Planning Department
W240 N3065 Pewaukee Road
Pewaukee WI 53072
Phone: 262-691-0770

PLAN COMMISSION
MEETING NOTICE AND AGENDA
Thursday, October 16, 2025
6:00 PM
Pewaukee City Hall Common Council Chambers
W240N3065 Pewaukee Road, Pewaukee, WI

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1. Call to Order and Pledge of Allegiance

2. Preliminary Plats

   2.1 Discussion and Action Regarding a Preliminary Plat for the Single-Family Rental Portion of the Willow Run Subdivision Development, as Submitted by Land by Label (PWC 0941988104 & PWC 0944994)

   2.2 Discussion and Action Regarding a Preliminary Plat for the Single-Family For-Sale Portion of the Willow Run Subdivision Development, Located at N12 W26506 Golf Road, as Submitted by Veridian Homes (PWC 0944994)

3. The Glen at Springdale Mixed-Use Residential Development Located at W220 N2475 Springdale Road, as Requested by Cornerstone Development/Esser Farm (PWC 0916997)

   3.1 Discussion and Action and Public Hearing to Rezone the Subject Property from Rs-6 Single-Family Residential, A-2 Agricultural, and LC Lowland Conservancy to Rs-6 Single-Family Residential, Rm-1 Multi-Family Planned Unit Development, and LC Lowland Conservancy

   3.2 Discussion and Action Regarding a Recommendation to the Common Council for a Conditional Use Residential Planned Unit Development to Allow for a Multi-Family Residential Development Upon the Subject Property

   3.3 Discussion and Action Regarding a Preliminary Plat for the Purpose of Developing a Single-Family Residential Subdivision Upon the Subject Property

   3.4 Discussion and Action Regarding the Site and Building Plans for a Multi-Family Residential Development Upon the Subject Property

4. Adjournment

Ami Hurd
Deputy Clerk
Community Development Coordinator
October 9, 2025

NOTICE

It is possible that members of other governmental bodies of the municipality may be in attendance to gather information that may form a quorum at the above stated meeting. No action will be taken by any governmental body other than the governmental body specifically referred to above in this notice.

Any person who has a qualifying disability under the Americans with Disabilities Act that requires the meeting or materials at the meeting to be in an accessible format must contact the City Planner/Community Development Director Nick Fuchs, at (262) 691-6007 three business days prior to the meeting so that

arrangements may be made to accommodate your request.

Office of the Planner & Community Development Director
W240 N3065 Pewaukee Road
Pewaukee, Wisconsin 53072
Phone (262) 691-0770 Fax (262) 691-1798
fuchs@pewaukee.wi.us

REPORT TO THE PLAN COMMISSION

Meeting of September 18, 2025

Date: October 8, 2025

Project Name: Land By Label Preliminary Plat

Project Address/Tax Key No.: PWC 0941988104 and a portion of PWC 0944994

Applicant: LAND BY LABEL

Property Owner: Meadowbrook Village LLC

Current Zoning: Rs-6 Single-Family Residential District and LC Lowland Conservancy District

2050 Land Use Map Designation: Medium Density Residential (6,500 Sq. Ft. - 1/2 Ac. / D.U.) and Floodplains, Lowland, & Upland Conservancy and Other Natural Areas

Use of Surrounding Properties: The P.aD.D.S. Prairie Grass Luxury Apartments to the north, Pewaukee Golf Club to the south and east, and Meadowbrook Village to the west.

Project Description:

This submission is following the City's approval of a Comprehensive Master Plan Amendment, rezoning, and Conditional Use Permit to allow for a single-family residential development under the Rs-6 District residential planned unit development standards.

Conditional Use Permit No. CUP-25-5-2 (attached) approved a planned unit development (PUD) to allow for up to 160 single-family units on Lots 2 and 3 of a concurrently submitted CSM and up to 27 single-family units on Lot 1 and 2 of a second concurrently submitted CSM.

At that time, the applicant anticipated completing a Condominium Plat for the 27 single family units for the residential development primarily on the 19-acre parcel bearing Tax Key No. 0941988104; however, the applicant has now decided to submit a Preliminary Plat to create 27 individual lots, opposed to condominium ownership. This does not change the use or require an amendment to the CUP.

The Preliminary Plat includes 25 lots. The proposed lots range in size from 9,048 square feet to 23,193 square feet, with a mean lot size of 11,236 square feet.

According to the applicant, the site area is 11.34 acres and approximately 8.155 net acres (excluding rights-of-way and wetlands). This results in a net density of approximately 3.06 dwelling units per acre, which is in compliance with the Rs-6 District.

Wetlands that are not anticipated to be filled are protected within outlots on the plat. *All wetland impacts shall be subject to approval by the Wisconsin Department of Natural Resources*.

Rs-6 District requirements are summarized below. These must be met for all homes constructed within the development and will be reviewed at time of building permit.

- Maximum Building Height: 35 feet
- Minimum First Floor Area: 900 square feet
- Minimum Total Area: 1,000 square feet, plus 100 square feet for each bedroom
- Maximum Building Lot Coverage: 30%
- Minimum Setbacks:
    - Front/Street Yard: 30-feet/20.1-feet PUD
    - Side Yard: 12 feet
    - Rear Yard: 35-feet/23.45-feet PUD

Below are staff recommended conditions of approval related to this development.

1. *Wisconsin Department of Natural Resources approval of any wetland impacts or exemptions shall be granted and provided to the City prior to any land disturbance*.
2. *SEWRPC Environmental Corridor delineations shall be completed prior to land disturbance activities*.
3. *All improvements shall be located outside of remaining and undisturbed natural resources onsite including wetland boundaries and the 25-foot wetland setback*.
4. *Natural resource features and their respective setbacks shall be located within outlots and shall not extend onto any individual lots*.

   Conditions No. 3 and 4 above also relate to the Waukesha County recommendations below. Note the applicant is requesting the wetland areas noted on the lots below to be filled. If not approved to be impacted or exempted by the WDNR, the plat would need to be reconfigured.

   > It appears wetlands are located on Lots 47 – 50 and in the vicinity of lots 110 – 98. We recommend consideration be given to redesign the lots to place wetlands on commonly held outlots rather than lots owned by private parties. Wetlands are vulnerable to fill if they remain on private lots. If the wetlands are to remain on the private lots, please ensure the City of Pewaukee's wetland setback is met. At minimum, we recommend split rail fencing or signage by placed to indicate the extent of the wetland if wetlands will remain on private lots.
   > 15.
   >
   > In the vicinity of Lots 85 – 88, it appears that the city's required seventy-five foot shore setback encroaches upon the building envelope depicted upon several lots. It appears as though all lots remain buildable. However, we recommend that the affected building envelopes be revised to exclude the shore setback area so that future lot buyers and builders understand the limitations of the setback requirements.

5. *Signs shall be subject to Article 9 of the Zoning Code and staff review of Sign Permit Applications*.
6. *Final grading, erosion control, utilities, and storm water management plans shall be reviewed and approved by the Engineering Department prior to any land disturbance*.
7. *A note shall be added to the plat stating, "Sump pumps shall be directed to a suitable location on the property and shall not discharge onto neighboring properties or directly into the City's storm sewers, sanitary sewers, or roadways.*"

Attached is a review letter from Waukesha County comments. Based on this review, staff recommends including the following conditions of approval.

1. *Applicant shall revise all technical corrections as requested by Waukesha County, prior to recording*.
2. *Applicant shall provide documentation to the City and Waukesha County Planning and Zoning Division staff confirming that, as required by Section NR 110.08(4) of the Wisconsin Administrative Code, the Southeastern Wisconsin Regional Planning Commission has reviewed and commented on the proposed sanitary sewer extension which will be needed to serve this development*.
3. *The developer shall consult with the property owner regarding the location and function of any drain tile that may be present on the property and how it may impact the development*.

Waukesha County also commented on the soils within this development area and that these soils may be indicative of seasonal high groundwater conditions. Waukesha County notes that some lots contain severe conditions with hydric soils and groundwater is estimated to be less than one foot from the ground surface.

Related to this, Waukesha County recommended the note below be placed on the plat, which the applicant added.

> BASEMENT RESTRICTION – GROUNDWATER
> - Although all lots in the Subdivision have been reviewed and approved for development with single-family residential use in accordance with Wis. Stat. Ch. 236, some lots contain soil conditions that, due to the possible presence of groundwater near the surface, may require additional soil engineering and foundation design with regard to basement construction. It is recommended that a licensed professional engineer design a basement and foundation that will be suitable to withstand the various problems associated with saturated soil conditions on basement walls or floors or that other special measures be taken. Soil conditions should be subject to each owner's special investigation prior to construction and no specific representation is made herein.

Waukesha County also recommended constructing sidewalks on at least one side of the streets in accordance with "SEWRPC's Recommendations for Provision of Sidewalks in Areas of Existing or Planned Urban Development."

The applicant is providing a sidewalk along the main road of the development, which is consistent with the recommendation from the Conceptual Review.

Recommendation

Staff recommends approval of the Preliminary Plat of Willow Run Single Family Rentals, subject to the conditions within this staff report.

August 15, 2025

Preliminary Plat Narrative

Project: Willow Run Single Family Rentals
Northeast corner of Milkweed Lane and E Fieldhack Drive
Pewaukee, WI 53072

Land By Label is requesting preliminary plat review and approval for a project located on the east side of E Fieldhack Drive in the City of Pewaukee Wisconsin (parcel 0941988104). The property is north of the Meadowbrook Village Condominiums and Milkweed Lane. The subject property contains 11.340 acres of mainly undeveloped land. The project will consist of a new residential subdivision consisting of 25 single-family residential lots that will be owned and maintained by Land By Label and an outlot with an expanded stormwater management pond. The property was rezoned to RS-6 PUD. The proposed zoning is shown on the preliminary plat. The proposed preliminary plat is consistent with the RS-6 PUD zoning district standards with respect to lot size (width and area) as well as specified yard setbacks.

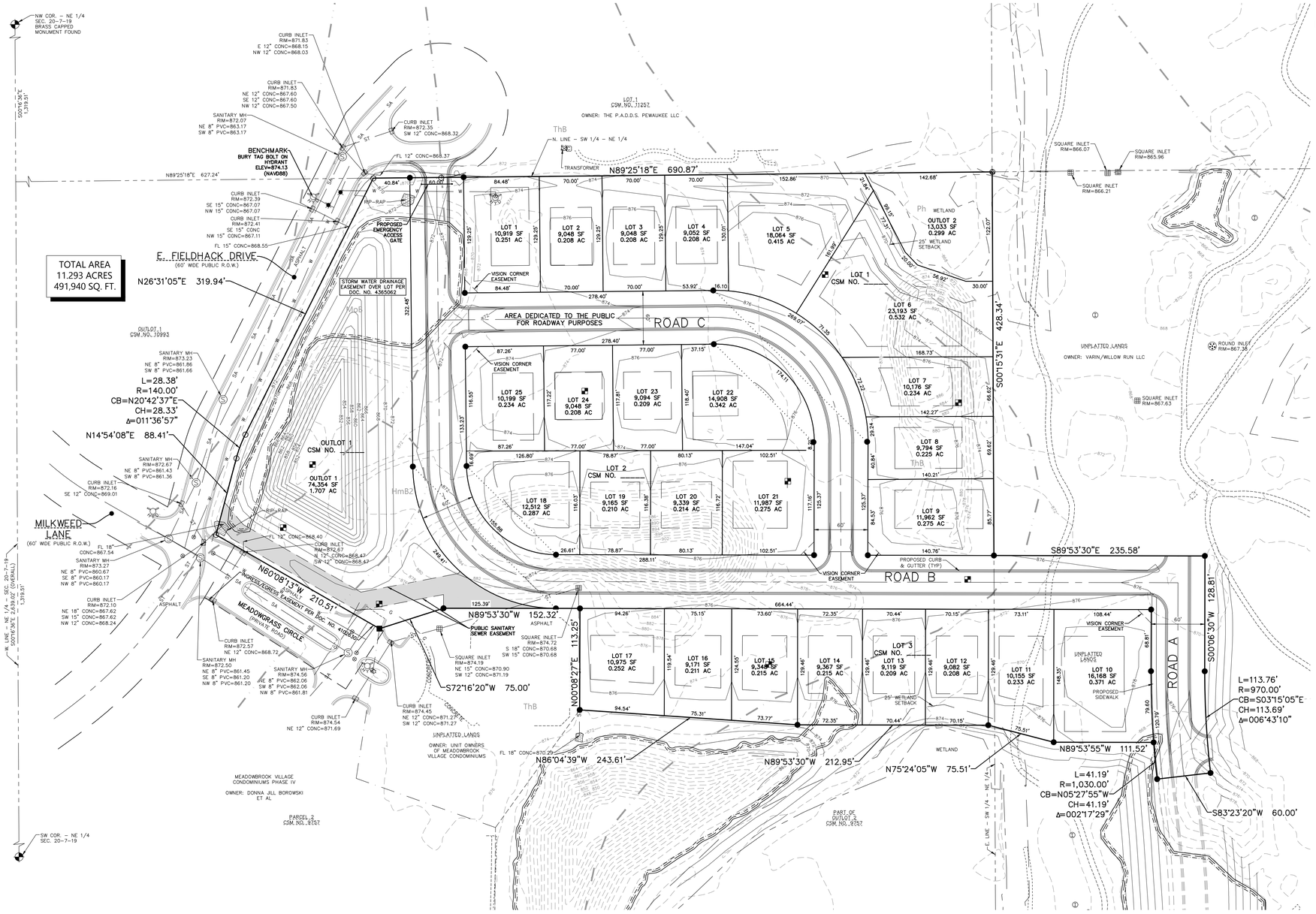
The proposed subdivision will be served by municipal sewer and water. A sanitary lift station is currently proposed on the outlot to the west of the subdivision, but discussions with the city are ongoing to determine a final location. Post-construction stormwater management facilities will be constructed to treat all stormwater run-off from the development in compliance with State and local code requirements. The majority of the public streets constructed for the subdivision and the residential lots will drain to the west into a wet pond along E Fieldhack Drive. The backyards of the residential lots on the south side of the subdivision will drain to the existing stormwater pond south of the site. This subdivision is anticipated to be built in conjunction with a multi-family residential development located to the northeast of the subdivision.

All proposed roads are designed to meet city of Pewaukee standards and will provide sole access to the subdivision lots. A new public road will be extended to the north from Golf Road to provide access to a single family for sale subdivision, the multi-family residential property, and the subject single family for rent subdivision. A second access point off E Fieldhack Drive will be gated to allow access for emergency vehicles but will prohibit use by everyday traffic. No adverse congestion or traffic problems are expected with the proposed layout. Fire hydrants are proposed in accordance with state and local requirements and no significant fire hazards are expected.

Street cross sections are proposed to follow city of Pewaukee standard road sections.
Mountable curb and gutter will be installed along the edge of the street to convey stormwater to inlets and storm sewer.

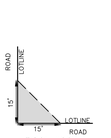
PRELIMINARY PLAT OF
WILLOW RUN SINGLE FAMILY RENTALS

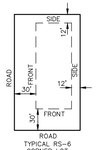
LOTS 1, 2 & 3 & OUTLOT 1, CSM NO. _____,
BEING PART OF THE SE 1/4 & SW 1/4 OF THE NE 1/4,
SECTION 20, TOWNSHIP 7 NORTH, RANGE 19 EAST,
CITY OF PEWAUKEE, WAUKESHA COUNTY, WISCONSIN.

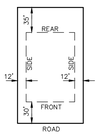


OWNER/SUBDIVIDER:
LXI PEWAUKEE LLC
638 MILWAUKEE STREET
DELAFIELD, WI 53018

ENGINEER & SURVEYOR:
EXCEL ENGINEERING, INC.
100 CAMELOT DRIVE
FOND DU LAC, WI 54935



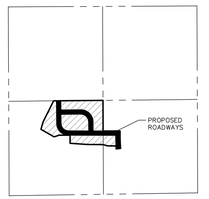




CURRENT ZONING:

RS-6 Single-Family Residential District
Building Setbacks:
Front: 30 feet
Side: 12 feet
Rear: 35 feet

Condition Use PUD setback reduction
Front & Rear setbacks allowed to be reduced by 33%



VICINITY MAP
NE 1/4 OF SECTION 20–7–19
SCALE 1"=1000'

= WILLOW RUN SINGLE FAMILY RENTALS SUBDIVISION

I, Ryan Wilgreen, Professional Land Surveyor, hereby certify that this preliminary plat is a true and correct representation of all the adjacent existing land divisions and of the boundary of the preliminary plat and features.

That I have fully complied with the provisions of Chapter 236 of the Wisconsin Statutes and Chapter 239 of the City of Pewaukee Subdivision Ordinance in surveying, dividing and mapping of the same.

Ryan Wilgreen, P.L.S. S-2647
ryan.wilgreen@excelengineer.com
Excel Engineering, Inc.
Fond du Lac, Wisconsin 54935
Project No. 240299700

NOTES:

FLOODPLAIN
-Based upon a review of the Federal Emergency Management Agency Flood Insurance Rate Map No. 55133C0192H with an effective date of October 19, 2023, the property falls within Zone "X" (areas determined to be outside the 0.2% annual chance flood hazard).

WETLANDS
-Wetlands shown on this plat were delineated by Evergreen Consultants, LLC on October 29, 2024.

OUTLOTS
-Outlot 1 is to be used for stormwater management purposes. All owners of the plat of Willow Run Single Family Rentals have an equal and undivided fractional ownership of all of the stormwater facilities. Waukesha County shall not be liable for any fees or special charges in the event they become the owner of a lot or outlot in the subdivision by reason of tax delinquency. The City of Pewaukee is authorized to access Outlot 1 to conduct necessary stormwater inspections and maintenance. The Meadowbrook Village Condominiums will have continued use of Outlot 1 for stormwater management purposes per Storm Water Drainage Easement Agreement recorded as Document No. 4365062.

SCHOOL DISTRICT:
- The plat of Willow Run Single Family Rentals lies within the Waukesha School District.

EXISTING UTILITIES
-Surface indications of utilities along with Digger's Hotline markings per ticket no. 20244221277 have been shown. Sizes and elevation of underground utilities shown hereon are based on field measurements of visible structures in combination with available data provided to Excel Engineering. Excel Engineering makes no guarantee that all the existing utilities in the surveyed area have been shown nor that they are in the exact location indicated. Contractor shall be responsible for verifying the location of all utilities prior to construction. This plan is in no way a substitute for utility locating at the time of excavation.

DATUMS
-Elevations shown on this survey are based on North American Vertical Datum 1988 (NAVD88). Horizontal coordinates are based on the Wisconsin State Plane Coordinate System, South Zone. (North American Datum 1983).

LEGEND:

WATER VALVE IN BOX	STORM SEWER AND MANHOLE
WATER SERVICE VALVE	SANITARY SEWER AND MANHOLE
CURB INLET	WATER LINE AND HYDRANT
ROUND CATCH BASIN	UNDERGROUND GAS LINE
SQUARE CATCH BASIN	CURB AND GUTTER
CABLE TV PEDESTAL	PROPERTY LINE
LIGHT POLE	RIGHT–OF–WAY LINE
SIGN	ADJACENT PROPERTY LINE
IRRIGATION CONTROL VALVE	EXISTING GROUND CONTOUR
ELECTRIC TRANSFORMER	PROPOSED GROUND CONTOUR
SOIL BORING	
3/4" REBAR SET	
MAG NAIL SET	
3/4" REBAR FOUND	
2" IRON PIPE FOUND	

60' 0 60' 120'
1"= 60' SCALE FEET

NORTH POINT REFERENCED TO THE WISCONSIN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE (NAD83). THE WEST LINE OF THE NORTHEAST 1/4 OF SECTION 20 HAS A BEARING OF SOUTH 00°–16'–36" EAST.

EXCEL
Always a Better Plan
100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com

PROJECT INFORMATION

PRELIMINARY PLAT
WILLOW RUN SINGLE FAMILY RENTALS
E. FIELDHACK DRIVE • PEWAUKEE, WI 53072

PROFESSIONAL SEAL

SHEET DATES
ISSUE DATE AUG. 14, 2025
REVISIONS
SEPT. 5, 2025

JOB NUMBER
240299700

SHEET NUMBER
PP

2024 © EXCEL ENGINEERING, INC.

September 5, 2025

City of Pewaukee
Attn: Nick Fuchs
W240 N3065 Pewaukee Rd
Pewaukee, WI 53072

Re: Willow Run Single Family for Rent Preliminary Plat

Dear Mr. Fuchs,

This letter is in response to the review comments dated August 28, 2025.

1. Lots 6, 10, 12, and 14 all have wetland areas that extend onto the lot. It is indicated that the area on Lot 10 is planned to be filled. Will the small portion of wetland on Lot 12 be filled as well?
   Excel Response: Lots 5&6 have been adjusted to create an Outlot containing the wetland. Lot 10 & Lot 14 ponds will be filled as the ponds have been exempted as artificial wetlands by the DNR & USACE. South line of the Plat has been adjusted to remove the wetland from Lot 12.

2. Is the area extending onto Lot 14 part of Wetland EE? The creation of Lot 14 will be contingent upon approval to impact that area.
   Excel Response: Lot 14 existing pond portion will be filled as the pond has been exempted as an artificial wetland by the DNR & USACE.

3. Natural resources and storm water management areas must be placed within outlots. Also see Section 239-8F.(8).
   Excel Response: Outlot has been created for wetland that was previously part of Lots 5&6. Wetland previously as part of Lot 12 has been removed from plat area.

4. What is the net acreage of the site? This would not include roads or wetland areas that will not be impacted.
   Excel Response: 355,249 sf (8.155 acres)

5. It is recommended to indicate the Conditional Use residential planned unit development (PUD) designation along with the Rs-6 zoning note. The setback reduction option should be noted as well.
   Excel Response: Setback reductions are noted on the plat.

6. Please show the 25-foot setback from wetlands.
   Excel Response: Wetland setback lines are depicted and labeled.

7. Please show vision corner easements in compliance with Section 340-8.3 of the Zoning Code.
   Excel Response: vision corner easements are depicted on the plat.

8. Note Section 239-8A.(9) related to street naming.

Excel Response: Developer will determine street naming in accordance with code.

9. Note that corner lots are required to meet the minimum street yard setback abutting both streets and any other yard must meet the side yard setback. See Section 340-11.5.
   Excel Response: Corner lot building setbacks have been adjusted to depict 2 street and 2 side setbacks.

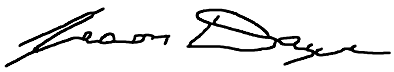
10. Are there any changes to the architectural plans previously shown for these homes? Will covenants or bylaws include architectural design standards?
    Excel Response: Minimal design changes to architectural plans. Design will conform to City of Pewaukee code standards (EC to check). Land By Label will be developer and sole reviewer of architectural and will confirm design is cohesive with overall development

11. Below are anticipated staff recommended conditions of approval.
    a. Wisconsin Department of Natural Resources approval of wetland exemptions shall be granted prior to any land disturbance and impacts to wetlands onsite.
       Excel Response: Wetland approvals received to date have been included with the resubmittal.
    b. SEWPRC Environmental Corridor delineations shall be completed prior to land disturbance activities.
       Excel Response: SEWPRC Environmental Corridor report completed by Evergreen Consultants has also been provided.
    c. All improvements shall be located outside of remaining natural resources onsite including wetland boundaries and the 25-foot wetland setback.
       Excel Response: Noted. All improvements will be constructed outside of the 25' wetland setback.
    d. Signs shall be subject to Section 17.0700 of the Zoning Code and staff review of sign permits.
       Excel Response: Noted.
    e. Final grading, erosion control and storm water management plans will require Engineering Department approval prior to any land disturbance.
       Excel Response: Noted.
    f. Engineering Department approval of detailed utility plans.
       Excel Response: Noted.

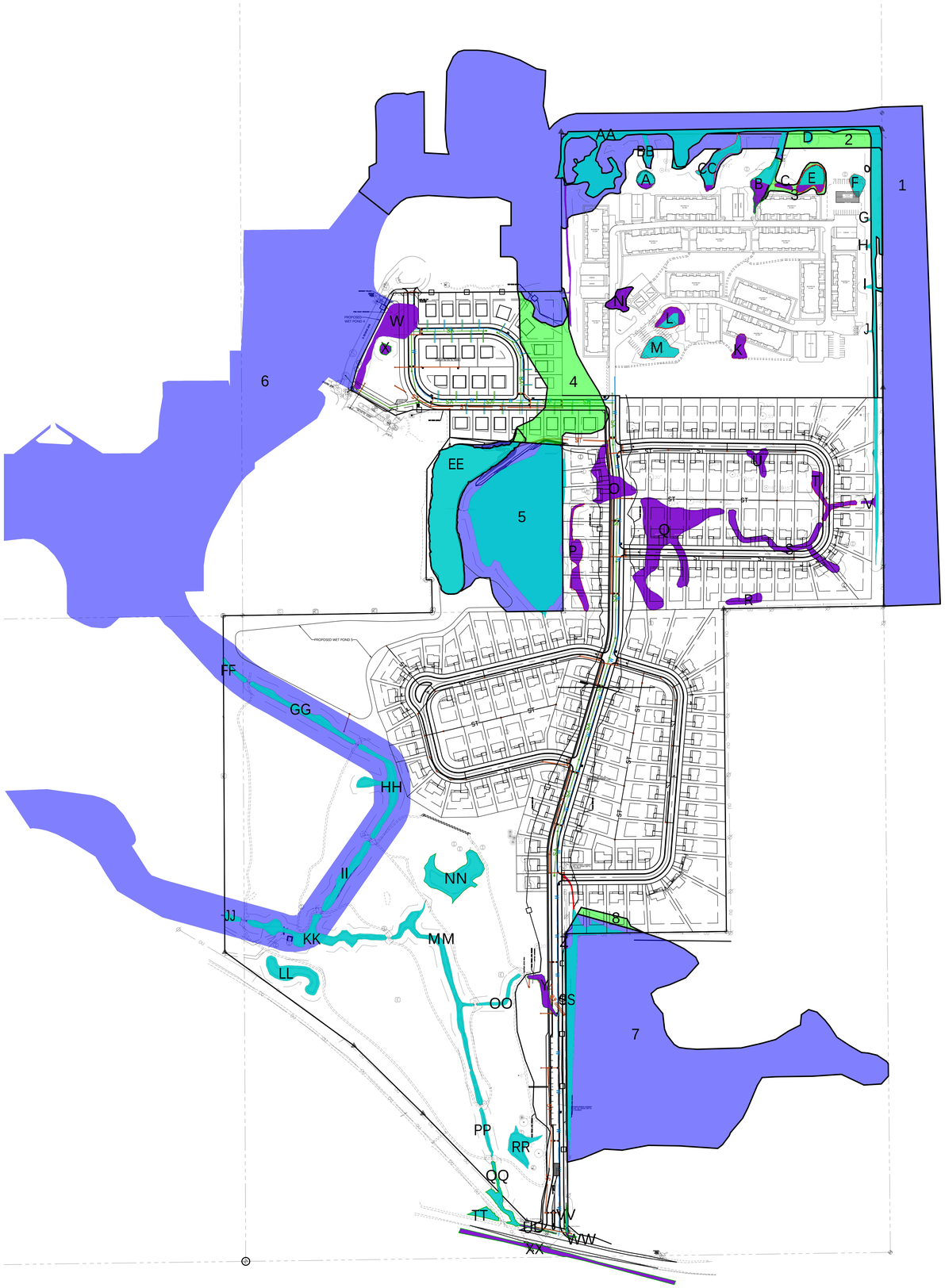
The submittal documents have been revised per the comments above. Please accept for review and approval. Please let me know if you have any comments, questions, or need additional information.

Sincerely,

Excel Engineering, Inc.



Jason Daye, P.E.
Principal, Civil



LEGEND:

	WETLAND/ POND PROPOSED TO BE FILLED/ DISTURBED - 4.02 AC FILLED/ DISTURBED.
	WETLAND/ POND TO BE PROTECTED
	ENVIRONMENTAL COORIDOR TO BE FILLED/ DISTURBED - 3.94 AC DISTURBED
	ENVIRONMENTAL COORIDOR TO BE PROTECTED

WETLAND AREAS	
WETLAND	AREA (SF)
A	4307
B	10301
C	1018
D	1353
E	9135
F	3996
G	197
H	345
I	414
J	196
K	3807
L	7402
M	9155
N	3083
O	18426
P	11884
Q	56825
R	4110
S	1422
T	7306
U	4890
V	1060
W	24248
X	1619
Y	4899
Z	500
AA	91817
BB	3014
CC	9788
DD	9707
EE	92107
FF	2194
GG	11518
HH	16589
II	10564
JJ	1683
KK	22426
LL	14067
MM	23466
NN	24225
OO	3386
PP	3058
QQ	6053
RR	9300
SS	36796
TT	3334
UU	909
VV	645
WW	368
XX	13695

CORRIDOR AREAS	
CORRIDOR	AREA (SF)
1	1131899
2	24962
3	18192
4	121209
5	253476
6	1778721
7	618321
8	7392

EXCEL
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100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com

PROJECT INFORMATION

PROPOSED MIXED RESIDENTAL DEVELOPMENT FOR:
WILLOW RUN
PEWAUKEE • WISCONSIN

PROFESSIONAL SEAL

PRELIMINARY DATES
MAR. 28, 2025
MAY 2, 2025
AUG. 15, 2025

NOT FOR CONSTRUCTION

JOB NUMBER
240299700

SHEET NUMBER
WF

SCALE: 1"= 200'
200' 0 200' 400'
NORTH

WETLAND/ POND FILL EXHIBIT

evergreen consultants LLC
PO Box 680 • Pulaski, WI 54162
Phone: 920.615.0019 • Website: www.evergreenwis.com

Pewaukee Golf Club- Willow Run

Environmental Corridor Delineation Report

Project Number: WKS25-028-27
Property Address: N12W26506, City of Pewaukee, Waukesha County, Wisconsin
Parcel IDs: PWC 0944994 and Part of PWC 0941988104

August 22, 2025

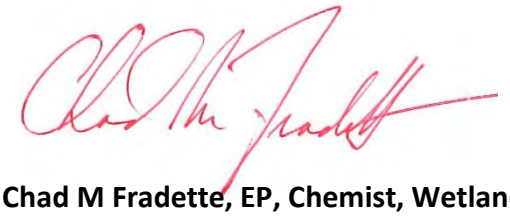
Report Request by

EXCEL ENGINEERING
Always a better plan

100 Camelot Drive
Fond du Lac, Wisconsin 54935

evergreen consultants LLC
PO Box 680 • Pulaski, WI 54162
Phone: 920.615.0019 • Website: www.evergreenwis.com

Field Work Certification:



Chad M Fradette, EP, Chemist, Wetland Scientist
Wisconsin DNR Professional Assured Wetland Delineator
Lead Wetland Delineator
(920) 615-0019 *chad@evergreenwis.com*

Shyann P Banker, Environmental Scientist
Wisconsin DNR Professional Assured Wetland Delineator
shyann@evergreenwis.com

Ashley Poehls, Biologist
ashley@evergreenwis.com

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Appendix E – NRCS County Soil Survey Report

Introduction

Evergreen was retained by Excel Engineering and Land By Label to perform an environmental corridor delineation. The property is located at N12W26506 Golf Road, City of Pewaukee, Wisconsin. The study area is approximately 164.3 acres in size and is in part of the East ½ of Section 20, Township 07 North, Range 19 East, City of Pewaukee, Waukesha County, Wisconsin. Site Maps can be found in Appendix A.

The environmental corridor delineation was conducted on June 26th, July 18th and 25th and August 13th, by Chad Fradette, with assistance from Shyann Banker, Ashley Poehls, and Sara Marcinkus. A site visit to review stream navigability determinations was conducted on July 25th with Ms. Francesca Sanchez, Wisconsin Department of Natural Resources Water Management Specialist.

The environmental corridor delineation was conducted for development planning purposes. The study area consists of a golf course with many excavated landscape ponds and ditches, roadside areas and buckthorn infested forest remnants and tree lines. Historically, much of the area was wetlands. Beginning in the 1930s, the area was ditched and tiled to drain the area for cropping. Streams were rerouted, straightened and ditched. Tile outlets were visible in the ditch network. By 1963 construction of a golf course began and ponds and ditches were constructed throughout the course until 1995. In 1990 there were some areas of wet signatures that were avoided and remain wetlands today.

In southeastern Wisconsin the preservation, protection, and wise use of the natural resource base is particularly important because increasing numbers of urban residents are becoming year-round residents of outlying areas of southeastern Wisconsin, seeking both the varied outdoor recreational opportunities offered by the natural resource amenities present in these outlying areas and the open space that these areas provide for residential development. The need to protect valuable natural resource amenities, therefore, has become increasingly important to the maintenance of the general well-being and environmental quality of the Southeastern Wisconsin Region.

In an effort to identify those natural resources that should be protected and preserved in southeastern Wisconsin, the Southeastern Wisconsin Regional Planning Commission (SEWRPC) has identified environmental corridors, which are linear areas in the landscape containing concentrations of natural resource amenities, as well as scenic, recreational, and historic resource amenities. These corridors generally lie along the major stream valleys, around major lakes, and in the Kettle Moraine area of southeastern Wisconsin. Almost all of the remaining high-value woodlands, wetlands, wildlife habitat areas, major bodies of surface water, and delineated floodlands and shorelands are contained within these corridors. In addition, significant groundwater recharge and discharge areas, many of the important recreational and scenic areas, and the best remaining potential park sites are located within the environmental corridors. Such environmental corridors are, in effect, a composite of the most important individual elements of the natural resource base in south- eastern Wisconsin and have immeasurable environmental and recreational value.

Failure to provide for the protection and preservation of the natural resources found in southeastern Wisconsin, and primarily within the environmental corridors, could result in serious environmental degradation and the creation of difficult and costly problems, such as flooding and water pollution.

Personnel

Mr. Fradette is an Environmental Professional, Analytical Chemist, WDNR Professionally Assured Wetland Delineator and has over twenty years of experience working on infrastructure, community development, and industrial projects throughout the entire Midwest and Northeast, including Wisconsin. His expertise is in completing wetland delineations, stream assessments, reports, permit applications, exemptions, compliance cases, compensatory wetland mitigation plans, endangered species assessments, and floristic habitat assessments. Mr. Fradette is professionally trained and experienced in the practice of wetland delineation, stream assessment, and habitat assessment.

Mrs. Shyann Banker, Environmental Scientist and WDNR Professionally Assured Wetland Delineator and has nine years of experience conducting wetland delineations for utility, municipal, residential, and industrial projects in Wisconsin. Her expertise is in completing wetland delineations, reports, and exemption applications.

Ms. Ashley Poehls, Biologist, has two years of professional experience in working on utility, municipal, residential, and industrial projects in Wisconsin.

Ms. Sara Marcinkus, Environmental Technician, is in her first year of professional experience.

Methodology

Identification and Delineation of Environmental Corridors and Other High-Value Resource Areas

The delineation of the detailed natural resource base and resource base-related inventory data, and the assignment of point values to each of the resource base and related elements encompasses the identification and delineation of environmental corridor and other high-value resource areas. A hierarchy of natural resource areas was identified-namely, primary environmental corridors, secondary environmental corridors, isolated high-value resource areas, and other natural resource or resource-related areas. These areas were identified through the application of criteria related to the point values assigned to the individual resource com- ponents, as well as of criteria established with respect to the acreage, width, and length of the resource components. These criteria are listed below.[1]

Natural Resource Feature	Minimum Point Value	Minimum Area (acres)	Minimum Length (miles)	Minimum Width (feet)
Primary Environmental Corridor	10	400	2	200
Secondary Environmental Corridor.	10	100	1	--
Isolated High-Value Natural Area	10	5	--	200
Other Natural Resource or Related Feature.	1	--	--	--

A point value of 10 or more established an area as having "significant" natural resource value. As further shown in Table 3, areas with "significant" natural resource values include primary environmental corridors, secondary environmental corridors, and isolated high-value natural areas.

Assignment of Numerical Point Values to Each Natural Resource Base and Resource Base-Related Element

To facilitate the identification of those areas having the most significant concentrations of natural resource values, each natural resource base and natural resource base-related element was assigned a numeric value rating. The numeric value rating assigned was intended to reflect the "natural" characteristic of each resource component.

Those features of the landscape having "inherent natural resource values" were assigned a higher point value than features having "implied natural resource values." Thus, features such as surface water, woodlands, wetlands, high-value wildlife habitat, prairies, and scientific areas were assigned high point value ratings, while features like existing park sites, potential park sites, historic sites, and scenic viewpoints were assigned relatively low point value ratings.

Within each area delineated, the total composite point value was recorded and the natural resource base and related elements within that area were identified through the use of

[1] Refining the Delineation of Environmental Corridors in Southeastern Wisconsin, SEWRPC

code letters. The code letters, together with the point values assigned to each of the natural resource base and resource base-related elements, are presented below[2]:

Element	Code	Point Value
Natural Resource Base		
Lake		
Major (50 acres or larger)	LA	20
Minor (5-49 acres)	LM	20
River or Stream (perennial)	PS	10
Shoreland		
Perennial (lake, river, or stream)	SP	10
Intermittent Stream	SO	5
100-Year Floodland	FP	3
Wetland	WT	10
Wet, Poorly Drained, and Organic Soils	--[a]	--[a]
Woodland	WO	10
Wildlife Habitat		
High Value	WH	10
Medium Value	WM	7
Low Value	WL	5
Steep Slope		
20 Percent or Greater	SS	7
12 Percent to 19 Percent	SL	5
Prairie	PR	10
Natural Resource Base-Related		
Existing Park or Other Open Space Site		
Rural Open Space Site	OS	5
Other Park or Recreation Site	PK	2
Potential Park		
High Value	PH	3
Medium Value	PM	2
Low Value	PL	1
Historic Site		
Structural	HS	1
Other Cultural	HC	1
Archeological	HA	2
Scenic Viewpoint (combined with area of steep slope)	SV	5
Natural and Scientific Area		
State Scientific Area	SA	15
Natural Area of Statewide or Greater Significance	NS	15
Natural Area of Countywide or Regional Significance	NC	10
Natural Area of Local Significance	NL	5

[a] *Code letters and point values for wet, poorly drained, and organic soils were not assigned. The consideration of wet, poorly drained, and organic soils in the determination of environmental corridors is discussed in the section of this article on the identification and delineation of environmental corridors and other high-value resource areas.*

In the identification and delineation of secondary environmental corridors, there were no minimum width considerations. However, the termination points of such corridors must contain a natural resource area at least five acres in size and 200 feet in width. *A* primary environmental corridor may serve as the termination point of a secondary

[2] Refining the Delineation of Environmental Corridors in Southeastern Wisconsin, SEWRPC

environmental corridor.

Elongated, narrow-less than 200 feet wide-areas that had significant natural resource values and that "connected" two segments of primary environmental corridor lands were identified and delineated as secondary environmental corridors. This is the only situation where the minimum length and area requirements for secondary environmental corridors were not strictly applied. It should also be noted that such areas were generally located along intermittent or perennial streams that flowed from one primary environmental corridor to another.

Areas less than five acres in size-regardless of the resource point values assigned to them-that were surrounded by significant natural resource features-namely, primary environmental corridors, secondary environmental corridors, or isolated natural areas-were included in the delineation of those corridors or isolated natural resource features. Areas greater than five acres in size and surrounded by significant natural resource features but having less than 10 points were not included in the delineation of the primary or secondary environmental corridors or isolated natural areas.

Results

Off Site Analysis

Land Use

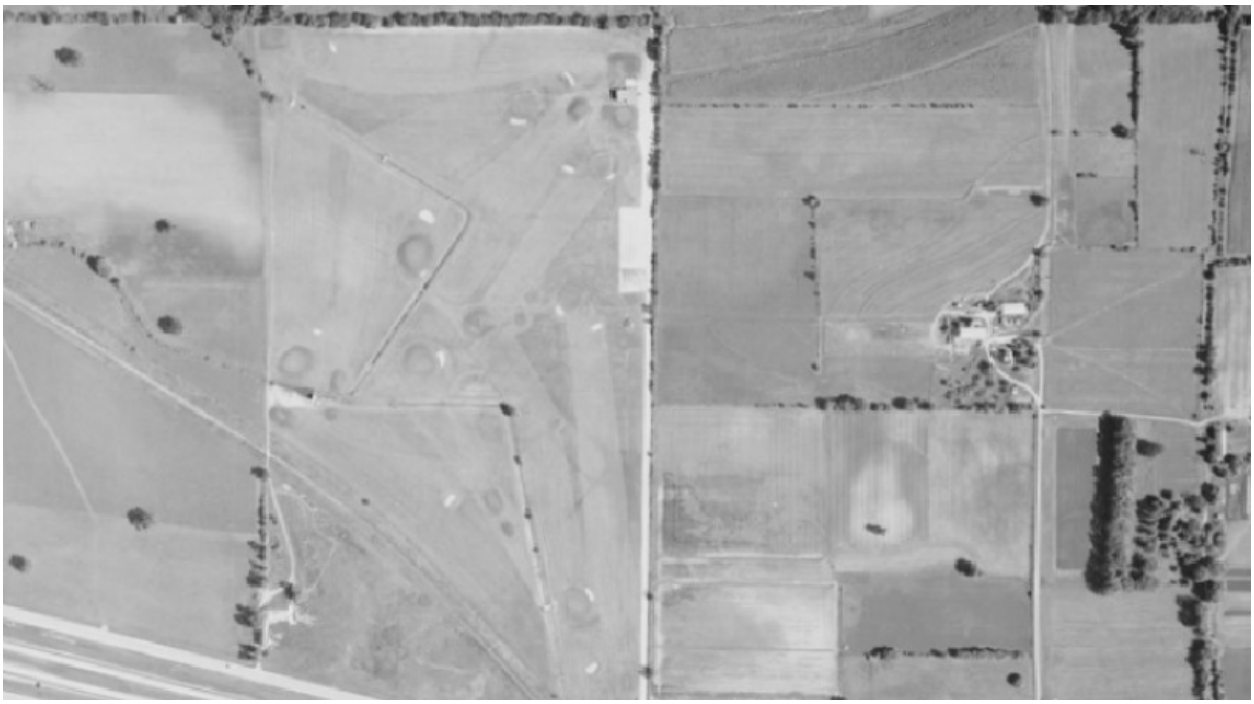
Aerial photographs from 1937 through 2024 were reviewed. Beginning in the 1930s, the area was ditched and tiled to drain the area for cropping. Streams were rerouted, straightened and ditched. Tile outlets were visible in the ditch network. By 1963 construction of a golf course began and ponds and ditches were constructed throughout the course until 1995. In 1990 there were some areas of wet signatures that were avoided and remain wetlands today. The Historic Aerial Photographs are in Appendix D. [3] [4] [5]

1937 Aerial photograph

[3] Waukesha County, GIS, *aerial photographs*, *topography*, Waukesha County, WI

[4] USDA, FSA, Service Center, *FSA Slides for years 1981 through 2002*. Waukesha County, WI

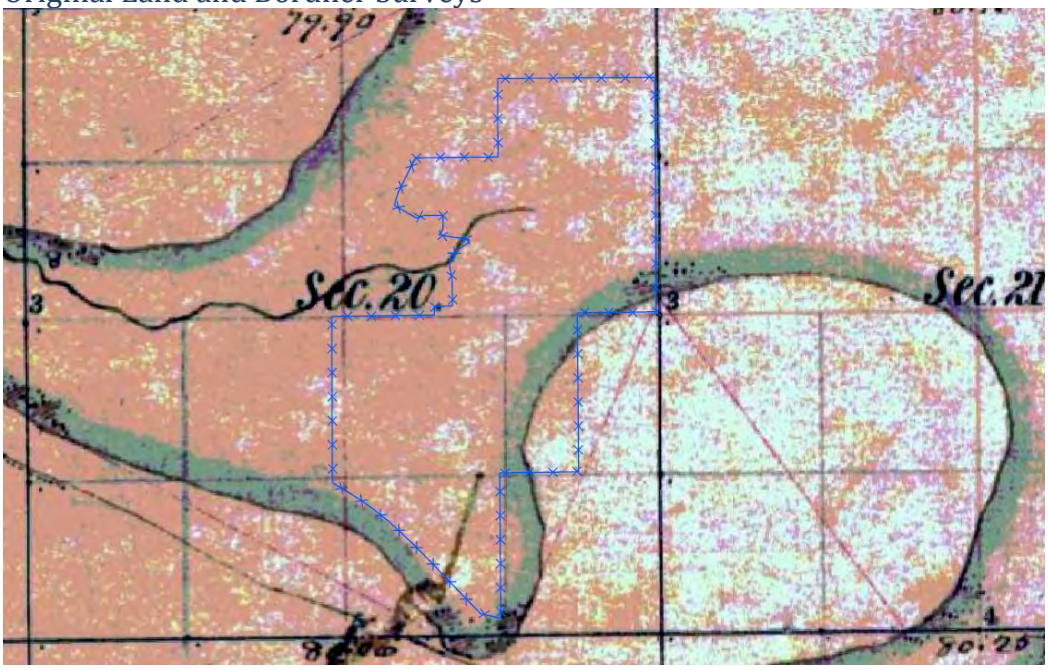
[5] University of Wisconsin, *Wisconsin Historic Aerial Image Finder,* 2024



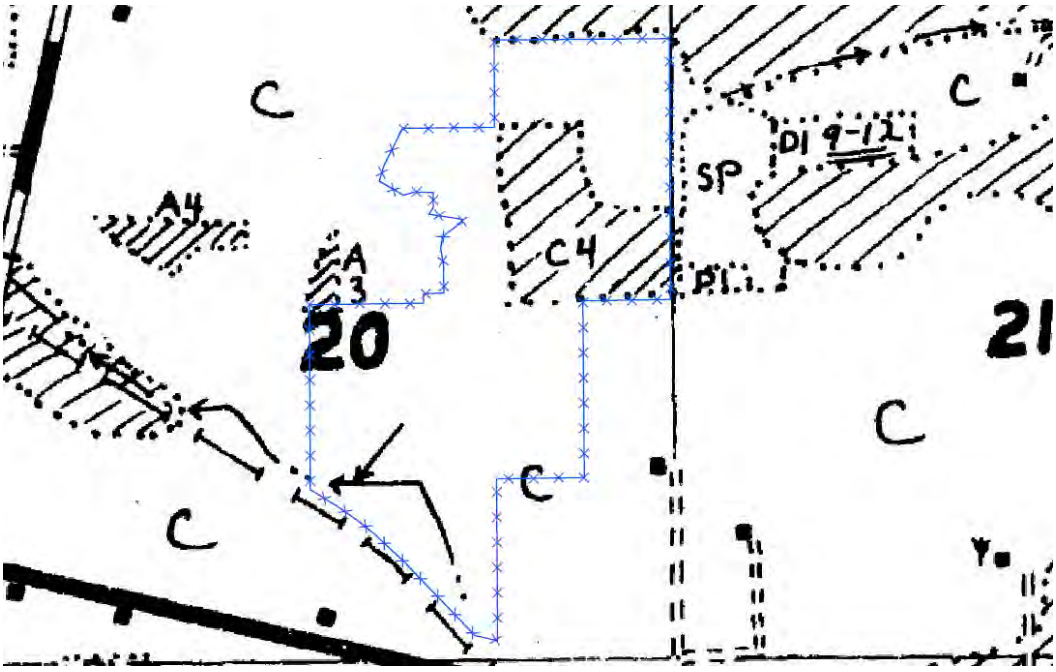
1963 Aerial Photograph, new golf course

Wet signatures visible in 1990 (blue)

Original Land and Bordner Surveys



The Original Survey shows the Site within a marsh or bog. The Original Survey Notes describe the vegetation in this area as black oak, white oak, burr oak, and tall grass.[6]

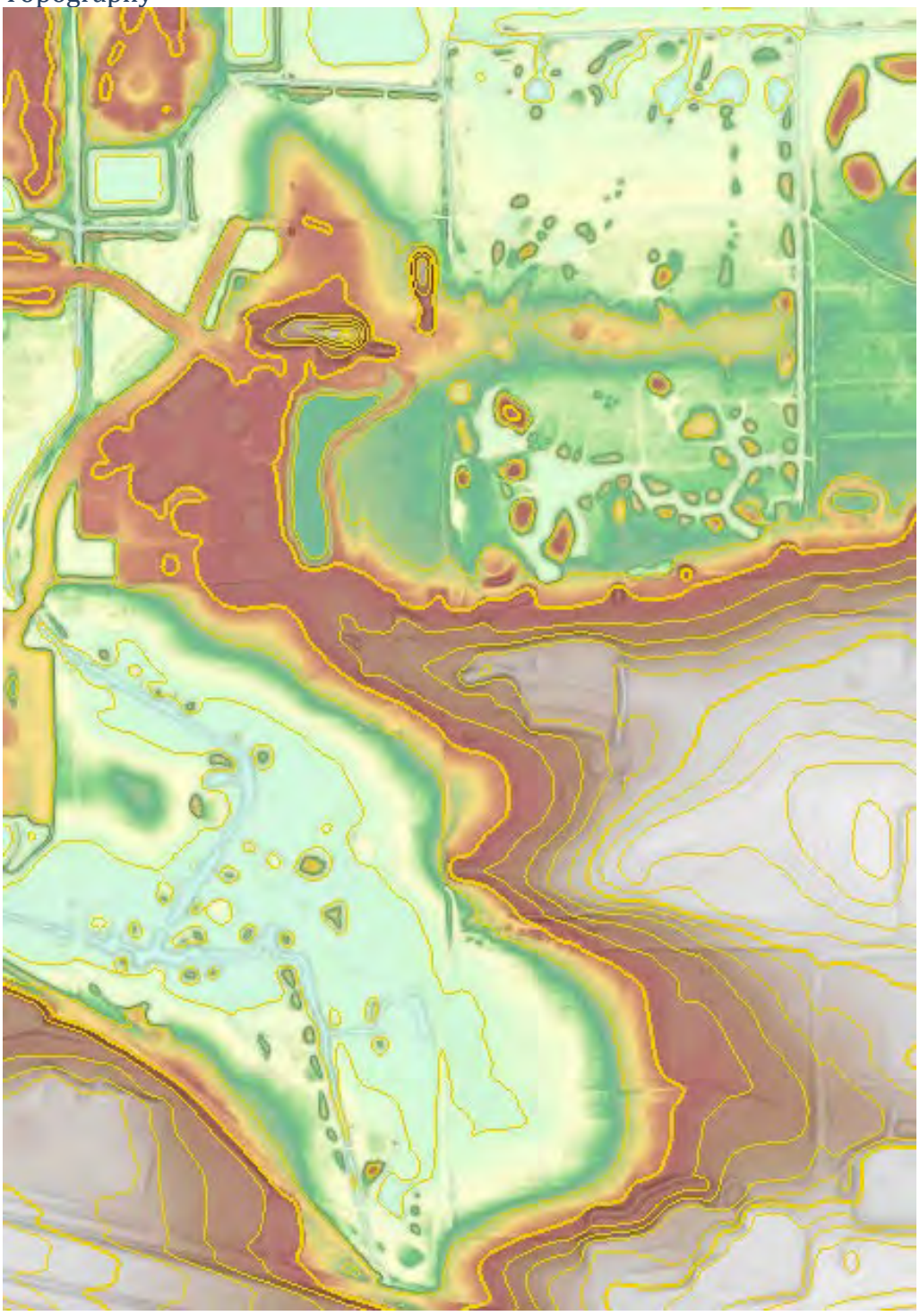


The Bordner Survey shows the Site as cleared cropland with grass marsh in part of the north half of the Site[7]. The Original Survey, Survey Notes and Bordner Survey are in Appendix C.

[6] Board of Commissioners of Public Lands, *Wisconsin Public Land Survey Records: Original Field Notes and Plat Maps*, Madison, Wisconsin, 2024

[7] University of Wisconsin Digital Collections Center, *Wisconsin Land Economic Inventory Maps (Bordner Survey)*, Madison, WI, 2024

Topography



WI DNR LiDAR, colorized elevation

The topography at the Site ranges from an elevation of 912 feet down to 861 feet. The topography of the Site slopes down from the center of the Site towards the southwest and north boundary of the study area.[8] The Topographic Map is in Appendix A.

[8] Waukesha County GIS

Wetland Mapping

The WDNR Wisconsin Wetland Inventory (WWI) Map was reviewed and indicates the presence of small open water wetlands dispersed throughout the study area, emergent wetlands in the south half of the study area, forested and emergent wetlands in the north half of the study area, and scrub/shrub and emergent wetlands along the boundaries of the Site. Flats/unvegetated wet soil is present immediately north of the Site.[9] The WWI wetland indicator soils layer was also reviewed and indicates the presence of indicator soils within the south corner and middle of the east boundary in the south half of the Site and in a portion of the west side of the north half of the study area. The study area is mapped as having Non-Hydric, Hydric, Predominantly Hydric, and Predominantly Non-Hydric soils. Indicator soils are soils which are commonly found in wetlands or have inclusions of soils that are commonly found in wetlands. The WDNR Surface Water Data Viewer (SWDV) was also reviewed and indicates the presence of an unnamed order 3 stream located in the southeast corner of the study area and unnamed order 2 stream located along the north boundary of the study area and in the center of the south half of the study area. An unnamed order 1 stream joins the order 2 stream at the northeast corner of the Site.

The NWI Map was reviewed and indicates the presence of small unconsolidated bottom wetlands throughout the study area, scrub/shrub and emergent wetlands along the boundaries of the north half of the Site and along the southeast boundary, riverine wetlands within the south half of the Site, and forested and forested/emergent wetlands within the north half of the Site. Littoral wetlands are immediately to the north of the Site. [10] The WWI, SWDV, and NWI Maps are in Appendix A.

[9] WDNR, *Surface Water Data LiDAR Viewer*, 2024

[10] U.S. Fish and Wildlife Service, National Wetlands Inventory, Wetlands Mapper, 2024

Mapped Soils

The NRCS Web Soil Survey indicates the presence of the following soil types[11]:

Report—Hydric Rating by Map Unit (WI)

Hydric Rating by Map Unit (WI)–Waukesha County, Wisconsin				
Map Unit Symbol	**Map Unit Name**	**Hydric Percent of Map Unit**	**Hydric Category**	**Landform Hydric Minor Components**
BsA	Brookston silt loam, 0 to 2 percent slopes	95	WI Predominantly Hydric	Drainageways
HmB	Hochheim loam, 2 to 6 percent slopes	0	WI Nonhydric	—
HmB2	Hochheim loam, 2 to 6 percent slopes, eroded	0	WI Nonhydric	—
HmC2	Hochheim loam, 6 to 12 percent slopes, eroded	0	WI Nonhydric	—
HmD2	Hochheim loam, 12 to 20 percent slopes, eroded	0	WI Nonhydric	—
HoD3	Hochheim soils, 12 to 20 percent slopes, severely eroded	0	WI Nonhydric	—
HtA	Houghton muck, 0 to 2 percent slopes	100	WI Hydric	Lakebeds (relict)
LmB	Lamartine silt loam, 0 to 3 percent slopes	15	WI Predominantly Nonhydric	Depressions
Lu	Loamy land	10	WI Predominantly Nonhydric	—
MoB	Mayville silt loam, 2 to 6 percent slopes	0	WI Nonhydric	—
Pa	Palms muck, 0 to 2 percent slopes	100	WI Hydric	Interdrumlins
Ph	Pella silt loam, 0 to 2 percent slopes	87	WI Predominantly Hydric	Depressions
ScB	St. Charles silt loam, 2 to 6 percent slopes	3	WI Predominantly Nonhydric	Drainageways
ThB	Theresa silt loam, 2 to 6 percent slopes	0	WI Nonhydric	—
W	Water	0	WI Nonhydric	—

NRCS County Soil Survey Report is in Appendix E.

[11] USDA, NRCS, *Web Soil Survey,* 2024

Field Investigation

Primary Environmental Corridors

Primary environmental corridors (PEC) occupy an area of at least 400 acres and have a minimum length of two miles and a minimum width of 200 feet. Such corridors generally include a wide variety of natural resource base and related elements.

One PEC was identified within the study area.

Secondary environmental corridors

Secondary environmental corridors (SEC) occupy an area of at least 100 acres and have a minimum length of one mile. Such corridors also include a variety of natural resource base and related elements but are generally less diverse and are smaller in size, length, and width than primary environmental corridors.

Two SECs were identified within the study area and were adjacent to perennial and intermittent streams and connect to and SEC and PEC located outside the study area.

Isolated Natural Resource Areas

Isolated high-value natural areas (INRA) are at least five acres in size. Such areas generally consist of those natural resource base elements that have "inherent natural" value such as wetlands, woodlands, wildlife habitat areas, and surface water areas but that are separated physically from the environmental corridors by intensive urban and agricultural land uses. Other natural resources and related features have no minimum area, length, or width requirements. These features generally include those natural resource base-related elements that have "implied natural" value, such as an existing park, a potential park site, or an historic site.

In the classification and delineation of natural resource features, areas with significant natural resource values-areas with a point value of 10 or more points-that were located in proximity to other areas with significant natural resource values were often linked with such areas as a single natural resource feature.

One INRA was identified within the study area. An INRA located outside the study area to the east was changed to an SEC by connection to an intermittent stream and discussion with WDNR.

Lakes

Lakes have been classified by the Commission as either major or minor. Major lakes have 50 acres or more of surface water area, while minor lakes have less than 50 acres of surface water area. All major lakes in southeastern Wisconsin are listed in Appendix C of *"SEWRPC Planning Guide No. 5, Floodland and Shoreland Development Guide"*.

No lakes are present within the study area.

Minor Lakes

Minor lakes were identified under the corridor refinement process using aerial photographs. Only those minor lakes with a surface area more than five acres were identified. Minor lakes less than five acres in size were generally located within another natural resource base element, primarily wetlands, and were included within the delineation of such a related natural resource base element. It is also important to note that certain small surface water bodies such as sewage treatment lagoons, water-filled quarries, and irrigation ponds were not identified as minor lakes.

No minor lakes are present within the study area.

Rivers and Streams

Rivers and streams have been classified by the Commission as perennial and intermittent. The identification of perennial and intermittent rivers and streams was made on the basis of the classifications shown on 7.5-minute quadrangle topographic maps published by the U. S. Geological Survey and through field investigation and site visit with the local DNR Water Management Specialist. Only rivers and streams having a width of 50 feet or more were delineated as separate natural resource base elements. Rivers and streams less than 50 feet in width were included within the delineation of shorelands described below.

Two streams were located within the study area. Both streams are navigable and are narrower than 50 feet. One is intermittent and one is perennial.

Shorelands

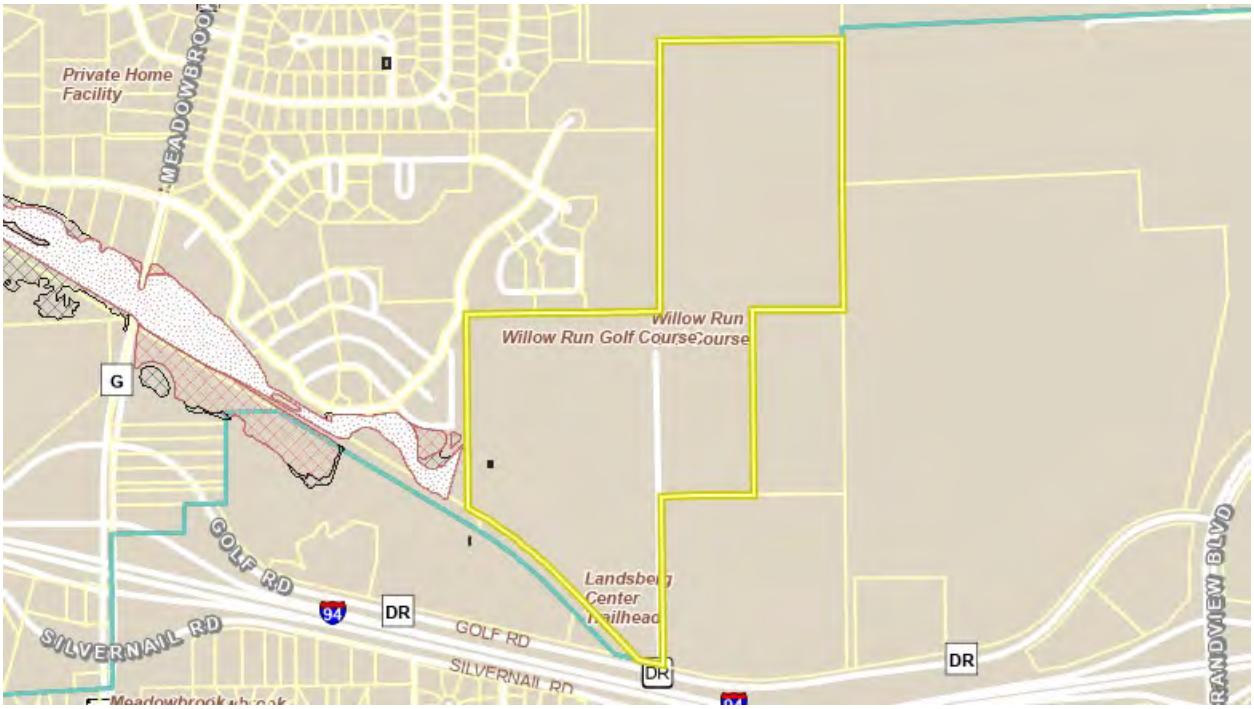
Shorelands associated with the identified major and minor lakes and with the identified perennial and intermittent rivers and streams were located and delineated. Because it is often difficult to identify the precise lateral extent of a shoreland area, a band of 50 feet in depth lying along both sides of and including all intermittent streams was delineated as the shoreland area; while a band 75 feet in depth lying along both sides of and including all perennial streams less than 50 feet in width was delineated as the shoreland area. For those perennial streams and rivers having a width of 50 feet or greater and for all major and minor lake shorelines, a band 75 feet in depth was delineated as the shoreland area. The shoreland area associated with Lake Michigan was delineated as a band 200 feet from the inland edge of the bluff when that bluff is within 200 feet of the lake itself. If the bluff is at a distance greater than 200 feet from the lake, the shoreland area was delineated as a band 200 feet in depth from the inland edge of the beach.

Two streams were located within the study area. Both streams are navigable and are narrower than 50 feet. One is intermittent and one is perennial. The intermittent stream was included as an SEC and the perennial stream was included as a SEC and a PEC.

Floodlands

The floodlands of a river or ·stream are the wide, gently sloping areas contiguous with, and usually lying on both sides of, a river or stream channel that are subject to inundation during a flood. For purposes of the environmental corridor refinement process, the areas inundated by the 100-year recurrence interval flood event were considered to comprise the floodlands of the Region.

There were no floodlands identified on the latest flood maps.



Floodplain as viewed on the Waukesha County GIS

Wetlands

Wetlands are defined by the Commission as areas in which the water table is at, near, or above the land surface, and which are characterized by both hydric soils, such as peats or mucks or other organic soils, and by the growth of hydrophytes.

A wetland delineation was conducted in 2024 by Evergreen Consultants Assured Wetland Delineators. An artificial wetland exemption request was submitted to the DNR and approved for many wetlands and landscape ponds located within the study area. Additionally, an Approved Jurisdictional Determination was received from the US Army Corps of Engineers, and a non-federal exemption request was submitted to the WDNR with wetland mitigation. Exempt wetlands were not included in the environmental corridors.

Many wetlands within the study area remain under state, federal, and/or local jurisdiction. Large, isolated wetlands were included as INRAs and wetlands connected to streams were included as part of PECs and SECs.

The wetland map is included in Appendix A.

Wet, Poorly Drained, and Organic Soils

Certain soils tend to be well suited for supporting certain plant communities and wildlife habitat. These soils are generally wet, poorly drained, and organic, and when devoted to natural open space uses contribute significantly to the ecology of an area.

Palms muck and Pella silt loam soils were observed within the study area. Most of these soils were historically drained for farming by ditching and installation of drain tile lines. Further draining of the study area occurred in the 1960s for construction of the golf course. Areas of

these soil types that were not sufficiently drained were determined to be wetlands. Some of these areas are included within environmental corridors and Isolated Natural Resource Areas.

Woodlands

Woodlands are defined by the Commission as those upland areas one acre or more in size having 17 or more deciduous trees per acre each measuring at least four inches in diameter at breast height and having at least a 50 percent canopy cover. In addition, coniferous tree plantations and reforestation projects were identified as woodlands by the Commission. Woodlands that are lowland woodland areas are delineated as wetlands rather than woodlands because the water table in such areas is located at, near, or above the land surface and because such areas are generally characterized by hydric soils which support hydrophytic trees and shrubs.

There were two woodland areas found within the study area, a northern area and southern area. The northern woodland area is located between a large wetland and a stream and within the golf course. Wide mowed areas bisect this woodland into two sections (east and west). Portions of the western part of this woodland are included within a PEC and an INRA. This woodland was dominated by box elder (*Acer negunda*), hickory (*Carya ovata*), cottonwood (*Populus deltoides*), red oak (*Quercus rubra*), burr oak (*Quercus macrocarpa*), and common buckthorn (*Rhamnus cathartica*). Common buckthorn was a dominant plant in all three strata (trees, shrubs, and herbaceous) and areal coverage percentages ranged from 30 to 70 percent with most areas having 50 percent coverage. The buckthorn infestation is so dominant that the woodland lacks any other species in the herbaceous and shrub layer rendering it virtually useless as wildlife habitat. It appeared that wildlife was avoiding the area and not using it as a corridor. The golf course maintenance crew has begun clearing some areas of the woodland of buckthorn in the eastern section. The west section is located between wetlands connected to a stream and a large wetland in an INRA. The west section of woodland ranges in width from 108 to 126 feet. Due to the narrow width and the degraded habitat of the woodland points were deducted and it was not included as part of an EC. The west section of this woodland is smaller than five acres. The area could greatly benefit from buckthorn control.

The southern woodland area reviewed is adjacent to a large wetland complex located mostly outside the study area. Wetland portions of woodland were included in the INRA. This area was not determined to woodland due to an areal coverage percentage of less than 40 percent of the tree stratum. Dominant tree species included box elder and weeping willow (*Salix babylonica*). The herbaceous layer in the woodland was dominated by invasive non-native species.

Wildlife Habitat

Wildlife habitat is defined by the Commission as an area devoted to natural open uses of a size and with a vegetative cover capable of supporting a high and balanced diversity of wildlife. Such areas generally have vegetation that provides nesting opportunities, travel routes, concealment, and weather impact modification for a variety of wildlife species. The wildlife habitat areas were rated in the inventories as being of high, medium, or low value.

High-value wildlife habitat areas contain a wide diversity of wildlife; are adequate in size to meet all of the habitat requirements of the species concerned-including territorial and

vegetative composition requirements; and are generally located in proximity to other wildlife habitat areas. Medium-value wildlife habitat areas generally lack one of the three aforementioned criteria for a high-value wildlife habitat; however, such habitat areas do retain a good plant and animal diversity. Low-value wildlife habitats are remnant in nature in that they generally lack two or more of the three aforementioned criteria for a high-value wildlife habitat but may, nevertheless, be important if they are located close to medium- or high-value wildlife habitat areas, if they provide corridors linking higher value wildlife habitat areas, or if they provide the only available range in the area.

Low and medium quality wildlife habitat areas were encountered and are included in the point scores.

Steep Slopes

Under Commission standards, a slope of 12 percent or greater is considered unsuitable for all types of urban development as well as for most types of agricultural uses. Steep slopes are divided by the Commission into two categories: slopes 12 to 19 percent and slopes 20 percent or greater.

Some steep slopes in the 12 to 19 percent range were observed.

Prairies

Prairies are defined by the Commission as open, generally treeless areas which are dominated by native grasses. There are three general types of prairies within the Region-wet prairies, mesic prairies, and dry prairies. The types correspond to soil moisture conditions. In addition, it is important to note that oak openings, which are savannahs-that is, park-like areas dominated by dry prairie grasses and forbs but having between one and 17 oak trees, usually burr oaks, per acre-are included in prairie inventories. Only those prairies and oak openings identified by the Wisconsin Scientific Areas Preservation Council and those known to *local* naturalists were included.

No prairies were encountered.

Existing Park and Open Space Sites

A detailed classification of park and open space sites may be found in "*SEWRPC Planning Report No. 27, A Regional Park and Open Space Plan for Southeastern Wisconsin: 2000*". For purposes of the corridor refinement process, park and open space sites were classified into one of two groups-the first group consisting of general-use outdoor recreation sites, special-use outdoor recreation sites, and urban open space sites, and the second group consisting of rural open space sites. The first group of sites generally provides developed outdoor recreation facilities for relatively intensive use, while the second group consists primarily of natural areas that are generally used only for extensive outdoor recreation and natural resource preservation purposes.

No existing parks are present other that the golf course. The golf course was not previously identified by SEWRPC.

Potential Parks

A potential park site is a site which has been identified by the Commission as having the potential to provide opportunities for a variety of resource-oriented outdoor recreation activities. The sites evaluated for their recreation potential were assigned a high, medium, or low value rating. Sites rated as high value are those which possess the most favorable development potential for resource-oriented outdoor recreation facilities, and which appear to have no serious development limitations. Sites rated as medium value possess certain minor development limitations, while sites rated as low value possess some major development limitations and, therefore, have relatively poor potential for development without major modification. A potential park site inventory was conducted by the Commission in 1963 and updated in 1968 and 1975.

The entire area is a low value potential park, but the property owners wish to develop the site as residential and therefore a point value was not given to the area.

Historic Sites

Historic sites have been classified by the Commission into one of three categories-structures, archaeological features, and other cultural features. In general, historic structures include architecturally or historically significant homes, churches, inns, government buildings, mills, schools, and museums. Archaeological sites consist of areas occupied or utilized by man for a sufficient length of time to be marked by certain features-such as mounds-or to contain a number of artifacts. Such sites are generally associated with early American Indian settlements. Other cultural features include sites of early European settlements or are closely related to such settlements and include, for example, old plank roads and cemeteries.

This property is not shown on the Wisconsin Archaeological Site Index as having any sites present and no listing on the state or national historic register is present. Golf courses are not typically eligible for listing unless a famous architect has designed the course. This course is not known to have been designed by a famous course designer.

Scenic Viewpoints

A scenic viewpoint is defined by the Commission as a vantage point from which a diversity of natural features can be observed. A special inventory of scenic viewpoints was conducted by the Commission in 1979 and 1980 for use in the identification and delineation of natural resource base and related elements. Three basic criteria were applied in identifying such viewpoints: 1) the variety of features viewed should exist harmoniously in a natural or rural landscape, 2) there should be one dominant or interesting feature, such as a river or lake, which serves as a focal point of the scenic area, and 3) the view- point should permit an observation area from which the variety of natural features can be seen.

This property has not previously been identified as having a scenic viewpoint and no areas meeting the basic criteria were identified within the study area.

Natural and Scientific Areas

Natural areas, as defined by the Wisconsin Scientific Areas Preservation Council, are tracts of land or water so little modified by man's activity or sufficiently recovered from the effects of such activity that they contain intact native plant and animal communities believed to be

representative of the pre-settlement landscape. State Scientific Areas are those natural areas, geological sites, or archaeological sites identified as being of at least statewide significance and which have been designated by the Wisconsin Department of Natural Resources, Scientific Areas Preservation Council. Natural areas which have not been designated as State Scientific Areas by the Scientific Areas Preservation Council have been divided into three basic categories. They are:

1. Natural Areas of Statewide or Greater Significance-Natural areas of statewide or greater significance are those natural areas which have not been significantly modified by man's activity, or have sufficiently recovered from the effects of such activity so as to contain nearly intact native plant and animal communities which are believed to be representative of the pre-settlement landscape. These are areas which have not as yet been classified as State Scientific Areas.

2. Natural Areas of Countywide or Regional Significance-Natural areas of countywide or regional significance are defined as those natural areas which have been slightly modified by man's activities or which have insufficiently recovered from the effects of such activity, but which still contain good examples of native plant and animal communities representative of the pre-settlement landscape. These natural areas are of lesser significance because their quality is less than ecologically ideal, and because there is evidence of past or present disturbances such as logging, grazing, water level changes as a result of ditching or filling, or pollution. These areas may contain plant or animal community types common to the Region, in which case only the best examples would qualify for State Scientific Area recognition. These natural areas may also be of insufficient size to be of statewide significance. Such areas could serve local communities as educational sites, passive recreational areas, and ecological zones. In addition, such areas, if protected in an undisturbed condition, may be expected to increase in value over time. Therefore, some of these areas may eventually become natural or scientific areas of statewide significance.

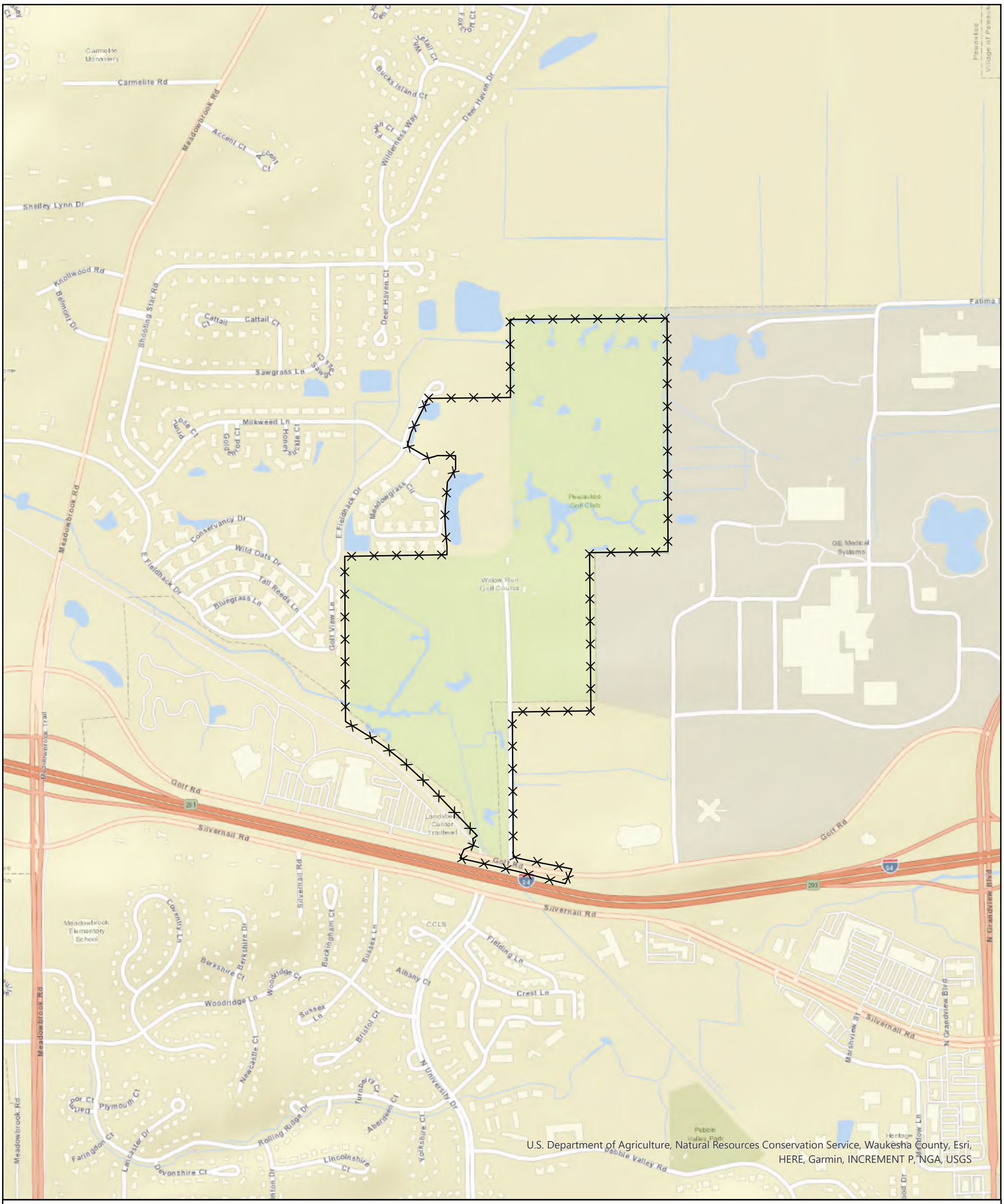
3. Natural Areas of Local Significance-Natural areas of local significance are defined as those natural areas which have been significantly modified by man's activities but have, nevertheless, retained a modest amount of natural cover. Such natural areas are suitable for local educational use and should not be excluded from a natural area survey. Natural areas of local significance may reflect patterns of former vegetation or serve as examples of the influence of human settlement on vegetation. These natural areas may also be expected to increase in value if protected.

Classification of an area into one of the foregoing categories is based upon consideration of the diversity of plant and animal species and community types present; the structure and integrity of the native plant or animal community; the extent of disturbance from man's activities such as logging, grazing, water level changes, and pollution; the commonness of the plant and animal communities present; any unique natural features within the area; the size of the area; and the area's educational value.

This property was not identified by the Wisconsin Scientific Areas Preservation Council, the Wisconsin Department of Natural Resources, or SEWRPC. No areas meeting natural area criteria were identified within the study area.

Appendix A:

Figures and Site Maps



Willow Run- Pewaukee Golf Club
Site Location Map
N12W26506 Golf Road
City of Pewaukee
Waukesha County, WI

N
W E
S

Legend

Site Boundary

Project: WKS25-028-27

0 400 800 1,600
Feet

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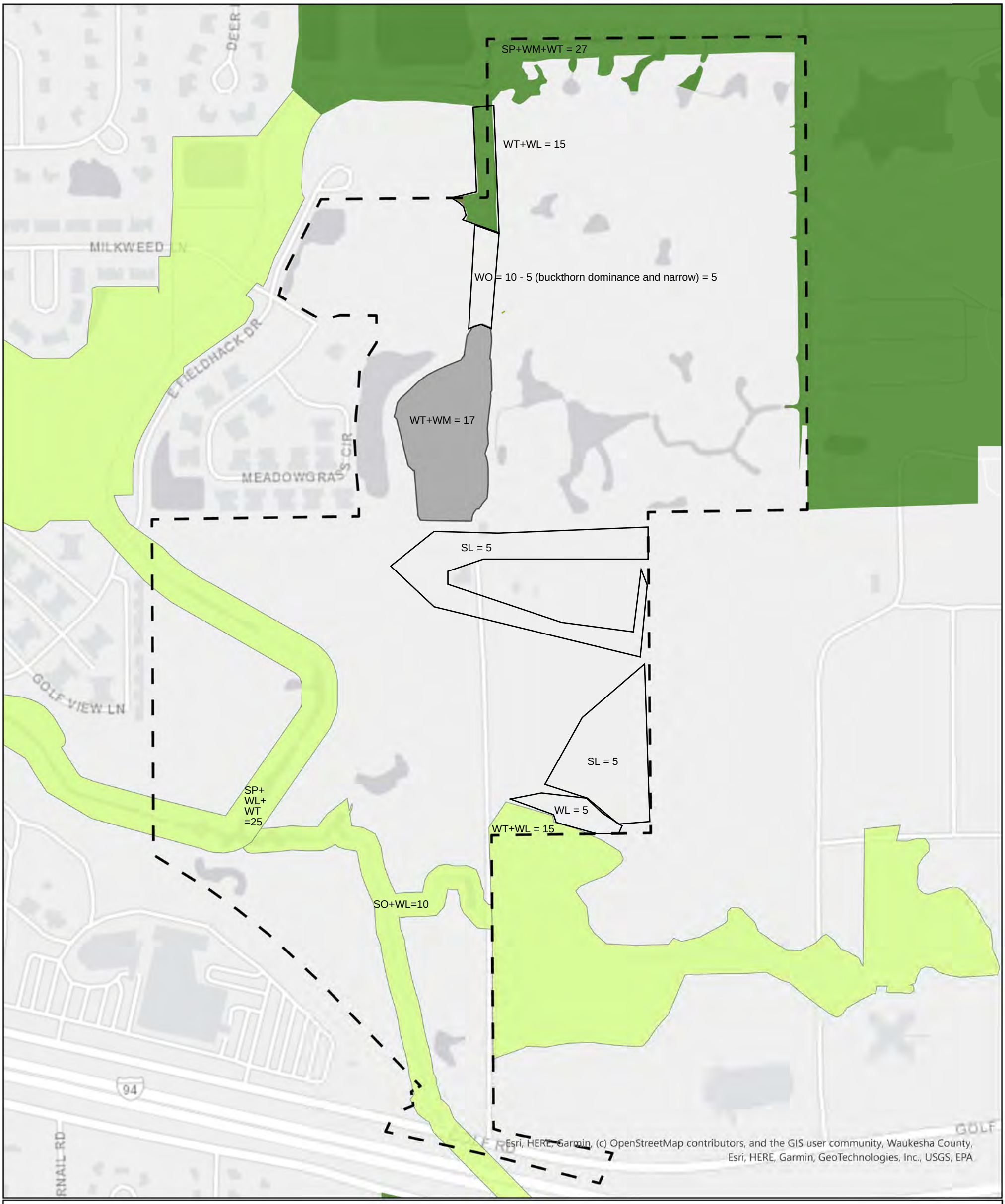
Phone: 920.615.0019 • Website: www.evergreenwis.com



Willow Run
Environmental Corridor Delineation
N12W26506 Golf Road
City of Pewaukee
Waukesha County, WI

N
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Legend

- Site Boundary
- Primary Environmental Corridor
- Secondary Environmental Corridor
- Isolated High-Value Natural Area

Project: WKS25-028-27

0 200 400 800
Feet

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Willow Run
Environmental Corridor Delineation
N12W26506 Golf Road
City of Pewaukee
Waukesha County, WI

Project: WKS25-028-27

Legend

- Site Boundary
- Primary Environmental Corridor
- Secondary Environmental Corridor
- Isolated High-Value Natural Area

N
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Feet

SE Wisc Reg Planning Comm, SEWRPC, Maxar, Microsoft

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Willow Run
Environmental Corridor Delineation
N12W26506 Golf Road
City of Pewaukee
Waukesha County, WI

N
W E
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Legend

- Site Boundary
- Primary Environmental Corridor
- Secondary Environmental Corridor
- Isolated High-Value Natural Area

Project: WKS25-028-27

0 200 400 800
Feet

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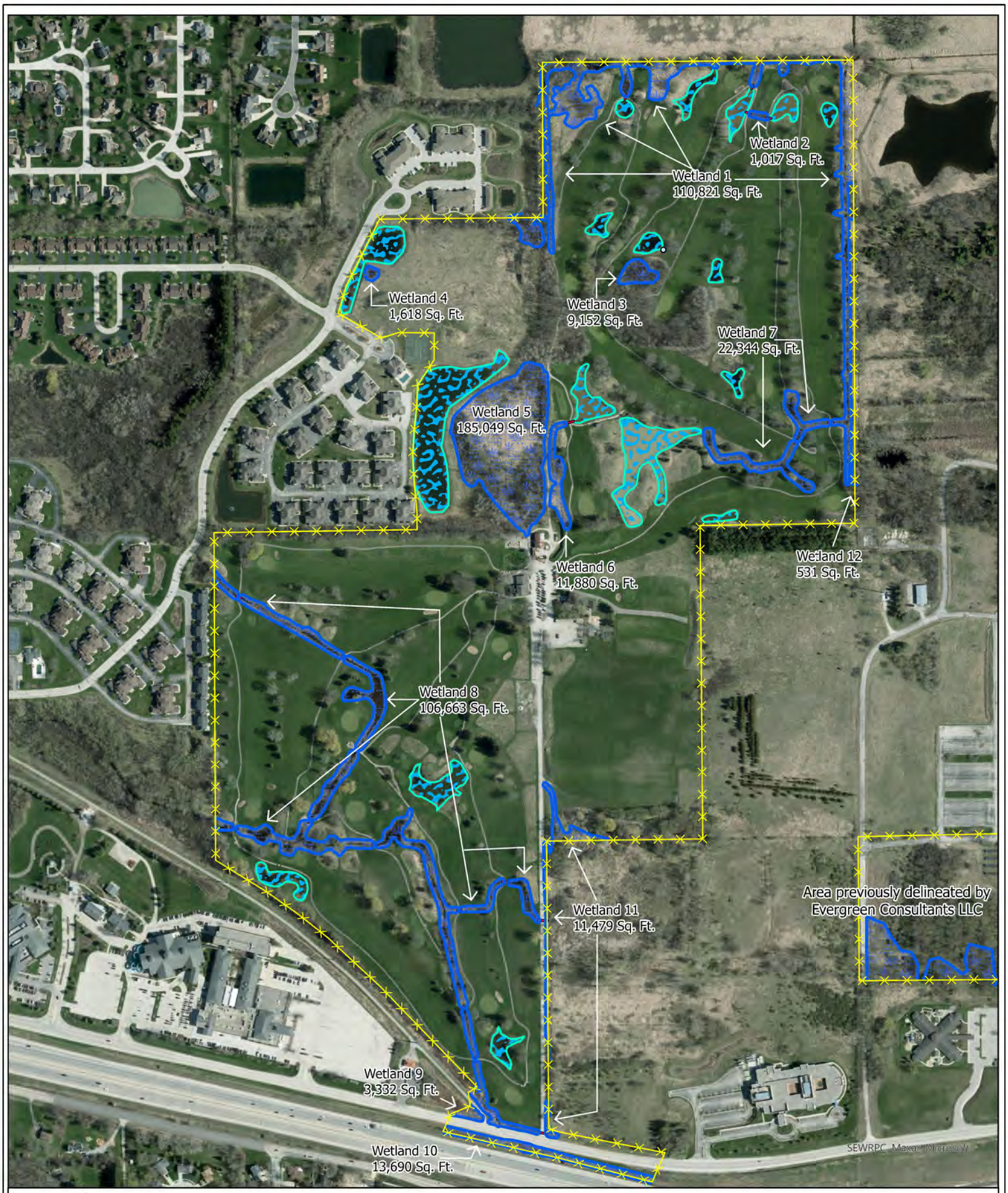

Legend

- Site Boundary
- Wetland Line
- Wetland
- Catch Basin
- Culvert
- Landscape Pond with Developing Wetlands

Willow Run- Pewaukee Golf Club
Wetland Delineation Map
N12W26506 Golf Road
City of Pewaukee
Waukesha County, WI
- Overall Map -

N
W E
S

Project: WKS24-028-01

0 200 400 800 Feet

Wetland Delineation was conducted by
Chad Fradette, EP, Chem,
WDNR Professionally Assured Wetland Delineator
with assistance from
Shyann Banker, Environmental Scientist,
WDNR Professionally Assured Wetland Delineator

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PO Box 680 Pulaski, WI 54162
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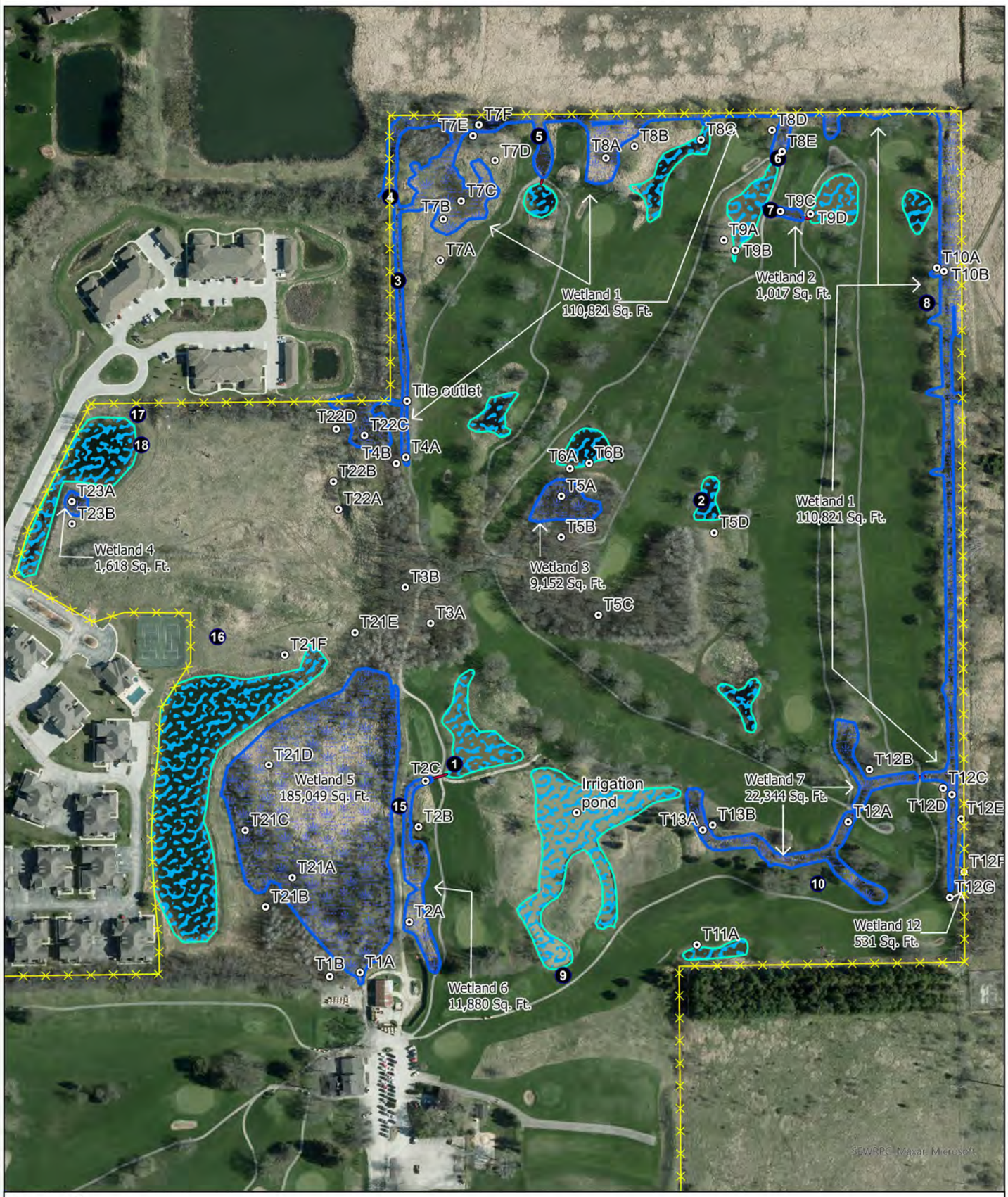

Legend

- Site Boundary
- Sample Point
- Picture Location
- Wetland Line
- Wetland
- Catch Basin
- Culvert
- Landscape Pond with Developing Wetlands

Willow Run- Pewaukee Golf Club
Wetland Delineation Map
N12W26506 Golf Road
City of Pewaukee
Waukesha County, WI
- North Half Map -

N
W E
S

Project: WKS24-028-01

0 110 220 440 Feet

Wetland Delineation was conducted by
Chad Fradette, EP, Chem,
WDNR Professionally Assured Wetland Delineator
with assistance from
Shyann Banker, Environmental Scientist,
WDNR Professionally Assured Wetland Delineator

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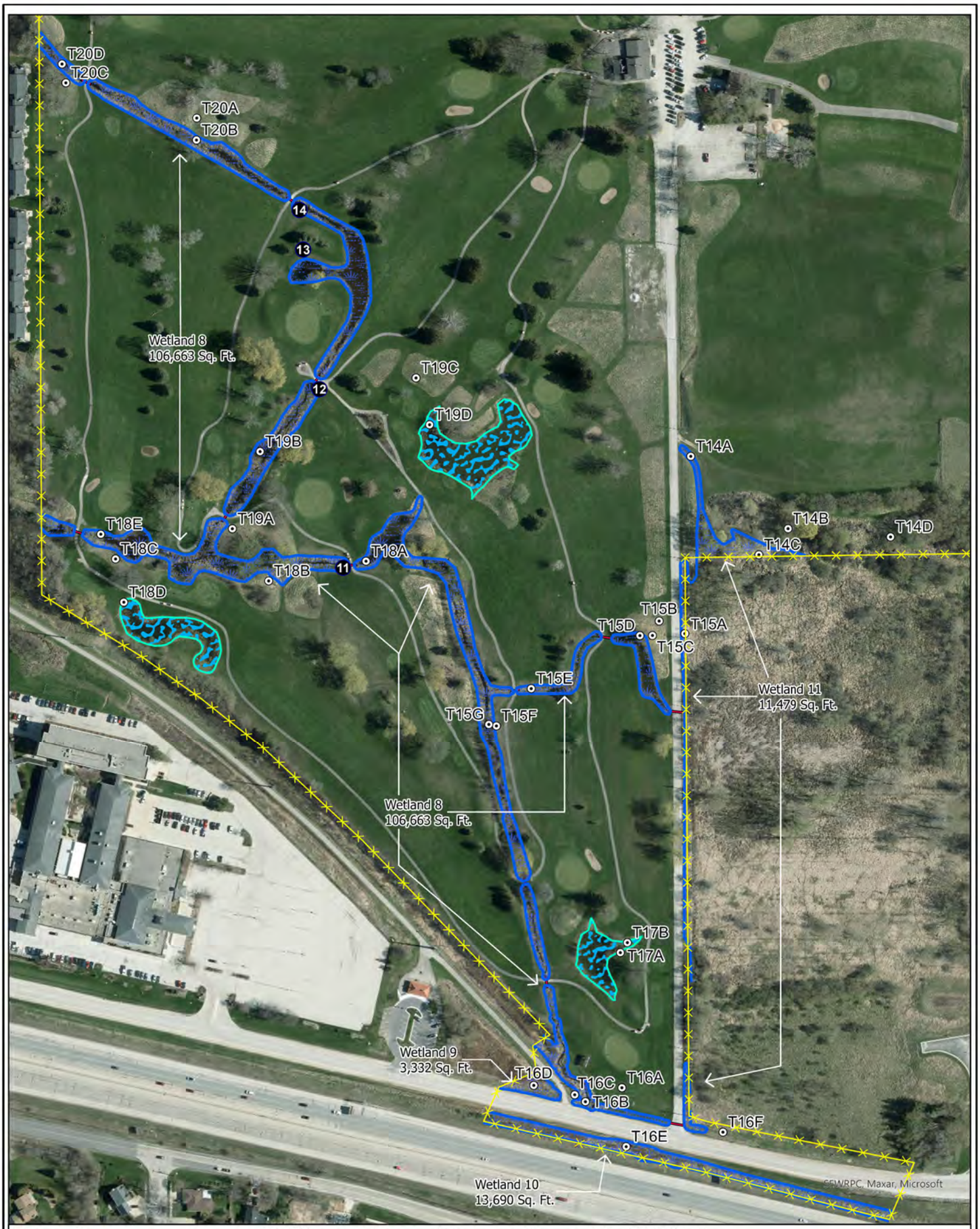

Legend

- Site Boundary
- Sample Point
- Picture Location
- Wetland Line
- Wetland
- Culvert
- Landscape Pond with Developing Wetlands

Wetland Delineation was conducted by
Chad Fradette, EP, Chem,
WDNR Professionally Assured Wetland Delineator
with assistance from
Shyann Banker, Environmental Scientist,
WDNR Professionally Assured Wetland Delineator

Willow Run- Pewaukee Golf Club
Wetland Delineation Map
N12W26506 Golf Road
City of Pewaukee
Waukesha County, WI
- South Half Map -

Project: WKS24-028-01

0 100 200 400 Feet

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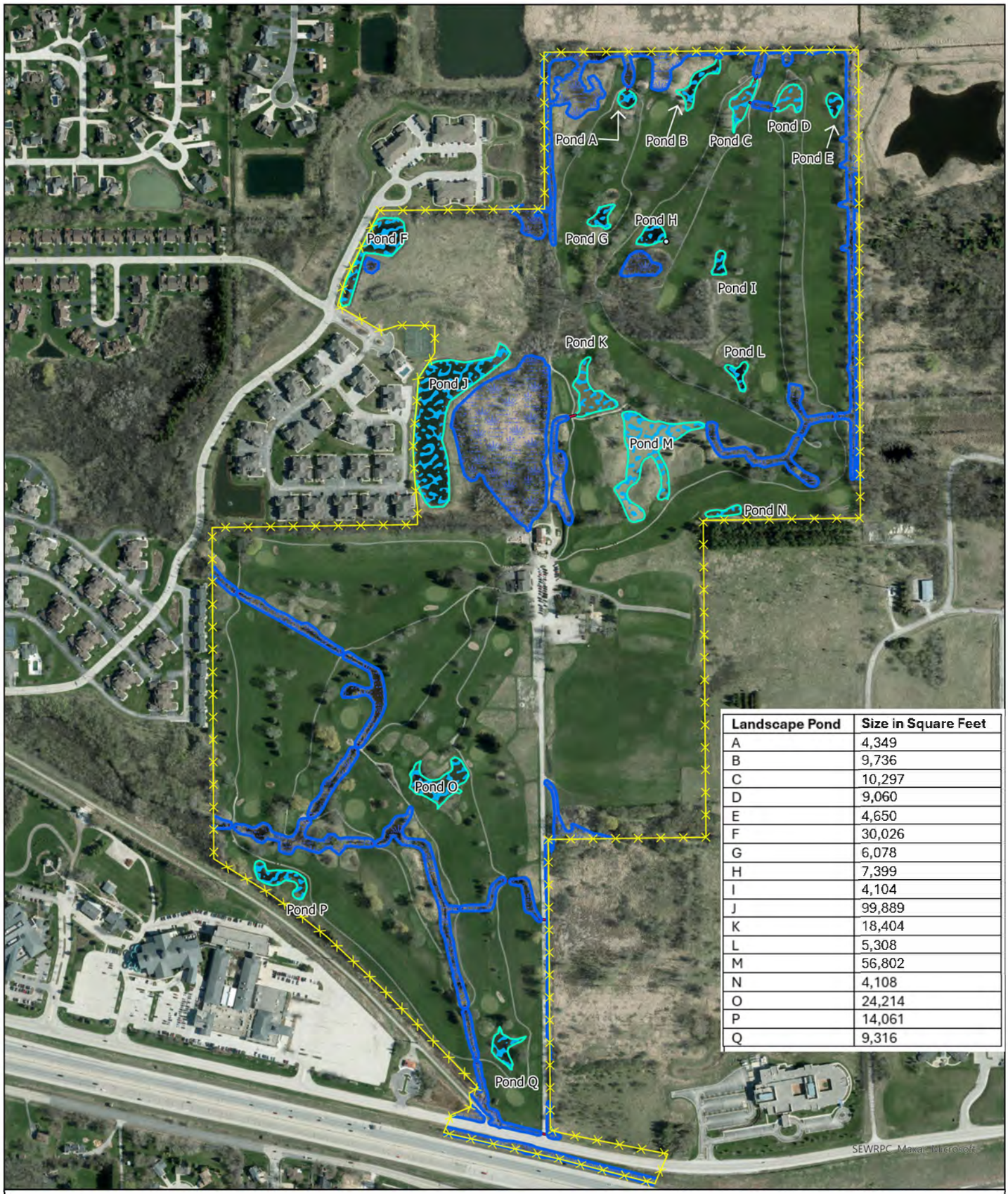

Landscape Pond	Size in Square Feet
A	4,349
B	9,736
C	10,297
D	9,060
E	4,650
F	30,026
G	6,078
H	7,399
I	4,104
J	99,889
K	18,404
L	5,308
M	56,802
N	4,108
O	24,214
P	14,061
Q	9,316

Legend

- Site Boundary
- Wetland Line
- Wetland
- Catch Basin
- Culvert
- Landscape Pond with Developing Wetlands

Willow Run- Pewaukee Golf Club
Wetland Delineation Map with Landscape Pond Labeling
N12W26506 Golf Road
City of Pewaukee
Waukesha County, WI

N
W E
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Project: WKS24-028-01

Wetland Delineation was conducted by
Chad Fradette, EP, Chem,
WDNR Professionally Assured Wetland Delineator
with assistance from
Shyann Banker, Environmental Scientist,
WDNR Professionally Assured Wetland Delineator

0 200 400 800
Feet

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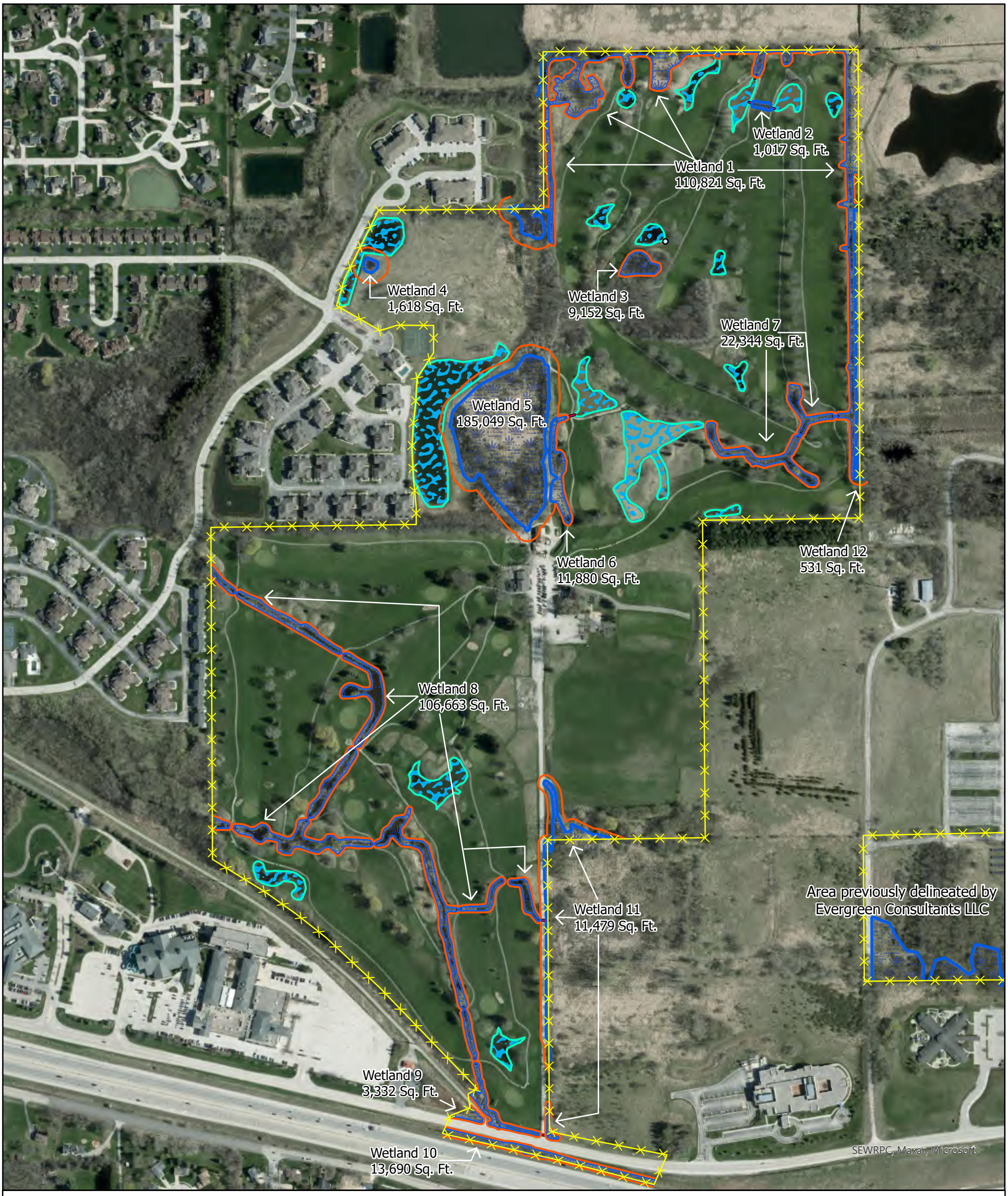

Legend

- Site Boundary
- WDNR Protective Area
- Wetland Line
- Wetland
- Catch Basin
- Culvert
- Landscape Pond with Developing Wetlands

Willow Run- Pewaukee Golf Club
Wetland Delineation Map with WDNR Protective Areas
N12W26506 Golf Road
City of Pewaukee
Waukesha County, WI

N
W E
S

Project: WKS24-028-01

0 200 400 800
Feet

Wetland Delineation was conducted by
Chad Fradette, EP, Chem,
WDNR Professionally Assured Wetland Delineator
with assistance from
Shyann Banker, Environmental Scientist,
WDNR Professionally Assured Wetland Delineator

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Willow Run- Pewaukee Golf Club
Topographic Map
N12W26506 Golf Road
City of Pewaukee
Waukesha County, WI

N
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Legend
- Site Boundary
- Contours

Project: WKS25-028-27

0 200 400 800
Feet

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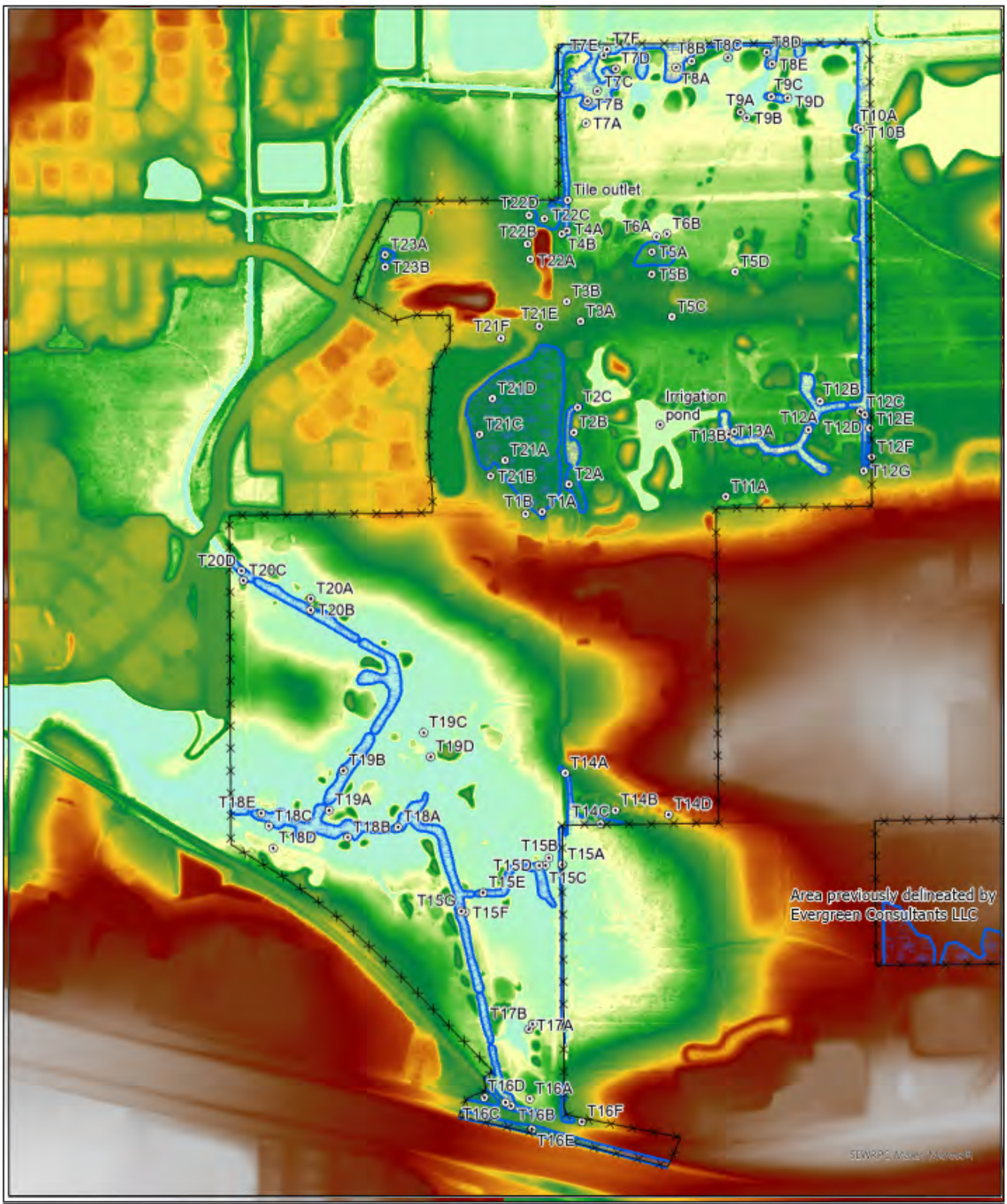

Willow Run- Pewaukee Golf Club
WDNR LiDAR Viewer Map
N12W26506 Golf Road
City of Pewaukee
Waukesha County, WI

Legend

- Site Boundary
- Wetland Line
- Wetland
- Sample Point

N
W E
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Project: WKS25-028-27

0 200 400 800 Feet

Wetland Delineation was conducted by
Chad Fradette, EP, Chem,
WDNR Professionally Assured Wetland Delineator
with assistance from
Shyann Banker, Environmental Specialist

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Willow Run- Pewaukee Golf Club
Wisconsin Wetland Inventory Map
N12W26506 Golf Road
City of Pewaukee
Waukesha County, WI

N
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Legend

- Site Boundary
- USDA Wetspots
- Maximum Extent Wetland Indicators
- Wisconsin Wetland Inventory
- Wetland Points

Project: WKS25-028-27

0 200 400 800
Feet

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Willow Run- Pewaukee Golf Club
National Wetland Inventory Map
N12W26506 Golf Road
City of Pewaukee
Waukesha County, WI

Legend

- Site Boundary
- NWI Wetlands

N
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Project: WKS25-028-27

0 200 400 800
Feet

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Willow Run- Pewaukee Golf Club
NRCS Soil Survey Map
N12W26506 Golf Road
City of Pewaukee
Waukesha County, WI

N
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Legend

- Site Boundary
- USA Soils Map Units

Project: WKS25-028-27

0 200 400 800

Feet

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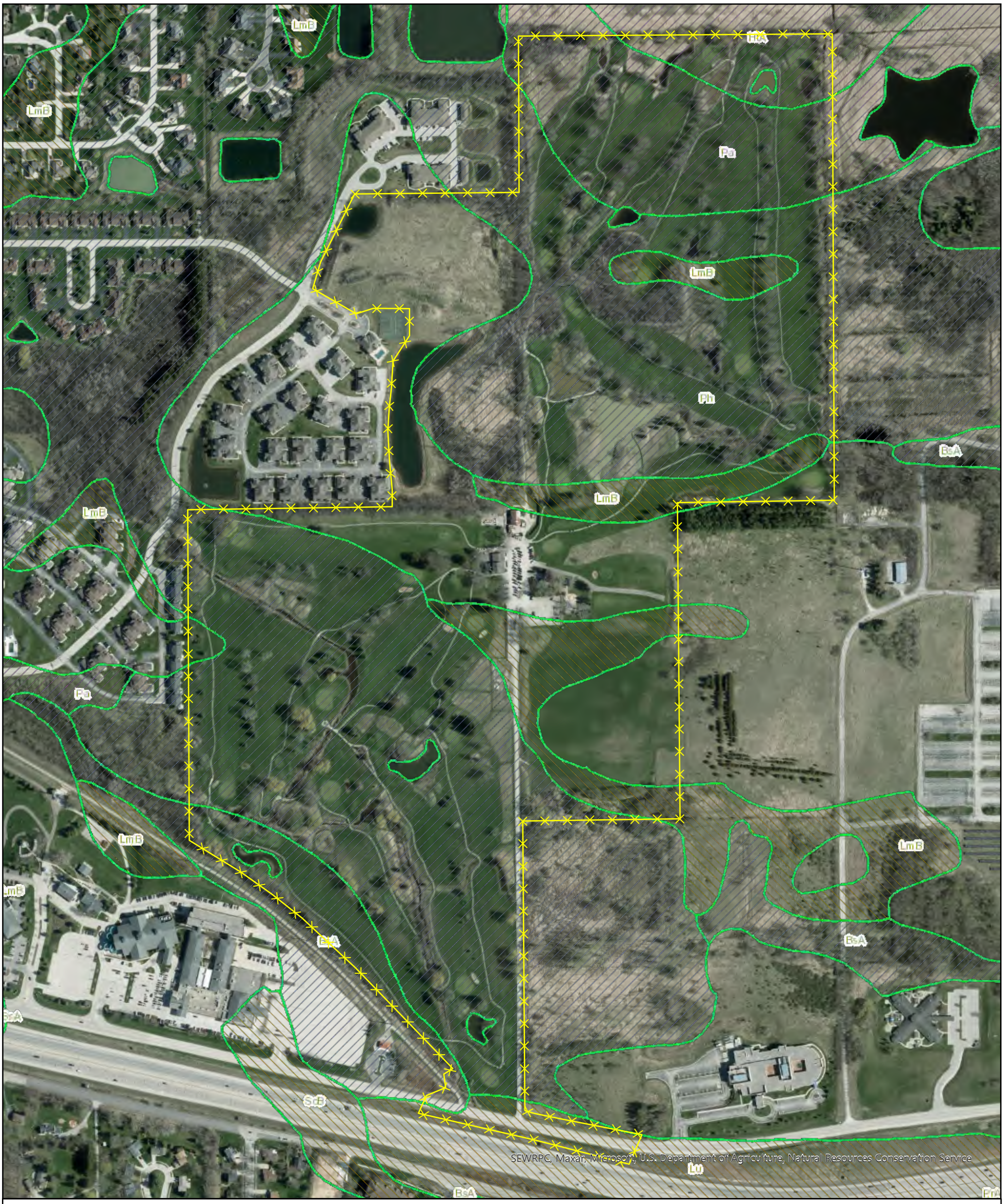

Willow Run- Pewaukee Golf Club
NRCS Soil Hydric Ratings Map
N12W26506 Golf Road
City of Pewaukee
Waukesha County, WI

N
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Legend

- Site Boundary
- Hydric
- Predominantly Hydric
- Partially Hydric
- Predominantly Non-Hydric

Project: WKS25-028-27

0 200 400 800
Feet

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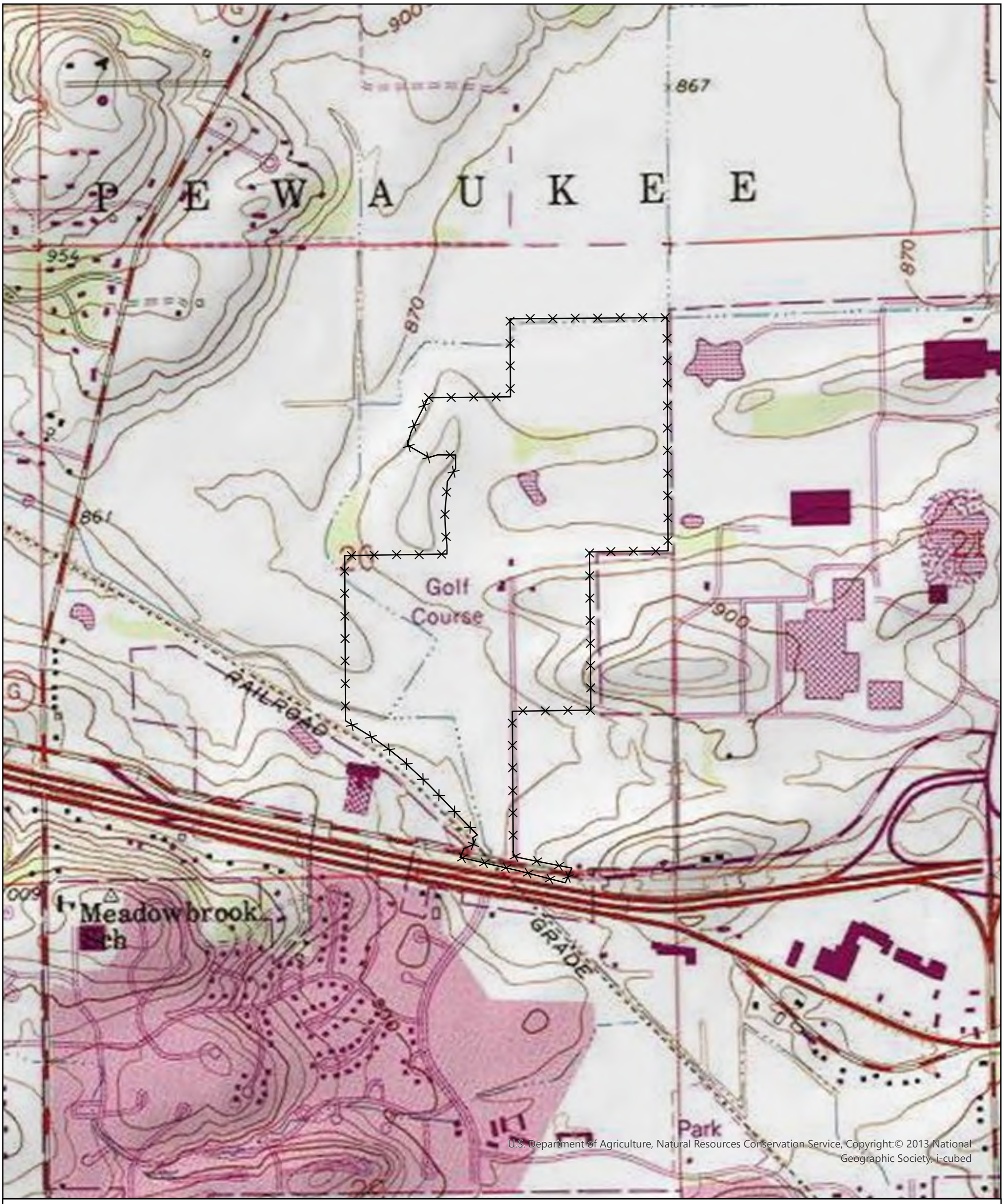

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Willow Run- Pewaukee Golf Club
USGS Topographic Map
N12W26506 Golf Road
City of Pewaukee
Waukesha County, WI

N
W E
S

Legend

Site Boundary

Project: WKS25-028-27

0 400 800 1,600
Feet

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Appendix B:

Site Pictures

Standing at photo location 1 facing east, irrigation pond.

Standing at photo location 2 facing east.

Standing at photo location 3 Wetland 1.

Standing at photo location 3 within Wetland 1 and PEC.

Standing at photo location 4 within Wetland 1 and PEC

Standing at photo location 5 facing northeast within Wetland 1 within PEC.

Standing at photo location 5 facing south within Wetland 1 within PEC.

Standing at photo location 6 facing southwest facing a pond, PEC.

Standing at photo location 6 facing west adjacent to a pond.

Standing at photo location 7 facing east towards Wetland 14.

Standing at photo location 7 facing west towards a pond.

Standing at photo location 8 facing north adjacent to Wetland 1.

Standing at photo location 8 facing south adjacent to Wetland 1.

Standing at photo location 9 facing north.

Standing at photo location 10.

Standing at photo location 10.

Standing at photo location 11 facing east within Wetland 8, intermittent stream, SEC.

Standing at photo location 12 facing northwest adjacent to Wetland 8, SEC.

Standing at photo location 13 facing south towards Wetland 8, SEC.

Standing at photo location 14 facing west within Wetland 8, SEC.

Standing at photo location 14 facing southeast within Wetland 8, stream, SEC.

Standing at photo location 15 facing south between Wetland 5 and Wetland 6.

Standing at photo location 16 facing south, stormwater pond.

Standing at photo location 18 facing north.

Standing at photo location 18 facing west, stormwater pond.

Standing near T1A facing southeast within Wetland 5, INRA.

Standing near T1A facing southwest within Wetland 5, INRA.

Standing near T1B facing west, INRA.

Standing near T1B.

Standing near T3A, buckthorn.

Standing near T3B facing northeast, buckthorn and oak.

Standing near T3B facing southwest, oak and buckthorn.

Standing near T4A facing north within Wetland 1, PEC.

Standing near T4A facing south within Wetland 1, PEC.

Standing near T4A facing west within Wetland 1, PEC.

Standing near T5A within Wetland 3, buckthorn.

Standing near T5B facing east, beginning of buckthorn control, east part of northern woodland.

Standing near T5B, buckthorn.

Standing near T5C, buckthorn infestation.

Standing near T6B facing east within Wetland 2.

Standing near T7A facing north towards Wetland 1, PEC.

Standing near T7A facing east.

Standing near T7B facing northeast within Wetland 1, within PEC.

Standing near T7B facing north within Wetland 1, PEC.

Standing near T7B facing south within Wetland 1, PEC.

Standing near T7C facing southeast within Wetland 1, PEC.

Standing near T7C facing south within Wetland 1, PEC.

Standing near T7D facing south adjacent to Wetland 1.

Standing near T7D facing east adjacent to Wetland 1, reed canary grass infestation.

Standing near T7E facing north towards Wetland 1, PEC, stream to right.

Standing near T7F facing northeast within Wetland 1, PEC, stream.

Standing near T8A facing north within Wetland 1, PEC.

Standing near T8A facing south within Wetland 1, PEC.

Standing near T8B facing north towards Wetland 1, PEC.

Standing near T8B facing west towards Wetland 1, PEC.

Standing near T8C within Wetland 1, PEC.

Standing near T8D facing west adjacent to Wetland 1.

Standing near T8D facing east adjacent to Wetland 1.

Standing near T8E facing south within Wetland 1, PEC.

Standing near T9A facing north adjacent to pond.

Standing near T10A facing south adjacent to Wetland 1.

Standing near T10A facing east towards Wetland 1, PEC.

Standing near T10B within Wetland 1, PEC.

Standing near T10B within Wetland 1, PEC.

Standing near T11A facing east, pond.

Standing near T11A facing west.

Standing near T12A facing north within Wetland 7.

Standing near T12C facing north towards Wetland 1, PEC.

Standing near T12C facing south adjacent to Wetland 1, PEC.

Standing near T12D within Wetland 1, PEC.

Standing near T12E facing south adjacent to Wetland 1, PEC.

Standing near T12F facing north within Wetland 13, PEC.

Standing near T12F facing south within Wetland 13, PEC.

Standing near T12G facing west.

Standing near T12G facing south.

Standing near T14B facing north.

Standing near T14B facing east, southern woodland review area, determined to be meadow with some trees.

Standing near T14C facing northwest within Wetland 11, SEC.

Standing near T14C facing southwest within Wetland 11, SEC.

Standing near T14D facing west, upland meadow, infested with invasive species.

Standing near T15A facing south within Wetland 11, SEC.

Standing near T15A facing east within Wetland 11, SEC.

Standing near T15A facing north within Wetland 11, SEC.

Standing near T15B facing north, upland meadow infested with invasive species.

Standing near T15B facing south towards SEC.

Standing near T15C facing south adjacent to Wetland 11, SEC.

Standing near T15D facing west within Wetland 11, intermittent stream, SEC.

Standing near T15D facing south within Wetland 11, SEC.

Standing near T15E facing west within Wetland 8, SEC.

Standing near T15F facing south adjacent to Wetland 8, SEC.

Standing near T15G within Wetland 8, SEC.

Standing near T15G within Wetland 8, SEC.

Standing near T16A facing northwest.

Standing near T16A facing southeast.

Standing near T17A facing southwest adjacent to pond.

Standing near T18A facing south within Wetland 8, SEC.

Standing near T18B facing southwest adjacent to Wetland 8, SEC.

Standing near T18E facing southeast within Wetland 8, perennial stream, SEC.

Standing near T18E facing south within Wetland 8, SEC.

Standing near T19A facing west adjacent to Wetland 8, SEC.

Standing near T19A facing east adjacent to Wetland 8, SEC.

Standing near T19B facing south within Wetland 8, SEC.

Standing near T19B facing northeast within Wetland 8.

Standing near T19C facing northwest

Standing near T20A facing north.

Standing near T20A facing east.

Standing near T20B within Wetland 8, SEC.

Standing near T20C facing east adjacent to Wetland 8, SEC.

Standing near T20C facing southwest.

Standing near T20D facing northwest within Wetland 8, SEC.

Standing near T20D facing southeast within Wetland 8, SEC.

Standing near T21A within Wetland 5, INRA.

Standing near T21B facing south.

Standing near T21B facing northwest.

Standing near T21C facing northwest within Wetland 5, INRA.

Standing near T21C facing north within Wetland 5, INRA.

Standing near T21D within Wetland 5, INRA.

Standing near T21E facing south, upland meadow with a mix of native forbs and non-native grasses.

Standing near T21E facing north.

Standing near T22A facing southwest, reed canary grass and non-native upland grasses.

Standing near T22A facing north.

Standing near T22A facing south.

Standing near T22B facing north.

Standing near T22B facing west.

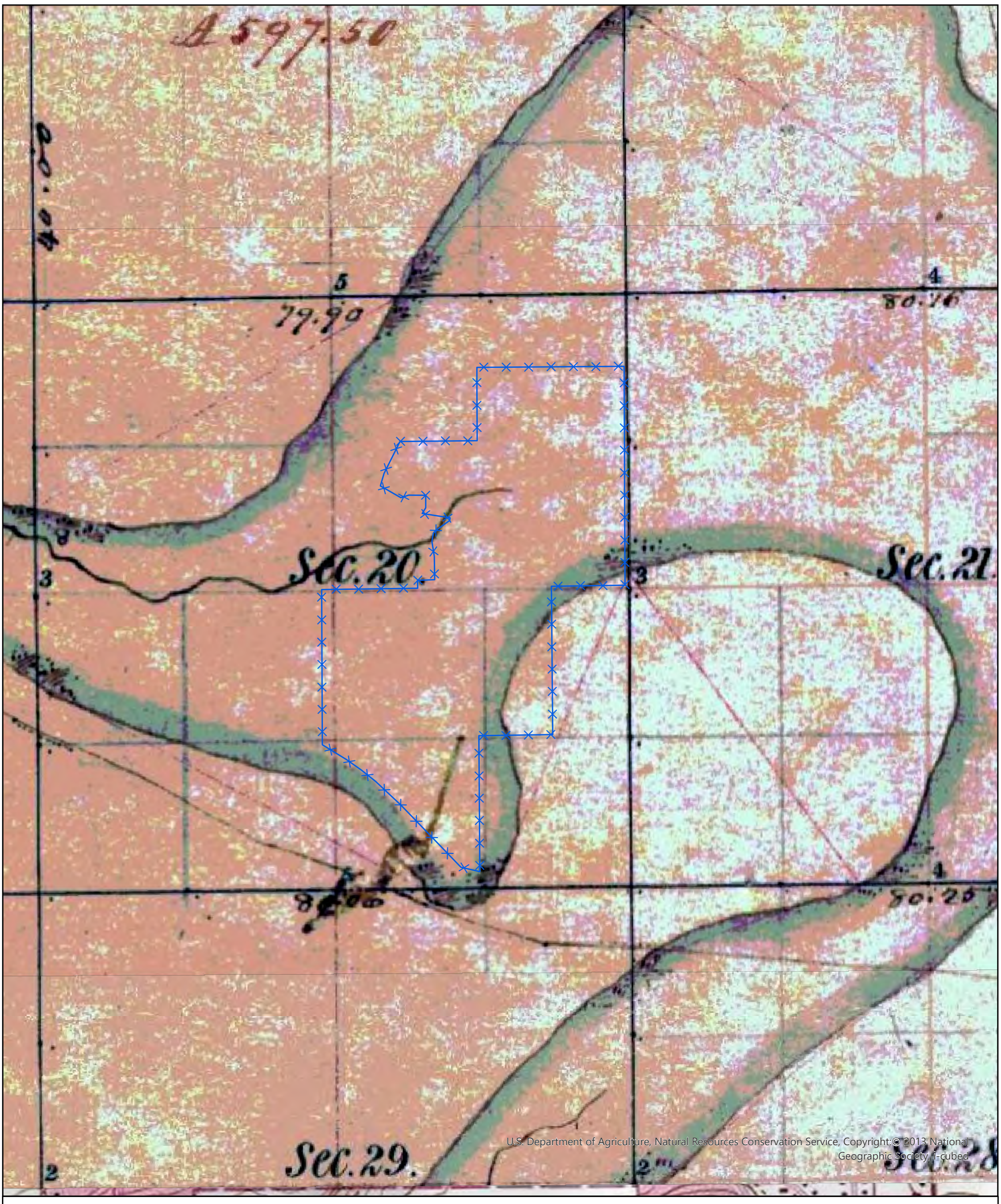
Standing near T22C within Wetland 1, PEC.

Standing near T22D adjacent to Wetland 1, PEC.

Mowed areas between segments of northern woodland.

Appendix C:

Original Survey, Notes, and Bordner Map



Willow Run- Pewaukee Golf Club
Original Survey Map
N12W26506 Golf Road
City of Pewaukee
Waukesha County, WI

Legend

Site Boundary

N
W
E
S

Project: WKS25-028-27

0 425 850 1,700
Feet

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T. 7, R. 19 E. 4th Mer.

North Between Sections 20 & 21

15.94 Blackoak 4 in

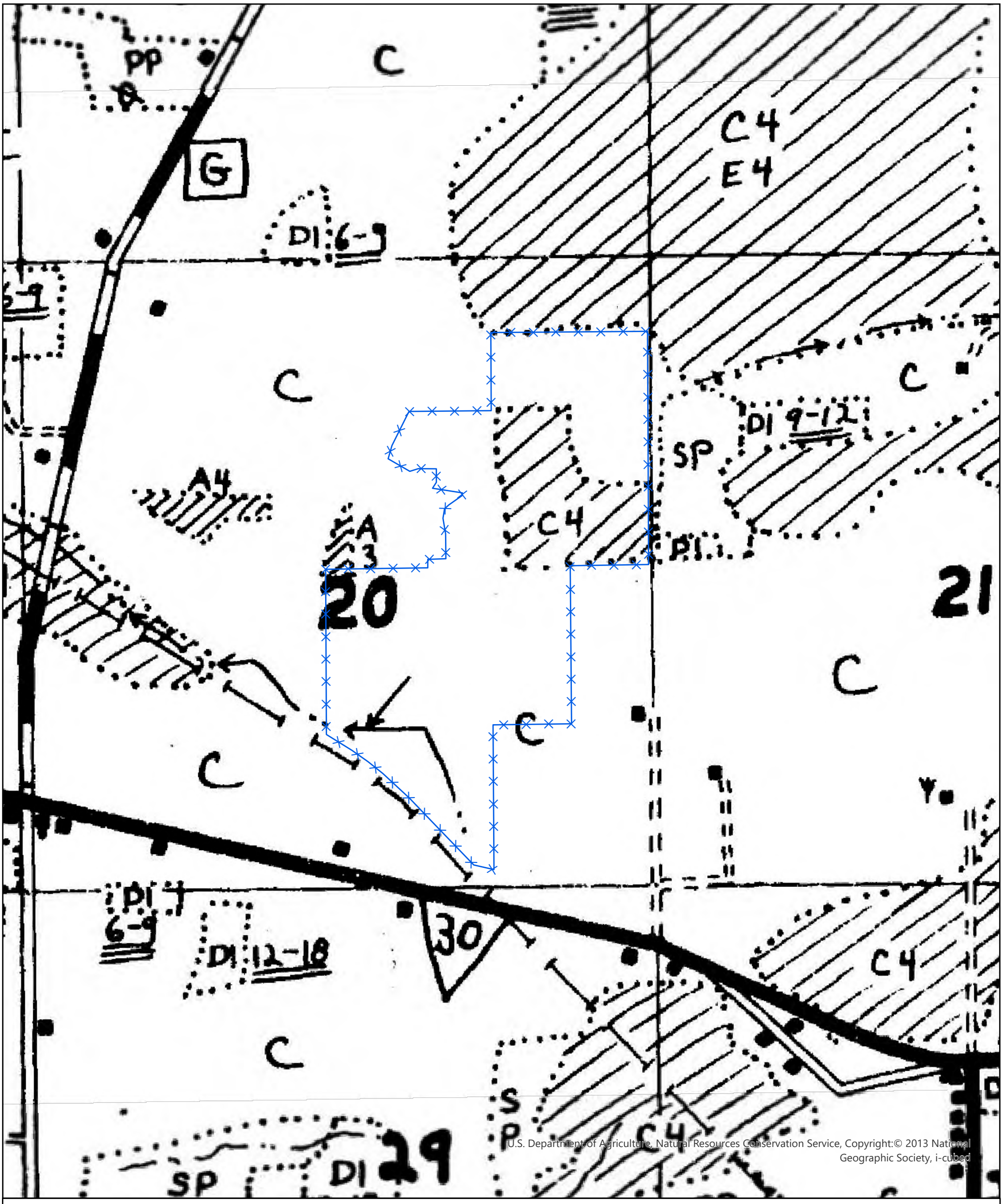
36.25 Whiteoak 20 in

40.00 Set Cr See post
Whiteoak 30 ins 46° E 22 lks
Burroak 14 in N 38½ E 18

43.00 Entered Marsh or Bog
Meadow with Tall grass and
Reed very wet

80.00 Set post Cor of Secs 16. 17. 20. 21
no Bearing trees to be had
Land Except Marsh Second rate
Timber as the last line Oak
Openings

Original Survey Notes



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Willow Run- Pewaukee Golf Club
Bordner Survey Map
N12W26506 Golf Road
City of Pewaukee
Waukesha County, WI

Legend

Site Boundary

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W E
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Project: WKS25-028-27

0 400 800 1,600
Feet

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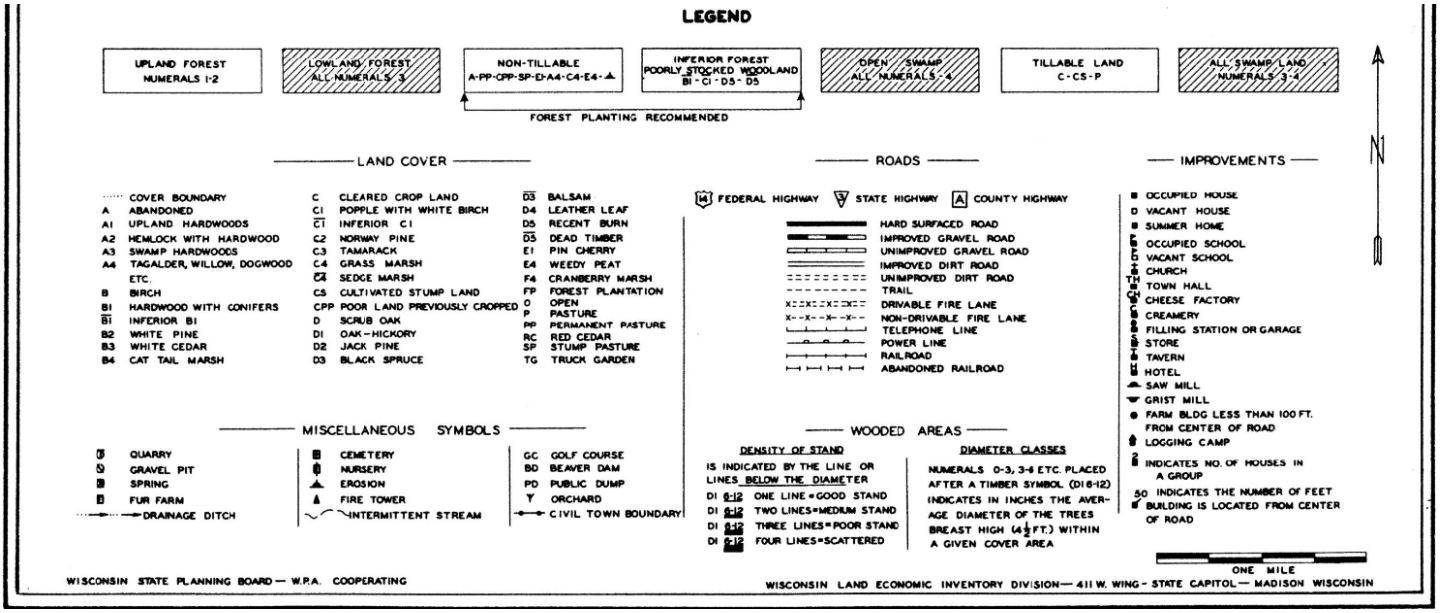

LEGEND
UPLAND FOREST
NUMERALS 1-2
LOWLAND FOREST
ALL NUMERALS 3
NON-TILLABLE
A-PP-CPP-SP-E-A4-C4-E4-▲
INFERIOR FOREST
POORLY STOCKED WOODLAND
B1-C1-D5-D5
OPEN SWAMP
ALL NUMERALS 4
TILLABLE LAND
C-CS-P
ALL SWAMP LAND
NUMERALS 3-4
FOREST PLANTING RECOMMENDED
LAND COVER
COVER BOUNDARY
A ABANDONED
A1 UPLAND HARDWOODS
A2 HEMLOCK WITH HARDWOOD
A3 SWAMP HARDWOODS
A4 TAGALDER, WILLOW, DOGWOOD ETC.
B BIRCH
B1 HARDWOOD WITH CONIFERS
B1 INFERIOR B1
B2 WHITE PINE
B3 WHITE CEDAR
B4 CAT TAIL MARSH
C CLEARED CROP LAND
C1 POPPLE WITH WHITE BIRCH
C1 INFERIOR C1
C2 NORWAY PINE
C3 TAMARACK
C4 GRASS MARSH
C4 SEDGE MARSH
C5 CULTIVATED STUMP LAND
CPP POOR LAND PREVIOUSLY CROPPED
D SCRUB OAK
D1 OAK-HICKORY
D2 JACK PINE
D3 BLACK SPRUCE
D3 BALSAM
D4 LEATHER LEAF
D5 RECENT BURN
D5 DEAD TIMBER
E1 PIN CHERRY
E4 WEEDY PEAT
F4 CRANBERRY MARSH
FP FOREST PLANTATION
O OPEN
P PASTURE
PP PERMANENT PASTURE
RC RED CEDAR
SP STUMP PASTURE
TG TRUCK GARDEN
ROADS
FEDERAL HIGHWAY
STATE HIGHWAY
COUNTY HIGHWAY
HARD SURFACED ROAD
IMPROVED GRAVEL ROAD
UNIMPROVED GRAVEL ROAD
IMPROVED DIRT ROAD
UNIMPROVED DIRT ROAD
TRAIL
DRIVABLE FIRE LANE
NON-DRIVABLE FIRE LANE
TELEPHONE LINE
POWER LINE
RAILROAD
ABANDONED RAILROAD
IMPROVEMENTS
OCCUPIED HOUSE
VACANT HOUSE
SUMMER HOME
OCCUPIED SCHOOL
VACANT SCHOOL
CHURCH
TOWN HALL
CHEESE FACTORY
CREAMERY
FILLING STATION OR GARAGE
STORE
TAVERN
HOTEL
SAW MILL
GRIST MILL
FARM BLDG LESS THAN 100 FT. FROM CENTER OF ROAD
LOGGING CAMP
INDICATES NO. OF HOUSES IN A GROUP
50 INDICATES THE NUMBER OF FEET BUILDING IS LOCATED FROM CENTER OF ROAD
MISCELLANEOUS SYMBOLS
QUARRY
GRAVEL PIT
SPRING
FUR FARM
DRAINAGE DITCH
CEMETERY
NURSERY
EROSION
FIRE TOWER
INTERMITTENT STREAM
GC GOLF COURSE
BD BEAVER DAM
PD PUBLIC DUMP
Y ORCHARD
CIVIL TOWN BOUNDARY
WOODED AREAS
DENSITY OF STAND
IS INDICATED BY THE LINE OR LINES BELOW THE DIAMETER
D1 6-12 ONE LINE=GOOD STAND
D1 6-12 TWO LINES=MEDIUM STAND
D1 6-12 THREE LINES=POOR STAND
D1 6-12 FOUR LINES=SCATTERED
DIAMETER CLASSES
NUMERALS 0-3, 3-6 ETC. PLACED AFTER A TIMBER SYMBOL (D1 6-12) INDICATES IN INCHES THE AVERAGE DIAMETER OF THE TREES BREAST HIGH (4½ FT.) WITHIN A GIVEN COVER AREA
N
ONE MILE
WISCONSIN STATE PLANNING BOARD — W.P.A. COOPERATING
WISCONSIN LAND ECONOMIC INVENTORY DIVISION — 411 W. WING - STATE CAPITOL — MADISON WISCONSIN

Appendix D:

Historic Aerial Photographs

1937 WHAI

1937 north

1937 South

1941 Waukesha County

1941 North

1941 south

1950 Waukesha County

1950 North

1950 South

1956

1956 North

1956 South

1963 Waukesha County

1963 north

150
300ft
Waukesha County Department of Parks and Land Use - Planning and Zor

1963 south

1970 Waukesha County

Waukesha County Department of Parks and Land Use - Planning ar

1970 north

1970 south

1979 FSA

1980 FSA

1980 north

1980 south

1981 FSA

1982 FSA

1983 FSA

1984 FSA

1985 FSA

1986 FSA

1987 FSA

1988 FSA

1989 FSA

1990 FSA

1990 north

1990 south

1991 FSA

1992 FSA

1994 FSA

1995 FSA

1996 FSA

1997 FSA

1998 FSA

1999 FSA

2000 FSA

2001 FSA

2002 FSA

2003 FSA

2005 Google Earth

2006 Maxar Technologies

2007 Google Earth

2008 USDA

2010 Google Earth

2011 Google Earth

2013 Waukesha County

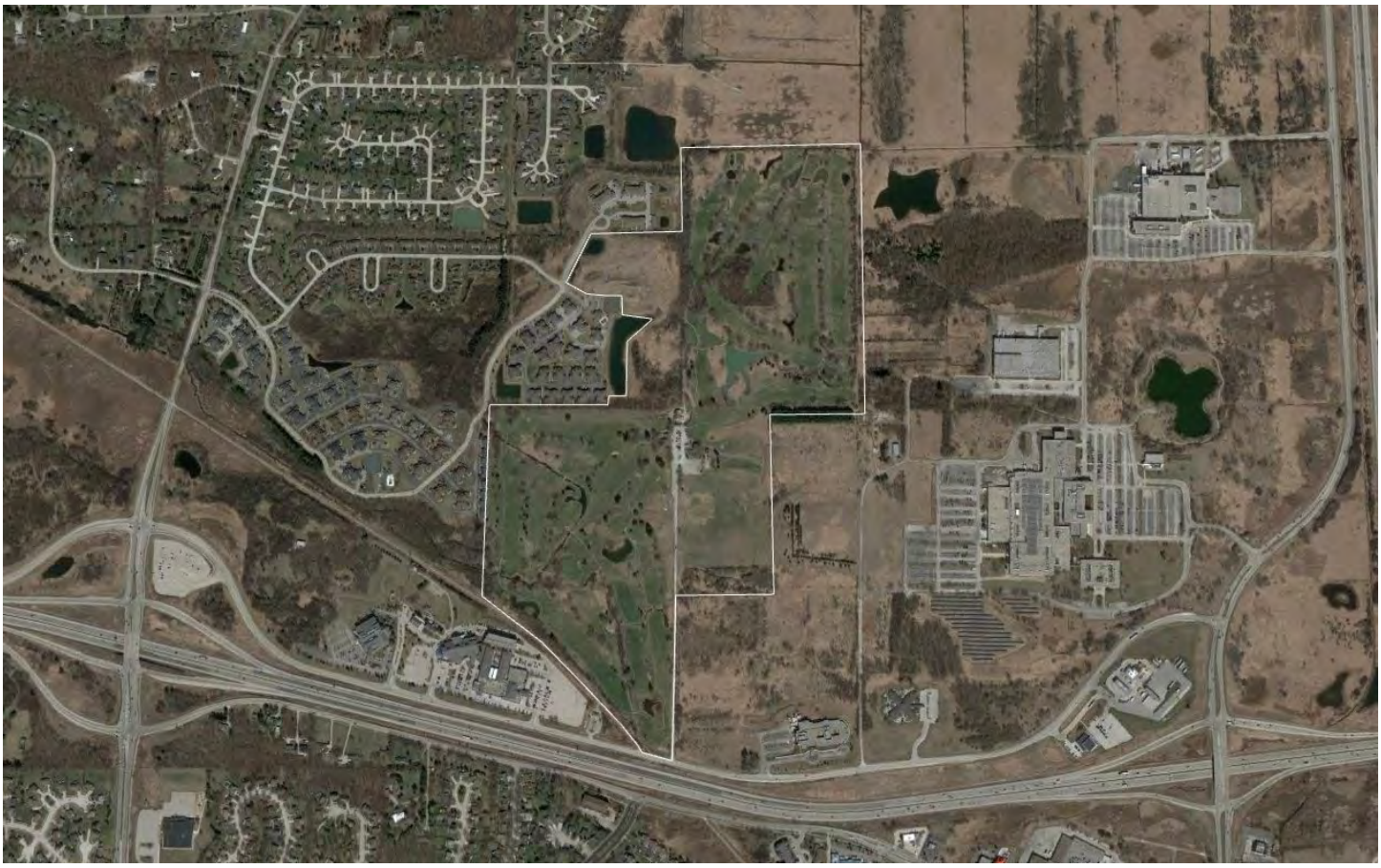
2014 Google Earth

2015 Google Earth

2017 Waukesha County

2018 Google Earth

2020 Maxar Technologies



2021 Google Earth

2022 Maxar Technologies

2023 Airbus

2024 Airbus

Appendix E:

NRCS County Soil Survey Report

Soil Map

Map Scale: 1:9,440 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 100 200 400 600

Feet: 0 450 900 1800 2700

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Waukesha County, Wisconsin
Survey Area Data: Version 1, Sep 3, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 4, 2022—Sep 13, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BsA	Brookston silt loam, 0 to 2 percent slopes	16.3	5.7%
HmB	Hochheim loam, 2 to 6 percent slopes	0.9	0.3%
HmB2	Hochheim loam, 2 to 6 percent slopes, eroded	13.1	4.5%
HmC2	Hochheim loam, 6 to 12 percent slopes, eroded	10.6	3.7%
HmD2	Hochheim loam, 12 to 20 percent slopes, eroded	4.8	1.7%
HoD3	Hochheim soils, 12 to 20 percent slopes, severely eroded	1.2	0.4%
HtA	Houghton muck, 0 to 2 percent slopes	17.4	6.0%
LmB	Lamartine silt loam, 0 to 3 percent slopes	20.8	7.2%
Lu	Loamy land	7.8	2.7%
MoB	Mayville silt loam, 2 to 6 percent slopes	4.9	1.7%
Pa	Palms muck, 0 to 2 percent slopes	21.7	7.5%
Ph	Pella silt loam, 0 to 2 percent slopes	125.8	43.7%
ScB	St. Charles silt loam, 2 to 6 percent slopes	0.6	0.2%
ThB	Theresa silt loam, 2 to 6 percent slopes	35.7	12.4%
W	Water	6.3	2.2%
Totals for Area of Interest		**288.0**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some

observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The

pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Waukesha County, Wisconsin

BsA—Brookston silt loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2tjx5
Elevation: 590 to 1,120 feet
Mean annual precipitation: 29 to 37 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 133 to 178 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Brookston and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Brookston

Setting

Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Loess over loamy till

Typical profile

Ap - 0 to 12 inches: silt loam
Btg1 - 12 to 20 inches: silty clay loam
2Btg2 - 20 to 30 inches: clay loam
2Cg - 30 to 79 inches: sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.60 in/hr)
Depth to water table: About 0 to 20 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 35 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 9.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C/D
Ecological site: F095XB004WI - Wet Loamy or Clayey Lowland
Forage suitability group: High AWC, high water table (G095BY007WI)
Other vegetative classification: High AWC, high water table (G095BY007WI)
Hydric soil rating: Yes

Minor Components

Lamartine

Percent of map unit: 5 percent
Landform: Draws
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: F095XB005WI - Moist Loamy or Clayey Lowland
Hydric soil rating: No

Pella

Percent of map unit: 5 percent
Landform: Drainageways
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: F095XB004WI - Wet Loamy or Clayey Lowland
Hydric soil rating: Yes

HmB—Hochheim loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 2t03x
Elevation: 820 to 1,330 feet
Mean annual precipitation: 29 to 31 inches
Mean annual air temperature: 43 to 46 degrees F
Frost-free period: 135 to 155 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Hochheim and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hochheim

Setting

Landform: Drumlins
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Crest, side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loamy till and/or calcareous, dense loamy till

Typical profile

Ap - 0 to 9 inches: loam
Bt - 9 to 17 inches: clay loam

C - 17 to 33 inches: gravelly loam
Cd - 33 to 79 inches: gravelly loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: 20 to 40 inches to densic material
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 60 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 5.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: D
Ecological site: F095XB007WI - Loamy Upland with Carbonates
Forage suitability group: Mod AWC, adequately drained (G095BY005WI)
Other vegetative classification: Mod AWC, adequately drained (G095BY005WI)
Hydric soil rating: No

Minor Components

Theresa

Percent of map unit: 7 percent
Landform: Drumlins
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: F095XB007WI - Loamy Upland with Carbonates
Hydric soil rating: No

Lamartine

Percent of map unit: 3 percent
Landform: Drumlins
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: F095XB005WI - Moist Loamy or Clayey Lowland
Hydric soil rating: No

HmB2—Hochheim loam, 2 to 6 percent slopes, eroded

Map Unit Setting

National map unit symbol: 2t03w

Elevation: 820 to 1,330 feet
Mean annual precipitation: 29 to 36 inches
Mean annual air temperature: 43 to 46 degrees F
Frost-free period: 135 to 175 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Hochheim, eroded, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hochheim, Eroded

Setting

Landform: Drumlins
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Crest, side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loamy till and/or calcareous, dense loamy till

Typical profile

Ap - 0 to 7 inches: loam
Bt - 7 to 16 inches: loam
C - 16 to 33 inches: gravelly sandy loam
Cd - 33 to 79 inches: gravelly sandy loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: 20 to 40 inches to densic material
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 60 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: D
Ecological site: F095XB007WI - Loamy Upland with Carbonates
Forage suitability group: Mod AWC, adequately drained (G095BY005WI)
Other vegetative classification: Mod AWC, adequately drained (G095BY005WI)
Hydric soil rating: No

Minor Components

Theresa, eroded

Percent of map unit: 10 percent
Landform: Till plains
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Side slope

Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: F095XB007WI - Loamy Upland with Carbonates
Hydric soil rating: No

Lamartine

Percent of map unit: 5 percent
Landform: Drumlins
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: F095XB005WI - Moist Loamy or Clayey Lowland
Hydric soil rating: No

HmC2—Hochheim loam, 6 to 12 percent slopes, eroded

Map Unit Setting

National map unit symbol: 2t03r
Elevation: 900 to 1,340 feet
Mean annual precipitation: 31 to 33 inches
Mean annual air temperature: 43 to 46 degrees F
Frost-free period: 135 to 175 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Hochheim, eroded, and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hochheim, Eroded

Setting

Landform: Drumlins
Landform position (two-dimensional): Shoulder, summit
Landform position (three-dimensional): Crest, side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loamy till and/or calcareous, dense loamy till

Typical profile

Ap - 0 to 7 inches: loam
Bt - 7 to 16 inches: clay loam
C - 16 to 33 inches: gravelly sandy loam
Cd - 33 to 79 inches: gravelly sandy loam

Properties and qualities

Slope: 6 to 12 percent
Depth to restrictive feature: 20 to 40 inches to densic material
Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 60 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: D
Ecological site: F095XB007WI - Loamy Upland with Carbonates
Forage suitability group: Mod AWC, adequately drained (G095BY005WI)
Other vegetative classification: Mod AWC, adequately drained (G095BY005WI)
Hydric soil rating: No

Minor Components

Theresa

Percent of map unit: 5 percent
Landform: Drumlins
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: F095XB007WI - Loamy Upland with Carbonates
Hydric soil rating: No

Hochheim

Percent of map unit: 5 percent
Landform: Drumlins
Landform position (two-dimensional): Backslope, shoulder
Landform position (three-dimensional): Side slope, head slope
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F095XB006WI - Shallow Upland
Hydric soil rating: No

HmD2—Hochheim loam, 12 to 20 percent slopes, eroded

Map Unit Setting

National map unit symbol: 2t72w
Elevation: 820 to 1,330 feet
Mean annual precipitation: 28 to 36 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 130 to 175 days
Farmland classification: Not prime farmland

Map Unit Composition

Hochheim, eroded, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hochheim, Eroded

Setting

Landform: Drumlins
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loamy till and/or calcareous, dense loamy till

Typical profile

Ap - 0 to 6 inches: loam
Bt - 6 to 16 inches: clay loam
C - 16 to 30 inches: gravelly loam
Cd - 30 to 79 inches: gravelly loam

Properties and qualities

Slope: 12 to 20 percent
Depth to restrictive feature: 20 to 36 inches to densic material
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 60 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: D
Ecological site: F095XB007WI - Loamy Upland with Carbonates
Forage suitability group: Mod AWC, adequately drained with limitations (G095BY006WI)
Other vegetative classification: Mod AWC, adequately drained with limitations (G095BY006WI)
Hydric soil rating: No

Minor Components

Theresa

Percent of map unit: 10 percent
Landform: Drumlins
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: F095XB007WI - Loamy Upland with Carbonates
Hydric soil rating: No

Hochheim

Percent of map unit: 5 percent
Landform: Drumlins
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F095XB006WI - Shallow Upland
Hydric soil rating: No

HoD3—Hochheim soils, 12 to 20 percent slopes, severely eroded

Map Unit Setting

National map unit symbol: g949
Elevation: 670 to 1,100 feet
Mean annual precipitation: 28 to 36 inches
Mean annual air temperature: 37 to 55 degrees F
Frost-free period: 135 to 170 days
Farmland classification: Not prime farmland

Map Unit Composition

Hochheim and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hochheim

Setting

Landform: Ground moraines, drumlins
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Calcareous, dense loamy till

Typical profile

A,E - 0 to 6 inches: clay loam
Bt1,Bt2,BC - 6 to 17 inches: clay loam
C - 17 to 60 inches: gravelly loam

Properties and qualities

Slope: 12 to 20 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 60 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: Moderate (about 7.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: B
Ecological site: F095XB007WI - Loamy Upland with Carbonates
Forage suitability group: Mod AWC, adequately drained with limitations (G095BY006WI)
Other vegetative classification: Mod AWC, adequately drained with limitations (G095BY006WI)
Hydric soil rating: No

HtA—Houghton muck, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2szff
Elevation: 600 to 1,090 feet
Mean annual precipitation: 31 to 35 inches
Mean annual air temperature: 43 to 48 degrees F
Frost-free period: 124 to 192 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Houghton, muck, and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Houghton, Muck

Setting

Landform: Depressions
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Herbaceous organic material

Typical profile

Oap - 0 to 6 inches: muck
Oa - 6 to 79 inches: muck

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 5.95 in/hr)
Depth to water table: About 0 to 4 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: Very high (about 23.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: A/D
Ecological site: F095XB001WI - Mucky Swamp
Forage suitability group: Not suited, flooded or organics (G095BY010WI)
Other vegetative classification: Not suited, flooded or organics (G095BY010WI)
Hydric soil rating: Yes

Minor Components

Houghton, ponded

Percent of map unit: 4 percent
Landform: Depressions
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: F095XB001WI - Mucky Swamp
Other vegetative classification: Not suited, flooded or organics (G095BY010WI)
Hydric soil rating: Yes

Palms

Percent of map unit: 2 percent
Landform: Lakebeds (relict)
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: F095XB001WI - Mucky Swamp
Other vegetative classification: Not suited, flooded or organics (G095AY010WI)
Hydric soil rating: Yes

Adrian

Percent of map unit: 2 percent
Landform: Lakebeds (relict)
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: F095XB001WI - Mucky Swamp
Hydric soil rating: Yes

Willette, muck

Percent of map unit: 1 percent
Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: F095XA001WI - Mucky Swamp
Hydric soil rating: Yes

Edwards

Percent of map unit: 1 percent
Landform: Depressions

Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: F095XB001WI - Mucky Swamp
Hydric soil rating: Yes

LmB—Lamartine silt loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2t043
Elevation: 590 to 1,140 feet
Mean annual precipitation: 29 to 35 inches
Mean annual air temperature: 37 to 46 degrees F
Frost-free period: 135 to 170 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Lamartine and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lamartine

Setting

Landform: Interdrumlins
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Loess over loamy till

Typical profile

Ap - 0 to 8 inches: silt loam
Bt1 - 8 to 20 inches: silty clay loam
2Bt2 - 20 to 28 inches: clay loam
2C - 28 to 79 inches: gravelly sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 12 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 8.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: B/D
Ecological site: F095XB005WI - Moist Loamy or Clayey Lowland
Forage suitability group: High AWC, high water table (G095BY007WI)
Other vegetative classification: High AWC, high water table (G095BY007WI)
Hydric soil rating: No

Minor Components

Pella

Percent of map unit: 8 percent
Landform: Drainageways
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: F095XB004WI - Wet Loamy or Clayey Lowland
Hydric soil rating: Yes

Ossian

Percent of map unit: 7 percent
Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: F095XB004WI - Wet Loamy or Clayey Lowland
Hydric soil rating: Yes

Lu—Loamy land

Map Unit Setting

National map unit symbol: g94q
Elevation: 670 to 1,100 feet
Mean annual precipitation: 28 to 36 inches
Mean annual air temperature: 37 to 55 degrees F
Frost-free period: 135 to 170 days
Farmland classification: Not prime farmland

Map Unit Composition

Loamy land and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Loamy Land

Setting

Parent material: Loamy mine spoil or earthy fill

Typical profile

H1 - 0 to 10 inches: loam

Properties and qualities

Slope: 1 to 12 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 12 to 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 2.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Hydric soil rating: No

Minor Components

Pella

Percent of map unit: 10 percent
Landform: Depressions
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: R110XY024IL - Ponded Depressional Sedge Meadow
Hydric soil rating: Yes

MoB—Mayville silt loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 2szfv
Elevation: 830 to 1,120 feet
Mean annual precipitation: 31 to 35 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 130 to 180 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Mayville and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Mayville

Setting

Landform: Drumlins

Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loess over loamy till

Typical profile

Ap - 0 to 6 inches: silt loam
BE - 6 to 12 inches: silt loam
Bt1 - 12 to 28 inches: silty clay loam
2Bt2 - 28 to 32 inches: clay loam
2C - 32 to 79 inches: gravelly sandy loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 12 to 40 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 9.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Ecological site: F095XB010WI - Loamy and Clayey Upland
Forage suitability group: High AWC, adequately drained (G095AY008WI)
Other vegetative classification: High AWC, adequately drained (G095AY008WI)
Hydric soil rating: No

Minor Components

Dodge

Percent of map unit: 8 percent
Landform: Drumlins
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: F095XB007WI - Loamy Upland with Carbonates
Hydric soil rating: No

Lamartine

Percent of map unit: 2 percent
Landform: Drumlins
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: F095XB005WI - Moist Loamy or Clayey Lowland
Hydric soil rating: No

Pa—Palms muck, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2szdc
Elevation: 780 to 1,240 feet
Mean annual precipitation: 31 to 35 inches
Mean annual air temperature: 43 to 49 degrees F
Frost-free period: 124 to 178 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Palms, muck, and similar soils: 87 percent
Minor components: 13 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Palms, Muck

Setting

Landform: Interdrumlins
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Herbaceous organic material over loamy drift

Typical profile

Oap - 0 to 13 inches: muck
Oa - 13 to 30 inches: muck
2Cg - 30 to 79 inches: silty clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 1.98 in/hr)
Depth to water table: About 0 to 4 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 20 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very high (about 15.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: B/D
Ecological site: F095XB001WI - Mucky Swamp
Forage suitability group: Not suited, flooded or organics (G095BY010WI)
Other vegetative classification: Not suited, flooded or organics (G095BY010WI)

Hydric soil rating: Yes

Minor Components

Houghton, muck

Percent of map unit: 8 percent
Landform: Depressions
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: F095XB001WI - Mucky Swamp
Other vegetative classification: Not suited, flooded or organics (G095BY010WI)
Hydric soil rating: Yes

Adrian

Percent of map unit: 5 percent
Landform: Interdrumlins
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: F095XB001WI - Mucky Swamp
Hydric soil rating: Yes

Ph—Pella silt loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2t044
Elevation: 590 to 1,100 feet
Mean annual precipitation: 29 to 37 inches
Mean annual air temperature: 43 to 55 degrees F
Frost-free period: 124 to 178 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Pella and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pella

Setting

Landform: Drainageways
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Silty glaciofluvial deposits over calcareous lacustrine deposits and/or calcareous loamy till

Typical profile

Ap - 0 to 11 inches: silt loam
Bg - 11 to 38 inches: silty clay loam
2Cg - 38 to 79 inches: stratified loamy sand to silty clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Calcium carbonate, maximum content: 40 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Very high (about 12.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: B/D
Ecological site: F095XB004WI - Wet Loamy or Clayey Lowland
Forage suitability group: High AWC, high water table (G095BY007WI)
Other vegetative classification: High AWC, high water table (G095BY007WI)
Hydric soil rating: Yes

Minor Components

Kendall

Percent of map unit: 7 percent
Landform: Drainageways
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: F095XB005WI - Moist Loamy or Clayey Lowland
Hydric soil rating: No

Lamartine

Percent of map unit: 6 percent
Landform: Drainageways
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: F095XB005WI - Moist Loamy or Clayey Lowland
Hydric soil rating: No

Palms, muck

Percent of map unit: 2 percent
Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave

Ecological site: F095XB001WI - Mucky Swamp
Hydric soil rating: Yes

ScB—St. Charles silt loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 2szdy
Elevation: 630 to 1,240 feet
Mean annual precipitation: 29 to 37 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 127 to 178 days
Farmland classification: All areas are prime farmland

Map Unit Composition

St. charles and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of St. Charles

Setting

Landform: Till plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loess over glacial loamy till

Typical profile

Ap - 0 to 9 inches: silt loam
Bt1 - 9 to 48 inches: silt loam
2Bt2 - 48 to 54 inches: sandy loam
2C - 54 to 79 inches: gravelly sandy loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 40 to 60 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 20 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 11.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e

Hydrologic Soil Group: B
Ecological site: F095XB010WI - Loamy and Clayey Upland
Forage suitability group: High AWC, adequately drained (G095BY008WI)
Other vegetative classification: High AWC, adequately drained (G095BY008WI)
Hydric soil rating: No

Minor Components

St. charles, moderately well drained
Percent of map unit: 8 percent
Landform: Till plains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: F095XB010WI - Loamy and Clayey Upland
Other vegetative classification: High AWC, adequately drained (G095BY008WI)
Hydric soil rating: No

Virgil
Percent of map unit: 4 percent
Landform: Till plains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: F095XB005WI - Moist Loamy or Clayey Lowland
Hydric soil rating: No

Pella
Percent of map unit: 3 percent
Landform: Drainageways
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: F095XB004WI - Wet Loamy or Clayey Lowland
Hydric soil rating: Yes

ThB—Theresa silt loam, 2 to 6 percent slopes

Map Unit Setting
National map unit symbol: 2szd9
Elevation: 700 to 1,240 feet
Mean annual precipitation: 31 to 35 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 140 to 180 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Theresa and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Theresa

Setting

Landform: Drumlins
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loess over loamy till and/or calcareous, dense loamy till

Typical profile

Ap - 0 to 8 inches: silt loam
BE - 8 to 14 inches: silt loam
Bt1 - 14 to 18 inches: silty clay loam
2Bt2 - 18 to 34 inches: clay loam
2Cd - 34 to 79 inches: loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: 32 to 35 inches to densic material
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 60 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 5.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Ecological site: F095XB007WI - Loamy Upland with Carbonates
Forage suitability group: Mod AWC, adequately drained with limitations (G095BY006WI)
Other vegetative classification: Mod AWC, adequately drained with limitations (G095BY006WI)
Hydric soil rating: No

Minor Components

Hochheim

Percent of map unit: 10 percent
Landform: Drumlins
Landform position (two-dimensional): Shoulder, summit
Landform position (three-dimensional): Crest, side slope
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F095XB006WI - Shallow Upland

Hydric soil rating: No

Lamartine

Percent of map unit: 5 percent
Landform: Drumlins
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Ecological site: F095XB005WI - Moist Loamy or Clayey Lowland
Hydric soil rating: No

W—Water

Map Unit Setting

National map unit symbol: g96s
Elevation: 660 to 980 feet
Mean annual precipitation: 30 to 34 inches
Mean annual air temperature: 39 to 43 degrees F
Frost-free period: 100 to 140 days
Farmland classification: Not prime farmland

Map Unit Composition

Water: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Soil Information for All Uses

Soil Reports

The Soil Reports section includes various formatted tabular and narrative reports (tables) containing data for each selected soil map unit and each component of each unit. No aggregation of data has occurred as is done in reports in the Soil Properties and Qualities and Suitabilities and Limitations sections.

The reports contain soil interpretive information as well as basic soil properties and qualities. A description of each report (table) is included.

Land Classifications

This folder contains a collection of tabular reports that present a variety of soil groupings. The reports (tables) include all selected map units and components for each map unit. Land classifications are specified land use and management groupings that are assigned to soil areas because combinations of soil have similar behavior for specified practices. Most are based on soil properties and other factors that directly influence the specific use of the soil. Example classifications include ecological site classification, farmland classification, irrigated and nonirrigated land capability classification, and hydric rating.

Hydric Rating by Map Unit (WI)

This Hydric Soil Category rating indicates the components of map units that meet the criteria for hydric soils. Map units are composed of one or more major soil components or soil types that generally make up 20 percent or more of the map unit and are listed in the map unit name, and they may also have one or more minor contrasting soil components that generally make up less than 20 percent of the map unit. Each major and minor map unit component that meets the hydric criteria is rated **hydric.** The map unit class ratings based on the hydric components present are: WI Hydric, WI Predominantly Hydric, WI Partially Hydric, WI Predominantly Nonhydric, and WI Nonhydric. The report also shows the total representative percentage of each map unit that the hydric components comprise.

"WI Hydric" means that all major and minor components listed for a given map unit are rated as being hydric. *"WI Predominantly Hydric"* means that all major components listed for a given map unit are rated as hydric, and at least one contrasting minor component is not rated hydric.*"WI Partially Hydric"* means that at least one major component listed for a given map unit is rated as hydric, and at

least one other major component is not rated hydric. *"WI Predominantly Nonhydric"* means that no major component listed for a given map unit is rated as hydric, and at least one contrasting minor component is rated hydric. *"WI Nonhydric"* means no major or minor components for the map unit are rated hydric. The assumption is that the map unit is nonhydric even if none of the components within the map unit have been rated.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). Under natural conditions, these soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

If soils are wet enough for a long enough period of time to be considered hydric, they typically exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Vasilas, Hurt, and Noble, 2010).

The NTCHS has developed criteria to identify those soil properties unique to hydric soils (Federal Register, 2012). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria use selected soil properties that are described in “Field Indicators of Hydric Soils in the United States” (Vasilas, Hurt, and Noble, 2010), "Soil Taxonomy" (Soil Survey Staff, 1999), "Keys to Soil Taxonomy" (Soil Survey Staff, 2010), and the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

The criteria for hydric soils are represented by codes, for example, 2 or 3. Definitions for the codes are as follows:

1. All Histels except for Folistels, and Histosols except for Folists.
2. Soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Historthels great group, Histoturbels great group, Pachic subgroups, or Cumulic subgroups that:
    A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
    B. Show evidence that the soil meets the definition of a hydric soil;
3. Soils that are frequently ponded for long or very long duration during the growing season.
    A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
    B. Show evidence that the soil meets the definition of a hydric soil;
4. Map unit components that are frequently flooded for long duration or very long duration during the growing season that:
    A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
    B. Show evidence that the soil meets the definition of a hydric soil;

Hydric Condition: Food Security Act information regarding the ability to grow a commodity crop without removing woody vegetation or manipulating hydrology.

References:

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. February, 28, 2012. Hydric soils of the United States.
Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.
Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.
Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.
Vasilas, L.M., G.W. Hurt, and C.V. Noble, editors. Version 7.0, 2010. Field indicators of hydric soils in the United States.

Report—Hydric Rating by Map Unit (WI)

Hydric Rating by Map Unit (WI)–Waukesha County, Wisconsin				
Map Unit Symbol	**Map Unit Name**	**Hydric Percent of Map Unit**	**Hydric Category**	**Landform Hydric Minor Components**
BsA	Brookston silt loam, 0 to 2 percent slopes	95	WI Predominantly Hydric	Drainageways
HmB	Hochheim loam, 2 to 6 percent slopes	0	WI Nonhydric	—
HmB2	Hochheim loam, 2 to 6 percent slopes, eroded	0	WI Nonhydric	—
HmC2	Hochheim loam, 6 to 12 percent slopes, eroded	0	WI Nonhydric	—
HmD2	Hochheim loam, 12 to 20 percent slopes, eroded	0	WI Nonhydric	—
HoD3	Hochheim soils, 12 to 20 percent slopes, severely eroded	0	WI Nonhydric	—
HtA	Houghton muck, 0 to 2 percent slopes	100	WI Hydric	Lakebeds (relict)
LmB	Lamartine silt loam, 0 to 3 percent slopes	15	WI Predominantly Nonhydric	Depressions
Lu	Loamy land	10	WI Predominantly Nonhydric	—
MoB	Mayville silt loam, 2 to 6 percent slopes	0	WI Nonhydric	—
Pa	Palms muck, 0 to 2 percent slopes	100	WI Hydric	Interdrumlins
Ph	Pella silt loam, 0 to 2 percent slopes	87	WI Predominantly Hydric	Depressions
ScB	St. Charles silt loam, 2 to 6 percent slopes	3	WI Predominantly Nonhydric	Drainageways
ThB	Theresa silt loam, 2 to 6 percent slopes	0	WI Nonhydric	—
W	Water	0	WI Nonhydric	—

Hydric Soil List - All Components

This table lists the map unit components and their hydric status in the survey area. This list can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site (National Research Council, 1995; Hurt and others, 2002).

The three essential characteristics of wetlands are hydrophytic vegetation, hydric soils, and wetland hydrology (Cowardin and others, 1979; U.S. Army Corps of Engineers, 1987; National Research Council, 1995; Tiner, 1985). Criteria for all of the characteristics must be met for areas to be identified as wetlands. Undrained hydric soils that have natural vegetation should support a dominant population of ecological wetland plant species. Hydric soils that have been converted to other uses should be capable of being restored to wetlands.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). These soils, under natural conditions, are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

Hydric soils are identified by examining and describing the soil to a depth of about 20 inches. This depth may be greater if determination of an appropriate indicator so requires. It is always recommended that soils be excavated and described to the depth necessary for an understanding of the redoximorphic processes. Then, using the completed soil descriptions, soil scientists can compare the soil features required by each indicator and specify which indicators have been matched with the conditions observed in the soil. The soil can be identified as a hydric soil if at least one of the approved indicators is present.

Map units that are dominantly made up of hydric soils may have small areas, or inclusions, of nonhydric soils in the higher positions on the landform, and map units dominantly made up of nonhydric soils may have inclusions of hydric soils in the lower positions on the landform.

The criteria for hydric soils are represented by codes in the table (for example, 2). Definitions for the codes are as follows:

1. All Histels except for Folistels, and Histosols except for Folists.
2. Soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Historthels great group, Histoturbels great group, Pachic subgroups, or Cumulic subgroups that:
   A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
   B. Show evidence that the soil meets the definition of a hydric soil;
3. Soils that are frequently ponded for long or very long duration during the growing season.
   A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
   B. Show evidence that the soil meets the definition of a hydric soil;
4. Map unit components that are frequently flooded for long duration or very long duration during the growing season that:
   A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
   B. Show evidence that the soil meets the definition of a hydric soil;

Hydric Condition: Food Security Act information regarding the ability to grow a commodity crop without removing woody vegetation or manipulating hydrology.

References:

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. Doc. 2012-4733 Filed 2-28-12. February, 28, 2012. Hydric soils of the United States.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.

Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.

Vasilas, L.M., G.W. Hurt, and C.V. Noble, editors. Version 7.0, 2010. Field indicators of hydric soils in the United States.

Report—Hydric Soil List - All Components

Hydric Soil List - All Components–WI133-Waukesha County, Wisconsin					
Map symbol and map unit name	**Component/Local Phase**	**Comp. pct.**	**Landform**	**Hydric status**	**Hydric criteria met (code)**
BsA: Brookston silt loam, 0 to 2 percent slopes	Brookston	85-95	Depressions	Yes	2
	Lamartine	2-6	Draws	No	—
	Pella	3-9	Drainageways	Yes	2,3
HmB: Hochheim loam, 2 to 6 percent slopes	Hochheim	85-92	Drumlins	No	—
	Theresa	5-8	Drumlins	No	—
	Lamartine	3-7	Drumlins	No	—
HmB2: Hochheim loam, 2 to 6 percent slopes, eroded	Hochheim-Eroded	80-91	Drumlins	No	—
	Theresa-Eroded	6-12	Till plains	No	—
	Lamartine	3-8	Drumlins	No	—
HmC2: Hochheim loam, 6 to 12 percent slopes, eroded	Hochheim-Eroded	85-92	Drumlins	No	—
	Theresa	4-8	Drumlins	No	—
	Hochheim	4-7	Drumlins	No	—
HmD2: Hochheim loam, 12 to 20 percent slopes, eroded	Hochheim-Eroded	80-91	Drumlins	No	—
	Theresa	6-12	Drumlins	No	—
	Hochheim	3-8	Drumlins	No	—
HoD3: Hochheim soils, 12 to 20 percent slopes, severely eroded	Hochheim	100	Ground moraines,drumlins	No	—
HtA: Houghton muck, 0 to 2 percent slopes	Houghton-Muck	84-95	Depressions	Yes	1,2,3
	Houghton-Ponded	2-5	Depressions	Yes	1,3
	Palms	1-3	Lakebeds (relict)	Yes	1,3
	Adrian	1-3	Lakebeds (relict)	Yes	1,3
	Willette-Muck	0-3	Depressions	Yes	1,3
	Edwards	1-2	Depressions	Yes	1,3
LmB: Lamartine silt loam, 0 to 3 percent slopes	Lamartine	80-91	Interdrumlins	No	—
	Pella	6-11	Drainageways	Yes	2,3
	Ossian	3-9	Depressions	Yes	2,3
Lu: Loamy land	Loamy land	90	—	No	—
	Pella	10	Depressions	Yes	2
MoB: Mayville silt loam, 2 to 6 percent slopes	Mayville	80-95	Drumlins	No	—
	Dodge	5-17	Drumlins	No	—
	Lamartine	0-3	Drumlins	No	—

Hydric Soil List - All Components–WI133-Waukesha County, Wisconsin					
Map symbol and map unit name	**Component/Local Phase**	**Comp. pct.**	**Landform**	**Hydric status**	**Hydric criteria met (code)**
Pa: Palms muck, 0 to 2 percent slopes	Palms-Muck	75-95	Interdrumlins	Yes	1,3
	Houghton-Muck	3-15	Depressions	Yes	1,2,3
	Adrian	2-10	Interdrumlins	Yes	1,3
Ph: Pella silt loam, 0 to 2 percent slopes	Pella	80-91	Drainageways	Yes	2,3
	Kendall	5-9	Drainageways	No	—
	Lamartine	4-8	Drainageways	No	—
	Palms-Muck	1-3	Depressions	Yes	1,3
ScB: St. Charles silt loam, 2 to 6 percent slopes	St. Charles	80-90	Till plains	No	—
	St. Charles-Moderately well drained	5-10	Till plains	No	—
	Virgil	3-5	Till plains	No	—
	Pella	2-5	Drainageways	Yes	2,3
ThB: Theresa silt loam, 2 to 6 percent slopes	Theresa	80-92	Drumlins	No	—
	Hochheim	5-14	Drumlins	No	—
	Lamartine	3-6	Drumlins	No	—
W: Water	Water	100	—	No	—

Hydric Soils

This table lists the map unit components that are rated as hydric soils in the survey area. This list can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site (National Research Council, 1995; Hurt and others, 2002).

The three essential characteristics of wetlands are hydrophytic vegetation, hydric soils, and wetland hydrology (Cowardin and others, 1979; U.S. Army Corps of Engineers, 1987; National Research Council, 1995; Tiner, 1985). Criteria for all of the characteristics must be met for areas to be identified as wetlands. Undrained hydric soils that have natural vegetation should support a dominant population of ecological wetland plant species. Hydric soils that have been converted to other uses should be capable of being restored to wetlands.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). These soils, under natural conditions, are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and

duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

Hydric soils are identified by examining and describing the soil to a depth of about 20 inches. This depth may be greater if determination of an appropriate indicator so requires. It is always recommended that soils be excavated and described to the depth necessary for an understanding of the redoximorphic processes. Then, using the completed soil descriptions, soil scientists can compare the soil features required by each indicator and specify which indicators have been matched with the conditions observed in the soil. The soil can be identified as a hydric soil if at least one of the approved indicators is present.

Map units that are dominantly made up of hydric soils may have small areas, or inclusions, of nonhydric soils in the higher positions on the landform, and map units dominantly made up of nonhydric soils may have inclusions of hydric soils in the lower positions on the landform.

The criteria for hydric soils are represented by codes in the table (for example, 2). Definitions for the codes are as follows:

1. All Histels except for Folistels, and Histosols except for Folists.
2. Soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Historthels great group, Histoturbels great group, Pachic subgroups, or Cumulic subgroups that:
    A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
    B. Show evidence that the soil meets the definition of a hydric soil;
3. Soils that are frequently ponded for long or very long duration during the growing season.
    A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
    B. Show evidence that the soil meets the definition of a hydric soil;
4. Map unit components that are frequently flooded for long duration or very long duration during the growing season that:
    A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
    B. Show evidence that the soil meets the definition of a hydric soil;

Hydric Condition: Food Security Act information regarding the ability to grow a commodity crop without removing woody vegetation or manipulating hydrology.

References:

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.
Federal Register. September 18, 2002. Hydric soils of the United States.
Federal Register. July 13, 1994. Changes in hydric soils of the United States.
Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.
National Research Council. 1995. Wetlands: Characteristics and boundaries.
Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.
Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.
Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.
Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.
United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

Report—Hydric Soils

Hydric Soils–Waukesha County, Wisconsin				
Map symbol and map unit name	**Component**	**Percent of map unit**	**Landform**	**Hydric criteria**
BsA—Brookston silt loam, 0 to 2 percent slopes				
	Brookston	90	Depressions	2
	Pella	5	Drainageways	2, 3
HtA—Houghton muck, 0 to 2 percent slopes				
	Houghton, muck	90	Depressions	1, 2, 3
	Houghton, ponded	4	Depressions	1, 3
	Palms	2	Lakebeds (relict)	1, 3
	Adrian	2	Lakebeds (relict)	1, 3
	Willette, muck	1	Depressions	1, 3
	Edwards	1	Depressions	1, 3
LmB—Lamartine silt loam, 0 to 3 percent slopes				
	Pella	8	Drainageways	2, 3
	Ossian	7	Depressions	2, 3
Lu—Loamy land				
	Pella	10	Depressions	2

Hydric Soils–Waukesha County, Wisconsin				
Map symbol and map unit name	**Component**	**Percent of map unit**	**Landform**	**Hydric criteria**
Pa—Palms muck, 0 to 2 percent slopes				
	Palms, muck	87	Interdrumlins	1, 3
	Houghton, muck	8	Depressions	1, 2, 3
	Adrian	5	Interdrumlins	1, 3
Ph—Pella silt loam, 0 to 2 percent slopes				
	Pella	85	Drainageways	2, 3
	Palms, muck	2	Depressions	1, 3
ScB—St. Charles silt loam, 2 to 6 percent slopes				
	Pella	3	Drainageways	2, 3

Taxonomic Classification of the Soils

The system of soil classification used by the National Cooperative Soil Survey has six categories (Soil Survey Staff, 1999 and 2003). Beginning with the broadest, these categories are the order, suborder, great group, subgroup, family, and series. Classification is based on soil properties observed in the field or inferred from those observations or from laboratory measurements. This table shows the classification of the soils in the survey area. The categories are defined in the following paragraphs.

ORDER. Twelve soil orders are recognized. The differences among orders reflect the dominant soil-forming processes and the degree of soil formation. Each order is identified by a word ending in *sol.* An example is Alfisols.

SUBORDER. Each order is divided into suborders primarily on the basis of properties that influence soil genesis and are important to plant growth or properties that reflect the most important variables within the orders. The last syllable in the name of a suborder indicates the order. An example is Udalfs (*Ud*, meaning humid, plus *alfs*, from Alfisols).

GREAT GROUP. Each suborder is divided into great groups on the basis of close similarities in kind, arrangement, and degree of development of pedogenic horizons; soil moisture and temperature regimes; type of saturation; and base status. Each great group is identified by the name of a suborder and by a prefix that indicates a property of the soil. An example is Hapludalfs (*Hapl*, meaning minimal horizonation, plus *udalfs*, the suborder of the Alfisols that has a udic moisture regime).

SUBGROUP. Each great group has a typic subgroup. Other subgroups are intergrades or extragrades. The typic subgroup is the central concept of the great group; it is not necessarily the most extensive. Intergrades are transitions to other orders, suborders, or great groups. Extragrades have some properties that are not representative of the great group but do not indicate transitions to any other taxonomic class. Each subgroup is identified by one or more adjectives preceding the name of the great group. The adjective *Typic* identifies the subgroup that typifies the great group. An example is Typic Hapludalfs.

FAMILY. Families are established within a subgroup on the basis of physical and chemical properties and other characteristics that affect management. Generally, the properties are those of horizons below plow depth where there is much biological activity. Among the properties and characteristics considered are particle-size class, mineralogy class, cation-exchange activity class, soil temperature regime, soil depth, and reaction class. A family name consists of the name of a subgroup preceded by terms that indicate soil properties. An example is fine-loamy, mixed, active, mesic Typic Hapludalfs.

SERIES. The series consists of soils within a family that have horizons similar in color, texture, structure, reaction, consistence, mineral and chemical composition, and arrangement in the profile.

References:
Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.
Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. (The soils in a given survey area may have been classified according to earlier editions of this publication.)

Report—Taxonomic Classification of the Soils

[An asterisk by the soil name indicates a taxadjunct to the series]

Taxonomic Classification of the Soils–Waukesha County, Wisconsin	
Soil name	**Family or higher taxonomic classification**
Adrian	
Adrian	Sandy or sandy-skeletal, mixed, euic, mesic Terric Haplosaprists
Brookston	Fine-loamy, mixed, superactive, mesic Typic Argiaquolls
Dodge	Fine-silty, mixed, superactive, mesic Typic Hapludalfs
Edwards	Marly, euic, mesic Limnic Haplosaprists
Hochheim	Fine-loamy, mixed, active, mesic Typic Argiudolls
Hochheim	Fine-loamy, mixed, active, mesic Typic Argiudolls
Houghton	Euic, mesic Typic Haplosaprists
Kendall	
Lamartine	Fine-silty, mixed, superactive, mesic Aquollic Hapludalfs
Loamy land	
Mayville	Fine-silty, mixed, superactive, mesic Oxyaquic Hapludalfs
Ossian	
Palms	Loamy, mixed, euic, mesic Terric Haplosaprists
Pella	
Pella	Fine-silty, mixed, superactive, mesic Typic Endoaquolls
St. Charles	
St. Charles	Fine-silty, mixed, superactive, mesic Typic Hapludalfs
Theresa	Fine-loamy, mixed, superactive, mesic Typic Hapludalfs
Virgil	

Taxonomic Classification of the Soils–Waukesha County, Wisconsin	
Soil name	**Family or higher taxonomic classification**
Water	Not used over mixed
Willette	Clayey, illitic, euic, mesic Terric Haplosaprists

Jeremy Wagner

From: Jeremy Wagner
Sent: Wednesday, September 3, 2025 5:02 PM
To: Jason Daye; Matt Mrochinski
Subject: FW: Wagner Willow Run Nonfederal Wetland Mitigation Requirement

Follow Up Flag: Follow up
Flag Status: Flagged

Jason- See below about the nonfederal exemptions. Emily was not on the email. I will let you forward to her/ talk to her about it.

Jeremy Wagner, PE
Engineer 2

From: Sanchez, Francesca M - DNR <francesca.sanchez@wisconsin.gov>
Sent: Wednesday, September 3, 2025 4:58 PM
To: Jeremy Wagner <jeremy.wagner@excelengineer.com>
Cc: Shyann Banker <shyann@evergreenwis.com>; Chad Fradette <chad@evergreenwis.com>; Lundeen, Chelsey A - DNR <chelsey.lundeen@wisconsin.gov>
Subject: Wagner Willow Run Nonfederal Wetland Mitigation Requirement

{EXTERNAL EMAIL}

Dear Mr. Wagner,

DNR has completed its review of your Non-Federal Wetland Exemption Request (EXE-SE-2025-68-02559) located in an urban area in the SE Q of Section 20, Township 07 North, Range 19 East, City of Pewaukee, Waukesha County. The project will result in permanent impacts to 1,017 square feet (SF) of fresh (wet) meadow wetlands and 42,061 square feet of historically disturbed wetlands that are now utilized as landscape or stormwater ponds within the Upper Fox HUC 8, Upper Illinois service area.

According to state statute, wetland impacts in urban areas between 10,000 square feet and 1 acre per parcel that qualify for the non-federal wetland exemption require the purchase of wetland mitigation credits to compensate for the wetland losses. Based upon the facts outlined above, the DNR has determined the project has the following wetland mitigation requirements:

Permanent Fresh (Wet) Meadow and Shallow Marsh Impacts (lumped due to only having wet mesic prairie and sedge meadow credits available for purchase in the service area):

- 43,078 square feet – 10,000 square feet (non-federal reduction) = 33,078 square feet
- 33,078 square feet X 1.20: 1 ratio = 39,693.6
- 39,693.6/43,560 = **0.91 mitigation credits required**

DNR has determined that mitigation for the above-mentioned wetland impacts will be accomplished through the purchase of Wetland Mitigation Bank Credits as there are private wetland mitigation bank credits available in the Upper Illinois service area. As wetland credits are available, please contact the following mitigation bank sponsor and **purchase 0.91 wet to wet mesic prairie OR sedge meadow credits**.

- RFD II Wetland Mitigation Bank
  Contact: Gregory Reesman (jr@reesmans.com or 262-539-2124)

Once you receive an affidavit of purchase from the Mitigation Bank, please forward that information to Chelsey Lundeen (copied above) and me. Please note that DNR cannot issue our non-federal exemption approval until we receive the affidavit of credit purchase. Therefore, our review of your application will be placed on **HOLD**, until these requirements have been satisfied. Please let me know if you have any questions or concerns regarding this email.

Please let me know if you have any questions.

Thank you,

Francesca Sanchez
Water Management Specialist
Wisconsin Department of Natural Resources
N7725 Hwy 28
Horicon, WI 53032
Phone: (414) 531-0305
francesca.sanchez@wisconsin.gov

dnr.wi.gov
Our core values include professionalism, integrity, and customer service.
Please visit our survey to provide feedback on your experience interacting with any DNR employee.

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, ST. PAUL DISTRICT
ST. PAUL DISTRICT OFFICE
332 MINNESOTA STREET SUITE E1500
ST. PAUL MINNESOTA 55101

March 31, 2025

Regulatory File No. MVP-2014-02803-RJH

Shyann Banker
Evergreen Consultants LLC
PO Box 680
Pulaski, Wisconsin 541662
shyann@evergreenwis.com

Dear Shyann Banker,

This letter contains an Approved Jurisdictional Determination (AJD) for the area(s) identified below, located on the N12W26506 Golf Road property in Section 20, Township 007N, Range 019E, Waukesha County, Wisconsin. The review area for this determination is identified on the enclosed figure labeled: MVP-2014-02803-RJH.

Non-Jurisdictional Area(s):

We have determined that the following area(s) are not waters of the United States subject to Corps of Engineers (Corps) jurisdiction under Section 404 of the Clean Water Act or Sections 9 or 10 of the Rivers and Harbors Act:

- Wetland 2, (1,017 sqft)
- Wetland 3, (9,152 sqft)
- Wetland 4, (1,618 sqft)
- Wetland 5, (185,049 sqft)
- Wetland 6, (11,880 sqft)
- Wetland 7, (22,344 sqft)
- Landscape Pond A, (4,349 sqft)
- Landscape Pond B, (4,349 sqft)
- Landscape Pond C, (4,349 sqft)
- Landscape Pond D, (4,349 sqft)
- Landscape Pond E, (4,349 sqft)
- Landscape Pond F, (4,349 sqft)
- Landscape Pond G, (4,349 sqft)
- Landscape Pond H (4,349 sqft)
- Landscape Pond I, (4,349 sqft)
- Landscape Pond J, (4,349 sqft)
- Landscape Pond K, (4,349 sqft)
- Landscape Pond L, (4,349 sqft)
- Landscape Pond M, (4,349 sqft)
- Landscape Pond N, (4,349 sqft)
- Landscape Pond O, (4,349 sqft)
- Landscape Pond P, (4,349 sqft)
- Landscape Pond Q, (4,349 sqft)

You are not required to obtain Corps authorization within the area(s) listed above. This determination only applies to the area(s) identified above and is based on a reasonable approximation of their location and boundaries. The basis for this determination is provided in the enclosed Memorandum for Record.

Agricultural Lands Information:

This determination has been conducted to identify the location and extent of the aquatic resources for purposes of the Clean Water Act for the particular site identified in this request. This determination may not be valid for the Wetland Conservation Provisions of the Food

Security Act of 1985, as amended. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should discuss the applicability of an NRCS Certified Wetland Determination with the local USDA service center, prior to starting work.

Appeal Process:

If you object to this approved jurisdictional determination, you may request an administrative appeal under Corps regulations at 33 CFR 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and Request for Appeal (RFA) form. If you request to appeal this determination, you must submit a completed RFA form to the Mississippi Valley Division Office at the address shown on the form. In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR 331.5, and that it has been received by the Division Office within 60 days of the date of the enclosed NAP.

It is not necessary to submit an RFA form to the division office if you do not object to the determination in this letter.

AJD Expiration:

This AJD may be relied upon for five years from the date of this letter. However, the Corps reserves the right to review and revise the determination in response to information that was not considered during our initial review.

Contact Information:

If you have any questions, please contact me in our Green Bay office at 651-290-5859 or Ryan.J.Huber@usace.army.mil. In any correspondence or inquiries, please refer to the Regulatory file number shown above.

Sincerely,

Ryan Huber
Project Manager

Enclosures
AJD MFR, Appeals Form

U.S. Army Corps of Engineers (USACE)

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

For use of this form, see Section 404 of the Clean Water Act, Section 10 of the Rivers and Harbors Act of 1899, and Section 103 of the Marine Protection, Research, and Sanctuaries Act; the proponent agency is CECW-COR.

Form Approved –
OMB No. 0710-0003
Expires 2027-10-31

DATA REQUIRED BY THE PRIVACY ACT OF 1974

Authority	The authorities for requesting this information are Sections 9, 10, 13, and 14, Rivers and Harbors Act of March 3, 1899; Section 404, Clean Water Act; and Section 103 Marine Protection Research and Sanctuaries Act of 1972.
Principal Purpose	This information serves as notification to affected parties regarding the USACE administrative appeal options and process, as well as to facilitate requests for appeal of USACE decisions with which they disagree.
Routine Uses	Routine uses will include: (a) To serve as notification to affected parties of the Corps administrative appeal options and process and to facilitate requests for appeal of Corps decisions with which they disagree. (b) Records may be referred to the Department of Justice for possible criminal prosecution. (c) Records may be referred to other Federal, State, and local agencies for evaluation and enforcement purposes.
Disclosure	Disclosure of this information is voluntary on your part. However, failure of individual to provide requested information could result in inability to determine all pertinent information regarding a Department of the Army permit matter.

The Agency Disclosure Notice (ADN)

The Public reporting burden for this collection of information, 0710-0003, is estimated to average 1 hour per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services, at whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

PURPOSE: This form is used to facilitate the initiation of the administrative appeals process. The appeals process allows an affected party to pursue an administrative appeal of certain Corps of Engineers decisions with which they disagree.

Upon release, this form will also be available on the Corps website https://www.usace.army.mil/Missions/Civil-Works/Regulatory-Program-and-Permits/

Applicant: Shyann Banker	File Number: MVP-2014-02803-RJH	Date: Letter Date 3/31/2025

Documents Attached (*select all that apply*):		Form Reference Section:
☐	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
☐	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
☐	PERMIT DENIAL WITHOUT PREJUDICE	C
☐	PERMIT DENIAL WITH PREJUDICE	D
☒	APPROVED JURISDICTIONAL DETERMINATION	E
☐	PRELIMINARY JURISDICTIONAL DETERMINATION	F

SECTION I

The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at https://www.usace.army.mil/Missions/Civil-Works/Regulatory-Program-and-Permits/appeals/ or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.

- OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.

- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C. PERMIT DENIAL WITHOUT PREJUDICE: Not appealable

You received a permit denial without prejudice because a required Federal, state, and/or local authorization and/or certification has been denied for activities which also require a Department of the Army permit before final action has been taken on the Army permit application. The permit denial without prejudice is not appealable. There is no prejudice to the right of the applicant to reinstate processing of the Army permit application if subsequent approval is received from the appropriate Federal, state, and/or local agency on a previously denied authorization and/or certification.

D: PERMIT DENIAL WITH PREJUDICE: You may appeal the permit denial

You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information for reconsideration

- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice means that you accept the approved JD in its entirety and waive all rights to appeal the approved JD.

- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

- RECONSIDERATION: You may request that the district engineer reconsider the approved JD by submitting new information or data to the district engineer within 60 days of the date of this notice. The district will determine whether the information submitted qualifies as new information or data that justifies reconsideration of the approved JD. A reconsideration request does not initiate the appeal process. You may submit a request for appeal to the division engineer to preserve your appeal rights while the district is determining whether the submitted information qualifies for a reconsideration.

F: PRELIMINARY JURISDICTIONAL DETERMINATION: Not appealable

You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also, you may provide new information for further consideration by the Corps to reevaluate the JD.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision you may contact:	If you have questions regarding the appeal process, or to submit your request for appeal, you may contact:
Name: Ryan Huber	Name: Brian Oberlies, Regulatory Appeals Review Officer
Street Address, City, State: 320 North Broadway Suite 200 Green Bay, Wisconsin 54303	Street Address, City, State: 1400 Walnut Street Vicksburg, Mississippi 39180
Phone: 651-290-5859	Phone: 601-634-5820
Email: Ryan.J.Huber@usace.army.mil	Email: brian.m.oberlies@usace.army.mil

SECTION II – REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. Use additional pages as necessary. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15-day notice of any site investigation and will have the opportunity to participate in all site investigations.

Email address of appellant and/or agent	Telephone number
Signature of appellant or agent	Date

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, ST. PAUL DISTRICT
ST. PAUL DISTRICT OFFICE
332 MINNESOTA STREET SUITE E1500
ST. PAUL MINNESOTA 55101

MVP-R March 31, 2025

MEMORANDUM FOR RECORD

SUBJECT: US Army Corps of Engineers (Corps) Approved Jurisdictional Determination in accordance with the "Revised Definition of 'Waters of the United States'"; (88 FR 3004 (January 18, 2023) as amended by the "Revised Definition of 'Waters of the United States'; Conforming" (8 September 2023) ,[1] MVP-2014-02803-RJH [MFR 1 of 1][2]

BACKGROUND. An Approved Jurisdictional Determination (AJD) is a Corps document stating the presence or absence of waters of the United States on a parcel or a written statement and map identifying the limits of waters of the United States on a parcel. AJDs are clearly designated appealable actions and will include a basis of JD with the document.[3] AJDs are case-specific and are typically made in response to a request. AJDs are valid for a period of five years unless new information warrants revision of the determination before the expiration date or a District Engineer has identified, after public notice and comment, that specific geographic areas with rapidly changing environmental conditions merit re-verification on a more frequent basis.[4]

On January 18, 2023, the Environmental Protection Agency (EPA) and the Department of the Army ("the agencies") published the "Revised Definition of 'Waters of the United States,'" 88 FR 3004 (January 18, 2023) ("2023 Rule"). On September 8, 2023, the agencies published the "Revised Definition of 'Waters of the United States'; Conforming", which amended the 2023 Rule to conform to the 2023 Supreme Court decision in *Sackett v. EPA*, 598 U.S., 143 S. Ct. 1322 (2023) ("*Sackett*").

This Memorandum for Record (MFR) constitutes the basis of jurisdiction for a Corps AJD as defined in 33 CFR §331.2. For the purposes of this AJD, we have relied on Section 10 of the Rivers and Harbors Act of 1899 (RHA),[5] the 2023 Rule as amended,

[1] While the Revised Definition of "Waters of the United States"; Conforming had no effect on some categories of waters covered under the CWA, and no effect on any waters covered under RHA, all categories are included in this Memorandum for Record for efficiency.
[2] When documenting aquatic resources within the review area that are jurisdictional under the Clean Water Act (CWA), use an additional MFR and group the aquatic resources on each MFR based on the TNW, the territorial seas, or interstate water that they are connected to. Be sure to provide an identifier to indicate when there are multiple MFRs associated with a single AJD request (i.e., number them 1, 2, 3, etc.).
[3] 33 CFR 331.2.
[4] Regulatory Guidance Letter 05-02.
[5] USACE has authority under both Section 9 and Section 10 of the Rivers and Harbors Act of 1899 but for convenience, in this MFR, jurisdiction under RHA will be referred to as Section 10.

as well as other applicable guidance, relevant case law, and longstanding practice in evaluating jurisdiction.

1. SUMMARY OF CONCLUSIONS.

   a. Provide a list of each individual feature within the review area and the jurisdictional status of each one (i.e., identify whether each feature is/is not a water of the United States and/or a navigable water of the United States).

- Wetland 2, (1,017 sqft)
- Wetland 3, (9,152 sqft)
- Wetland 4, (1,618 sqft)
- Wetland 5, (185,049 sqft)
- Wetland 6, (11,880 sqft)
- Wetland 7, (22,344 sqft)
- Landscape Pond A, (4,349 sqft)
- Landscape Pond B, (4,349 sqft)
- Landscape Pond C, (4,349 sqft)
- Landscape Pond D, (4,349 sqft)
- Landscape Pond E, (4,349 sqft)
- Landscape Pond F, (4,349 sqft)
- Landscape Pond G, (4,349 sqft)
- Landscape Pond H (4,349 sqft)
- Landscape Pond I, (4,349 sqft)
- Landscape Pond J, (4,349 sqft)
- Landscape Pond K, (4,349 sqft)
- Landscape Pond L, (4,349 sqft)
- Landscape Pond M, (4,349 sqft)
- Landscape Pond N, (4,349 sqft)
- Landscape Pond O, (4,349 sqft)
- Landscape Pond P, (4,349 sqft)
- Landscape Pond Q, (4,349 sqft)

2. REFERENCES.

   a. "Revised Definition of 'Waters of the United States,'" 88 FR 3004 (January 18, 2023) ("2023 Rule")

   b. "Revised Definition of 'Waters of the United States'; Conforming" 88 FR 61964 (September 8, 2023))

   c. *Sackett v. EPA*, 598 U.S. 651, 143 S. Ct. 1322 (2023)

3. REVIEW AREA.
   a. Project Area Size (in acres): 164.3
   b. Location Description: The project/review area is located in Section 20, Township 007N, Range 019E, Waukesha County, Wisconsin.
   c. Center Coordinates of the Project Site (in decimal degrees) Latitude: 43.053620 Longitude: -88.270670
   d. Nearest City or Town: Pewaukee
   e. County: Waukesha
   f. State: Wisconsin

g. Other associated Jurisdictional Determinations (including outcomes):

4. NEAREST TRADITIONAL NAVIGABLE WATER (TNW), THE TERRITORIAL SEAS, OR INTERSTATE WATER TO WHICH THE AQUATIC RESOURCE IS CONNECTED. [NA.][6]

5. FLOWPATH FROM THE SUBJECT AQUATIC RESOURCES TO A TNW, THE TERRITORIAL SEAS, OR INTERSTATE WATER. [NA]

6. SECTION 10 JURISDICTIONAL WATERS[7]: Describe aquatic resources or other features within the review area determined to be jurisdictional in accordance with Section 10 of the Rivers and Harbors Act of 1899. Include the size of each aquatic resource or other feature within the review area and how it was determined to be jurisdictional in accordance with Section 10.[8]
N/A

7. SECTION 404 JURISDICTIONAL WATERS: Describe the aquatic resources within the review area that were found to meet the definition of waters of the United States in accordance with the 2023 Rule as amended, consistent with the Supreme Court's decision in *Sackett*. List each aquatic resource separately, by name, consistent with the naming convention used in section 1, above. Include a rationale for each aquatic resource, supporting that the aquatic resource meets the relevant category of "waters of the United States" in the 2023 Rule as amended. The rationale should also include a written description of, or reference to a map in the administrative record that shows, the lateral limits of jurisdiction for each aquatic resource, including how that limit was determined, and incorporate relevant references used. Include the size of each aquatic resource in acres or linear feet and attach and reference related figures as needed.

a. Traditional Navigable Waters (TNWs) (a)(1)(i): N/A

[6] This MFR should not be used to complete a new stand-alone TNW determination. A stand-alone TNW determination for a water that is not subject to Section 9 or 10 of the Rivers and Harbors Act of 1899 (RHA) is completed independently of a request for an AJD. A stand-alone TNW determination is conducted for a specific segment of river or stream or other type of waterbody, such as a lake, where upstream or downstream limits or lake borders are established.
[7] 33 CFR 329.9(a) A waterbody which was navigable in its natural or improved state, or which was susceptible of reasonable improvement (as discussed in § 329.8(b) of this part) retains its character as "navigable in law" even though it is not presently used for commerce, or is presently incapable of such use because of changed conditions or the presence of obstructions.
[8] This MFR is not to be used to make a report of findings to support a determination that the water is a navigable water of the United States. The district must follow the procedures outlined in 33 CFR part 329.14 to make a determination that water is a navigable water of the United States subject to Section 10 of the RHA.

b. The Territorial Seas (a)(1)(ii): N/A

c. Interstate Waters (a)(1)(iii): N/A

d. Impoundments (a)(2): N/A

e. Tributaries (a)(3): N/A

f. Adjacent Wetlands (a)(4): N/A

g. Additional Waters (a)(5): N/A

8. NON-JURISDICTIONAL AQUATIC RESOURCES AND FEATURES

a. Describe aquatic resources and other features within the review area identified in the 2023 Rule as amended as not "waters of the United States" even where they otherwise meet the terms of paragraphs (a)(2) through (5). Include the type of excluded aquatic resource or feature, the size of the aquatic resource or feature within the review area and describe how it was determined to meet one of the exclusions listed in 33 CFR 328.3(b).[9]

We have reviewed and evaluated the historical photography (1938-present), Google Earth photography, soil mapping, and the Wetland Delineation report submitted by the applicant for the following wetlands:

Landscape Pond F, (30,026 sqft)- b(5) exclusion
Landscape Pond H (7,399 sqft)- b(5) exclusion
Landscape Pond J, (99,889 sqft)- b(5) exclusion
Landscape Pond M, (56,802 sqft)- b(5) exclusion
Landscape Pond N, (4,108 sqft)- b(5) exclusion
Landscape Pond P, (14,061 sqft)- b(5) exclusion

Based on evaluation of the available data, lack of wetland signatures in historical aerials, and the lack of hydric soils surrounding the above listed wetland areas, we have determined that the above resources have been identified as artificial lakes or ponds created by excavating dry land to collect and retain water and which are used exclusively for such purposes as irrigation and settling basins to serve the operation and maintenance of a golf course. These ponds were likely excavated between 1963 and 2004.

[9] 88 FR 3004 (January 18, 2023)

Landscape Pond A, (4,349 sqft)- b(6) exclusion
Landscape Pond B, (9,736 sqft) - b(6) exclusion
Landscape Pond C, (10,297 sqft) - b(6) exclusion
Landscape Pond D, (9,060 sqft) - b(6) exclusion
Landscape Pond E, (4,650 sqft) - b(6) exclusion
Landscape Pond G, (6,078 sqft) - b(6) exclusion
Landscape Pond I, (4,104 sqft) - b(6) exclusion
Landscape Pond K, (18,404 sqft) - b(6) exclusion
Landscape Pond L, (5,308 sqft) - b(6) exclusion
Landscape Pond O, (4,349 sqft) - b(6) exclusion
Landscape Pond Q, (9,316 sqft) - b(6) exclusion

Based on evaluation of the available data, lack of wetland signatures in historical aerials, and the lack of hydric soils surrounding the above listed wetland areas, we have determined that the above resources have been identified as artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating and/or diking dry land to retain water for primarily aesthetic reasons. These ponds were used as golf course obstacles and were excavated between 1963 and 2004.

Wetland 7, (22,344 sqft)-b(3) exclusion

Based on evaluation of the available data, lack of wetland signatures in historical aerials, and the lack of hydric soils surrounding the above listed wetland areas, we have determined that this wetland is a ditch that was excavated wholly in and draining only dry land and do not carry a relatively permanent flow of water. The area walk excavated some time between 1986 to 1989. Wetland 7 is a ditch that was excavated in uplands to provide surface drainage from Landscape Pond M offsite to a wetland complex east of the AJD review area.

The resources listed above are not jurisdictional under the 2023 Revised Definition of ‘Waters of the United States’: Conforming” 88 FR 61964 Final Rule.

b. Describe aquatic resources and features within the review area that were determined to be non-jurisdictional because they do not meet one or more categories of waters of the United States under the 2023 Rule as amended (e.g., tributaries that are non-relatively permanent waters; non-tidal wetlands that do not have a continuous surface connection to a jurisdictional water).

- Wetland 2, (1,017 sqft)
- Wetland 3, (9,152 sqft)

- Wetland 4, (1,618 sqft)
- Wetland 5, (185,049 sqft)
- Wetland 6, (11,880 sqft)

The resources listed above are depressional wetlands surrounded by uplands in an active golf course. The site consists of stands of upland hardwood forest, upland meadows, golf course obstacles, and wetlands. The immediately surrounding land is currently under residential development and agricultural lands. The area surrounding the wooded portion of the site is generally level. The Digital Elevation Model and aerial photography show that the wetlands are not abutting or physically touching a relatively permanent water (RPW). Wetland 5, Wetland 6, Landscape Pond K and Landscape Pond M are connected via tile lines and culverts into the Wetland 7. The nearest RPW is an unnamed tributary to Pewaukee Lake. The tributary is approximately 225 linear feet west of Pond O.

These wetlands are not TNWs, territorial seas, or interstate waters and therefore are not (a)(1) waters. The wetlands do not physically abut a relatively permanent water, paragraph (a)(2) impoundment or a jurisdictional (a)(3) tributary. Wetlands 2 through 6 are non-tidal wetlands that do not meet the definition of adjacent and cannot be evaluated as (a)(4) adjacent wetlands; therefore, the wetlands are not jurisdictional under the 2023 Revised Definition of 'Waters of the United States'; Conforming" 88 FR 61964 Final Rule.

9. DATA SOURCES. List sources of data/information used in making determination. Include titles and dates of sources used and ensure that information referenced is available in the administrative record.

   a. [Office evaluation conducted 26 March 2025]

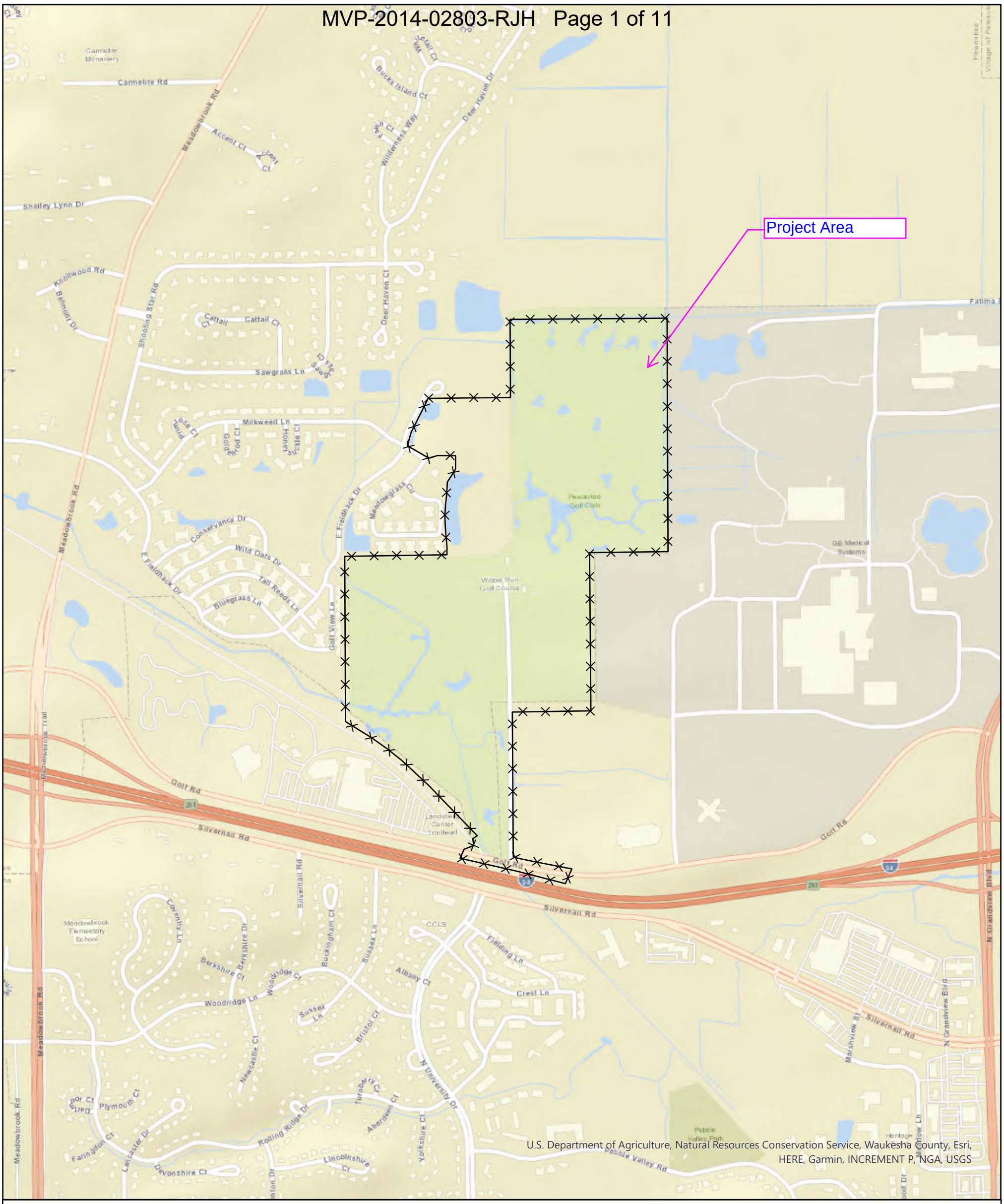
   b. [National Regulatory Viewer – USA Soils Hydric Class layer, National Wetland Inventory layer, Hillshade layer and DEM layer accessed on 26 March 2025]

   c. [Wetland Delineation Report, submitted by Evergreen Consulting LLC dated October 2024]

10. OTHER SUPPORTING INFORMATION. [N/A]

11. NOTE: The structure and format of this MFR were developed in coordination with the EPA and Department of the Army. The MFR's structure and format may be subject to future modification or may be rescinded as needed to implement additional guidance from the agencies; however, the approved jurisdictional determination described herein is a final agency action.

MVP-R
SUBJECT: 2023 Rule, as amended, Approved Jurisdictional Determination in Light of *Sackett v. EPA*, 143 S. Ct. 1322 (2023), MVP-2014-02803-RJH



U.S. Department of Agriculture, Natural Resources Conservation Service, Waukesha County, Esri, HERE, Garmin, INCREMENT P, NGA, USGS

Willow Run- Pewaukee Golf Club
Site Location Map
N12W26506 Golf Road
City of Pewaukee
Waukesha County, WI

N
W E
S

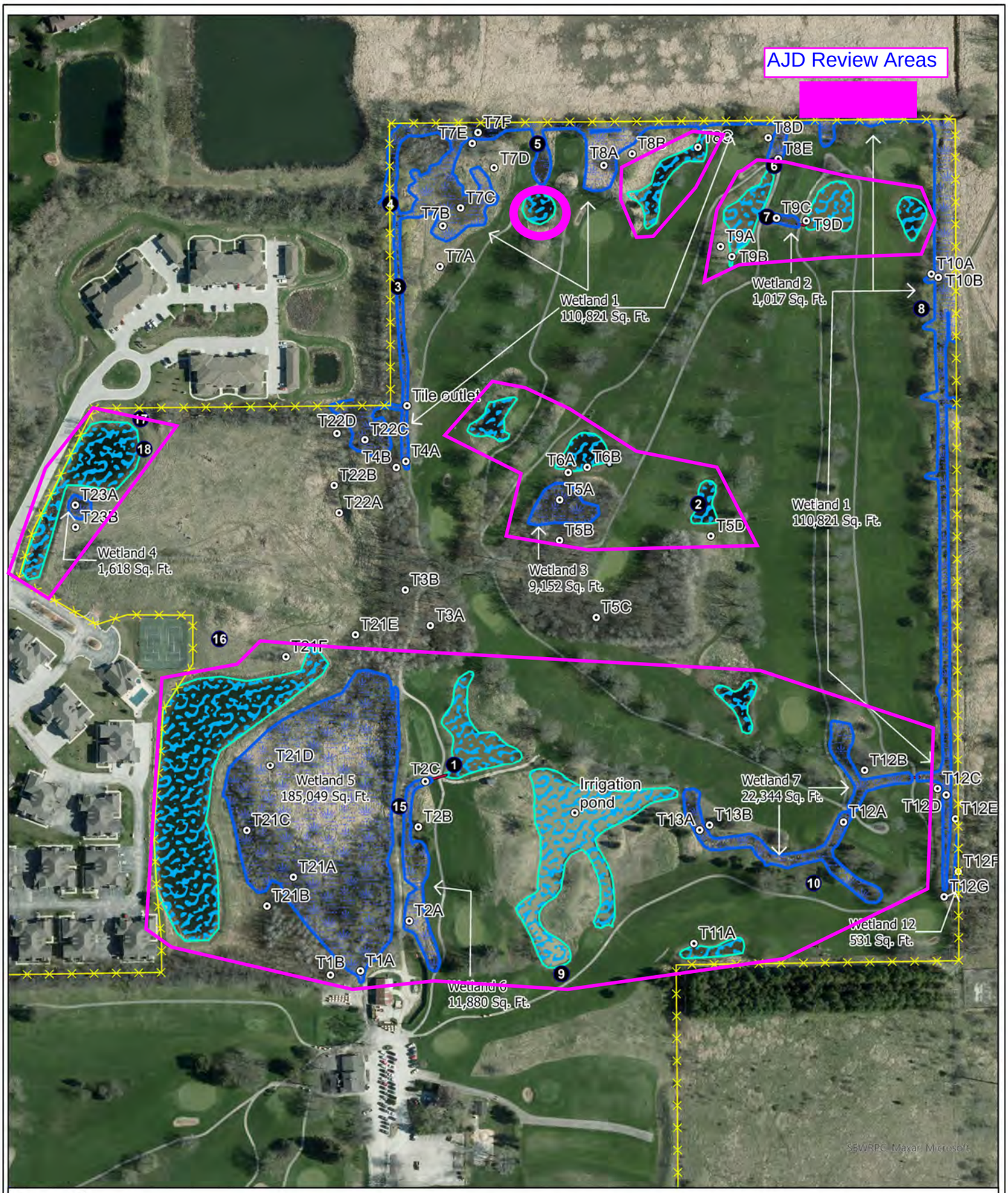
Legend

Site Boundary

Project: WKS24-028-01

0 400 800 1,600
Feet

evergreen consultants LLC
PO Box 680 Pulaski, WI 54162
Phone: 920.615.0019 • Website: www.evergreenwis.com



Legend

- Site Boundary
- Sample Point
- Picture Location
- Wetland Line
- Wetland
- Catch Basin
- Culvert
- Landscape Pond with Developing Wetlands

Willow Run- Pewaukee Golf Club
Wetland Delineation Map
N12W26506 Golf Road
City of Pewaukee
Waukesha County, WI
- North Half Map -

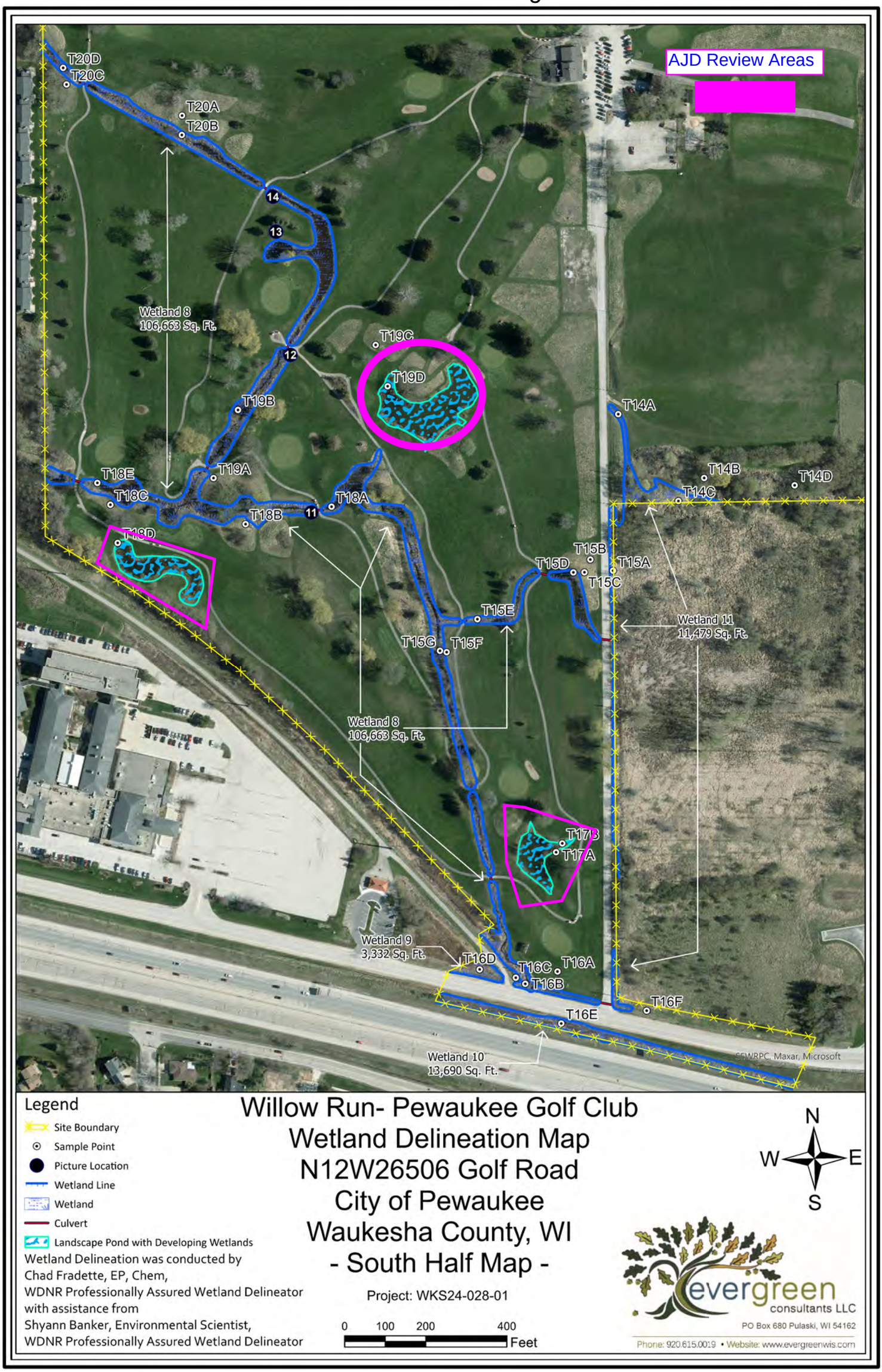
N
W E
S

Project: WKS24-028-01

0 110 220 440 Feet

Wetland Delineation was conducted by
Chad Fradette, EP, Chem,
WDNR Professionally Assured Wetland Delineator
with assistance from
Shyann Banker, Environmental Scientist,
WDNR Professionally Assured Wetland Delineator

evergreen consultants LLC
PO Box 680 Pulaski, WI 54162
Phone: 920.615.0019 • Website: www.evergreenwis.com



Legend

- Site Boundary
- Sample Point
- Picture Location
- Wetland Line
- Wetland
- Culvert
- Landscape Pond with Developing Wetlands

Wetland Delineation was conducted by
Chad Fradette, EP, Chem,
WDNR Professionally Assured Wetland Delineator
with assistance from
Shyann Banker, Environmental Scientist,
WDNR Professionally Assured Wetland Delineator

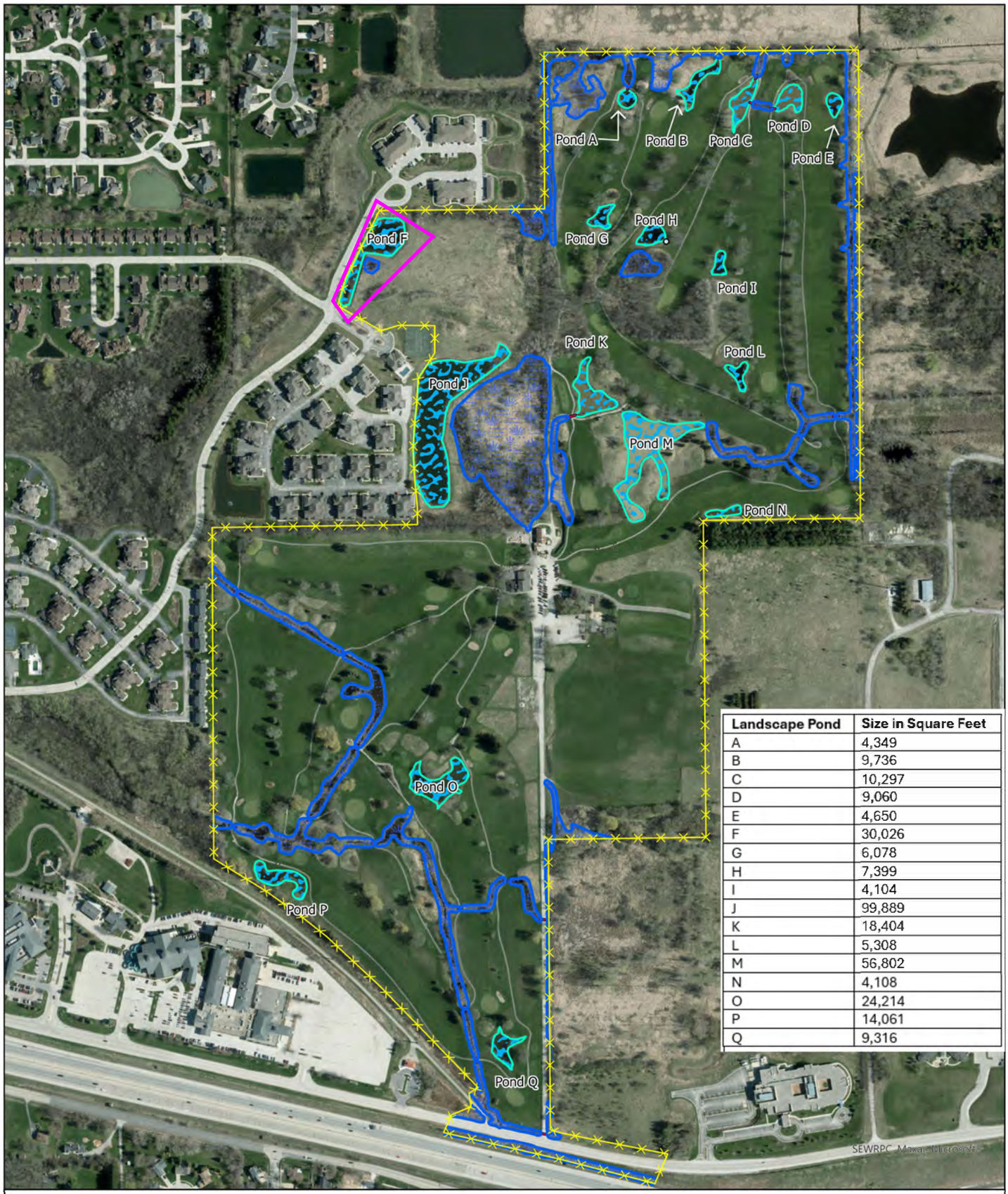
Willow Run- Pewaukee Golf Club
Wetland Delineation Map
N12W26506 Golf Road
City of Pewaukee
Waukesha County, WI
- South Half Map -

Project: WKS24-028-01

0 100 200 400 Feet

N W E S

evergreen consultants LLC
PO Box 680 Pulaski, WI 54162
Phone: 920.615.0019 • Website: www.evergreenwis.com



Landscape Pond	Size in Square Feet
A	4,349
B	9,736
C	10,297
D	9,060
E	4,650
F	30,026
G	6,078
H	7,399
I	4,104
J	99,889
K	18,404
L	5,308
M	56,802
N	4,108
O	24,214
P	14,061
Q	9,316

Legend

- Site Boundary
- Wetland Line
- Wetland
- Catch Basin
- Culvert
- Landscape Pond with Developing Wetlands

Willow Run- Pewaukee Golf Club
Wetland Delineation Map with Landscape Pond Labeling
N12W26506 Golf Road
City of Pewaukee
Waukesha County, WI

N
W E
S

Project: WKS24-028-01

Wetland Delineation was conducted by
Chad Fradette, EP, Chem,
WDNR Professionally Assured Wetland Delineator
with assistance from
Shyann Banker, Environmental Scientist,
WDNR Professionally Assured Wetland Delineator

0 200 400 800
Feet

evergreen consultants LLC
PO Box 680 Pulaski, WI 54162
Phone: 920.615.0019 • Website: www.evergreenwis.com

TOTAL WETLAND IMPACTS:

(ALL IMPACTED AREAS HATCHED IN RED)

- MULTIFAMILY - 21,834 SF (0.5 AC)
- SINGLE FAMILY FOR RENT - 1,618 SF (0.04 AC)
- SINGLE FAMILY FOR SALE - 220,342 SF (5.06 AC)
- SOUTHERN AREA (ROAD/PATHS/R.O.W.) - 7,451 SF (0.17 AC)

EXCEL
Always a Better Plan
100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com

PROJECT INFORMATION

PROPOSED MIXED RESIDENTAL DEVELOPMENT FOR:
WILLOW RUN
PEWAUKEE • WISCONSIN

PROFESSIONAL SEAL

PRELIMINARY DATES
DEC. 6, 2024
FEB. 05, 2025

NOT FOR CONSTRUCTION

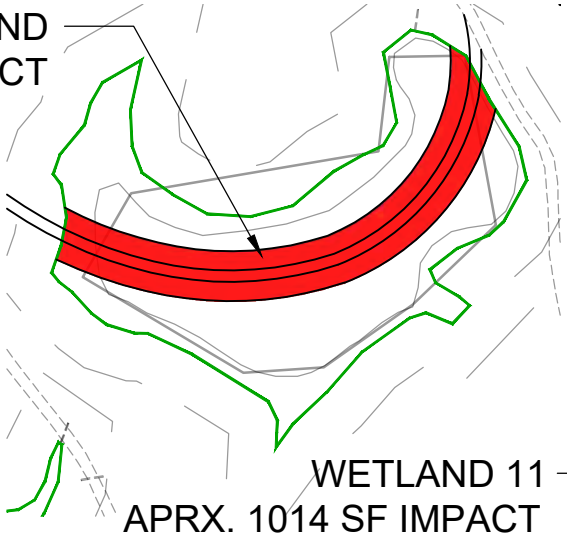
JOB NUMBER
240299700

SHEET NUMBER
C5.0

SCALE: 1" = 200'
200' 0 200' 400'
NORTH

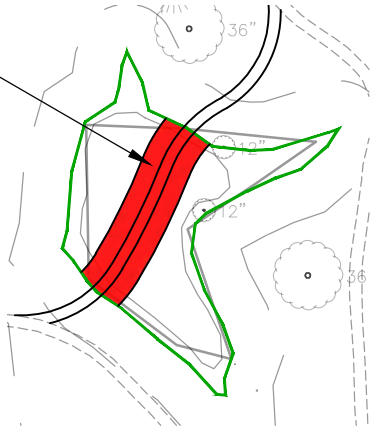
WETLAND IMPACT EXHIBIT

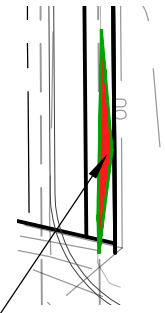
LANDSCAPE POND
APRX. 7112 SF IMPACT



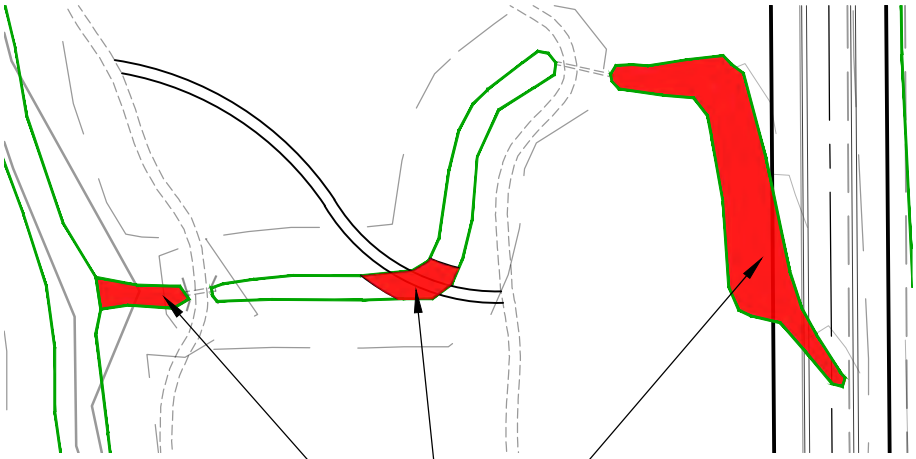
WETLAND 11
APRX. 1014 SF IMPACT

LANDSCAPE POND
APRX. 2505 SF IMPACT

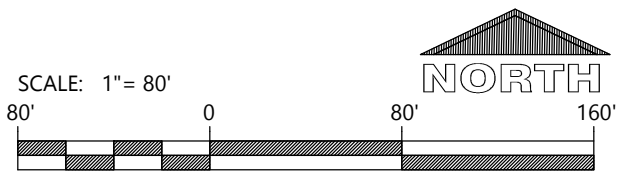


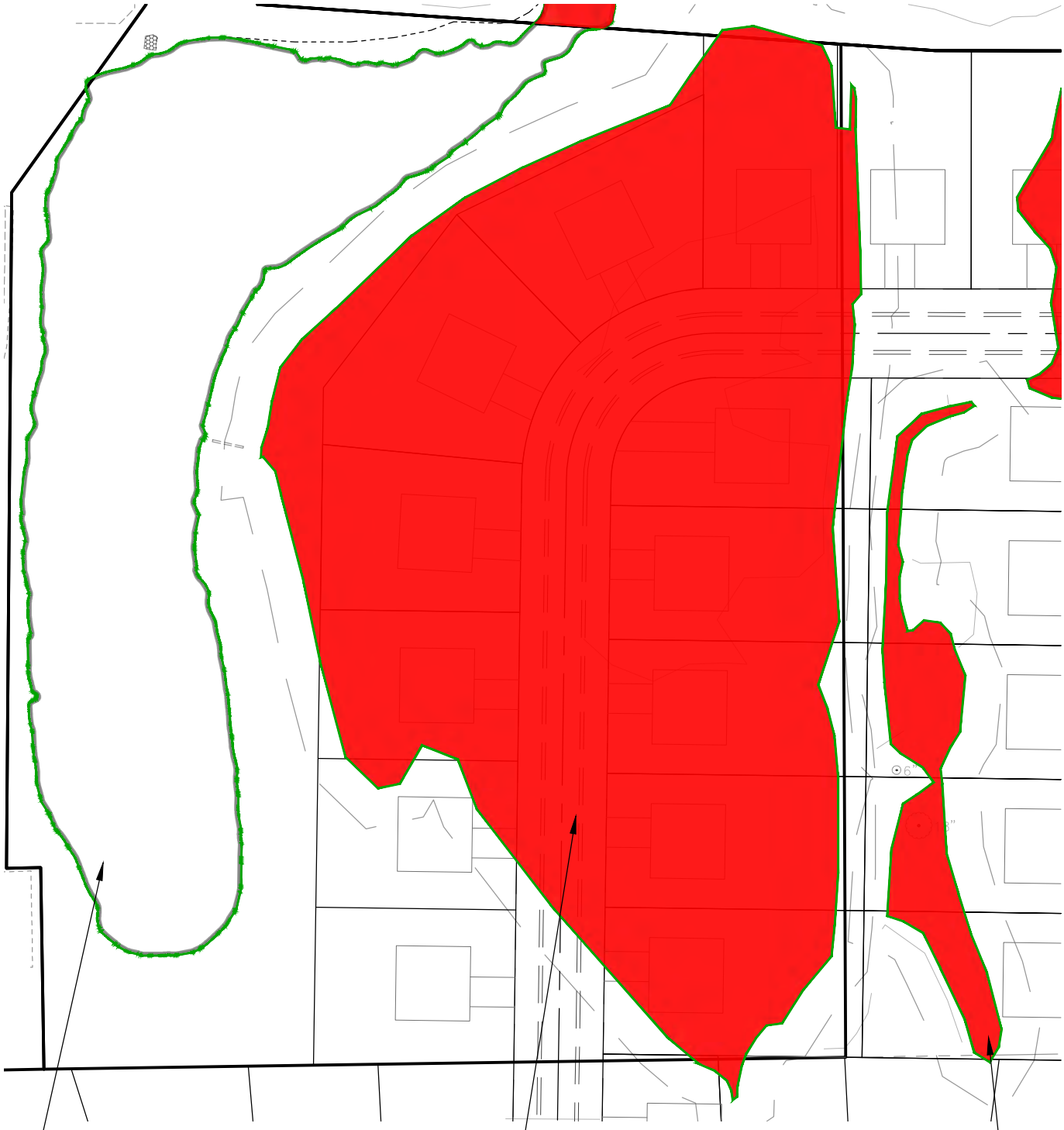


WETLAND 11
APRX. 401 SF IMPACT



WETLAND 8
APRX. 6036 SF IMPACT




WETLAND 5
APRX. 185049 SF IMPACT
WETLAND 6
APRX. 11880 SF IMPACT
STORMWATER
MANAGEMENT POND
SCALE: 1"= 80'
80' 0 80' 160'
NORTH

LANDSCAPE POND
APRX. 18426 SF
IMPACT

LANDSCAPE POND
APRX. 56825 SF IMPACT

SCALE: 1"= 80'

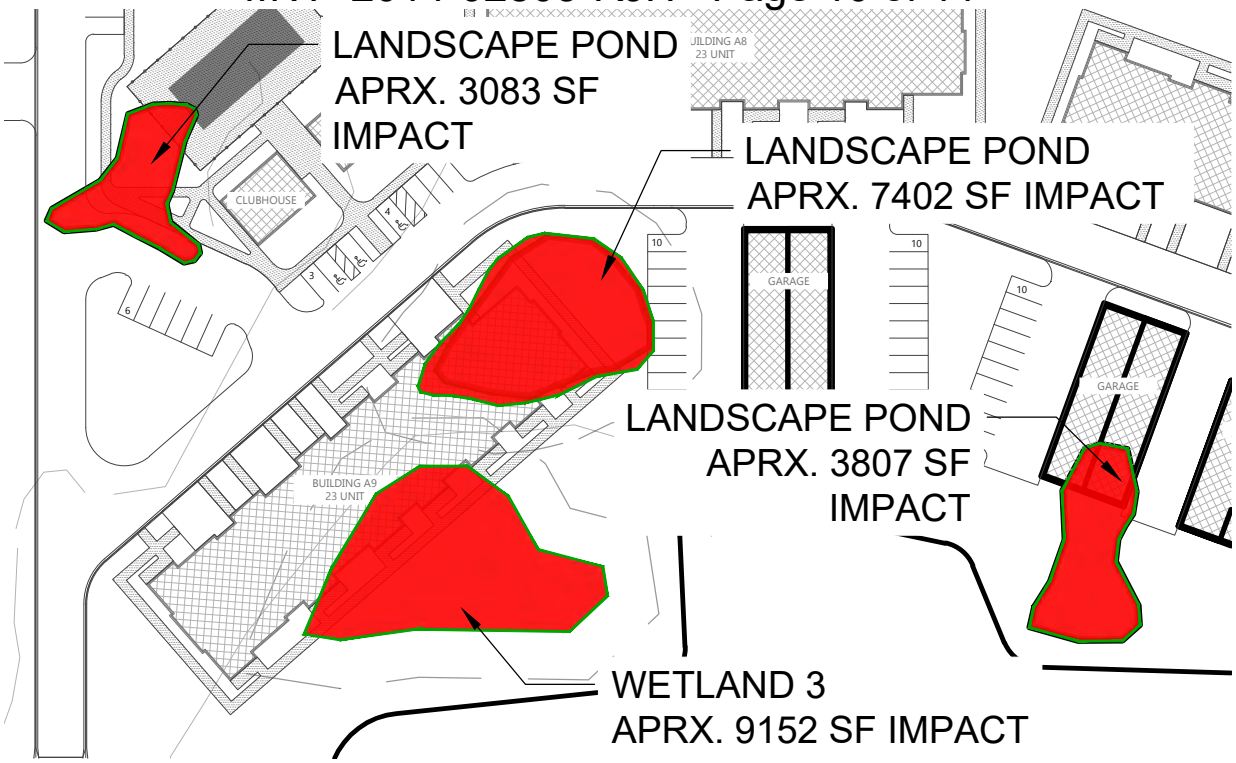
NORTH

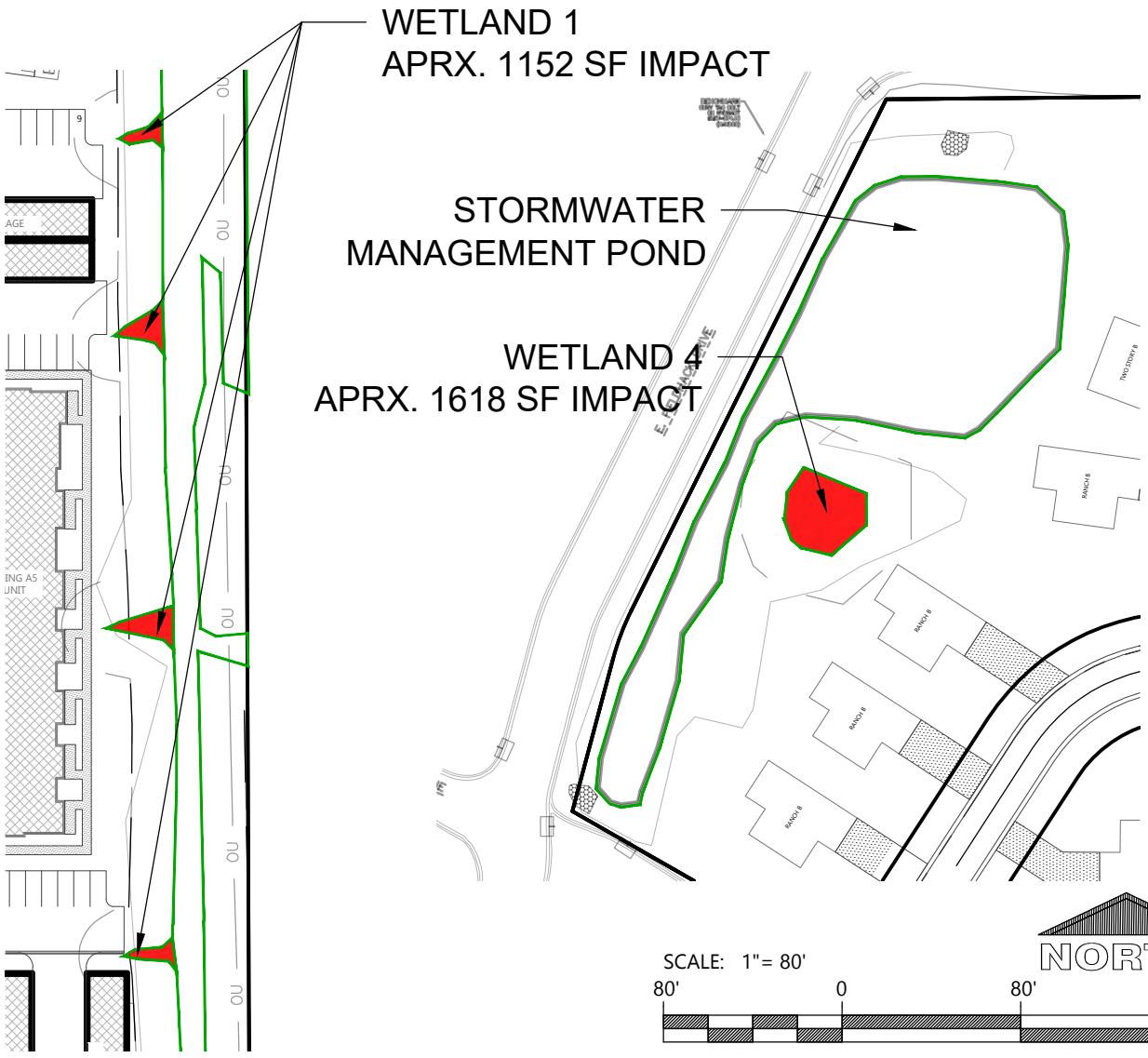
80' 0 80' 160'

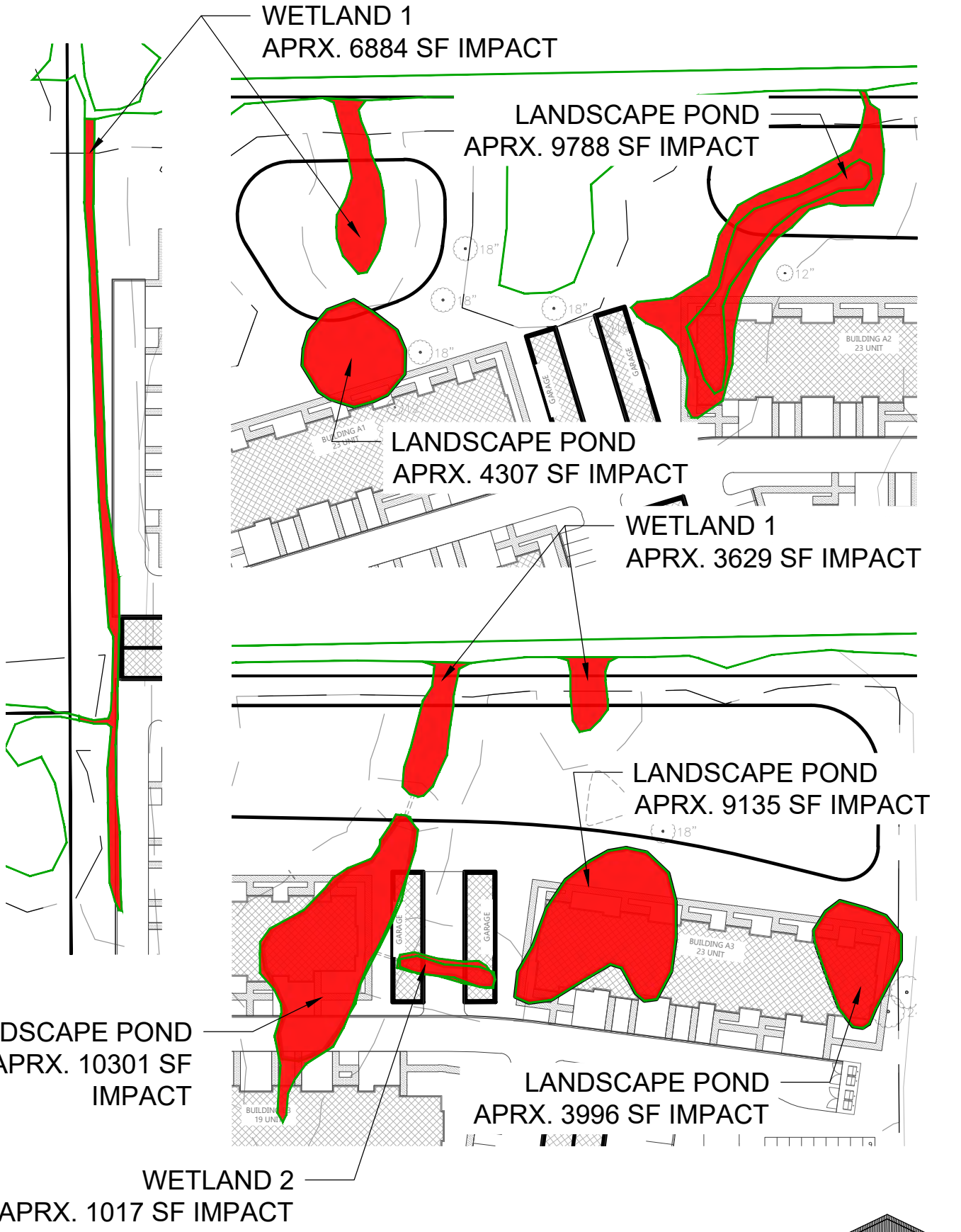
SCALE: 1"= 80'

NORTH

80' 0 80' 160'


LANDSCAPE POND
APRX. 3083 SF
IMPACT
LANDSCAPE POND
APRX. 7402 SF IMPACT
LANDSCAPE POND
APRX. 3807 SF
IMPACT
WETLAND 3
APRX. 9152 SF IMPACT
CLUBHOUSE
GARAGE
BUILDING A9
23 UNIT


WETLAND 1
APRX. 1152 SF IMPACT
STORMWATER
MANAGEMENT POND
WETLAND 4
APRX. 1618 SF IMPACT
SCALE: 1"= 80'
80' 0 80' 160'
NORTH


WETLAND 1
APRX. 6884 SF IMPACT
LANDSCAPE POND
APRX. 9788 SF IMPACT
LANDSCAPE POND
APRX. 4307 SF IMPACT
WETLAND 1
APRX. 3629 SF IMPACT
LANDSCAPE POND
APRX. 9135 SF IMPACT
LANDSCAPE POND
APRX. 10301 SF
IMPACT
LANDSCAPE POND
APRX. 3996 SF IMPACT
WETLAND 2
APRX. 1017 SF IMPACT
BUILDING A2
23 UNIT
BUILDING A1
23 UNIT
BUILDING A3
23 UNIT
GARAGE
GARAGE
GARAGE
18"
18"
18"
18"
12"
18"
SCALE: 1"= 80'
80'
0
80'
160'
NORTH

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
N7725 Hwy 28
Horicon, WI, 53032

Tony Evers, Governor
Karen Hyun, Ph.D., Secretary
Telephone 608-266-2621
Toll Free 1-888-936-7463
TTY Access via relay - 711

July 3, 2025

Jeremy Wagner
1949 St Johns Ave, Suite 202
Highland Park, IL 60035
[sent electronically]

EXE-SE-2025-68-01359

RE: Artificial Wetland Exemption Determination for areas described as **Wetlands 1, 2, 4, 6, 7, 9, 10, and 11 and Ponds A, B, C, D, E, G, H, I, J, K, L, M, N, O, and Q** located in the City of Pewaukee, Waukesha County

Dear Mr. Wagner,

This letter is in response to your request for an artificial wetland exemption determination for the above mentioned wetlands.

According to 281.36 (4n), State Statutes, a landscape feature where hydrophytic vegetation may be present as a result of human modification to the landscape or hydrology and for which no definitive evidence exists showing a prior wetland or stream history before August 1, 1991, may be exempt from state wetland regulations. The following types of artificial wetlands cannot be exempted from state wetland regulation: 1) a wetland that serves as a fish spawning area or that is passage to a fish spawning area and 2) a wetland created as a result of a wetland mitigation requirement. In addition, DNR must also consider whether the artificial wetland is providing significant flood protection to adjacent or downstream properties and infrastructure, and/or significant water quality functions to adjacent or downstream water bodies.

The Department reviewed the following materials to aid in our exemption determination:

- The request narrative
- Historic Maps, including the Original Land Survey Plat, Bordner Survey, the USGS topographic Quad map from 1892, and soil mapping.
- Aerial photographs, including the 1937/8 era photograph, a pre-construction photograph, and a post-construction photograph.
- Site photographs that show different angles and views of the wetland

Below is a summary of our findings:

Request Narrative
According to the request narrative, the applicant is requesting an artificial wetland determination on **Wetlands 1, 2, 4, 6, 7, 9, 10, and 11 and Ponds A, B, C, D, E, G, H, I, J, K, L, M, N, O, and Q.** According to the narrative, "The Site is to be developed into a subdivision with single family and multifamily housing. Beginning in the 1930s, the area was ditched and tiled to drain the area for cropping. Streams were rerouted, straightened and ditched. Tile outlets were visible in the ditch network. By 1963 construction of a golf course began and ponds and ditches were constructed throughout the course until 1995. In 1990 there were some areas of wet signatures that were avoided and remain wetlands today."

Historic Map Review

- Original Land Survey Plat. The original land survey indicates that wetlands were present in the areas of **Wetlands 1, 2, 4, 6, 7, 9, 10, and 11 and Ponds A, B, C, D, E, G, H, I, J, K, L, M, N, O, and Q**
- Bordner Survey. The Bordner survey maps **Wetland 6 and 7, a portion of Wetland 1, and Ponds G, H, K, L, and M** as a grass marsh and **Wetlands 1, 2, 4, 7, 9, 10, and 11 and Ponds A, B, C, D, E, I, J, M, N, O, and Q** as cleared crop land
- USGS Topographic Quad map: The 1892 USGS Quad map indicates wetland history for **Wetlands 1, 2, 4, 6, 7, 9, 10, and 11 and Ponds A, B, C, D, E, G, H, I, J, K, L, M, N, O, and Q**. The 1959 USGS Quad map indicates that a portion of **Wetland 1** has a mapped intermittent stream.

- Soil Maps: The soil maps indicate that **Wetland 1 and Ponds A, B, C, G, and H** have Palms muck (hydric), **Wetlands 1 and 2 and Ponds B, C, D, and E** have Houghton muck (hydric), **Wetlands 1, 4, 6, 7, and 11 and Ponds G, H, I, L, M, O, and Q** have Pella silt loam (hydric), **Wetlands 9 and 10** have Brookston silt loam (hydric), and **Wetlands 6 and 7 and Ponds I, M, and N** have Lamartine silt loam (not hydric) soils.

Aerial Photograph Review

- 1937/38 era aerial photograph. The 1937/38 aerial photograph shows cropped fields, soil wetness signatures, and isolated tree stands in the areas of **Wetlands 1, 2, 4, 6, 7, 9, 10, and 11 and Ponds A, B, C, D, E, G, H, I, J, K, L, M, N, O, and Q.**
- Pre-construction aerial photographs
    - 1941-1971 shows a ditch in the area of **Wetland 1** and the northern portion of **Wetland 11**, soil wetness in the areas of **Wetlands 1, 2, and 7 and Ponds A, B, C, D, E, G, and H,** evidence of drain tile in the areas of **Wetlands 1, 2, and 7 and Ponds A, B, C, D, E, G, and H,** an isolated tree stand in the areas of **Wetland 3 and Ponds G and H.** In 1941, there were signs of soil wetness in the areas of **Ponds K and M**, soil wetness in the area of **Pond O** in 1955, and a change in vegetation pattern in the areas of **Ponds K and M** in 1955. Several of the requested ponds were started to be created in 1971, but were more prominent starting in 1976.
- Post-construction aerial photograph: The 1990 aerial photograph shows what appears to be a golf course with several ponds and two waterways.

Site Photographs

The site photographs show ponds, a treed area with a waterway in **Wetland 1,** a waterway with vegetation growing adjacent in **Wetland 2,** a waterway with vegetation in **Wetland 7,** a vegetated, treed area in **Wetland 6,** a vegetated area with a waterway in **Wetland 11,**

Conclusion

Based upon the information provided above, the wetlands identified as **Wetlands 4, 9, 10, and** the western portion of **Wetland 11** (see image below) **and Ponds J, N, O, and Q** lacked a wetland history prior to August 1, 1991, fulfills all artificial wetland exemption standards, and are exempt from state wetland regulations.

The wetlands identified as **Wetlands 1, 2, 6, 7 and** the northern portion of **Wetland 11** (see image below) **and Ponds A, B, C, D, E, G, H, I, K, L, and M** had a wetland history prior to August 1, 1991, and are not exempt from state wetland regulations.

This letter describes DNR's decision regarding the jurisdictional status of **Wetlands 1, 2, 4, 6, 7, 9, 10, and 11 and Ponds A, B, C, D, E, G, H, I, J, K, L, M, N, O, and Q**, and is only valid for state jurisdictional purposes. For decisions regarding the federal jurisdictional status of **Wetlands 1, 2, 4, 6, 7, 9, 10, and 11 and Ponds A, B, C, D, E, G, H, I, J, K, L, M, N, O, and Q**, you will need to contact the U.S. Army Corps of Engineers.

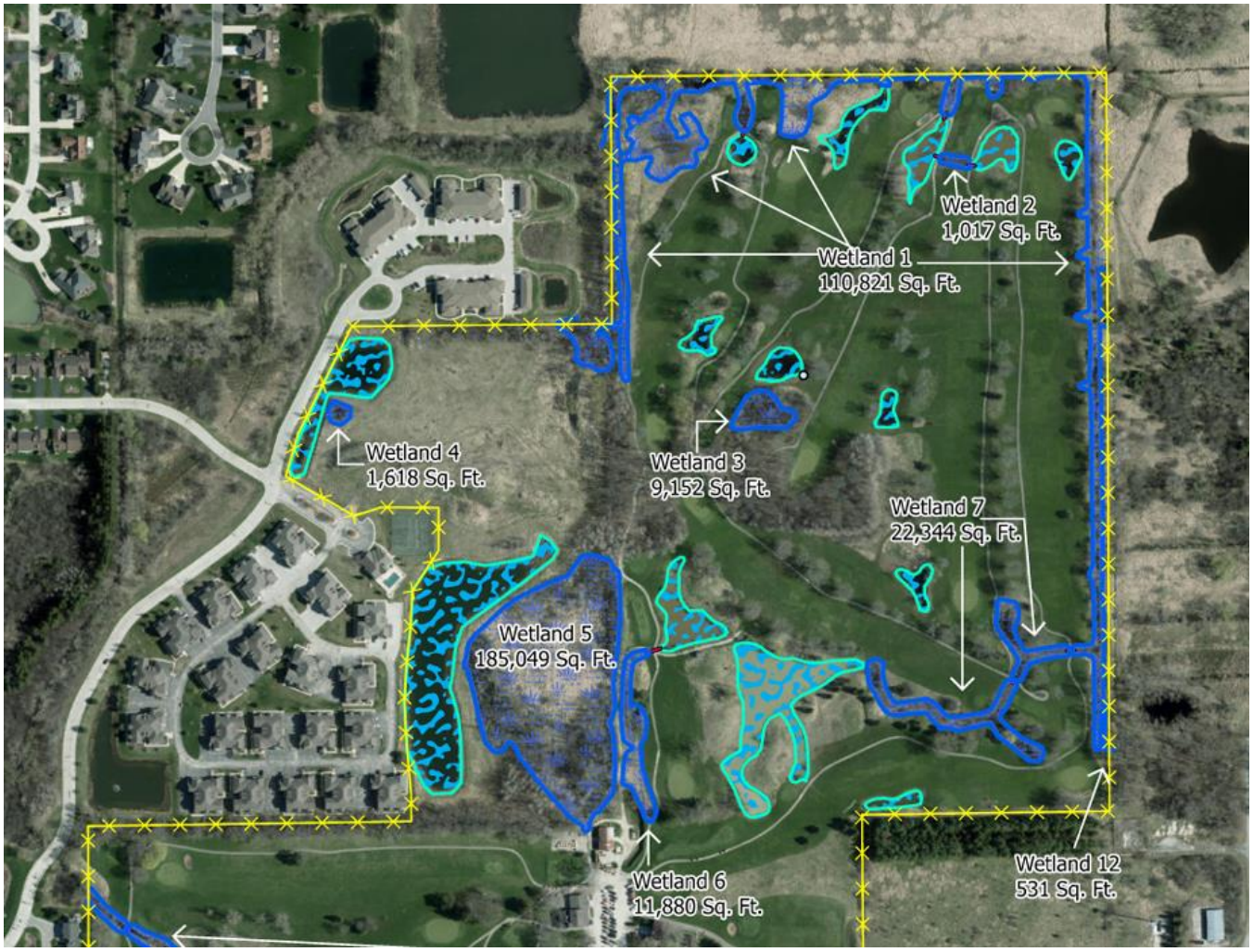
If you have any questions, please call me at (414) 531-0305 or email francesca.sanchez@wisconsin.gov.

Sincerely,

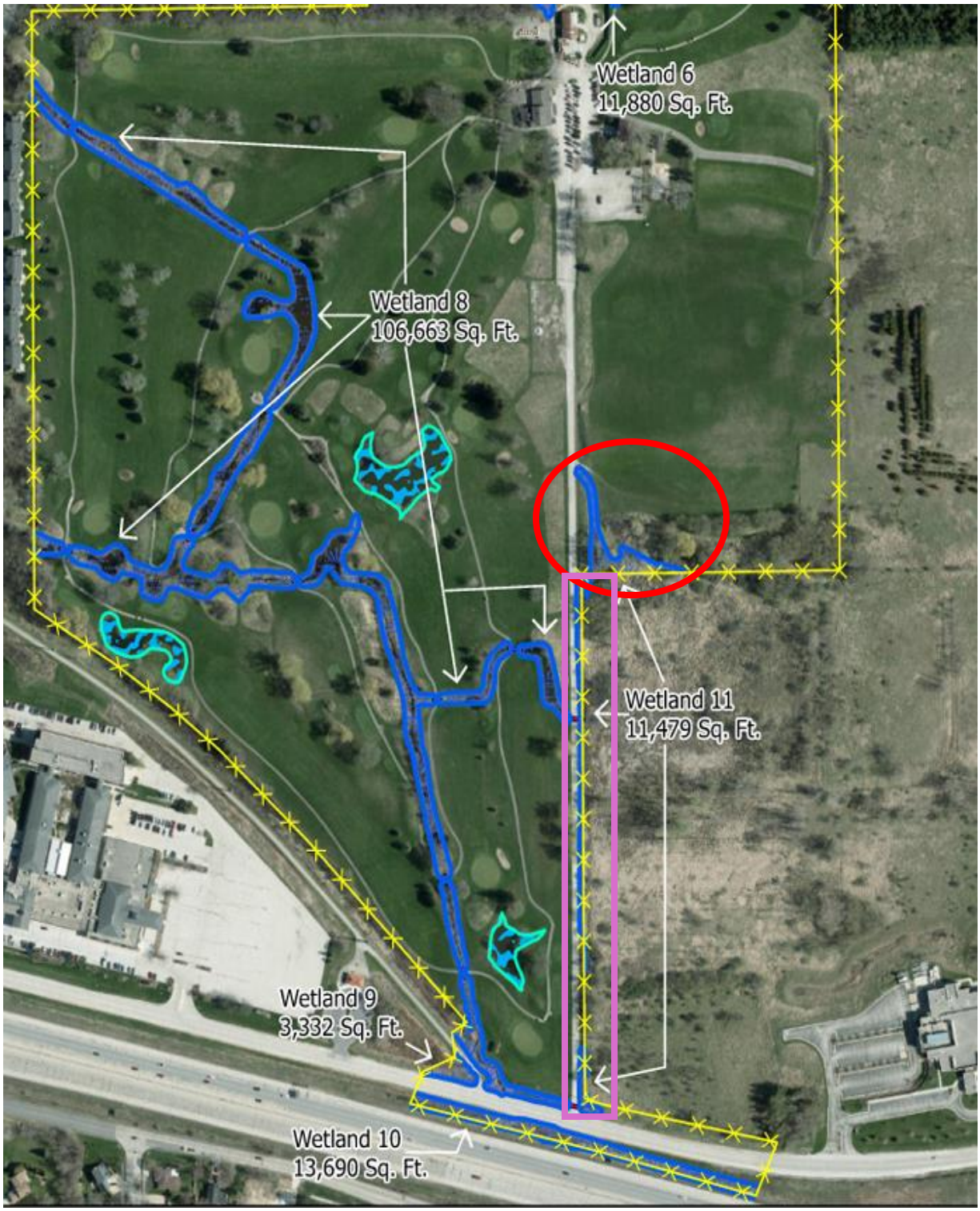
Francesca Sanchez
Water Management Specialist

Email CC:
Jennifer Hubert, USACE Project Manager
Shyann Banker, Evergreen Consultants LLC
Chad Fradette, Evergreen Consultants LLC
Matt Mrochinski, Excel Engineering
Nick Fuchs, City of Pewaukee Planner/Zoning Administrator
Travis Schroeder, WDNR Waterway Field Supervisor
Allison Willman, WDNR Wetland Exemption Expert

Northern half of property showing **Wetlands 1, 2, 3, 4, 6, and 7**

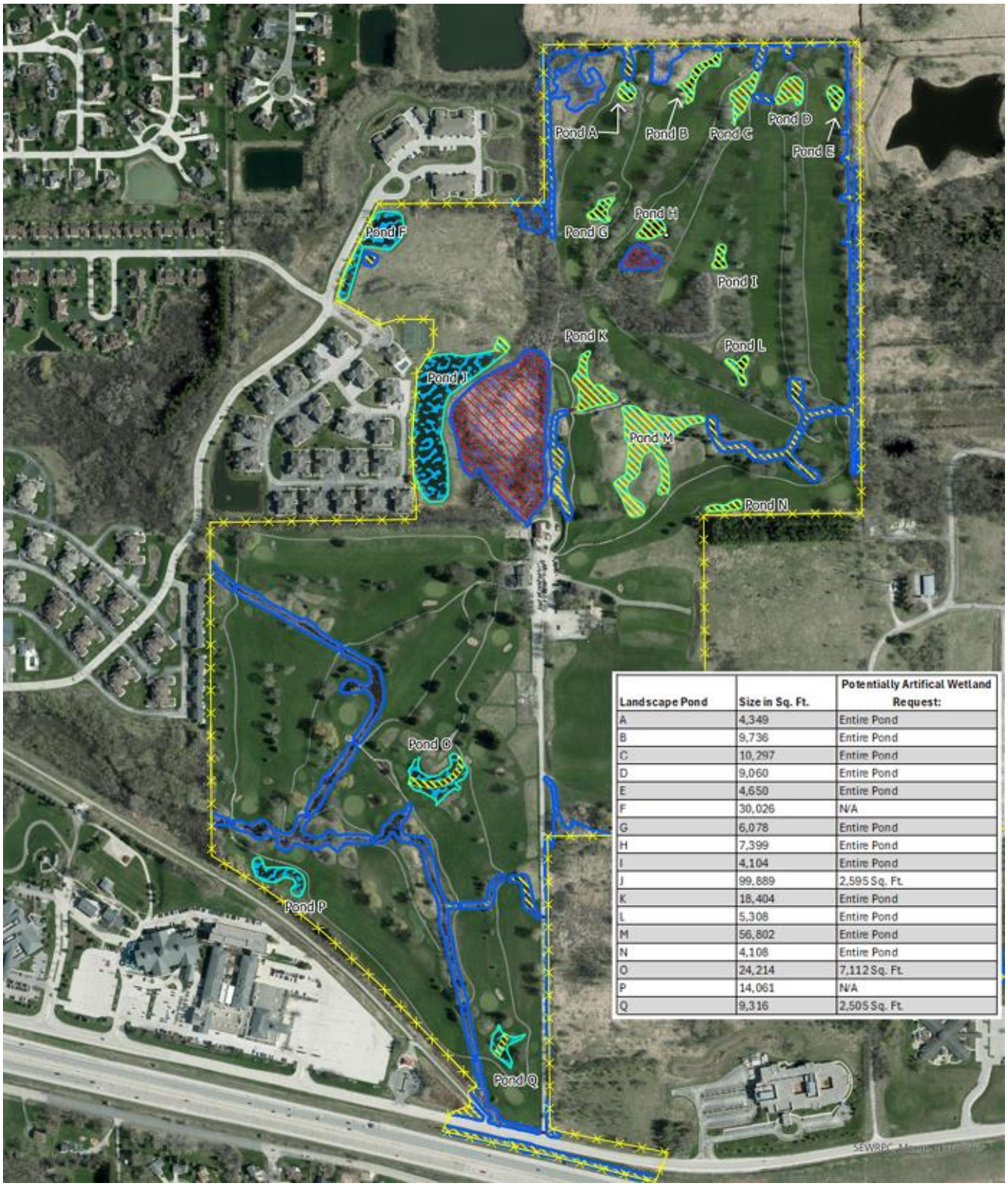


Southern half of property showing **Wetlands 9, 10, and 11**



Northern part of **Wetland 11** within red circle, western part in pink rectangle, as mentioned in decision.

Requested ponds in green outline with yellow hatched stripes



Landscape Pond	Size in Sq. Ft.	Potentially Artifical Wetland Request:
A	4,349	Entire Pond
B	9,736	Entire Pond
C	10,297	Entire Pond
D	9,060	Entire Pond
E	4,650	Entire Pond
F	30,026	N/A
G	6,078	Entire Pond
H	7,399	Entire Pond
I	4,104	Entire Pond
J	99,889	2,595 Sq. Ft.
K	18,404	Entire Pond
L	5,308	Entire Pond
M	56,802	Entire Pond
N	4,108	Entire Pond
O	24,214	7,112 Sq. Ft.
P	14,061	N/A
Q	9,316	2,505 Sq. Ft.

Paul Farrow
County Executive

Dale R. Shaver
Director

Waukesha County

Department of Parks and Land Use

TO:	State of Wisconsin–Department of Administration (Plat Review)
NOTICE OF:	Conditional Certification of No Objection to Preliminary Plat
DATE OF REVIEW:	September 9, 2025
RE:	Subdivision Plat known as: **Willow Run Single Family Rentals** **File No: 2103**
LOCATION:	Part of the SE ¼ & SW ¼ of the NE ¼, Section 20, Township 7 North, Range 19 East, City of Pewaukee.
SUBMITTED BY:	State of Wisconsin-Department of Administration (Plat Review)
SURVEYOR:	Ryan Wilgreen Excel Engineering, Inc. 100 Camelot Dr. Fond du Lac, WI 54935
DATE RECEIVED:	August 21, 2025
DATE OF PLAT:	August 14, 2025
SUBDIVIDER:	LXL PEWAUKEE LLC 638 Milwaukee Street Delafield, WI 53018

REMARKS: Conditional Certification of No Objection to this Preliminary Plat is based on the following conditions being satisfied prior to submittal of a revised Preliminary Plat or a Final Plat:

1. The surveyor's seal, signature, and date must appear on all sheets of the Preliminary Plat.

2. All easements, such as proposed or existing drainage ways, access, sanitary sewer and utilities shall be shown on the final plat. Any related recorded documents numbers for existing easements shall also be noted on the plat.

3. Documentation must be presented to Waukesha County Planning and Zoning Division staff confirming that, as required by Section NR 110.08(4) of the Wisconsin Administrative Code, the Southeastern Wisconsin Regional Planning Commission has reviewed and commented on the proposed sanitary sewer extension which will be needed to serve this development.

4. A letter from the city indicating that they are willing to extend sewer to the subdivision must be furnished to the Waukesha County Planning & Zoning Division.

5. In accordance with Chapter 236 of the Wisconsin Statues, signature certificates must be added to the Final Plat. Please ensure that signature certificates for the County Treasurer and the mortgage holder are added to the Final Plat.

In addition, we recommend the following:

6. The Location Map on Sheet 1 should be revised to show more detail. At a minimum, it should include existing nearby roads and names.

7. Please provide Waukesha County Planning and Zoning Division with the wetland delineation report completed by Evergreen Consultants, LLC on October 29, 2024. This ensures the Waukesha County GIS map is kept up to date.

8. We recommend constructing sidewalks on at least one side of the streets in accordance with "SEWRPC's Recommendations for Provision of Sidewalks in Areas of Existing or Planned Urban Development".

9. According to the soil survey of Milwaukee and Waukesha Counties, lots in this subdivision contain soils that may be indicative of seasonal high groundwater conditions. Some of the lots contain particularly severe conditions with hydric soils, meaning that groundwater is estimated to be less than one foot from the ground surface. Therefore, unless significant fill is proposed, we recommend that the City require a soil analysis for all lots within the development and ensure that basement floor elevations will be above seasonal high groundwater conditions. Waukesha County recommends that basements be placed at least one (1) ft. above the estimated seasonal high groundwater elevation. Minimum basement floor elevations should be identified on a Master Grading Plan or Final Plat for any lots with limiting factors. At a minimum, it is recommended the City of

Pewaukee require a note, similar to the enclosed, be placed on the face of the Final Plat, indicating these lots may contain soils that are unsuitable for conventional basement construction due to the presence of seasonal high groundwater and special construction methods may be required.

BASEMENT RESTRICTION – GROUNDWATER

Although all lots in the Subdivision have been reviewed and approved for development with single-family residential use in accordance with Wis. Stat. Ch. 236, some lots contain soil conditions that, due to the possible presence of groundwater near the surface, may require additional soil engineering and foundation design with regard to basement construction. It is recommended that a licensed professional engineer design a basement and foundation that will be suitable to withstand the various problems associated with saturated soil conditions on basement walls or floors or that other special measures be taken. Soil conditions should be subject to each owner's special investigation prior to construction and no specific representation is made herein.

10. We recommend that vision corner easements be added to all internal intersections, specifically at Lots 1, 9, 10, 21, and 25. Please consult with City staff regarding the dimensions of the corners and the required vision restriction language that should be placed on the plat.

11. We recommend that the City require that a Master Grading Plan be prepared, to provide grades that will ensure protection from high groundwater and continuity of yard grades from one lot to another.

12. We recommend that the developer consult with the property owner regarding the location and function of any drain tile that may be present on the property and how it may impact the development.

13. We recommend that a temporary cul de sac easement be provided at the north and south termini of Road A unless the construction of Road A extending into the Willow Run Subdivision to the south will be constructed at the same time.

14. The Wisconsin Wetland Inventory indicates a wetland is located on Outlot 1. It appears this may be an artificial wetland. If you have obtained a permit from the DNR to fill this wetland, please provide the permit to Waukesha County.

15. It appears wetlands are located on Lot 6 and Lot 12. We recommend consideration be given to redesign the lots to place wetlands on commonly held outlots rather than lots owned by private parties. Wetlands are vulnerable to fill if they remain on private lots. If the wetlands are to remain on the private lots, please ensure the City of Pewaukee's wetland setback is met. At minimum, we recommend split rail fencing or signage by placed to indicate the extent of the wetland if wetlands will remain on private lots.

16. It appears part of a stormwater facility or wetland extends on to the south part of Lot 14. Is there intent to reshape the facility? The location of the existing stormwater facility appears to interfere with the planned building envelope on this lot.

17. We recommend the storm water maintenance responsibilities be clarified in the maintenance agreement between the Willow Run Single Family Rentals and the Meadow Brook Village Condominiums for Outlot 1.

SIGNED:

Jason Fruth
Planning and Zoning Manager

For information regarding this review, please contact Emily Goodman at Egoodman@waukeshacounty.gov or 262.896.8300.

Cc via email: City of Pewaukee Clerk, hurd@pewaukee.wi.us (*e-mail*)
City of Pewaukee Planner, fuchs@pwaukee.wi.us (*e-mail*)
Ryan Wilgreen, Surveyor, ryan.wilgreen@excelengineer.com (*e-mail*)
VH Acquisitions LLC, Developer, mcudney@veridianhomes.com (*e-mail*)
We Energies – Plat Review, co-subdivisionsgroup@we-energies.com, Nicole.warwick@we-energies.com, travis.kluewer@we-energies.com (*e-mail*)
AT&T – Plat Review, jo2376@att.com (*e-mail*)
CenturyLink Plat Review, james.winter@Brightspeed.com (*e-mail*)
Joel Dietl, SEWRPC, joel.dietl@sewrpc.org (*e-mail*)
File

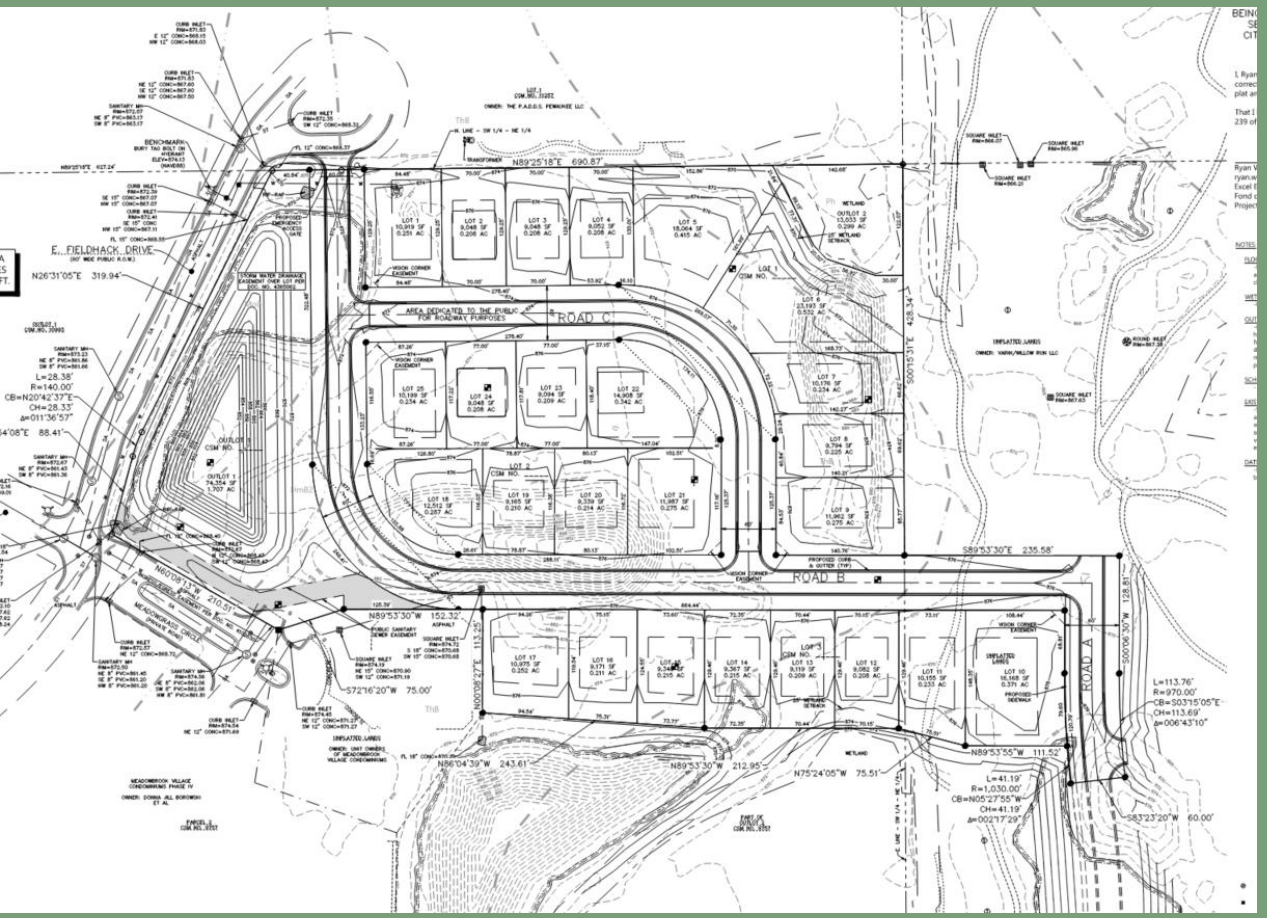
\\wcg.waukeshacounty.gov\files\Depts\PRKANDLU\Subdivision Files\PLATS\Cities\Pewaukee\2103 Willow Run Single Family Rentals

Willow Run

Plan Commission

Single-Family Rental Preliminary Plat

October 16, 2025


E. FIELDHACK DRIVE
ROAD C
ROAD B
ROAD A
AREA DEDICATED TO THE PUBLIC FOR ROADWAY PURPOSES
N89°25'18"E 690.87'
N26°31'05"E 319.94'
S89°53'30"E 235.58'
N89°53'30"W 152.32'
S72°16'20"W 75.00'
N89°53'30"W 212.95'
N75°24'05"W 75.51'
S83°23'20"W 60.00'

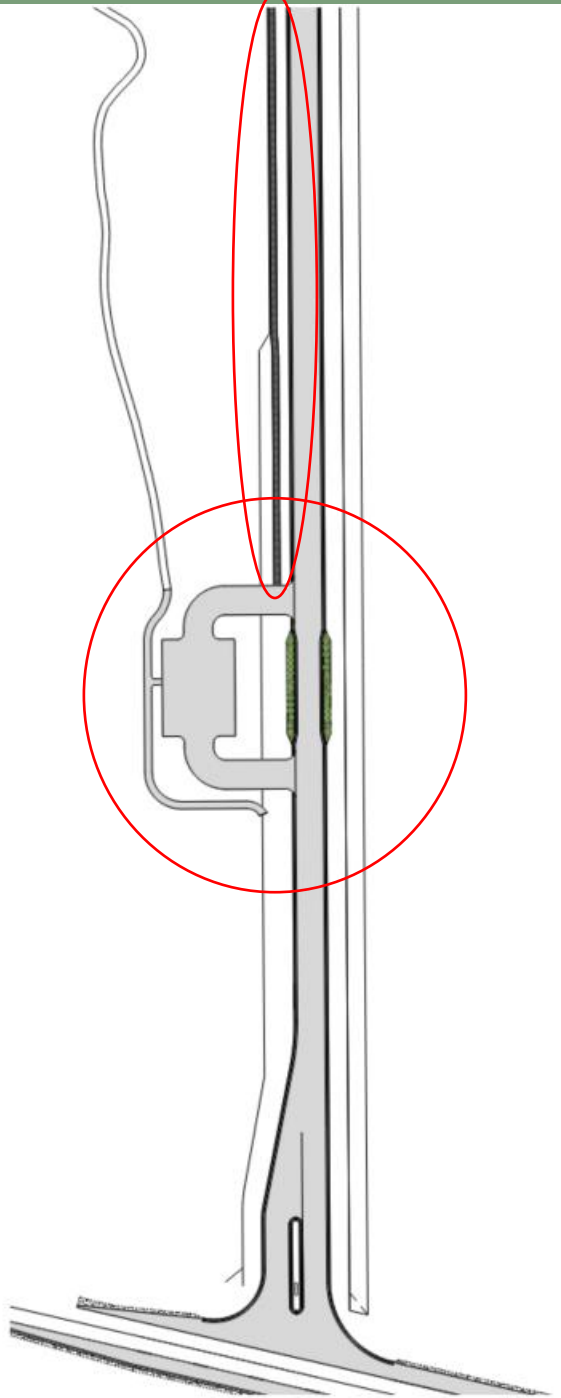
E. FIELDHACK DRIVE
SINGLE FAMILY HOMES
STORMWATER FACILITY
STORMWATER FACILITY
MONUMENT SIGNAGE
G1-A
B1
21 UNIT

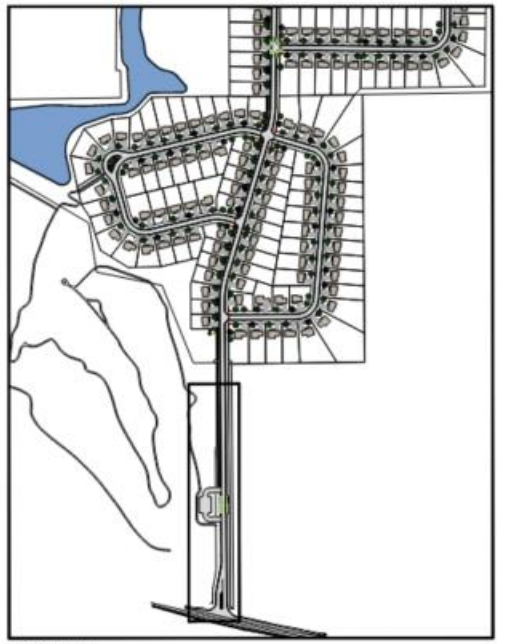
DECIDUOUS SHRUB PLANTING DETAIL
LIMITS OF DISTURBANCE
PROPOSED
WET POND 3

©2025 RINKA+

Spine Road: What we heard….

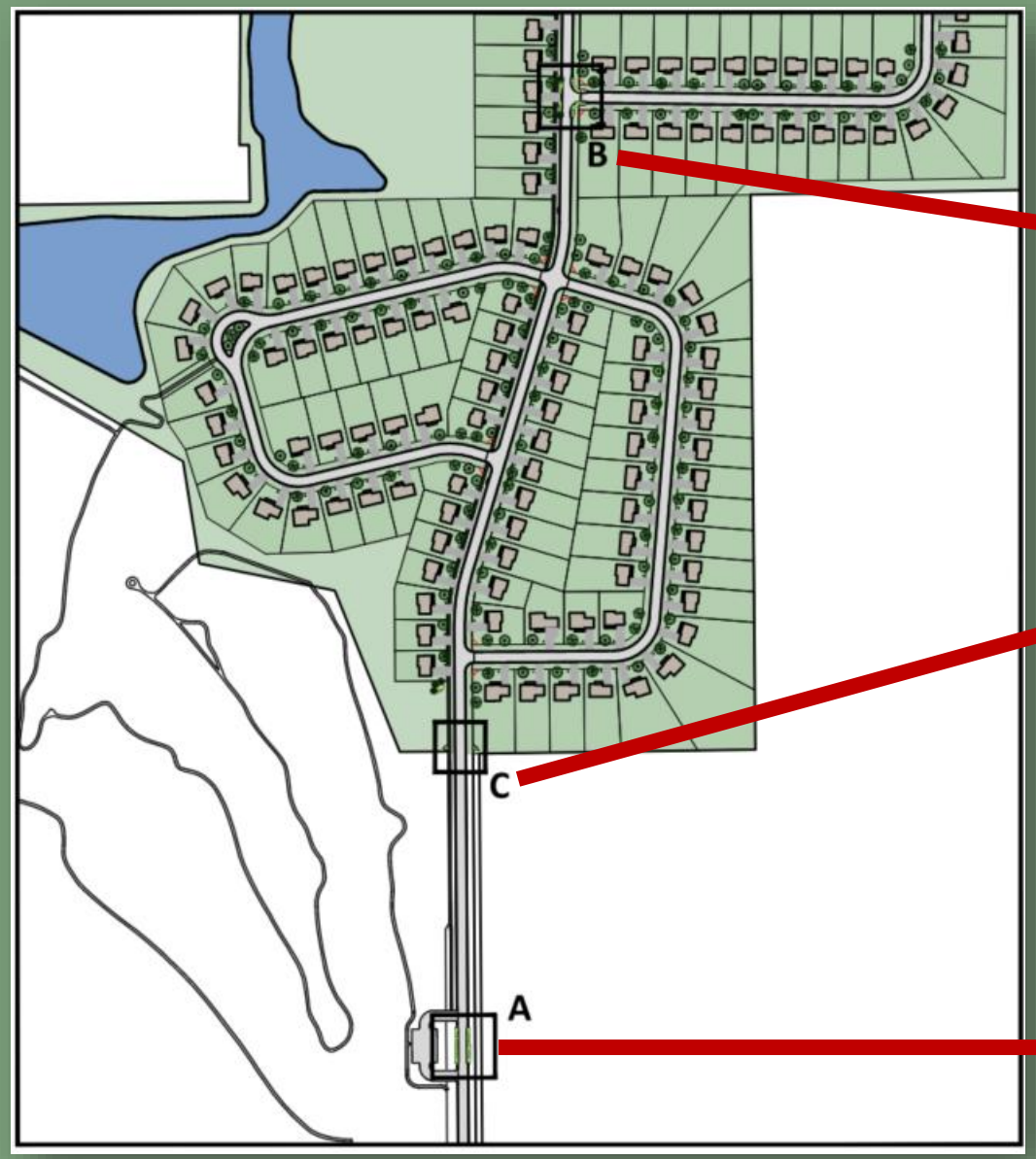
1. Aesthetic concern about long, unattractive roadway
2. Safety concern about speed
3. Pedestrian connectivity with sidewalks
4. Concern about on-street parking

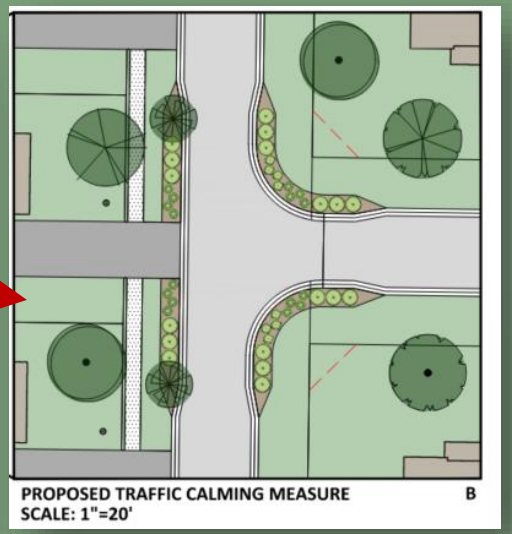




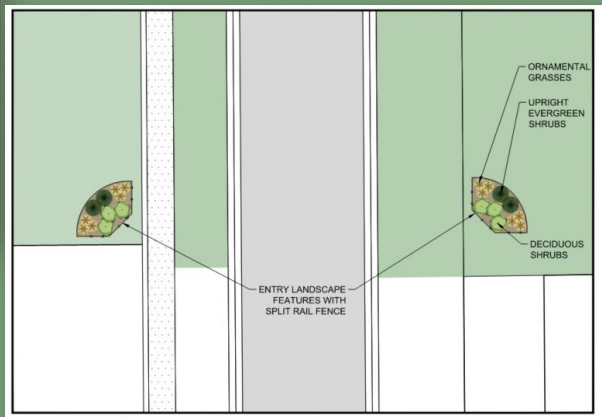
KEY PLAN
SCALE: 1"=300'

PARKING PLAN



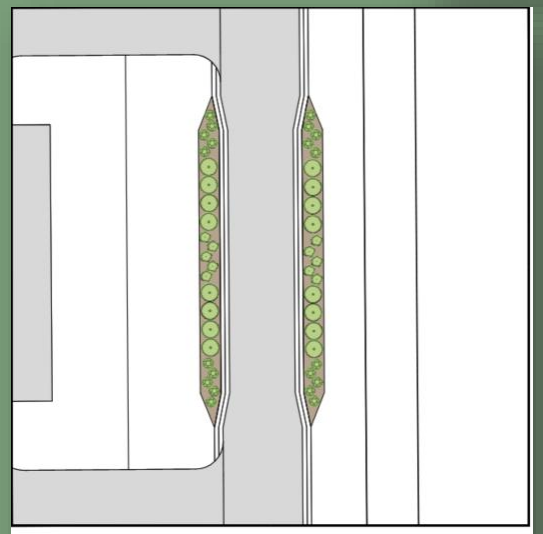


PROPOSED TRAFFIC CALMING MEASURE B
SCALE: 1"=20'



ENTRY FEATURE C
SCALE: 1"=10'

ENTRY FEATURE RELATED IMAGERY

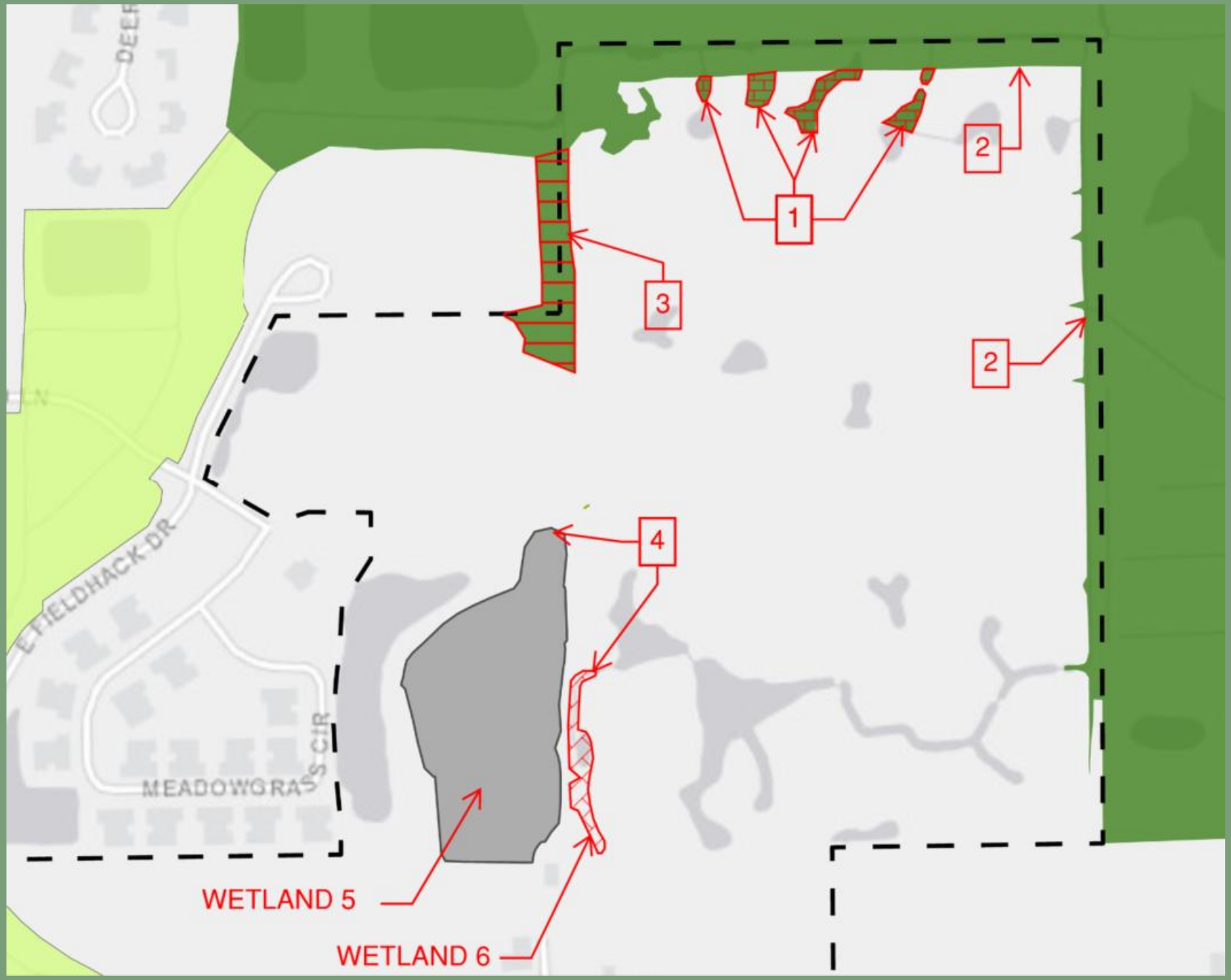


PROPOSED TRAFFIC CALMING MEASURE A
SCALE: 1"=20'

Thank you

LAND By LABEL

DEVELOPMENT CO.


1
2
2
3
4
WETLAND 5
WETLAND 6
FIELDHACK DR
MEADOWGRASS CIR

Office of the Planner & Community Development Director
W240 N3065 Pewaukee Road
Pewaukee, Wisconsin 53072
Phone (262) 691-0770 Fax (262) 691-1798
fuchs@pewaukee.wi.us

REPORT TO THE PLAN COMMISSION

Meeting of October 16, 2025

Date: October 7, 2025

Project Name: Veridian Homes Preliminary Plat

Project Address/Tax Key No.: N12W26506 Golf Road / PWC 0944994

Applicant: Veridian Homes LLC

Property Owner: VARIN-WILLOW RUN LLC

Current Zoning: Rs-6 Single-Family Residential District

2050 Land Use Map Designation: Medium Density Residential (6,500 Sq. Ft. - 1/2 Ac. / D.U.),

Use of Surrounding Properties: Prairie Grass Living Apartments and vacant land to the north, Meadowbrook Village condominiums and City of Waukesha and I-94 to the south, City of Waukesha to the east and Meadowbrook Village and Spice Creek condominiums to the west

Introduction

The applicant, Veridian Homes, filed a Preliminary Plat Application for approval of a single-family residential subdivision development upon property located at N12W26506 Golf Road.

This submission is following the City's approval of a Comprehensive Master Plan Amendment, Rezoning, and Conditional Use Permit to allow for a single-family residential development under the Rs-6 District residential planned unit development standards.

The Plan Commission also reviewed a conceptual pre-preliminary plat at their August 21, 2025 meeting. At that meeting, there was extensive discussion regarding different types and options of residential subdivision developments. Staff found the items with the most consensus to be requiring a sidewalk along the main north/south road and to include cul-de-sacs or other features along this main road to help slow traffic and make the road more aesthetically pleasing.

The plat submitted is substantially similar to the pre-preliminary plat.

Project Description

The Preliminary Plat includes 147 lots. The gross site area is approximately 75.44 acres. The site has a net area of about 48.51 acres, which is a net density of 3.03 dwelling units per acre. This is in compliance with the Rs-6 District maximum net density of 3.49 dwelling units per net acre.

The proposed lots range in size from 9,125 square feet to 42,297 square feet, with a mean lot size of 14,376 square feet.

Rs-6 District requirements are summarized below. These must be met for all homes constructed within the development and will be reviewed at time of building permit.

- Maximum Building Height: 35 feet
- Minimum First Floor Area: 900 square feet
- Minimum Total Area: 1,000 square feet, plus 100 square feet for each bedroom
- Maximum Building Lot Coverage: 30%
- Minimum Setbacks:
    - Front/Street Yard: 30-feet/20.1-feet PUD
    - Side Yard: 12 feet
    - Rear Yard: 35-feet/23.45-feet PUD

The applicant is not providing cul-de-sacs as recommended during the pre-preliminary plat review; however, the applicant is proposing other traffic calming measures.

The proposed revisions to the main road include narrowing the street and adding landscaping adjacent to the proposed parking lot for the park area and at one other intersection as shown on the landscape plans, Sheets L1.0 and L1.1. Landscaping within the vision triangle must conform to the noted provision on the plat, which states, "[w]ithin the area of the vision corner easement, the height of all plantings, berms, fencing, signs or any other structure shall be limited to 24 inches above the intersection elevation. No roadway access is permitted over the vision corners from the adjacent lots."

Below are staff recommended conditions of approval related to this development.

1. *Wisconsin Department of Natural Resources approval of any wetland impacts or exemptions shall be granted and provided to the City prior to any land disturbance*.
2. *SEWRPC Environmental Corridor delineations shall be completed prior to land disturbance activities*.
3. *All improvements shall be located outside of remaining and undisturbed natural resources onsite including wetland boundaries and the 25-foot wetland setback*.
4. *Natural resource features and their respective setbacks shall be located within outlots and shall not extend onto any individual lots*.

Conditions No. 3 and 4 above also relate to the Waukesha County recommendations below. Note the applicant is requesting the wetland areas described on these lots to be filled. If not approved to be impacted or exempted by the WDNR, the plat and lots will need to be reconfigured.

> It appears wetlands are located on Lots 47 – 50 and in the vicinity of lots 110 – 98. We recommend consideration be given to redesign the lots to place wetlands on commonly held outlots rather than lots owned by private parties. Wetlands are vulnerable to fill if they remain on private lots. If the wetlands are to remain on the private lots, please ensure the City of Pewaukee's wetland setback is met. At minimum, we recommend split rail fencing or signage by placed to indicate the extent of the wetland if wetlands will remain on private lots.
> 15.
>
> In the vicinity of Lots 85 – 88, it appears that the city's required seventy-five foot shore setback encroaches upon the building envelope depicted upon several lots. It appears as though all lots remain buildable. However, we recommend that the affected building

envelopes be revised to exclude the shore setback area so that future lot buyers and builders understand the limitations of the setback requirements.

5. *Signs shall be subject to Article 9 of the Zoning Code and staff review of Sign Permit Applications*.
6. *Final grading, erosion control, utilities, and storm water management plans shall be reviewed and approved by the Engineering Department prior to any land disturbance*.
7. *A note shall be added to the plat stating, "Sump pumps shall be directed to a suitable location on the property and shall not discharge onto neighboring properties or directly into the City's storm sewers, sanitary sewers, or roadways.*"

Attached is a review letter from Waukesha County comments. Based on this review, staff recommends including the following conditions of approval.

1. *Applicant shall revise all technical corrections as requested by Waukesha County, prior to recording*.
2. *Applicant shall provide documentation to the City and Waukesha County Planning and Zoning Division staff confirming that, as required by Section NR 110.08(4) of the Wisconsin Administrative Code, the Southeastern Wisconsin Regional Planning Commission has reviewed and commented on the proposed sanitary sewer extension which will be needed to serve this development*.
3. *The developer shall consult with the property owner regarding the location and function of any drain tile that may be present on the property and how it may impact the development*.
4. *If any of the waterways are deemed navigable, the following note shall be added to the face of the plat, "Any land below the ordinary high water mark of a lake or a navigable stream is subject to the public trust in navigable waters that is established under article IX, section 1, of the state constitution.*"

Waukesha County also commented on the soils within this development area and that these soils may be indicative of seasonal high groundwater conditions. Waukesha County notes that some lots contain severe conditions with hydric soils and groundwater estimated to be less than one foot from the ground surface.

Related to this, Waukesha County recommended the note below be placed on the plat, which the applicant added.

> BASEMENT RESTRICTION – GROUNDWATER
> - Although all lots in the Subdivision have been reviewed and approved for development with single-family residential use in accordance with Wis. Stat. Ch. 236, some lots contain soil conditions that, due to the possible presence of groundwater near the surface, may require additional soil engineering and foundation design with regard to basement construction. It is recommended that a licensed professional engineer design a basement and foundation that will be suitable to withstand the various problems associated with saturated soil conditions on basement walls or floors or that other special measures be taken. Soil conditions should be subject to each owner's special investigation prior to construction and no specific representation is made herein.

Waukesha County also recommended constructing sidewalks on at least one side of the streets in accordance with "SEWRPC's Recommendations for Provision of Sidewalks in Areas of Existing or Planned Urban Development."

The applicant is providing a sidewalk along the main road of the development, which is consistent with the recommendation from the Conceptual Review, but not along all streets within the development.

Recommendation

Staff recommends approval of the Preliminary Plat for Willow Run, subject to the conditions within this staff report.

PRELIMINARY PLAT NARRATIVE: WILLOW RUN SINGLE-FAMILY

Veridian Homes is pleased to present the proposed Preliminary Plat for the City's consideration. The subject property of Veridian's focus includes the two future parcels known as Lots 2 and 3 of the CSM which was approved on June 2nd, 2025. The Comprehensive Plan was amended to support the zoning designation of RS-6 PUD at the same meeting, and the property is designated as an undeveloped property suitable for residential development in the City's latest housing report.

The proposed Preliminary Plat is consistent with the RS-6 PUD standards – a summary of pertinent proposal data is included in the "General Site Data" table below:

GENERAL SITE DATA

Category	**Value**
Total Acreage	75.44
Total Homes	147
Gross Density	1.94 du/gross acre
Net Density	3.03 du/net acre**
Required Net Density	*3.49 du/net acre max*
Min Proposed Lot	9,125 sf
Avg. Proposed Lot	14,414 sf
Required Lot Area	*9,000 sf min.*
Required Lot Width	*70 ft*
Required Street Setback	*25 ft**
Required Rear Setback	*25 ft**
Required Side Setback	*12 ft*

*Indicates "Base" RS-6 Yard/Setback requirements reduced by (up to) 33% as indicated in ord. 17.0410.c.(4)
**As defined in ord. 17.1402.(g)-61

DEVELOPMENT CHARACTER

Veridian Homes plans each of its neighborhoods with three major principles in mind: neighborhood vibrancy, housing variety, and sustainability with respect to the land. Each of these components works hand in hand to create a sense of place within the neighborhood that is desirable for years to come.

Vibrancy is created through thoughtful planning to create a visually interesting and engaging neighborhood. In the case of the proposal, the property features natural topographic undulations and a contiguous wetland in the northwestern corner which are planned around to drive the character of the plan. In addition, the existing Meadowbrook Village detention basin is proposed to be expanded upon, to allow for additional buffer and view opportunities for homes along the western boundary. The proposed neighborhood will take access from Land by Label's proposed spine road, which connects Golf Road to the proposed multifamily site. The plan has been designed with smaller blocks radiating from the spine road, allowing convenient access to and from the overall development, as well as the the shared amenity spaces planned by Land by Label.

Architectural interest is created using detailed design guidelines, which will be enforced by an Architectural Control Committee upon establishment of the neighborhood HOA. Examples of standards include anti-monotony regulations, requirements of human-scale entry features such as covered entries and patios, and implementation of landscape design and maintenance standards.

Housing Variety is created through the utilization of varying lot sizes and formats. The inclusion of an array of lot sizes, and different degrees of basement exposure will assist in the goals of anti-monotony by allowing for the use of a variety of home types and styles throughout the neighborhood, ranging from 1,500 sf 1-story ranch homes, to 3,000+ sf estate style homes with walk-out basements.

Sustainability revolves around respecting the natural features of the land. As described in the section on vibrancy, the subject property features natural amenities (contiguous wetland feature and topography) which Veridian, and its consultants are taking care to protect. Veridian's engineer is developing a grading plan which respects the natural topography where possible - working with the topography to allow homes to be sited at the high point of the property providing scenic views for those homes. It also includes the way we build - Veridian Homes is the only private developer who is a member of the WDNR's green tier program, which focuses on effectively controlling construction stormwater discharges to protect sensitive ecosystems.

ECONOMIC AND MARKET ANALYSIS

The build out of 147 homes will generate Impact fees of about $250k ($1,744/home not including sewer RCA) based on the 2024 Impact Fee Schedule. The City will receive additional payments for building permit fees and the various other plumbing, electrical and associated building and inspection fees. Building the infrastructure and homes in the City will also create (and maintain) a considerable number of jobs for the life of the neighborhood construction.

In addition to the one-time payment of impact fees, the neighborhood will continue to generate tax dollars annually. At full build out it is estimated that the project will generate ~$304k in yearly City tax revenue. This is based on the mill rates of the 2024 tax bill and will fluctuate over time.

TAX BILL		*Annual Amount*
Number of Homes	147	
Average Assessed Value	$650,000	
City of Pewaukee Rate	3.1829844	$304,134.16

The neighborhood will include a variety of ranch and 2-story detached single family homes ranging in size from ~1,500sf to >3,000sf. The current estimated average sales price of homes in the neighborhood is about $650k (with starting prices in the mid $500k's) which will generate an estimated $90-100 million in assessed value in the City.

Veridian Homes has developed, built, and sold over 250 homes in Waukesha County since 2015, providing about 10-years of operating experience in the area. Additionally, a recent private market study of Waukesha County found that Veridian is currently building two of the top three most in-demand (based on absorption rate) neighborhoods within Waukesha County in 2024 - Arrowood in Oconomowoc, and Evergreen Fields in Menomonee Falls. The realized absorption of homes within those neighborhoods has been, and continues to be, strong as we move into the second half of 2025. It is expected that the same or even greater level of demand for quality new-build homes exists in the City of Pewaukee due to the general desirability and demographic make-up of the city.

ORGANIZATIONAL STRUCTURE OF THE PROPERTY OWNER'S ASSOCIATION

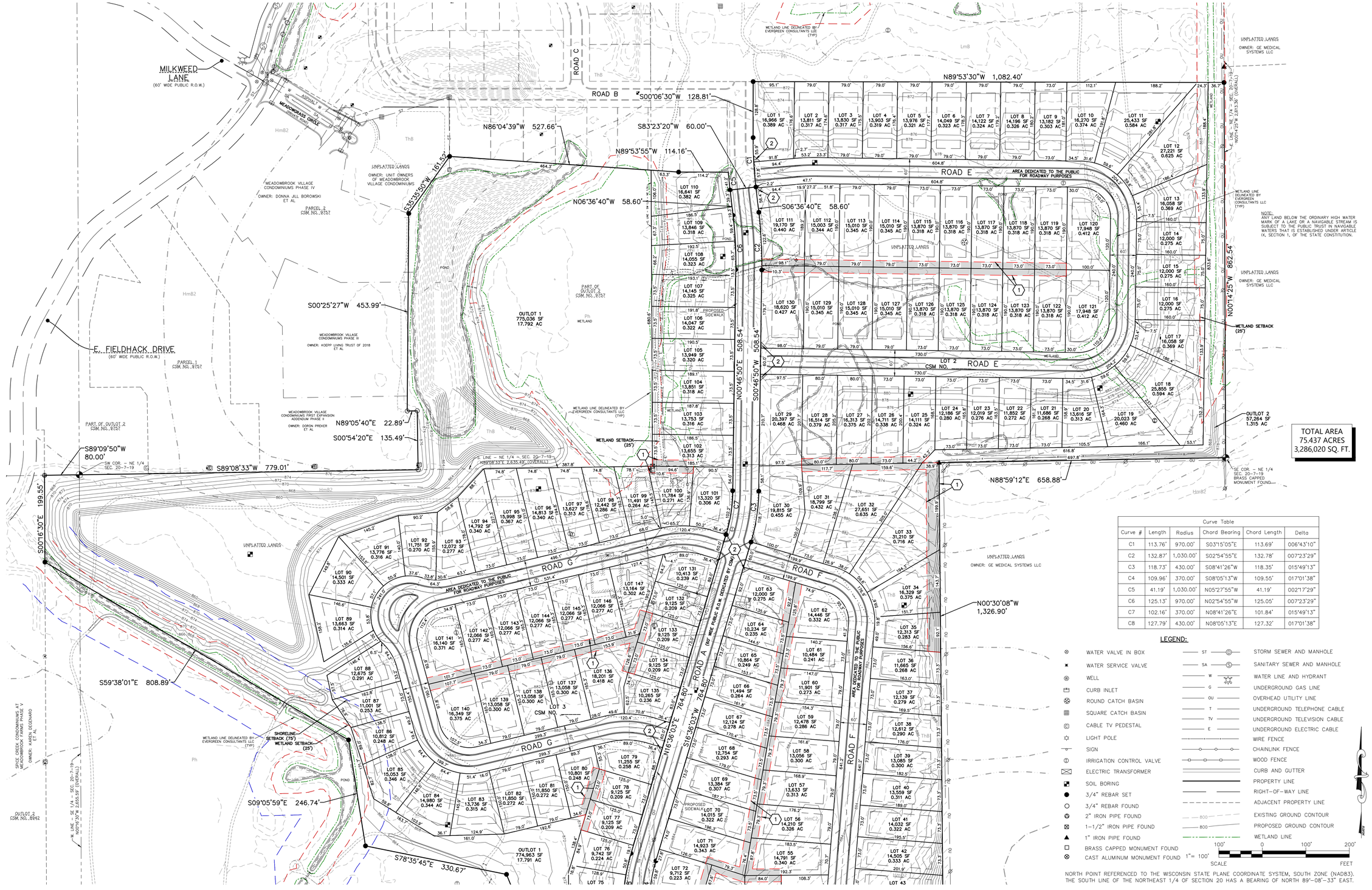
A Homeowners Association will be created to enforce the by-laws of the organization. The HOA will be required to hire a professional manager to ensure long-term maintenance obligations for out lots and common spaces are met. Architecture plans will have to adhere to the guidelines established by the detailed Conditions, Covenants and Restrictions and enforced by an Architectural Control Committee which will be created for the neighborhood. The general Architecture and Character of the proposed neighborhood will be similar to our existing Arrowood, Evergreen Fields, or Silver Springs Estates neighborhoods within the County.

PRELIMINARY PLAT OF
WILLOW RUN

LOTS 2 & 3, CSM NO. _____, BEING PART OF THE SE 1/4 & SW 1/4 OF THE NE 1/4, PART OF THE NE 1/4, NW 1/4, SE 1/4 & SW 1/4 OF THE SE 1/4 AND PART OF THE NE 1/4 OF THE SW 1/4 SECTION 20, TOWNSHIP 7 NORTH, RANGE 19 EAST, CITY OF PEWAUKEE, WAUKESHA COUNTY, WISCONSIN.

EASEMENT KEYNOTES

1. PROPOSED STORM SEWER & DRAINAGE EASEMENT
2. PROPOSED VISION TRIANGLE EASEMENT



Curve Table					
Curve #	Length	Radius	Chord Bearing	Chord Length	Delta
C1	113.76'	970.00'	S03°15'05"E	113.69'	006°43'10"
C2	132.87'	1,030.00'	S02°54'55"E	132.78'	007°23'29"
C3	118.73'	430.00'	S08°41'26"W	118.35'	015°49'13"
C4	109.96'	370.00'	S08°05'13"W	109.55'	017°01'38"
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C6	125.13'	970.00'	N02°54'55"W	125.05'	007°23'29"
C7	102.16'	370.00'	N08°41'26"E	101.84'	015°49'13"
C8	127.79'	430.00'	N08°05'13"E	127.32'	017°01'38"

LEGEND:

- WATER VALVE IN BOX
- WATER SERVICE VALVE
- WELL
- CURB INLET
- ROUND CATCH BASIN
- SQUARE CATCH BASIN
- CABLE TV PEDESTAL
- LIGHT POLE
- SIGN
- IRRIGATION CONTROL VALVE
- ELECTRIC TRANSFORMER
- SOIL BORING
- 3/4" REBAR SET
- 3/4" REBAR FOUND
- 2" IRON PIPE FOUND
- 1-1/2" IRON PIPE FOUND
- 1" IRON PIPE FOUND
- BRASS CAPPED MONUMENT FOUND
- CAST ALUMINUM MONUMENT FOUND
- STORM SEWER AND MANHOLE
- SANITARY SEWER AND MANHOLE
- WATER LINE AND HYDRANT
- UNDERGROUND GAS LINE
- OVERHEAD UTILITY LINE
- UNDERGROUND TELEPHONE CABLE
- UNDERGROUND TELEVISION CABLE
- UNDERGROUND ELECTRIC CABLE
- WIRE FENCE
- CHAINLINK FENCE
- WOOD FENCE
- CURB AND GUTTER
- PROPERTY LINE
- RIGHT-OF-WAY LINE
- ADJACENT PROPERTY LINE
- EXISTING GROUND CONTOUR
- PROPOSED GROUND CONTOUR
- WETLAND LINE

1" = 100' (SCALE: 100' 0 100' 200' FEET)

NORTH POINT REFERENCED TO THE WISCONSIN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE (NAD83). THE SOUTH LINE OF THE NORTHEAST 1/4 OF SECTION 20 HAS A BEARING OF NORTH 89°-08'-33" EAST.

TOTAL AREA
75.437 ACRES
3,286,020 SQ. FT.

EXCEL
Always a Better Plan
100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com

PROJECT INFORMATION

PRELIMINARY PLAT
WILLOW RUN
GOLF ROAD • PEWAUKEE, WI 53072

PROFESSIONAL SEAL

SHEET DATES
ISSUE DATE AUG. 28, 2025
REVISIONS
OCT. 3, 2025

JOB NUMBER
230312700

SHEET NUMBER
PP-N

2024 © EXCEL ENGINEERING, INC.

PRELIMINARY PLAT OF
WILLOW RUN

LOTS 2 & 3, CSM NO. _____, BEING PART OF THE SE 1/4 & SW 1/4 OF THE NE 1/4, PART OF THE NE 1/4, NW 1/4, SE 1/4 & SW 1/4 OF THE SE 1/4 AND PART OF THE NE 1/4 OF THE SW 1/4 SECTION 20, TOWNSHIP 7 NORTH, RANGE 19 EAST, CITY OF PEWAUKEE, WAUKESHA COUNTY, WISCONSIN.

I, Ryan Wilgreen, Professional Land Surveyor, hereby certify that this preliminary plat is a true and correct representation of all the adjacent existing land divisions and of the boundary of the preliminary plat and features.

That I have fully complied with the provisions of Chapter 236 of the Wisconsin Statutes and Chapter 239 of the City of Pewaukee Subdivision Ordinance in surveying, dividing and mapping of the same.

Ryan Wilgreen, P.L.S. S-2647
ryan.wilgreen@excelengineer.com
Excel Engineering, Inc.
Fond du Lac, Wisconsin 54935
Project No. 230312700

NOTES:

FLOODPLAIN
-Based upon a review of the Federal Emergency Management Agency Flood Insurance Rate Map No. 55133C0192H with an effective date of October 19, 2023, the property falls within Zone "X" (areas determined to be outside the 0.2% annual chance flood hazard).

WETLANDS
-Wetlands shown on this plat were delineated by Evergreen Consultants, LLC on October 29, 2024.

OUTLOTS
-Outlots 1 and 2 are to be used for stormwater management purposes. Outlot 3 is to be used for open space. All owners of the plat of Willow Run have an equal and undivided fractional ownership of all of the outlots. Waukesha County shall not be liable for any fees or special charges in the event they become the owner of a lot or outlot in the subdivision by reason of tax delinquency. The City of Pewaukee is authorized to access Outlots 1 and 2 to conduct necessary stormwater inspections and maintenance.

SCHOOL DISTRICT:
- The plat of Willow Run lies within the Waukesha School District.

EXISTING UTILITIES
-Surface indications of utilities along with Digger's Hotline markings per ticket no. 20244221277 have been shown. Sizes and elevation of underground utilities shown hereon are based on field measurements of visible structures in combination with available data provided to Excel Engineering. Excel Engineering makes no guarantee that all the existing utilities in the surveyed area have been shown nor that they are in the exact location indicated. Contractor shall be responsible for verifying the location of all utilities prior to construction. This plan is in no way a substitute for utility locating at the time of excavation.

DATUMS
-Elevations shown on this survey are based on North American Vertical Datum 1988 (NAVD88). Horizontal coordinates are based on the Wisconsin State Plane Coordinate System, South Zone. (North American Datum 1983).

VISION CORNER EASEMENT RESTRICTIONS
-Within the area of the vision corner easement, the height of all plantings, berms, fencing, signs or any other structure shall be limited to 24 inches above the intersection elevation. No roadway access is permitted over the vision corners from the adjacent lots.

BASEMENT RESTRICTION – GROUNDWATER
- Although all lots in the Subdivision have been reviewed and approved for development with single-family residential use in accordance with Wis. Stat. Ch. 236, some lots contain soil conditions that, due to the possible presence of groundwater near the surface, may require additional soil engineering and foundation design with regard to basement construction. It is recommended that a licensed professional engineer design a basement and foundation that will be suitable to withstand the various problems associated with saturated soil conditions on basement walls or floors or that other special measures be taken. Soil conditions should be subject to each owner's special investigation prior to construction and no specific representation is made herein.

TOTAL AREA
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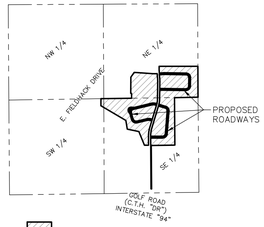
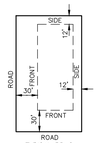
3,286,020 SQ. FT.

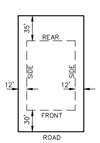


= WILLOW RUN SUBDIVISION

VICINITY MAP
SECTION 20-7-19
SCALE 1"=2000'



ROAD
TYPICAL RS-6
CORNER LOT
BUILDING SETBACKS



ROAD
TYPICAL RS-6
BUILDING SETBACKS

CURRENT ZONING:

RS-6 Single-Family Residential District
Building Setbacks:
Front: 30 feet
Side: 12 feet
Rear: 35 feet

Condition Use PUD setback reduction
Front & Rear setbacks allowed to be reduced by 33%

TYPICAL VISION
CORNER EASEMENT

EASEMENT KEYNOTES

1. PROPOSED STORM SEWER & DRAINAGE EASEMENT
2. PROPOSED VISION TRIANGLE EASEMENT

Curve Table					
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ROUND CATCH BASIN	OU		OVERHEAD UTILITY LINE
SQUARE CATCH BASIN	T		UNDERGROUND TELEPHONE CABLE
CABLE TV PEDESTAL	TV		UNDERGROUND TELEVISION CABLE
LIGHT POLE	E		UNDERGROUND ELECTRIC CABLE
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2" IRON PIPE FOUND			ADJACENT PROPERTY LINE
1-1/2" IRON PIPE FOUND	800		EXISTING GROUND CONTOUR
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CAST ALUMINUM MONUMENT FOUND			

1"= 100'
100' 0 100' 200'
SCALE FEET

NORTH POINT REFERENCED TO THE WISCONSIN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE (NAD83). THE SOUTH LINE OF THE NORTHEAST 1/4 OF SECTION 20 HAS A BEARING OF NORTH 89°-08'-33" EAST.

OWNER:
VARIN/WILLOW RUN LLC
1949 ST JOHNS AVE. STE 202
HIGHLAND PARK, IL 60035

ENGINEER & SURVEYOR:
EXCEL ENGINEERING, INC.
100 CAMELOT DRIVE
FOND DU LAC, WI 54935

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PROJECT INFORMATION

PRELIMINARY PLAT
WILLOW RUN
GOLF ROAD • PEWAUKEE, WI 53072

PROFESSIONAL SEAL

SHEET DATES
ISSUE DATE AUG. 28, 2025
REVISIONS
OCT. 3, 2025

JOB NUMBER
230312700

SHEET NUMBER
PP-S

2024 © EXCEL ENGINEERING, INC.

Legal Description

Lot 2 and Lot 3 of Certified Survey Map No. _____, recorded in Volume __ of Certified Survey Maps on Page _____ in the Waukesha County Register of Deeds Office as Document No. _____, being part of the Southeast 1/4 and Southwest 1/4 of the Northeast 1/4, part of the Northeast 1/4, Northwest 1/4, Southeast 1/4 and Southwest 1/4 of the Southeast 1/4 and part of the Northeast 1/4 of the Southwest 1/4 of Section 20, Township 7 North, Range 19 East, City of Pewaukee, Waukesha County, Wisconsin

October 3, 2025

City of Pewaukee
Attn: Nick Fuchs
W240 N3065 Pewaukee Rd
Pewaukee, WI 53072

Re: Willow Run Preliminary Plat

Dear Mr. Fuchs,

This letter is in response to the review comments dated September 22nd.

1. Staff recommends removing the on-street parking and providing a separate parking lot for the recreational area. This was discussed with Land By Label and these plans should reflect that revision. Plans for the road and what is shown on the plat should be consistent regardless of developer responsibilities.
   Excel Response: This will be coordinated; plans will reflect the updated parking lot.

2. A sidewalk is recommended along the main road. Again, this was discussed with Land By Label.
   Excel Response: This has been added and is coordinated with Land By Label.

3. It is recommended to provide cul-de-sacs at intersections along the main road or other traffic calming features. Landscape features should also be considered. The goal is to slow traffic as well as make the road more aesthetically pleasing. Again, it is understood that coordination is needed with Land By Label.
   Excel Response: Traffic calming measures have been proposed and coordinated.

4. Staff recommends addressing Waukesha County comments/recommendations. Are these comments acceptable?
   Excel Response: The technical comments are acceptable. The environmental recommendations will defer to the applicable DNR & state statue platting requirements.

5. Note signs require separate review and approval. See Section 340-905 for residential sign standards.
   Excel Response: Understood, these will be provided under a separate submittal.

6. Is any permanent fencing proposed within the subdivision?
   Excel Response: Mass fencing is not proposed at the Veridian site level. It is possible that a small section of split rail fencing is included with landscaping for an entrance feature. If individual homeowners pursue fences, it will be permitted at the time of single-family home construction per local ordinances.

7. As noted previously, there is a navigable stream and wetland area to the west of some lots. It is understood that a navigability determination is pending. Please be aware that staff anticipates

recommending that no natural resources or their setbacks, such as the 75-foot setback from the ordinary high-water mark and 25-foot wetland setback, extend onto any of the lots.
Excel Response: The 75-foot & 25-foot setbacks are shown on the plans/plat and do not impact the proposed building footprint. The buildable area will be clearly shown on all official plat documents.

8. Please revise the Current Zoning information and the typical setback illustrations to match that of the Willow Run Single Family Rentals Plat also being prepared by Excel. This includes corner lot setback provisions as well as noting that it is a Conditional Use planned unit development zoning. It is also preferred to just note the allowed percentage for the setback reduction.
   Excel Response: Plat has been updated.

9. Please show the 25-foot setback from wetlands.
   Excel Response: 25' setback from wetlands is shown on wetlands that are not proposed to be exempt or filled. Permit and construction documents will reflect the final wetland boundary and applicable setbacks.

10. Below are anticipated staff recommended conditions of approval.
    a. Wisconsin Department of Natural Resources approval of wetland exemptions shall be granted prior to any land disturbance and impacts to wetlands onsite.
       Excel Response: Understood.
    b. SEWPRC Environmental Corridor delineations shall be completed prior to land disturbance activities.
       Excel Response: Understood.
    c. All improvements shall be located outside of remaining natural resources onsite including wetland boundaries and the 25-foot wetland setback.
       Excel Response: The DNR wetland buffer/setback requirements will be followed pending final wetland permitting and applicability.
    d. Signs shall be subject to Article 9 of the Zoning Code and staff review of sign permits.
       Excel Response: Understood.
    e. Final grading, erosion control and storm water management plans will require Engineering Department approval prior to any land disturbance.
       Excel Response: Understood.
    f. Engineering Department approval of detailed utility plans.
       Excel Response: Understood.

The submittal documents have been revised per the comments above. Please accept for review and approval. Please let me know if you have any comments, questions, or need additional information.

Sincerely,

Excel Engineering, Inc.

Grant Duchac, P.E.
Senior Project Manager

PROPOSED RESIDENTIAL SUBDIVISION

WILLOW RUN

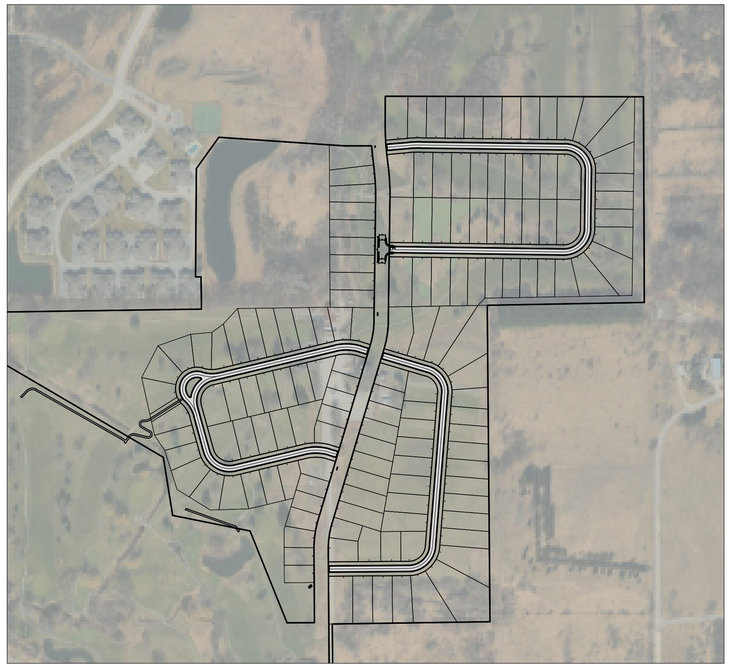
PEWAUKEE, WI

SHEET INDEX

SHEETS BELOW INTENDED TO BE PRINTED IN: COLOR. REFER TO DIGITAL FORMAT DRAWINGS IF PRINTED GRAYSCALE TO ENSURE SCOPE CLARITY.

NUMBER	SHEET NAME/DESCRIPTION	PRELIMINARY	PRELIMINARY	SHEET ISSUE BID & PERMITTING
	DATE:	8/28/2025	10/3/2025	
TITLE SHEET, SPECIFICATIONS, AND DETAILS				
C1.0	CIVIL COVER SHEET	PRELIM	PRELIM	
EXISTING CONDITIONS PLAN				
C3.0	EXISTING SITE PLAN	PRELIM	PRELIM	
MASS GRADING PLANS				
C4.0	OVERALL MASTER GRADING PLAN	PRELIM	PRELIM	
C4.1	MASTER GRADING PLAN	PRELIM	PRELIM	
C4.2	MASTER GRADING PLAN	PRELIM	PRELIM	
C4.3	MASTER GRADING PLAN	PRELIM	PRELIM	
C4.4	MASTER GRADING PLAN	PRELIM	PRELIM	
C4.5	MASTER GRADING PLAN	PRELIM	PRELIM	
UTILITY SYSTEM PLAN				
C5.0	SYSTEM PLAN	PRELIM	PRELIM	
PLAN AND PROFILE				
C6.0	ROAD A	PRELIM	PRELIM	
C6.1	ROAD A	PRELIM	PRELIM	
C6.2	ROAD D	PRELIM	PRELIM	
C6.3	ROAD D	PRELIM	PRELIM	
C6.4	ROAD D	PRELIM	PRELIM	
C6.5	ROAD E	PRELIM	PRELIM	
C6.6	ROAD E	PRELIM	PRELIM	
C6.7	ROAD E	PRELIM	PRELIM	
C6.8	ROAD F	PRELIM	PRELIM	
C6.9	ROAD F	PRELIM	PRELIM	
C6.10	STORM	PRELIM	PRELIM	
C6.11	STORM	PRELIM	PRELIM	
C6.12	STORM	PRELIM	PRELIM	

SHEET INDEX LEGEND:
PRELIMINARY SHEET = PRELIM
ISSUED SHEET = ●



NORTH

SUBDIVISION LAYOUT OVERVIEW

SCALE: 1" = 300'

300' 0 300' 600'

PROJECT CONTACTS

OWNER INFORMATION:

WERIDIAN HOMES, LLC
MATT CUDNEY
6801 S. TOWNE DRIVE
MADISON, WI 53713
Phone: (608) 226-3016
Email: mcudney@veidianhomes.com

CIVIL:

EXCEL ENGINEERING
GRANT DUDUCHAC, P.E.
100 CAMELOT DRIVE
FOND DU LAC WI 54935
Phone: (920)322-1681
E-mail: grant.d@excelengineer.com

CITY PLANNER:

NICK FUCHS
Phone: (262) 691-6007
E-mail: fuchs@pewaukee.wi.us

CITY ENGINEER:

MAGGIE WAGNER
Phone: (262) 691-0804
E-mail: wagner@pewaukee.wi.us

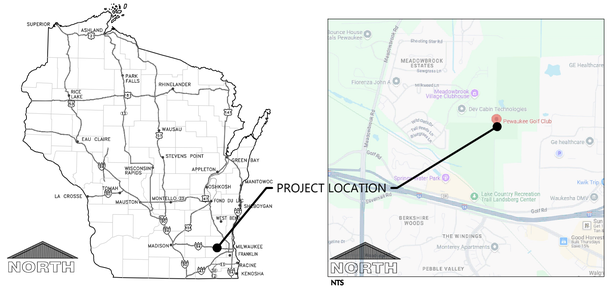
CITY CHIEF ENGINEER STREETS & DEVELOPMENT:

MICHAELIS GABBEY
Phone: (262) 691-0804
E-mail: gabbey@pewaukee.wi.us

CITY FIRE CHIEF:

KEVIN I. BIERCE
Phone: (262) 691-5607
E-mail: bierce@pewaukee.wi.us

LOCATION MAP



NTS

PROJECT NOTES

GENERAL PROJECT NOTES

1. CONSTRUCTION STAKING SHALL BE COMPLETED BY EXCEL ENGINEERING AS REQUESTED BY THE CONTRACTOR AT THE DEVELOPER'S EXPENSE. CAD DRAWING FILES AND SURVEY CONTROL WILL NOT BE PROVIDED FOR STAKING PURPOSES.
2. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL WORK IN ROW PERMITS.
3. CONTRACTOR TO CONTACT EXCEL ENGINEERING TO COMPLETE AS-BUILT SURVEY OF STORMWATER POND FOLLOWING COMPLETION OF THE POND.
4. CONTRACTOR SHALL REFER TO THE CITY OF PEWAUKEE TECHNICAL STANDARDS FOR LAND DEVELOPMENT, STORM, SANITARY, AND WATER SPECIFICATIONS. SEWER AND WATER SHALL BE INSTALLED PER THE STANDARD SPECIFICATIONS FOR SEWER & WATER CONSTRUCTION IN WISCONSIN. ALL WORK IN COUNTY ROW SHALL BE COMPLETED PER WAUKESHA COUNTY STANDARDS.
5. IF DEWATERING IS REQUIRED DURING CONSTRUCTION, ALL WATER SHALL BE TREATED PRIOR TO DISCHARGING OFF-SITE OR TO WATERS OF THE STATE. FOLLOW ALL WDNR PROCEDURES FOUND IN CONSERVATION PRACTICE STANDARD 1061. CONTRACTOR SHALL SUBMIT AND OBTAIN THE NECESSARY WISCONSIN DISCHARGE ELIMINATION SYSTEM (WPDES) PERMITS AND/OR HIGH CAPACITY WELL APPROVALS FOR ANY DEWATERING DISCHARGE TO ANY WATER OF THE STATE.

CONSTRUCTION STAKING SERVICES

CONSTRUCTION STAKING SHALL BE COMPLETE BY EXCEL ENGINEERING AS REQUESTED BY THE CONTRACTOR AT THE CONTRACTORS EXPENSE. CONTRACTOR TO CONTACT RAN WILGREEN AT 920-926-9800 OR RYAN.W@EXCELENGINEER.COM TO GET STAKING PRICE DUE TO INCLUDED THE BID TO OWNER. PAYMENT OF STAKING COSTS ABOVE AND BEYOND THE BASE PRICE DUE TO RESTAKING WILL BE THE RESPONSIBILITY OF THE CONTRACTOR, NOT THE OWNER. CAD DRAWING FILES AND SURVEY CONTROL WILL NOT BE PROVIDED FOR STAKING PURPOSES.

TO OBTAIN LOCATION OF PARTICIPANTS' UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN

CALL DIGGERS HOTLINE
1-800-242-8511

TOLL FREE TELEFAX (414) 259-0947
TDD (FOR THE HEARING IMPAIRED)
1-800 542-2289

WISCONSIN STATUTE 182.0175 (1974)
REQUIRES MINIMUM OF 3 WORK DAYS
NOTICE BEFORE YOU EXCAVATE

BENCHMARK INFORMATION

BENCHMARK NUMBER	BENCHMARK (NAVD88)	ELEVATION
BM1	ARROW ON HYDRANT ON THE NORTH SIDE OF GOLF ROAD APPROXIMATELY 415' EAST OF GOLF ROAD & GOLF COURSE ROAD INTERSECTION	887.71
BM2	BURY TAG BOLT OF HYDRANT ON THE WEST SIDE OF E. FIELDHACK DRIVE 415' NORTH OF THE INTERSECTION OF E. FIELDHACK DRIVE & MILKWEED LANE APPROXIMATELY 3,600' NORTH OF GOLF ROAD & GOLF COURSE ROAD INTERSECTION.	874.13

LEGEND

NOTE: ALL SYMBOLS SHOWN MAY NOT APPEAR ON DRAWINGS.

SYM.	IDENTIFICATION	SYM.	IDENTIFICATION
SPOT ELEVATIONS			
888.30	PROPOSED SPOT ELEVATIONS	877.37	PROPOSED SPOT ELEVATIONS - INTERSECTION PLANS (FLOW LINE OF CURB UNLESS OTHERWISE SPECIFIED)
893.0 EG	EXISTING GRADE SPOT ELEVATIONS	876.3	INTERMEDIATE GRADE SPOT ELEVATIONS
EXISTING SITE SYMBOLS			
	EXISTING SIGN		EXISTING UTILITY POLE
	EXISTING WATER VALVE IN BOX		EXISTING UTILITY POLE WITH GUY WIRE
	EXISTING WATER VALVE IN MANHOLE		EXISTING STREET LIGHT
	EXISTING WATER SERVICE VALVE	T	EXISTING TELEPHONE PEDESTAL
	EXISTING WELL	E	EXISTING ELECTRIC PEDESTAL
	EXISTING STORM CATCH BASIN		EXISTING ELECTRIC BOX
	EXISTING STORM CURB INLET		EXISTING FLOOD LIGHT
	EXISTING SQUARE CATCH BASIN	T	EXISTING TELEPHONE MANHOLE
	EXISTING END SECTION	C	EXISTING CABLE TV PEDESTAL
	EXISTING LIGHT POLE		EXISTING GAS VALVE
	1-1/4" REBAR SET WEIGHING 4.30 LB/FT.		EXISTING HEDGE
	3/4" REBAR SET WEIGHING 1.50 LB/FT.		EXISTING WOODED AREA
	1-1/4" REBAR FOUND		EXISTING MARSH AREA
	3/4" REBAR FOUND		EXISTING DECIDUOUS TREE WITH TRUNK DIAMETER
	2" IRON PIPE FOUND		EXISTING CONIFEROUS TREE
	1" IRON PIPE FOUND		EXISTING SHRUB
	SECTION CORNER		EXISTING STUMP
PROPOSED SITE SYMBOLS			
	PROPOSED SIGN		PROPOSED DRAINAGE FLOW
	PROPOSED WATER VALVE IN BOX		INTERMEDIATE DRAINAGE FLOW
	PROPOSED WATER SERVICE VALVE (CURB STOP)		SOIL BORING
	PROPOSED STORM FIELD INLET - ST FI	CO	PROPOSED CLEANOUT
	PROPOSED STORM CURB INLET - ST CI		PROPOSED BALE DITCH CHECK
	PROPOSED STORM END SECTION		PROPOSED SILT LOG
		IP	PROPOSED TYPE B INLET PROTECTION
EXISTING LINETYPES			
	EXISTING CHAINLINK FENCE	800	EXISTING GROUND CONTOUR
	EXISTING WOOD FENCE	FO	EXISTING UNDERGROUND FIBER OPTIC LINE
	EXISTING BARBED WIRE FENCE	E	EXISTING UNDERGROUND ELECTRIC CABLE
	EXISTING CURB AND GUTTER	T	EXISTING UNDERGROUND TELEPHONE CABLE
	EXISTING GUARD RAIL	G	EXISTING UNDERGROUND GAS LINE
ST	EXISTING STORM SEWER AND MANHOLE	OU	EXISTING OVERHEAD UTILITY LINE
SA	EXISTING SANITARY SEWER AND MANHOLE		EXISTING RAILROAD TRACKS
	EXISTING WATER LINE AND HYDRANT		EXISTING RIGHT-OF-WAY LINE
PROPOSED LINETYPES			
	PROPOSED SILT FENCE		PROPOSED STORM SEWER AND MANHOLE - ST MH
	PROPOSED CURB AND GUTTER	SA	PROPOSED SANITARY SEWER AND MANHOLE - SAN MH
800	PROPOSED GROUND CONTOUR		PROPOSED WATER LINE AND HYDRANT
760	INTERMEDIATE GROUND CONTOUR		PHASE LIMITS
	PROPOSED PROPERTY LINE		

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COLLABORATION

VERIDIAN HOMES

PROJECT INFORMATION

PROPOSED RESIDENTIAL SUBDIVISION
WILLOW RUN
PEWAUKEE, WI

PROFESSIONAL SEAL

PRELIMINARY DATES
AUG. 28, 2025
OCT. 3, 2025

NOT FOR CONSTRUCTION

JOB NUMBER
230312700

SHEET NUMBER
C1.0

CIVIL COVER SHEET

SCALE: 1"= 100'

100' 0 100' 200'

NORTH

EXISTING SITE PLAN

EXCEL

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OCT. 3, 2025

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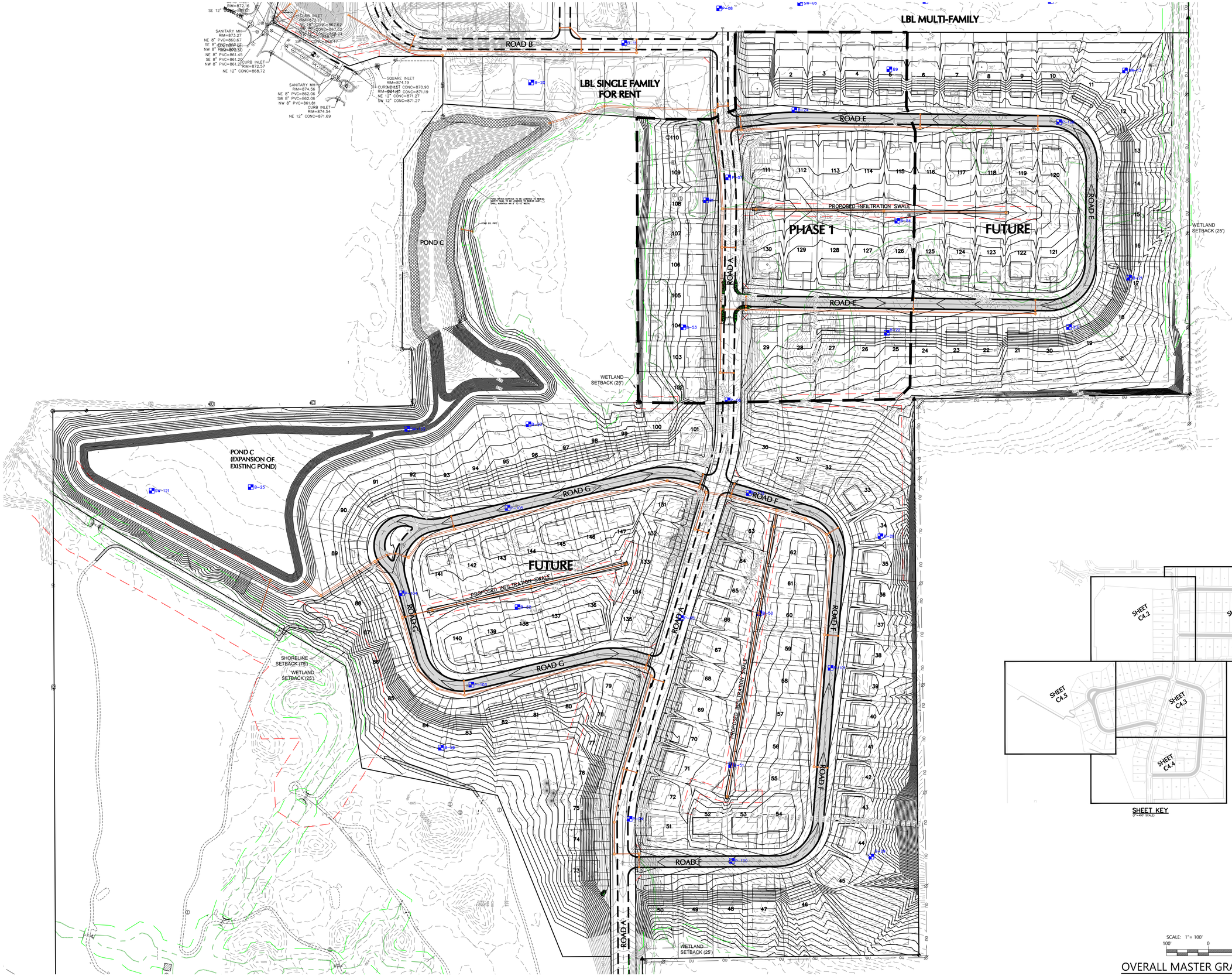
JOB NUMBER

230312700

SHEET NUMBER

C3.0



OVERALL MASTER GRADING PLAN

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COLLABORATION

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PROFESSIONAL SEAL

PRELIMINARY DATES

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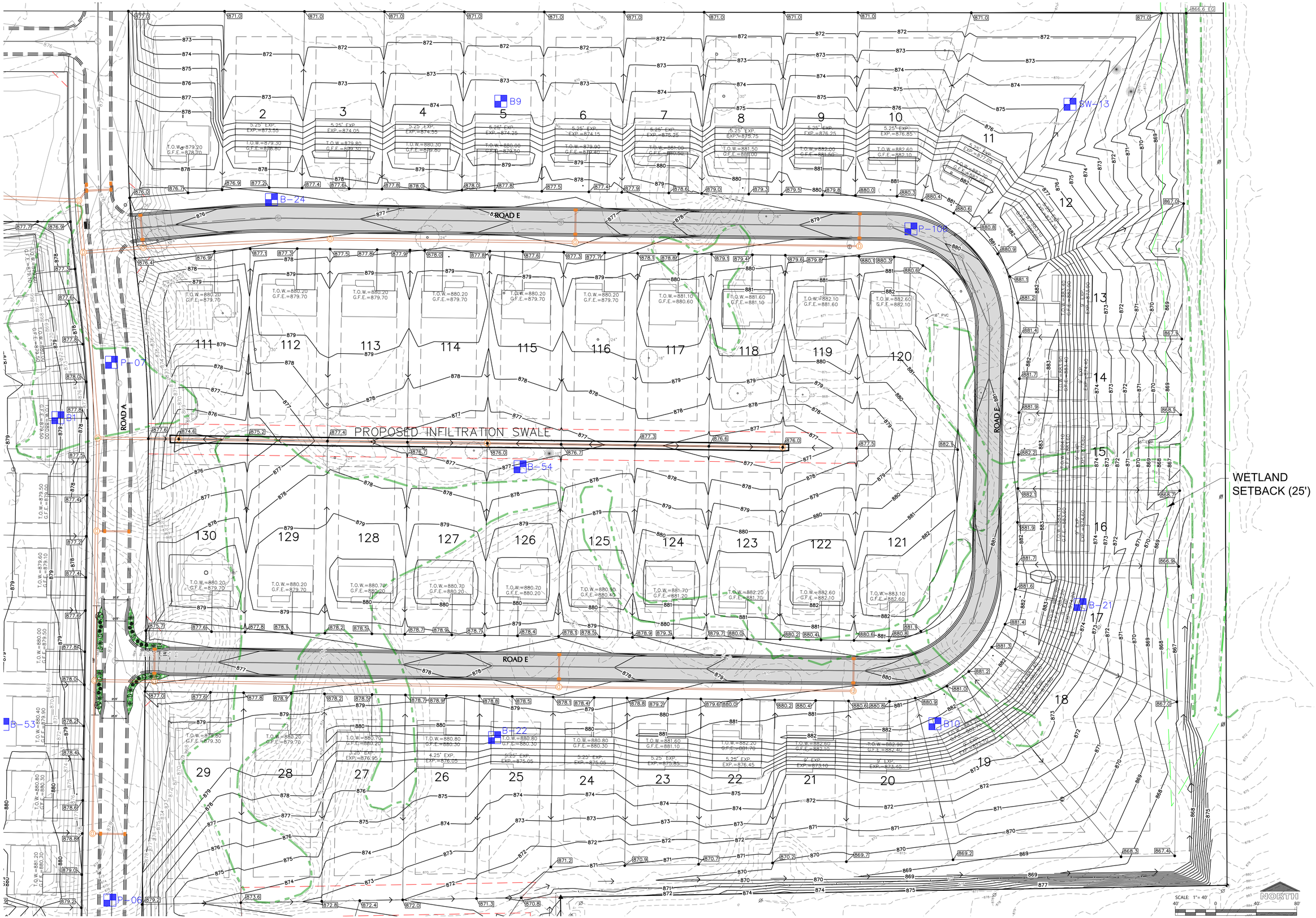
JOB NUMBER

230312700

SHEET NUMBER

C4.0



MASTER GRADING PLAN

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COLLABORATION
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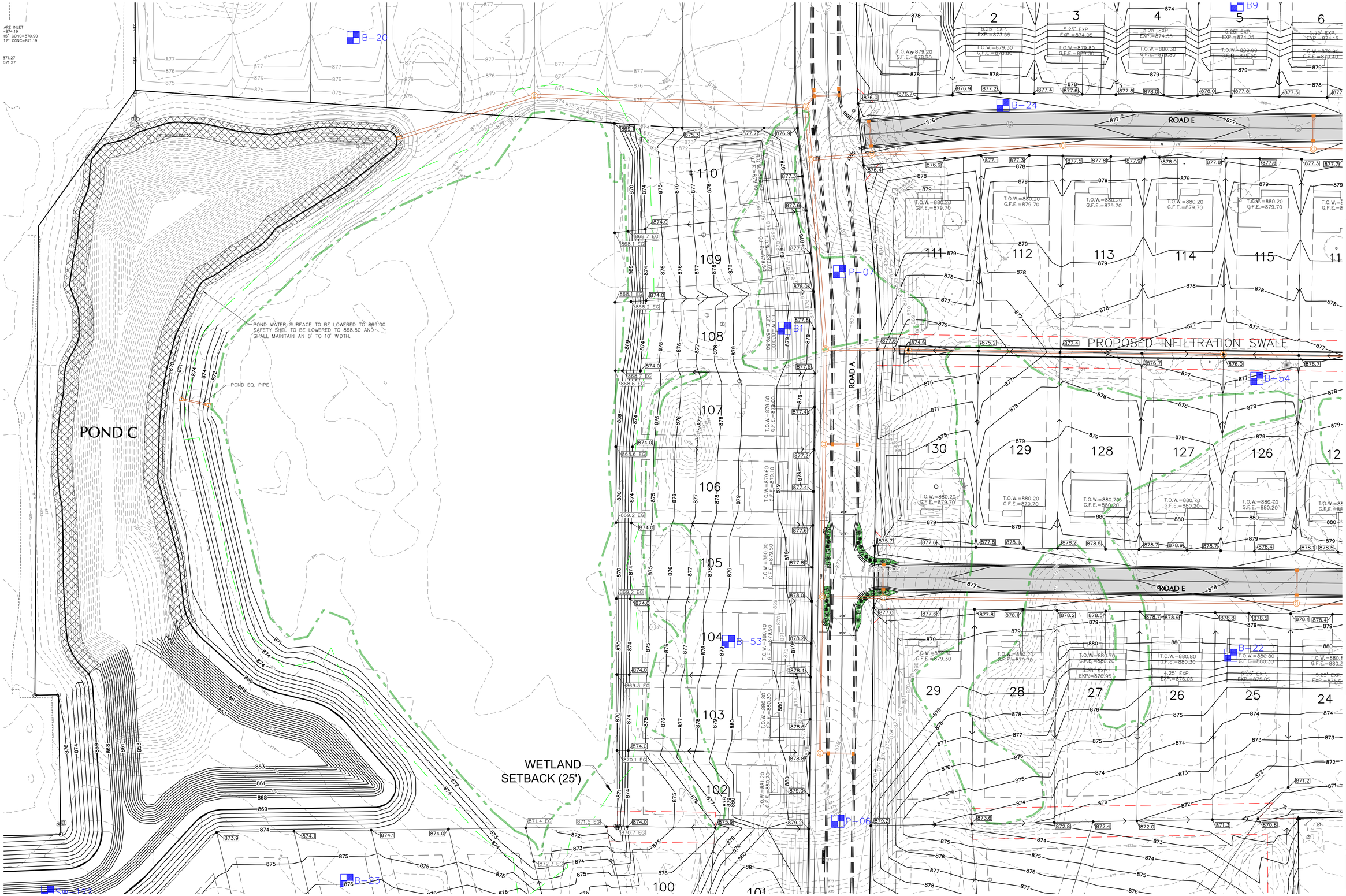
JOB NUMBER
230312700

SHEET NUMBER
C4.1



SCALE: 1" = 40'

NORTH

MASTER GRADING PLAN

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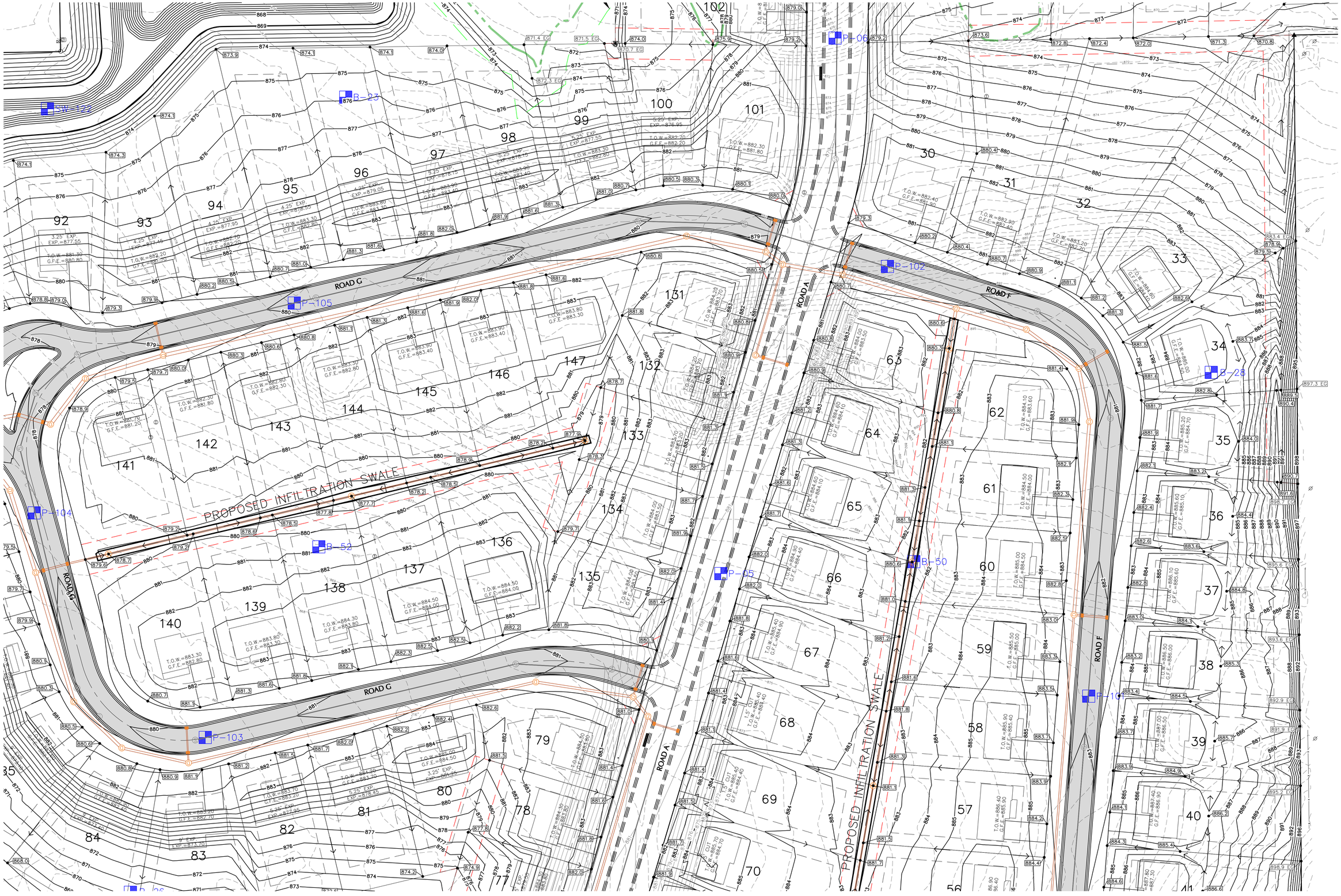
JOB NUMBER

230312700

SHEET NUMBER

C4.2



SCALE: 1"= 40'
40' 0 40' 80'
NORTH

MASTER GRADING PLAN

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COLLABORATION

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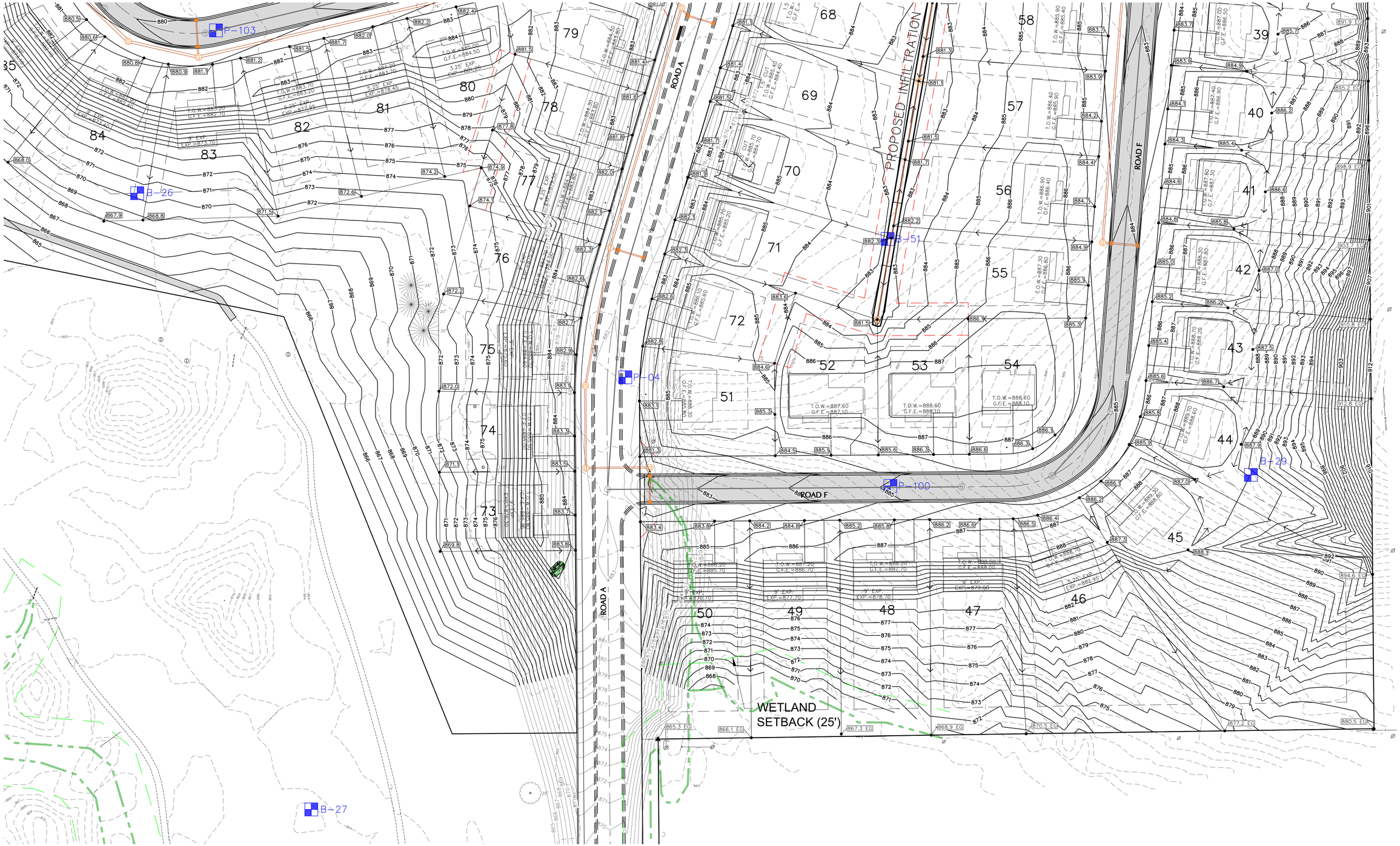
JOB NUMBER
230312700

SHEET NUMBER
C4.3



SCALE: 1"= 40'
40' 0 40' 80'
NORTH

MASTER GRADING PLAN

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230312700

SHEET NUMBER
C4.4

POND C
(EXPANSION OF
EXISTING POND)

SW-121

SW-122

B-25

B-23

P-105

P-104

P-103

B-52

B-26

ROAD G

ROAD G

PROPOSED INFILTRATION SWALE

SHORELINE
SETBACK (75')

WETLAND
SETBACK (25')

SCALE: 1" = 40'

NORTH

MASTER GRADING PLAN

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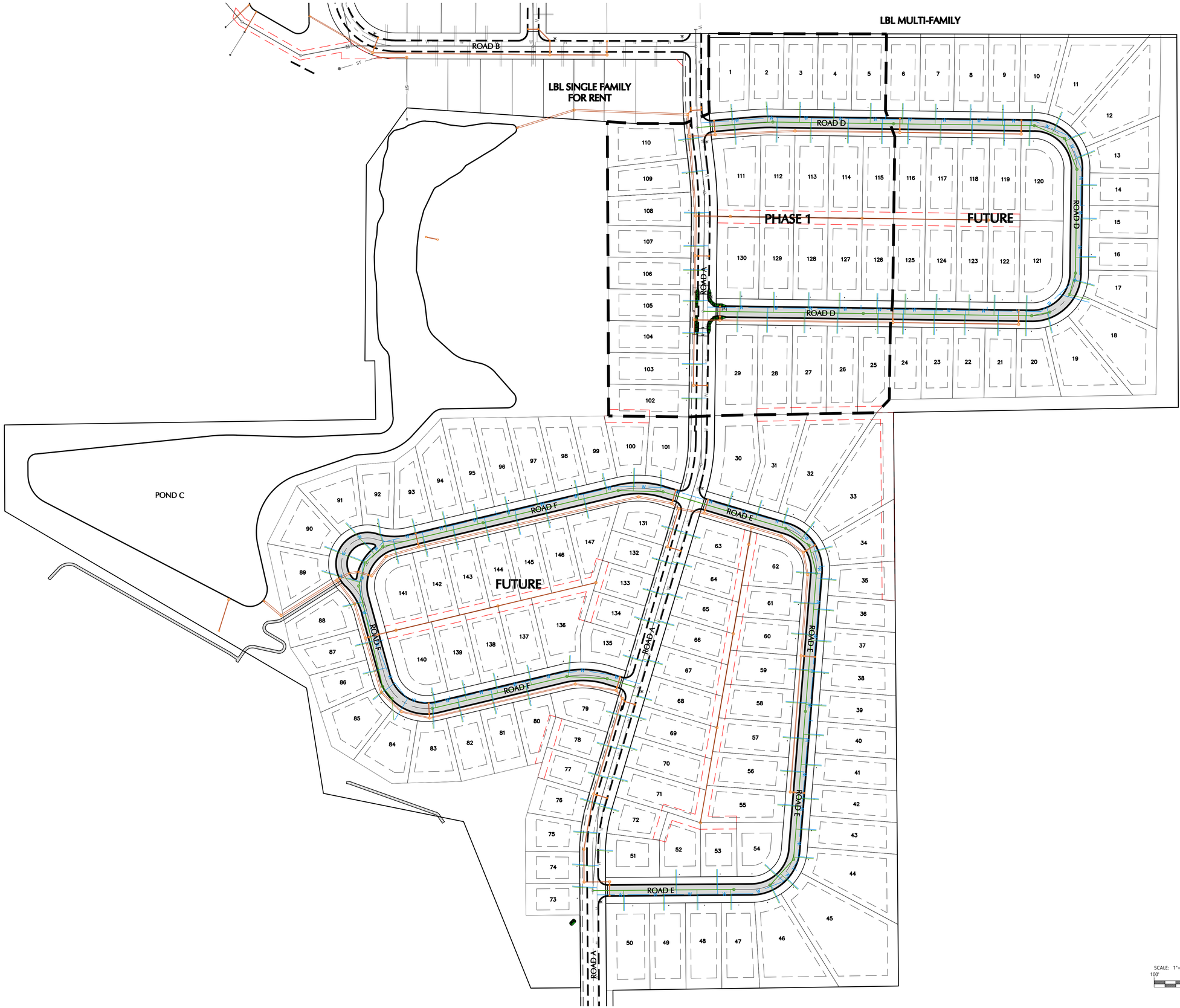
JOB NUMBER

230312700

SHEET NUMBER

C4.5



SCALE: 1"= 100'
100' 0 100' 200'
NORTH

SYSTEM PLAN

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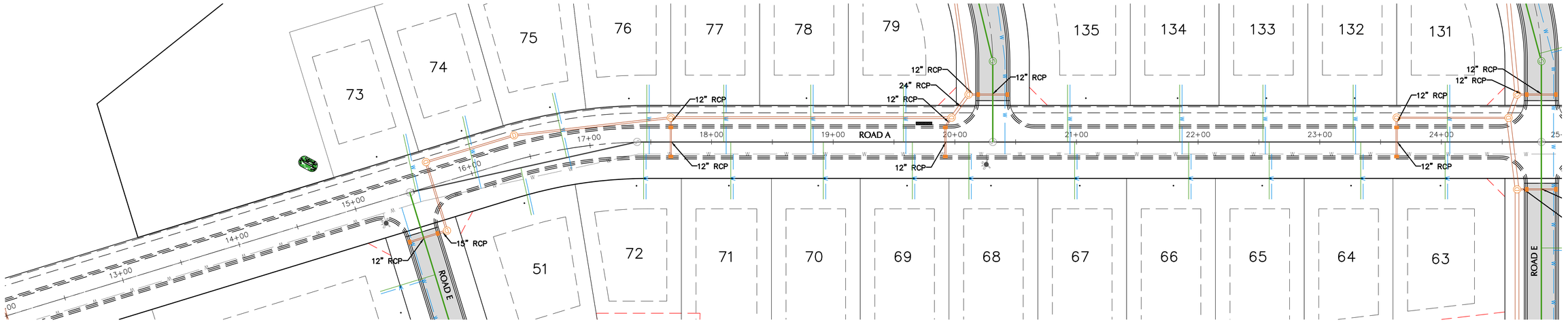
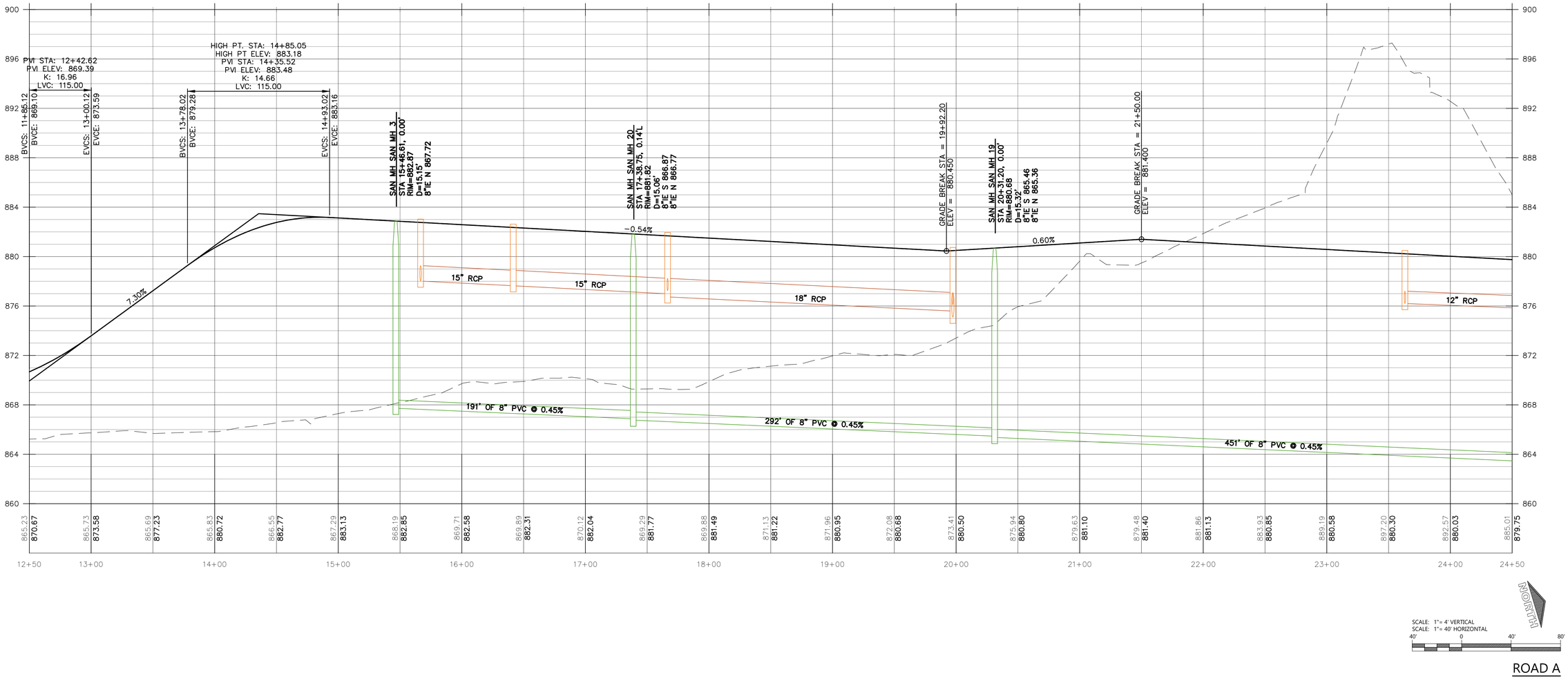
230312700

SHEET NUMBER
C5.0





ROAD A

SCALE: 1"= 4' VERTICAL
SCALE: 1"= 40' HORIZONTAL
40' 0 40' 80'

NORTH

EXCEL

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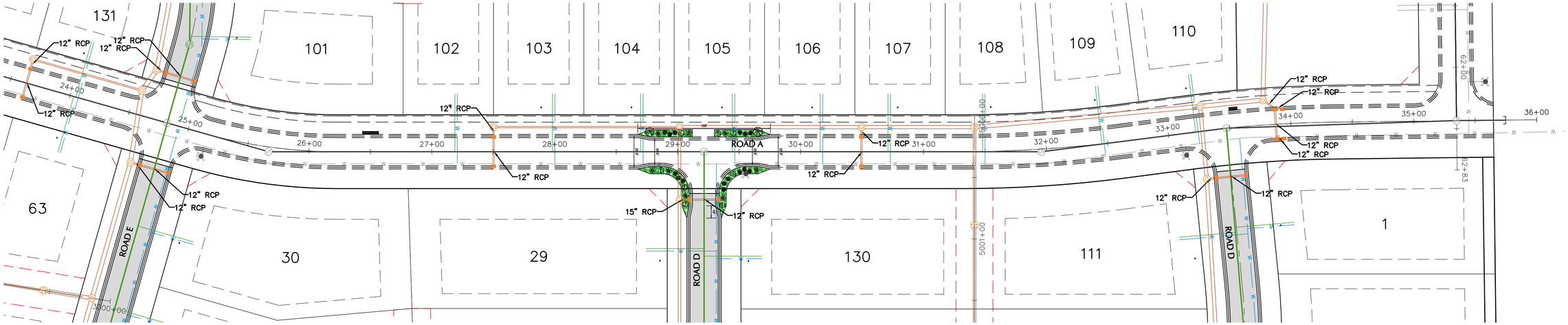
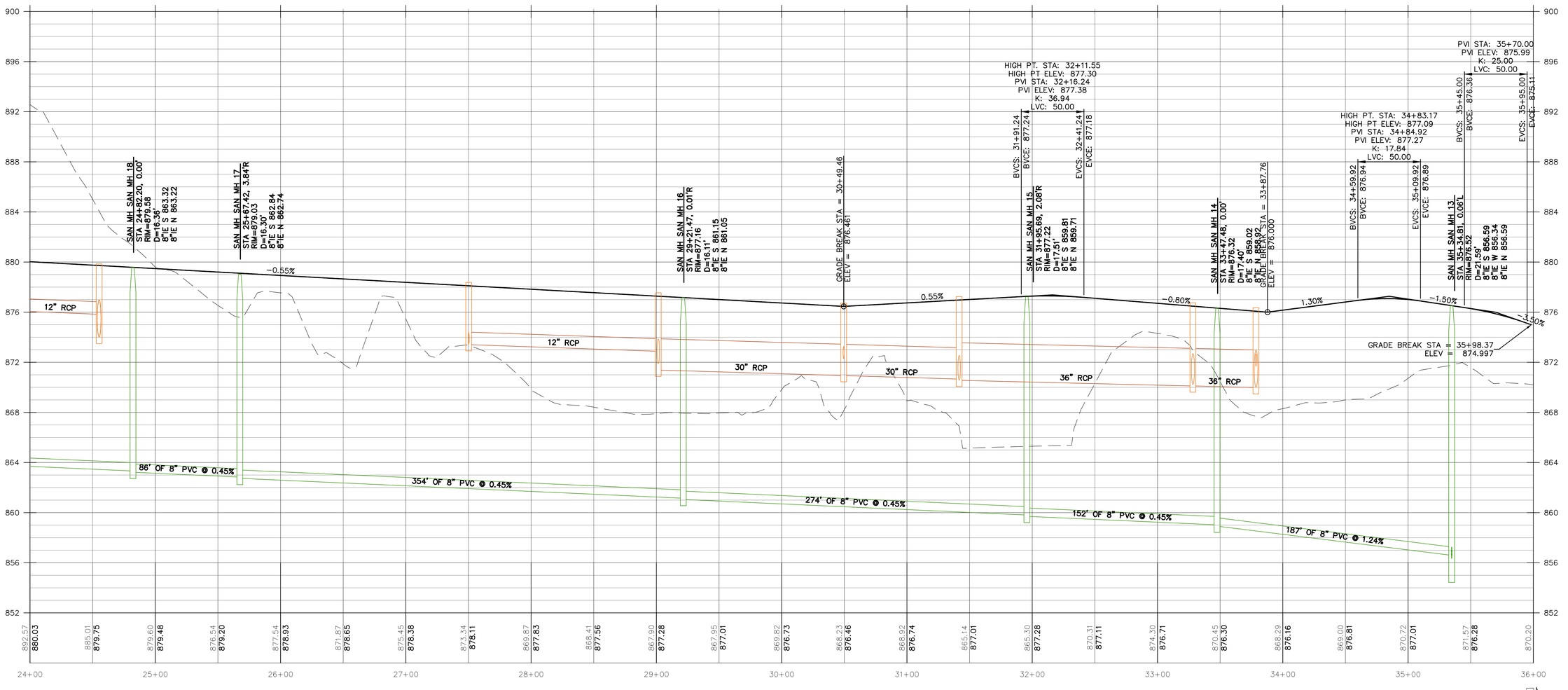
JOB NUMBER

230312700

SHEET NUMBER

C6.0





ROAD A

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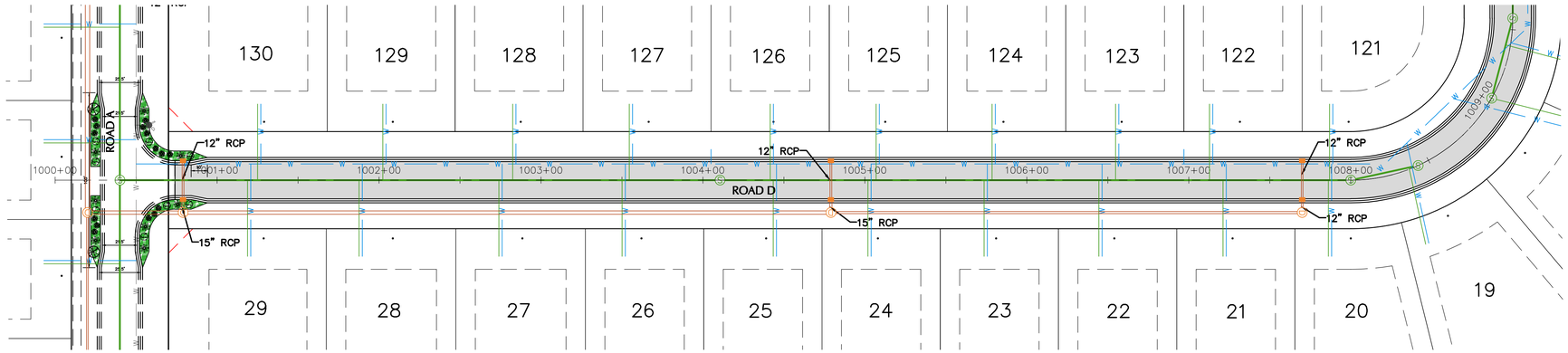

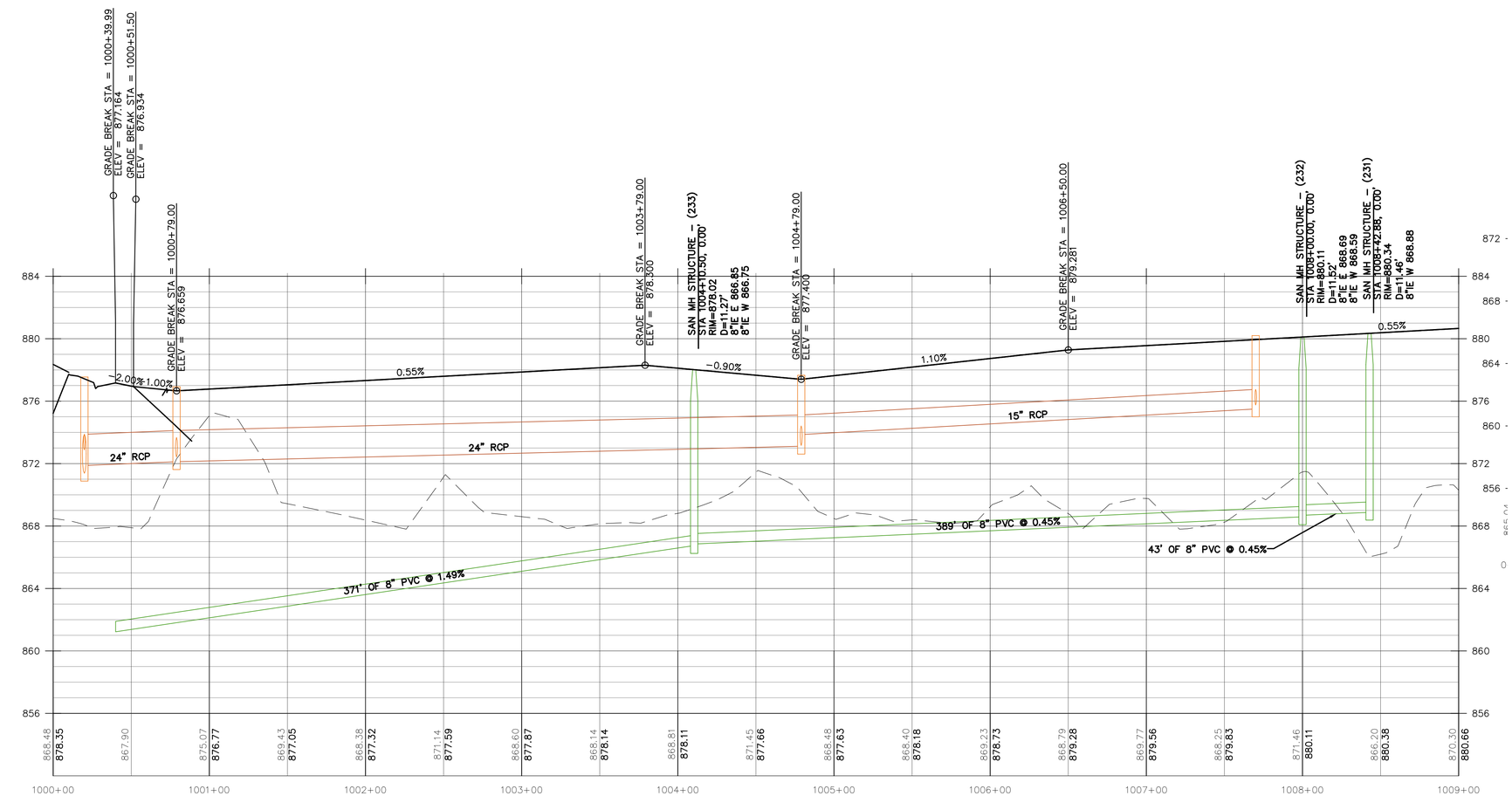

ROAD D

SCALE: 1"= 4' VERTICAL
SCALE: 1"= 40' HORIZONTAL
40' 0 40' 80'

NORTH

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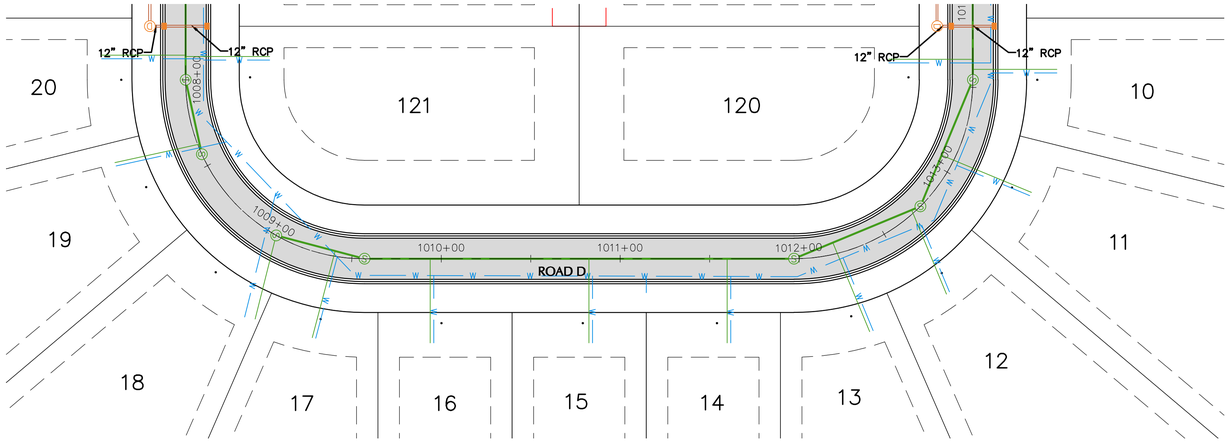
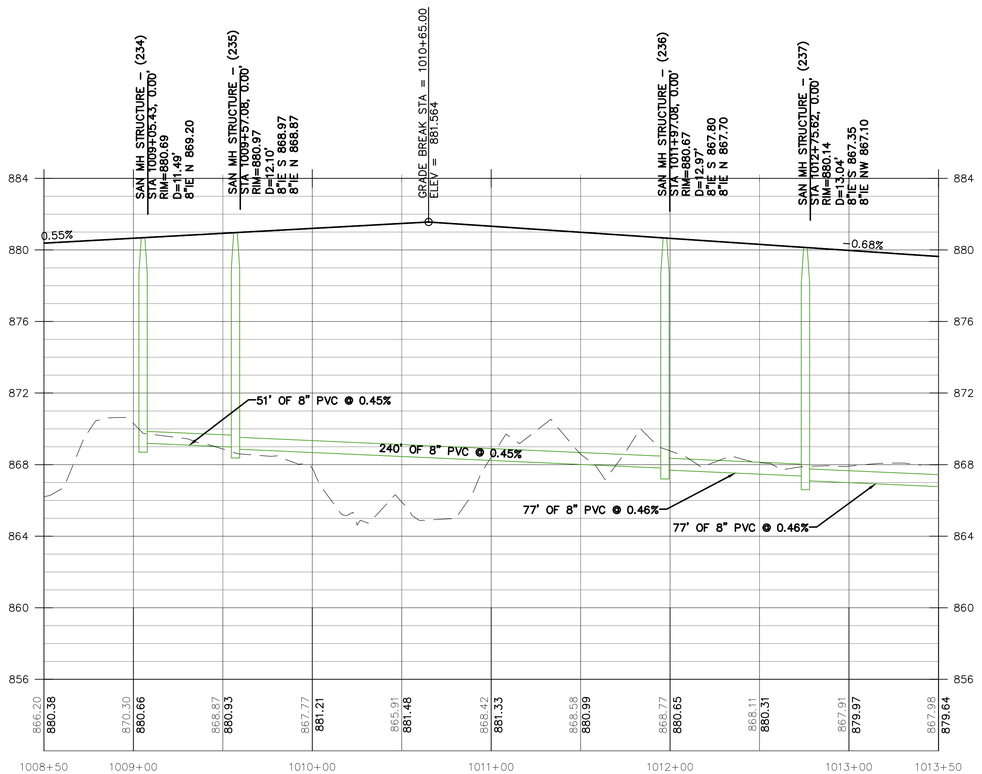
230312700

SHEET NUMBER
C6.2





EXCEL

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COLLABORATION

VERIDIAN HOMES

PROJECT INFORMATION

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WILLOW RUN

PEWAUKEE, WI

PROFESSIONAL SEAL

PRELIMINARY DATES

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OCT. 3, 2025

NOT FOR CONSTRUCTION

JOB NUMBER

230312700

SHEET NUMBER

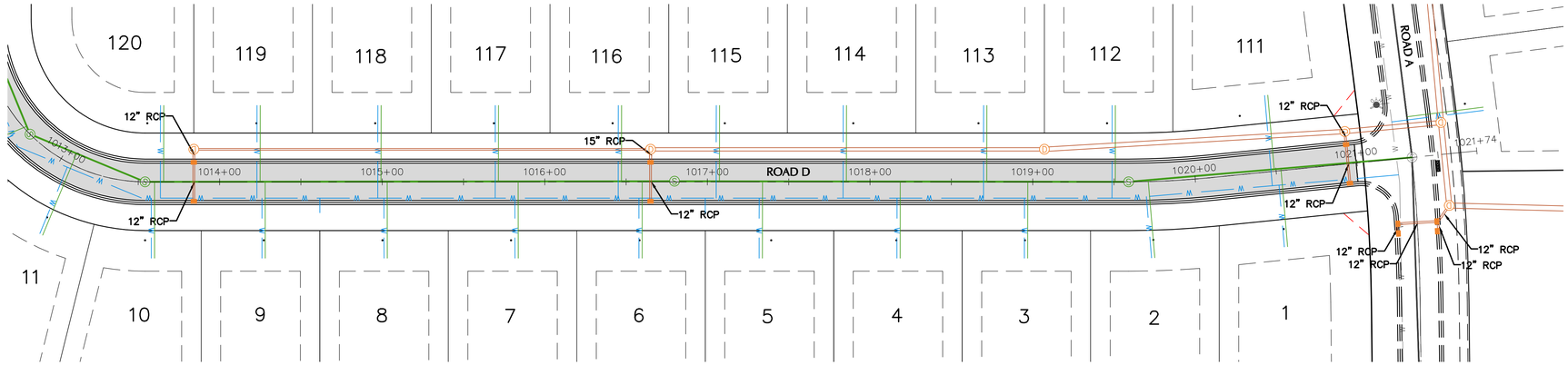
C6.3

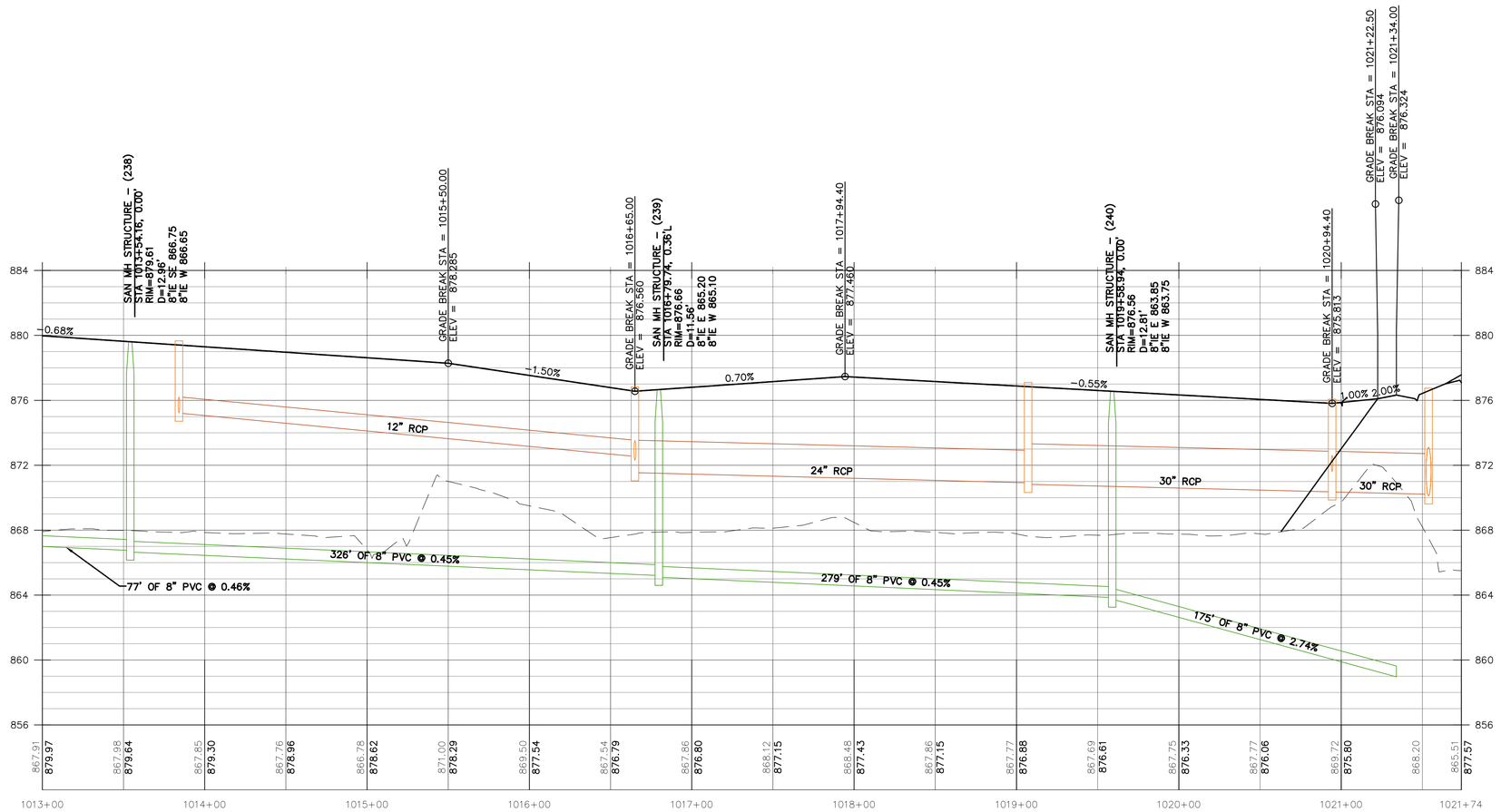
NORTH

SCALE: 1"= 4' VERTICAL
SCALE: 1"= 40' HORIZONTAL

40' 0 40' 80'

ROAD D





SCALE: 1"= 4' VERTICAL
SCALE: 1"= 40' HORIZONTAL
40' 0 40' 80'

NORTH

ROAD D

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COLLABORATION

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OCT. 3, 2025

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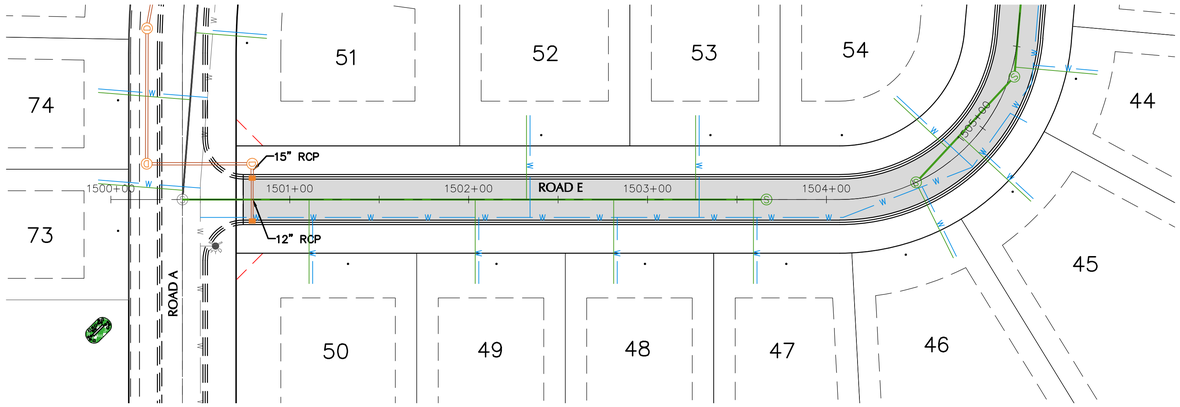
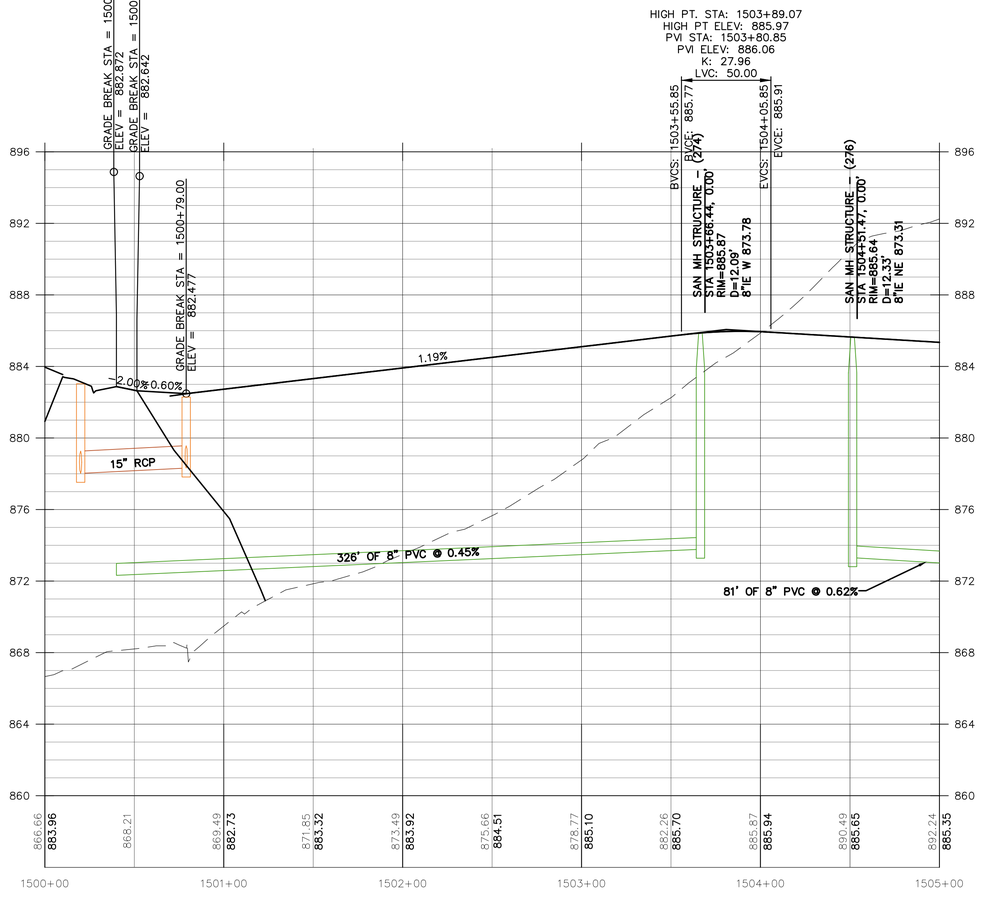
JOB NUMBER
230312700

SHEET NUMBER
C6.4





SCALE: 1"= 4' VERTICAL
SCALE: 1"= 40' HORIZONTAL
40' 0 40' 80'

NORTH

ROAD E

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PROPOSED RESIDENTIAL SUBDIVISION
WILLOW RUN
PEWAUKEE, WI

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AUG. 28, 2025
OCT. 3, 2025

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JOB NUMBER
230312700

SHEET NUMBER
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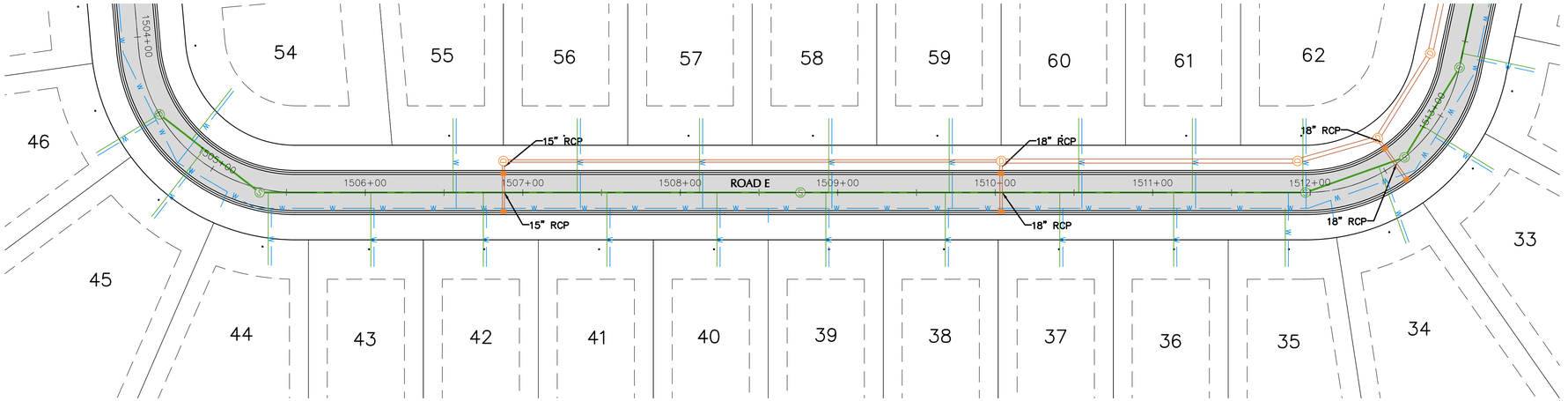

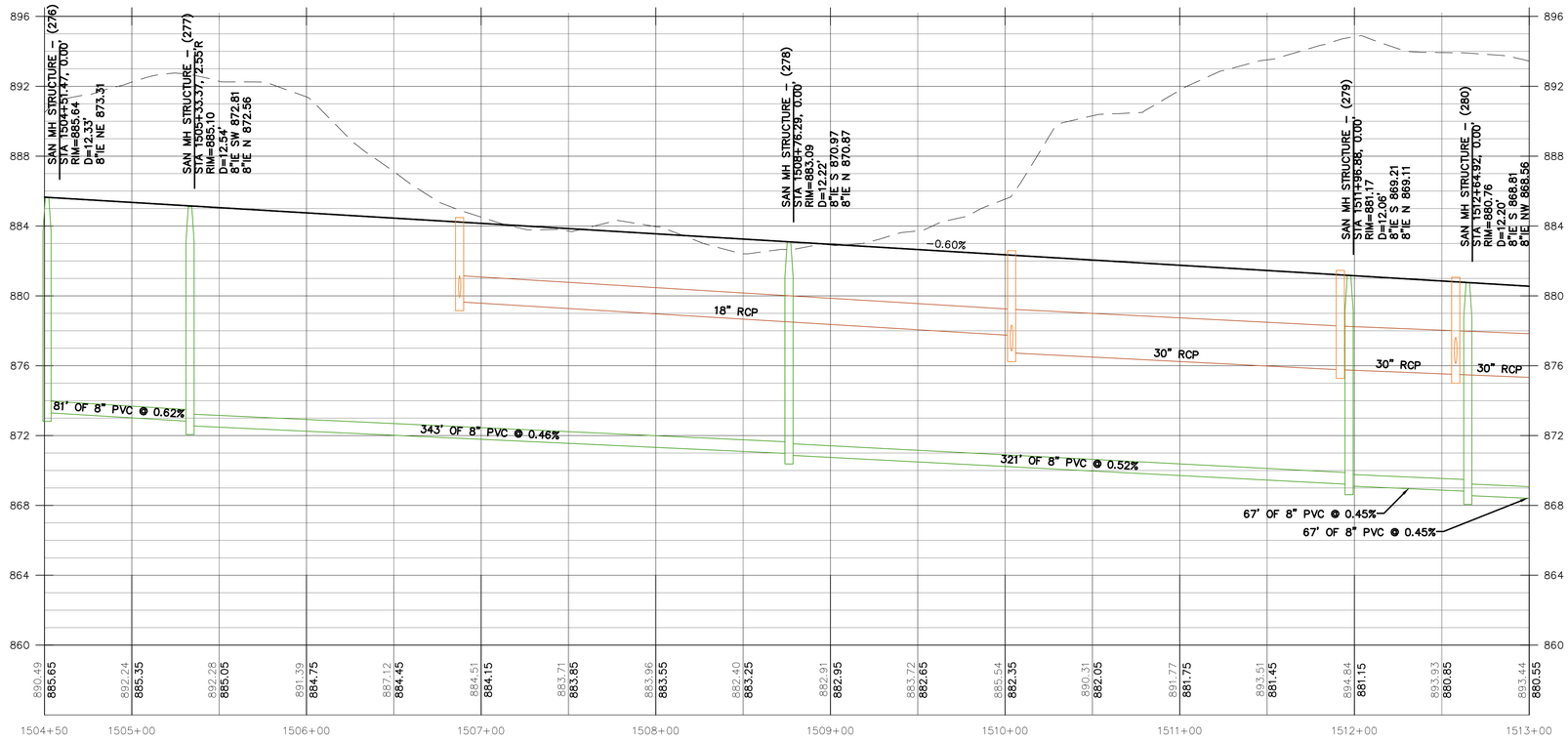

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NORTH

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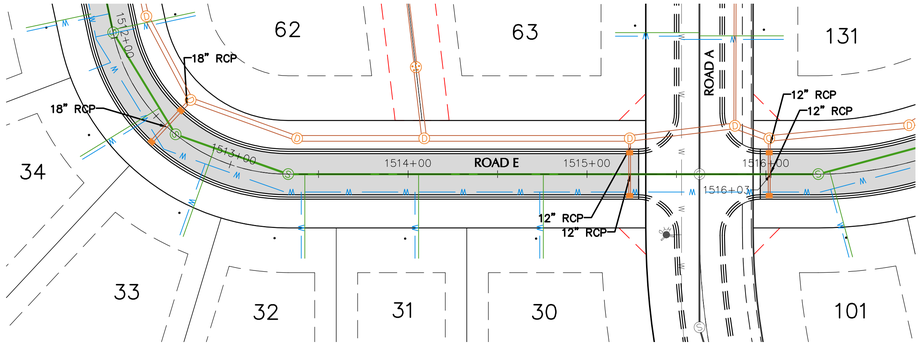

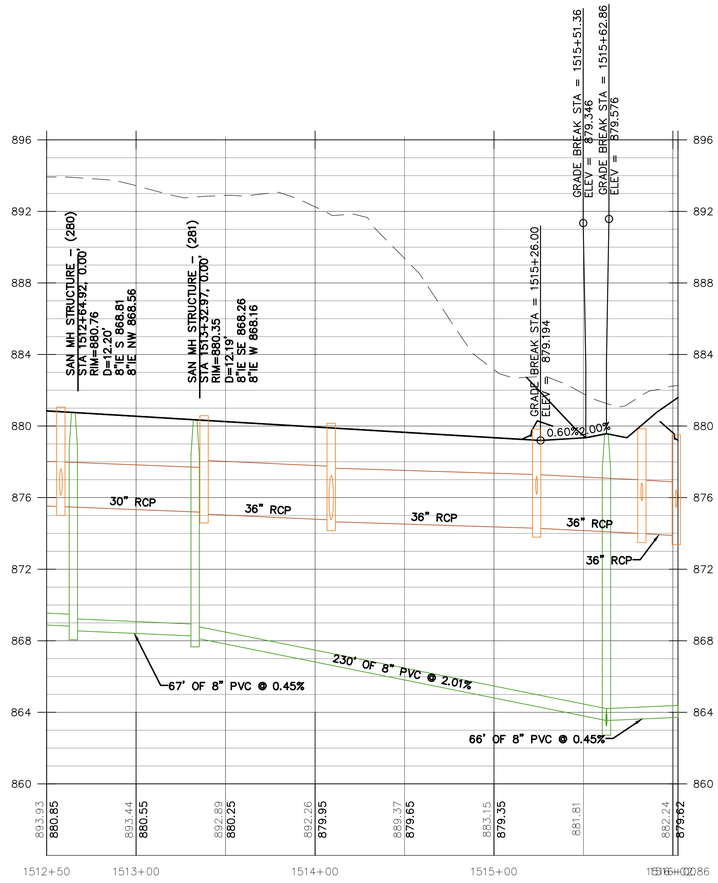

ROAD E

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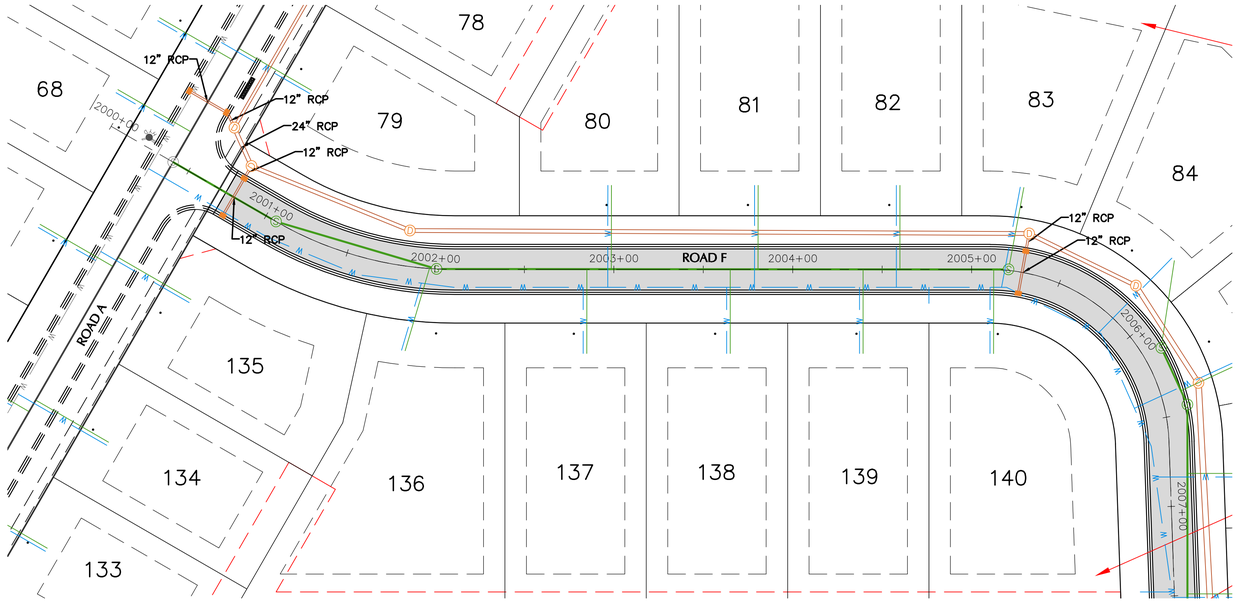

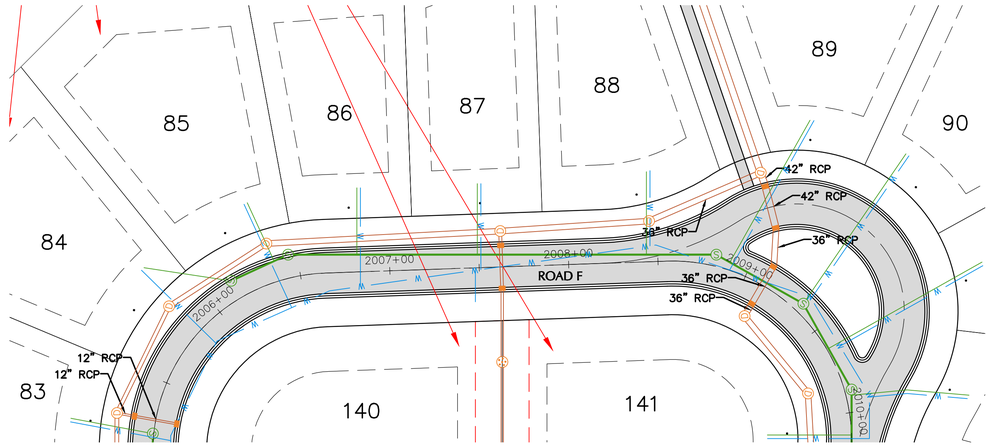

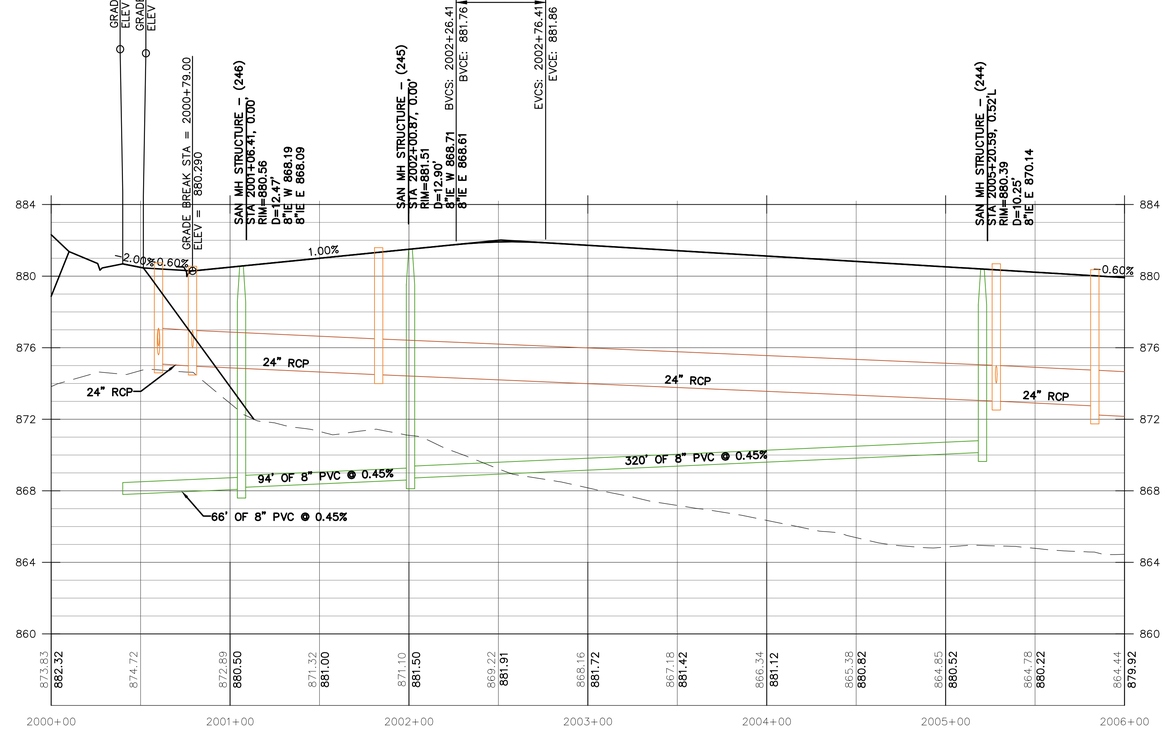

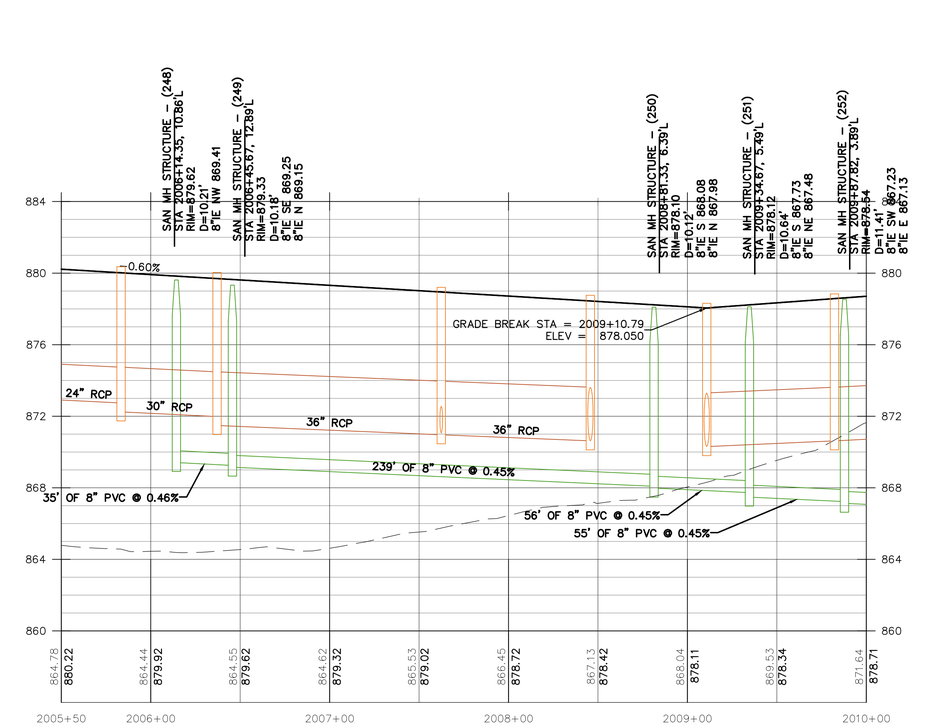

ROAD F

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40' 0 40' 80'
NORTH

SCALE: 1"= 4' VERTICAL
SCALE: 1"= 40' HORIZONTAL
40' 0 40' 80'
NORTH

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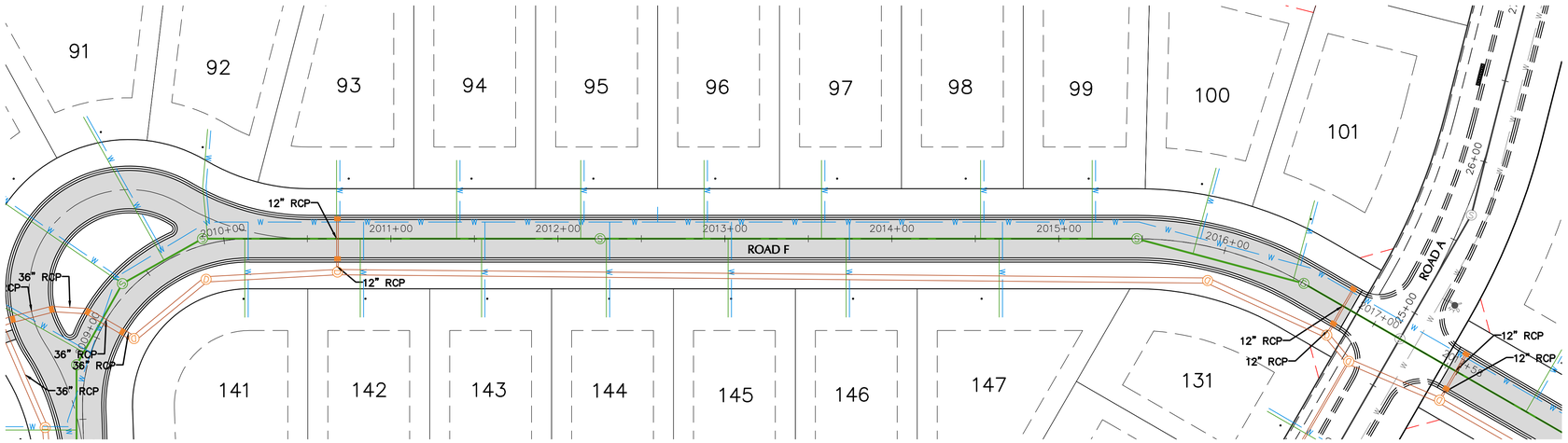

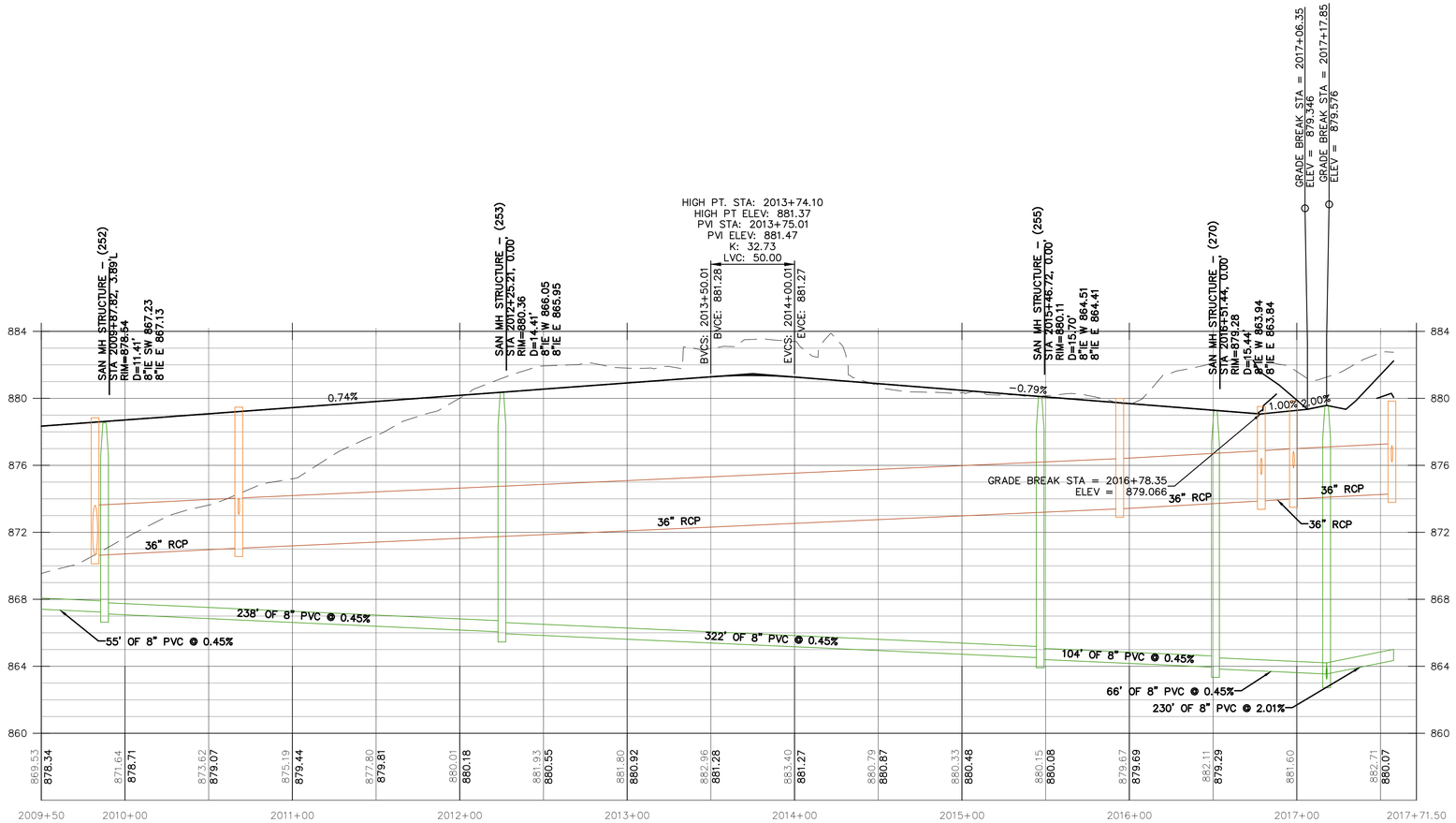

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SCALE: 1"= 40' HORIZONTAL
40' 0 40' 80'

NORTH

ROAD F

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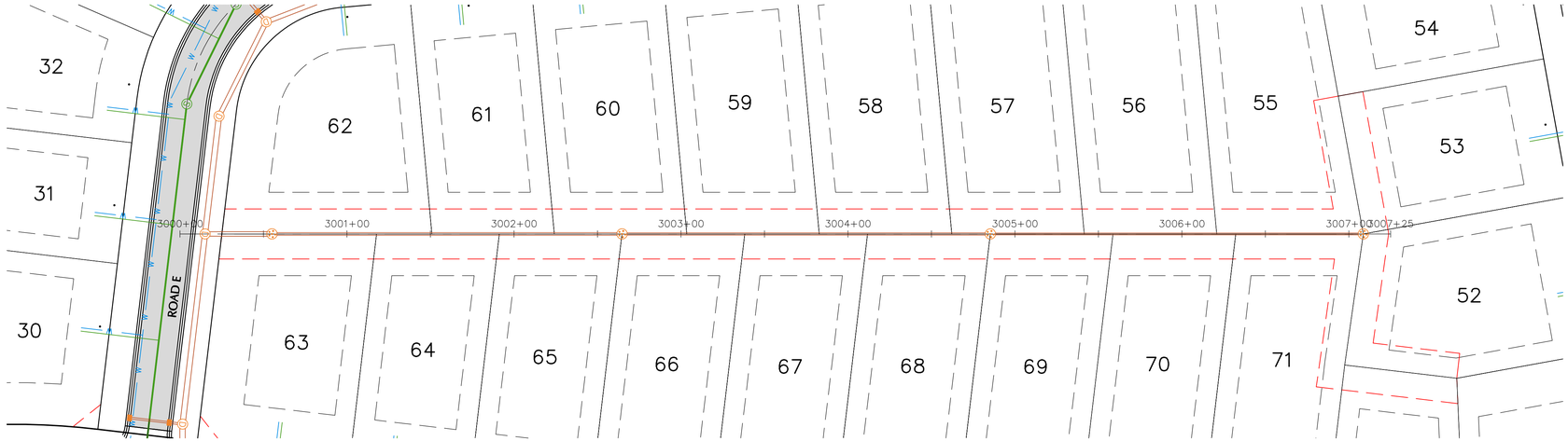

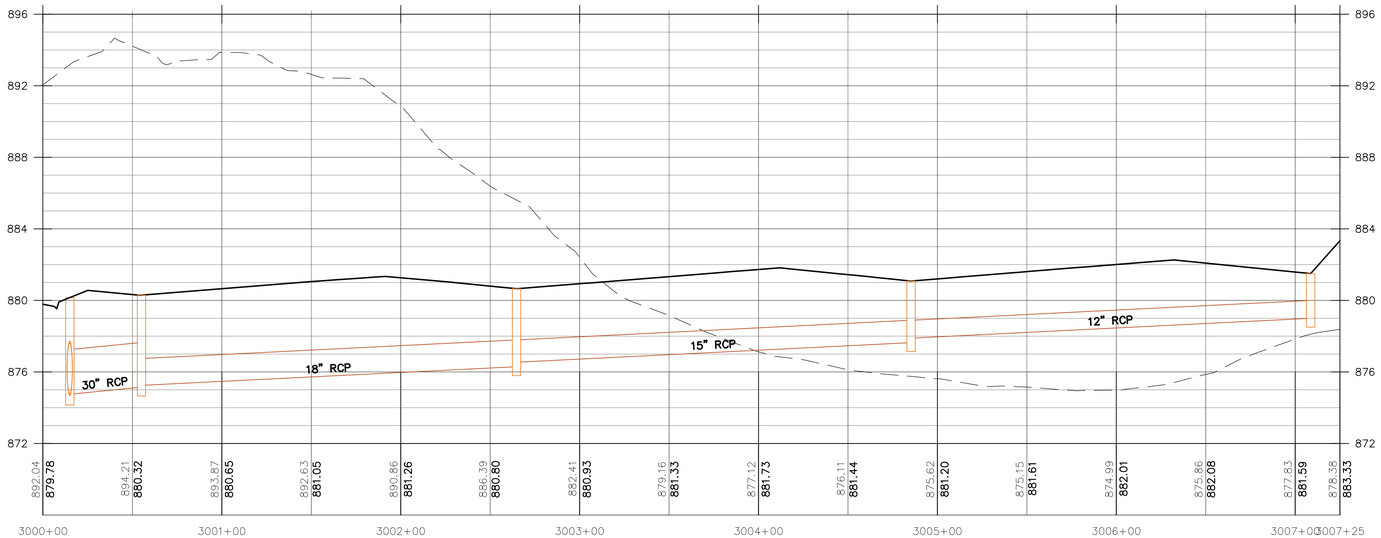

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SCALE: 1"= 40' HORIZONTAL
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NORTH

REAR YARDS 52-71

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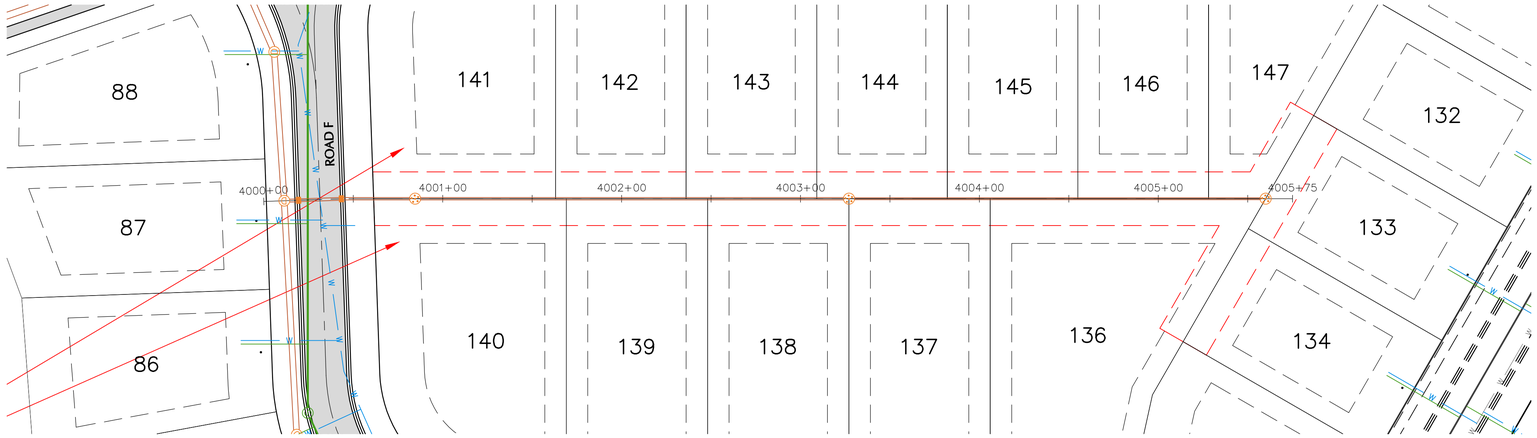

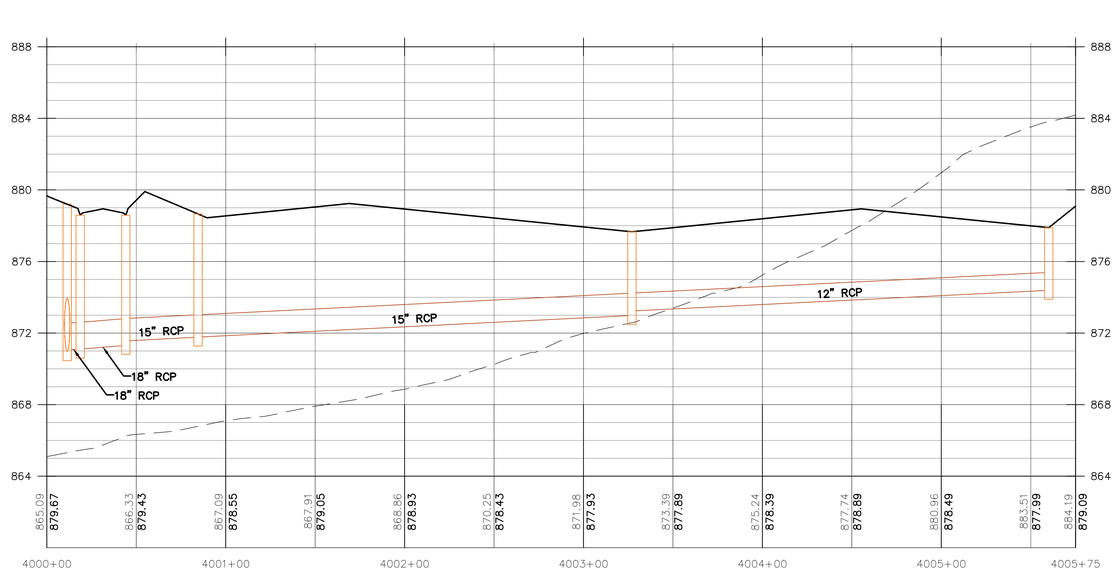

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NORTH

REAR YARDS 133-147

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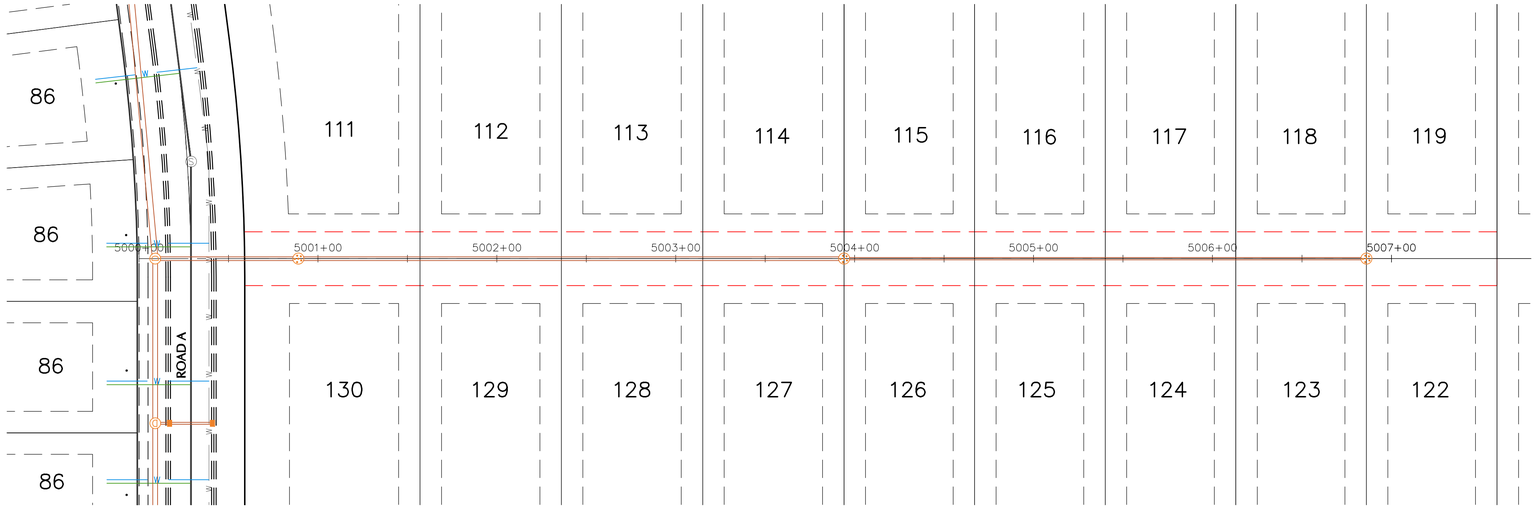

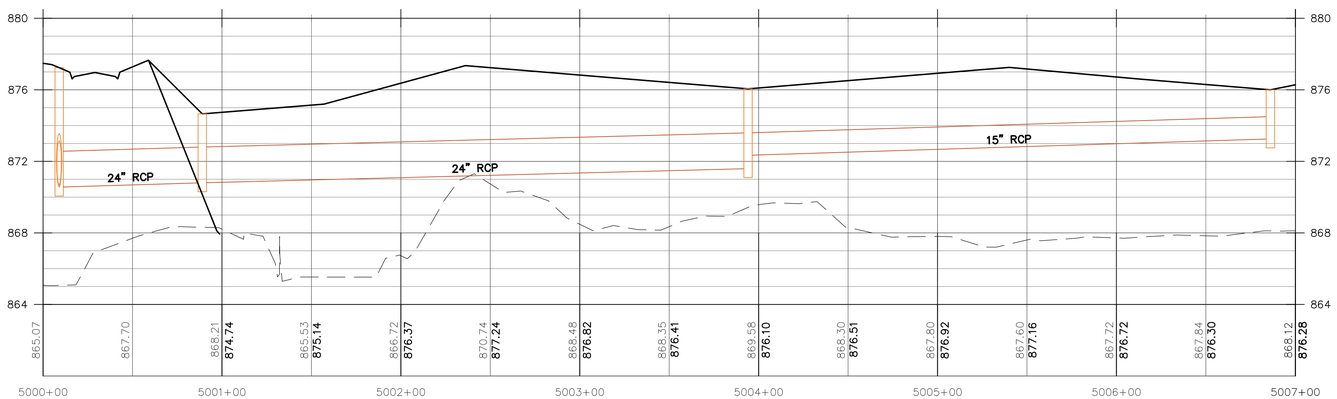

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40' 0 40' 80'

NORTH

REAR YARDS 111-130

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SHEET NUMBER
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VERIDIAN HOMES

Character Imagery and Architectural Specifications

PART D
DESIGN GUIDELINES

D-1) Single Family Dwelling Units.

A) Architectural Character. Architecture within the development will be developed with a unified architectural theme of mid-century modern as well as contemporary interpretations of regional vernacular styles. The overall character of the development will be created to establish a cohesive appearance throughout the community. Examples of these styles include:

Cottage	Craftsman	Four Square	Farmhouse	Mid-Century Modern
Prairie	Shingle	Traditional	Victorian	Southern Traditional
Classical				

B) Front Porch. Front porches are encouraged as both visual and functional design elements with a style consistent with the overall architectural style of the home and provide a visually appealing entry point. Minimum standard porch design details include the following: porch posts or alternate per plan, porch balustrades, when provided, of nominal 2" x 2" square wood at a maximum of six inches (6") on center; and newel posts that are compatible with the design of the column posts. Porch columns and railings shall be painted to match the trim color of the house.

C) Garage.

1. Garages shall be provided in accordance with PDD documents and specific unit plans.

2. The maximum garage width exposed on the front elevation shall be no greater than fifty percent (50%) of the overall building width.

3. On homes with a front-entry garage the front garage facade shall be a minimum of 2' behind house façade adjacent to garage exclusive of any porch element. Side entry garages may project beyond front façade of the home.

4. Tandem, split or side entry garages are encouraged for three (3) or four (4) car garages. For three (3) car front entry garages, the third stall must have a minimum setback of the greater of 2' from the two-car garage line or as required by compatible roof design. Garage width must comply with zoning and the design guideline standards of 50% of overall building width.

5. The garage door shall be a raised panel design painted to match the siding on the home. The use of windows in the door, appropriate to the architectural style, is encouraged. The maximum single garage door size is 8' x 18".

D) Ornamental Design Elements.

1) Ornamental design elements, such as dormers, shutters, window wrap window grids, gable vents, pilasters, pediments, etc., shall be used in a manner consistent with the overall architectural style of the home and with emphasis on elevations exposed to public space.

2) Window wrap or shutters and window grids are required on front and other primary elevations facing a public space. Gable ornamentation, 5" horizontal vinyl trim, and/or eyebrow roofs are required on front elevation gables greater than 10'-0" in width and are encouraged on other gables as deemed appropriate by the Architectural Control Committee.

3) The shutters shall be wood or polystyrene with colors as approved by the Committee or of other material or color as deemed acceptable by the Committee. Panel or louver design shutters shall be used as appropriate to home materials & style.

4) The window wrap and corner trim shall be minimum 3½" vinyl or composite material as approved by the Committee and used with box outs or when part of the standard plan.

5) Gable ornamentation when required for the front elevation and side elevations facing a public street shall be appropriate to architectural style per standard detail.

E) Roof/Facias/Soffits/Eaves.

1) Roof Standards:

a) Roof design must be consistent with the overall architectural style of the home. Roof forms and pitches as established on individual styles may not be altered without approval by the Committee.

b) Roof material shall be Owens Corning Oakridge 30 architectural shingle or equal and in colors as approved by the Committee. Rubber roofing is allowed on flat roof areas and metal roofing is allowed on feature elements.

c) Hip roof design, porches or other elements deemed appropriate by the Committee may be used in lieu of specific gable requirements.

2) Fascia, Soffit and Eave Standards:

a) Facia shall be 6" minimum aluminum with colors as approved by the Committee, wood or composite material may be used when appropriate to the architectural style.

b) Aluminum soffit and eave color shall match facia.

c) A minimum 12" overhang is required at typical eaves and gable ends. However, 6" is allowable with projections less than 6'-0" in width, such as the fireplace chase, dormers and small bay windows. Larger overhangs may be required as appropriate to the architectural style.

F) Exterior Wall Surfaces.

1) Siding material shall be premium vinyl or composite material as approved by the Committee. Vertical board and batten siding or shake siding is encouraged for accent areas appropriate to the style of the home. Colors shall be approved by the Committee.

2) Windows may be vinyl; vinyl clad, aluminum clad or wood with colors as approved by the Committee.

3) Variation of wall planes on primary elevations is encouraged as appropriate to architectural style and building scale. A front porch per Section B may also be used to provide front elevation articulation as appropriate.

4) Any elevations facing public streets or spaces shall have a minimum of three (3) windows with wrap trim or shutters and window grills as appropriate and gable ornamentation at all gable ends, street or public space exposure walls shall have a minimum of one (1) additional window in the exposure wall. Further wall treatment may be required per specific home design or requirements.

5) The use of brick or stone is encouraged as appropriate to architectural style. Brick or stone facing must return a minimum of 2'-4" when terminated at an outside corner. Brick or stone material and color selections shall be as approved by the Committee and harmonious with overall neighborhood palette, as well as with the specific home design and be used consistently on all elevations.

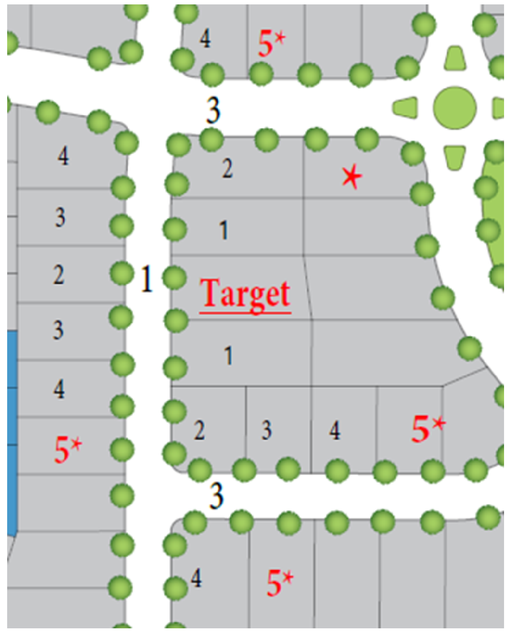
6) **Colors**. The Declarant or the Committee, whichever is then applicable shall approve the trim, siding and roofing colors to assure the most aesthetic combination for a particular house as well as for the other Lots in the Plat. Any subsequent changes in such colors shall be approved by the Declarant or Committee, whichever is then applicable.

7) **Chimneys, facia and soffits.** All chimneys and exterior flues shall be enclosed using brick, stone, stucco or siding material.

Anti-Monotony Standards

OBJECTIVE: To provide a variety of home elevations within a neighborhood while keeping single street integrity.
BENCHMARK: The same home and elevation may not be repeated without 4 full sites/streets between them, allowing the same elevation on the 5th site.

Example:



APPLICATION: The proposed preliminary plat features a total of (48) unique floor plans available to future homeowners. Each floor plan features 2 to 7 elevation variations for a total of 171 unique floor plan/elevation combinations. Homeowners will not be forced to select unique elevations beyond the anti-monotony benchmark defined above. Examples of elevation variations are contained here in - each variation may include changes to; cladding material/color/orientation, porch geometry, roof geometry, window placement, and/or articulation through the use of bay windows or other bump outs.

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Character Imagery

Maybeck - Cottage Elevation

Atwood - Craftsman Elevation

Margot - Prairie Elevation

Conrad - Prairie Elevation

Conrad - Cottage Elevation

Lexington - Farmhouse Elevation

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Character Imagery

Samples of Elevation Variation by Floorplan

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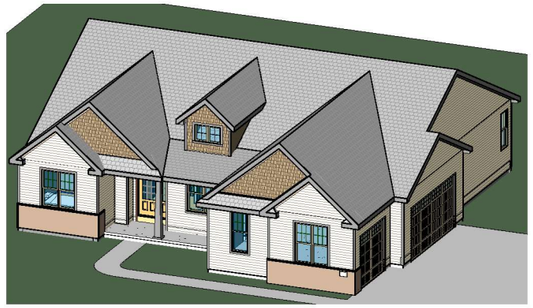
Cottage 2 Car Front Load

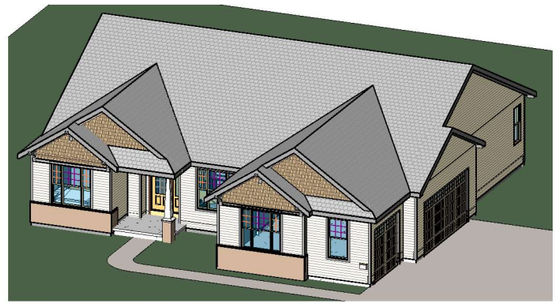
Cottage 3 Car Front Load



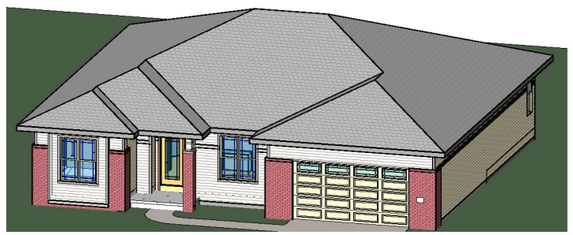
Cottage 3 Car Side Entry

Craftsman 2 Car Front Load

Craftsman 3 Car Front Load

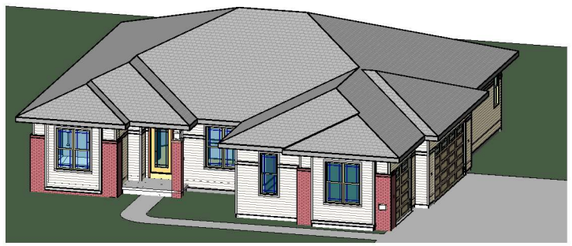


Craftsman 3 Car Side Entry

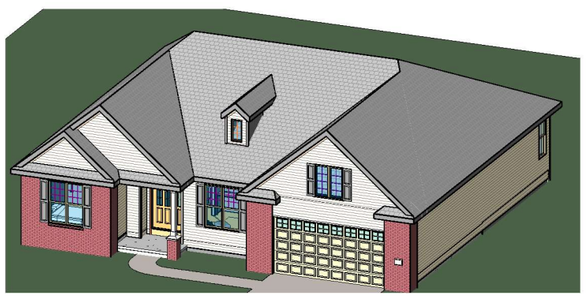


Prairie 2 Car Front Load

Prairie 3 Car Front Load



Prairie 3 Car Side Entry



Traditional 2 Car Front Load

Traditional 3 Car Front Load

Traditional 3 Car Side Entry

Custom Designed For: Owner
Homesite / Neighborhood: Project Number
Address: Enter address here
Customer Approval:

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Madison, WI 53713
Phone 608.226.3100
Fax 608.226.0600

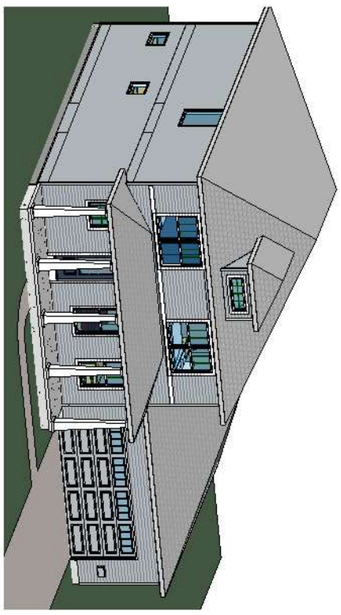
Do Not Scale Note: All dimensions are stud to stud
Actual floor plans & exterior styles may differ from these shown based on modifications, options & improvements to the plans by the builder.
Room dimensions, features & actual square footage vary by exterior style and options.

Model: Conrad
Elevation:
Drawn By: Author Date: Issue Date

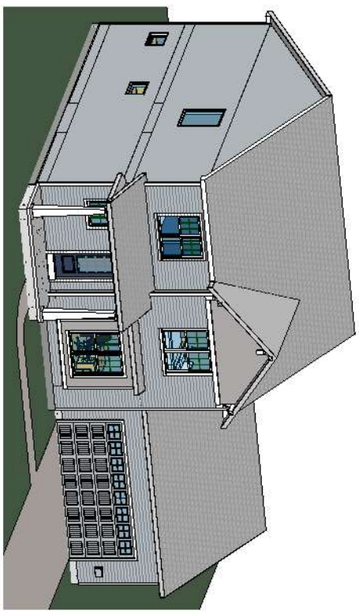
Print Date: 2/4/2025 11:05:13 PM

Drawing No.: 0.0

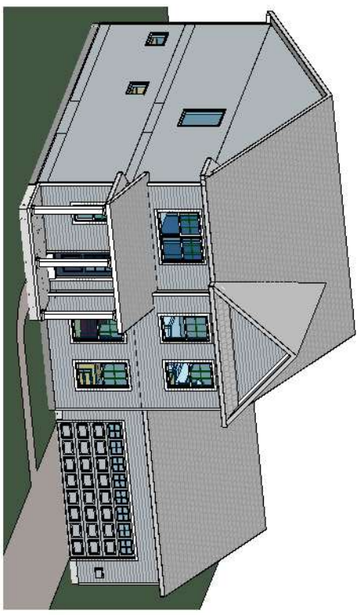
Four Square



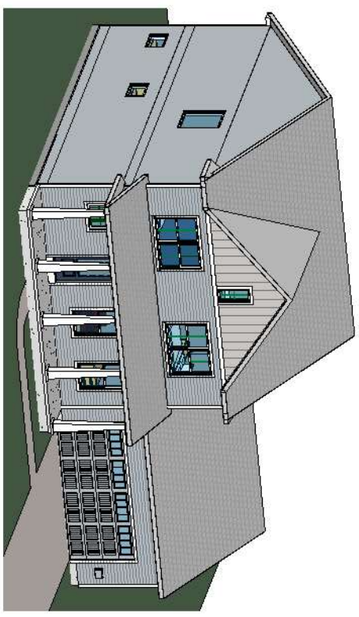
Craftsman



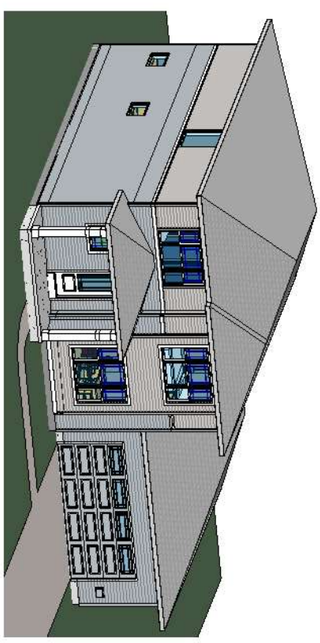
Classical



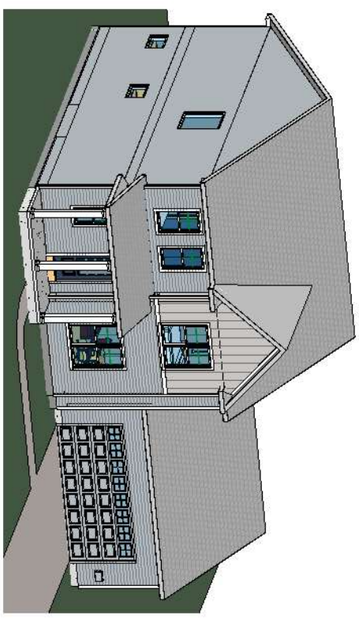
Farmhouse



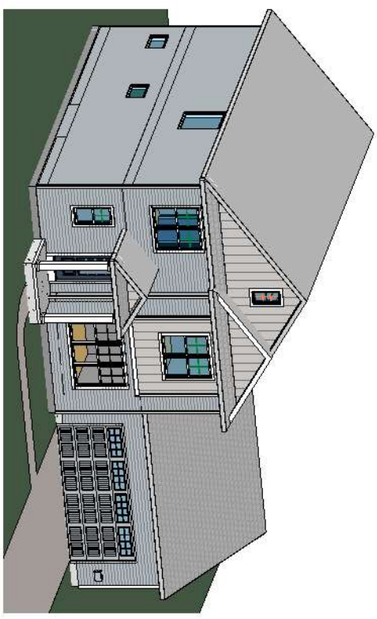
Prairie



Farmhouse B



Cottage



Do Not Scale

Note: All dimensions are stud to stud

Actual floor plans & exterior styles may differ from these shown based on modifications, options & improvements to the plans by the builder.
Room dimensions, features & actual square footage vary by exterior style and options.

Drawing No.: 0

Print Date: 4/2/2025 10:13:20 AM

Model: Everest

Elevation:

Drawn By: Author Date: Issue Date

VERIDIAN HOMES

6801 South Towne Drive
Madison, WI 53713
Phone 608.226.3100
Fax 608.226.0600

Custom Designed For: BASE PLAN

Homesite / Neighborhood: Project Number

Address: Enter address here

Customer Approval:

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Craftsman 2 Car Front Load

Craftsman 3 Car Front Load

Craftsman 3 Car Side Entry

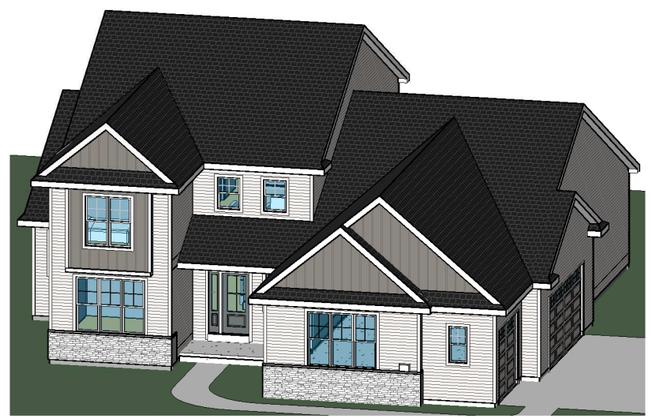
Cottage Farmhouse 2 Car Front Load

Cottage Farmhouse 3 Car Front Load

Cottage Farmhouse 3 Car Side Entry

Farmhouse 2 Car Front Load

Farmhouse 3 Car Front Load



Farmhouse 3 Car Side Entry

Do Not Scale Note: All dimensions are stud to stud
Actual floor plans & exterior styles may differ from these shown based on modifications, options & improvements to the plans by the builder.
Room dimensions, features & actual square footage vary by exterior style and options

Custom Designed For: Owner
Homesite / Neighborhood: Project Number
Address: Enter address here

Customer Approval:

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VERIDIAN HOMES
6801 South Towne Drive
Madison, WI 53713
Phone 608.226.3100
Fax 608.226.0600

Model: COLLINS
Elevation:
Drawn By: Author Date: Issue Date

Print Date: 2/18/2025 12:41:56 PM

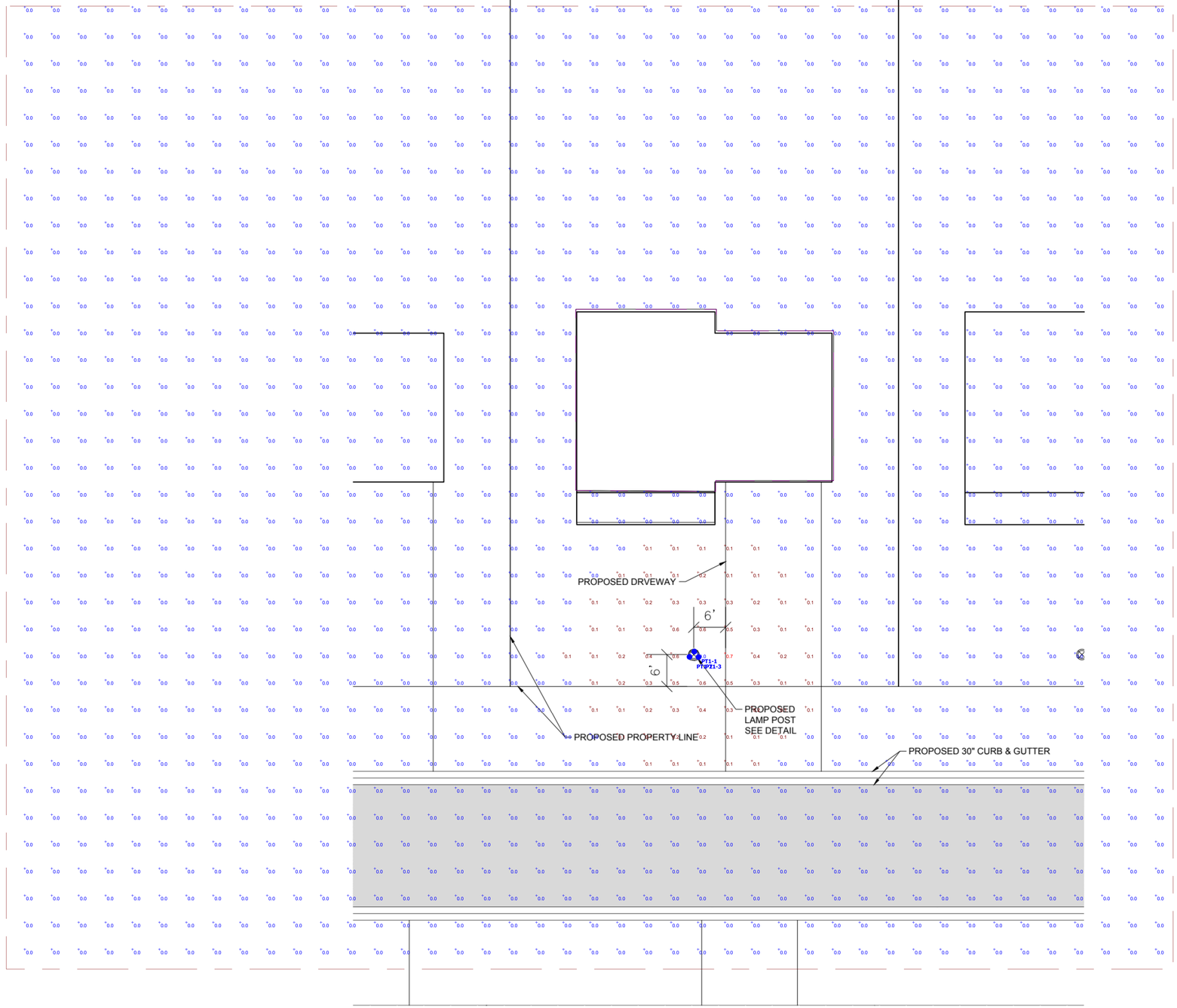
Drawing No.: 00

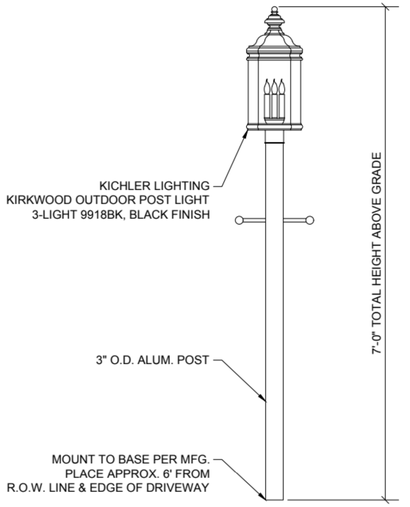
Schedule

Symbol	Label	QTY	Catalog Number	Description	Lamp	Number Lamps	Lumens per Lamp	LLF	Wattage	Notes
◯	PT1	3		CL3S	120V 3.5W	1	1000	0.9	3.4	PHOTOCELL CONTROLLED

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone #2	+	0.0 fc	0.7 fc	0.0 fc	N/A	N/A





LAMP POST DETAIL
SCALE: 1" = 1'-0"

PHOTO-CELL
CONTROLLED LAMP POST
CIVIL PHOTOMETRIC PLAN - TYPICAL SINGLE FAMILY LOT

NORTH
SCALE: 1"= 10'
10' 0 10' 20'

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COLLABORATION
VERIDIAN HOMES

PROJECT INFORMATION

PROPOSED RESIDENTIAL SUBDIVISION
WILLOW RUN
PEWAUKEE, WI

PROFESSIONAL SEAL

PRELIMINARY DATES
OCT. 3, 2025

NOT FOR CONSTRUCTION

JOB NUMBER
230312700

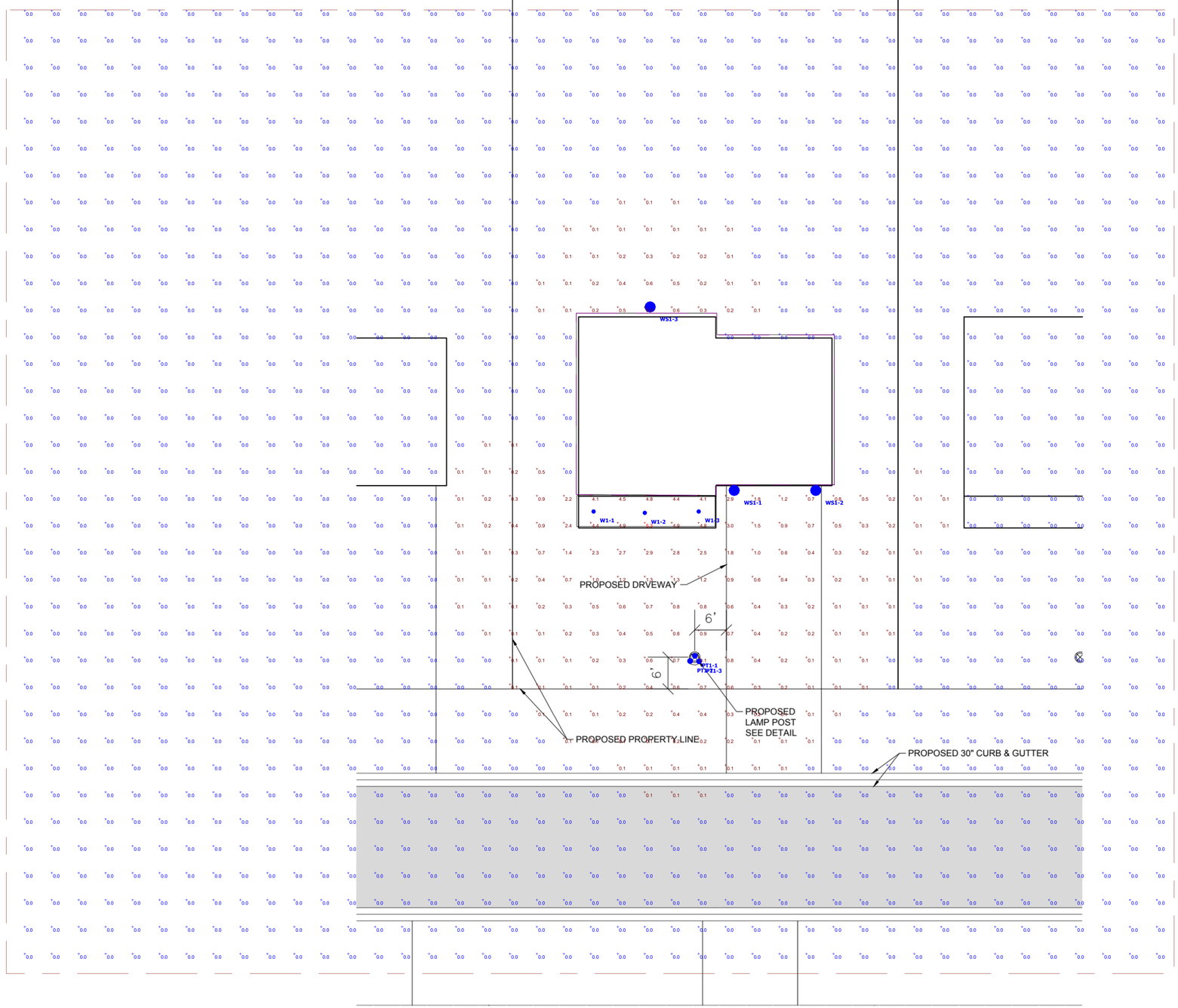
SHEET NUMBER
PXP1

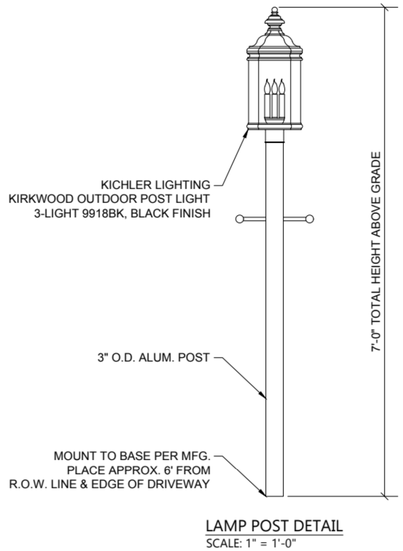
Schedule

Symbol	Label	QTY	Catalog Number	Description	Lamp	Number Lamps	Lumens per Lamp	LLF	Wattage	Notes
◯	PT1	3		CL35	120V 3.5W	1	1000	0.9	3.4	PHOTOCELL CONTROLLED
◯	WS1	3	Satco S21363			1	865	0.9	7.741	MANUAL ON/OFF
◯	W1	3	WF4 ALO19 SWW5 90CRI MVOLT 40K	4" Ultra Thin Flat Wafer Downlight, Selectable Lumens and Selectable CCT , MVOLT- 90CRI,40K ,High Lumen,Matte White		1	1170	0.9	13.5	MANUAL ON/OFF

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone #2	+	0.1 fc	5.3 fc	0.0 fc	N/A	N/A





LAMP POST DETAIL
SCALE: 1" = 1'-0"

SCALE: 1"= 10'
10' 0 10' 20'

NORTH

ALL EXTERIOR LIGHTS ON
CIVIL PHOTOMETRIC PLAN - TYPICAL SINGLE FAMILY LOT

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COLLABORATION

VERIDIAN HOMES

PROJECT INFORMATION

PROPOSED RESIDENTIAL SUBDIVISION
WILLOW RUN
PEWAUKEE, WI

PROFESSIONAL SEAL

PRELIMINARY DATES
OCT. 3, 2025

NOT FOR CONSTRUCTION

JOB NUMBER
230312700

SHEET NUMBER
PXP2

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Willow Run – Pewaukee – Landscaping Specifications

1. Each lot will feature plantings consistent in design character with the "Sample Landscape Plan" to include at a minimum: one (1) ornamental or shade tree in front yard, one (1) light post in front yard, and other plantings or features consistent with the following specifications.

2. Each lot shall be subject to the following point system:

    a. Foundation Beds Minimum Points: 400
    b. Total Minimum Points: 550

3. The point schedule attached hereto as Exhibit "A" shall be utilized in lot specific landscaping which shall be reviewed and approved by the HOA Architectural Control Board.

4. Other Minimum Specifications which will be installed at time of construction:

    a. Standard shredded 3" wood mulch – not dyed.
    b. Plastic Edging at foundation beds
    c. Tree rings will not include edging
    d. Any required retaining walls to be constructed of Fieldstone / Granite Boulders.
    e. Grass – seeded and mulched

5. Optional upgrades are available for build-contract customers, no minimum specification shall be construed to restrict additional upgrades which may include but are not limited to; additional plantings, additional hardscaping, or enhanced planting beds.

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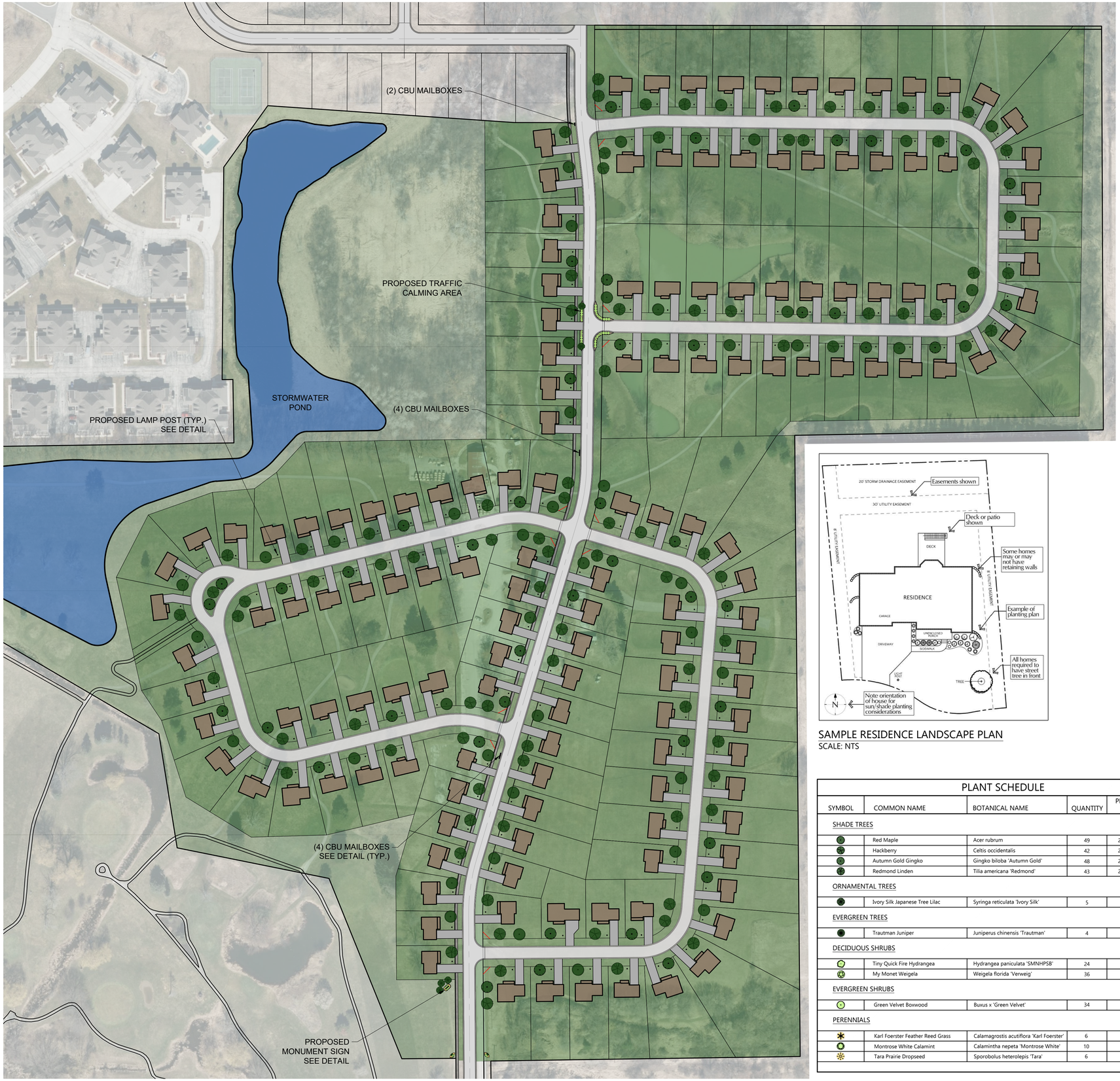
"Exhibit A – Landscape Point Schedule"

Landscaping Elements

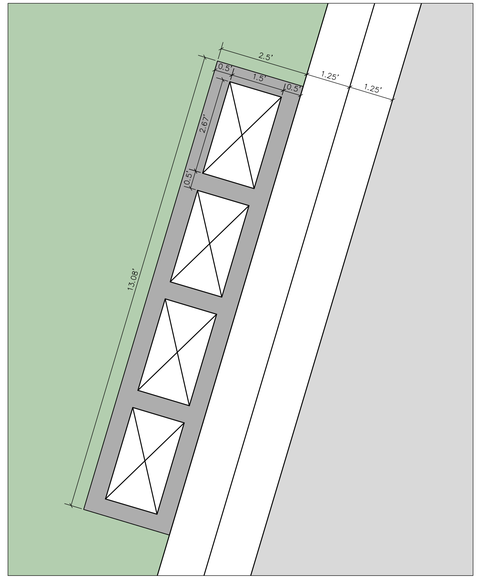
Elements		Point Schedule
A)	*Small Shade Trees (balled and burlaped)* (1.5"-2" caliper at 6" from the roots)	50
B)	*Medium Shade Trees (balled and burlaped)* (2"-3" caliper at 6" from the roots)	100
C)	*Large Shade Trees (balled and burlaped)* (3"-4" caliper at 6" from the roots)	150
D)	*Extra-Large Shade Trees (balled and burlaped)* (4" + caliper at 6" from the roots)	200
E)	*Ornamental Trees (balled and burlaped)* (1.5"-2" caliper at 6" from the roots)	50
F)	*Small Evergreen Trees* (3' to 4.5' when planted)	25
G)	*Medium Evergreen Trees* (5' to 6.5' when planted)	50
H)	*Large Evergreen Trees* (7' + when planted)	100
I)	*Evergreen Shrubs* (18" minimum diameter)	20
J)	*Small Deciduous Shrubs* (18" to 35" in diameter)	10
K)	*Medium Deciduous Shrubs* (35" to 60" in diameter)	15
L)	*Large Deciduous Shrubs (balled and burlaped)* (60" or greater in diameter)	25
M)	*Decorative Retaining Walls* (Points are per face foot. Boulders, timbers, and stones only – no concrete walls included.)	10
N)	*Paver Stone Walks, Paths or Patios* (Points per square foot – no driveways included.)	1
O)	*Planting Beds* (Points per square foot – must be decorative stone or mulch.)	1



SAMPLE RESIDENCE LANDSCAPE PLAN
SCALE: NTS

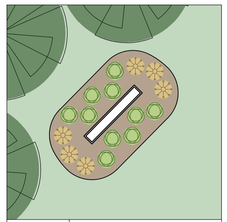
PLANT SCHEDULE

SYMBOL	COMMON NAME	BOTANICAL NAME	QUANTITY	PLANTED SIZE	ROOT
SHADE TREES					
	Red Maple	Acer rubrum	49	2 1/2" CAL.	B&B
	Hackberry	Celtis occidentalis	42	2 1/2" CAL.	B&B
	Autumn Gold Gingko	Gingko biloba 'Autumn Gold'	48	2 1/2" CAL.	B&B
	Redmond Linden	Tilia americana 'Redmond'	43	2 1/2" CAL.	B&B
ORNAMENTAL TREES					
	Ivory Silk Japanese Tree Lilac	Syringa reticulata 'Ivory Silk'	5	2" CAL.	B&B
EVERGREEN TREES					
	Trautman Juniper	Juniperus chinensis 'Trautman'	4	4' HT.	B&B
DECIDUOUS SHRUBS					
	Tiny Quick Fire Hydrangea	Hydrangea paniculata 'SMNHPSB'	24	18" HT.	CONT.
	My Monet Weigela	Weigela florida 'Verweig'	36	18" HT.	CONT.
EVERGREEN SHRUBS					
	Green Velvet Boxwood	Buxus x 'Green Velvet'	34	18" HT.	CONT.
PERENNIALS					
	Karl Foerster Feather Reed Grass	Calamagrostis acutiflora 'Karl Foerster'	6	1 GAL.	CONT.
	Montrose White Calamint	Calamintha nepeta 'Montrose White'	10	1 GAL.	CONT.
	Tara Prairie Dropseed	Sporobolus heterolepis 'Tara'	6	1 GAL.	CONT.



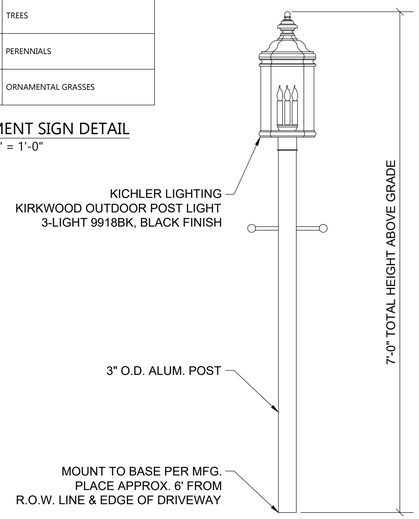
CBU MAILBOX PLACEMENT DETAIL
SCALE: 1/2" = 1'-0"

CBU EXAMPLE



HATCH	LANDSCAPE MATERIAL
	ORGANIC MULCH
	LAWN
	TREES
	PERENNIALS
	ORNAMENTAL GRASSES

MONUMENT SIGN DETAIL
SCALE: 1/8" = 1'-0"



LAMP POST DETAIL
SCALE: 1" = 1'-0"

SCALE: 1"= 100'
100' 0 100' 200'
NORTH

CIVIL LANDSCAPE PLAN

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COLLABORATION
VERIDIAN HOMES

PROJECT INFORMATION

PROPOSED RESIDENTIAL SUBDIVISION
WILLOW RUN
PEWAUKEE, WI

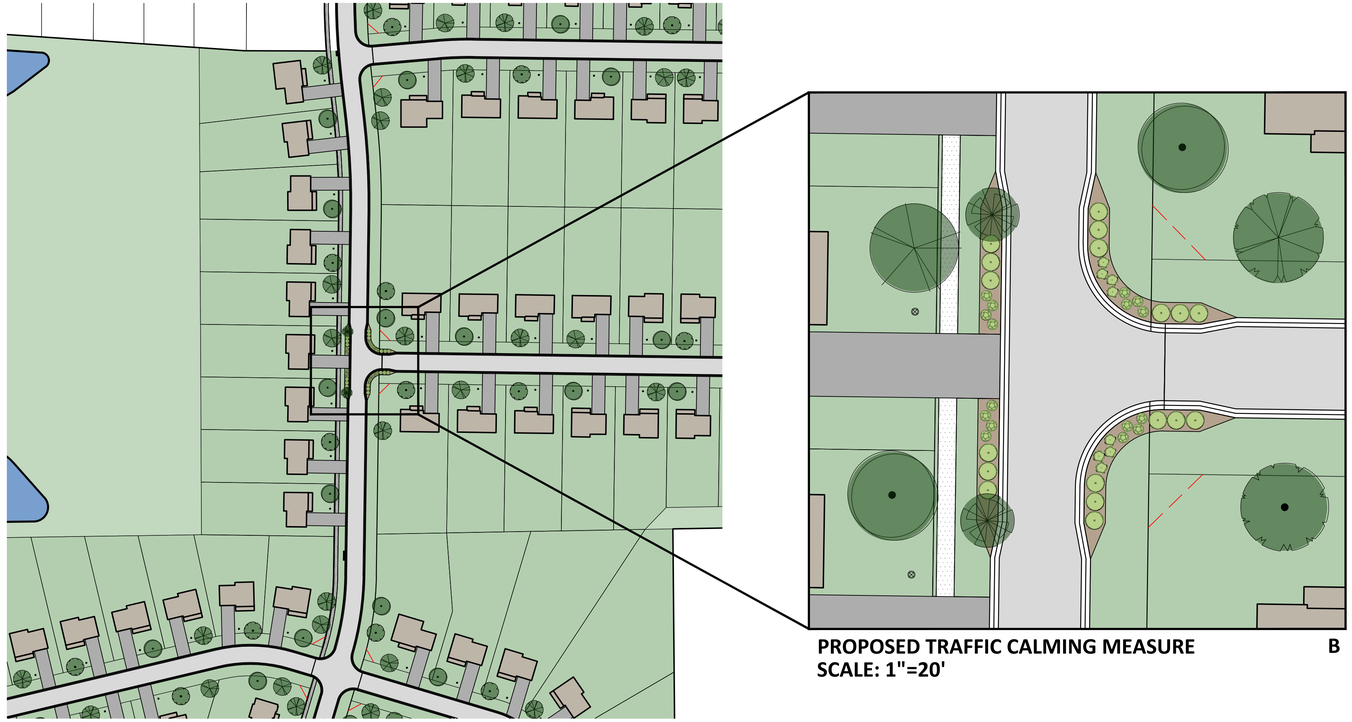
PROFESSIONAL SEAL

PRELIMINARY DATES
OCT. 3, 2025

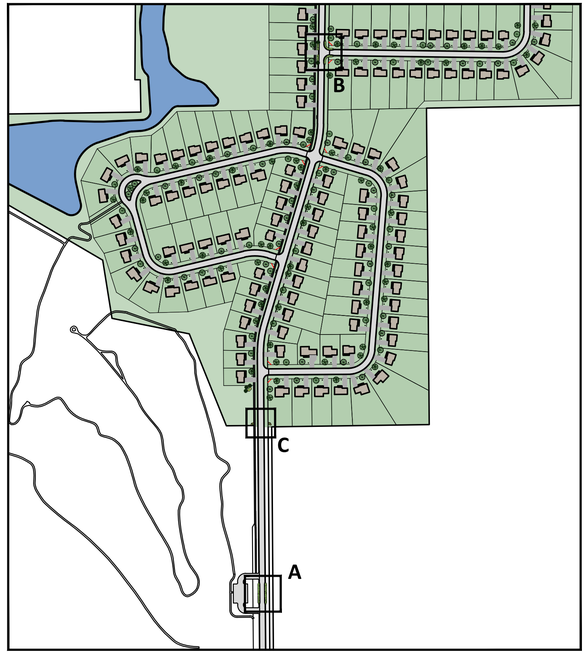
NOT FOR CONSTRUCTION

JOB NUMBER
230312700

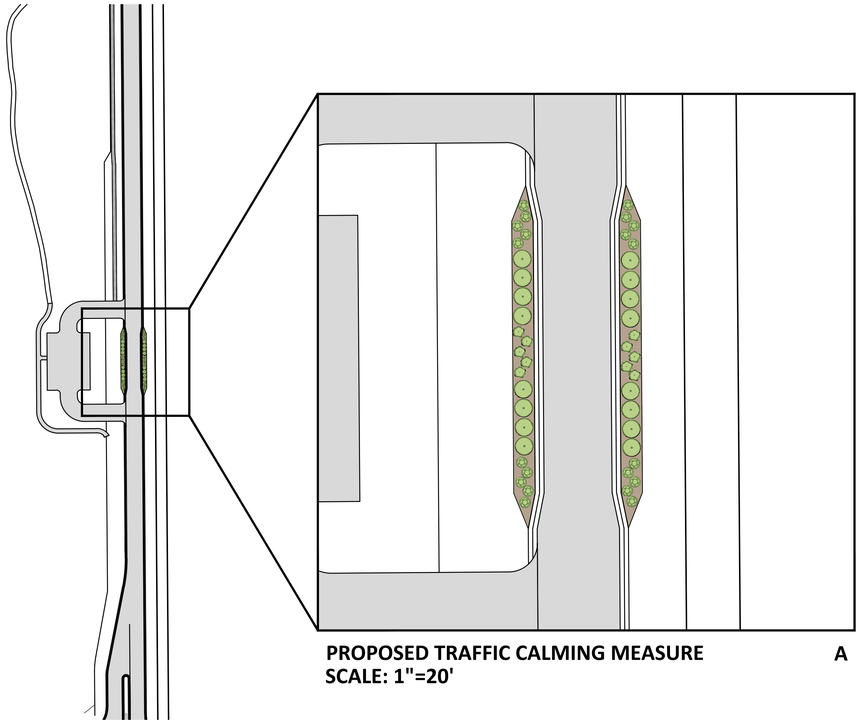
SHEET NUMBER
L1.0



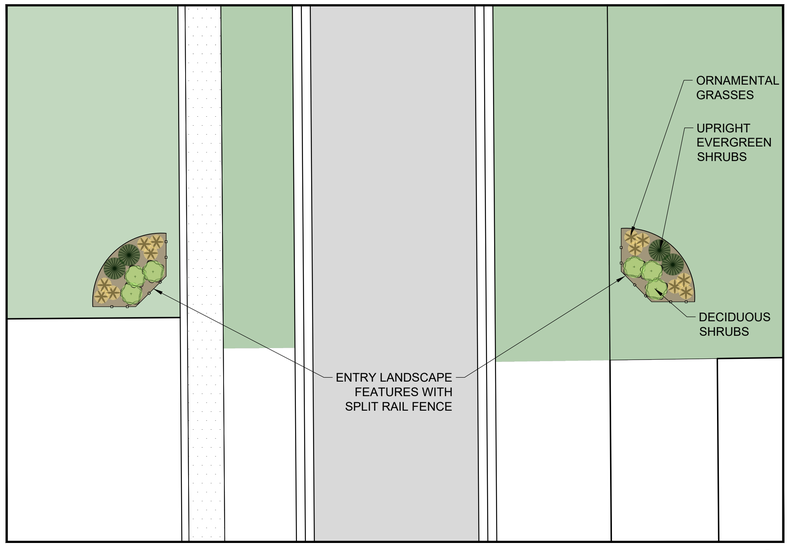
PROPOSED TRAFFIC CALMING MEASURE **B**
SCALE: 1"=20'



KEY PLAN
SCALE: 1"=300'



PROPOSED TRAFFIC CALMING MEASURE **A**
SCALE: 1"=20'



ENTRY FEATURE **C**
SCALE: 1"=10'

ENTRY FEATURE RELATED IMAGERY

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COLLABORATION

VERIDIAN HOMES

PROJECT INFORMATION

PROPOSED RESIDENTIAL SUBDIVISION
WILLOW RUN
PEWAUKEE, WI

PROFESSIONAL SEAL

PRELIMINARY DATES
OCT. 3, 2025

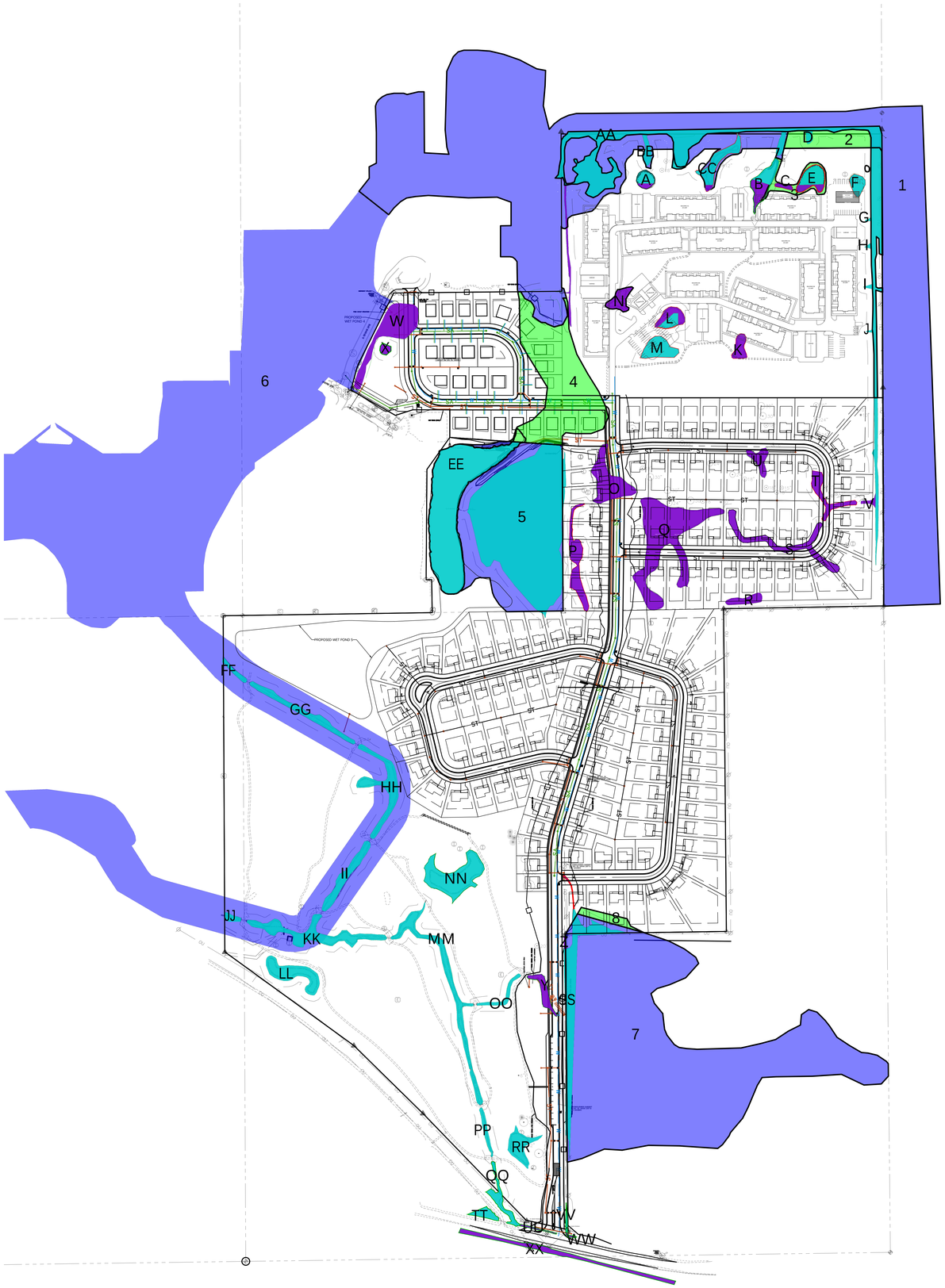
NOT FOR CONSTRUCTION

JOB NUMBER
230312700

SHEET NUMBER
L1.1

NORTH

TRAFFIC CALMING LANDSCAPE DETAIL PLAN



LEGEND:

	WETLAND/ POND PROPOSED TO BE FILLED/ DISTURBED - 4.02 AC FILLED/ DISTURBED.
	WETLAND/ POND TO BE PROTECTED
	ENVIRONMENTAL COORIDOR TO BE FILLED/ DISTURBED - 3.94 AC DISTURBED
	ENVIRONMENTAL COORIDOR TO BE PROTECTED

WETLAND AREAS	
WETLAND	AREA (SF)
A	4307
B	10301
C	1018
D	1353
E	9135
F	3996
G	197
H	345
I	414
J	196
K	3807
L	7402
M	9155
N	3083
O	18426
P	11884
Q	56825
R	4110
S	1422
T	7306
U	4890
V	1060
W	24248
X	1619
Y	4899
Z	500
AA	91817
BB	3014
CC	9788
DD	9707
EE	92107
FF	2194
GG	11518
HH	16589
II	10564
JJ	1683
KK	22426
LL	14067
MM	23466
NN	24225
OO	3386
PP	3058
QQ	6053
RR	9300
SS	36796
TT	3334
UU	909
VV	645
WW	368
XX	13695

CORRIDOR AREAS	
CORRIDOR	AREA (SF)
1	1131899
2	24962
3	18192
4	121209
5	253476
6	1778721
7	618321
8	7392

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PROJECT INFORMATION

PROPOSED MIXED RESIDENTAL DEVELOPMENT FOR:
WILLOW RUN
PEWAUKEE • WISCONSIN

PROFESSIONAL SEAL

PRELIMINARY DATES
MAR. 28, 2025
MAY 2, 2025
AUG. 15, 2025

NOT FOR CONSTRUCTION

JOB NUMBER
240299700

SHEET NUMBER
WF

SCALE: 1"= 200'
200' 0 200' 400'
NORTH

WETLAND/ POND FILL EXHIBIT

DRAFT of Veridian Homes DCCR's. Will be updated and modified for project specifics for recordation following the final plat.

DECLARATION OF PROTECTIVE COVENANTS, CONDITIONS AND RESTRICTIONS

_____ OF _____, _____ COUNTY, WI.

Return to:
Angie Christensen
Veridian Homes
6801 South Towne Drive
Madison, WI53713

See Exhibit "A"
(Parcel Identification Numbers)

PREAMBLE

This Declaration of Protective Covenants, Conditions and Restrictions (the "**Declaration**") is made this ___ day of _____, 20__ by [ADD VERIDIAN ENTITY], LLC, a Wisconsin Limited Liability Company (hereinafter referred to as the **"Declarant"**) and/or its successors and assigns.

WHEREAS, Declarant is the owner of certain Lots located in the plat of _____ (the "Plat") located in the ____ of _____, _____ County, Wisconsin. The Lots are more particularly described in Exhibit "A" attached hereto and incorporated herein by reference, and the Plat is shown in Exhibit "B", attached hereto and incorporated herein by reference; and

WHEREAS, Declarant has the right to acquire the remaining lots in the Plat (the **"Remaining Lots"**) as that term is further defined below; and

WHEREAS, by this Declaration Declarant desires to subject the Lots and Outlots to the terms hereof, and by future amendment intends to subject the Remaining Lots, to the terms hereof, such that the Lots and the Remaining Lots will be constructed as a planned development with housing units and shared common property (the "**Development**"); and

WHEREAS, Declarant desires to provide for the maintenance and enhancement of property values and amenities in said Development, and for the preservation of the properties and improvements thereon, as well as, for the preservation of said Development's distinctive style, and to prevent the erection, or maintenance of poorly designed or constructed improvements; and

WHEREAS, the Development is subject to and existing set of Declarations Covenants and Restrictions ("**The Existing Declaration**") established by the previous property owner, which require the Development to participate in costs of maintenance for common open spaces.

WHEREAS, to the above end, Declarant desires to subject the Development to the covenants, restrictions, easements, charges and liens hereinafter set forth, each and all of which is and are for the benefit of said Lots and each Owner thereof, as that term is defined below, and

WHEREAS, Declarant has thought it desirable for the efficient maintenance and preservation of the values of said Development to create an Association to which should be delegated and assigned the powers of owning, maintaining and administering the Common Property and facilities, as set forth below, and administering and enforcing the covenants and restrictions, and collecting and disbursing the Assessments and charges as hereinafter or in the future created or established, and promoting the health, welfare and recreation of the Development's residents, and to that end Declarant has incorporated or will incorporate the _____ Homeowners Association, Inc. a non-profit, non-stock corporation, under the laws of the State of Wisconsin (the **"Association")**; and

NOW, THEREFORE, the Declarant declares that the real property constituting the Development will and shall be sold, transferred and conveyed subject to the easements, covenants, restrictions, assessments, charges and liens hereinafter set forth.

PART A
ASSOCIATION MATTERS

A-1) Definitions.

A) "Association" shall mean and refer to the _____ Homeowners Association, Inc., and its successors and assigns.

B) "Common Property" includes all those areas located in the Development which are not contained within a Lot and which are intended for common use or are necessary or convenient to the existence, maintenance or safety of the Development. Common Property may also include any additions thereto designated by the Declarant or the Association in any subsequent amendment to this Declaration, and all improvements located on said property, which are intended to be devoted to the common use and enjoyment of members, Owners and Occupants. Common Property shall further include plantings, landscaping islands or boulevards, Development entry signs with or without landscaping features which the [ADD THE WORD CITY, VILLAGE, TOWN] of [ADD NAME OF CITY, VILAGE, TOWN] is not obligated to maintain. Declarant may, by subsequent amendment or easement, designate parts of certain private lands within the Development as Common Property, rendering the Association responsible for maintenance thereof, without subjecting the same to the ownership provisions contained in Section A-3, below.

C) "Declarant" shall mean and refer to [ADD VERIDIAN ENTITY] LLC, a Wisconsin Limited Liability Company, and/or its successors and assigns.

D) "Lot" shall mean and refer to the lands described as [ADD PLAT NAME] as described in Exhibit "A", or as may be subjected to the terms of this Declaration in the future. The Lots described herein are now owned by Declarant, but which Declarant in the future intends to convey to purchasers who shall thereupon become members of the Association. The term "Property" or "Properties" shall be synonymous with the term Lot.

E) "Owner" shall mean and refer to the record owner, whether one or more persons or entities, of the fee simple title to any of the Properties described in Exhibit "A". A purchaser of any of said Properties by land contract shall be referred to as "Owner" instead of the land contract vendor.

F) "Occupant" shall mean and refer to the occupant of any of the Properties who shall either be an Owner or a lessee who holds a written lease having an initial term of twelve months or more.

G) "Remaining Lots" shall mean all of the lots contained in the Preliminary Plat which are not described in Exhibit "A", but are depicted in the Preliminary Plat or Plat Additions. Declarant reserves the right to subject the Remaining Lots to the terms hereof by future amendment to this Declaration.

H) "Subdivision" shall refer to the lands described in Exhibit "A". The term "Subdivision" is synonymous with the term "Development".

I) "_____" shall refer to the ___ of _____, a Wisconsin Municipal Corporation.

A-2) Membership and Voting Rights.

A) Members. Declarant has incorporated the Association. The Association shall have two classes of membership. Each Owner of a Lot shall automatically become a Class A Member of the Association. The Declarant, or its successors or assigns, is the Class B Member of the Association. Declarant shall not be considered a Class A Member in the Association notwithstanding its ownership of Lots in the Subdivision. By acceptance of the Deed or other instrument of conveyance, the Owner(s) of each Lot consent to such Owner's membership in the Association whether or not specified on the deed to the Owner. A Class A membership in the Association is appurtenant to each Lot. Each Owner of a Lot shall automatically be entitled to the benefits and subject to the burdens relating to such Class A membership in the Association. The Association shall have authority to manage the Common Property. Persons or entities, including a land contract vendor, who hold an interest merely as security for the performance of an obligation, shall not be members of the Association. Tenants of Properties who are not Owners shall not be members of the Association. The rights, duties and obligations of the Class A and the Class B Members are specified in this Declaration and in the By-Laws of the Association.

B) Articles of Incorporation and By-Laws. The purposes and powers of the Association and the rights and obligations with respect to the members thereof, shall be governed by the Articles of Incorporation and By-Laws of the Association; provided, however, that such Articles of Incorporation and By-Laws shall be subject to, and shall not contravene, the terms, conditions, benefits and burdens set forth in this Declaration.

C) Class B Member Obligation for Assessments. Declarant has no responsibility to pay for operating expenses of the Association by virtue of its ownership of the Class B membership interest in the Association. Declarant's liability for operating expenses is limited by and subject to the provisions of this Declaration.

D) Calculation of Assessments. Each Owner, other than Declarant, whose responsibility is governed by Section A-3(D), below, shall be responsible for assessments as described in this Declaration. The Association shall calculate an Owner's responsibility for assessments based on the following formula:

> Total Subdivision Expenses/Total Number of Assessment Units X Assessment Unit(s) of Lot in question.

As used above, the term "Total Subdivision Expenses" shall mean (i) all Common Area Expenses which the Association estimates actually incurring during the budget year in question, plus (ii)

all Common Area Expenses which the Association estimates it would incur during the budget year in question if all phases of the Subdivision were completed at the time said calculation is made. Declarant shall not be responsible for assessments on Declarant owned Lots. Declarant shall be responsible for paying to the Association the amount by which the Assessments collected by the Association are less than the amount necessary to pay for all actual Common Area Expenses incurred by the Association for the budget year in question until such time as Declarant owns 5% or less of the lots in the subdivision or control of the Association is turned over to the Owners, whichever occurs first.

A-3) Description.

A) Responsibility for Assessments. The following table describes the number of assessment units (an "A**ssessment Unit"**), which are assigned to various Lots in the Development based upon their intended use at the present time. For the purposes of the following table, a single family residence shall be deemed a Dwelling Unit.

	Use	Number of Assessment Units
1)	Single Family:	One (1) per Dwelling Unit.

B) Association Management. The Association is required to retain a professional property management company with the experience necessary to perform the duties of the Association (the **"Management Company"**). The Association shall enter into a management contract (the **"Management Contract"**) with the Management Company on such terms and conditions as the Association and the Management Company shall agree. The initial Management Company is DSI Real Estate Group, Inc., a Wisconsin Corporation, which is affiliated with the Declarant by reason of common ownership. The Management Contract between DSI Real Estate Group, Inc. and the Association has not been negotiated on an arm's length basis.

C) General Fund. As used herein, the term **"Surplus"** shall mean the amount by which assessments collected by the Management Company on behalf of the Association to pay for common expenses relating to the Property exceed the common expenses for the fiscal year in question. The Management Company shall deposit and hold any Surplus in the Association's operating account maintained by the Management Company. The Surplus, in the discretion of the Association working in conjunction with the Management Company, may be applied to future Association expenses as they become due, but there shall be no obligation on either the Association's or the Management Company's part to return the Surplus to lot owners.

D) Declarant's Responsibility for Assessments. Declarant shall not be responsible for assessments on Declarant owned Lots. Declarant shall be responsible for paying to the Association the amount by which the Assessments collected by the Association are less than the amount necessary to pay for all actual Common Area Expenses incurred by the Association for the budget year in question.

E) Percentage Interest. For the purposes of establishing an Owner's percentage of assessments hereunder, insurance proceeds or condemnation awards in the event any portion of the Common Property is completely destroyed or taken by eminent domain and is not reconstructed, each Owner shall have a percentage interest in the insurance or condemnation proceeds equal to the Percentage Interest of such Owner in the Common Property. "Percentage Interest" shall be calculated as follows: the number of Assessment Units for a particular Lot will be divided by the total number of Assessment Units in the Development to arrive at a particular Lot's percentage share (the **"Percentage Interest")** of assessments for common area maintenance and other expenses, which the Association is permitted to assess to Class A Members under the Declaration.

F) **Conveyance, Lease or Encumbrance of Percentage Interest.** Any deed, mortgage, lease or other instrument purporting to convey, encumber or lease for a period of time in excess of one (1) year (a **"Lease"**) any Lot shall be deemed to include the Owner's Percentage Interest in the Common Property and in the insurance proceeds or condemnation awards even though such interest is not expressly described or referred to therein. The conveyance, encumbrance or Lease of an Owner's Percentage Interest in the Common Property independent of the appurtenant Lot and the conveyance, encumbrance or Lease of an appurtenant Lot independent of the Owner's Percentage Interest in the Common Property shall be prohibited.

G) **Ownership.**

1) The Common Property shall be initially owned by the Declarant until conveyed as provided below.

2) At the time of purchase, legal title to a percentage interest in the Common Property shall be deemed conveyed with each lot to an Owner, whether or not specified on the deed to the Owner. Legal title to the percentage interest in the Common Property shall be deemed conveyed with any subsequence conveyance of a Lot whether or not specifically stated. Taxes, assessments or other charges on the Common Property may be divided according to each Owner's Percentage Interest by the taxing authority or may be an assessment by the Association against each of the Lots in an amount equal to the Percentage Interest attributable to such Lot.

3) The Common Property shall be conveyed to the Association by the Declarant at such time as determined by the Declarant. The Association shall be responsible for the payment of any and all present and future general taxes, assessments or other charges against any portion of the Common Property owned by the Association. General property taxes, assessments and other charges shall be prorated between the Declarant and the Association based on the date of conveyance by the Declarant to the Association.

4) Declarant, the Association and all Owners of a percentage interest in the Common Property hereby waive notice and protest of any tax or assessments levied by the [ADD THE WORD CITY, VILLAGE, TOWN] against such Owners or any part of the Property attributable to the Common Property in which such Owners, the Association or the Declarant may have an interest.

H) **Damage or Destruction of Common Property by Owner.** In the event any Common Property is damaged or destroyed by an Owner or any of his guests, lessees, tenants, licensees, agents or member(s) of his family, including pets, said Owner does hereby irrevocably authorize the Association to repair said damage. The Association shall repair and restore any damaged area to its former condition. The amount necessary for said repair shall become a special assessment upon the Property of said Owner.

A-4) Maintenance of Common Property

A) Maintenance Requirements.

1) Responsible Party. Declarant shall initially provide for the care, operation, management, maintenance and repair of the Common Property, until the Common Property is conveyed as provided herein. After such time, the Association shall provide for the care, operation, management, maintenance and repair of the Common Property and shall keep the Common Property maintained in neat, good and safe condition.

2) General Responsibilities. Maintenance shall include, but not be limited to, responsibility for landscaping and lawn care, trash removal in the alleyways, ice and snow removal including shoveling with particular attention being paid to cross walk ramps and islands, improvements to common areas, upkeep of stormwater management facilities which may include detention basins and drainage swales, common property lighting and/or other common property utility charges and any special street design features or traffic calming features.

3) Specific Responsibilities. Certain streets within the Property may include special traffic islands and traffic calming measures within the public right-of-way. The Association shall be responsible, at the Association's sole cost and expense, for the maintenance and upkeep of such physical traffic measures. Such maintenance and upkeep shall be performed at the discretion of the Association except to the extent required by the [ADD THE WORD CITY, VILLAGE, TOWN], and shall include landscaping, snow and ice removal. If the special street design features or landscaping are not maintained, the [ADD THE WORD CITY, VILLAGE, TOWN] will give notice to the Association that it is not being maintained. If the Association does not respond to the notice within sixty (60) days, the [ADD THE WORD CITY, VILLAGE, TOWN] may modify the physical traffic measures to minimize maintenance needs; including replacing landscaped surfaces with asphalt. The Association and persons involved with the maintenance and upkeep of the special traffic measures shall indemnify and hold harmless the [ADD THE WORD CITY, VILLAGE, TOWN] and its boards and commissions, and their officers, agents and employees from and against all claims, demands, loss or liability of any kind, type or description, related to the maintenance and upkeep of the special traffic measures.

4) Responsibilities related to the Existing Declaration. The Existing Declaration require the Development to participate in the cost of maintenance of drainage facilities constructed on the neighboring multifamily property which benefit the Development. [FUTURE PROVISION FOR SHARED MAINTENANCE COSTS WITH MASTER DEVELOPER]

5) In order to carry out its maintenance obligations, the Association may enter into a long-term contract (i.e., no less than ten (10) years) with a reputable property management company (**"Management Company"**), pursuant to which contract the Management Company shall assume the maintenance obligations of the Association as provided herein.

5) Any and all expenses incurred by the Declarant, or by the Management Company, on behalf of and pursuant to its contract with the Association, in connection with the management and maintenance of the Common Property and administration of the Association shall be deemed to be common expenses (**"Common Expenses"**), including, without limitation, expenses incurred for: landscaping and lawn care; removal of ice; snow shoveling and plowing; trash removal in alleyways; improvements to the Common Property; common grounds security lighting; neighborhood entry signs; municipal utility services for Common Property enforcement of this Declaration (including attorneys' fees); and maintenance and management salaries and wages.

C) <u>Assessments</u>.

1) The Association, or the Management Company, on its behalf, shall levy annual general assessments (**"General Assessments"**) against each Lot beginning January 1 of every year for the purpose of maintaining a fund from which Common Expenses may be paid. The General Assessments against each Lot shall be assessed according to their Percentage Interests in the Common Property. General Assessments shall be due in advance on the first day of each year, or in such other manner as the Association

may set forth in the Bylaws. Any General Assessment not paid when due shall bear annual interest at a rate of ten percent (10%) until paid and, together with interest, collection costs, and reasonable attorneys' fees, shall constitute a lien on the Lot on which it is assessed.

2) The Association, or the Management Company, on behalf of and pursuant to its contract with the Association, may, whenever necessary or appropriate, levy special assessments (**"Special Assessments"**) against the Lots for deficiencies in the case of destruction or condemnation, for defraying the cost of improvements to the Common Property or for any other purpose for which the Association and/or the Management Company may determine a Special Assessment is necessary or appropriate for the improvement or benefit of the Subdivision. In addition, the Association shall have the authority to levy Special Assessments against one or more of the Lots, but less than all, in cases where the Association incurs expenses that are attributable to the act or failure to act by one or more Lot Owners in violation of this Declaration, the Articles of Incorporation, By-laws or rules of the Association in effect from time to time. Special Assessments may also be imposed by the Association for failure to pay any Fines levied against an Owner pursuant to the provisions of this Declaration. Special Assessments shall be paid at such time and in such manner as the Association or the Management Company may determine. Any Special Assessment or installment not paid when due shall bear annual interest at a rate of ten percent (10%) until paid and, together with the interest, collection costs and reasonable attorneys' fees, shall constitute a lien on the Lot on which it is assessed.

3) The Association, or the Management Company, on behalf of and pursuant to its contract with the Association, shall have the right to collect all General and Special Assessments and such sums shall constitute a lien on the Lot or Lots against which the Assessment is made. The Owner of a Lot, or any portion thereof, shall be personally obligated to pay such charges which were assessed or accrued upon the land owned during the period of Ownership. The Association or the Management Company, on behalf of and pursuant to its contract with the Association, may commence an action against any Owner personally obligated to pay the charges or to foreclose the lien for such charge against any Lots. Any such foreclosure action may be brought at the Association's election, either in the same manner as an action to foreclose a real estate mortgage, or as a proceeding to enforce a statutory maintenance lien as provided in Section 779.70, Wis. Stats., to the extent said Section is applicable. Any lien in favor of the Association/Management Company securing unpaid charges arising by virtue of this Declaration shall be subject and subordinate to the lien of any mortgage whether the mortgage is executed or recorded prior to or after the creation of such lien.

D) **Subordination of the Lien to Mortgages.** The lien of the assessments provided for herein shall be subordinate to the lien of any first mortgage. Sale or transfer of any Property shall not release the assessment lien. However, the sale or transfer of any Property pursuant to mortgage foreclosure or any proceeding in lieu thereof shall extinguish the lien of such assessment(s) as to payments which become due prior to such sale or transfer. No sale or transfer pursuant to foreclosure or proceedings in lieu thereof shall relieve such Property from liability from any assessments thereafter becoming due or from the lien thereof.

E) **Joint and Several Liabilities of Grantor and Grantee.** Upon a voluntary conveyance, the grantee of a Property shall be jointly and severally liable with the grantor for all unpaid assessments against the grantor as provided in this Declaration up to the time of conveyance, without prejudice to the grantee's right to recover from the grantor the amount paid by the grantee therefore. However, any such grantee shall be entitled to a statement from the Association setting forth the amount of such unpaid assessment and any such grantee shall not be liable for, nor shall the Property conveyed be subject to a lien for, any unpaid assessments against the grantor pursuant to this Declaration in excess of the amount therein set forth.

PART B
CONDITIONS, COVENANTS AND RESTRICTIONS

B-1) Applicability. The following provisions in this Part B shall apply to all Lots and Outlots as described in Exhibit "A" and such other Lots and Outlots as may, in the future, be acquired by Declarant and subjected to this Declaration, as the same may be amended from time to time, by Declarant in the sole exercise of Declarant's discretion. Uses, other than the uses set forth in this Part B, shall not be permitted on the Lots or Outlots, as applicable, without the prior written approval of the Declarant and Committee (defined in Section C-2 below), as appropriate. After Declarant control of the Association has terminated, approval from the Association and the Committee shall be required.

B-2) Land Use And Building Type. Only the following designated uses for Lots and Outlots shall be permitted:

A) Lots _____ shall be used for single family residential purposes. No building shall be erected, altered, placed or permitted to remain on any Lot other than one detached single family dwelling unit not to exceed two and one-half stories in height. Each dwelling unit shall have an attached or detached garage of a size to be approved by the Committee, as that term is defined below. The size of a dwelling unit to be constructed on specific Lots shall not be less than the minimum size to be established hereinafter.

B) As stated on the Plat, the Owners of Lots within the Subdivision shall each own an equal undivided fractional interest in Outlots ___, ____, ____ of the Subdivision. Waukesha County shall not be liable for fees or special charges in the event Waukesha County becomes the owner of any Lot or Outlot in the Subdivision by reason of tax delinquency.

C) Outlot ___ shall be used as Stormwater Management Facilities and shall be maintained by the Association. Outlot 1 will be owned jointly by all the lot owners within all phases of the _____ Development.

D) Outlot ___ shall be used for a temporary turnaround until it extends through in the second phase of the development and shall be maintained by the Association.

Uses, other than the uses set forth in this Section B-2, shall not be permitted on the Lots, as applicable, without the prior written approval of the Declarant and Committee (defined in Section B-3 below), as appropriate. After Declarant control of the Association has terminated, approval from the Association and the Committee shall be required.

Except as otherwise provided herein, no buildings, signs or other structures incidental to the use of any Outlot, which have not been approved in advance by the Committee, may be constructed on any Outlot.

The Plat shows the streets and rights of ways which are to be dedicated as permanent public streets and rights-of-way and which shall be improved in accordance with agreements entered into between the Declarant and the municipality in which the Development is located.

B-3) Architectural Control. No building shall be erected, placed or altered on any Lot until the construction plans and specifications and a plan showing the location of the structure have been approved by a majority of the Architectural Control Committee (the **"Committee"**) as to quality of workmanship and materials, harmony of external design with existing structures, and as to location with

respect to topography and finish grade elevation. There shall be a variation in building elevations on adjacent Lots. Approval shall be as provided below.

B-4) Dwellings and Landscaping. The landscaping to be installed on all Lots must meet or exceed the minimum number of points for foundation planting and cumulative total landscaping points, including foundation planting points as set forth hereafter as described in Exhibit "C", attached hereto and incorporated herein by reference. The number of points attributable to various elements of the landscaping to be installed shall be determined by reference to Exhibit "D", attached hereto and incorporated herein by reference. The structure and the minimum landscaping requirements shall be completed within nine (9) months after issuance of a building permit. **Please Note:** Landscaping installed by the Declarant may or may not meet the minimum number of required points. All driveways shall be of concrete and shall be installed within nine (9) months after substantial completion of the structure. No outbuilding or accessory building of any nature shall be erected on any Lot with the exception of detached garages approved by the Committee in advance of construction. No above-ground swimming pools shall be permitted. All Lot areas not used as a building site, or under cultivation as a family garden, shall be planted with grass seed or shall be sodded, and shall be maintained on a regular seasonal basis, including mowing of a frequency of not less than once every fourteen (14) days during the lawn growing season. Maintenance of all improvements on a Lot shall be performed by the Owner. Maintenance shall include, but not be limited to, watering, pruning and routine fertilizing and mulching of all plantings and plant beds, replacement of dead, dying and/or diseased trees and shrubs, prompt removal of weeds, trash and debris from plant beds and areas adjacent to shrubs and trees so as to keep said landscaping in a healthy, attractive, neat condition and contained within the Property.

If the Owner of any Lot, after reasonable notice, fails or refuses to install landscaping as described herein, or maintain it as required above, the Committee, through its duly authorized agents or employees, shall have the right to enter upon said Lot at reasonable hours to perform said landscaping and/or maintenance. The costs of the materials and labor to perform such landscaping and/or maintenance shall be assessed against said Lot in accordance with the terms of Section A-4 (C)(2) above, which assessment may be foreclosed or collected in accordance with the terms hereof or collected as provided herein.

B-5) Vehicle and/or Equipment Storage. No inoperable, dilapidated or junk vehicles of any nature may be kept upon any Lot except in a fully enclosed garage. The exterior storage of boats, trailers, travel trailers, campers, motorcycles, recreational vehicles, automobiles or trucks, portable moving and storage containers, mini storage or on-site storage containers (collectively, without limitation by reason of enumeration **"Equipment"**), of any nature is prohibited whether or not screened from public view. No Equipment shall be parked or stored on lawns. The temporary storage of vehicles in a drive area for the purpose of loading or unloading for a period not to exceed forty-eight (48) hours is permitted. No commercial vehicles, including trucks, vans, semi-trailers, trailers, may be stored or parked overnight on or in front of said Lots except in an enclosed garage.

B-6) Construction On Adjoining Lots. Nothing contained herein shall be construed to prohibit the construction of a residential dwelling or private garage partially on one Lot and partially on an adjoining Lot without regard to side yards between adjoining Lots, provided that all such Lots are owned by the same person or persons.

B-7) Easements.

A) No structure, planting, or other materials shall be placed or permitted to remain within any easement of record (an **"Easement"**) if any, which may damage or interfere with the installation and maintenance of utilities, or which may change, obstruct or retard the flow of water or the

direction of such flow through the Easement or through such other drainage channels or swales that may have been created by the Plat or otherwise. The Easements located on each Lot and all improvements therein shall be maintained continuously by the owner of the Lot, except for those improvements for which a public authority or utility company is responsible.

B) The Intra-block drainage Easement shall be graded with the construction of each principal structure in accordance with the approved Stormwater Drainage Plan on file with the [ADD THE WORD CITY, VILLAGE, TOWN] Engineer and the Zoning Administration, as amended in accordance with the [ADD THE WORD CITY, VILLAGE, TOWN] General Ordinances.

C) Public utility easements as set forth on the Plat are for the use of public and private utilities having the right-of-way to serve the area.

D) All lots within this plat are subject to a non-exclusive easement for drainage purposes which shall be a minimum of five feet (5') in width measured from the property line to the interior of each lot except that the easement shall be twelve feet (12) in width on the perimeter of the Plat. The drainage easement shall not be required on the property lines shared with greenways or public streets.

E) **Public Storm Sewer and Drainage Easement.** The Storm Sewer and Drainage Easements shall be graded with the construction of each principal structure in accordance with the approved Stormwater Drainage Plan on file with the [ADD THE WORD CITY, VILLAGE, TOWN] Engineer, as amended in accordance with [ADD THE WORD CITY, VILLAGE, TOWN] General Ordinances.

Several Lots will have a variation in width of a storm sewer/drainage easement located either along or near the rear property line. These easements may be noted on the recorded plat or by a separate recorded document.

No change in grade will be permitted. Fences cannot be constructed in easements where public watermain, sanitary sewer, and storm sewer exist, nor in access routes to stormwater management facilities (outlots). Fences will not be permitted within this easement.

F) **Sign Easement Areas:** Easements for entry monumentation signage and plantings shall be established by Declarant at each corner, as well as, center islands. Maintenance of the Easement shall be deemed a part of the Common Property which the Association is obligated to maintain under Section (A) of the Declaration, the cost of maintenance of said Common Property shall be an assessment against all the Property in the Subdivision in accordance with the Declaration, for so long as such maintenance is necessary or required. Refer to Section B-19)B) for notices regarding plantings.

G) **Temporary Construction Easement.** Each Lot which has been made subject to this Declaration (for the purposes of this paragraph each Lot described herein shall be referred to as the **"Primary Lot"**) is hereby made subject to a temporary, non-exclusive easement over, under, upon, across and through so much of the side yards of the Primary Lot as may be necessary for the safe and code compliant construction of a basement, including but not limited to footings, foundation and basement walls, on the adjoining Lot (the **"Adjoining Lot"**). The purpose of this Temporary Construction Easement is to permit Declarant to adequately slope and provide lateral support to the walls of the basement excavation in question so as to protect against cave-ins and loss of lateral support, and it shall be broadly construed to effectuate such purpose. This Temporary Construction Easement shall remain in effect for so long as it is needed to permit construction of the basement on the Adjoining Lot in a safe and code compliant manner. After completion, Declarant shall backfill the excavated area, compact such

backfill in accordance with good construction practices, and restore the area affected by this easement to the condition existing immediately preceding the excavation, including replacement of sod, trees, shrubs and other landscaping, at no expense to the Owner of the Adjoining Lot (collectively **"Restoration"**). This Temporary Construction Easement shall, without further notice, terminate upon completion of said Restoration." This Temporary Construction Easement shall, without further notice, terminate upon completion of said Restoration.

H) Multi-User Mailbox Easement. Based on new, recently adopted requirements of the United States Postal Service, this neighborhood will receive mail by using CBU's (cluster box units) instead of curb side mailboxes on newly constructed homesites. Certain Lots or Outlots will feature CBU's and will be determined by phase as constructed and will be noted in the Neighborhood Disclosure Addendum A to be received by Buyer at the time a Sales Contract is signed. There will be a separate recorded Multi-User Mailbox Easement for such Lots. All maintenance (concrete pad repair and replacement, CBU and snow removal around the CBU) shall be the sole responsibility of the Association.

I) Landscaping Easement. Lots ___ and ___ shall contain a private landscaping easement. Each of the Lot ___ and ___ Owners are responsible for maintenance to the easement located in their respective lots. Costs attributable to repair or restore the landscaping within said landscape easement shall be included in Assessments to Owners under the terms of this Declaration as Common Expenses.

No additional trees, plantings, buildings, fences, berms, or retaining walls shall be placed in any landscape easement areas or right-of-way's with the exception of the landscape trees and planting in any landscape easement areas.

B-8) Slope and Swale Areas.

A) The graded slopes and swales as established by Declarant shall remain as permanent. Within these slopes and swales, no structure, planting or other material shall be placed or permitted to remain, or other activities undertaken which may damage or interfere with established slope and swale ratios, create erosion or sliding problems or which may change the direction of flow of drainage channels or obstruct or retard the flow of water through drainage channels. The slopes and swales of each Lot and all improvements in them shall be maintained continuously by the Owner of a Lot, at the Owner's sole expense, except for those improvements for which a public authority or utility company is responsible.

B) In order to control run off, all down spouts and down spout extenders are to drain into a permeable area such as grass or a planting bed.

C) Declarant and the [ADD THE WORD CITY, VILLAGE, TOWN] have agreed to a certain Storm Water Management Plan. In the event of conflict between any plans and such Storm Water Management Plan, the Storm Water Management Plan shall control. Declarant and the Association shall each have the right to enter upon any Lot at any time for the purpose of inspection, maintenance or correction of any drainage condition and the Lot Owner shall be responsible for the cost thereof.

D) Any disputes relating to drainage swales, drainage or other surface water issues, shall be resolved by the Board of Directors of the Association, which may seek the advice of the [ADD THE WORD CITY, VILLAGE, TOWN] Engineer of the [ADD THE WORD CITY, VILLAGE, TOWN]. The Association shall establish procedures by which such decisions can be heard by the Board of Directors and decided by said Board.

B-9) Lot Grading Declaration. The [ADD THE WORD CITY, VILLAGE, TOWN] approves a master grading plan for each new subdivision within [ADD THE WORD CITY, VILLAGE, TOWN] limits which takes into consideration engineering principles such as stormwater management and erosion mitigation. For the benefit of all lot owners and the [ADD THE WORD CITY, VILLAGE, TOWN], it is required that all lots be graded in substantial conformance with the master grading plan in perpetuity. The Declarant shall be initially responsible for certifying grading is performed in compliance with the master grading plan. If lot owners desire to change grade on their property at any time, it is required that the lot owner consult with the [ADD THE WORD CITY, VILLAGE, TOWN] to determine any required documentation and approvals which may be required PRIOR to making any grading modifications.

B-10) Nuisances. No noxious or offensive activity, as determined by the Committee, shall be carried on upon any Lot, nor shall anything be done thereon which may be or may become an annoyance or nuisance to the neighborhood or which may have a detrimental effect on the value of other Lots and/or improvements.

B-11) Temporary Structures. No structure of a temporary character, trailer, basement, tent, shack, garage, storage container, barn or other outbuilding shall be used on any Lot at any time as a residence, either temporarily or permanently.

B-12) Signs. No sign of any kind shall be displayed to the public view on any Lot except, one professional sign of not more than one square foot, one sign of not more than six square feet advertising the property for sale or rent or signs without regard to size used by the Declarant, a builder or licensed real estate broker to advertise the property during the construction and sales period or to identify the subdivision and/or its Declarant. No signs will be located in the Outlots.

B-13) Entrance Sign. It is contemplated there will be an entrance monument sign located in Outlot 1. The entrance sign will be owned by the Association. The Association will be responsible for the maintenance of said sign to include watering, mowing and basic landscape requirements. The Association is responsible for determining whether said signs shall remain in place and assess all owners in the neighborhood of any future replacement cost after Declarant turns over control of the Association to the Owners.

B-14) Animals. No animals, livestock or poultry of any kind shall be raised, bred or kept on any Lot, except that dogs, cats or other household pets may be kept, provided that they are not kept, bred or maintained for any commercial purpose. No animal enclosure, house, pen or fences or similar device shall be placed on any Lot without the prior written approval of the Committee which may require special landscaping and screening.

B-15) Garbage and Refuse Disposal. No Lot shall be used or maintained as a dumping ground for rubbish. Trash, garbage or other waste shall not be kept except in sanitary containers. No incinerators shall be permitted. Other equipment for the storage or disposal of such material shall be kept in a clean and sanitary condition. No trash, building materials, debris, leaves, lawn clippings, rocks or earth shall be placed in any Outlot. Garbage cans, garbage bags or recycle bins must be kept in enclosed garage and not stored outside. **Note**: Please check with the municipality as to the length of time garbage cans, garbage bags or recycle bins may remain at curb side prior to and after collection.

B-16) Sight Distance at Intersections. No fence, wall, hedge or shrub planting which obstructs sight lines at elevations between 30" and 72" above the roadways shall be placed or permitted to remain

on any corner Lot within the triangular area formed by the street property lines and a line connecting them at points twenty five (25) feet from the intersection of the street lines, or in the case of a rounded property corner, from the intersection of the street property lines extended. The same sight-line limitations shall apply on any Lot within ten (10) feet from the intersection of a street property line with the edge of a driveway or alley pavement. No tree shall be permitted to remain within such distances of such intersections unless the foliage line is maintained at sufficient height to prevent obstruction of such sight lines.

B-17) Telephone (Land Line Service). Due to updated FCC government regulations, telephone communication providers are no longer required to provide land line service to new phases. As a result, Declarant cannot guarantee that all new phases will have access to traditional land line phones. However, most of the cable company service providers have the ability to bundle in those services.

B-18) Exterior Lighting.

A) Driveway Lamps specific to Lots _____. It is required that all of Lots _____ include a post-mounted lamp in each front yard adjacent to each driveway. Installation and maintenance obligations are set forth in paragraph B-18) C.

B) Exterior Lighting. Exterior lighting installed on any Lot shall either be indirect or of such controlled focus and intensity that such lighting will not disturb the residents of adjacent Lots. Uniform post lights and wall mounted fixtures required by Sections B-18)A and B-18)B shall be installed on the Lot or structure by the Declarant. Each required post light or wall mounted fixture shall be connected to an electrical power source at the time of installation and shall be maintained in a clean and operating condition at all times thereafter, provided, however, that fixtures shall weather naturally and therefore shall not be painted or stained. Any replacement of such lights shall be accomplished by the Lot Owner, and only with a bulb or fixture of the same specifications, height and appearance and in the same location as the original fixture. The post light and wall mounted fixtures specified by the Declarant are equipped with a photoelectric sensor for automatic use from dusk to dawn, therefore, no Lot Owner may install a turn-off switch for the required post light or wall mounted fixture. It is the Owner's responsibility to maintain the lights so that they are always operational.

B-19) Notices to Owners. The following information is being put of record in order to give record notice to all Owners, mortgagees and other persons and entities having an interest in the Property:

A) Plantings, flower beds, and entry signs (including utility installations connected therewith) constructed and installed by Declarant, if any, shall be deemed a part of the Common Area. The Association is obligated to maintain any entry feature; maintenance shall include electrical charges (if any), sign repair and maintenance of the landscaping including mowing of all lawns and grass areas. The cost of maintenance of said Common Property shall be an assessment against all of the Property in the subdivision in accordance with the Declaration, for so long as such maintenance is necessary or required adversely affects the natural flow of surface or underground waters within the area permitted.

B-20) Improvements Within Easements and Right-of-Way. Any improvements within easements or right-of-way (for example, fences, landscaping or invisible pet fence wire) located within any part of a Lot which is subject to a utility easement is subject to removal at the Owner's expense for utility maintenance and other reasons as determined by the party benefitted by the easement. Reinstallation of any improvement would be at the Owner's cost and would also be subject to the discretion of the party benefitted by the easement and is subject to terms and conditions as set forth on

the final plat. A portion of the right-of-way may also be located on the side of sidewalk adjacent to the home. Lot Owner should check with the [ADD THE WORD CITY, VILLAGE, TOWN] or [ADD THE WORD CITY, VILLAGE, TOWN] ordinances prior to installation of fences, landscaping or invisible pet fence wire, etc within the right-of-way's.

B-21) *Lease Requirements.* An Owner may rent its dwelling by written Lease (a "Lease"), provided that

a) The term of any such Lease shall not be less than six (6) months;

b) The Owner has obtained the prior written approval of the Association to the proposed tenant and the terms of the proposed Lease, and the written approval for any proposed extension of the Lease; and

c) The Lease contains a statement obligating all tenants to abide by this Declaration, the Articles, the Bylaws, and the Rules and Regulations, providing that the Lease is subject and subordinate to those instruments; and

d) The Lease provides that any default arising out of the tenant's failure to abide by the Declaration, the Articles, the Bylaws, and the Rules and Regulations shall be enforceable by the Association as a third-party beneficiary to the Lease and that the Association shall have, in addition to all rights and remedies provided under the Declaration, the Articles, the Bylaws and the Rules and Regulations, the right to evict the tenant and/or terminate the Lease should any such violation continue for a period of ten (10) days following delivery of written notice to the Owner and the tenant specifying the violation.

2) *Standard for Approval of Lease and Tenant*. The Association may withhold approval on any reasonable basis, including, but not limited to: the failure of the Lease terms to comply with all provisions of this Declaration, the Articles, the Bylaws, and the Rules and Regulations; the past failure of the Owner, the tenant or tenant's guests to abide by all provisions of this Declaration, the Articles, the Bylaws, and the Rules and Regulations; and the past use by Owner, the tenant or its invitees or guests of any part of the Lot in a manner offensive or objectionable to the Association or other occupants of the Property by reason of noise, odors, vibrations, or nuisance.

3) *Violations / Remedies*.

a) During the term of any Lease of all or any part of a Lot, each Owner of such Lot shall remain liable for the compliance of the Lot, such Owner and all tenants of the Lot with all provisions of this Declaration, the Bylaws, and the Rules and Regulations of the Association, and shall be responsible for securing such compliance from the tenants of the Lot. The Association may require that a copy of each Lease of all or any part of a Lot be filed with the Association.

b) In the event that an Owner leases out its dwelling or any portion of its Lot in violation of this provision, the Association may impose a daily fine up to the greater of (i) an amount equal to the daily rental amount being charged by Owner to its tenant and (ii) $100 (this daily fine shall be adjusted up every five years by 5%).

In addition to any fines imposed under this Section, the Owner shall reimburse the Association for all costs incurred by the Association, including attorneys' fees, incurred to enforce this

Section, any action the Association takes under this Section B-21 against Owner or Owner's tenant, and to collect any outstanding amounts owed by Owner to the Association.

PART C
ARCHITECTURAL CONTROL COMMITTEE

C-1) Membership. Declarant shall establish an Architectural Control Committee (the **"Committee"**) consisting of three (3) members. So long as Declarant has title to any Lot subject to this Declaration, the Committee shall be appointed by Declarant. After Declarant no longer has title to any Lot within the Development or at such earlier time as determined by the Declarant, the initial members of the Committee shall resign and the Association shall elect three (3) Owners to serve on the Committee. At any time, Declarant may elect to surrender the selection of the members of the Committee to the Association by election or appointment.

A majority of the Committee may designate a representative to act for it. In the event of the death or resignation of any member of the Committee, the remaining members shall have full authority to designate a successor.

The Committee appointed hereunder shall serve for the time period specified in paragraph C-10, below. Any Committee member may resign prior to said date. Such resignation shall be effective upon receipt. If a resignation shall occur, prior to turning over control of the Committee, then the remaining members of the Committee may appoint a replacement.

C-2) Architectural Control. No exterior improvements, including but not limited to, structure, whether residence, accessory building, tennis or sport court, swimming pool, basketball hoop, deck, patio, antenna (whether located on a structure or on a Lot), flag pole, wall, fence, landscaping, recreational equipment or other improvements, including exterior colors and materials to be applied to said improvements, shall be constructed, maintained or performed upon any Lot and no alteration or painting/repainting of the exterior of a structure shall be made unless complete Architectural Review Application (**"Application"**) to the Committee. The Application, as well as plans, specification and plot plans therefore shall have been submitted to and approved in writing by a majority of the Committee. Approval shall also be required for location of improvements with respect to topography and finish grade elevation. Said Application, plans, specifications and plot plans shall show the exterior design, height, building materials and color scheme thereof, the location of the structure plotted horizontally and vertically, the location and size of driveways, the plans for required landscaping, and the grading plan. A copy of such Application, plan specifications and plot plans as finally approved shall be deposited with the Committee. The Application can be found on the DSI Real Estate website www.dsirealestate.com. Select Condo & HOA, then Architectural Control (ACC) – Project Approval and select the appropriate application for your request.

C-3) Plan Review. The Committee shall review said Application, plans and specifications as to quality of workmanship and materials, harmony of external design with existing or proposed structures and as to location with respect to topography and finish grade elevation. The Committee shall use the guidelines set forth in this Declaration as an aid in exercising its architectural control responsibilities hereunder, but nothing contained herein or therein shall limit the Committee's discretion to grant variances from or make changes to, the guidelines, as they shall determine in the sole exercise of their discretion.

C-4) Procedure.

A) Neither the members of the Committee nor its designated representative shall be entitled to any compensation for services performed pursuant to this covenant for the initial approval of a residential structure. Thereafter, said Committee may charge a "request for action" or "approval" fee not to exceed Fifty and no/100 Dollars ($50.00) for each such request or approval. The Committee's approval or disapproval, as required in these Covenants, shall be in writing. In the event the Committee fails to provide, in writing, approval or disapproval within thirty (30) days after application, plans and specifications or any other matters requiring approval have been submitted to it, the request shall be deemed denied.

B) A submission will not be complete, and the thirty (30)-day approval time, as applicable, set forth above shall not commence until all documents required herein have been submitted. All such submissions shall be made to the Committee at the address set forth in this Declaration or to such other address that the Committee may designate.

C) The Committee shall have the sole right to reject any Application and plans which, in the judgment and sole opinion of a majority of its members are not in conformity with this Declaration; or are not desirable for aesthetic reasons; or are not in harmony with buildings located on the surrounding Lots; or are not in conformity with the general purposes of this Declaration.

D) The Committee shall exercise its sole approval authority and discretion in good faith and each Owner, by acceptance of a deed to, or any other interest in, a Lot, agrees to hold the Committee harmless from any perceived discrepancies in the Committee's good-faith performance of its duties. Refusal of approval of plans by the Committee may be based on any grounds, including purely aesthetic grounds, which in the sole discretion of the Committee shall be deemed sufficient.

E) The Committee may set its own operating procedures consistent with this Declaration and any limitations hereafter imposed by the Association. The costs of operating the Committee shall be assessed by the Association as Common Property expenses, except as permitted below. The Committee may engage consultants (e.g., architects, engineers or attorneys) either on a general or on a case-by-case basis, and the costs thereof may be charged to an applicant. The members of the Committee shall not draw any compensation for serving thereon but may be reimbursed for expenses incurred in performing their duties. All funds relating to the Committee shall be handled by the Association.

C-5) Separate [ADD THE WORD CITY, VILLAGE, TOWN] **Approval**. Matters which require approval of the Committee may also require approval of the [ADD THE WORD CITY, VILLAGE, TOWN]. Obtaining approval from the Committee and the [ADD THE WORD CITY, VILLAGE, TOWN] is solely the responsibility of the Owner desiring approval. Approval of Plans by the Committee shall not be deemed approval by the [ADD THE WORD CITY, VILLAGE, TOWN] and approval by the [ADD THE WORD CITY, VILLAGE, TOWN] shall not be deemed approval by the Committee.

C-6) Records. Until such time as a replacement Committee is designated, all plans, applications and requests shall be submitted to said Committee at the following address:

_____ Homeowners Association, Inc.
Architectural Control Committee
708 River Place
Madison, Wisconsin 53713
acc@dsirealestate.com

C-7) Committee Liability. Neither the Committee nor any member thereof shall be liable for damages to any person submitting request for approval or to any Owner of any Lot by reason of any action, failure to act, approval, disapproval or failure to approve or disapprove with regard to such requests. The Committee is not responsible for ensuring that the application and plans submitted by an Owner are in compliance with applicable laws, rules, regulations, ordinances or customary and typical building practices. The Committee does not review plans for structural design.

C-8) Indemnification. Each member or former member of the Committee, together with the personal representatives and heirs of each such person, shall be indemnified by the Association against all loss, costs, damages and expenses, including reasonable attorney's fees, asserted against, incurred by or imposed in connection with or resulting from any claim, action, suit or proceeding, including criminal proceedings, to which such person is made or threatened to be made a party by reason of service as a member thereof, except as to matters resulting in a final determination of gross negligence or willful misconduct on the part of such member. In the event of settlement of such proceeding, indemnification shall be provided only in connection with such matters covered by the settlement as to which the Association is advised by counsel that the person to be indemnified has not been guilty of gross negligence or willful misconduct in the performance of such person as a member in the matter involved. This right of indemnification shall be in addition to all other rights and defenses. All liabilities, losses, damages, costs and expenses incurred or suffered by the Association in connection with this indemnification shall be a Common Property expense. Nothing in this Section C-8 shall be deemed an indemnification of such person with respect to such person's status as an Owner, occupant or otherwise.

C-9) Variance. The Committee shall have the power and absolute discretion to authorize a variance from any of the requirements of this Declaration if it finds that the strict application thereof would, in its sole discretion and opinion, result in difficulties or undue hardship to the Lot owner or in the event the architecture of the proposed Lot improvement is such as to present, in its opinion, a particularly pleasing appearance compatible with other houses in the development.

C-10) Successor to Committee. Declarant may turn over control of the Committee to the Members of the Association at any time, and shall turn over control when Declarant no longer has any ownership interest in the Property. At such time as Declarant turns over Committee control, the Association's Board of Directors shall designate not less than three (3) or more than five (5) Members of the Association to serve and act as the Committee for all purposes hereunder.

PART D
DESIGN GUIDELINES

D-1) Single Family Dwelling Units.

A) Architectural Character. Architecture within the development will be developed with a unified architectural theme of mid-century modern as well as contemporary interpretations of regional vernacular styles. The overall character of the development will be created to establish a cohesive appearance throughout the community. Examples of these styles include:

Cottage	Craftsman	Four Square	Farmhouse	Mid-Century Modern
Prairie	Shingle	Traditional	Victorian	Southern Traditional
Classical				

The requirements as itemized in the following section will be used as applicable to the context of the specific architectural style. Declarant reserves the right to grant variances in its sole discretion. Where [ADD THE WORD CITY, VILLAGE, TOWN] zoning is more restrictive, such requirements will govern.

B) Front Porch. Front porches are encouraged as both visual and functional design elements with a style consistent with the overall architectural style of the home and provide a visually appealing entry point. Minimum standard porch design details include the following; porch posts or alternate per plan, porch balustrades, when provided, of nominal 2" x 2" square wood at a maximum of six inches (6") on center; and newel posts that are compatible with the design of the column posts. Porch columns and railings shall be painted to match the trim color of the house.

C) Garage.

1. Garages shall be provided in accordance with PDD documents and specific unit plans.

2. The maximum garage width exposed on the front elevation shall be no greater than fifty percent (50%) of the overall building width.

3. On homes with a front-entry garage the front garage facade shall be a minimum of 2' behind house façade adjacent to garage exclusive of any porch element. Side entry garages may project beyond front façade of the home.

4. Tandem, split or side entry garages are encouraged for three (3) or four (4) car garages. For three (3) car front entry garages, the third stall must have a minimum setback of the greater of 2' from the two-car garage line or as required by compatible roof design. Garage width must comply with zoning and the design guideline standards of 50% of overall building width.

5. The garage door shall be a raised panel design painted to match the siding on the home. The use of windows in the door, appropriate to the architectural style, is encouraged. The maximum single garage door size is 8' x 18".

D) Ornamental Design Elements.

1) Ornamental design elements, such as dormers, shutters, window wrap window grids, gable vents, pilasters, pediments, etc., shall be used in a manner consistent with the overall architectural style of the home and with emphasis on elevations exposed to public space.

2) Window wrap or shutters and window grids are required on front and other primary elevations facing a public space. Gable ornamentation, 5" horizontal vinyl trim, and/or eyebrow roofs are required on front elevation gables greater than 10'-0" in width and are encouraged on other gables as deemed appropriate by the Architectural Control Committee.

3) The shutters shall be wood or polystyrene with colors as approved by the Committee or of other material or color as deemed acceptable by the Committee. Panel or louver design shutters shall be used as appropriate to home materials & style.

4) The window wrap and corner trim shall be minimum 3½" vinyl or composite material as approved by the Committee and used with box outs or when part of the standard plan.

5) Gable ornamentation when required for the front elevation and side elevations facing a public street shall be appropriate to architectural style per standard detail.

E) Roof/Facias/Soffits/Eaves.

1) Roof Standards:

a) Roof design must be consistent with the overall architectural style of the home. Roof forms and pitches as established on individual styles may not be altered without approval by the Committee.

b) Roof material shall be Owens Corning Oakridge 30 architectural shingle or equal and in colors as approved by the Committee. Rubber roofing is allowed on flat roof areas and metal roofing is allowed on feature elements.

c) Hip roof design, porches or other elements deemed appropriate by the Committee may be used in lieu of specific gable requirements.

2) Fascia, Soffit and Eave Standards:

a) Facia shall be 6" minimum aluminum with colors as approved by the Committee, wood or composite material may be used when appropriate to the architectural style.

b) Aluminum soffit and eave color shall match facia.

c) A minimum 12" overhang is required at typical eaves and gable ends. However, 6" is allowable with projections less than 6'-0" in width, such as the fireplace chase, dormers and small bay windows. Larger overhangs may be required as appropriate to the architectural style.

F) Exterior Wall Surfaces.

1) Siding material shall be premium vinyl or composite material as approved by the Committee. Vertical board and batten siding or shake siding is encouraged for accent areas appropriate to the style of the home. Colors shall be approved by the Committee.

2) Windows may be vinyl; vinyl clad, aluminum clad or wood with colors as approved by the Committee.

3) Variation of wall planes on primary elevations is encouraged as appropriate to architectural style and building scale. A front porch per Section B may also be used to provide front elevation articulation as appropriate.

4) Any elevations facing public streets or spaces shall have a minimum of three (3) windows with wrap trim or shutters and window grills as appropriate and gable ornamentation at all gable ends, street or public space exposure walls shall have a minimum of one (1) additional window in the exposure wall. Further wall treatment may be required per specific home design or requirements.

5) The use of brick or stone is encouraged as appropriate to architectural style. Brick or stone facing must return a minimum of 2'-4" when terminated at an outside corner. Brick or stone material and color selections shall be as approved by the Committee and harmonious with overall neighborhood palette, as well as with the specific home design and be used consistently on all elevations.

6) **Colors**. The Declarant or the Committee, whichever is then applicable shall approve the trim, siding and roofing colors to assure the most aesthetic combination for a particular house as well as for the other Lots in the Plat. Any subsequent changes in such colors shall be approved by the Declarant or Committee, whichever is then applicable.

7) **Chimneys, facia and soffits.** All chimneys and exterior flues shall be enclosed using brick, stone, stucco or siding material.

D-2) Other Improvements.

A) **Fences** All fencing must receive prior written approval of the Committee and shall comply with any requirements set out below. The Committee may also require the installation and maintenance of landscape materials for screening and aesthetic purposes. All fence material shall be constructed of vinyl. Zoning approval and/or building permit from the [ADD THE WORD CITY, VILLAGE, TOWN] may be required to construct fencing. Committee approval does not supersede the need for any municipal approvals or permits.

1) The fence style required is the PlyGem Stratford Vinyl, Exhibit "E".

a) All fencing shall be erected finish side out (i.e. pickets on the outside of the rail facing the street or neighboring lot).

b) Posts shall be spaced a minimum of 72" and a maximum of 96" on center. Rails shall be discontinuous and abut into the posts.

c) Gates are permitted and shall be consistent with the fencing style. All gates shall open into the lot. Gates may be required for access to utility easements and any other access easements that are dedicated on the plat.

d) Fencing color by PlyGem Fence/Railing of White is the only color allowed for vinyl material.

2) Appropriate uses of fencing:

a) Fencing shall be limited to rear and side yards only.

b) Fencing shall meet up with the corners of the home or garage and may not project past the front face of home or garage.

c) Only one fence is permitted along adjoining properties. Corners of adjoining properties fencing shall intersect at common corners.

d) Owner to contact [ADD THE WORD CITY, VILLAGE, TOWN] for current [ADD THE WORD CITY, VILLAGE, TOWN] zoning requirements for fence placement on corner lots prior to submitting to Committee.

3) Inappropriate use of fencing:

a) Fencing in front yards shall not be permitted.

b) Fencing shall not occur in freestanding segments or be placed arbitrarily.

c) Fencing shall not meet porch or deck corners.

d) Fencing shall not interfere with utility equipment. Your utility companies shall be consulted for current requirements and the most restrictive shall apply.

B) Decks. All decks must receive prior written approval of the Committee and shall comply with any requirements set out below. The Committee may also require the installation and maintenance of landscape materials for screening and aesthetic purposes. A zoning approval or building permit from the [ADD THE WORD CITY, VILLAGE, TOWN] may be required to construct a deck. Committee approval does not supersede the need for any municipal approvals or permits.

1) Appropriate deck design shall incorporate the following criteria:

a) Deck(s) shall be proportionate in size to the footprint of the dwelling

b) Deck(s) shall be proportionate in length and width

c) Deck(s) shall not project past the rear or side yard setbacks

d) Deck(s) at side yards of corner lots may not project past the corner of the home or garage for that side facing the street.

e) Deck(s) must be stained or painted

2) Inappropriate deck design:

a) Deck(s) in front yards shall not be permitted.

b) Deck(s) shall not occur in freestanding segments or be placed arbitrarily on the lot.

c) Deck(s) shall not interfere with utility equipment. Your utility companies shall be consulted for current requirements and the most restrictive shall apply.

C) Outbuildings. No outbuilding, shed or accessory building of any nature shall be erected on any Lot, with the exception of a detached garage that is the only garage on the lot and is approved by the Committee prior to construction. Secondary units (ADU – accessory dwelling unit) above detached garages may be allowed subject to municipal ordinance and with prior written approval from the Committee.

D) Antennae/Wind Powered Electric Generators. No wind powered electric generators, exterior television, radio receiving or transmission antennae, satellite signal receiving station or dish shall be placed or maintained upon any portion of a Lot without prior written approval of the Committee.

1) Appropriate antennae or satellite dish placement:

a) Only one antennae or satellite dish shall be allowed per lot.

b) The location of the satellite dish can be any of the following and shall not be visible from the curb directly in front of the home:

i. On a pole in the backyard and located close to the home.

ii. Attached to the deck.

iii. On the rear roof line of the home.

1. A satellite dish shall not project past the uppermost roof ridgeline. This method is not recommended by the Committee as you may have water infiltration issues if the dish is not property installed and roof repairs may not be covered under the applicable roof warranty.

2) Inappropriate antennae or satellite dish placement:

a) Antennae or satellite dish in front or side yards shall not be permitted.

b) Antennae or satellite dish shall not interfere with utility equipment.

E) Firewood Storage. No firewood or woodpile shall be kept on any lot unless it is neatly stacked, placed in the rear yard and screened from street view by plantings or a fence first approved in writing by the Committee.

F) Solar Collectors. No active solar collector or apparatus may be installed on any Lot unless such installation is first approved in writing by the Committee, which shall consider the aesthetic and sun reflection effects on neighboring structures. Solar collectors or apparatus installed flat against or parallel to the plane of the roof shall be preferred.

G) Lighting. Exterior lighting installed on any Lot shall either by indirect or of such controlled focus and intensity that such lighting will not disturb the residents of adjacent Lots.

H) Landscaping Requirements. Pursuant to Section B-4 of the Declaration of Conditions, Covenants and Restrictions, Developer hereby imposes upon all Lots described in Exhibit "A", attached hereto and incorporated herein by reference, the requirement that the Owners thereof install landscaping on such Lots which meets or exceeds the minimum number of points for landscaping set forth in Exhibit "C". The number of points attributable to various elements of the landscaping to be installed shall be determined by reference to Exhibit "D", attached hereto and incorporated herein by reference. All terms, covenants and conditions of Section B-4 of the Declaration of Conditions, Covenants and Restrictions, as amended herein, shall be applicable to the landscaping to be installed pursuant to the terms of this paragraph. Landscape installed by the Declarant may or may not meet the minimum number required.

PART E
GENERAL PROVISIONS

E-1) Term. This Declaration shall run with the Property and Common Property, and shall be binding on Declarant, the Association and all of its Members and/or its successors and assigns, and all persons claiming under them for a period of twenty-five (25) years from the date this Original Declaration

was recorded, after which time said Declaration shall be extended automatically for successive periods of five (5) years each unless an instrument signed by a majority of the Class A Members and all of the Class B Members agreeing to change said Covenants in whole or in part or to terminate the same.

E-2) Enforcement. The Declarant, the Association or Management Company on behalf of the Association, or any Owner shall have the right to enforce by any proceedings at law or in equity all restrictions, conditions and covenants created or imposed herein, against any person or persons violating or attempting to violate any covenant, by any action to either restrain violation or to recover damages, or both including reasonable attorney fees. The Architectural Control Committee may refer any violation which shall come to its attention to the Declarant or Association for action under the terms of this paragraph and this Declaration. Failure to enforce any covenant, condition or restriction herein shall in no event be deemed a waiver of the right to do so thereafter. In the event of a violation of this Declaration the Association shall have the right to assess and collect from the violating party a fine (the "**Fine**") for such violation equal to the greater of (i) the actual damages suffered on account of the violation, or (ii) the sum of $100.00 per day for each day the violation remains outstanding plus (iii) all costs of collection and enforcement, including actual attorney fees. Any Fine imposed by the Association or the Management Company acting on its behalf, may be assessed against the Owner(s) by means of a Special Assessment against the Lot or Lots owned by the Owner in violation. In such event, the Association, or the Management Company acting on its behalf, shall have all rights provided in Section A-4 (C) (3), above, regarding collection of Special Assessments and foreclosure of the lien thereof.

E-3) Severability. Invalidation of any one of these covenants by judgment or court order shall in no way affect any of the other provisions which shall remain in full force and effect.

E-4) Model Homes. So long as Declarant shall own any Lot in the Development, Declarant shall be permitted to maintain model homes in the Development, including therein a sales office for the purpose of sales and marketing of its homes.

E-5) Parade of Homes and/or Condominiums. So long as Developer shall own any Lots in the Development, or condominium units in any condominium located within the Development (collectively a "Lot/Unit"). Developer reserves the right to submit some or all of said Lots/Units as a site for the Parade of Home and/or the Parade of Condominiums of the Madison Area Builders Association (the "Parade"). In the event that some or all of said Lots/Units are selected as a site for a Parade, this Declaration of Protective Covenants, Conditions and Restrictions shall, as to the Lots/Units enrolled in the Parade, for a limited period of time ending 48 hours after the conclusion of the Parade, be deemed temporarily altered and modified, to the extent necessary, to permit the Madison Area Builders Association to hold its Parade in this Development pursuant to the then current Parade Rules and Checklist of the Madison Area Builders Association. All purchasers of Lots/Units, and/or their successors and assigns, shall take title subject to this specific reservation by the Developer and shall waive all rights to object to violations of this Declaration of Protective Covenants, Conditions and Restrictions by the Developer, the Madison Area Builders Association, or any of the builders or participants in the Parade for the period of the Parade as set forth above, including the closing of any public or private streets in the Parade area. All Lot/Unit owners appoint the Developer their attorney-in-fact to execute all necessary petitions; applications and consents to facilitate said street closings for the Parade.

E-6) Governing Law. This Declaration shall be construed and enforced in accordance with the terms of the laws of the State of Wisconsin. The terms of this Declaration are not intended to replace or affect any applicable laws, ordinances, rules or regulations of the [ADD THE WORD CITY, VILLAGE, TOWN].

E-7) Notices.

A) Notices to Declarant shall be given to Declarant at the following address: 6801 South Towne Drive, Madison, WI 53713.

B) Notices to an Owner of any Lot within the Development shall be given in care of the street address of the Lot.

C) Any party may change its address by written notice given to the other parties. Party, its successors and/or assigns, may change said addresses by notice properly given hereunder.

E-8) Amendment and Release. At any time until Declarant conveys all of the Lots which comprise the entire Property, or turns control of the Association over to the Class A Members, whichever occurs first, Declarant may modify, amend, alter and grant variances to this Declaration without the consent of any Member, Owner or Occupant, their Mortgagees or any other party, including the Association and its Board of Directors. These restrictions or any part thereof may be cancelled, released or amended in writing as to the entire Plat or any part thereof by the Declarant at any time until Declarant conveys all of the Lots or until the Declarant turns over control to the Committee, whichever comes first. After the Declarant has sold all of the Lots or otherwise released or assigned its right to enforce this Declaration, then this Declaration or any part thereof may be released, cancelled, amended or waived by an instrument approved and signed by a majority of the Class A Members and all of the Class B Members.

E-9) No Waiver. Whenever a waiver, consent or approval is required or permitted herein, it must be express and in writing; no waiver, consent or approval shall be implied. Failure to enforce any provision of this Declaration shall not operate as a waiver of any such provision or any other provision of this Declaration.

E-10) Number and Gender. Whenever used herein, unless the context shall otherwise provide, the singular shall include the plural, the plural shall include the singular, and the use of any gender shall include all genders.

E-11) Including. Whenever used herein, the term "including" preceding a list of one or more items shall indicate that the list contains examples of a general principle and is not intended as an exhaustive listing.

E-12) Captions. The captions and article and section headings in this Declaration are intended for convenience and reference only and in no way define or limit the scope or intent of the various provisions hereof.

E-13) Remedies. All remedies herein are cumulative.

[See attached signature page.]

IN WITNESS WHEREOF, the said [ADD VERIDIAN ENTITY], LLC, a Wisconsin Limited Liability Company has caused these presents to be signed and sealed this ____ day of _____, 20__.

[ADD VERIDIAN ENTITY] LLC
By: Forgewell Building Group, LLC, Its Sole Member

By: _____
Chris Ehlers, Authorized Signatory

STATE OF WISCONSIN)
) ss
COUNTY OF DANE)

Personally came before me this _____ day of _____, 20__, Chris Ehlers the Authorized Representative of [ADD VERIDIAN ENTITY], LLC a Wisconsin Limited Liability Company, to me know to be such persons and officers who executed the foregoing instrument and acknowledged that they executed the same as such officers, by its authority for the purposes therein contained.

_____
Notary Public
Dane County, Wisconsin
My Commission Expires: _____, 20__

This document was drafted by:

Gregory J. Paradise
Mohs Widder Paradise LLC
725 Heartland Trail, Suite 300
Madison, WI 53717

CONSENT TO DECLARATION OF
COVENANTS AND RESTRICTIONS

The undersigned, [ADD BANK NAME], consents to the forgoing Declaration of Conditions and Restrictions for the plat of _____.

Dated at _____, Wisconsin this _____ day of _____, 20__.

[ADD BANK NAME]

By: _____

Print Name:_____

Title:_____

ACKNOWLEDGMENT

STATE OF WISCONSIN)
) ss.
COUNTY OF DANE)

Personally came before me this _____ day of _____, 20__, the above named _____ _____, to me known to be the person(s) who executed the foregoing instrument and acknowledged the same in the capacity and for the purposes therein intended.

_____
Notary Public
County of _____, State of Wisconsin
My Commission Expires: _____

Exhibit "A"

Description of [ADD PLAT NAME]

Lots ___ and Outlots ___, [ADD PLAT NAME], ___ of _____, _____ County, Wisconsin

Exhibit "B"

Please be advised that the Declarant hereby directs viewers to ignore the printed text material on the maps attached to this Exhibit "B." Only the spacial relationships of the illustrators on the maps are being presented for your information.

DECLARANT

[ADD VERIDIAN ENTITY], LLC

BY: FORGEWELL BUILDING GROUP, LLC, ITS SOLE MEMBER

By: _____

Print Name: Chris Ehlers

Print Title: Authorized Representative

Exhibit "B"

[ADD IMAGES OF EACH PAGE OF RECORDED PLAT]

Viewers are advised to ignore the illegible text on this map. It is presented to show spatial relationships only.

EXHIBIT "C"

Total Minimum Points for Landscaping

Lot(s)	Minimum Points for Foundation Plantings	Total Minimum Points for Landscaping
[ADD LOT NUMBERS]	400	550

EXHIBIT "D"

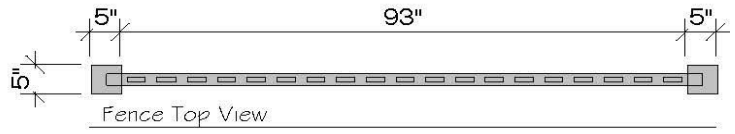
Landscaping Elements

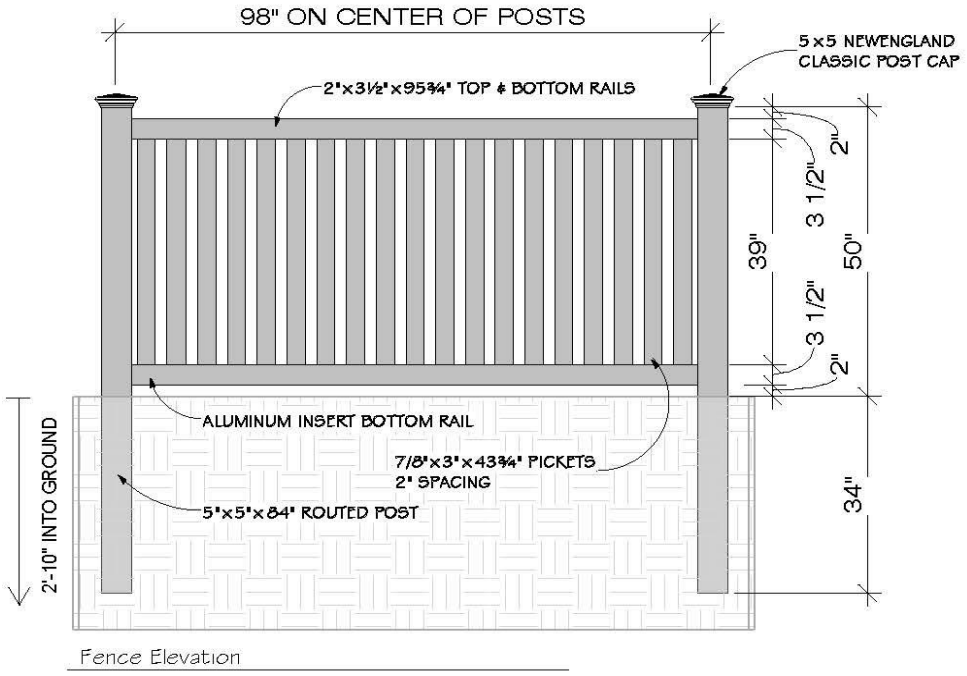
Elements	Point Schedule
A) Small Shade Trees (balled and burlaped) (1.5"-2" caliper at 6" from the roots)	*50*
B) Medium Shade Trees (balled and burlaped) (2"-3" caliper at 6" from the roots)	*100*
C) Large Shade Trees (balled and burlaped) (3"-4" caliper at 6" from the roots)	*150*
D) Extra-Large Shade Trees (balled and burlaped) (4" + caliper at 6" from the roots)	*200*
E) Ornamental Trees (balled and burlaped) (1.5"-2" caliper at 6" from the roots)	*50*
F) Small Evergreen Trees (3' to 4.5' when planted)	*25*
G) Medium Evergreen Trees (5' to 6.5' when planted)	*50*
H) Large Evergreen Trees (7' + when planted)	*100*
I) Evergreen Shrubs (18" minimum diameter)	*20*
J) Small Deciduous Shrubs (18" to 35" in diameter)	*10*
K) Medium Deciduous Shrubs (35" to 60" in diameter)	*15*
L) Large Deciduous Shrubs (balled and burlaped) (60" or greater in diameter)	*25*
M) Decorative Retaining Walls (Points are per face foot. Boulders, timbers, and stones only – no concrete walls included.)	*10*
N) Paver Stone Walks, Paths or Patios (Points per square foot – no driveways included.)	*1*
O) Planting Beds (Points per square foot – must be decorative stone or mulch.)	*1*

The final point totals must consist of a balanced variety of the listed elements acceptable to the Architectural Control Committee. Existing vegetation, trees and shrubs may be included in the point totals if they are properly protected and maintained during the construction process and located as such on the landscape plans submitted to the Architectural Control Committee for approval.

Exhibit “E”

STRATFORD





NOTE:

MANDATORY REQUIREMENTS (NO VARIANCE WILL BE ALLOWED)

- FENCE MUST BE VINYL
- VINYL COLOR: WHITE
- FENCE STYLE IS A PLYGEM PRODUCT (STRATFORD)

- CUSTOM BUILT ON THE JOBSITE
- INSTALLED WITH METAL BRACKETS THAT ATTACH TO POST AND SCREW INTO STRINGERS

VERIDIAN HOMES

6801 South Towne Drive
Madison, WI 53713
Phone 608.226.3100
Fax 608.226.0600

Viewers are advised to ignore the illegible text on this map. It is presented to show spatial relationships only.

Paul Farrow
County Executive

Dale R. Shaver
Director

Waukesha County

Department of Parks and Land Use

TO:	State of Wisconsin–Department of Administration (Plat Review)
NOTICE OF:	Conditional Certification of No Objection to Preliminary Plat
DATE OF REVIEW:	September 22, 2025
RE:	Subdivision Plat known as: **Willow Run** **File No: 2104**
LOCATION:	Part of the SE ¼ & SW ¼ of the NE ¼, Part of the NE ¼, NW ¼, SE 1/4, & SW ¼ of the SE ¼ and Part of the NE ¼ of the SW ¼ Section 20, Township 7 North, Range 19 East, City of Pewaukee.
SUBMITTED BY:	State of Wisconsin-Department of Administration (Plat Review)
SURVEYOR:	Ryan Wilgreen Excel Engineering, Inc. 100 Camelot Dr. Fond du Lac, WI 54935
DATE RECEIVED:	September 3, 2025
DATE OF PLAT:	August 28, 2025
SUBDIVIDER:	Varin/Willow Run LLC 1949 ST Johns Ave Suite 202 Highland Park, IL 60025

REMARKS: Conditional Certification of No Objection to this Preliminary Plat is based on the following conditions being satisfied prior to submittal of a revised Preliminary Plat or a Final Plat:

1. The Waukesha County Department of Public Works (DPW) requires the following

   - There shall be only one access to CTH DR.
   - The plat shall state that there shall be no direct access from Outlot 3 to CTH DR.
   - Vision corner easements and restrictions shall be placed on the plat as follows: "Within the area of the vision corner easement, the height of all plantings, berms, fencing, signs or any other structure shall be limited to 24 inches above the intersection elevation. No roadway access is permitted over the vision corners from the adjacent lots."
   - CTH DR right of way dedication shall be subject to DPW's requirements established as part of the access permitting process.

2. The surveyor's seal, signature, and date must appear on all sheets of the Preliminary Plat.

3. The Wisconsin Wetlands Inventory shows areas of wetlands mapped on this property. It appears as though some of those wetlands were artificially created; if the intent is to seek DNR water quality certification for wetland fill, please provide DNR authorization for the fill areas.

   Additionally, please provide the Waukesha County Planning and Zoning Division with the wetland delineation report completed by Evergreen Consultants, LLC on October 29, 2024. This ensures the Waukesha County GIS map is kept up to date.

4. All easements, such as proposed or existing drainage ways, access, sanitary sewer and utilities shall be shown on the final plat. Any related recorded documents numbers for existing easements shall also be noted on the plat.

5. Documentation must be presented to Waukesha County Planning and Zoning Division staff confirming that, as required by Section NR 110.08(4) of the Wisconsin Administrative Code, the Southeastern Wisconsin Regional Planning Commission has reviewed and commented on the proposed sanitary sewer extension which will be needed to serve this development.

6. A letter from the city indicating that they are willing to extend sewer to the subdivision must be furnished to the Waukesha County Planning & Zoning Division.

7. In accordance with Chapter 236 of the Wisconsin Statues, signature certificates must be added to the Final Plat. Please ensure that signature certificates for the County Treasurer and the mortgage holder are added to the Final Plat.

In addition, we recommend the following:

8. The Location Map on Sheet 1 should be revised to show more detail. At a minimum, it

should include existing nearby roads and names.

9. We recommend constructing sidewalks on at least one side of the streets in accordance with "SEWRPC's Recommendations for Provision of Sidewalks in Areas of Existing or Planned Urban Development".

10. According to the soil survey of Milwaukee and Waukesha Counties, lots in this subdivision contain soils that may be indicative of seasonal high groundwater conditions. Some of the lots contain particularly severe conditions with hydric soils, meaning that groundwater is estimated to be less than one foot from the ground surface. It appears as though significant fill is proposed to mitigate this condition. We recommend that the City requires a soil analysis for all lots within the development and ensure that basement floor elevations will be above seasonal high groundwater conditions. Waukesha County recommends that basements be placed at least one (1) ft. above the estimated seasonal high groundwater elevation. Minimum basement floor elevations should be identified on a Master Grading Plan or Final Plat for any lots with limiting factors. Unless minimum basement floor elevations are provided on the Final Plat, it is recommended the City of Pewaukee require a note, similar to the enclosed, be placed on the face of the Final Plat, indicating these lots may contain soils that are unsuitable for conventional basement construction due to the presence of seasonal high groundwater and special construction methods may be required.

BASEMENT RESTRICTION – GROUNDWATER

Although all lots in the Subdivision have been reviewed and approved for development with single-family residential use in accordance with Wis. Stat. Ch. 236, some lots contain soil conditions that, due to the possible presence of groundwater near the surface, may require additional soil engineering and foundation design with regard to basement construction. It is recommended that a licensed professional engineer design a basement and foundation that will be suitable to withstand the various problems associated with saturated soil conditions on basement walls or floors or that other special measures be taken. Soil conditions should be subject to each owner’s special investigation prior to construction and no specific representation is made herein.

11. We recommend that the City requires that a Master Grading Plan be prepared, to provide grades that will ensure protection from high groundwater and continuity of yard grades from one lot to another.

12. We recommend that the developer consult with the property owner regarding the location and function of any drain tile that may be present on the property and how it may impact the development.

13. The Water feature layer on the Waukesha County GIS shows multiple ditches on the property. If navigability status has been determined, please share the report with Waukesha County. If navigability has not been determined, we recommend consultation with the Department of Natural Resources. Per Ch. 236 WI State Statues, if any of the waterways

are deemed navigable, the following note shall be added to the face of the plat, "Any land below the ordinary high water mark of a lake or a navigable stream is subject to the public trust in navigable waters that is established under article IX, section 1, of the state constitution."

14. It appears wetlands are located on Lots 47 – 50 and in the vicinity of lots 110 – 98. We recommend consideration be given to redesign the lots to place wetlands on commonly held outlots rather than lots owned by private parties. Wetlands are vulnerable to fill if they remain on private lots. If the wetlands are to remain on the private lots, please ensure the City of Pewaukee's wetland setback is met. At minimum, we recommend split rail fencing or signage by placed to indicate the extent of the wetland if wetlands will remain on private lots.

15. In the vicinity of Lots 85 – 88, it appears that the city's required seventy-five foot shore setback encroaches upon the building envelope depicted upon several lots. It appears as though all lots remain buildable. However, we recommend that the affected building envelopes be revised to exclude the shore setback area so that future lot buyers and builders understand the limitations of the setback requirements.

16. It is recommended different line weights or symbology are used to differentiate the wetland boundaries from the existing and proposed ground contours.

17. Please amend the 2nd line of the outlot notes referencing equal and undivided fractional ownership "of all of the stormwater facilities" to ownership "of all of the outlots".

SIGNED: _____

Jason Fruth
Planning and Zoning Manager

For information regarding this review, please contact Emily Goodman at Egoodman@waukeshacounty.gov or 262.896.8300.

Cc via email: City of Pewaukee Clerk, hurd@pewaukee.wi.us (*e-mail*)
City of Pewaukee Planner, fuchs@pewaukee.wi.us (*e-mail*)
Ryan Wilgreen, Surveyor, ryan.wilgreen@excelengineer.com (*e-mail*)
VH Acquisitions LLC, Developer, mcudney@veridianhomes.com (*e-mail*)
We Energies – Plat Review, co-subdivisionsgroup@we-energies.com, Nicole.warwick@we-energies.com, travis.kluewer@we-energies.com (*e-mail*)
AT&T – Plat Review, jo2376@att.com (*e-mail*)
CenturyLink Plat Review, james.winter@Brightspeed.com (*e-mail*)

Joel Dietl, SEWRPC, joel.dietl@sewrpc.org (*e-mail*)
File

\\wcg.waukeshacounty.gov\files\Depts\PRKANDLU\Subdivision Files\PLATS\Cities\Pewaukee\2104 Willow Run

Office of the Planner & Community Development Director
W240 N3065 Pewaukee Road
Pewaukee, Wisconsin 53072
Phone (262) 691-0770 Fax (262) 691-1798
fuchs@pewaukee.wi.us

REPORT TO THE PLAN COMMISSION

Meeting of October 16, 2025

Date: October 8, 2025

Project Name: Esser Farm Rezoning, Conditional Use, Site & Building Plan Review, and Preliminary Plat

Project Address/Tax Key No.: W220N2475 SPRINGDALE RD / PWC 0916997

Applicant: Cornerstone Development

Property Owner: FRIEDL ESSER REVOCABLE TRUST AND NORMAN ESSER CO LLC

Current Zoning: A-2 Agricultural District, Rs-6 Single-Family Residential District, and LC Lowland Conservancy District

2050 Land Use Map Designation: Medium Density Residential (6,500 Sq. Ft. - 1/2 Ac. / D.U.) and Floodplains, Lowland, & Upland Conservancy and Other Natural Areas

Use of Surrounding Properties: Single-family residential to the north, east, west, and single-family residential and LC District zoned property to the south.

Introduction:

The applicant filed the following applications for a mixed-use residential development upon property located at W220N2475 Springdale Road.

- Rezoning Application to rezone the subject property from A-2 District, Rs-6 District, and LC District to Rs-6 District, Rm-1 Residential planned unit development (PUD), and LC Lowland Conservancy District.

  Staff is recommending that the rezoning also include the UC Upland Conservancy District for woodland areas and F-1 District for the area of land designated as floodplain.

  The future land use designation is Medium Density Residential (6,500 Sq. Ft. – 1/2 Ac./D.U.) and Flood Plains, Lowland & Upland Conservancy, and other Natural Areas. At 132 units, the project does not require a Comprehensive Master Plan Amendment.

- Conditional Use Permit for the condominium portion of the development to allow four-unit and two-unit structures under the CUP planned unit development standards, such as reduced front and rear setbacks.
- Preliminary Plat to create the residential and condominium lots.
- Site & Building Plan Review for the approval of the condominium site design and architecture.

This submission is following review of a Conceptual Review Application at the April 17, 2025 Plan Commission meeting. The conceptual plan included 48 single-family lots and 90 condominium units for a total of 138 dwelling units.

The current development plan reduced the number of condominium units to 84 units, thus reducing the total number of dwelling units to 132.

Project Description/Analysis:

The property is approximately 58-acres and is primarily vacant and used for agricultural purposes currently. The site plan shows the single-family residential abutting the existing single-family residential to the west and transitioning to condominiums on the eastern portion of the property.

The southeast corner is a Southeastern Wisconsin Regional Planning Commission Primary Environmental Corridor and wetland area. There is also a wetland on the western side of the property which abuts the Springdale Estates subdivision.

All lots and condominium units will be served by public sanitary sewer and water facilities.

Single-Family Residential
The single-family residential portion of the development is proposed to be rezoned to the Rs-6 Single-Family Residential District consistent with the surrounding residential uses. The 48 single-family lots are generally located on the western half of the property abutting the existing single-family residential subdivision.

The Rs-6 District requires a minimum lot size of 12,500 square feet and a minimum lot width at the building setback line of 90 feet. The lot sizes proposed range from 12,740 square feet to 24,524 square feet. The average lot size is 16,226 square feet.

For comparison, the existing single-family residential lots directly abutting this property have an average lot size of 17,370 square feet, ranging from 13,020 square feet to 29,346 square feet. With a total acreage of 58 acres, the resulting gross density for the entire development is about 2.4 units per acre.

Mult-Family Residential
The multi-family portion of the development is proposed to be rezoned to the Rm-1 Multiple-Family Residential District. This district allows a maximum density of six dwelling units per net acre, which this development meets (see table below for each multi-family lot).

Lot Number	Number Of Units	Net Acreage	Units Per Acre
Lot 49	28	7.52	3.72
Lot 50	12	3.31	3.31
Lot 51	22	4.89	4.50
Lot 52	22	5.96	3.69

The site plan consists of 84 condominium dwelling units within 15 four-family buildings and 12 two-family buildings. Each condominium unit includes a two-car-attached garage.

The project also includes a clubhouse, swimming pool and two sport courts adjacent to Springdale Road, south of the entrance drive. Additionally, the plan includes a paved trail, which extends through both the single-family and condominium uses. The clubhouse is for the condominium owners only.

Staff did recommend that the trail be expanded to better serve all condominium units and provide a safe off-street connection to the clubhouse and amenities area. The applicant stated, "[t]he developer does not see a benefit to the proposed community to add or expand the trail system. The local roads are typically used by the community residents for walking. The two segments of trail proposed herein are situated within public access easements and allow for enjoyment of the open space."

Staff also recommended that the trail extend into the single-family Lots 34 through 36.

The applicant is proposing this development as a Conditional Use planned unit development. This allows for townhouses and condominiums as well as reduced development standards. For example, this would allow for front and rear yard setbacks of 24.5-feet, opposed to 35-feet. This section of the ordinance also requires a minimum 40-foot building separation.

The Rm-1 District contains the parking requirement below.

> g. Parking Space
> There shall be a minimum of two and one-half (2-1/2) 200-square-foot off-street parking spaces provided for each residential unit, of which at least two (2) must be located in a garage as defined in sub-section 17.1402 (Also see Section 17.0600)

As each unit will have a two-car attached garage and parking is available on the driveway in front of the garage, this standard is met.

The applicant is also proposing a small parking lot for the clubhouse and amenity area consisting of sixteen parking spaces.

Staff anticipates low level residential style lighting for the multi-family development. *It is recommended that lighting details be provided for any proposed lighting for staff review and approval*.

Staff recommends that landscaping be provided, particularly foundation plantings and within outlots and common areas of the multi-family development. As such, *staff recommends submittal of a Landscape Plan for staff review and approval*.

Engineering
Engineering Department recommendations are as follows:

- *All storm easements on the plat shall be revised to storm and access easements and shall be a minimum of thirty feet wide*.
- *The Private Drainage Easement on Lots 9-11, 15-17, 21, and 26 be a minimum of thirty feet, unless otherwise approved by the City Engineer*.
- *The 2' vertical and 15' horizontal setback from the 100-year elevations of the drainage pond elevations are required for the condo development easements*.
- *The note below shall be included on the plat*.

  BASEMENT RESTRICTION – GROUNDWATER

- Although all lots in the Subdivision have been reviewed and approved for development with single-family residential use in accordance with Wis. Stat. Ch. 236, some lots contain soil conditions that, due to the possible presence of groundwater near the surface, may require additional soil engineering and foundation design with regard to basement construction. It is recommended that a licensed professional engineer design a basement and foundation that will be suitable to withstand the various problems associated with saturated soil conditions on basement walls or floors or that other special measures be taken. Soil conditions should be subject to each owner's special investigation prior to construction and no specific representation is made herein.

- *A note shall be added to the plat stating, "Sump pumps shall be directed to a suitable location on the property and shall not discharge onto neighboring properties or directly into the City's storm sewers, sanitary sewers, or roadways.*"
- *Final grading, erosion control, utilities, and storm water management plan approval by the Engineering Department prior to issuance of a Building Permit*.

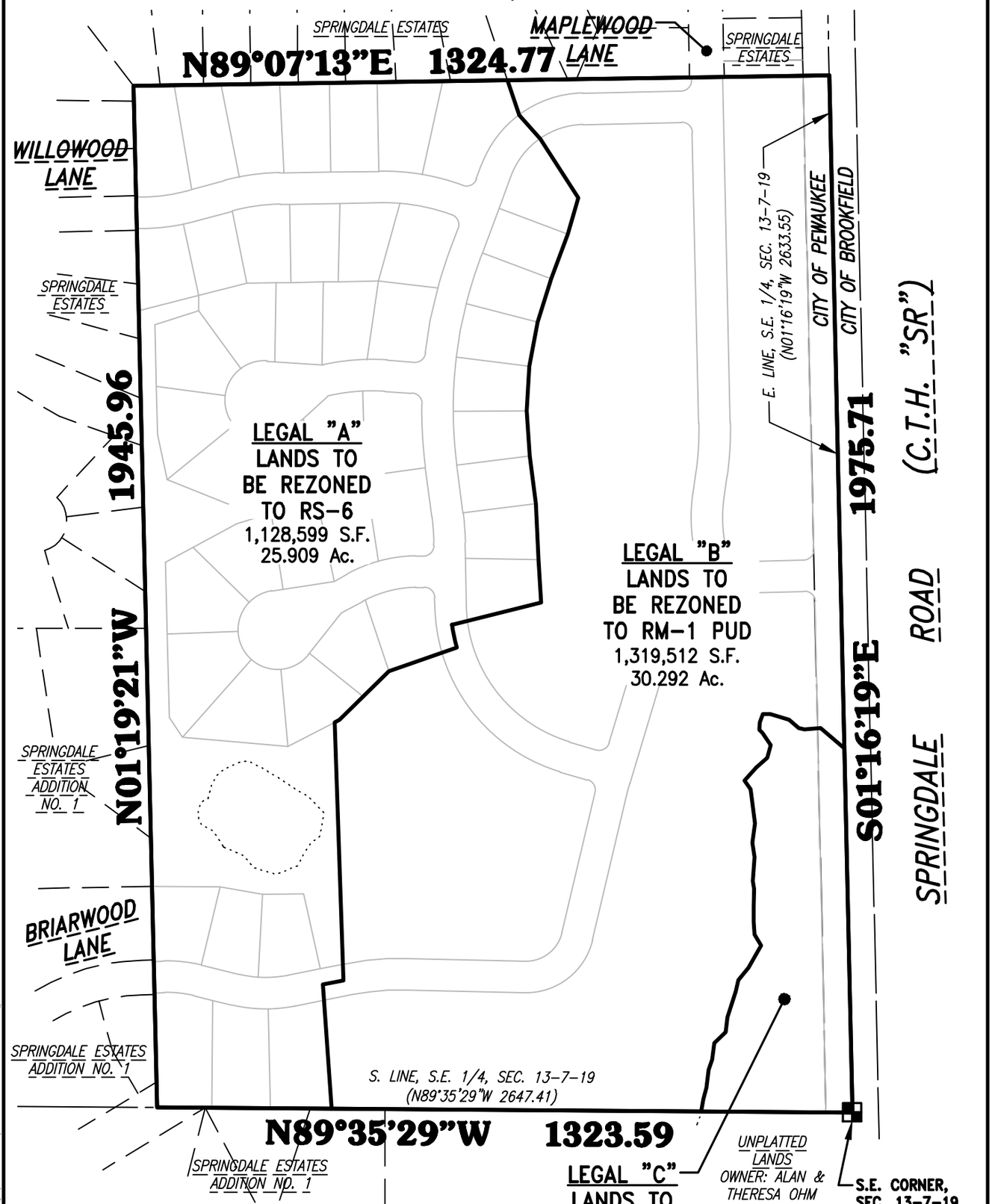
Signage
Multiple subdivision signs are proposed. *Signs shall be subject to Article 9 of the Zoning Code and staff review of Sign Permit Applications*.

Recommendation:

A motion to recommend approval of the Rezoning, Conditional Use Permit and Preliminary Plat and a motion to approve the Site & Building Plan Review Application, contingent upon approval of the Rezoning and CUP.

REZONING EXHIBIT "A"

ALL THAT PART OF THE NORTHEAST 1/4 AND SOUTHEAST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 13, TOWNSHIP 7 NORTH, RANGE 19 EAST, IN THE CITY OF PEWAUKEE, WAUKESHA COUNTY, WISCONSIN.



TRIO
DESIGN • LAND SURVEYING
CIVIL ENGINEERING

19035 W. Capitol Drive
Suite 200
Brookfield, WI 53045
Phone: (262) 790-1480
Fax: (262) 790-1481

WISCONSIN
GRADY L. GOSSER
S-2972
MENOMONEE FALLS, WI
LAND SURVEYOR

NORTH
SCALE:1"=250'
0 125 250 500

THIS EXHIBIT WAS PREPARED BY GRADY L. GOSSER, P.L.S. (S-2972)

DATE: 09/19/25

X:\2025\25-01-796 Esser Property - Pewaukee\Drawings\Survey\EXHIBITS\885DEX-REZONING.dwg

REZONING EXHIBIT “B”

LEGAL DESCRIPTION “A” (LANDS REZONED TO “RS-6”):

All that part of the Northeast 1/4 and Southeast 1/4 of the Southeast 1/4 of Section 13, Town 7 North, Range 19 East, In the City of Pewaukee, Waukesha County, Wisconsin, now being more particularly bounded and described as follows:

Commencing at the Southeast Corner of said Section 13; Thence North 89°35’29” West and along the South line of the said Southeast 1/4 Section, 991.39 feet to the place of beginning of lands hereinafter described:

Thence North 03°57’35” West, 237.30 feet to a point; Thence North 78°44’20” East, 39.99 feet to a point; Thence North 01°59’38” West, 491.69 feet to a point; Thence North 62°46’37” East, 10.43 feet to a point; Thence North 45°33’42” East, 62.91 feet to a point; Thence North 45°39’27” East, 68.78 feet to a point; Thence North 70°40’17” East, 136.49 feet to a point; Thence Northwesterly 44.20 feet along the arc of a curve, whose center lies to the Northeast, whose radius is 305.00 feet, whose central angle is 08°18’10”, and whose chord bears North 11°49’21” West, 44.16 feet to a point; Thence North 75°51’00” East, 175.21 feet to a point; Thence North 03°31’59” West, 81.34 feet to a point; Thence North 02°41’57” West, 107.45 feet to a point; Thence North 07°16’38” West, 91.41 feet to a point; Thence North 03°54’00” West, 85.73 feet to a point; Thence North 03°19’07” East, 85.59 feet to a point; Thence North 10°32’08” East, 85.59 feet to a point; Thence North 17°42’18” East, 86.19 feet to a point; Thence North 20°23’08” East, 91.00 feet to a point; Thence North 16°23’23” East, 71.75 feet to a point; Thence North 33°02’43” West, 134.34 feet to a point; Thence North 41°30’33” West, 60.31 feet to a point; Thence North 18°30’10” West, 69.96 feet to a point on the South line of “Springdale Estates” (A Subdivision Plat of Record); Thence South 89°07’13” West and along the said South line, 711.80 feet to a point; Thence South 01°19’21” East and along the East line of said “Springdale Estates” and the East line of “Springdale Estates Addition No. 1” (A Subdivision Plat of Record), 1945.96 feet to a point on the said South line of the said Southeast 1/4 Section; Thence South 89°35’29” East and along the said South line, 332.20 feet to the point of beginning of this description.

Said Parcel contains 1,128,599 Square Feet (or 25.9091 Acres) of land, more or less.

LEGAL DESCRIPTION “B” (LANDS REZONED TO “RM-1” “PUD”):

All that part of the Northeast 1/4 and Southeast 1/4 of the Southeast 1/4 of Section 13, Town 7 North, Range 19 East, In the City of Pewaukee, Waukesha County, Wisconsin, now being more particularly bounded and described as follows:

Commencing at the Southeast Corner of said Section 13; Thence North 89°35’29” West and along the South line of the said Southeast 1/4 Section, 287.54 feet to the place of beginning of lands hereinafter described:

Continuing thence North 89°35’29” West and along the said South line, 703.85 feet to a point; Thence North 03°57’35” West, 237.30 feet to a point; Thence North 78°44’20” East, 39.99 feet to a point; Thence North 01°59’38” West, 491.69 feet to a point; Thence North 62°46’37” East, 10.43 feet to a point; Thence North 45°33’42” East, 62.91 feet to a point; Thence North 45°39’27” East, 68.78 feet to a point; Thence North 70°40’17” East, 136.49 feet to a point; Thence Northwesterly 44.20 feet along the arc of a curve, whose center lies to the Northeast, whose radius is 305.00 feet, whose central angle is 08°18’10”, and whose chord bears North 11°49’21” West, 44.16 feet to a point; Thence North 75°51’00” East, 175.21 feet to a point; Thence North 03°31’59” West, 81.34 feet to a point; Thence North 02°41’57” West, 107.45 feet to a point; Thence North 07°16’38” West, 91.41 feet to a point; Thence North 03°54’00” West, 85.73 feet to a point; Thence North 03°19’07” East, 85.59 feet to a point; Thence North 10°32’08” East, 85.59 feet to a point; Thence North 17°42’18” East, 86.19 feet to a point; Thence North 20°23’08” East, 91.00 feet to a point; Thence North 16°23’23” East, 71.75 feet to a point; Thence North 33°02’43” West, 134.34 feet to a point; Thence North 41°30’33” West, 60.31 feet to a point; Thence North 18°30’10” West, 69.96 feet to a point on the South line of “Springdale Estates” (A Subdivision Plat of Record); Thence North 89°07’13” East and along the said South line, 612.97 feet to a point on the East line of the said Southeast 1/4 Section; Thence South 01°16’19” East and along the said East line, 1282.35 feet to a point; Thence North 49°09’02” West, 59.21 feet to a point; Thence South 84°46’38” West, 31.32 feet to a point; Thence North 75°40’03” West, 10.91 feet to a point; Thence North 49°29’30” West, 24.23 feet to a point; Thence North 73°16’54” West, 37.74 feet to a point; Thence North 87°44’23” West, 14.07 feet to a point; Thence South 20°0125” West, 17.28 feet to a point; Thence South 02°32’30” West, 13.75 feet to a point; Thence South 43°50’20” East, 9.03 feet to a point; Thence South 33°40’55” East, 27.59 feet to a point; Thence South 14°31’29” West, 25.14 feet to a point; Thence South 49°16’32” West, 28.01 feet to a point; Thence South 42°03’09” West, 33.74 feet to a point; Thence South 35°20’49” East, 20.70 feet to a point; Thence South 07°11’54” East, 65.48 feet to a point; Thence South 08°11’13” West, 36.64 feet to a point; Thence South 08°45’31” East, 27.61 feet to a point; Thence South 03°50’32” West, 45.86 feet to a point; Thence South 10°10’12” East, 15.93 feet to a point; Thence South 01°19’29” West, 31.87 feet to a point; Thence South 00°53’38” West, 30.35 feet to a point; Thence South 04°47’15” East, 24.25 feet to a point; Thence South 31°13’22” East, 23.83 feet to a point; Thence South 29°32’59” West, 49.50 feet to a point; Thence South 39°11’34” West, 29.96 feet to a point; Thence South 13°51’29” West, 22.13 feet to a point; Thence South 17°01’28” West, 51.87 feet to a point; Thence South 07°51’08” West, 28.38 feet to a point; Thence South 46°19’39” West, 29.72 feet to a point; Thence South 07°46’56” West, 31.67 feet to a point; Thence South 17°13’20” West, 20.54 feet to a point; Thence South 08°02’56” West, 34.79 feet to a point; Thence South 15°03’16” West, 22.28 feet to a point; Thence South 09°05’17” West, 23.50 feet to the point of beginning of this description.

Said Parcel contains 1,319,512 Square Feet (or 30.2918 Acres) of land, more or less.

LEGAL DESCRIPTION "C" (LANDS REZONED TO "LC"):

All that part of the Southeast 1/4 of the Southeast 1/4 of Section 13, Town 7 North, Range 19 East, In the City of Pewaukee, Waukesha County, Wisconsin, now being more particularly bounded and described as follows:

Commencing at the Southeast Corner of said Section 13; Said point being the place of beginning of lands hereinafter described:

Thence North 01°16'19" West and along the East line of the said Southeast 1/4 Section, 693.36 feet to a point; Thence North 49°09'02" West, 59.21 feet to a point; Thence South 84°46'38" West, 31.32 feet to a point; Thence North 75°40'03" West, 10.91 feet to a point; Thence North 49°29'30" West, 24.23 feet to a point; Thence North 73°16'54" West, 37.74 feet to a point; Thence North 87°44'23" West, 14.07 feet to a point; Thence South 20°0125" West, 17.28 feet to a point; Thence South 02°32'30" West, 13.75 feet to a point; Thence South 43°50'20" East, 9.03 feet to a point; Thence South 33°40'55" East, 27.59 feet to a point; Thence South 14°31'29" West, 25.14 feet to a point; Thence South 49°16'32" West, 28.01 feet to a point; Thence South 42°03'09" West, 33.74 feet to a point; Thence South 35°20'49" East, 20.70 feet to a point; Thence South 07°11'54" East, 65.48 feet to a point; Thence South 08°11'13" West, 36.64 feet to a point; Thence South 08°45'31" East, 27.61 feet to a point; Thence South 03°50'32" West, 45.86 feet to a point; Thence South 10°10'12" East, 15.93 feet to a point; Thence South 01°19'29" West, 31.87 feet to a point; Thence South 00°53'38" West, 30.35 feet to a point; Thence South 04°47'15" East, 24.25 feet to a point; Thence South 31°13'22" East, 23.83 feet to a point; Thence South 29°32'59" West, 49.50 feet to a point; Thence South 39°11'34" West, 29.96 feet to a point; Thence South 13°51'29" West, 22.13 feet to a point; Thence South 17°01'28" West, 51.87 feet to a point; Thence South 07°51'08" West, 28.38 feet to a point; Thence South 46°19'39" West, 29.72 feet to a point; Thence South 07°46'56" West, 31.67 feet to a point; Thence South 17°13'20" West, 20.54 feet to a point; Thence South 08°02'56" West, 34.79 feet to a point; Thence South 15°03'16" West, 22.28 feet to a point; Thence South 09°05'17" West, 23.50 feet to a point on the South line of the said Southeast 1/4 Section; Thence South 89°35'29" East and along the said South line, 287.54 feet to the point of beginning of this description.

Said Parcel contains 147,781 Square Feet (or 3.3926 Acres) of land, more or less.

Date: 9/19/25

Grady L. Gosser

Grady L. Gosser, P.L.S.
Professional Land Surveyor S-2972
TRIO ENGINEERING, LLC
19035 W. Capitol Drive, Suite 200
Brookfield, WI 53045
Phone: (262)790-1480

October 6, 2025

Nick Fuchs
Planner & Community Development Director
W240N3065 Pewaukee Road
Pewaukee, WI 53072

RE: Staff Comments – Preliminary Plat

Dear Mr. Fuchs,

Enclosed you will find our responses in bold to your comments dated October 3rd, 2025 regarding the development application submittal for the proposed Esser Property residential development in Pewaukee, WI.

General

1. Staff recommends that the rezoning include amending the zoning to LC Lowland Conservancy District for wetland areas, UC Upland Conservancy for wooded areas, and F-1 Floodplain District for designated floodplain areas of the site.
    - **We would prefer to not add F-1 and UC to the current rezoning requrest, but will do so if necessary. Note the following that supports the rezoning using Rm-1 PUD, Rs-6 and LC:**
        - **Current zooming of the land is a mixture of A-2, Rs-6 and LC.**
        - **The rezoning request shows all the F-1 within the proposed LC.**
        - **The areas that would be considered UC are entirely on condominium land.**

2. Please provide all information as required by Section 239-3C(2) including subs (o), (r), (s), (t), and (v).
    - **This information is now shown on the preliminary plat.**

3. Please also review Section 239-3D for required information. Related to sub (3) of this section, will any existing trees remain between Springdale Road and the east side of the two-family condominium buildings?
    - **The existing trees along Springdale Rd in this segment of right-of-way do not need to be removed for development. A tree survey has been completed to identify the trees on the site; this will be part of forthcoming grading and engineering plan submittals.**

4. Related to sub (6) of this section, will the single-family residential covenants include architectural standards? Please provide a draft copy if available.
    - **The subdivision will include architectural standards, which will be shared with staff when finalized.**

5. Staff recommends a 25-foot planting strip reservation adjacent to Springdale Road. See Section 239-8A(5) and Section 239-8B(1).
    - **The landscape plan provides for a >25' planting strip along the Springdale Rd frontage of the condominium area, satisfying this provision in code.**

6. Note Section 239-8A.(9) related to street naming.
    - **Noted.**

7. What is the minimum floor area proposed for the condominium buildings? See Section 340-4.14E(3).

Number of Bedrooms Per Dwelling Unit	Minimum Total Floor Area Per Dwelling Unit (square feet)	Minimum Total Floor Area per Structure (square feet)
2	1,600	4,800 per duplex
3 or more	1,800	9,800 per double duplex

8. Note the Preliminary Plat must show vision corner easements in compliance with Section 340-8.3 of the Zoning Code.
    - **The vision corner easements are shown on the plat and are per Sec. 340-8.3.**

9. Note that corner lots are required to meet the minimum street yard setback abutting both streets and any other yard must meet the side yard setback. See Section 340-11.5.
    - **The corner lot setbacks are now shown to meet Sec. 340-11.5.**

10. Is the building separation of 40 feet measured at the nearest point of each building? Are Buildings 15 and 16 in compliance?
    - **Yes, all condominium buildings are >40' apart at their closest point, including building 15-16.**

11. What is the net acreage of Lot 52? (not including wetland or environmental corridor areas)?
    - **The net acreage excluding the wetland and proposed upland PEC area is 5.955 acres.**

12. Staff recommend including one to two ADA accessible parking spaces in the parking lot for the clubhouse and amenity area.
    - **One ADA parking space is provided, as shown in the update.**

13. The Rm-1 District requires a 35-foot front/street setback. The CUP PUD option allows for a 30% reduction. This results in a minimum setback of 24.5 feet. A 20-foot minimum setback was utilized. Please revise accordingly.
    - **This has been revised to show a 24.5' front setback for the PUD.**

14. Is any lighting or landscaping proposed for the condominium portion of the development? If so, please provide those plans for review.
    - **Yes, a landscape plan has been prepared. A photometric plan can be provided with final engineering.**

15. Is any signage proposed? It is recommended to include a proposed location and sign details for Plan Commission review. See Section 340-9.5.
    - **Yes, two signs are proposed flanking the main Springdale Rd entrance, and then one sign per road entry from the west on the south side of each road, and in the outlot from the north.**

16. Staff recommends that the path within the condominium portion of the development be expanded to create a pedestrian connection to the clubhouse for all condominium buildings.
    - **The developer does not see a benefit to the proposed community to add or expand the trail system. The local roads are typically used by the community residents for walking. The two segments of trail proposed herein are situated within public access easements and allow for enjoyment of the open space.**

17. It is preferred that all natural resources and storm water management areas be placed within outlots. Easements may be provided within the condominium portion of the development.
    - **There is a wetland and storm water area located in OL 2, adjacent to the subdivision. The storm water areas on the condominium land will be situated within Storm Water Drainage Easements.**

18. The renderings should be consistent with the proposed architecture. It is recommended to provide color renderings for both the 2-unit and 4-unit buildings.
    - **These are being provided by Cornerstone.**

19. Are the two-unit building elevations accurate? The front elevation includes two garage doors; however, the site plan shows that garage doors for each unit will be on separate elevations.
    - **Yes, all of the elevations are accurate to the two-unit building orientations.**

20. Please see attached map for Engineering Department comments.
    - **Our responses are noted on the markup.**

21. Please be aware that the Engineering Department is also in the process of reviewing sewer capacity for this development.
    - **This property is in the existing sewer service area, and we note that staff is reviewing the sewer capacity calculations for the City.**

Please feel free to contact me with any questions, comments or to further discuss the plans.

Sincerely,

Josh Pudelko, M.S., P.E.
Trio Engineering

A COVENANT
REGARDING THE ISSUANCE OF A
CONDITIONAL USE PERMIT
BY THE
CITY OF PEWAUKEE

TAX KEY NUMBER(S) OR PARCEL(S) INVOLVED:

CONDITIONAL USE PERMIT: NO. CUP-25-10-1

PWC 0916997

Recording area

Name & Return Address

City of Pewaukee
W240N3065 Pewaukee Rd
Pewaukee, WI 53072

LEGAL DESCRIPTION:

E1/2 SE1/4 SEC 13 T7N R19E :: EX N 20 AC :: ALSO 5 FT STRIP :: R437/549 & R682/936 R1337/1139 & R2644/150 & DOC# 3346544

PERSON(S), AGENT(S) OR CORPORATION(S) PETITIONING FOR PERMIT:

Cornerstone Development/The Glen at Springdale

WHEREAS, It is understood by all parties to this covenant that Section 62.23 of WIS. Statutes prescribes the legal basis for the granting of a conditional use permit by a City and Chapter 17 of the City Codes and Ordinances provides for the issuance of such permits as well as the standards by which all such uses will be measured; and,

WHEREAS, The City Plan Commission has held a meeting on October 16, 2025; has reviewed the various elements of the petitioner's proposal; and has recommended that a Conditional Use Permit be granted to the above-named petitioner for the property/parcel identified above; and,

WHEREAS, The City Common Council held a public hearing meeting on November 3, 2025.

NOW, THEREFORE, let it be known that the City Common Council by its action on November 3, 2025 has, hereby, granted a Conditional Use Permit for the following use(s):

Developing a new residential neighborhood of single-family and condominium homes.

FURTHER, such approved use of the above designated parcel(s) are hereby allowed based on the following conditions being continually met:

1. The trail shall extend into the single-family Lots 34 through 36.
2. Lighting details shall be provided for any proposed lighting for staff review and approval.
3. A Landscape Plan shall be submitted for staff review and approval.
4. All storm easements on the plat shall be revised to storm and access easements and shall be a minimum of thirty feet wide.
5. The Private Drainage Easement on Lots 9-11, 15-17, 21, and 26 shall be a minimum of thirty feet, unless otherwise approved by the City Engineer.
6. The 2' vertical and 15' horizontal setback from the 100-year elevations of the drainage pond elevations are required for the condo development easements.
7. The note below shall be included on the plat.

   BASEMENT RESTRICTION – GROUNDWATER
   - Although all lots in the Subdivision have been reviewed and approved for development with single-family residential use in accordance with Wis. Stat. Ch. 236, some lots contain soil conditions that, due to the possible presence of groundwater near the surface, may require additional soil engineering and foundation design with regard to basement construction. It is recommended that a licensed professional engineer design a basement and foundation that will be suitable to withstand the various problems associated with saturated soil conditions on basement walls or floors or that other special measures be taken. Soil conditions should be subject to each owner's special investigation prior to construction and no specific representation is made herein.

8. A note shall be added to the plat stating "Sump pumps shall be directed to a suitable location on the property and shall not discharge onto neighboring properties or directly into the City's storm sewers, sanitary sewers, or roadways."
9. Final grading, erosion control, utilities, and storm water management plan approval by the Engineering Department prior to issuance of a Building Permit.
10. Signs shall be subject to Article 9 of the Zoning Code and staff review of Sign Permit Applications.

The parties hereto, namely the City of Pewaukee and the Equitable Owner of the property for which this conditional use has been sought, set their signatures or the signatures of their representatives below, thereby agreeing to the provisions and conditions set forth in this covenant.

_____ _____

Attest: Signature of equitable owner

_____

Date

_____ _____

Kelly Tarczewski
City Clerk

Steve Bierce
Mayor, City of Pewaukee

_____

Date

State of Wisconsin
County of Waukesha

Signed or attested before me on _____, 2025 by Steve Bierce, Mayor and Kelly Tarczewski, Clerk.

(Seal)

_____
Ami Hurd
My Commission expires _____

This instrument was drafted by Ami Hurd, Deputy Clerk

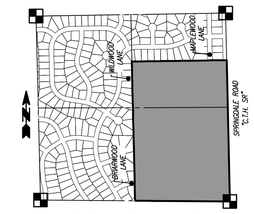
DRAFT

PRELIMINARY PLAT
OF
ESSER PROPERTY

BEING A SUBDIVISION OF A PART OF THE NORTHEAST 1/4 AND SOUTHEAST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 13, TOWNSHIP 7 NORTH, RANGE 19 EAST, IN THE CITY OF PEWAUKEE, WAUKESHA COUNTY, WISCONSIN.

SCALE: 1"=60'

0 30 60 120



LOCALITY MAP:
S.E. 1/4, SEC. 13, T. 7 N., R. 19 E.
SCALE: 1"=1000'

Proposed Zoning

- **Condominium Community Rm-1 PUD***
  - Lot Area = 0.5 ac
  - Lot Width = 120'
  - Setbacks:
    - **Front = 24.5' to building, 25' to garage (**)**
      **To front facing garage
    - Wetland = 25'
    - Side = 40' (*building-building), 25' side
    - Rear = 35'
  - 2.5 parking spaces/unit
- **Single Family Rs-6**
  - Lot Area = 12,500 sf
  - Lot Width = 90'
  - Setbacks:
    - Front = 30' -- Wetland = 25'
    - Side = 12'
    - Rear = 35'
- **Wetland LC**

DEVELOPMENT SUMMARY:

1. Subdivision contains approximately 57.33 Net Acres.
2. Subdivision contains 52 Lots and 2 Outlots.
3. All lots to be served by Public Sanitary Sewer and Watermain.
4. Public Streets to have Concrete Curb and Gutter, Metal Catch Basins, Underground Storm Sewer and Asphalt Pavement.
5. All lots to have Underground Telephone, Electric, Cable and Gas Service.
6. Proposed Single Family Community Zoning = "RS–6".
7. Proposed Condominium Community Zoning = "RM–1" (PUD)
8. Outlot 1 contains Open Space to be Owned and maintained by the Owners of all Lots within this Subdivision.
9. Outlot 2 contains a Wetland Conservancy Area, Stormwater Management Facilities and Open Space to be Owned and maintained by the Owners of all Lots within this Subdivision.
10. The Owners of all Lots within this Subdivision shall each own an equal undivided fractional interest in Outlots 1 and 2 of this Subdivision. Waukesha County shall not be liable for fees or special charges in the event they become the owner of any Lot or Outlot in the Subdivision by reason of tax delinquency.
11. Stormwater Management Facilities are located on Lots 49, 51 & 52 and Outlot 2 of this Subdivision. The Owners of all Lots within this Subdivision shall each be liable for an equal undivided fractional share of the cost to repair, maintain or restore said Stormwater Management Facilities. Said repairs, maintenance and restoration shall be performed by the Owners of all Lots within this Subdivision.
12. There shall be no direct vehicular ingress or egress to Springdale Road (C.T.H. "SR") from any Lot or Outlot within this Subdivision. It being expressly intended that this restriction shall constitute a restriction for the benefit of the public according to s.236.293 of the Wisconsin Statutes and shall be enforced by Waukesha County.
13. All existing structures onsite to be Razed when development takes place.
14. The subject site is in the Waukesha School District

WETLAND DELINEATION NOTE:

Wetland boundaries shown hereon were field delineated by RA Smith (Tina Myers) on July 20, 2021.

P.E.C. DELINEATION NOTE:

P.E.C. Boundaries shown hereon were field delineated by Heartland Ecological Group, Inc. in 2025.

FLOODPLAIN NOTE:

The area labeled Floodplain on this Plat is located in Zone "X" as designated on the Food Insurance Rate Map Number: 55133c0216H dated October 19, 2023. Zone "X" is defined as areas determined to be outside the 0.2% annual chance Floodplain.

HORIZONTAL DATUM PLANE:

All bearings are referenced to Grid North of the Wisconsin State Plane Coordinate System, South Zone (NAD–83/2011), in which the East line of the S.E. 1/4 of Section 13, Town 7 North, Range 19 East, bears North 01°16'19" West.

VERTICAL DATUM PLANE:

All elevations are referenced to the North American Vertical Datum of 1988 (12). Contours/Elevations shown on this Preliminary Plat are via a ground survey performed by Trio Engineering, LLC. and supplemented by Waukesha County records.

PRESERVATION RESTRICTIONS:

The Wetland Conservancy Areas, P.E.C. and Floodplain areas shown on this Preliminary Plat shall be subject to the following restrictions:

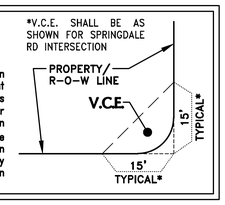
1. Grading, filling, and excavation shall be prohibited in said Preservation Area, except as may be required for Nature Walking Trails. Filling of Wetlands and Floodplain is subject to approval by the City of Pewaukee and the Department of Natural Resources.
2. Construction of structures within said Preservation Area shall be prohibited.
3. Removal or destruction of any vegetative cover, i.e., trees, shrubs, wildflowers, sedges, grasses, and the like, shall be prohibited with the exception of dead or diseased vegetation removal and noxious weeds as defined in the City municipality weed control ordinance, except as may be required for Nature Walking Trails.
4. Introduction of plant material not indigenous to the existing environment of the Preservation Area shall be prohibited in the Preservation Area.
5. Grazing by domesticated animals (e.g., horses, pigs, sheep and cows) shall be prohibited within said Preservation Area.
6. No dumping of solid or liquid waste or driving of motorized vehicles will be allowed within any Outlot or Open Space Area. Vegetative debris is also "solid waste".

VISION CORNER EASEMENT DETAIL: (V.C.E.)

PER SEC. 340–8.3 V.C.E. APPLIES TO:

All corner Lots are subject to a Vision Corner Easement as shown on this Plat in that "no obstructions such as structures, automobile parking, fences or vegetation shall be permitted between heights of 2 ½ feet and 7 feet above hte mean curb grades within the vision triangle. No access to any roadway shall be permitted within the Vision Corner Easement.

*V.C.E. SHALL BE AS SHOWN FOR SPRINGDALE RD INTERSECTION



LEGEND

●	INDICATES SOIL BORING LOCATION
W W	INDICATES EXISTING WATERMAIN
	INDICATES PROPOSED WATERMAIN
SAN	INDICATES EXISTING SANITARY SEWER
	INDICATES PROPOSED SANITARY SEWER
ST	INDICATES EXISTING STORM SEWER
	INDICATES PROPOSED STORM SEWER
800	INDICATES EXISTING CONTOUR

AGENCIES HAVING THE AUTHORITY TO OBJECT:

- State of Wisconsin, Department of Administration
- Waukesha County, Department of Parks and Land Use

APPROVING AUTHORITY:

- City of Pewaukee

SURVEYOR'S CERTIFICATE:

I hereby certify that this Preliminary Plat is a correct representative of all existing land divisions and features and that I have fully complied with the provisions of the Subdivision and Platting Code of the City of Pewaukee.

Date: 8/29/25
Revised: 10/03/25

S.E. CORNER SEC. 13–7–19
WIS. STATE PLANE COORD. SYSTEM – SOUTH ZONE NAD83(2011)
FND. CONC. MON. W/ BRASS CAP
N–391,865.81 E–2,453,276.39
ELEVATION = 825.72

WISCONSIN GRADY L. GOSSER S–2972 MENOMONEE FALLS, WI LAND SURVEYOR

Grady L. Gosser, P.L.S.
Professional Land Surveyor S–2972

WISCONSIN GRADY L. GOSSER S–2972 MENOMONEE FALLS, WI LAND SURVEYOR

DESIGN • LAND SURVEYING TRIO CIVIL ENGINEERING
4100 N. CALHOUN RD. SUITE 300
BROOKFIELD, WI 53005
PHONE: (262) 790-1480
FAX: (262) 790-1481
EMAIL: ggosser@trioeng.com

ENGINEER / SURVEYOR:
TRIO ENGINEERING, LLC
19035 W CAPITOL DRIVE, STE 200
BROOKFIELD, WISCONSIN 53045
PHONE: (262) 790–1480

DEVELOPER:
CORNERSTONE DEVELOPMENT
N63 W23849 MAIN ST.
SUSSEX, WI 53089
PHONE: (262) 932–4188

PROJECT: ESSER PROPERTY
CITY OF PEWAUKEE, WISCONSIN
BY: CORNERSTONE DEVELOPMENT
N63 W23849 MAIN ST.
SUSSEX, WI 53089

REVISION HISTORY

DATE	DESCRIPTION
8/29/25	PRELIMINARY PLAN
10/03/25	PER CITY REVIEW

DATE: OCTOBER 3, 2025

JOB NUMBER: 25-001-796-01

DESCRIPTION: PRELIMINARY PLAT

SHEET 1 OF 1

X:\2025\25-01-796 ESSER PROPERTY – PEWAUKEE\DRAWINGS\SURVEY\PLATS\150PRPP01.DWG

PRELIMINARY PLAT
OF
ESSER PROPERTY

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    - Rear = 35'
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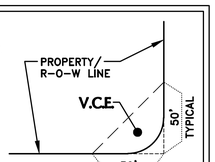
VISION CORNER EASEMENT DETAIL: (V.C.E.)

V.C.E. APPLIES TO:

All corner Lots are subject to a Vision Corner Easement as shown on this Plat in that the height of all plantings, berms, fences, signs or other structures within the Vision Corner Easement is limited to 24 inches above the elevation of the center of the intersection. No access to any roadway shall be permitted within the Vision Corner Easement.



LEGEND

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	INDICATES PROPOSED WATERMAIN
SAN	INDICATES EXISTING SANITARY SEWER
	INDICATES PROPOSED SANITARY SEWER
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APPROVING AUTHORITY:

- City of Pewaukee

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Date: 8/29/25

S.E. CORNER, SEC. 13-7-19
WIS. STATE PLANE COORD. SYSTEM – SOUTH ZONE NAD83(2011)
FND. CONC. MON. W/ BRASS CAP
N-391,865.81 E-2,453,276.39
ELEVATION = 825.72

WISCONSIN — GRADY L. GOSSER S-2972 MENOMONEE FALLS, WI — LAND SURVEYOR

Grady L. Gosser
Grady L. Gosser, P.L.S.
Professional Land Surveyor S-2972

WISCONSIN — GRADY L. GOSSER S-2972 MENOMONEE FALLS, WI — LAND SURVEYOR

TRIO — DESIGN • LAND SURVEYING • CIVIL ENGINEERING
4100 N. CALHOUN RD. SUITE 300
BROOKFIELD, WI 53005
PHONE: (262) 790-1480
FAX: (262) 790-1481
EMAIL: ggosser@trioeng.com

ENGINEER / SURVEYOR:

TRIO ENGINEERING, LLC
4100 N. CALHOUN ROAD, STE 300
BROOKFIELD, WISCONSIN 53005
PHONE: (262) 790-1480

DEVELOPER:

CORNERSTONE DEVELOPMENT
N63 W23849 MAIN ST.
SUSSEX, WI 53089
PHONE: (262) 932-4188

Indicates comment by City staff dated 9/30/25

INDICATES RESPONSE BY TRIO AND DEVELOPER DATED 10/3/2025

PROJECT: ESSER PROPERTY
CITY OF PEWAUKEE, WISCONSIN
BY: CORNERSTONE DEVELOPMENT
N63 W23849 MAIN ST.
SUSSEX, WI 53089

REVISION HISTORY	
DATE	DESCRIPTION

DATE: AUGUST 29, 2025

JOB NUMBER: 25-001-796-01

DESCRIPTION: PRELIMINARY PLAT

SHEET 1 OF 1

This must be an outlot
30' WIDE OUTLOT PROVIDED
THIS STORM SEWER END SECTION IS TO COLLECT RUNOFF FROM THE NEIGHBORING LOT. THE NEIGHBOR LEFT THEIR GRADE ~2' BELOW THE ROAD, HENCE THE NEED FOR THIS STORM PIPE TO COLLECT RUNOFF - IT CANNOT DRAIN TO THE ROAD.
Storm/ponds in easement when in condo land. Min 15' from single family lot and from buildings/sidewalks. (typ)
Eliminate end section and let water run over curb to be collected in storm sewer?
A STORM WATER EASEMENT IS PROVIDED. ALL STORM AND 100-YR PONDING HAS >15' SEPARATION AS REQUESTED.
must be a structure behind curb. (typ.)
REVISED
can't create a swale or pond water on adjacent lot where one doesn't exist today. Move swale entirely on the new development (typ)
Outlet for extent of backyard swale
THE DEVELOPER AND HOME BUILDERS VERY STRONGLY NEED TO KEEP THIS AS A 20' WIDE PRIVATE DRAINAGE EASEMENT. A SLIVER OF OUTLOT IS NOT PRACTICABLE HERE
- IT RESTRICTS THE BUILDING ENVELOPE AND WOULD RESULT IN AN UNDESIRABLE NARROW OUTLOT IN A BACKYARD AREA.
storm outlet above the 10 year water level and preferably above the 100 year water level. (typ)
REVISED TO THE EXTENT PRACTICABLE. THE EXISTING GRADE ALONG SPRINGDALE RD. DICTATES THE STORM SEWER DEPTH.
OUR PLAN RESPECTS THE EXISTING DRAINAGE PATTERN, ENSURING UNINTERRUPTED DRAINAGE FROM THE ADJACENT LOT. NO SWALE OR PONDING IS CREATED ON THE NEIGHBORING LOT.
Shift storm sewer to be in oulot by minimum15' from lot lot line. (typ)
THE OUTLOT HAS BEEN WIDENED A FEW EXTRA FEET ALONG THIS PERIMETER. THE STORM SEWER IS SHOWN AT 13' OFF THE LOT LINE. THIS WILL HELP PRESERVE EXISTING TREES WHILE PROVIDING ADEQUATE SPACE FOR PIPE MAINTENANCE.
Storm facility must be entirely in outlot. TOB must not be on private lots. also must be 2' lower than lowest exposed building elevation and a minimum of 15' from buildings (typ)
THE OUTLOT AND LOT CONFIGURATIONS HAVE BEEN REVISED TO KEEP THE STORM FACILITY ENTIRELY IN OUTLOT. THE GRADES ARE >2' LOWER THAN ADJACENT BUILDING ELEVATIONS AND >15' FROM BUILDINGS.
Ensure separation. No landscaping in easement. will need to address any improvements that are contained within easements (existing & proposed) (typ)
NOTED - THIS WILL BE VERIFIED WITH FINAL LANDSCAPE PLAN
ADA cross walks will be required. (typ)
PROVIDED
Trail must have access easement over entire length.
A 10' WIDE PUBLIC ACCESS EASEMENT IS PROVIDED OVER THE TRAIL.
THIS WETLAND POCKET FUNCTIONS AS A DRY POND IN THE EXISTING AND PROPOSED CONDITION. THE LOW AREA AT THE PIPE END SECTIONS ILLUSTRATES HOW OUR DEVELOPMENT WILL DRAIN THIS DRY DETENTION AREA.
This will need some explanation.
THE DEVELOPER AND HOME BUILDERS DO NOT SEE A NEED OR BENEFIT TO EXTENDING TRAIL HERE
Add Trail to project limits to the west
Concerns with cover and possible tailwater
MINIMAL COVER WILL BE MAINTAINED OVER THE OUTLET PIPE

Paul Farrow
County Executive

Dale R. Shaver
Director

Waukesha County

Department of Parks and Land Use

TO:	State of Wisconsin–Department of Administration (Plat Review)
NOTICE OF:	Conditional Certification of No Objection to Preliminary Plat
DATE OF REVIEW:	October 10, 2025
RE:	Subdivision Plat known as: **The Glen at Springdale** (formerly known as Esser Property) **File No: 2106**
LOCATION:	Part of the E 1/2 of the SE 1/4 Section 13, Township 7 North, Range 19 East, City of Pewaukee.
SUBMITTED BY:	State of Wisconsin-Department of Administration (Plat Review)
SURVEYOR:	Grady L Gosser Trio Engineering LLC 4100 N. Calhoun Road, Suite 300 Brookfield, Wisconsin 53005
DATE RECEIVED:	September 22, 2025
DATE OF PLAT:	August 29, 2025
SUBDIVIDER:	Cornerstone Development N63 W2349 Main Street Sussex, Wisconsin 53089

REMARKS: Conditional Certification of No Objection to this Preliminary Plat is based on the following conditions being satisfied prior to submittal of a revised Preliminary Plat or a Final Plat:

1. All conditions of the enclosed Waukesha County Department of Public Works letter dated October 6th, 2025, shall be complied with including construction of Type A intersections, providing vision corner easements along CTH S.R. and Briarwood Lane, and providing a drainage plan.

2. Please provide the Waukesha County Planning and Zoning Division with the wetland delineation report completed by RA Smith on July 20, 2021 and the Primary Environmental Corridor delineation report completed by Heartland Ecological Group, Inc. This ensures the Waukesha County GIS map is kept up to date.

3. The Zone X or 0.2% Chance Floodplain on Sheet 1 is mis-identified as 100 year floodplain line. Unless the city requires the preservation of the 0.2% or 500 year floodplain, we recommend that the linework be removed from the plat, or at minimum, that the floodplain line be re-labeled as 0.2% Chance Floodplain or 500 year floodplain.

   We recommend that the second sentence of the Floodplain Note also be modified, as the note indicates that the Zone X areas are outside of the 0.2% floodplain, whereas FEMA mapping indicates that the Zone X area is indicative of the 0.2% floodplain.

4. All easements, such as proposed or existing drainage ways, access, sanitary sewer and utilities shall be shown on the final plat. Any related recorded documents numbers for existing easements shall also be noted on the plat.

5. Documentation must be presented to Waukesha County Planning and Zoning Division staff confirming that, as required by Section NR 110.08(4) of the Wisconsin Administrative Code, the Southeastern Wisconsin Regional Planning Commission has reviewed and commented on the proposed sanitary sewer extension which will be needed to serve this development.

6. A letter from the city indicating that they are willing to extend sewer to the subdivision must be furnished to the Waukesha County Planning & Zoning Division.

7. In accordance with Chapter 236 of the Wisconsin Statues, signature certificates must be added to the Final Plat. If there is a mortgagee holder, please ensure the signatures are added to the Final Plat.

In addition, we recommend the following:

8. We recommend constructing sidewalks on at least one side of the streets in accordance with "SEWRPC's Recommendations for Provision of Sidewalks in Areas of Existing or Planned Urban Development".

9. According to the soil survey of Milwaukee and Waukesha Counties, lots in this subdivision contain soils that may be indicative of seasonal high groundwater conditions. There are extensive areas of hydric soils (seasonal high groundwater estimated to be one foot or less from the ground surface). We recommend that the City require a soil analysis for all lots within the development and ensure that basement floor elevations will be above seasonal high groundwater conditions. Waukesha County recommends that basements be placed at least one (1) ft. above the estimated seasonal high groundwater elevation. Minimum basement floor elevations should be identified on a Master Grading Plan or Final Plat for any lots with limiting factors. Unless minimum basement floor elevations are provided on the Final Plat, it is recommended the City of Pewaukee require a note, similar to the enclosed, be placed on the face of the Final Plat, indicating these lots may contain soils that are unsuitable for conventional basement construction due to the presence of seasonal high groundwater and special construction methods may be required.

BASEMENT RESTRICTION – GROUNDWATER

Although all lots in the Subdivision have been reviewed and approved for development with single-family residential use in accordance with Wis. Stat. Ch. 236, some lots contain soil conditions that, due to the possible presence of groundwater near the surface, may require additional soil engineering and foundation design with regard to basement construction. It is recommended that a licensed professional engineer design a basement and foundation that will be suitable to withstand the various problems associated with saturated soil conditions on basement walls or floors or that other special measures be taken. Soil conditions should be subject to each owner's special investigation prior to construction and no specific representation is made herein.

10. We recommend that the developer consult with the property owner regarding the location and function of any drain tile that may be present on the property and how it may impact the development.

11. If there are existing wells within 50 ft. of a septic or stormwater facility, please identify them on the Final Plat. If there are any existing wells or septic systems on the property, please provide abandonment reports to the Waukesha County Environmental Health Division.

12. The Waukesha County GIS Water Features layer indicates a possible intermittent unnamed waterway/ditch traversing the east side of the property. If a navigability determination has been made, please provide Waukesha County with the documentation. We recommend that the north to south drainage pattern along this potential intermittent waterway be accounted for in the stormwater management design.

13. We recommend that a Master Grading Plan be developed to ensure that basements achieve an adequate separation from estimated seasonal high groundwater.

14. We recommend that Vision Corner Easements be added to all internal intersections. Please consult with City staff regarding the dimensions of the corners.

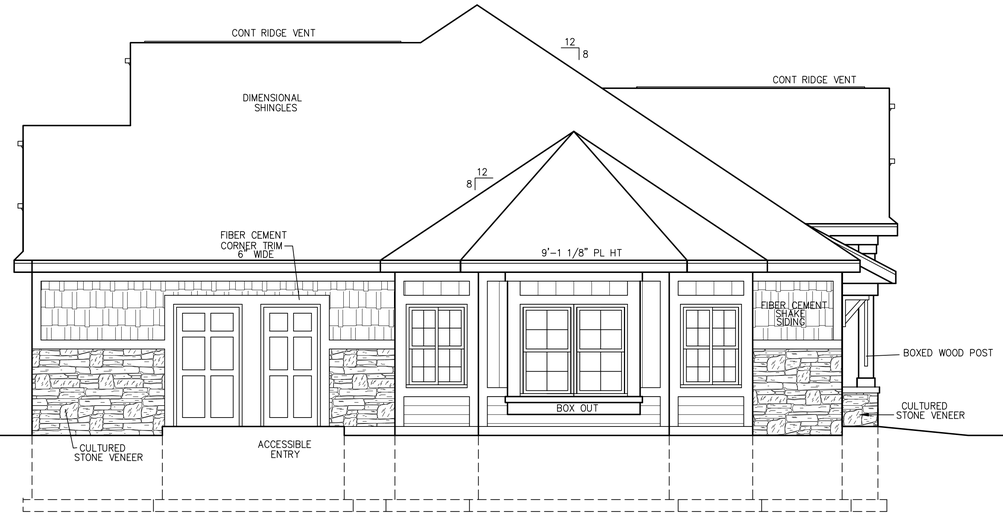
SIGNED: _____

Jason Fruth
Planning and Zoning Manager

For information regarding this review, please contact Emily Goodman at Egoodman@waukeshacounty.gov or 262.896.8300.

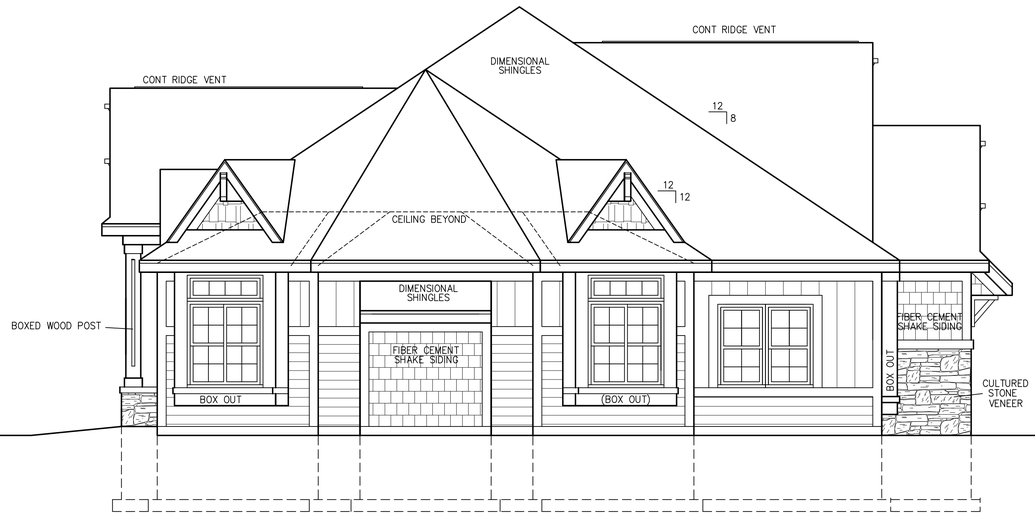
Cc via email: City of Pewaukee Clerk, hurd@pewaukee.wi.us (*e-mail*)
City of Pewaukee Planner, fuchs@pewaukee.wi.us (*e-mail*)
Grady Grosser, Surveyor, ggosser@trioeng.com (*e-mail*)
John Wahlen, Developer, jw@cornerstonedevelopment.com(*e-mail*)
We Energies – Plat Review, co-subdivisionsgroup@we-energies.com, Nicole.warwick@we-energies.com, travis.kluewer@we-energies.com (*e-mail*)
AT&T – Plat Review, jo2376@att.com (*e-mail*)
CenturyLink Plat Review, james.winter@Brightspeed.com (*e-mail*)
Joel Dietl, SEWRPC, joel.dietl@sewrpc.org (*e-mail*)
File

N:\PRKANDLU\Subdivision Files\PLATS\Cities\Pewaukee\2106 The Glen at Springdale (Esser Property)



LEFT ELEVATION

SCALE: 1/4" = 1'-0"



RIGHT ELEVATION

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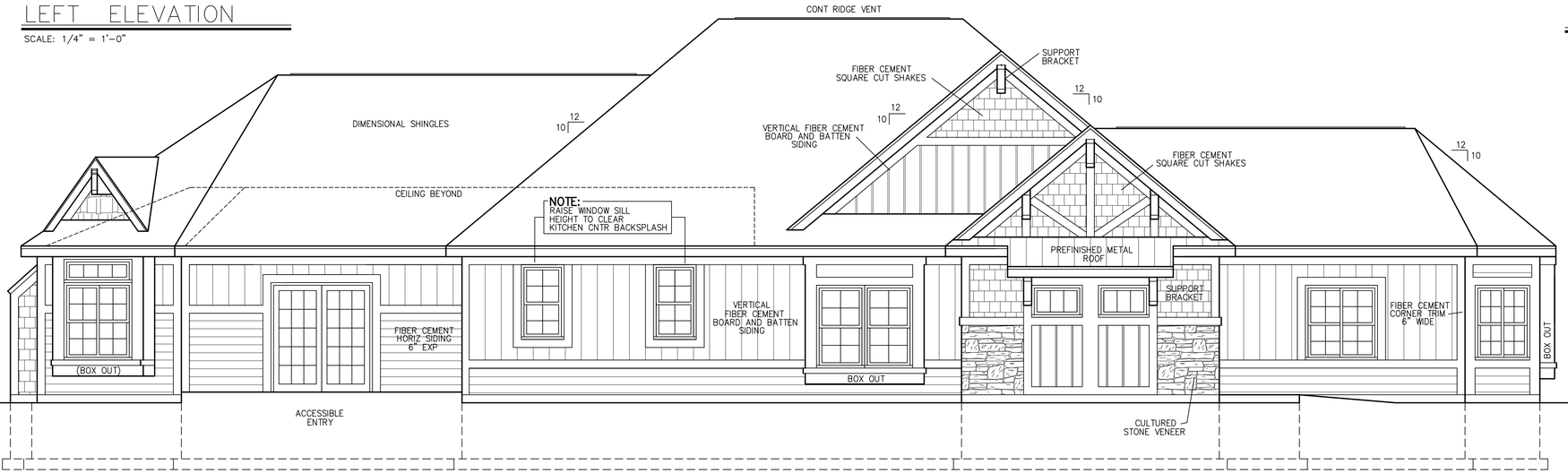
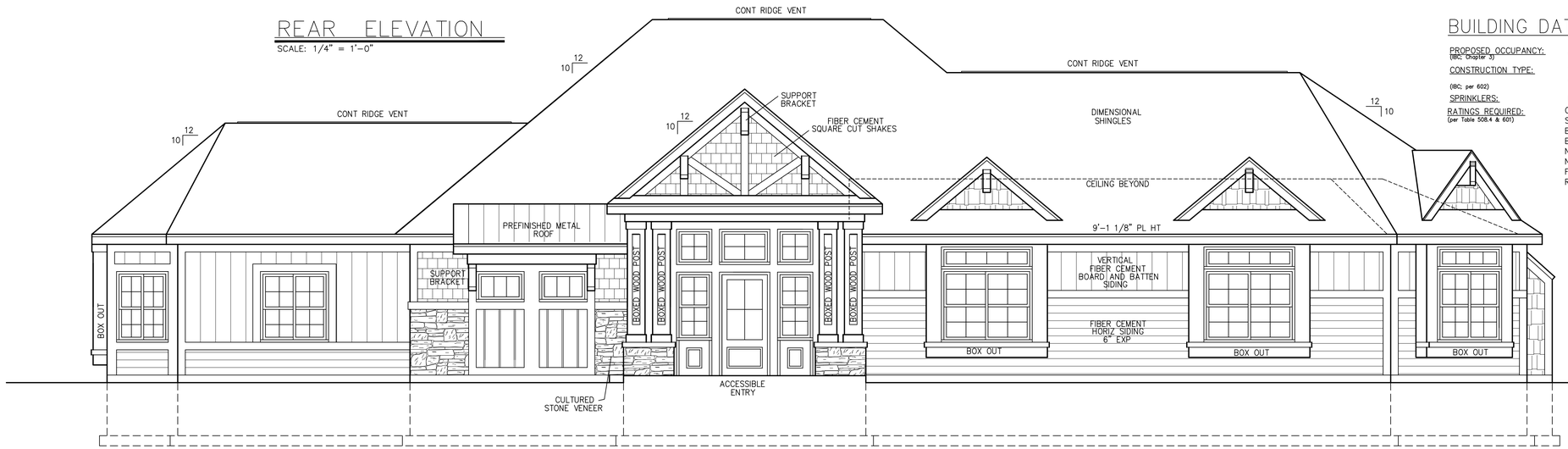


04-22-2024

REAR ELEVATION

SCALE: 1/4" = 1'-0"



FRONT ELEVATION

SCALE: 1/4" = 1'-0"

BUILDING DATA :

2015 IBC WITH WISCONSIN MODIFICATIONS

PROPOSED OCCUPANCY: (IBC, Chapter 3)	GROUP A2 – ASSEMBLY
CONSTRUCTION TYPE: (IBC, per 602)	TYPE VB ONE STORY
SPRINKLERS:	NON-SPRINKLERED
RATINGS REQUIRED: (per Table 508.4 & 601)	

OCCUPANCY SEPARATION	none per IBC 508.3
STRUCTURAL FRAMING	0 HOUR RATING
BEARING WALL EXTERIOR	0 HOUR RATING
BEARING WALL INTERIOR	0 HOUR RATING
NON BEARING EXTERIOR (≥30')	0 HOUR RATING
NON BEARING INTERIOR	0 HOUR RATING
FLOOR CONSTRUCTION	0 HOUR RATING
ROOF CONSTRUCTION	0 HOUR RATING

BUILDING VOLUME

48,538 CUBIC FEET

SHEET INDEX

A1 – EXTERIOR ELEVATIONS
A2 – FOUNDATION PLAN
A3 – FLOOR PLAN
A4 – SECTION – ROOF PLAN
E1 – ELECTRICAL PLAN

TDI ASSOCIATES, INC.
ARCHITECTS, PLANNERS

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Sheet Title

CLUBHOUSE ELEVATIONS

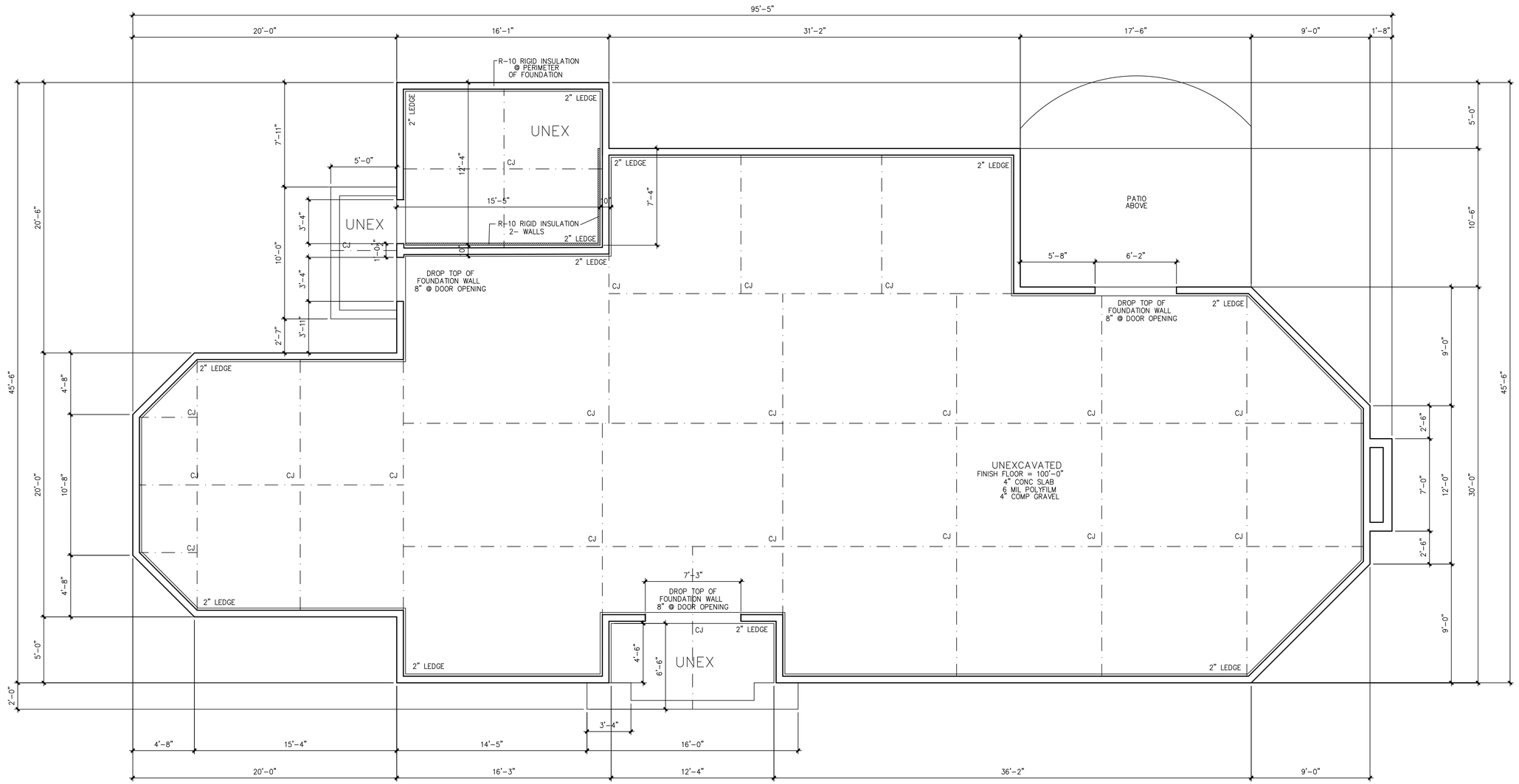
Revisions

REVISION		
	1	26 JAN, 2023 17 APRIL, 2024

Issued Date:	
Date:	28 NOV, 2022
Job NO.:	22-127
Drawn By:	LS

Sheet No.

A1



FOUNDATION PLAN

SCALE: 1/4" = 1'-0"

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Sheet Title
CLUBHOUSE FOUNDATION

Revisions

REVISION	△	26 JAN, 2023 17 APRIL, 2024

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Date: 28 NOV, 2022

Job NO.: 22-127

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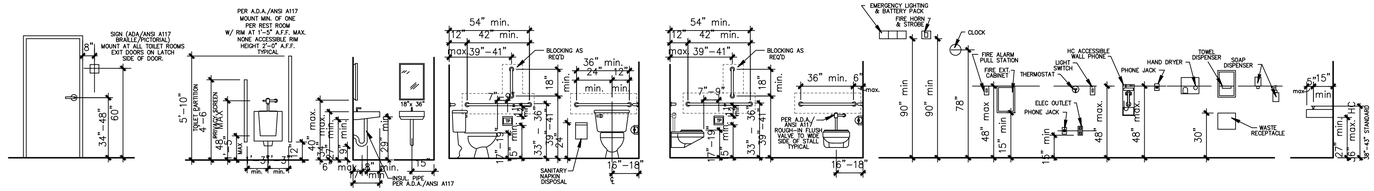
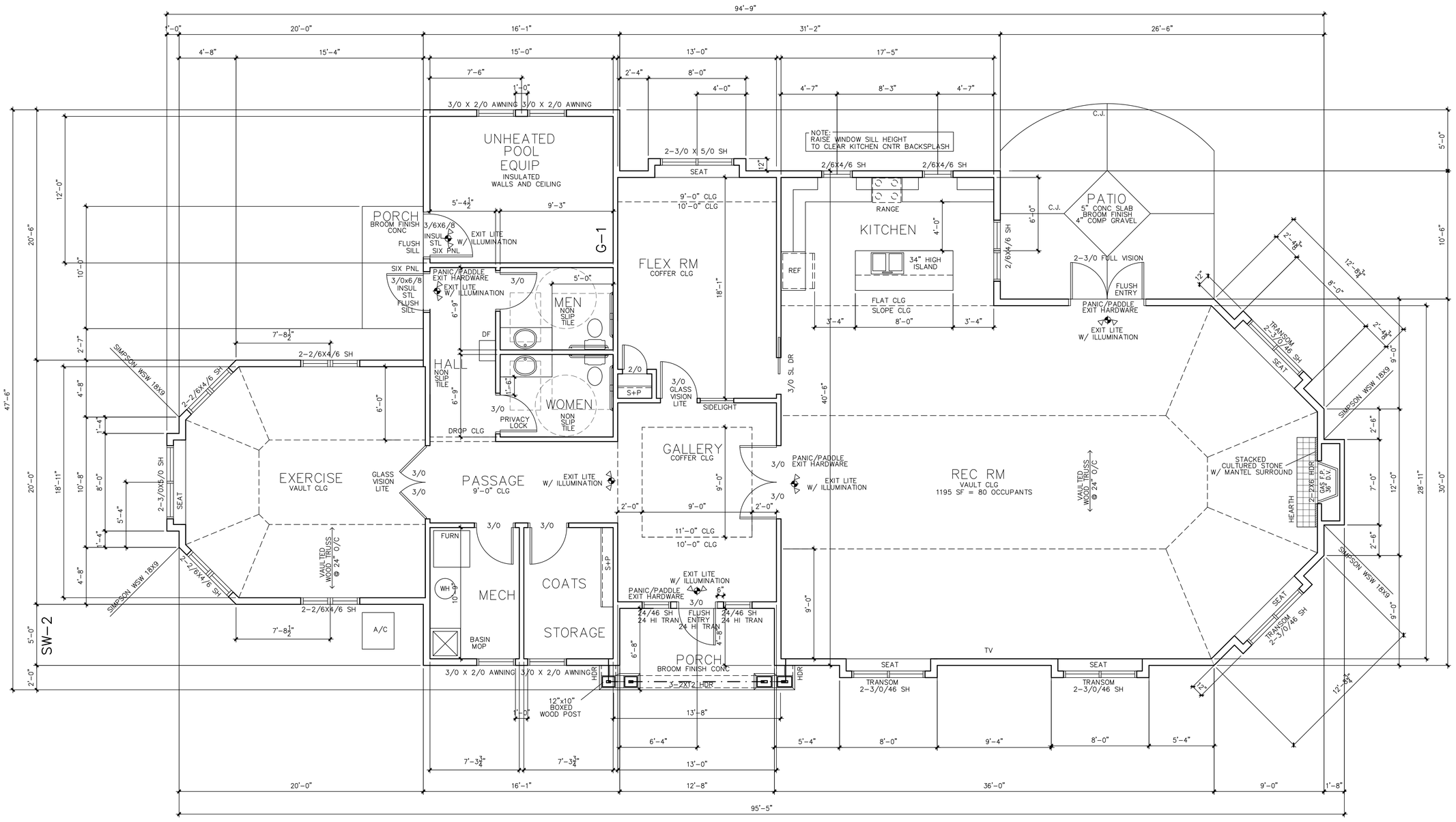
Sheet No.
A2



STANDARD MOUNTING HEIGHTS

1/4" = 1'-0"

YR-2003



HEADER SCHEDULE

SPANS LESS THAN – 3'-6" = 2-2X8
4'-0" MAX SPAN = 2-2X10
6'-6" MAX SPAN = 3-2X12

TOILET RM FINISHES

CEILING : 5/8" MR DRYWALL
WALLS : 1/2" MR DRYWALL
BASE : 4" TILE BASE
FLOOR : NON SLIP HARD TILE

FLOOR PLAN

SCALE: 1/4" = 1'-0" 3028 SF

DOOR NOTES:

EXTERIOR DOORS: INSULATED
SWEEPSTRIP
WEATHERSTRIPED
LOCK
CLOSERS
SAFETY GLAZING – DOORS AND SIDELITES

ALL DOORS : LEVER HARDWARE– TYPICAL

OCCUPANT LOAD

ASSEMBLY = 1195 SF / 15 SF = 80
BUSINESS = 1452 SF / 100 SF = 15
STORAGE = 381 SF / 300 SF = 2

TOTAL 3028 SF 97 OCCUPANTS

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Sheet Title
CLUBHOUSE
FLOOR PLAN

Revisions
REVISION 1 26 JAN, 2023
17 APRIL, 2024

Issued Date:
Date: 28 NOV, 2022
Job NO.: 22-127
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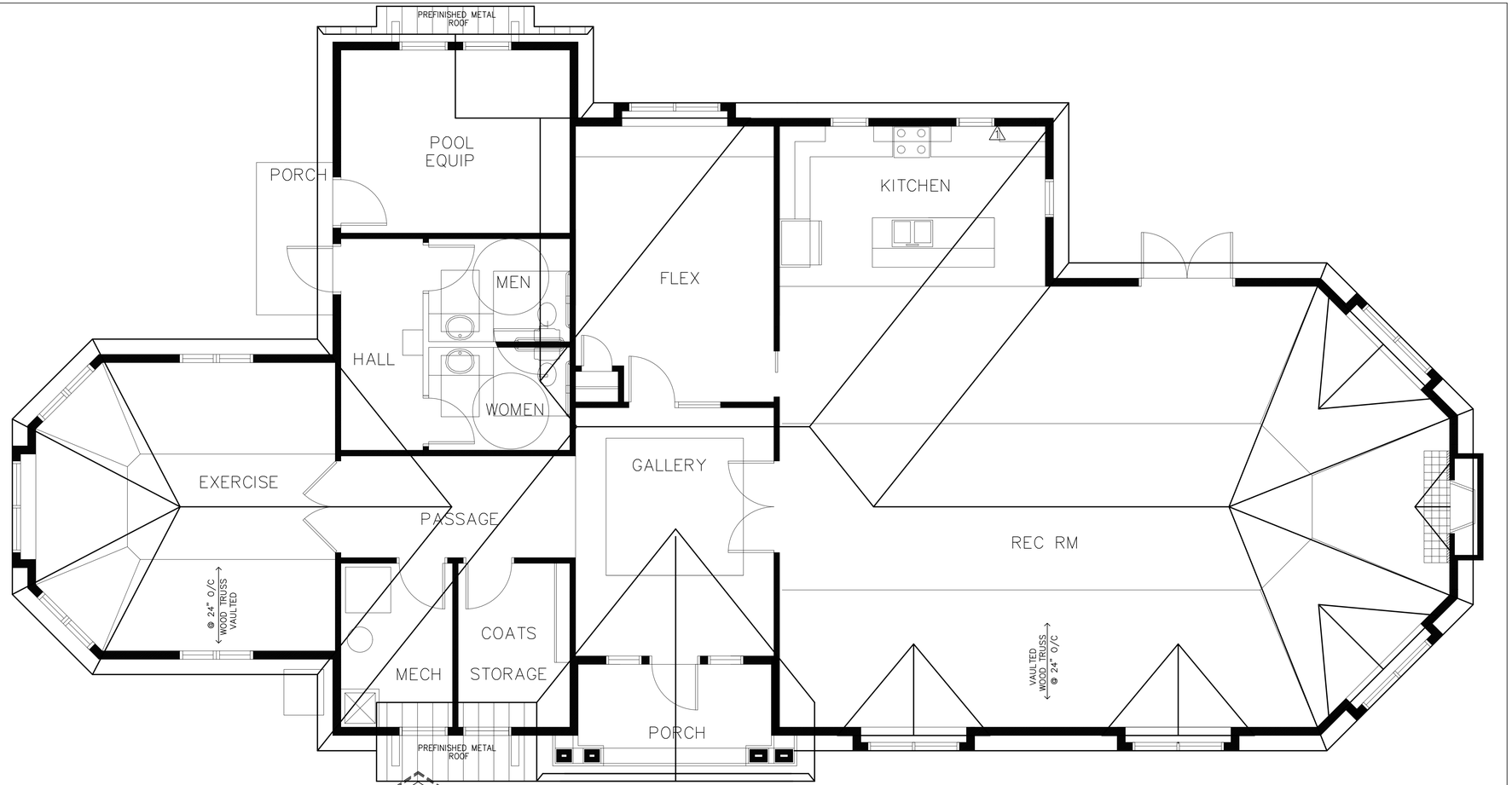
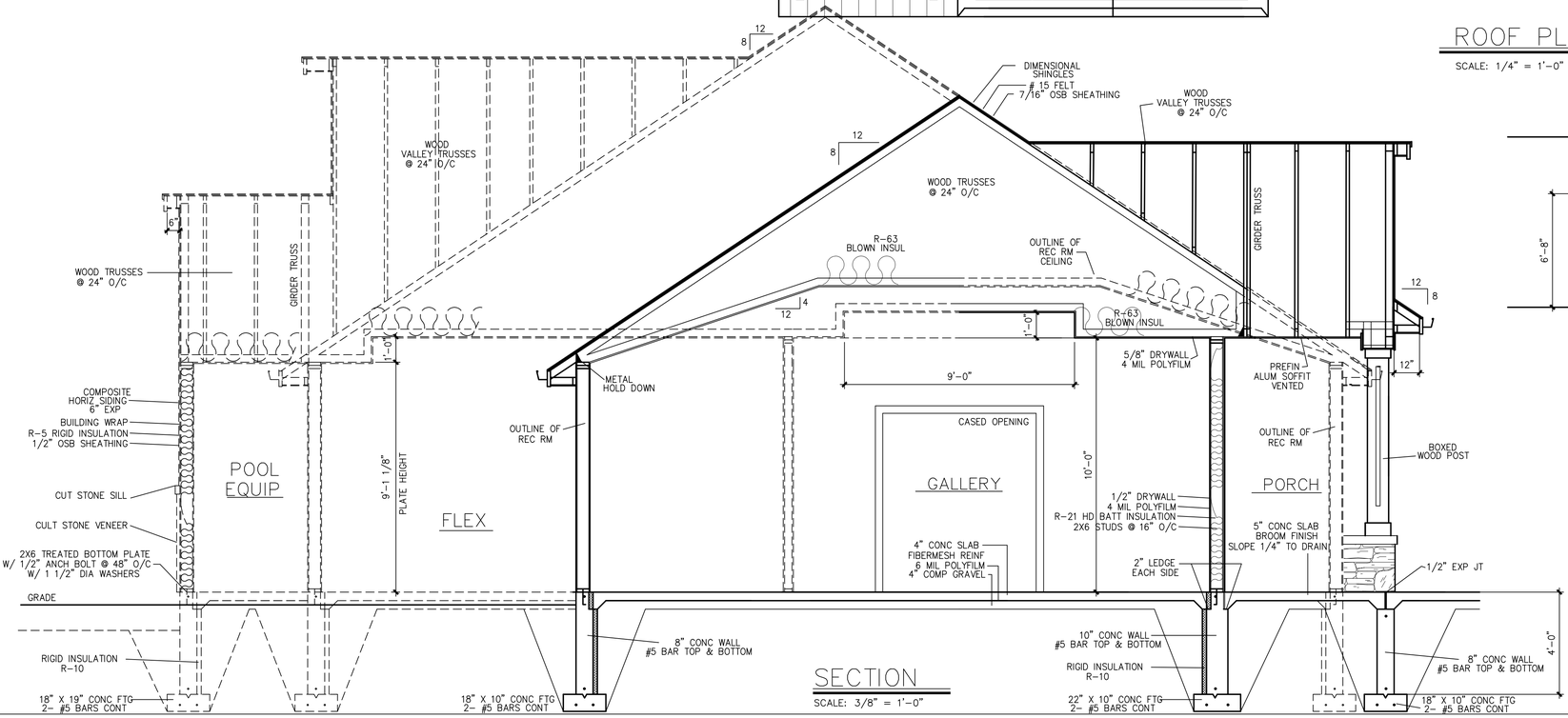
Sheet No.
A3



ROOF PLAN

SCALE: 1/4" = 1'-0"



SECTION

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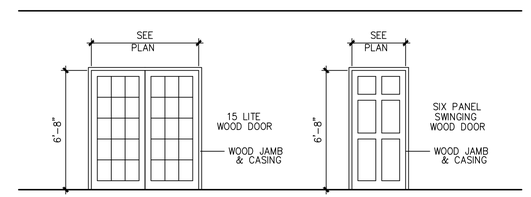

DOOR TYPES

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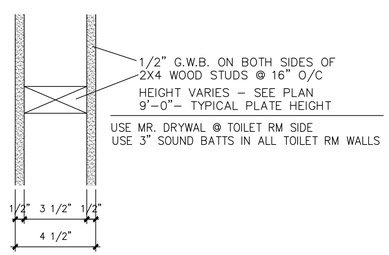

WALL TYPE

1/4"=1'-0"

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Sheet Title

CLUBHOUSE
SECTION
ROOF PLAN

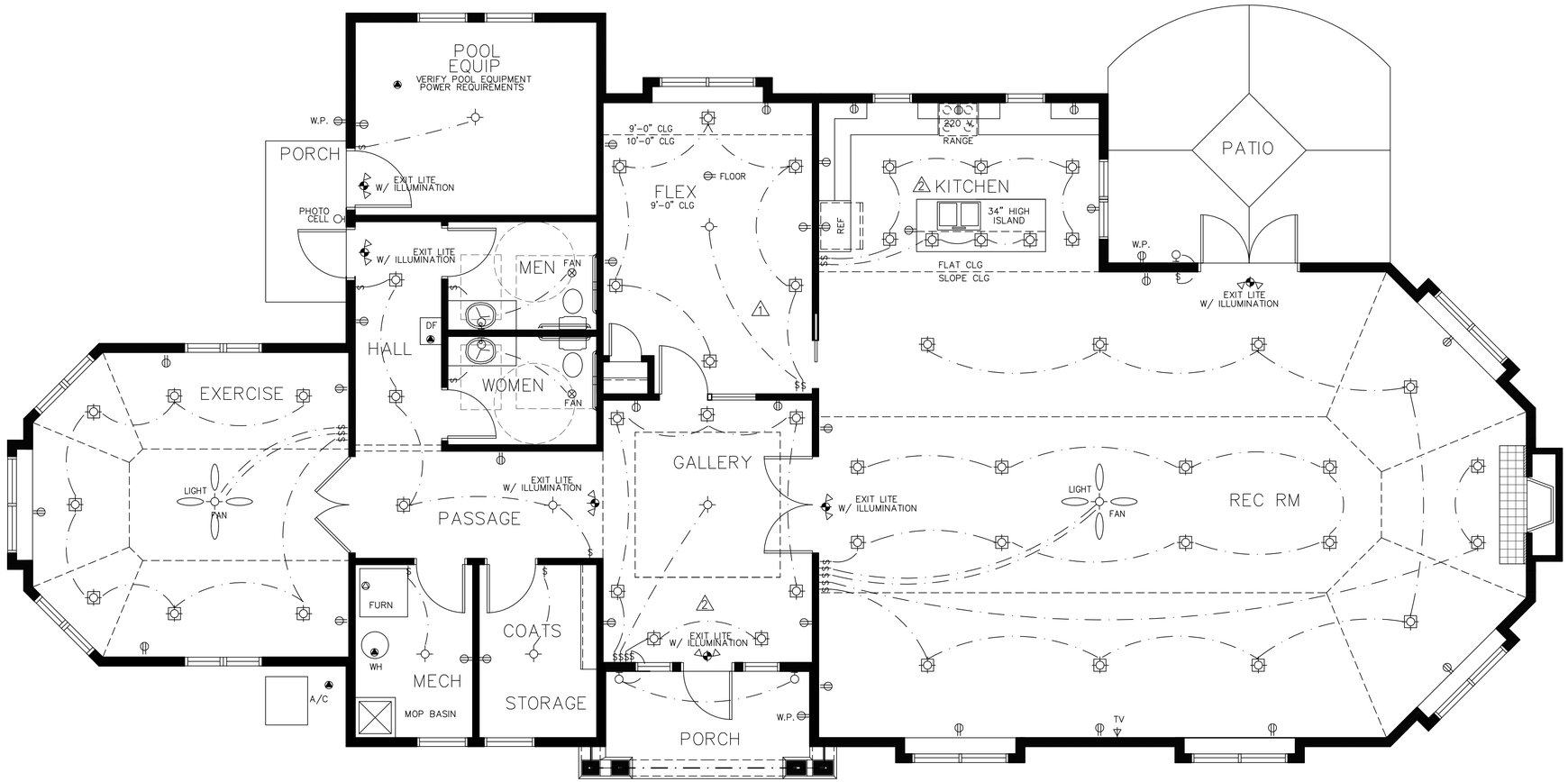
Revisions

REVISION	△	26 JAN, 2023 17 APRIL, 2024

Issued Date:	
Date:	28 NOV, 2022
Job NO.:	22-127
Drawn By:	LS

Sheet No.

A4



FLOOR PLAN

SCALE: 1/4" = 1'-0"

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Sheet Title
CLUBHOUSE
LIGHTING/POWER

Revisions

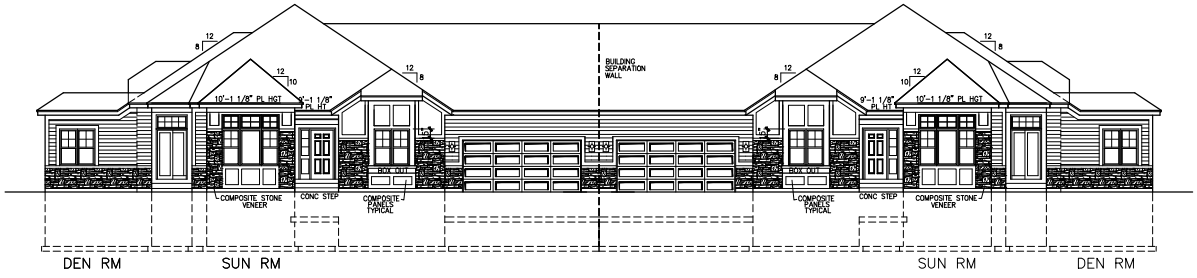
REVISION	
1	26 JAN, 2023
1	17 APRIL, 2024

Issued Date:	
Date:	28 NOV, 2022
Job NO.:	22-127
Drawn By:	LS

Sheet No.

E1

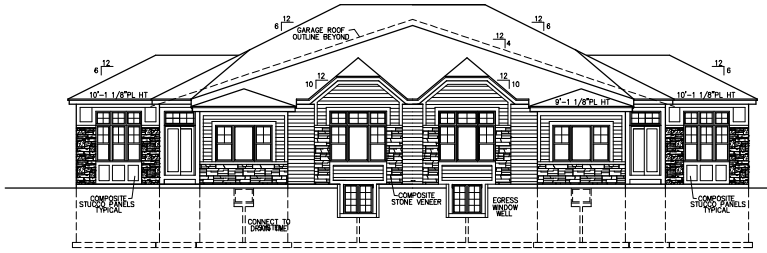
859



THE TARTAN UNIT #64

THE TARTAN UNIT #63

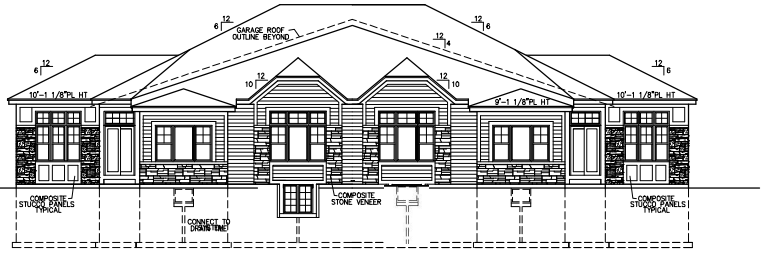
SIDE ELEVATION
1/8" = 1'-0"1/8" = 1'-0"



THE TARTAN UNIT #61

END ELEVATION
1/8" = 1'-0"

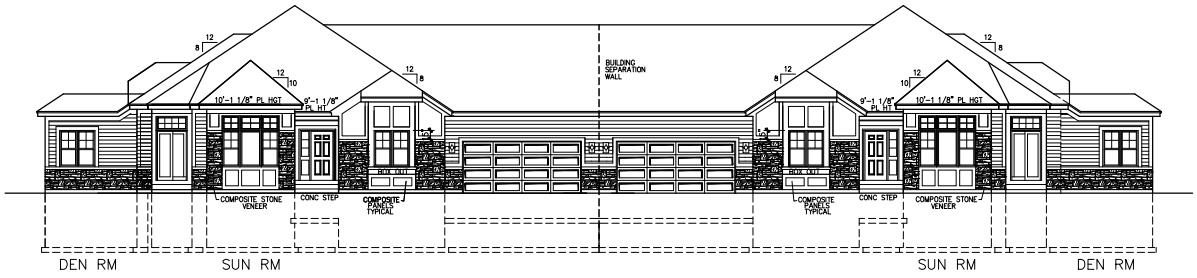
THE TARTAN UNIT #64



THE TARTAN UNIT #63

END ELEVATION
1/8" = 1'-0"

THE TARTAN UNIT #62



THE TARTAN UNIT #62

THE TARTAN UNIT #61

SIDE ELEVATION
1/8" = 1'-0"

TDI ASSOCIATES, INC.
ARCHITECTS, PLANNERS

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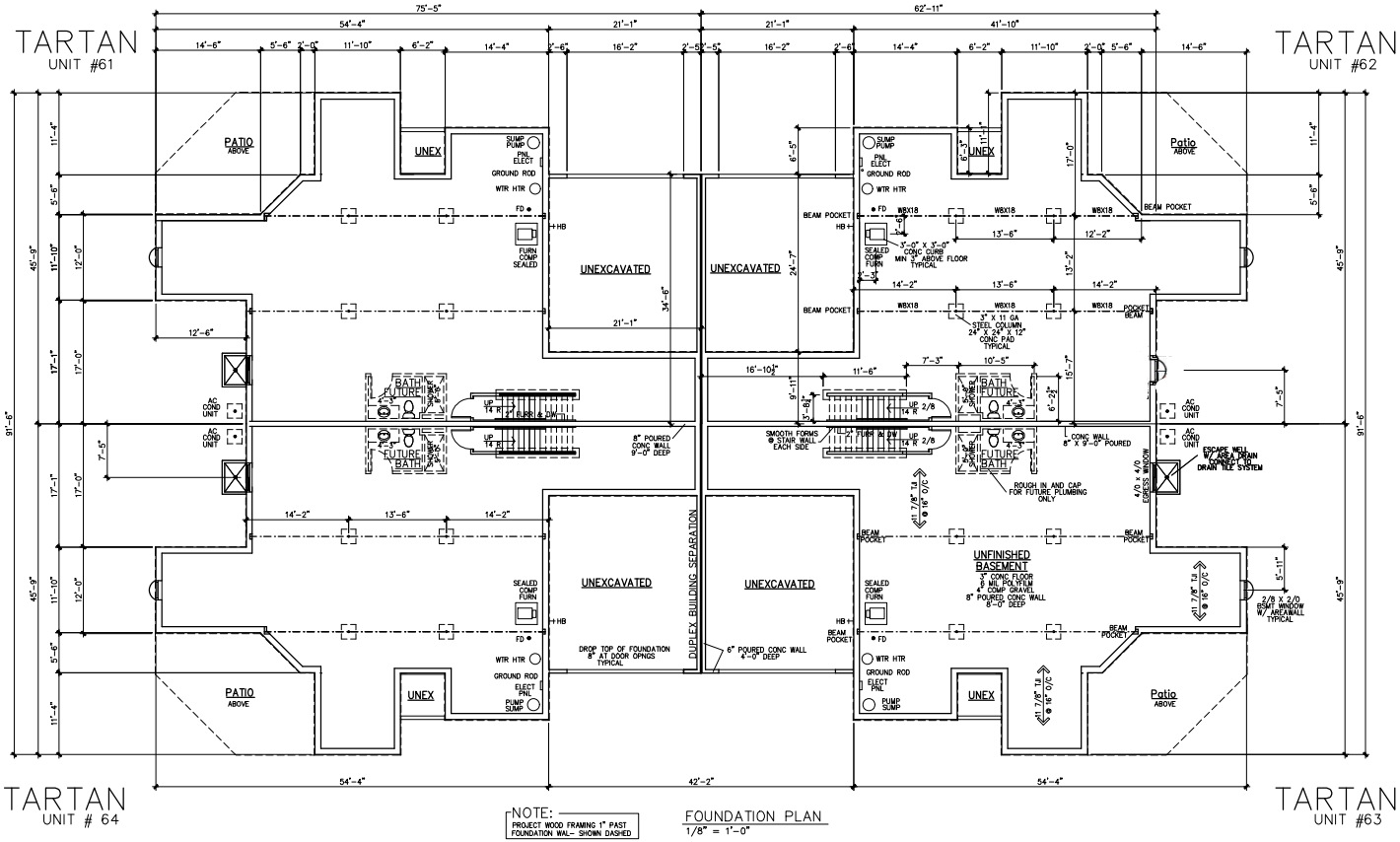
Sheet Title
EXTERIOR ELEVATIONS

Issued For:	Date:
REVISION	~~15 DEC, 2022~~ 23 MAY, 2024

Date:	23 MAY,2024
Job NO.:	19-209-23
Drawn By:	LS

Sheet No.
A2.1



FOUNDATION PLAN
1/8" = 1'-0"

TDI ASSOCIATES, INC.
ARCHITECTS, PLANNERS

1500 S. VILLA TERRACE
NEW BERLIN, WISCONSIN 53146
PHONE 262-437-0400 FAX 262-437-0401

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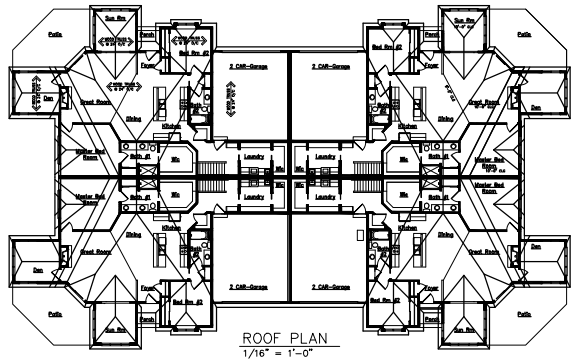
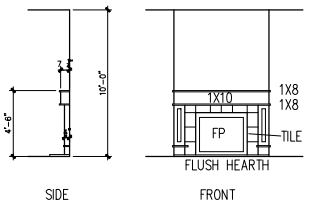
Sheet Title
BASEMENT / FOUNDATION PLAN

Issued For:	Date:
REVISION	23 MAY, 2024

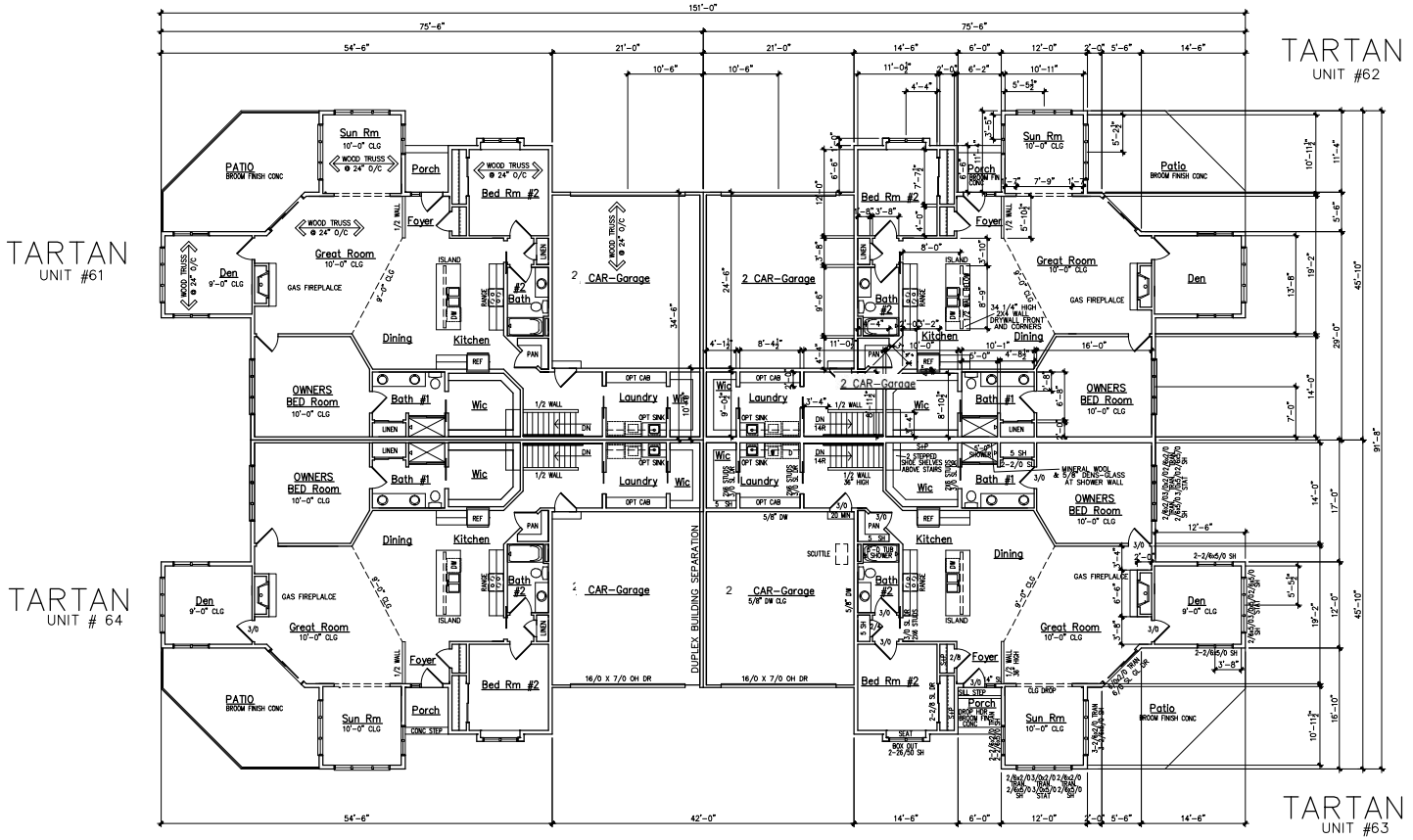
Date:	23 MAY,2024
Job NO.:	19-209-23
Drawn By:	LS
Sheet No.	A1.0



ROOF PLAN
1/16" = 1'-0"



FIREPLACE DETAIL
1/4" = 1'-0"



FIRST FLOOR PLAN
1/8" = 1'-0"

NOTE:
9'-0" CLG - TYPICAL
10'-0" CLG - SUN RM
GREAT RM
OWNERS BEDRM

TDI ASSOCIATES, INC.
ARCHITECTS, PLANNERS

1500 S. VILLA TERRACE
NEW BERLIN, WISCONSIN 53146
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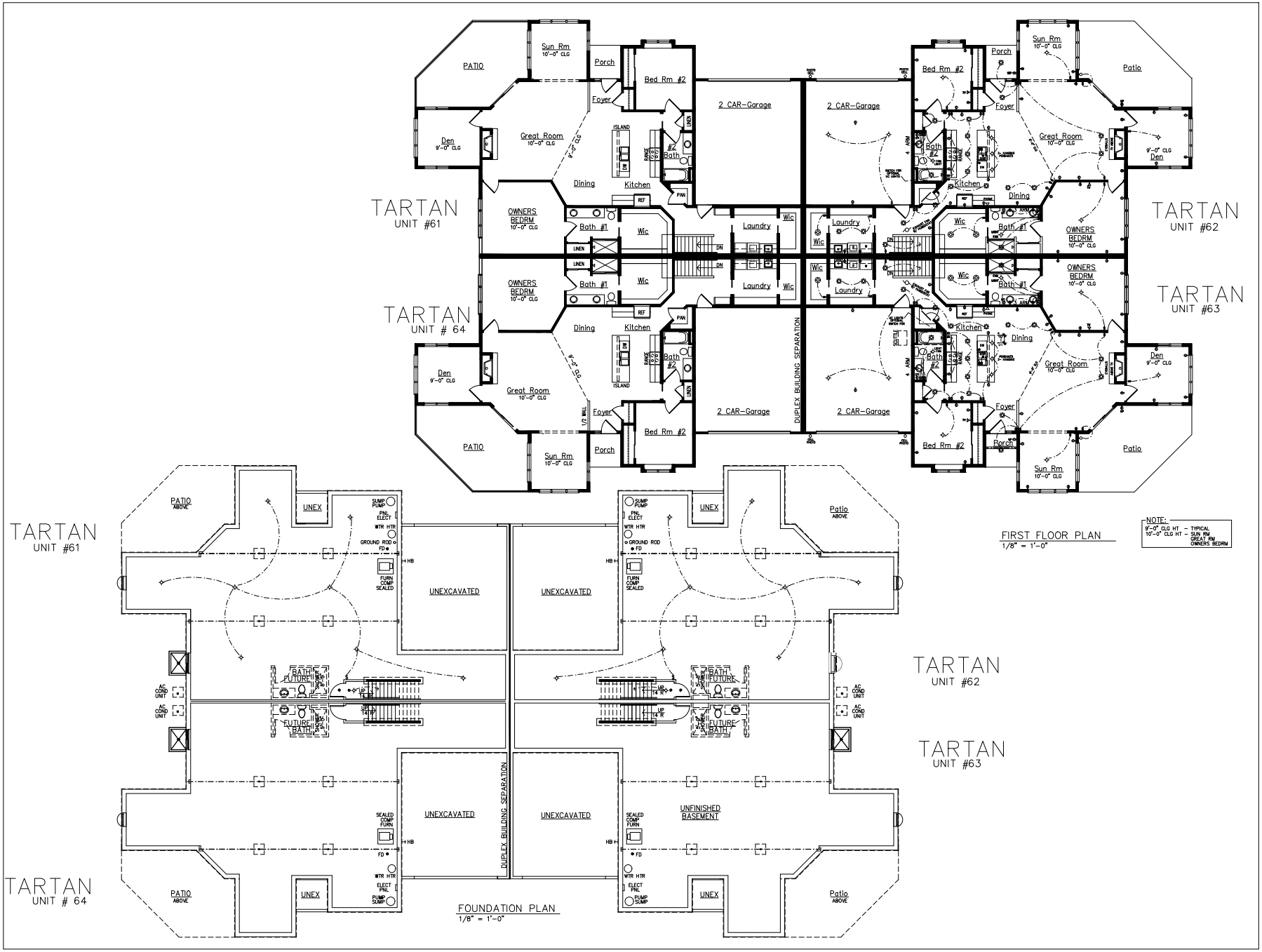

TDI ASSOCIATES, INC.
ARCHITECTS, PLANNERS

1500 S. VILLA TERRACE
NEW BERLIN, WISCONSIN 53146
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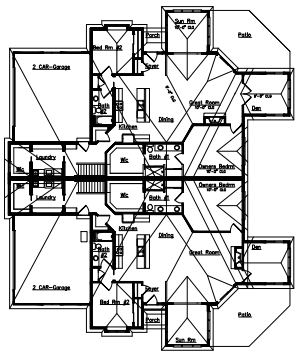
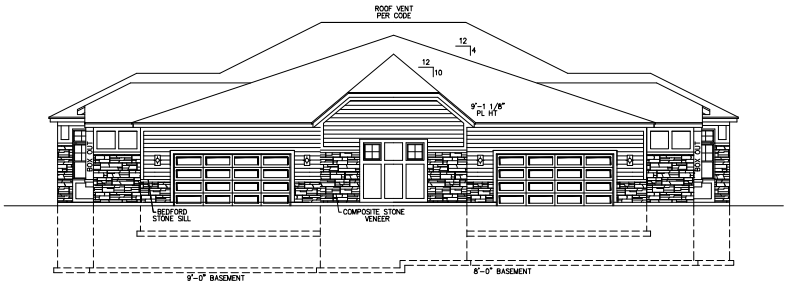
Sheet Title
ELECTRICAL
BASEMENT
FIRST FLOOR
PLANS

Issued For:	Date:
REVISION	23 MAY, 2024

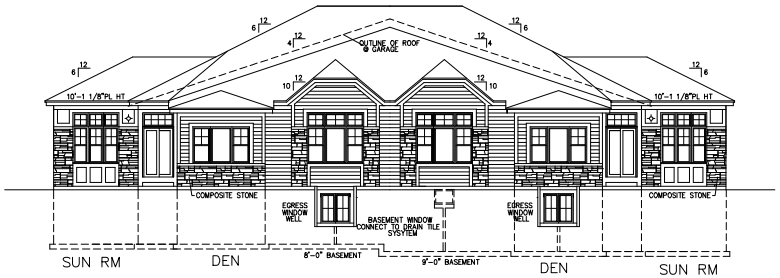
Date:	23 MAY,2024
Job NO.:	19-209-23
Drawn By:	LS
Sheet No.	E1.1



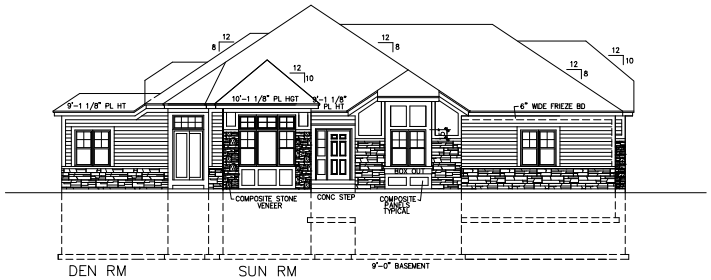
ROOF PLAN
1/16" = 1'-0"



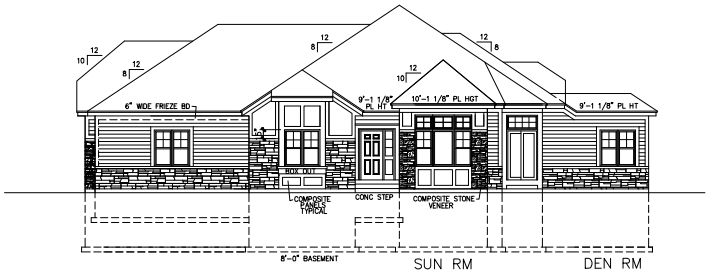
THE TARTAN UNIT #19 — FRONT ELEVATION 1/8" = 1'-0" — THE TARTAN UNIT #20



THE TARTAN UNIT #20 — REAR ELEVATION 1/8" = 1'-0" — THE TARTAN UNIT #19



THE TARTAN UNIT #19 — LEFT ELEVATION 1/8" = 1'-0"



RIGHT ELEVATION 1/8" = 1'-0" — THE TARTAN UNIT #20

TDI ASSOCIATES, INC.
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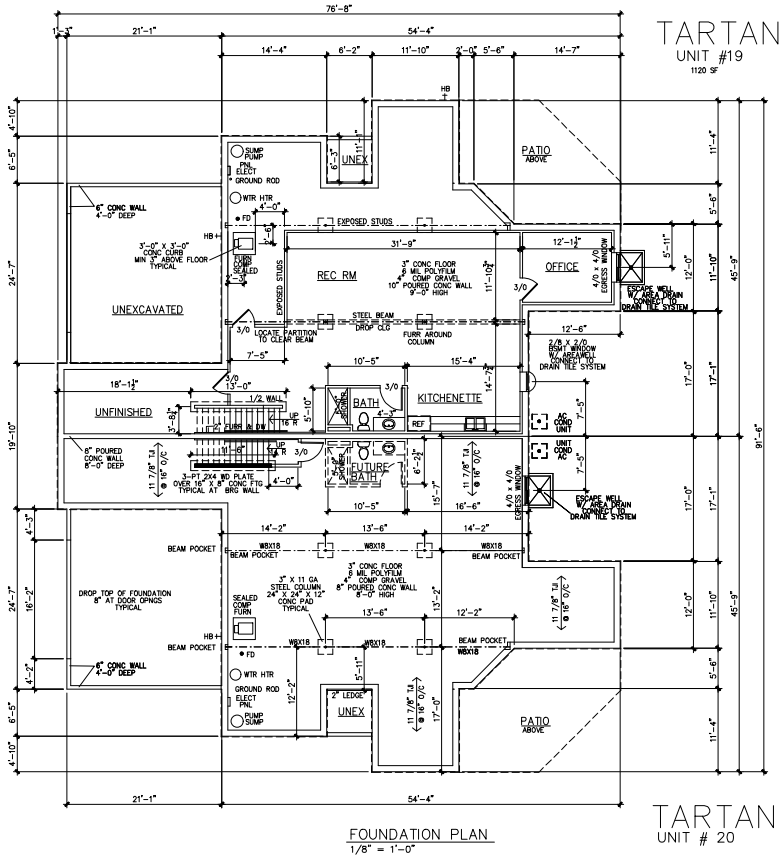
Sheet Title
EXTERIOR ELEVATIONS

Issued For:	Date:
REVISION	5 FEB, 2023 –

Date:	9 JAN, 2023
Job NO.:	19-209-10
Drawn By:	LS

Sheet No.
A2.1



FOUNDATION PLAN
1/8" = 1'-0"

TDI ASSOCIATES, INC.
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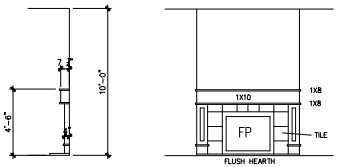
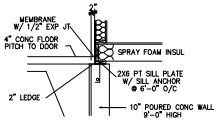
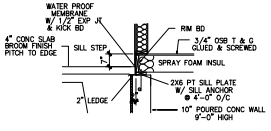
Sheet No.
A1.0



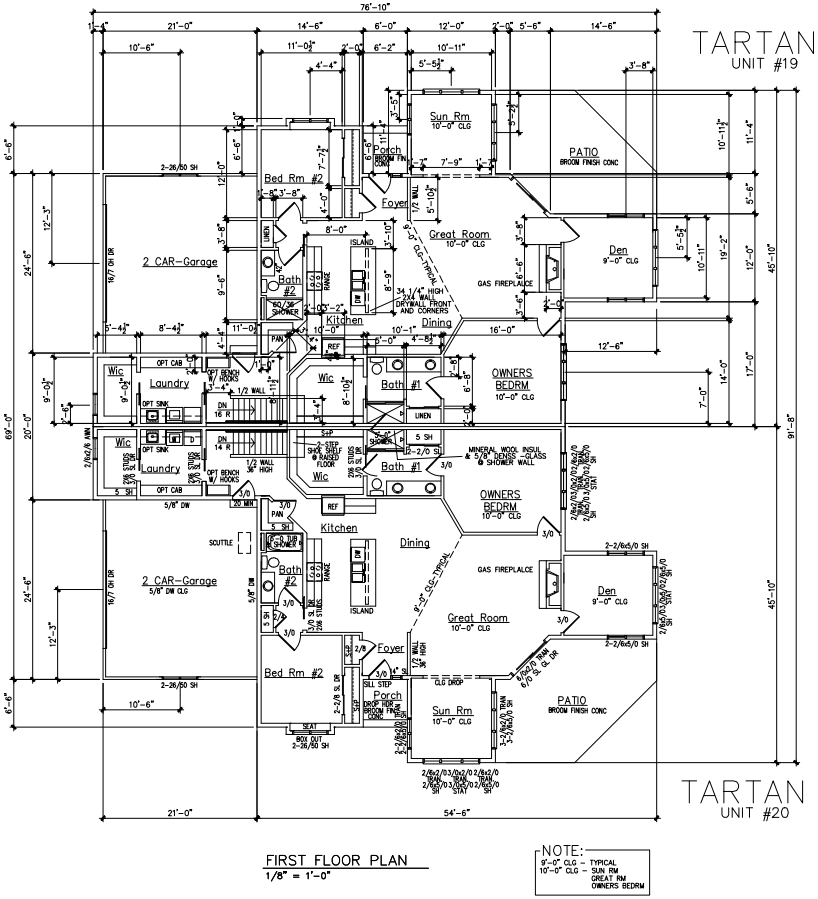
FIREPLACE DETAIL
1/4" = 1'-0"



2 GARAGE WALL DTL
3/8" = 1'-0"

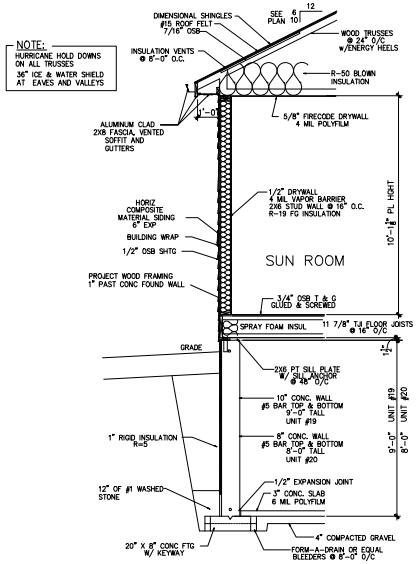


3 PORCH WALL DTL
3/8" = 1'-0"

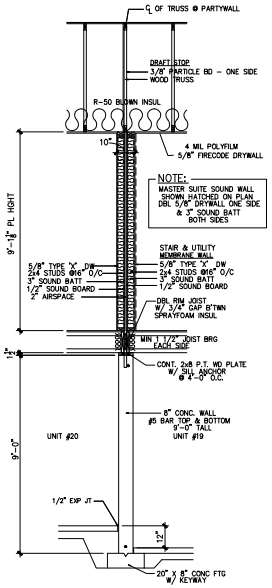


FIRST FLOOR PLAN
1/8" = 1'-0"

NOTE:
9'-0" CLG - TYPICAL
10'-0" CLG - SUN RM
GREAT RM
OWNERS BEDRM

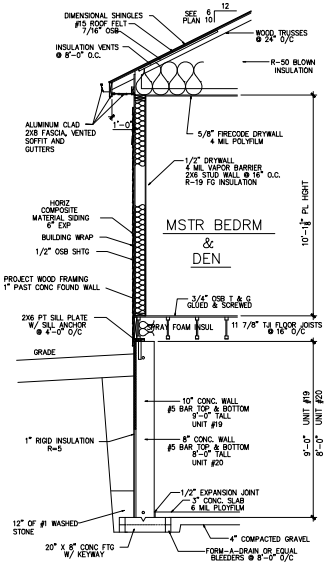


4 WALL SECTION
3/8" = 1'-0"

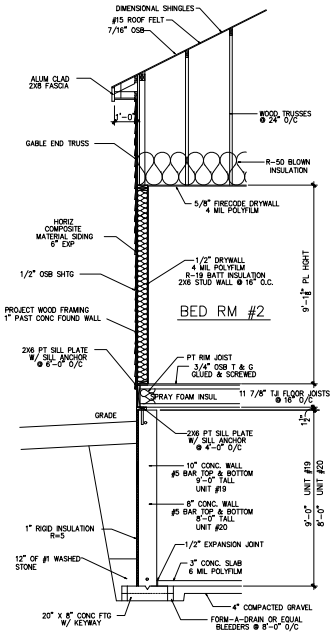


DWELLING UNIT SEPARATION WALL SECTION
3/8" = 1'-0"

NOTE:
CONCRETE WALL REINFORCING PER STATE CODE



6 WALL SECTION
3/8" = 1'-0"



7 WALL SECTION
3/8" = 1'-0"

TDI ASSOCIATES, INC.
ARCHITECTS, ENGINEERS, PLANNERS
N8 W22350 JOHNSON DRIVE, SUITE B4
WAUKESHA, WISCONSIN 53186
PHONE 262-437-0400 FAX 262-437-0401

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Sheet Title
FLOOR PLAN SECTIONS

Issued For:	Date:
REVISION	5 FEB, 2023

Date:	9 JAN, 2023
Job NO.:	19-209-10
Drawn By:	LS

Sheet No.
A1.1

Nighthawk Trail
4333 4335

343

324
326

FOR SALE
A new home with a new beginning!
262 - 751 - 7367
CORNERSTONE
FOR SALE
262 - 751 - 7367
CORNERSTONE

ESSER PROPERTY

RESIDENTIAL SUBDIVISION

PRELIMINARY SITE DEVELOPMENT PLANS

CITY OF PEWAUKEE, WISCONSIN

GENERAL NOTES

1. THE LATEST EDITIONS OF THE FOLLOWING DOCUMENTS AND ANY SUPPLEMENTS THERETO, SHALL GOVERN ALL CONSTRUCTION ITEMS ON THIS PLAN UNLESS OTHERWISE NOTED.

   –STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, 6TH EDITION (SSSWCW)
   –THE WISCONSIN D.O.T. STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, LATEST EDITION
   –WDNR STORMWATER RUNOFF TECHNICAL STANDARDS.
   –WISDOT PAL APPROVED EROSION CONTROL MEASURES LIST, LATEST EDITION.
   –CITY OF PEWAUKEE TECHNICAL STANDARDS.

2. THE CONTRACTOR SHALL TAKE ALL MEASURES NECESSARY TO MINIMIZE EROSION, WATER POLLUTION AND SILTATION CAUSED BY CONSTRUCTION OF THIS PROJECT. EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH WISCONSIN DEPARTMENT OF NATURAL RESOURCES TECHNICAL STANDARDS.

3. EROSION CONTROL PLAN: PRIOR TO BEGINNING WORK, AN APPROVED EROSION CONTROL PLAN WILL BE PROVIDED BY THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR PROPERLY IMPLEMENTING THE APPROVED PLAN.

4. THE CONTRACTOR SHALL FIELD VERIFY THE ELEVATIONS OF THE BENCHMARKS PRIOR TO COMMENCING WORK. THE CONTRACTOR SHALL ALSO FIELD VERIFY LOCATION, ELEVATION AND SIZE OF EXISTING UTILITIES, AND VERIFY FLOOR, CURB OR PAVEMENT ELEVATIONS WHERE MATCHING INTO EXISTING WORK. THE CONTRACTOR SHALL FIELD VERIFY HORIZONTAL CONTROL BY REFERENCING SHOWN COORDINATES TO KNOWN PROPERTY LINES. NOTIFY ENGINEER OF DISCREPANCIES IN EITHER VERTICAL OR HORIZONTAL CONTROL PRIOR TO PROCEEDING WITH WORK.

5. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO BEGINNING CONSTRUCTION (CALL DIGGERS HOTLINE AT 800–242–8511). COST OF REPLACEMENT OR REPAIR OF EXISTING UTILITIES DAMAGED AS A RESULT OF THE CONTRACTOR'S OPERATION SHALL BE THE CONTRACTOR'S RESPONSIBILITY.

6. EXISTING UTILITY INFORMATION IS SHOWN FROM SURVEY WORK, FIELD OBSERVATIONS, AVAILABLE PUBLIC RECORDS, AND AS–BUILT DRAWINGS. EXACT LOCATIONS AND ELEVATIONS OF UTILITIES SHALL BE DETERMINED PRIOR TO INSTALLING NEW WORK. EXCAVATE TEST PITS AS REQUIRED.

7. PROPERTY CORNERS SHALL BE CAREFULLY PROTECTED UNTIL THEY HAVE BEEN REFERENCED BY A PROFESSIONAL LAND SURVEYOR. PROPERTY MONUMENTS DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

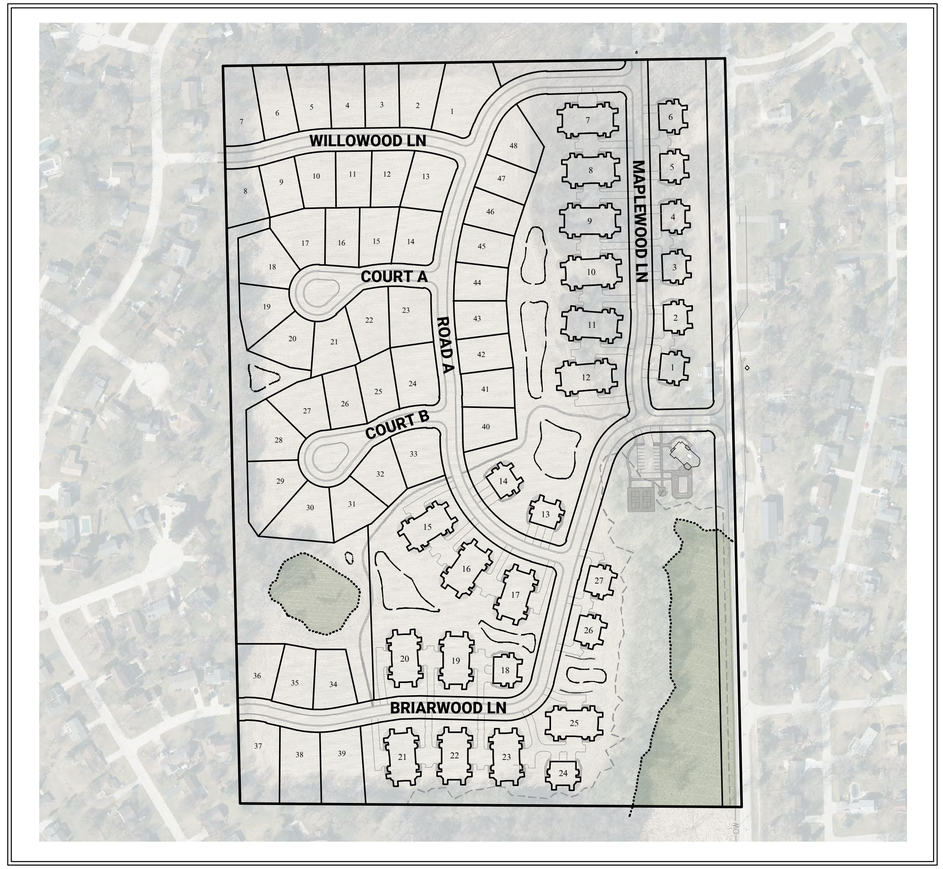
8. ENGINEER SHALL BE NOTIFIED 48 HOURS IN ADVANCE OF PERFORMING ANY CONSTRUCTION.

9. ALL TRENCHING SHALL BE PERFORMED ACCORDING TO OSHA STANDARDS.

10. ALL ITEMS SHALL INCLUDE ALL THE NECESSARY MATERIALS AND LABOR TO COMPLETE THE ITEM IN PLACE.

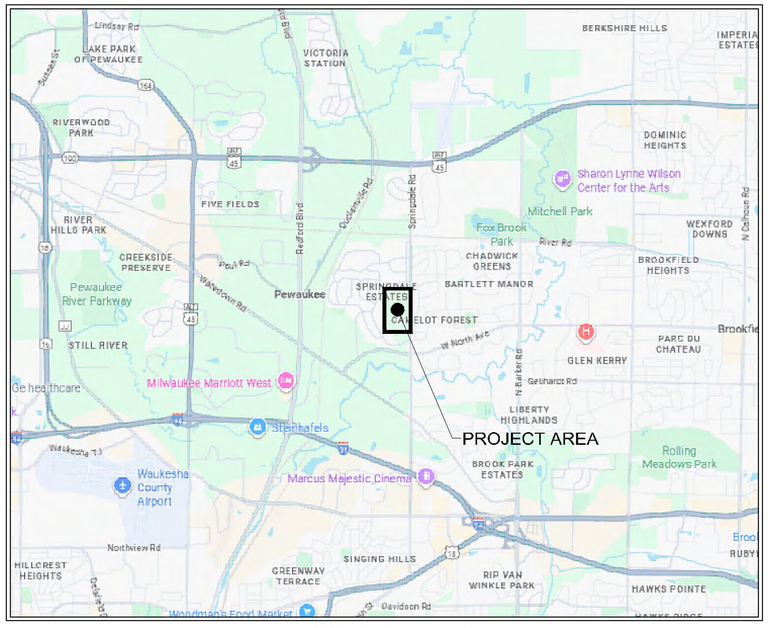
11. THE CONTRACTOR SHALL CLEAN ALL ADJACENT STREETS OF ANY SEDIMENT OR DEBRIS BY SWEEPING BEFORE THE END OF THE WORKING DAY OR AS REQUIRED BY THE CITY OF PEWAUKEE.

12. THE CONTRACTOR MUST AND IS REQUIRED TO NOTIFY THE CITY OF PEWAUKEE SEWER AND WATER UTILITY A MINIMUM OF 48 HOURS IN ADVANCE OF WATER MAIN FILLING, WATER MAIN FLUSHING, WATER MAIN TESTING AND WATER MAIN CONNECTIONS. NO CONNECTION SHALL BE MADE TO THE EXISTING WATER SYSTEM UNTIL SAFE SAMPLES FROM THE NEW MAIN HAVE BEEN OBTAINED.



SITE PLAN

SCALE: 1" = 200'



LOCATION MAP

NOT TO SCALE

ENGINEER:
TRIO ENGINEERING, LLC
4100 N CALHOUN ROAD, SUITE 300
BROOKFIELD, WI 53005
CONTACT: MR. JOSHUA PUDELKO, P.E., M.S.
PHONE: 262–790–1480
FAX: 262–790–1481
EMAIL: jpudelko@trioeng.com

SHEET INDEX

PRELIMINARY CIVIL		
C0.0	–	COVER SHEET
C0.1	–	EXISTING SITE PLAN
C0.2	–	PROPOSED SITE PLAN
C1.0	–	OVERALL GRADING PLAN
C1.1–C1.8	–	GRADING PLANS
C2.0	–	UTILITY SYSTEM PLAN
C2.1–C2.7	–	ROADWAY & SANITARY SEWER PLANS
C3.0–C3.1	–	CONSTRUCTION NOTES & DETAILS

WISCONSIN — JOSHUA D. PUDELKO — E–39220 — WAUWATOSA, WI — PROFESSIONAL ENGINEER

TRIO — DESIGN • LAND SURVEYING • CIVIL ENGINEERING
4100 N. CALHOUN RD., SUITE 300
BROOKFIELD, WI 53005
PHONE: (262) 790-1480
FAX: (262) 790-1481
EMAIL: jpudelko@trioeng.com

PROJECT:
ESSER PROPERTY
CITY OF PEWAUKEE, WISCONSIN
BY: CORNERSTONE DEVELOPMENT
N63 W23849 MAIN ST.
SUSSEX, WI 53089

REVISION HISTORY

DATE	DESCRIPTION
8/29/25	PRELIMINARY PLAN

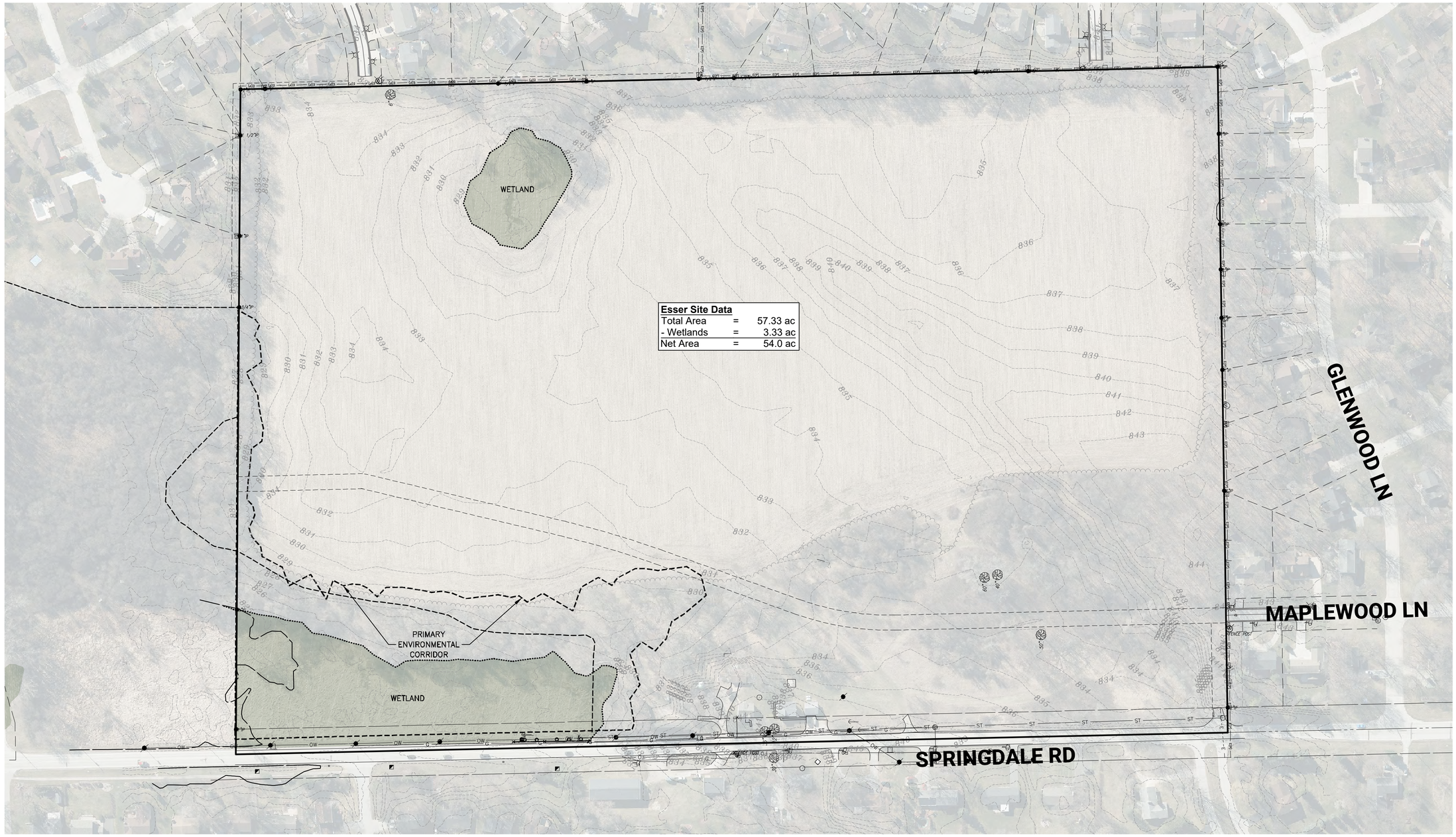
DATE:
AUGUST 29, 2025

JOB NUMBER:
25-01-796

DESCRIPTION:
COVER SHEET

SHEET
C0.0

X:\2025\25-01-796 ESSER PROPERTY - PEWAUKEE\DRAWINGS\PRELIMINARY\ESSER_C0-COVER_22X34.DWG



0 20 40 80

SCALE: 1" = 100' (22"X34")
SCALE: 1" = 200' (11"X17")

CONTRACTOR IS REQUIRED TO CONTACT DIGGERS HOTLINE TOLL FREE TO OBTAIN LOCATION OF UNDERGROUND UTILITIES PRIOR TO COMMENCING THE WORK. WISCONSIN STATUTE 182.0715 REQUIRES MIN. OF 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE.
CALL DIGGERS HOTLINE 1-800-242-8511

NOTE:
EXISTING UNDERGROUND UTILITY INFORMATION WAS OBTAINED FROM AVAILABLE RECORDS. THE ENGINEER MAKES NO GUARANTEE AS TO THE ACCURACY OF THIS INFORMATION. VERIFICATION TO THE SATISFACTION OF THE CONTRACTOR OF ALL UNDERGROUND UTILITIES, WHETHER OR NOT SHOWN ON THE PLANS, SHALL BE ASSUMED AS A CONDITION OF THE CONTRACT. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES BETWEEN LOCATION OF UTILITIES IN THE FIELD AND LOCATIONS SHOWN ON THE PLANS.

X:\2025\25-01-796 ESSER PROPERTY - PEWAUKEE\DRAWINGS\PRELIMINARY\ESSER_CO-SITE_22X34.DWG

WISCONSIN
JOSHUA D. PUDELKO
E-39220
WAUWATOSA, WI
PROFESSIONAL ENGINEER

TRIO
DESIGN • LAND SURVEYING
CIVIL ENGINEERING

4100 N. CALHOUN RD., SUITE 300
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JOB NUMBER:
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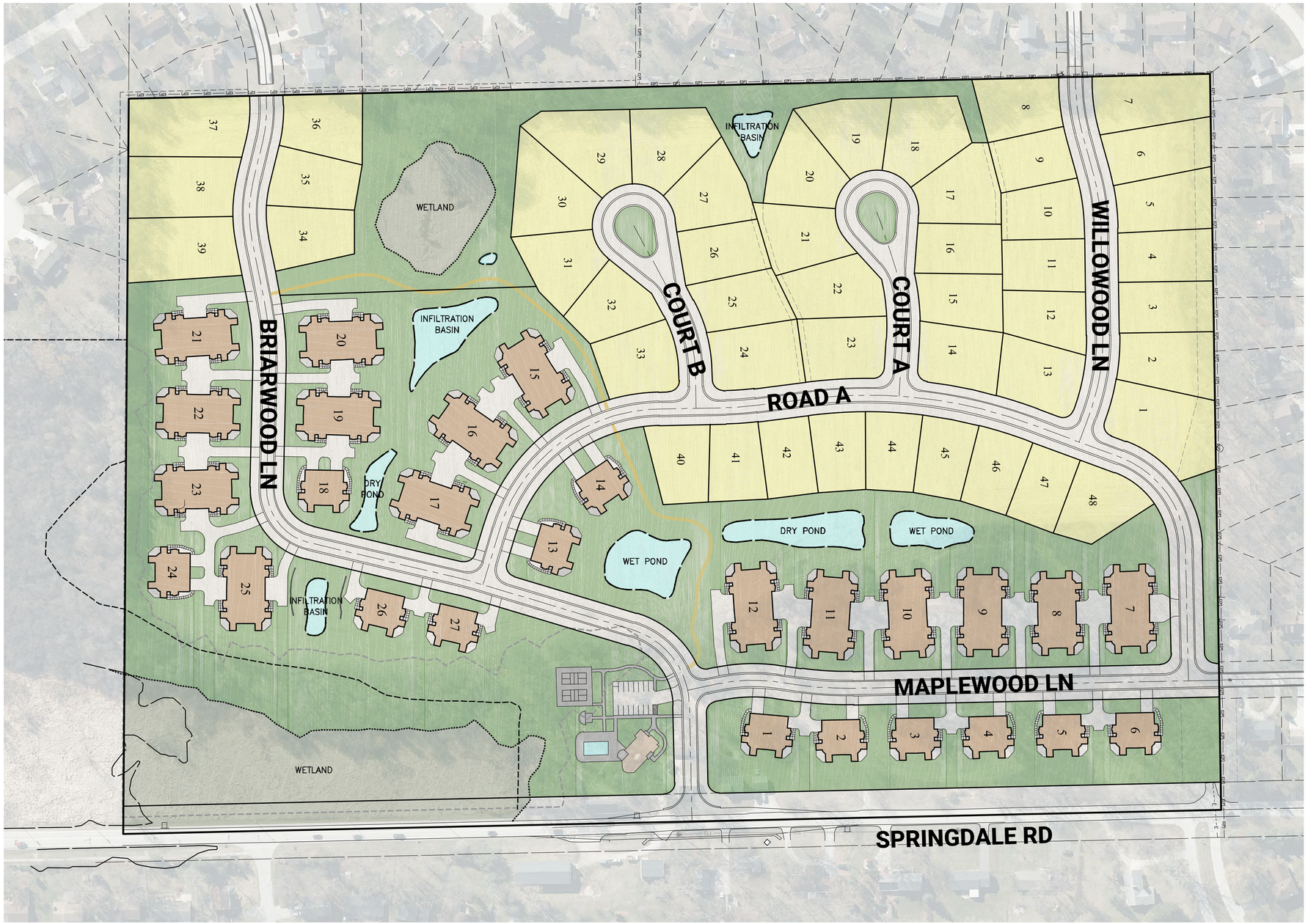
DESCRIPTION:
EXISTING
SITE PLAN

SHEET
C0.1



0 20 40 80

SCALE: 1" = 100' (22"X34")
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Condominium Community	84 units
- Lot Area = 0.5 ac	
- Lot Width = 120'	
- Setbacks:	
-- Front = 20' to building, 25' to garage	
-- Wetland = 25'	
-- Side = 40' building-to-building, 25 on side	
- 2.5 parking spaces per unit	

Single Family	48 lots
- Lot Area = 12,500 sf	
- Lot Width = 90'	
- Setbacks:	
-- Front = 30'	
-- Wetland = 25'	
-- Side = 12'	
-- Rear = 35'	

JOSHUA D. PUDELKO
E-39420
WAUWATOSA, WI
WISCONSIN PROFESSIONAL ENGINEER

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4100 N. CALHOUN RD., SUITE 300
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PHONE: (262) 790-1480
FAX: (262) 790-1481
EMAIL: jpudelko@trioeng.com

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CITY OF PEWAUKEE, WAUKESHA COUNTY, WISCONSIN
BY: CORNERSTONE DEVELOPMENT
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SUSSEX, WI 53089

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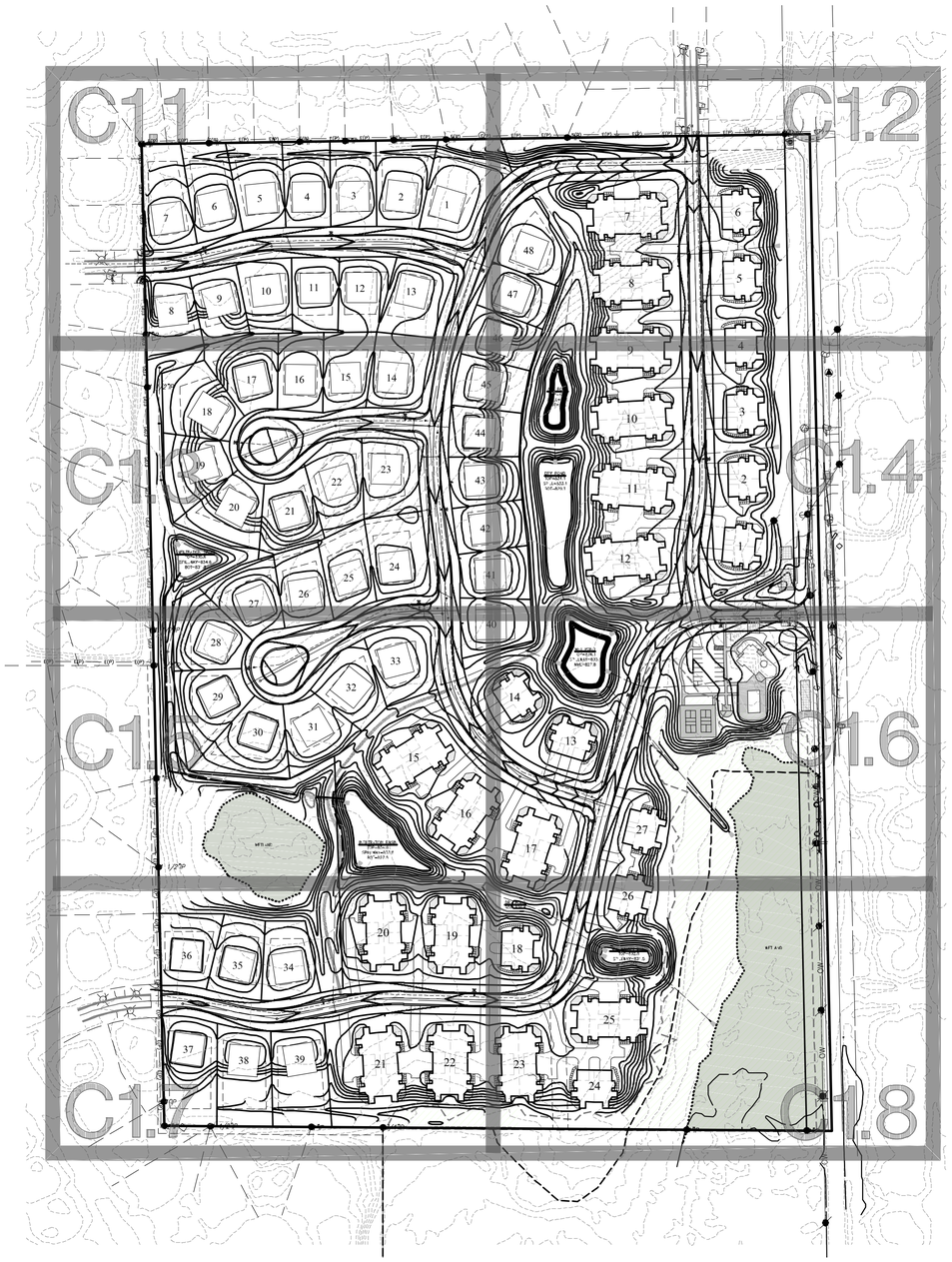
AUGUST 29, 2025

JOB NUMBER:
25-01-796

DESCRIPTION:
PROPOSED SITE PLAN

SHEET
C0.2

X:\2025\25-01-796 ESSER PROPERTY - PEWAUKEE\DRAWINGS\PRELIMINARY\ESSER_CO-SITE_22X34.DWG



0 20 40 80

SCALE: 1" = 150' (22"X34")
SCALE: 1" = 300' (11"X17")

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CALL DIGGERS HOTLINE 1-800-242-8511

NOTE:
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GRADING LEGEND:

850	– EXISTING CONTOUR
850	– PROPOSED CONTOUR
850.0	– PROPOSED SPOT ELEVATION
BSMT 850.0	– FINISHED BASEMENT ELEVATION
EXP 850.0	– PROPOSED EXPOSURE GRADE
FF 850.0	– FINISHED FIRST FLOOR ELEVATION
FG 850.0	– PROPOSED FINISHED GRADE

JOSHUA D. PUDELKO
E-39420
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WISCONSIN PROFESSIONAL ENGINEER

TRIO DESIGN • LAND SURVEYING CIVIL ENGINEERING
4100 N. CALHOUN RD., SUITE 300
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PHONE: (262) 790-1480
FAX: (262) 790-1481
EMAIL: jpudelko@trioeng.com

PROJECT:
ESSER PROPERTY
CITY OF PEWAUKEE, WISCONSIN
BY: CORNERSTONE DEVELOPMENT
N63 W23849 MAIN ST.
SUSSEX, WI 53089

REVISION HISTORY

DATE	DESCRIPTION
8/29/25	PRELIMINARY PLAN

DATE:
AUGUST 29, 2025

JOB NUMBER:
25-01-796

DESCRIPTION:
OVERALL GRADING PLAN

SHEET
C1.00

X:\2025\25-01-796 ESSER PROPERTY - PEWAUKEE\DRAWINGS\PRELIMINARY\ESSER_C1-GRAD_22X34.DWG

0 20 40 80

SCALE: 1" = 40' (22"X34")
SCALE: 1" = 80' (11"X17")

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GRADING LEGEND:

850	– EXISTING CONTOUR
850	– PROPOSED CONTOUR
X 850.0	– PROPOSED SPOT ELEVATION
BSMT 850.0	– FINISHED BASEMENT ELEVATION
EXP 850.0	– PROPOSED EXPOSURE GRADE
FF 850.0	– FINISHED FIRST FLOOR ELEVATION
FG 850.0	– PROPOSED FINISHED GRADE

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PROJECT:
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CITY OF PEWAUKEE, WISCONSIN
BY: CORNERSTONE DEVELOPMENT
N63 W23849 MAIN ST.
SUSSEX, WI 53089

REVISION HISTORY	
DATE	DESCRIPTION
8/29/25	PRELIMINARY PLAN

DATE:
AUGUST 29, 2025

JOB NUMBER:
25-01-796

DESCRIPTION:
GRADING PLAN

SHEET
C1.1

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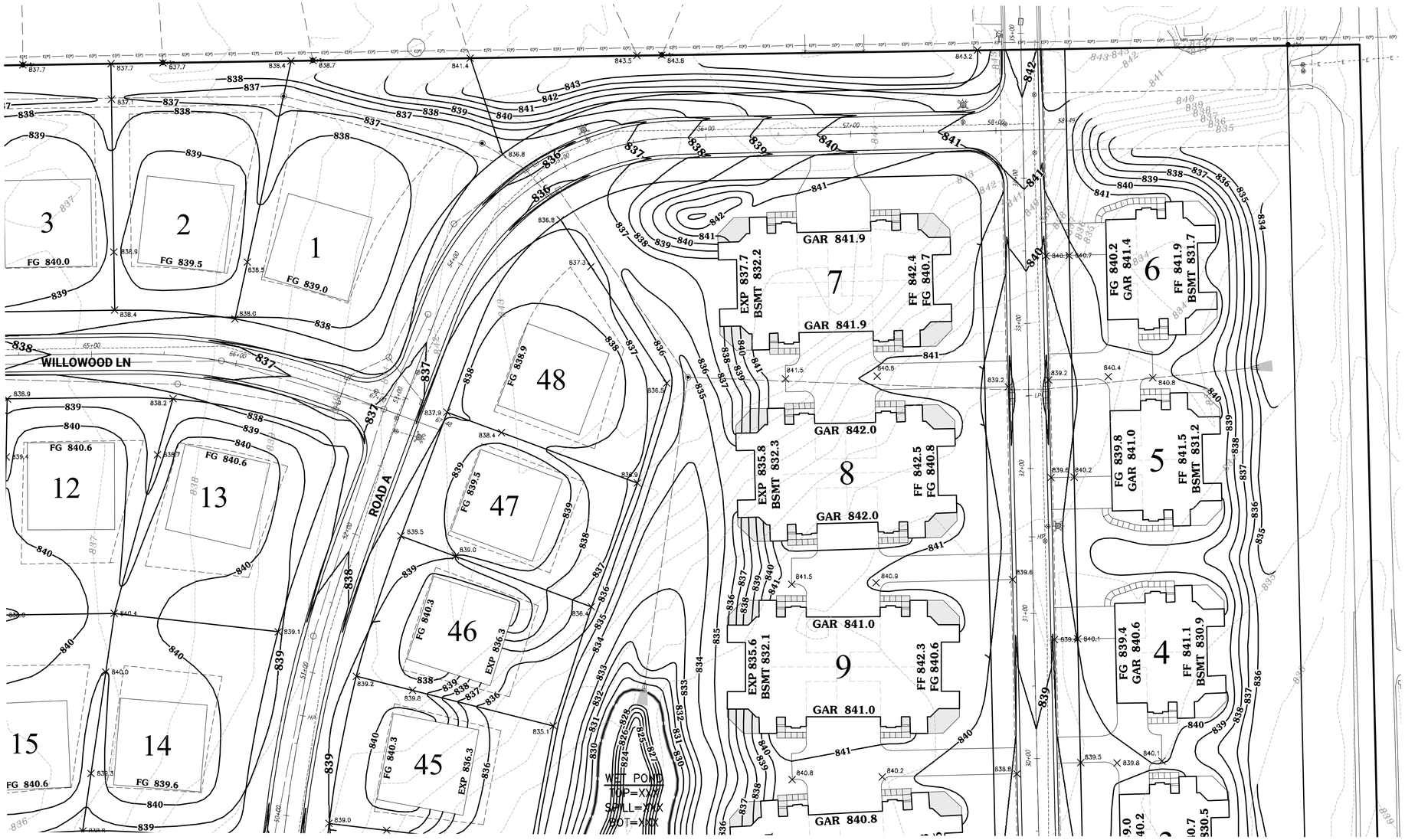

0 20 40 80

SCALE: 1" = 40' (22"X34")
SCALE: 1" = 80' (11"X17")

GRADING LEGEND:

850	– EXISTING CONTOUR
850	– PROPOSED CONTOUR
850.0	– PROPOSED SPOT ELEVATION
BSMT 850.0	– FINISHED BASEMENT ELEVATION
EXP 850.0	– PROPOSED EXPOSURE GRADE
FF 850.0	– FINISHED FIRST FLOOR ELEVATION
FG 850.0	– PROPOSED FINISHED GRADE

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BY: CORNERSTONE DEVELOPMENT
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REVISION HISTORY

DATE	DESCRIPTION
8/29/25	PRELIMINARY PLAN

DATE:
AUGUST 29, 2025

JOB NUMBER:
25-01-796

DESCRIPTION:
GRADING PLAN

SHEET
C1.2

X:\2025\25-01-796 ESSER PROPERTY - PEWAUKEE\DRAWINGS\PRELIMINARY\ESSER_C1-GRAD_22X34.DWG

0 20 40 80

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SCALE: 1" = 80' (11"X17")

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GRADING LEGEND:

850	– EXISTING CONTOUR
850	– PROPOSED CONTOUR
850.0	– PROPOSED SPOT ELEVATION
BSMT 850.0	– FINISHED BASEMENT ELEVATION
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FF 850.0	– FINISHED FIRST FLOOR ELEVATION
FG 850.0	– PROPOSED FINISHED GRADE

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REVISION HISTORY

DATE	DESCRIPTION
8/29/25	PRELIMINARY PLAN

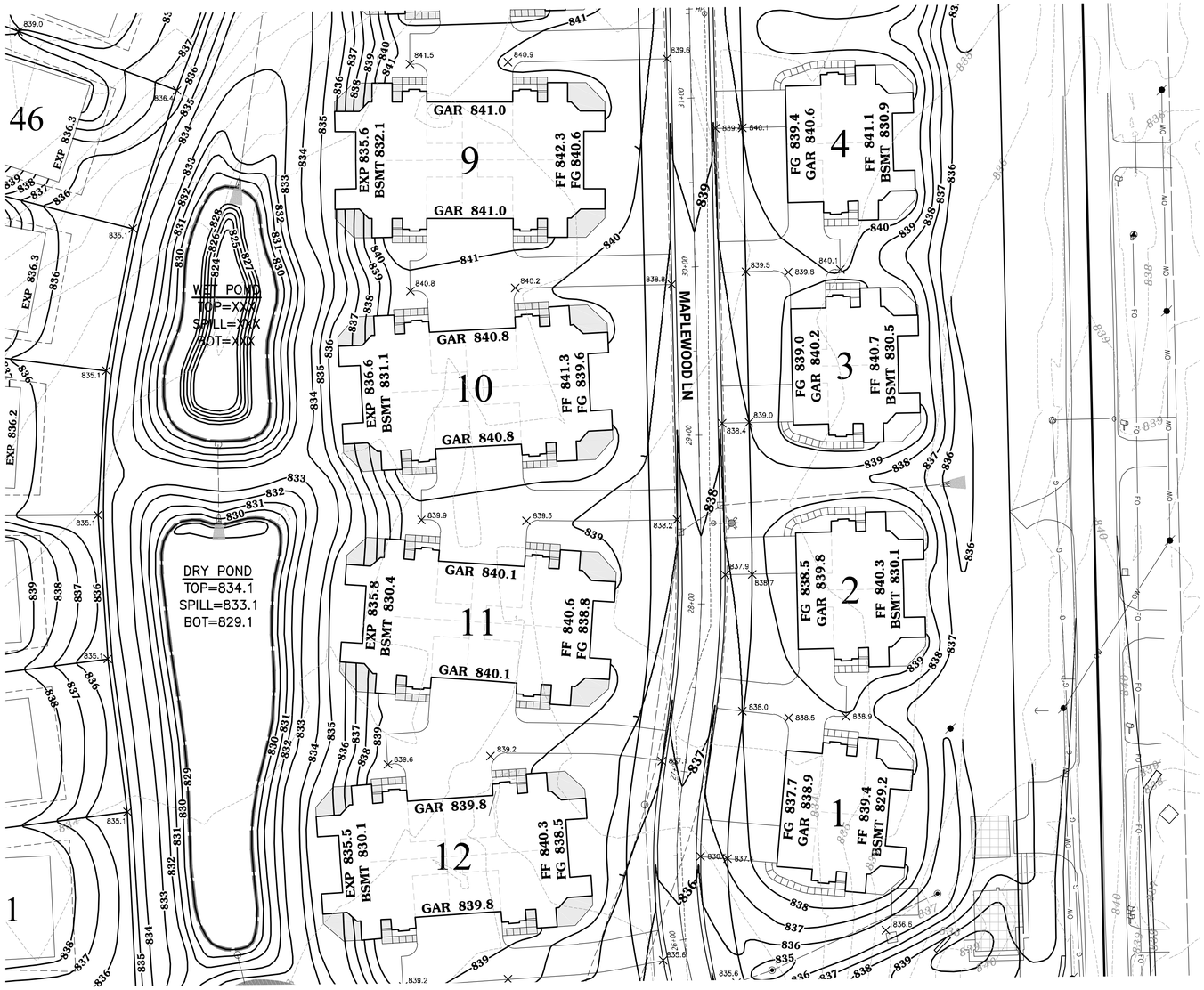
DATE:
AUGUST 29, 2025

JOB NUMBER:
25-01-796

DESCRIPTION:
GRADING PLAN

SHEET
C1.3

X:\2025\25-01-796 ESSER PROPERTY - PEWAUKEE\DRAWINGS\PRELIMINARY\ESSER_C1-GRAD_22X34.DWG



0 20 40 80

SCALE: 1" = 40' (22"X34")
SCALE: 1" = 80' (11"X17")

GRADING LEGEND:

850	– EXISTING CONTOUR
850	– PROPOSED CONTOUR
850.0	– PROPOSED SPOT ELEVATION
BSMT 850.0	– FINISHED BASEMENT ELEVATION
EXP 850.0	– PROPOSED EXPOSURE GRADE
FF 850.0	– FINISHED FIRST FLOOR ELEVATION
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REVISION HISTORY

DATE	DESCRIPTION
8/29/25	PRELIMINARY PLAN

DATE:
AUGUST 29, 2025

JOB NUMBER:
25-01-796

DESCRIPTION:
GRADING PLAN

SHEET
C1.4

X:\2025\25-01-796 ESSER PROPERTY - PEWAUKEE\DRAWINGS\PRELIMINARY\ESSER_C1-GRAD_22X34.DWG

SCALE: 1" = 40' (22"X34")
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GRADING LEGEND:

850	– EXISTING CONTOUR
850	– PROPOSED CONTOUR
× 850.0	– PROPOSED SPOT ELEVATION
BSMT 850.0	– FINISHED BASEMENT ELEVATION
EXP 850.0	– PROPOSED EXPOSURE GRADE
FF 850.0	– FINISHED FIRST FLOOR ELEVATION
FG 850.0	– PROPOSED FINISHED GRADE

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PROJECT:
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REVISION HISTORY

DATE	DESCRIPTION
8/29/25	PRELIMINARY PLAN

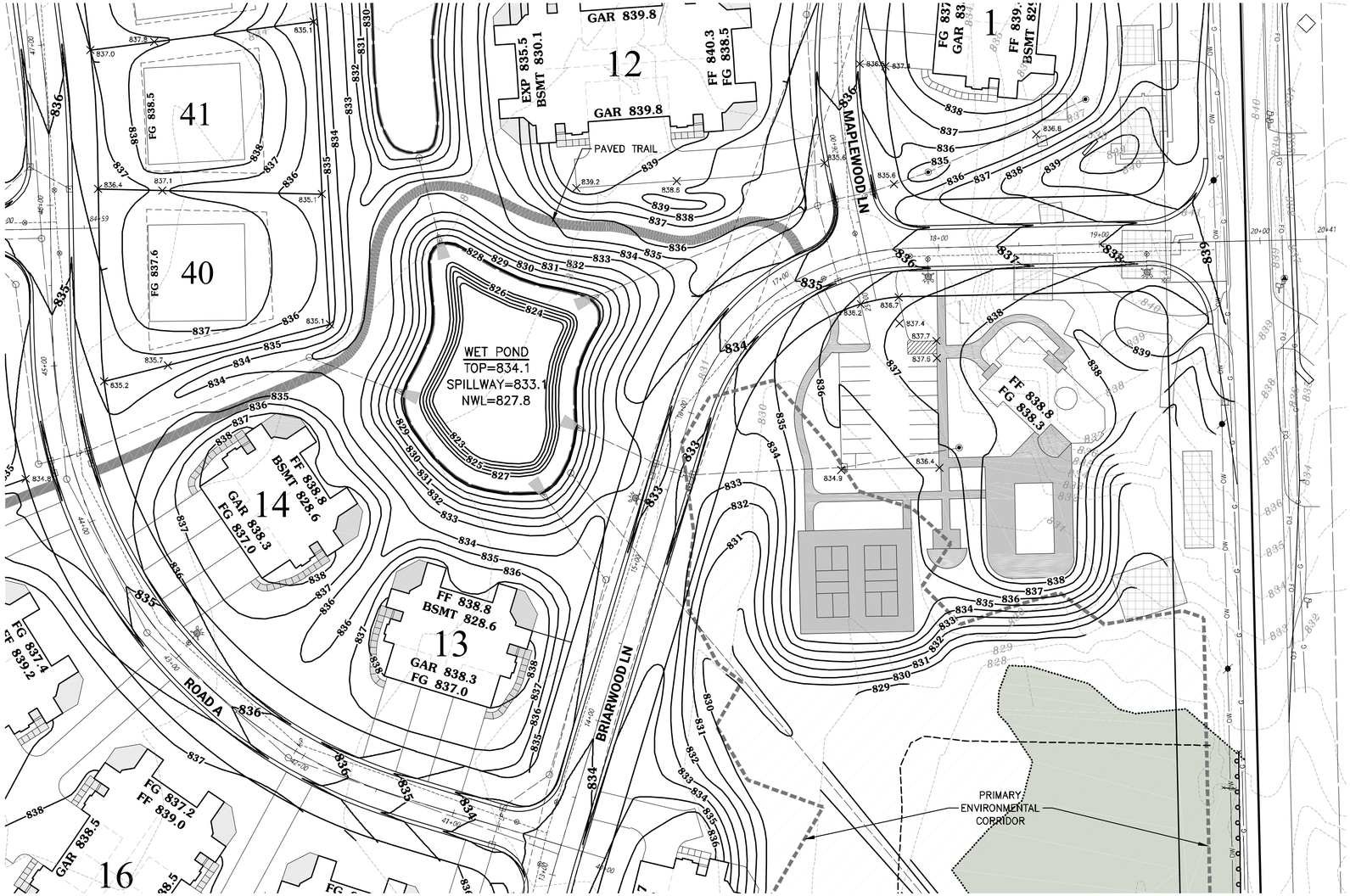
DATE:
AUGUST 29, 2025

JOB NUMBER:
25-01-796

DESCRIPTION:
GRADING PLAN

SHEET
C1.5

X:\2025\25-01-796 ESSER PROPERTY - PEWAUKEE\DRAWINGS\PRELIMINARY\ESSER_C1-GRAD_22X34.DWG



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GRADING LEGEND:

850	– EXISTING CONTOUR
850	– PROPOSED CONTOUR
× 850.0	– PROPOSED SPOT ELEVATION
BSMT 850.0	– FINISHED BASEMENT ELEVATION
EXP 850.0	– PROPOSED EXPOSURE GRADE
FF 850.0	– FINISHED FIRST FLOOR ELEVATION
FG 850.0	– PROPOSED FINISHED GRADE

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PROJECT:
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CITY OF PEWAUKEE, WISCONSIN
BY: CORNERSTONE DEVELOPMENT
N63 W23849 MAIN ST.
SUSSEX, WI 53089

REVISION HISTORY

DATE	DESCRIPTION
8/29/25	PRELIMINARY PLAN

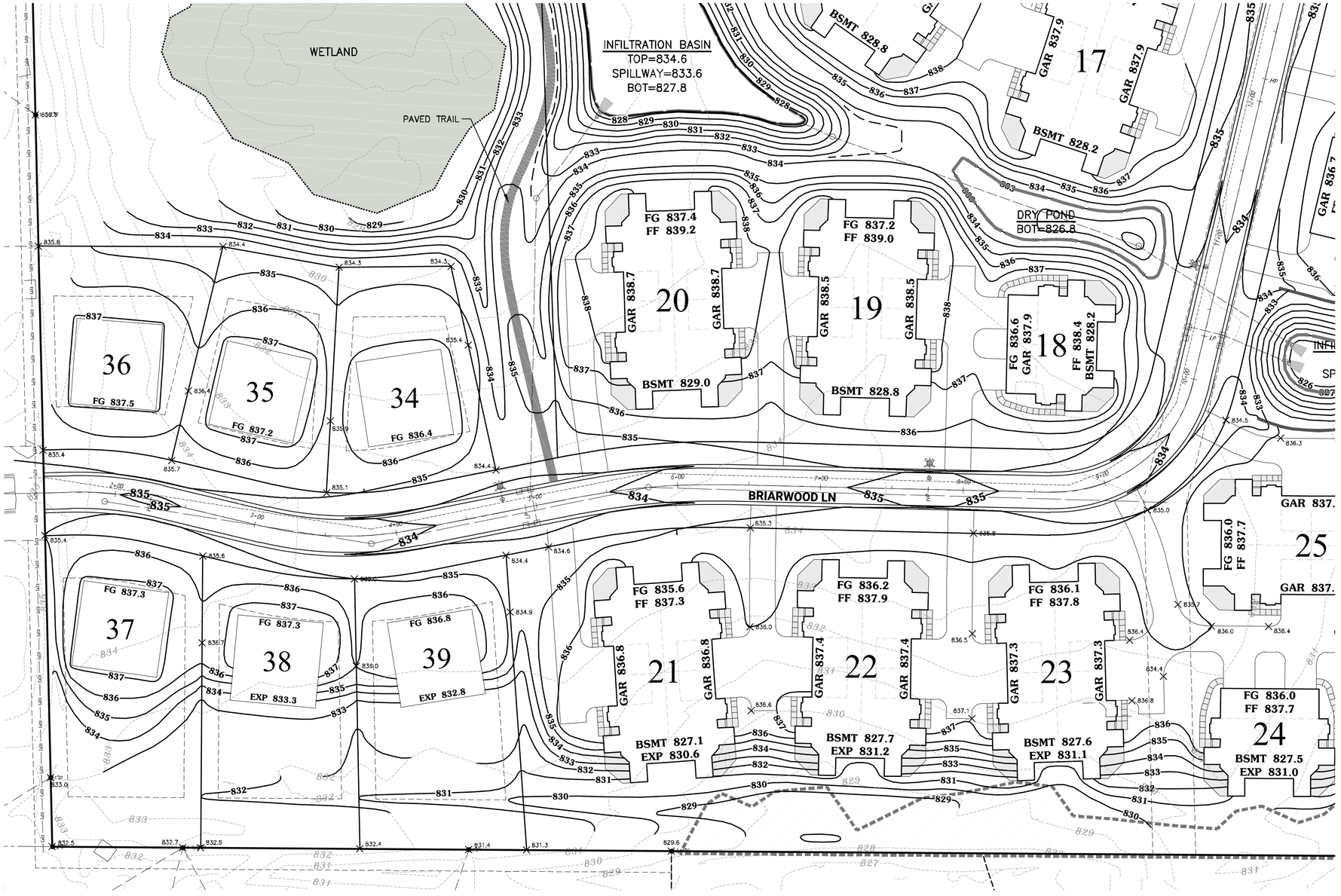
DATE:
AUGUST 29, 2025

JOB NUMBER:
25-01-796

DESCRIPTION:
GRADING PLAN

SHEET
C1.6

X:\2025\25-01-796 ESSER PROPERTY - PEWAUKEE\DRAWINGS\PRELIMINARY\ESSER_C1-GRAD_22X34.DWG



0 20 40 80

SCALE: 1" = 40' (22"X34")
SCALE: 1" = 80' (11"X17")

GRADING LEGEND:

850	– EXISTING CONTOUR
850	– PROPOSED CONTOUR
850.0	– PROPOSED SPOT ELEVATION
BSMT 850.0	– FINISHED BASEMENT ELEVATION
EXP 850.0	– PROPOSED EXPOSURE GRADE
FF 850.0	– FINISHED FIRST FLOOR ELEVATION
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X:\2025\25-01-796 ESSER PROPERTY - PEWAUKEE\DRAWINGS\PRELIMINARY\ESSER_C1-GRAD_22X34.DWG

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PROJECT:
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REVISION HISTORY

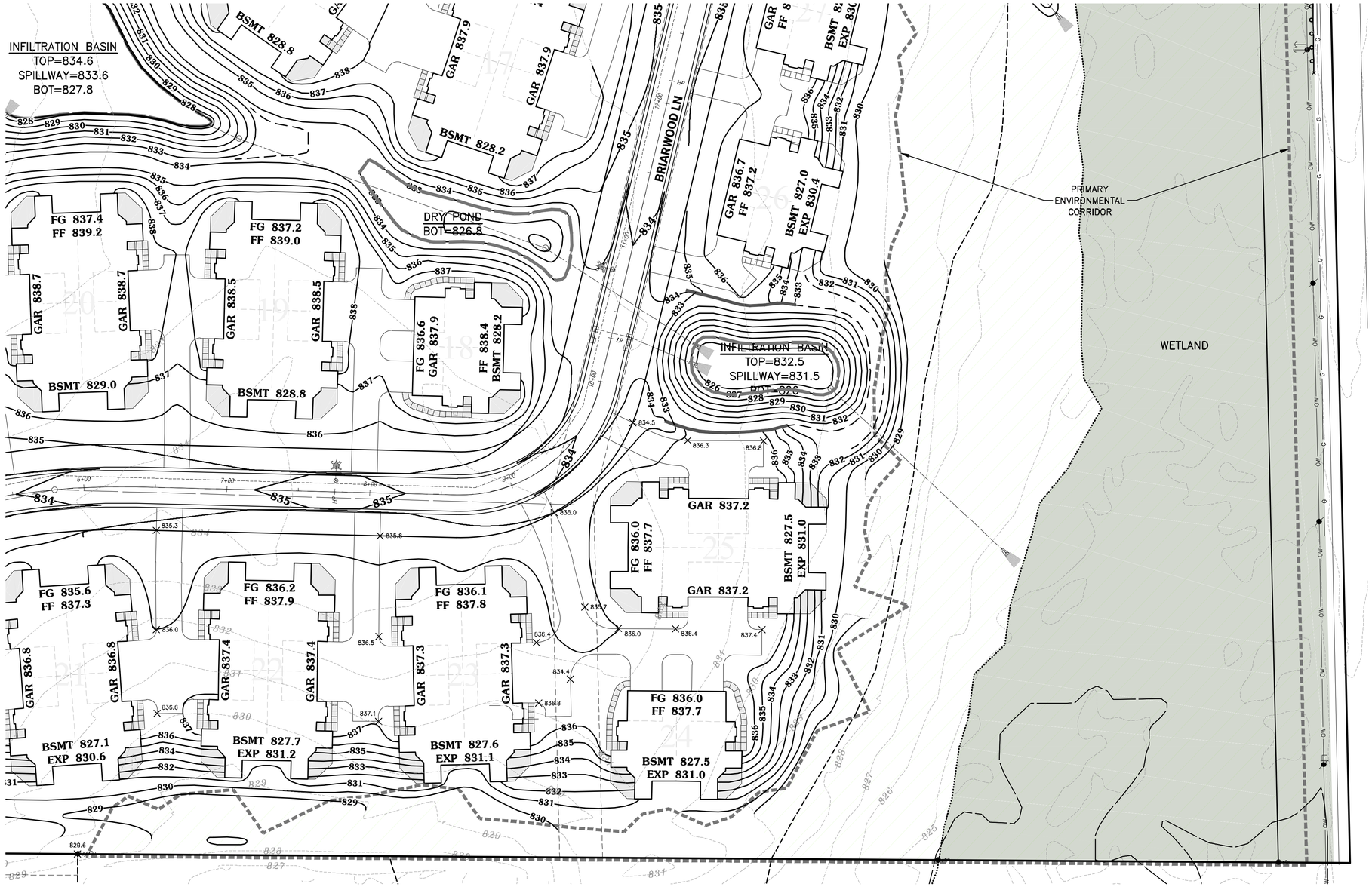
DATE	DESCRIPTION
8/29/25	PRELIMINARY PLAN

DATE:
AUGUST 29, 2025

JOB NUMBER:
25-01-796

DESCRIPTION:
GRADING PLAN

SHEET
C1.7



0 20 40 80

SCALE: 1" = 40' (22"X34")
SCALE: 1" = 80' (11"X17")

GRADING LEGEND:

850	– EXISTING CONTOUR
850	– PROPOSED CONTOUR
850.0	– PROPOSED SPOT ELEVATION
BSMT 850.0	– FINISHED BASEMENT ELEVATION
EXP 850.0	– PROPOSED EXPOSURE GRADE
FF 850.0	– FINISHED FIRST FLOOR ELEVATION
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PROJECT:
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BY: CORNERSTONE DEVELOPMENT
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REVISION HISTORY

DATE	DESCRIPTION
8/29/25	PRELIMINARY PLAN

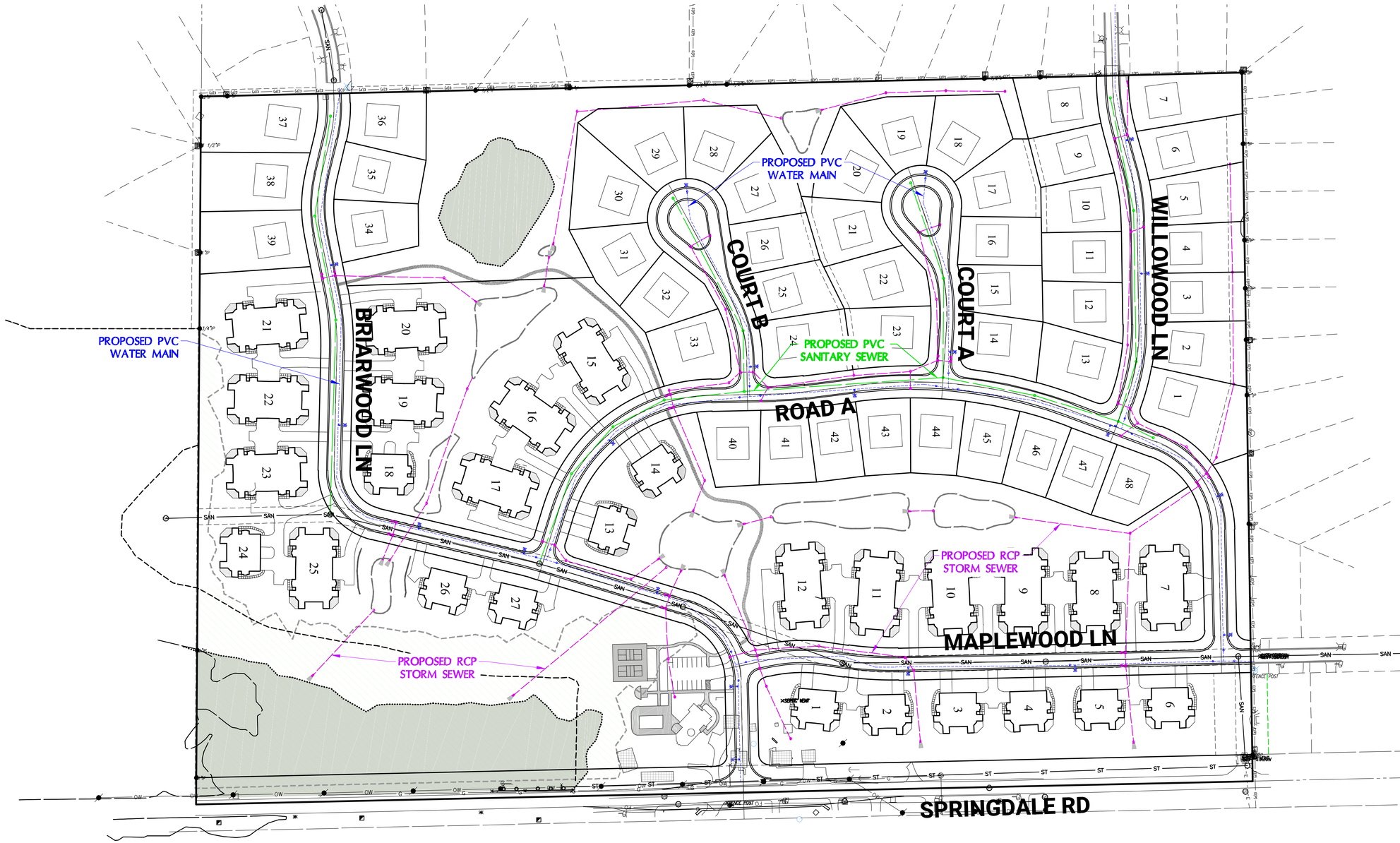
DATE:
AUGUST 29, 2025

JOB NUMBER:
25-01-796

DESCRIPTION:
GRADING PLAN

SHEET
C1.8

X:\2025\25-01-796 ESSER PROPERTY - PEWAUKEE\DRAWINGS\PRELIMINARY\ESSER_C1-GRAD_22X34.DWG



0 50 100 200

SCALE: 1" = 100' (22"X34")
SCALE: 1" = 200' (11"X17")

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X:\2025\25-01-796 ESSER PROPERTY - PEWAUKEE\DRAWINGS\PRELIMINARY\ESSER_C2-UTIL_22X34.DWG

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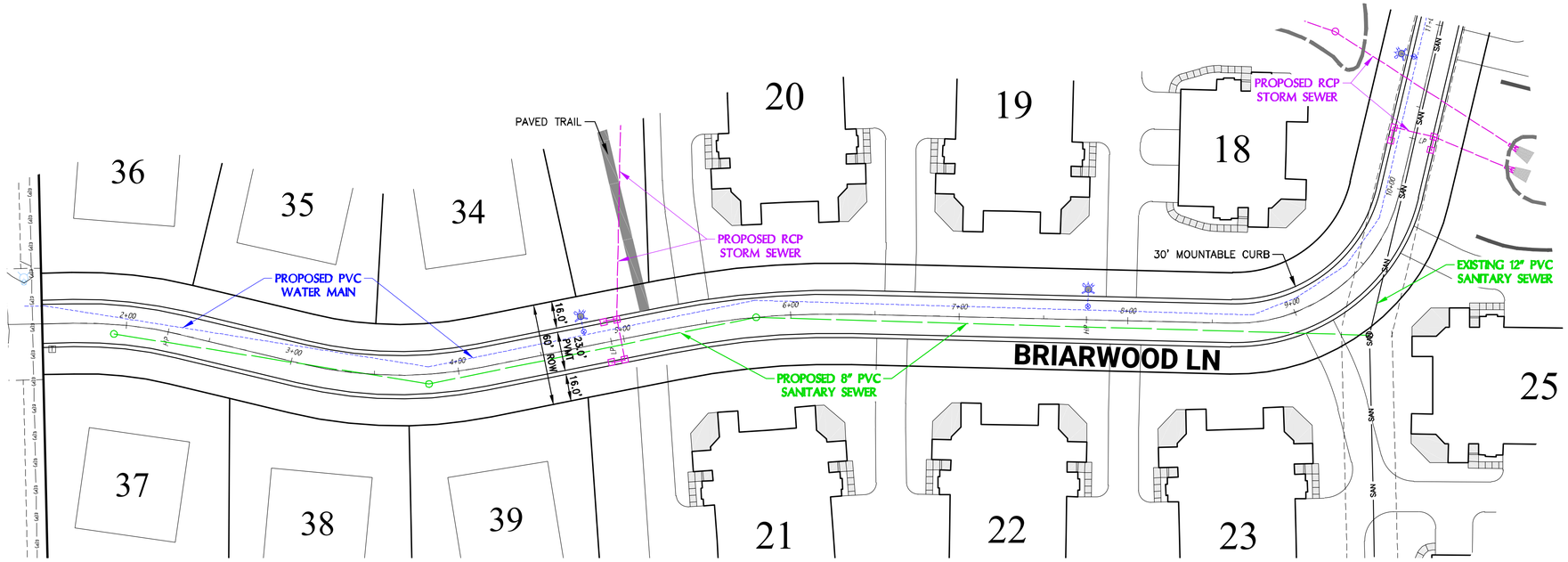
REVISION HISTORY	
DATE	DESCRIPTION
8/29/25	PRELIMINARY PLAN

DATE:
AUGUST 29, 2025

JOB NUMBER:
25-01-796

DESCRIPTION:
UTILITY
SYSTEM PLAN

SHEET
C2.0



0 20 40 80

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SCALE: 1" = 80' (11"X17")

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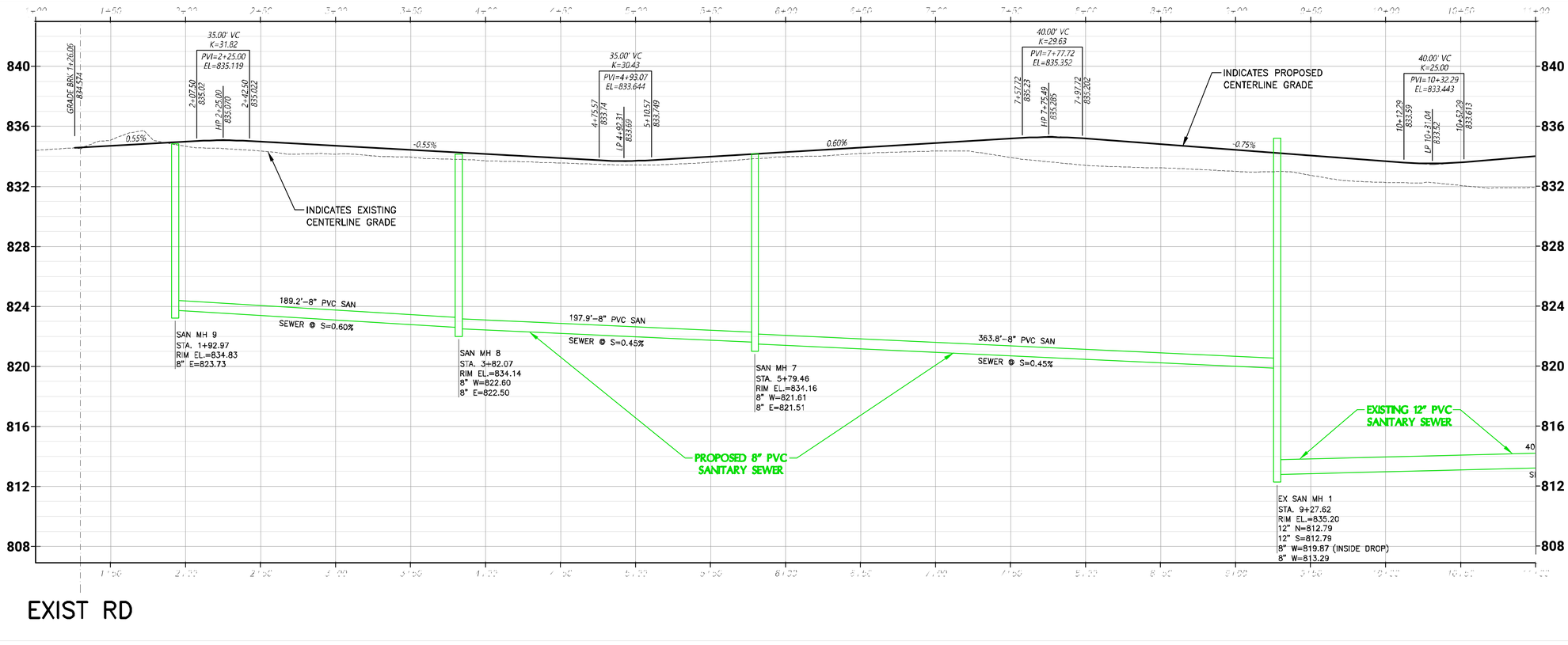

EXIST RD

X:\2025\25-01-796 ESSER PROPERTY - PEWAUKEE\DRAWINGS\PRELIMINARY\ESSER_C2-UTIL_22X34.DWG

JOSHUA D. PUDELKO
E-39220
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BROOKFIELD, WI 53005
PHONE: (262) 790-1480
FAX: (262) 790-1481
EMAIL: jpudelko@trioeng.com

PROJECT:
ESSER PROPERTY
CITY OF PEWAUKEE, WISCONSIN
BY: CORNERSTONE DEVELOPMENT
N63 W23849 MAIN ST.
SUSSEX, WI 53089

REVISION HISTORY

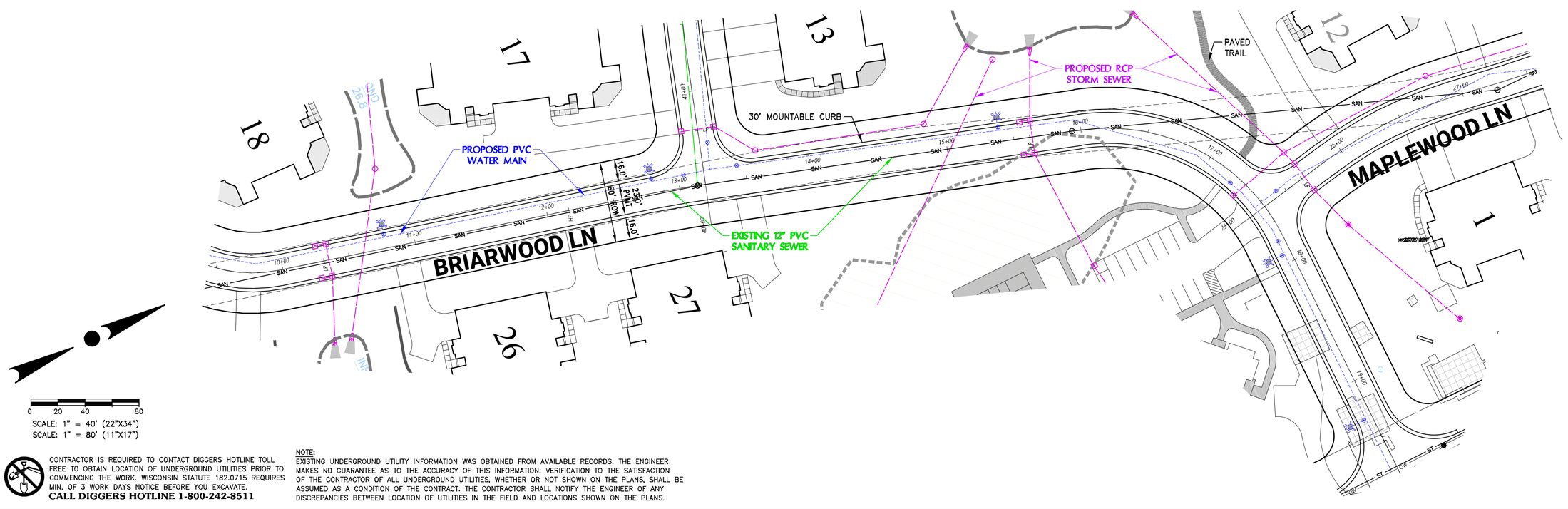
DATE	DESCRIPTION
8/29/25	PRELIMINARY PLAN

DATE:
AUGUST 29, 2025

JOB NUMBER:
25-01-796

DESCRIPTION:
ROADWAY AND SANITARY SEWER PLAN & PROFILE

SHEET
C2.1



0 20 40 80

SCALE: 1" = 40' (22"X34")
SCALE: 1" = 80' (11"X17")

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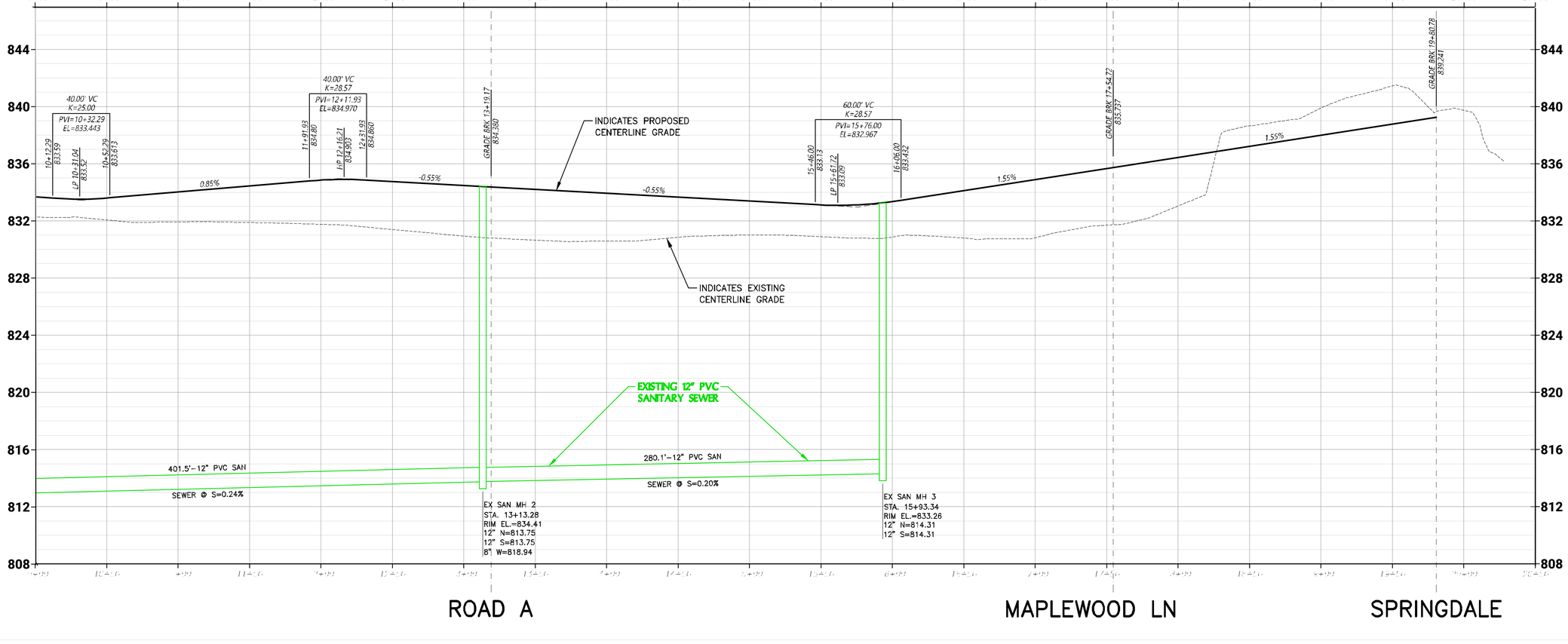

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C2.2

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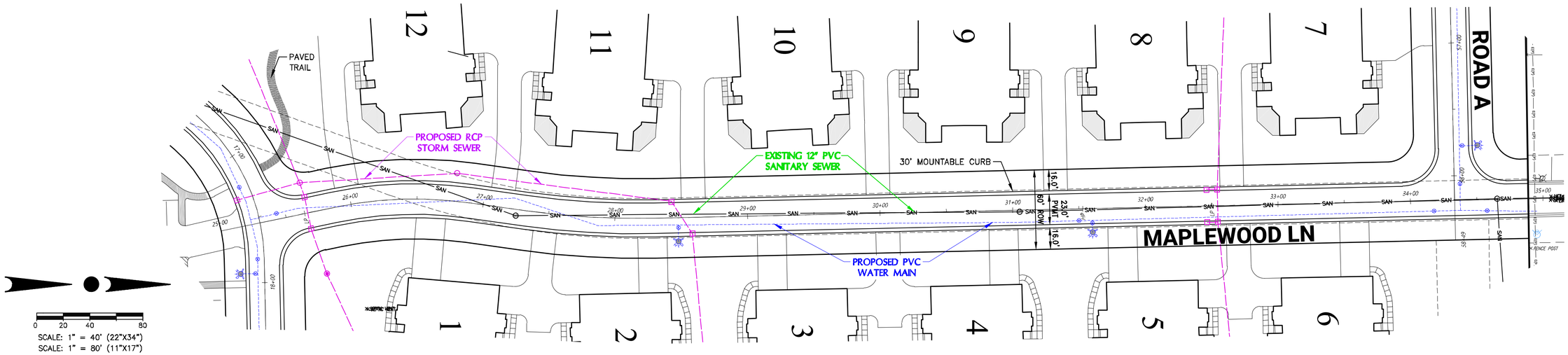

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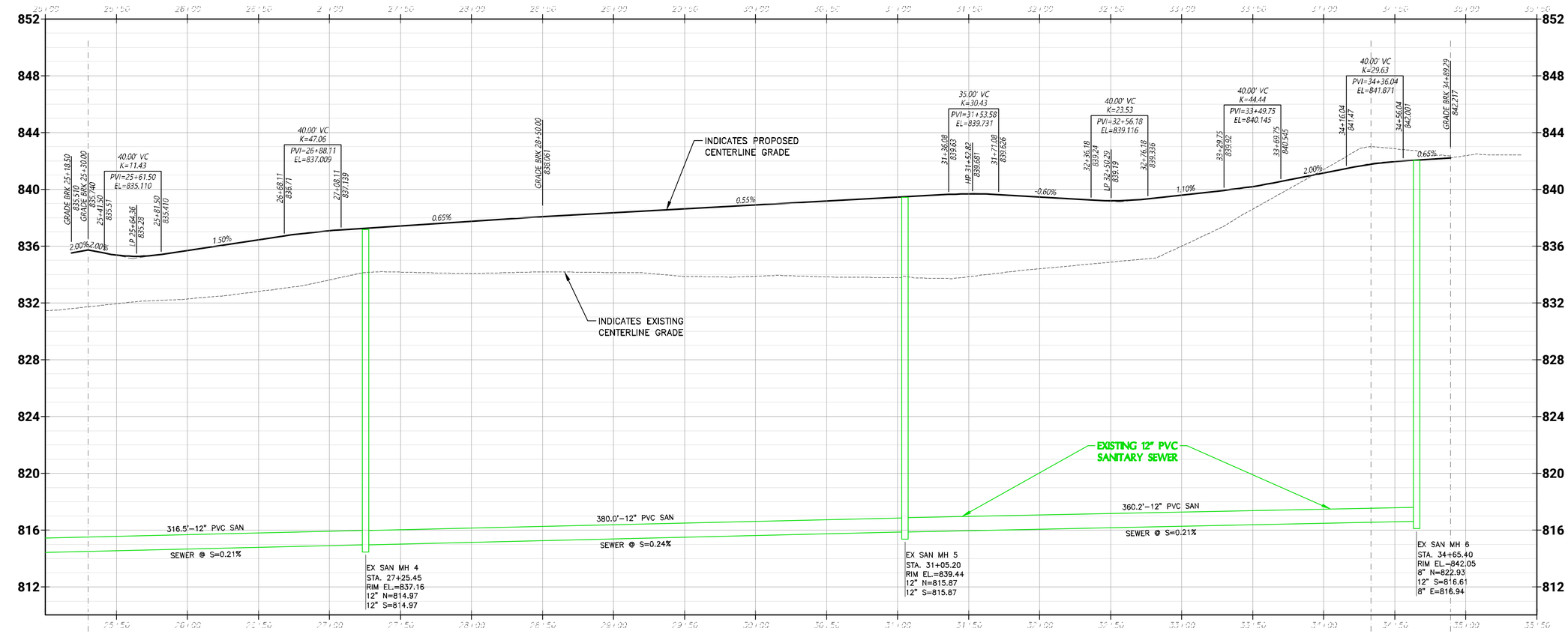

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SHEET
C2.3

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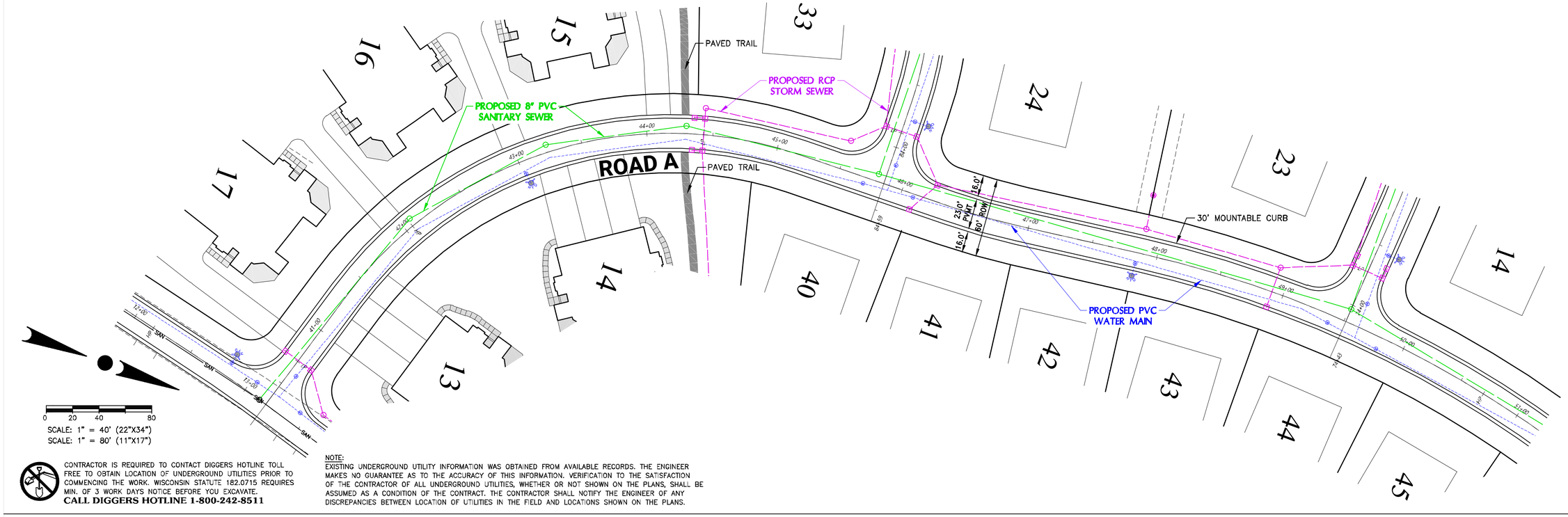
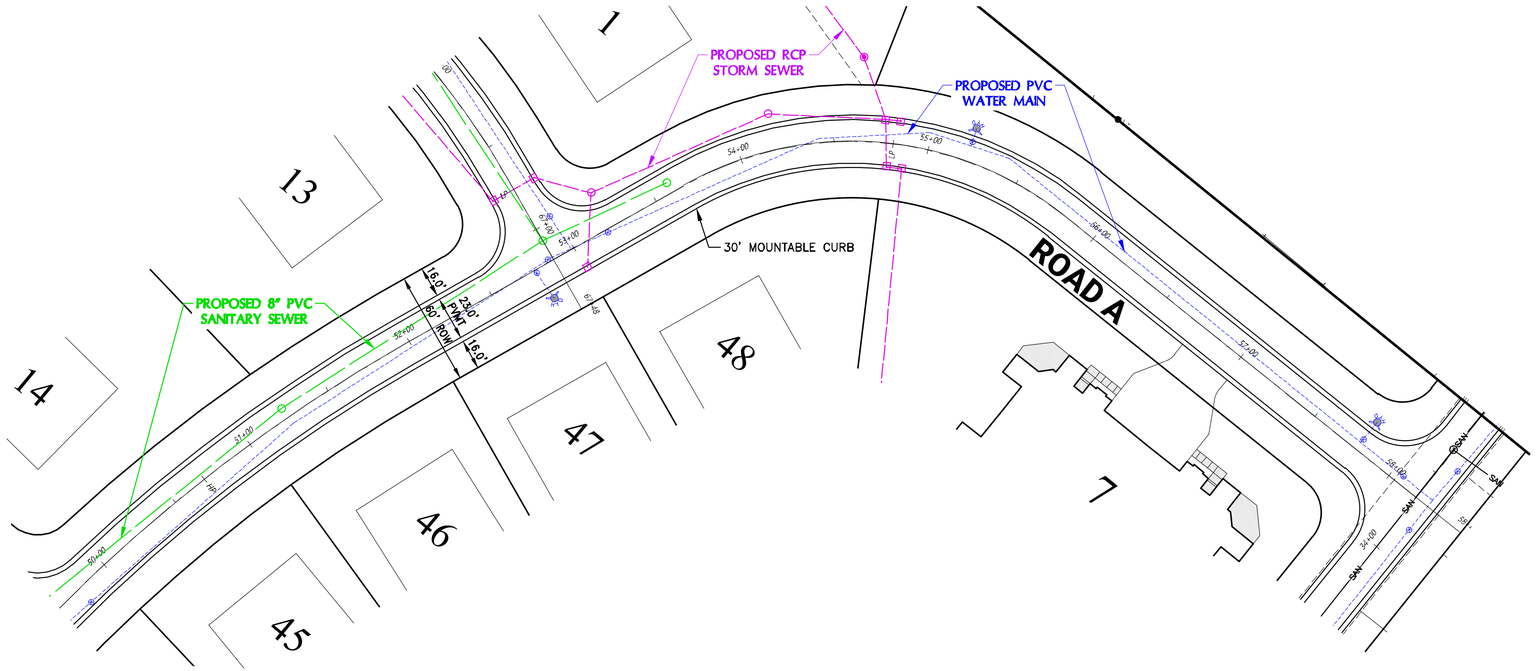

PAVED TRAIL
PROPOSED RCP STORM SEWER
PROPOSED 8" PVC SANITARY SEWER
ROAD A
PAVED TRAIL
30' MOUNTABLE CURB
PROPOSED PVC WATER MAIN
16.0'
23.0' PVMT.
60' ROW
16.0'
SAN
SAN
SAN



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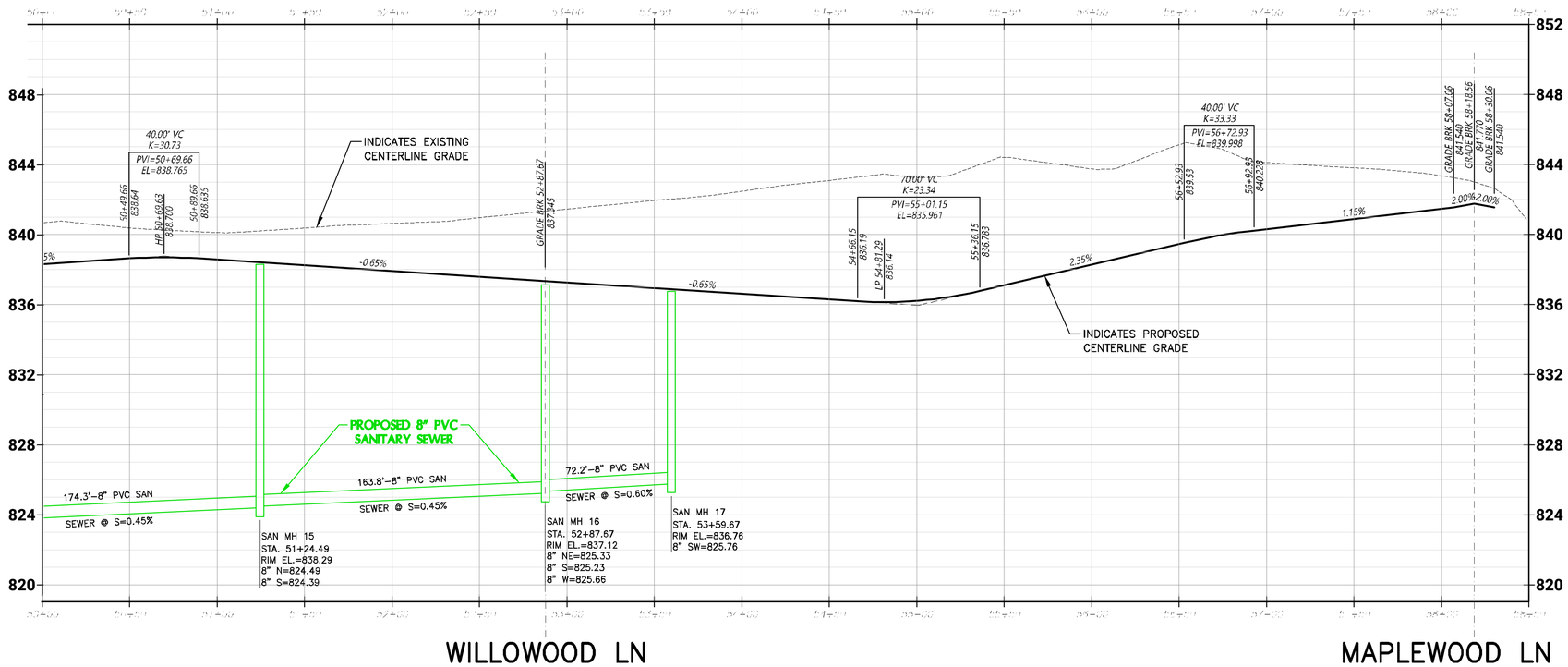

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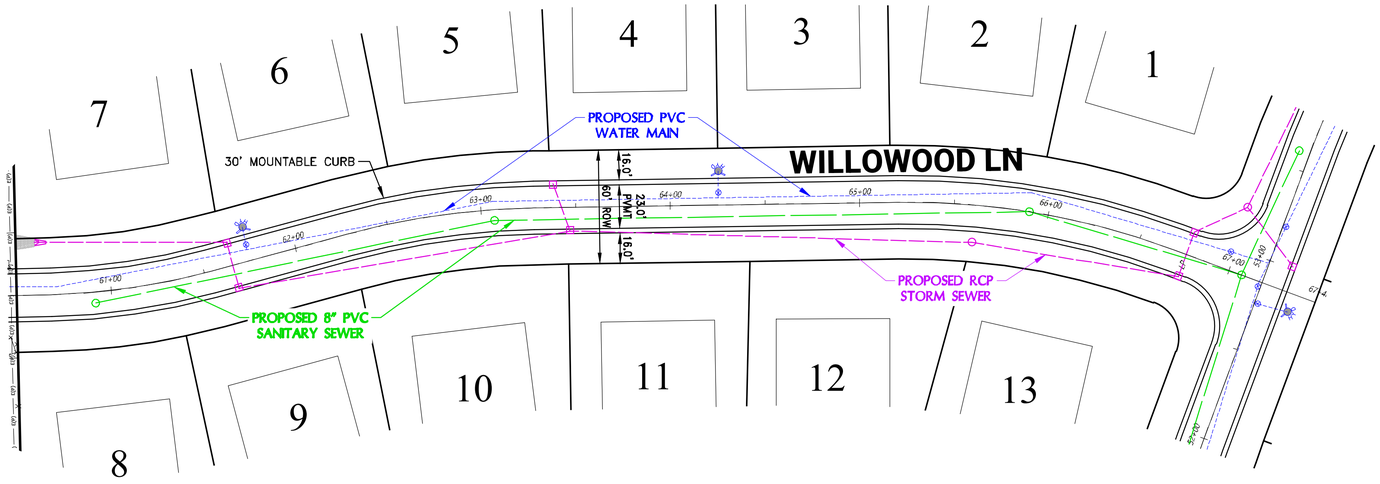
SHEET
C2.5

X:\2025\25-01-796 ESSER PROPERTY - PEWAUKEE\DRAWINGS\PRELIMINARY\ESSER_C2-UTIL_22X34.DWG



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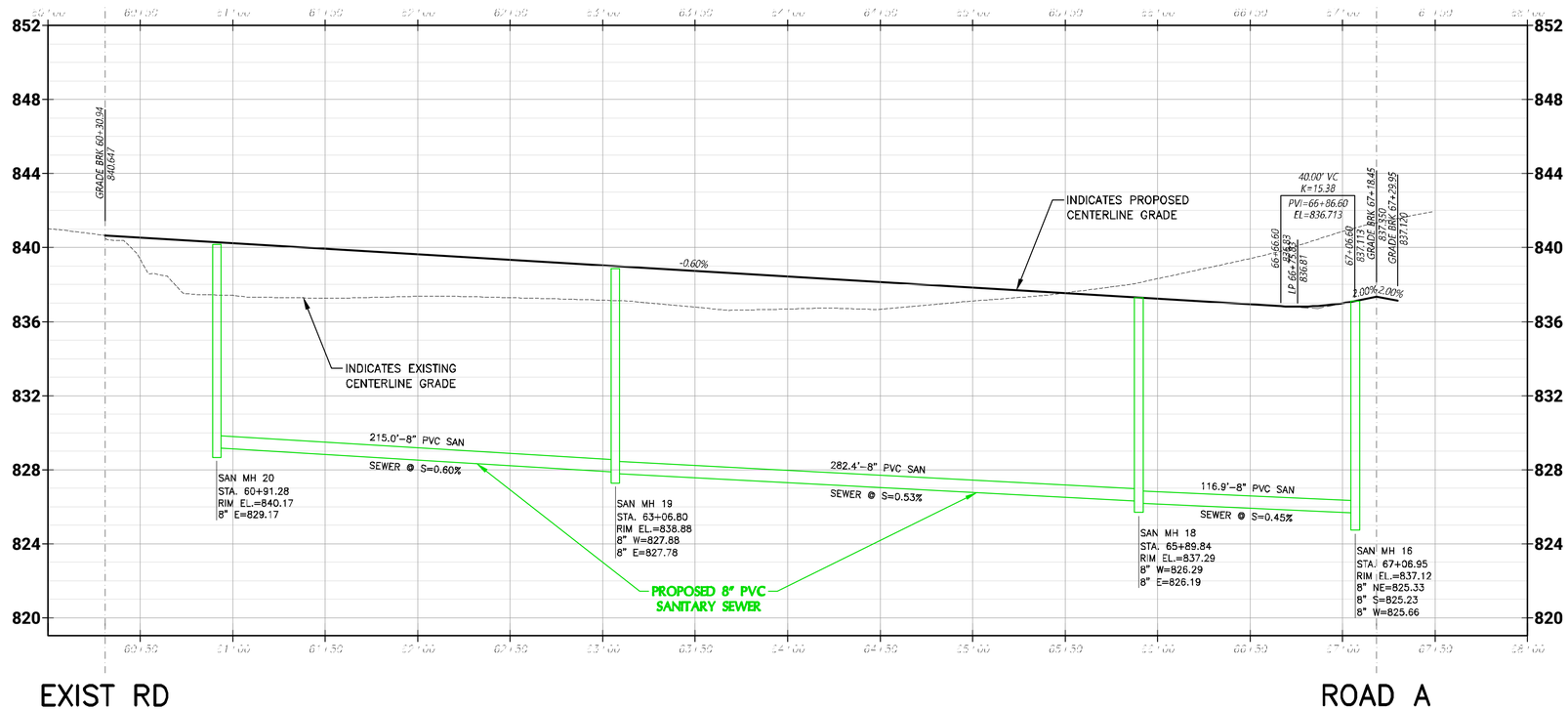

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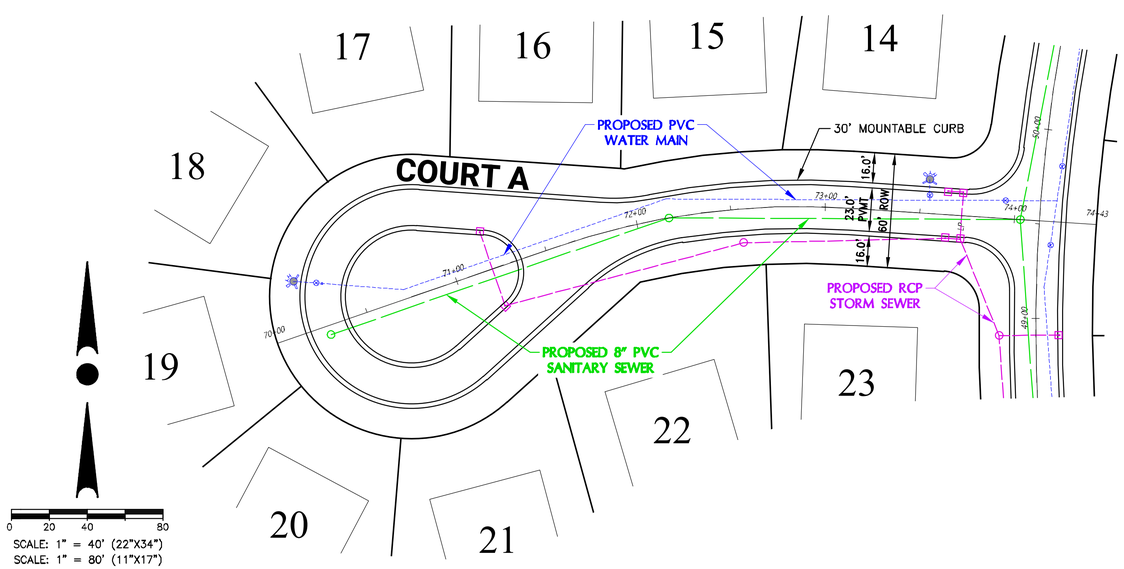

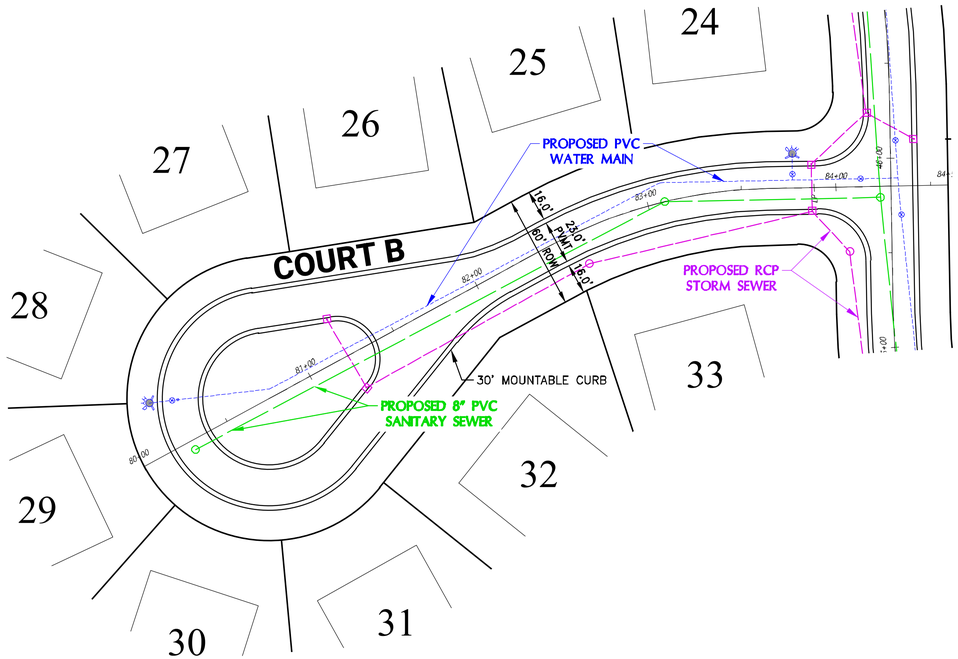

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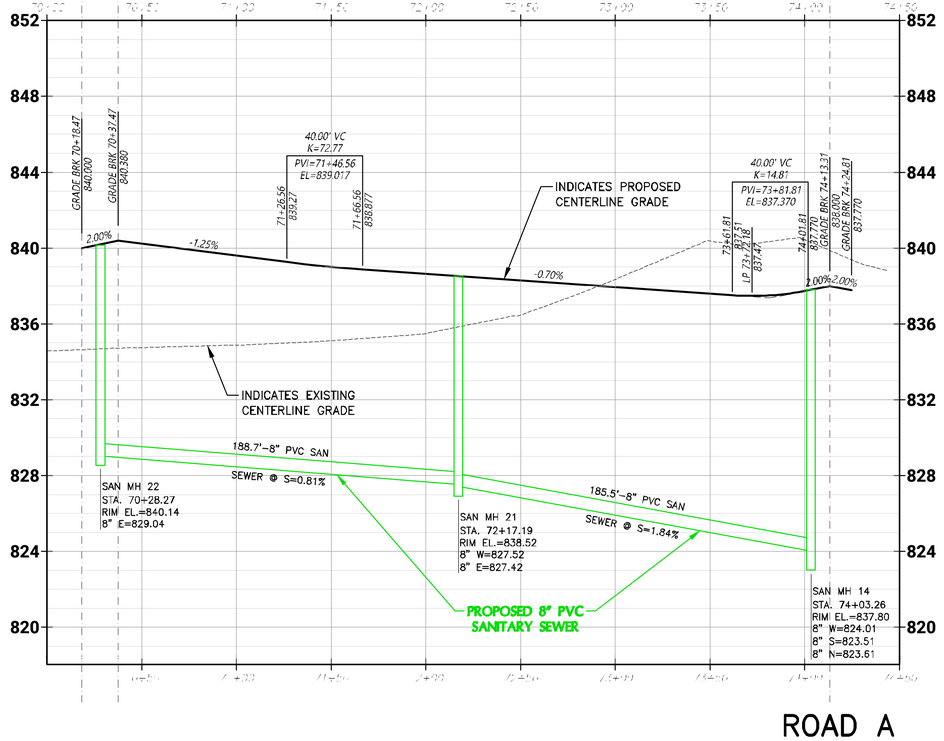
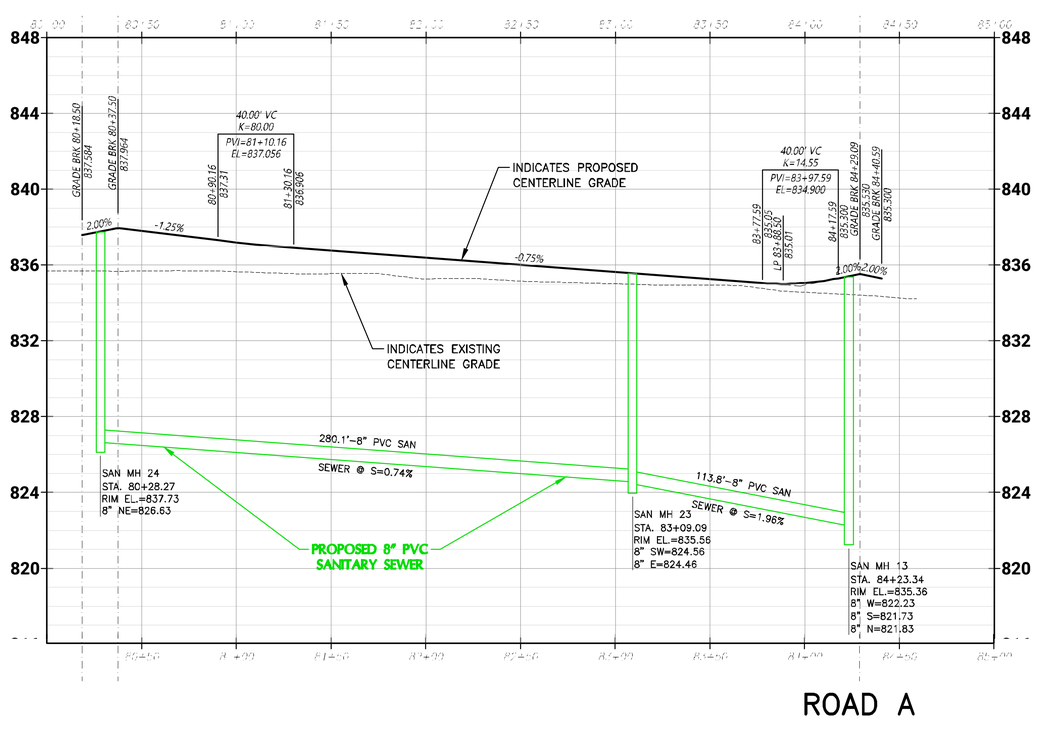


ROAD A



ROAD A

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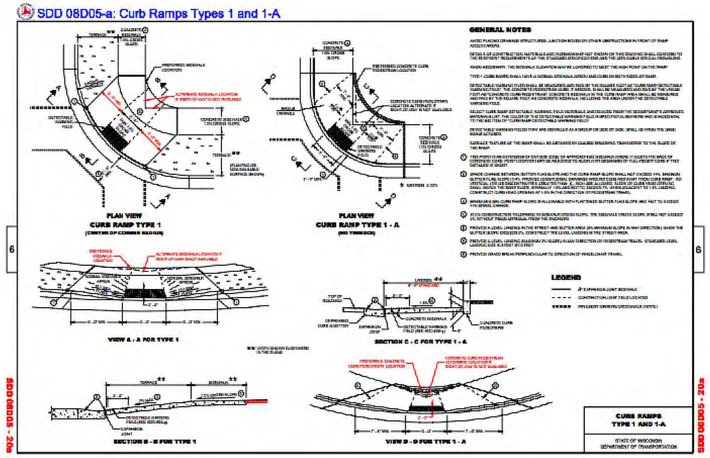
C2.7

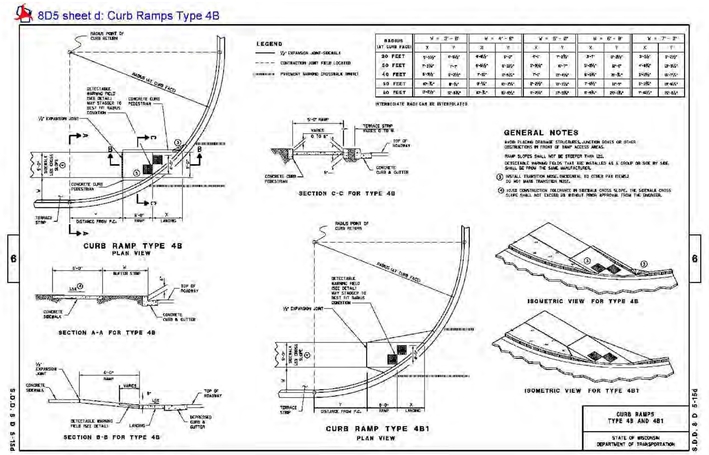
X:\2025\25-01-796 ESSER PROPERTY - PEWAUKEE\DRAWINGS\PRELIMINARY\ESSER_C2-UTIL_22X34.DWG

SDD 08D05-a: Curb Ramps Types 1 and 1-A



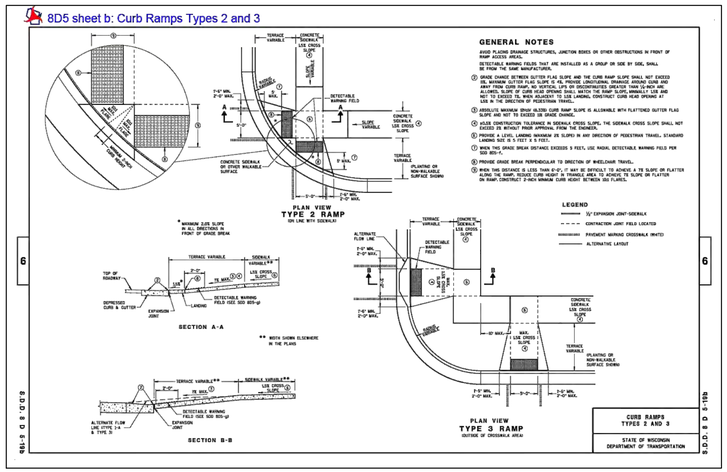
SIDEWALK CURB RAMP TYPE 1 DETAIL
NO SCALE

8D5 sheet d: Curb Ramps Type 4B



SIDEWALK CURB RAMP TYPE 4B1 DETAIL
NO SCALE

8D5 sheet b: Curb Ramps Types 2 and 3



SIDEWALK CURB RAMP TYPE 3 DETAIL
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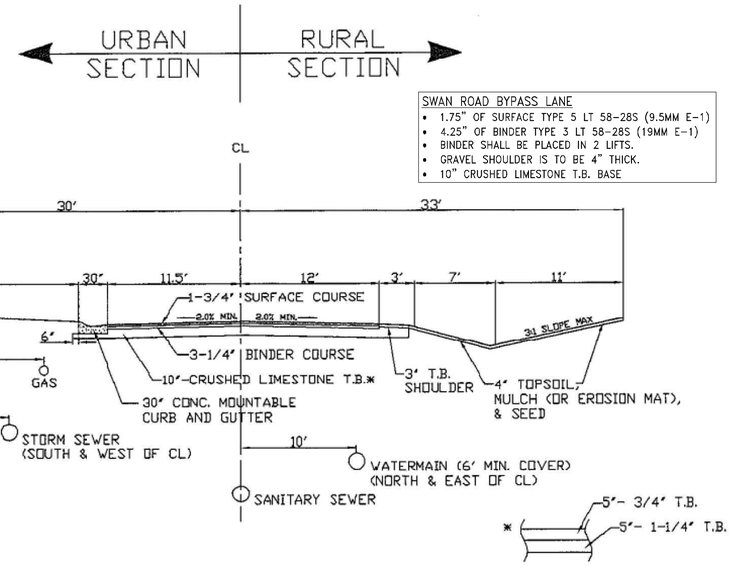
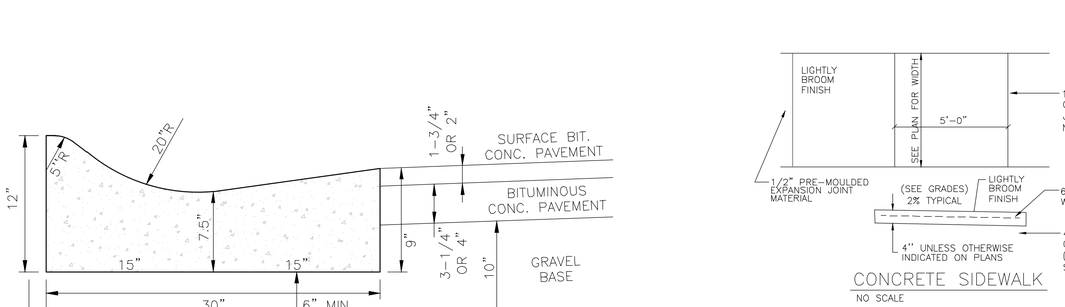


CITY OF PEWAUKEE PUBLIC ROAD DETAIL
NO SCALE



CONCRETE SIDEWALK
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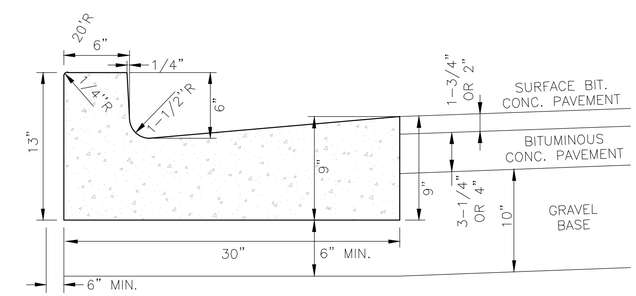
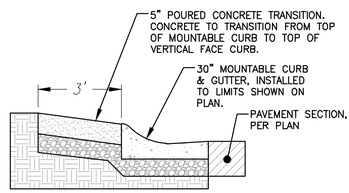
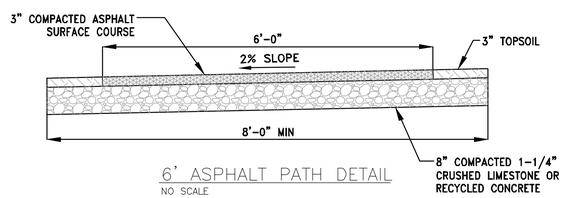


30" MOUNTABLE FACE CURB DETAIL
NO SCALE

30" VERTICAL FACE CURB DETAIL
NO SCALE



BULLNOSE END DETAIL
NO SCALE



6' ASPHALT PATH DETAIL
NO SCALE

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CONSTRUCTION NOTES & DETAILS

SHEET
C3.0

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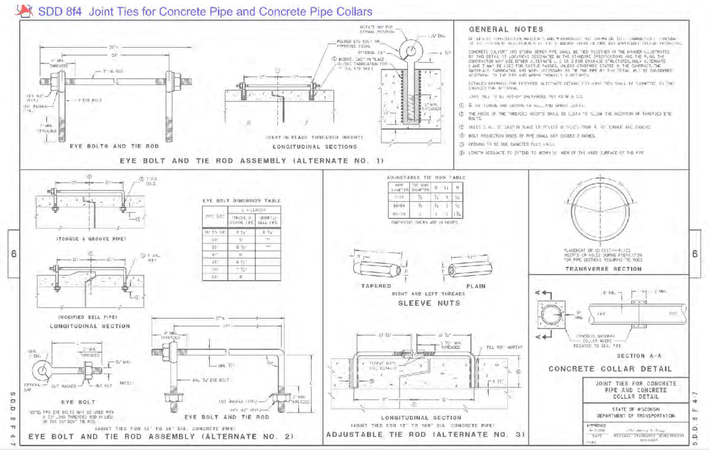


STORM SEWER TIE INSTALLATION DETAIL

NO SCALE

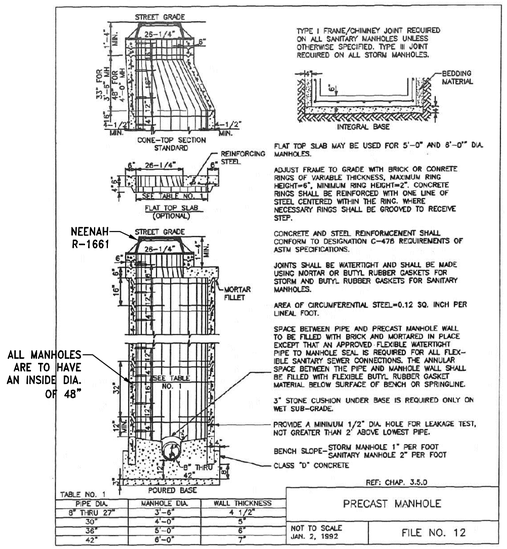


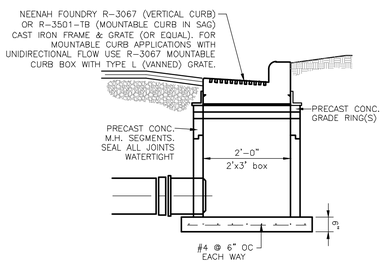
TABLE NO. 1

PIPE DIA.	MANHOLE DIA.	WALL THICKNESS
8" THRU 27"	3'-6"	4 1/2"
30"	4'-0"	5"
36"	5'-0"	6"
42"	6'-0"	7"

SANITARY MANHOLE DETAIL

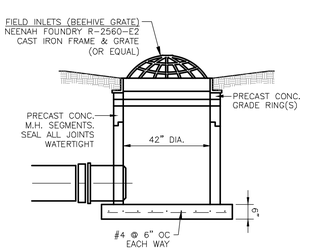
NO SCALE

NOTES:
- ALL SANITARY MANHOLES SHALL BE PROVIDED WITH INTERNAL/EXTERNAL SEALS AND MACWRAP JOINTS.
- WATERPROOF THE EXTERIOR OF MANHOLE WHERE NOTED ON THE PLANS.



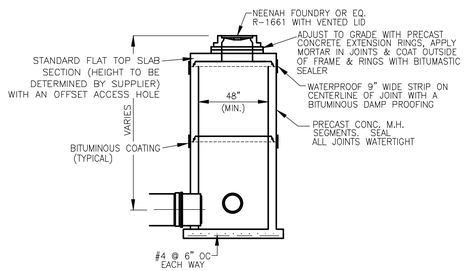
STORM SEWER CATCH BASIN

NO SCALE



STORM SEWER FIELD INLET DETAIL

NO SCALE



STORM MH DETAIL

NO SCALE

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WISCONSIN PROFESSIONAL ENGINEER
TRIO DESIGN • LAND SURVEYING CIVIL ENGINEERING
4100 N. CALHOUN RD., SUITE 300
BROOKFIELD, WI 53005
PHONE: (262) 790-1480
FAX: (262) 790-1481
EMAIL: jpudelko@trioeng.com

PROJECT:
ESSER PROPERTY
CITY OF PEWAUKEE, WISCONSIN
BY: CORNERSTONE DEVELOPMENT
N63 W23849 MAIN ST.
SUSSEX, WI 53089

REVISION HISTORY

DATE	DESCRIPTION
8/29/25	PRELIMINARY PLAN

DATE:
AUGUST 29, 2025

JOB NUMBER:
25-01-796

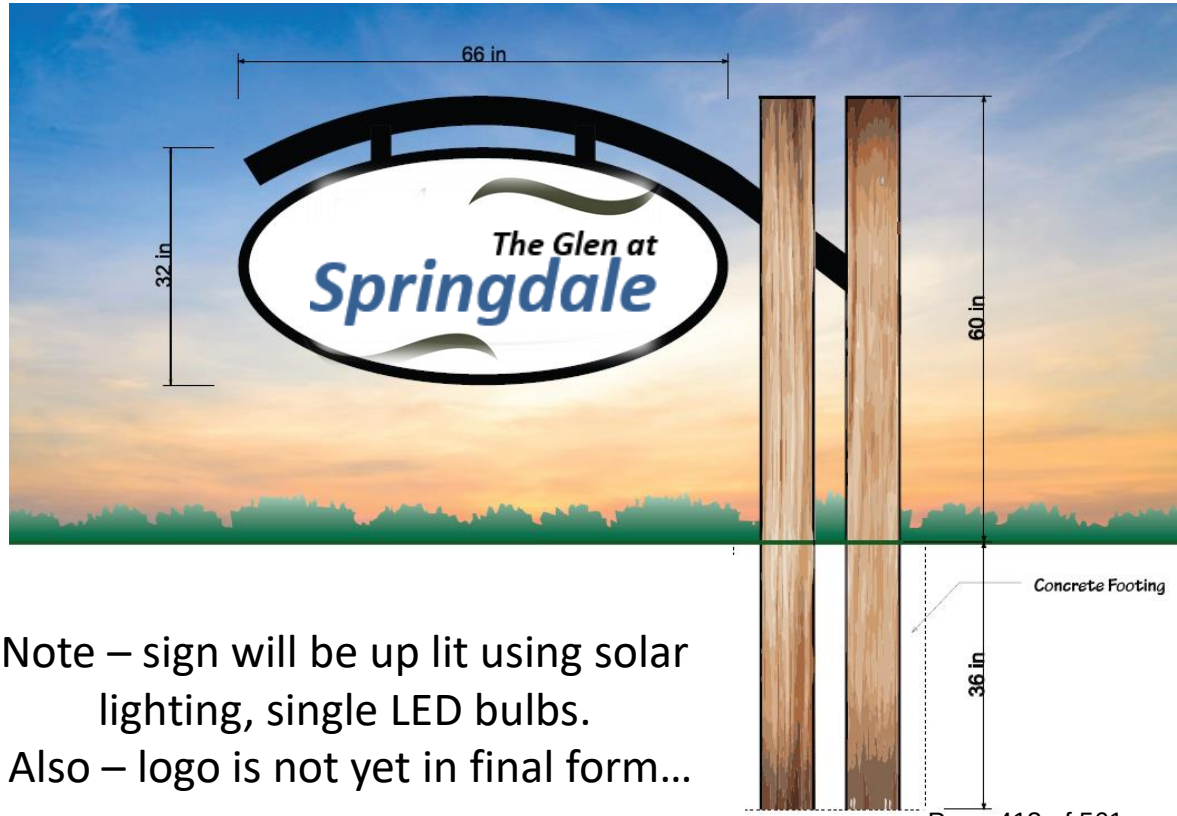
DESCRIPTION:
CONSTRUCTION NOTES & DETAILS

SHEET
C3.1

X:\2025\25-01-796 ESSER PROPERTY - PEWAUKEE\DRAWINGS\PRELIMINARY\ESSER_C3-DET_22X34.DWG

The Glen at Springdale Sign (Draft version)

- SINGLE-SIDED SIGN PANEL & FREE-STANDING STRUCTURE
- 32” X 66” X 2” SAND-BLASTED, CARVED WESTERN RED CEDAR SIGN PANEL WITH INTERNAL BRACING & STRUCTURAL MOUNT-RODS; RAISED LETTERING; PREMIUM SOLID COLOR STAIN & ENAMEL FINISH.
- 8”X8”X92” WHITE OAK TIMBERS (60” ABOVE GROUND) NATURAL PATINA WITH 4”X4”X96” HEAVY WALL SQUARE ALUMINUM TUBE FORMED AS SHOWN, WITH BLACK SATIN POWDER COAT FINISH; THIS WILL BE FIT THRU & SECURED TO OAK TIMBERS; INSTALLED IN LANDSCAPE WITH CONCRETE ANCHOR AND OUT OF VISION TRIANGLE.



Note – sign will be up lit using solar lighting, single LED bulbs.
Also – logo is not yet in final form…

Public Street Length
5,963 lf
36.8 lf/unit

Site Data Table

- Total Area (excluding Springdale Rd ROW)	57.33 acres
- Wetland Area	- 3.33 acres
- Net Upland	54.0 acres
- Proposed Development:	
- Condominium Community	84 units
- Double Duplex = 15 buildings	
- Duplex = 12 buildings	
- Single Family Lots (Rs-6 - 90' wide, 12,500 sf)	48 lots
- TOTAL	162 units

Proposed Zoning

- Condominium Community — Rm-1 PUD*
- Lot Area = 0.5 ac
- Lot Width = 120'
- Setbacks:
  - -- **Front = 24.5' to building, 25' to garage** (*)
  - -- Wetland = 25'
  - -- Side = 40' (*building-building), 25' side
  - -- Rear = 35'
- 2.5 parking spaces/unit

- Single Family — Rs-6
- Lot Area = 12,500 sf
- Lot Width = 90'
- Setbacks:
  - -- Front = 30' -- Wetland = 25'
  - -- Side = 12'
  - -- Rear = 35'

- Wetland — LC

Existing Zoning
- A-2
- Rs-6
- LC

Land Use Plan
- Medium Density Residential

WETLAND DELINEATION NOTE:

Wetland boundaries shown hereon were field delineated by RA Smith (Tina Myers) on July 20, 2021.

P.E.C. DELINEATION NOTE:

P.E.C. Boundaries shown hereon were field delineated by Heartland Ecological Group, Inc. in 2025.

FLOODPLAIN NOTE:

The area labeled Floodplain on this Plat is located in Zone "X" as designated on the Food Insurance Rate Map Number: 55133c0216H dated October 19, 2023. Zone "X" is defined as areas determined to be outside the 0.2% annual chance Floodplain.

SCALE: 1" = 100' (22"X34")
SCALE: 1" = 200' (11"X17")

JOSHUA D. DUDELKO
E-39220
WAUWATOSA, WI
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PROJECT:
ESSER PROPERTY
CITY OF PEWAUKEE, WISCONSIN
BY: CORNERSTONE DEVELOPMENT
N63 W23849 MAIN ST.
SUSSEX, WI 53089

REVISION HISTORY

DATE	DESCRIPTION
8/29/25	PRELIMINARY PLAN
10/03/25	PER CITY REVIEW

DATE: OCTOBER 3, 2025

JOB NUMBER: 25-01-796

DESCRIPTION: PROPOSED SITE PLAN

SHEET C0.2

X:\2025\25-01-796 ESSER PROPERTY - PEWAUKEE\DRAWINGS\PRELIMINARY\ESSER_CO-SITE_22X34.DWG

Esser Development

City of Pewaukee
Waukesha County, Wisconsin

Preliminary

Storm Water Management Plan

Prepared by:

Trio Engineering LLC
4100 N. Calhoun Road
Brookfield, Wisconsin 53005
Contact: Josh Pudelko, P.E.
Telephone: (262) 790-1480
Email: info@trioeng.com

Sound Stormwater Design LLC
Contact: Jayme Sisel, P.E.
Telephone: (414) 286-4739
Email: jayme.sisel@soundstormwater.com

September 2, 2025

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Owner/ Developer 1

Design Requirements 1

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APPENDIX B Post-Development Hydrologic Analysis

APPENDIX C Treatment Analysis

APPENDIX D Soil Survey & Preliminary Soil Boring Data

Introduction

The "Esser Development" is a proposed multi-family and single-family residential development on a 58-acre parcel located at the address W220 N2475 Springdale Road, in the City of Pewaukee, Waukesha County, Wisconsin.

This report documents the design computations for existing and proposed conditions and presents a plan for stormwater management that meets the requirements of the City of Pewaukee and the Wisconsin Department of Natural Resources (WDNR).

Owner/ Developer

The owner, developer, and responsible entity for installation and maintenance of the stormwater management practices:

Cornerstone Development
N63 W23849 Main Street
Sussex, Wisconsin 53089
Contact: John Wahlen
Email: jw@cornerstonedevelopment.com
Phone: (262) 932-4188

Design Requirements

The following design standards have been used to develop the stormwater management plan for the "Esser Development" project:

- City of Pewaukee Stormwater Management Ordinance: Chapter 180, Erosion Control and Stormwater Management

- Wisconsin Department of Natural Resources (WDNR) Technical Standards, NR151, and NR216

- Summary of design requirements:
    - Peak Discharge:
        - The peak flow discharge rates of stormwater runoff from the site under the post-development site conditions shall not exceed the rates under the pre-development conditions for the 1, 2, 10, and 100-yr, 24-hr design storms.
    - Water Quality (Total Suspended Solids): Reduce to the maximum extent practicable the total suspended solids load by 80% for new development sites, based on an average annual rainfall, as compared to no runoff management controls.
    - Infiltration: For low impervious developments one of the following shall be met:
        - Infiltrate sufficient runoff volume so that the post-development infiltration volume shall be at least 90% of the pre-development infiltration volume, based on an average annual rainfall.
        - No more than 1% of the project site is required as an effective infiltration area.

Analysis Overview

The Stormwater Management Plan for the "Esser Development" has been designed in accordance with the City of Pewaukee's requirements and all applicable state requirements. Existing and proposed stormwater runoff conditions for the site were analyzed for**:** runoff volume, peak volume, discharge, detention basin storage capacity required, outlet structure and storm sewer system requirements. The software package used for modeling and analysis was HydroCAD Version 10.10 software by HydroCAD Software Solutions. HydroCAD uses NRCS methods to generate runoff and pond routing hydrographs. The model's capabilities include modeling simple drainage basins, combining hydrographs to determine runoff and storage requirements, and detention basin and outlet structure sizing.

MSE3 rainfall distributions were used for modeling the 1, 2, 10 and 100-year, 24-hour storm events. The corresponding rainfall data used for modeling was taken from the National Oceanic and Atmospheric Administration (NOAA) Atlas 14 Precipitation Frequency Tables for Wisconsin Counties and is shown in the following table.

TABLE 1
Design Rainfall Values

Storm Recurrence Interval	24-hour Rainfall Depths
1-year	2.38 inches
2-year	2.69 inches
10-year	3.80 inches
100-year	6.17 inches

Soil types for the site were determined from the NRCS Soil Survey Maps for Waukesha County. The Soil Survey identifies the soils at the site as mostly Type C soils (Theresa silt loam and Mayville silt loam), Type C/D soils (Brookston silt loam, Colwood silt loam, and Edwards muck), and Type B/D soils (Lamartine silt loam) with limited areas of Type D soils (Hochheim loam) and Type B soils (Fox silt loam). Based on this, a hydrologic soil group Type C was used to determine the runoff curve numbers for the site.

Pre-Development Watershed Description

The existing site consists of a 58-acre parcel located at W220 N2475 Springdale Road, in the City of Pewaukee, Wisconsin. The property is primarily vacant agricultural land with some areas of trees and an existing wetland area. A former farmstead and residential homes remain along the eastern boundary fronting Springdale Road. Surface drainage generally flows south to southeast, ultimately discharging into the existing wetland at the southeast corner of the site. The entire property drains to an unnamed tributary to the Fox River.

Figure 1, Pre-Development Conditions Plan, shows the location of the project site, land cover types, drainage subareas and flow paths. The following table summarizes the results of the stormwater model for pre-development conditions. Detailed hydrological computations are included in Appendix A.

TABLE 2
Pre-Development Site Conditions

Subarea or Junction	Description	Total Area (acres)	Impervious Area (acres)	Time of Conc. (min.)	Peak Flow Rate (cfs)			
					1-year	2-year	10-year	100-year
1	Subarea	18.89	0.09	16	10.38	14.63	32.39	77.25
1D	Existing Depression	-	-	-	0.00	0.00	0.00	12.45
2	Subarea	11.35	0.00	12	5.66	8.40	19.77	49.14
2D	Existing Depression	-	-	-	0.00	0.00	0.00	0.00
3	Subarea	36.42	0.52	38	9.82	14.28	33.86	85.65
1L	**Pre-Development Outflow**	**66.66**	**0.61**	**-**	**9.82**	**14.28**	**33.86**	**85.65**

Post-Development Site Drainage Description

The proposed development plan includes the construction of twenty-seven multi-family condominium units, a clubhouse with a parking lot and an outdoor sport court and pool, and forty-eight single-family residential homes. Calculations for the single-family lots are based on a 5,200 square-foot impervious footprint per lot. General assumptions were made for the types of impervious development per lot and are as follows: 20% drive, 18% sidewalk/patio, and 62% roof.

Stormwater management for the development will be provided by two (2) wet detention ponds, two (2) bioretention basins, and three (3) infiltration basins. The proposed development plan will disturb approximately 54 acres of area and will result in a net increase in impervious area of approximately 18.88 acres.

Figure 2, Post-Development Conditions Plan, shows the proposed land cover, grading, drainage boundaries, flow paths, and proposed site and stormwater management improvements. The following table summarizes the results of the hydrologic analysis for post-development conditions. Detailed hydrological computations are included in Appendix B.

TABLE 3
Post-Development Site Conditions

Subarea, Junction or Pond	Description	Total Area (acres)	Impervious Area (acres)	Time of Conc. (min.)	Peak Flow Rate (cfs)			
					1-year	2-year	10-year	100-year
1	Subarea	17.17	4.50	19	17.47	22.11	39.92	80.52
2	Subarea	2.38	0.52	7	3.20	4.13	7.75	16.19
1P/2B	Pond 1P & Infiltration Basin 2B	-	-	-	4.27	5.23	7.13	24.63
3	Subarea	16.38	7.78	23	19.56	23.97	40.38	76.37
3P	Pond 3P	-	-	-	0.72	1.36	8.57	51.86
4	Subarea	7.02	1.11	17	6.60	8.49	15.88	33.14
4B	Infiltration Basin 4B	-	-	-	3.72	4.96	7.93	8.80
5	Subarea	5.86	0.45	10	5.82	7.71	15.24	33.23
5D	Existing Depression 5D	-	-	-	0.33	0.34	0.43	0.73
6	Subarea	4.64	1.98	10	7.45	9.24	15.95	30.85
6B	Biofiltration Basin 6B	-	-	-	0.54	0.58	0.88	1.26
7	Subarea	0.82	0.28	6	1.39	1.74	3.09	6.13
7B	Infiltration Basin 7B	-	-	-	0.44	0.47	0.55	1.35
8	Subarea	2.71	1.53	10	5.49	6.62	10.71	19.53
8B	Biofiltration Basin 8B	-	-	-	1.43	1.70	2.59	3.62
9	Subarea	9.68	1.11	28	4.65	6.35	13.44	30.97
1L	**Post-Development Outflow**	**66.66**	**19.26**	**-**	**6.57**	**8.53**	**17.74**	**84.15**

Stormwater Detention Basin Design & Summary

The Stormwater Management Plan proposes two (2) wet detention ponds, two (2) bioretention basins, and three (3) infiltration basins as the primary means of stormwater management for the site. The ponds and basins have been designed with 4:1 side slopes, 10-foot top of berm widths, and overflow spillways set above the 100-year high water level.

Figure 2, Post-Development Conditions Plan, shows the location of the project site, land cover types, drainage subareas, flow paths, and proposed stormwater management improvements. The following table summarizes the results of the stormwater model for post-development conditions. Detailed hydrological computations are included in Appendix B.

TABLE 4
Routing Analysis Summary

Pond 1P & Infiltration Basin 2B

Pond Details:
Bottom elevation = 824.1
Normal water elevation = 829.1
Top of berm elevation = 834.5

Basin Details:
Bottom elevation = 829.0
Top of berm elevation = 834.5

Pond Outlet Control:
6-inch diameter culvert pipe at I.E. 829.1
100-foot spillway at elevation = 830.8

Basin Outlet Control:
0.13 inch/hour native infiltration rate (Table 2)
36-inch diameter outlet pipe at I.E. 829.0
10-foot spillway at elevation = 833.5

	1-year Storm	2-year Storm	10-year Storm	100-year Storm
Peak Inflow (cfs)	18.77	23.76	42.90	86.71
Peak Outflow (cfs)	4.27	5.23	7.13	24.63
Max Water Surface Elev.	830.82	831.13	832.12	833.46
Max Storage Volume (ac-ft)	1.13	1.36	2.21	3.73

Pond 3P

System Details:
Bottom elevation = 822.8
Normal water elevation = 827.8
Top of berm elevation = 834.2

Outlet Control:
4-inch diameter orifice at I.E. 827.8
12-inch sharp-crested weir at I.E. 830.8
60-inch horizontal grate at elevation 832.0
36-inch diameter outlet pipe at I.E. 827.8
15-foot spillway at elevation = 833.2

	1-year Storm	2-year Storm	10-year Storm	100-year Storm
Peak Inflow (cfs)	23.41	29.06	46.50	76.37
Peak Outflow (cfs)	0.72	1.36	8.57	51.86
Max Water Surface Elev.	830.82	831.14	832.18	833.19
Max Storage Volume (ac-ft)	1.29	1.46	2.05	2.74

Infiltration Basin 4B

System Details:
Bottom elevation = 831.3
Top of berm elevation = 836.0

Outlet Control:
0.13 inch/hour native infiltration rate (Table 2)
18-inch diameter outlet pipe at I.E. 831.3
10-foot spillway at elevation = 835.0

	1-year Storm	2-year Storm	10-year Storm	100-year Storm
Peak Inflow (cfs)	6.60	8.49	15.88	33.14
Peak Outflow (cfs)	3.72	4.96	7.93	8.80
Max Water Surface Elev.	832.32	832.52	833.35	834.95
Max Storage Volume (ac-ft)	0.12	0.15	0.29	0.83

TABLE 4
Routing Analysis Summary

Existing Depression 5D		Outlet Control: 0.13 inch/hour native infiltration rate (Table 2)		
System Details: Bottom elevation = 829.0; Top of berm elevation = 834.5		4-inch diameter orifice at I.E. 829.0; 36-inch horizontal grate at elevation 832.5; 12-inch diameter outlet pipe at I.E. 829.0; 100-foot spillway at elevation = 833.5		
	1-year Storm	2-year Storm	10-year Storm	100-year Storm
Peak Inflow (cfs)	6.79	9.35	19.72	40.83
Peak Outflow (cfs)	0.33	0.34	0.43	0.73
Max Water Surface Elev.	830.09	830.32	831.10	832.55
Max Storage Volume (ac-ft)	0.56	0.76	1.57	3.52
Bioretention Basin 6B		Outlet Control: 0.13 inch/hour native infiltration rate (Table 2)		
System Details: Bottom of engineered soil elevation = 827.8; Top of engineered soil elevation = 829.3; Top of berm elevation = 834.6		4-inch diameter underdrain at I.E. 827.8; 4-inch diameter orifice at I.E. 829.8; 36-inch horizontal grate at elevation 832.0; 12-inch diameter outlet pipe at I.E. 827.8; 10-foot spillway at elevation = 833.6		
	1-year Storm	2-year Storm	10-year Storm	100-year Storm
Peak Inflow (cfs)	7.57	9.41	16.08	30.85
Peak Outflow (cfs)	0.54	0.58	0.88	1.26
Max Water Surface Elev.	829.63	829.84	830.46	831.89
Max Storage Volume (ac-ft)	0.26	0.34	0.58	1.25
Infiltration Basin 7B		Outlet Control: 0.13 inch/hour native infiltration rate (Table 2)		
System Details: Bottom elevation = 831.0; Top of berm elevation = 834.5		4-inch diameter orifice at I.E. 831.0; 36-inch horizontal grate at elevation 833.25; 10-foot spillway at elevation = 833.5		
	1-year Storm	2-year Storm	10-year Storm	100-year Storm
Peak Inflow (cfs)	1.39	1.74	3.09	6.13
Peak Outflow (cfs)	0.44	0.47	0.55	1.35
Max Water Surface Elev.	832.09	832.25	832.71	833.33
Max Storage Volume (ac-ft)	0.01	0.02	0.05	0.11
Bioretention Basin 8B		Outlet Control: 0.13 inch/hour native infiltration rate (Table 2)		
System Details: Bottom of engineered soil elevation = 826.0; Top of engineered soil elevation = 827.5; Top of berm elevation = 832.5		6-inch diameter underdrain at I.E. 826.0; 6-inch diameter orifice at I.E. 828.5; 36-inch horizontal grate at elevation 831.25; 12-inch diameter outlet pipe at I.E. 826.0; 10-foot spillway at elevation = 831.5		
	1-year Storm	2-year Storm	10-year Storm	100-year Storm
Peak Inflow (cfs)	6.31	7.51	11.64	20.75
Peak Outflow (cfs)	1.43	1.70	2.59	3.62
Max Water Surface Elev.	828.53	828.78	829.59	831.27
Max Storage Volume (ac-ft)	0.14	0.17	0.28	0.57

Peak Discharge Summaries

The stormwater management system will maintain post-development peak discharge rates to be no greater than pre-development discharge rates for the 1, 2, 10, and 100-year, 24-hour design storms. This is in accordance with the City of Pewaukee's stormwater discharge criteria. The following table compares the results of the analysis from a peak discharge standpoint.

TABLE 5
Comparison of Peak Discharge

	Pre-Development		Post-Development
1-year	9.82 cfs	>	6.57 cfs
2-year	14.28 cfs	>	8.53 cfs
10-year	33.86 cfs	>	17.74 cfs
100-year	85.65 cfs	>	84.15 cfs

Water Quality

The City of Pewaukee requires new development sites to be designed to remove 80 percent of TSS, based on an average annual rainfall as compared to no runoff management controls. Stormwater quality was analyzed using winSLAMM Version 10.5.0 software, developed by Robert Pitt and John Voorhees. The results of the winSLAMM analysis indicate that approximately 80.0 percent of TSS will be removed from stormwater as a result of the proposed bioretention and infiltration basins. In addition, approximately 62.6 percent of total phosphorus will be removed. Detailed computations are included in Appendix C.

Infiltration

The City of Pewaukee requires low imperviousness developments to infiltrate sufficient runoff volume so that the post-development infiltration volume is at least 90% of the pre-development infiltration volume, based on an average annual rainfall. However, no more than 1% of the project site is required as an effective infiltration area.

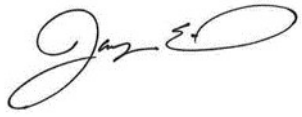
The development plan will disturb approximately 54 acres of area. In accordance with the City's ordinance, the maximum effective infiltration area required is approximately 0.54 acres (1% of the project site). The two proposed bioretention basins and three infiltration basins will provide a total effective infiltration area of approximately 0.86 acres which exceeds the 1% requirement. Based on this, the site meets the requirements for infiltration.

Conclusion

The proposed development will maintain compliance with the City of Pewaukee and the WDNR's requirements for control of stormwater quantity, quality, and infiltration. We request, on behalf of Cornerstone Development, approval of this Stormwater Management Plan to allow for construction of the Esser Development.

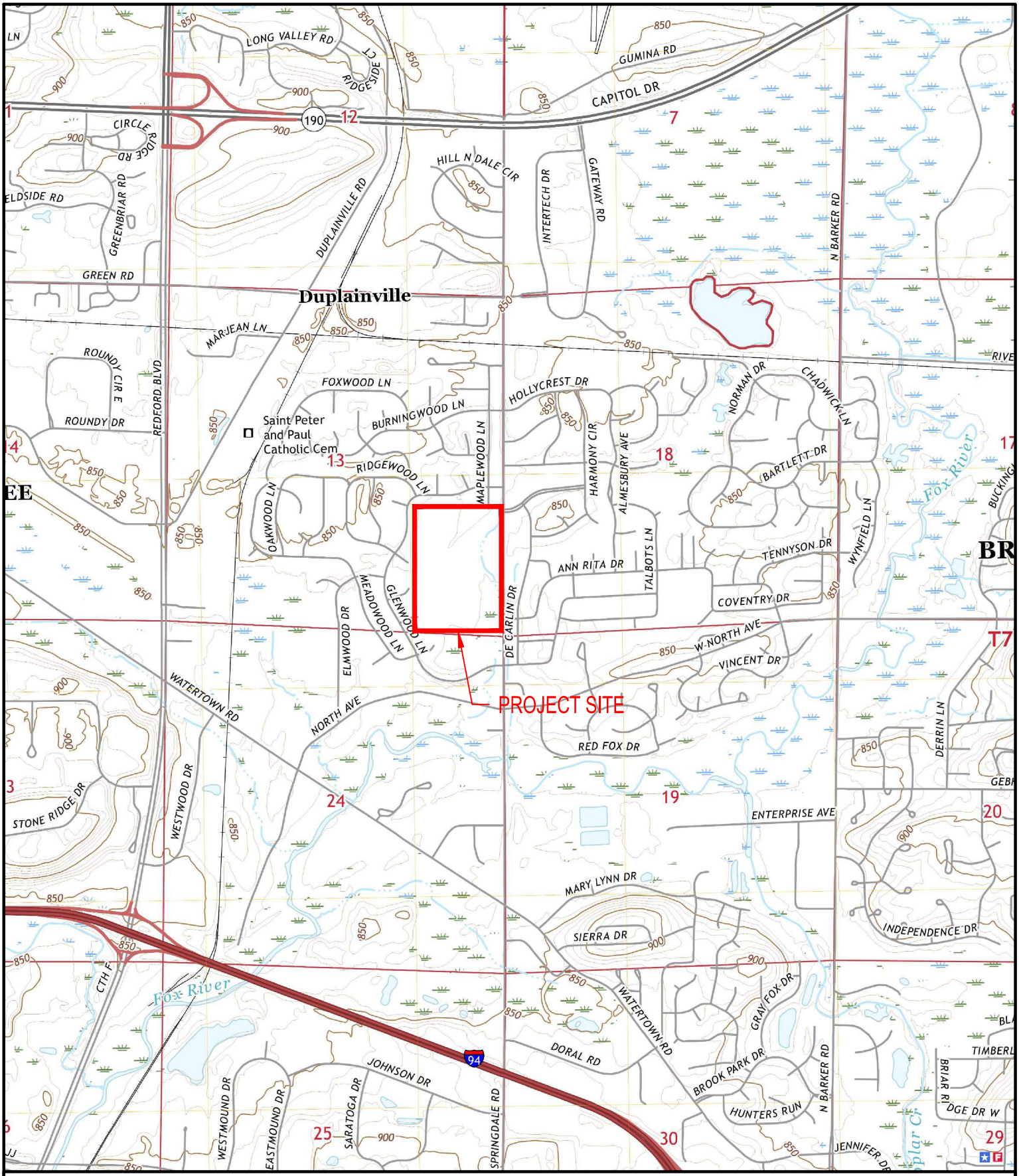
Prepared by:

SOUND STORMWATER DESIGN LLC



Jayme Sisel, P.E.

FIGURES



N

0 500 1,000 2,000

FEET

FIGURE 1

SITE LOCATION MAP

ESSER DEVELOPMENT
SPRINGDALE DRIVE
PEWAUKEE, WISCONSIN

SOUND STORMWATER DESIGN

LEGEND

—DRAINAGE BASIN BOUNDARY

—Tc LINE

SUBAREA 1

SUBAREA 2

SUBAREA 3

EX DEPRESSION 1D
TOP=837.0
OVERFLOW=836.0
BOTTOM=835.0

EX DEPRESSION 2D
TOP=833.5
OVERFLOW=832.5
BOTTOM=829.0

PRE-DEVELOPMENT CONDITIONS

ESSER DEVELOPMENT
CITY OF PEWAUKEE, WISCONSIN

0 40’ 80’ 160’
SCALE: 1” = 80’

FIGURE 2

LEGEND

—DRAINAGE BASIN BOUNDARY

—Tc LINE

GLENWOOD LN.

MAPLEWOOD LN.

SPRINGDALE RD. C.T.H. "SR"

BRIARWOOD LN

SUBAREA 1

SUBAREA 2

SUBAREA 3

SUBAREA 4

SUBAREA 5

SUBAREA 6

SUBAREA 7

SUBAREA 8

SUBAREA 9

POND 1P
TOP=834.5
OVERFLOW=830.8
NWL=829.1
BOTTOM=824.1

POND 3P
TOP=834.2
OVERFLOW=833.2
NWL=827.8
BOTTOM=822.8

INFILTRATION BASIN 4B
TOP=836.0
OVERFLOW=835.0
BOTTOM=831.3

INFILTRATION BASIN 2B
TOP=834.5
OVERFLOW=833.5
BOTTOM=829.0

EX DEPRESSION 5D
TOP=834.5
OVERFLOW=833.5
BOTTOM=829.0

BIORETENTION BASIN 6B
TOP=834.6
OVERFLOW=833.6
BOTTOM=827.8

INFILTRATION BASIN 7B
TOP=834.5
OVERFLOW=833.5
BOTTOM=831.0

BIORETENTION BASIN 8B
TOP=832.5
OVERFLOW=831.5
BOTTOM=826.0

PRIMARY ENVIRONMENTAL CORRIDOR PER 2025 HEARTLAND ECOLOGICAL GROUP INC. DELINEATION

POST-DEVELOPMENT CONDITIONS

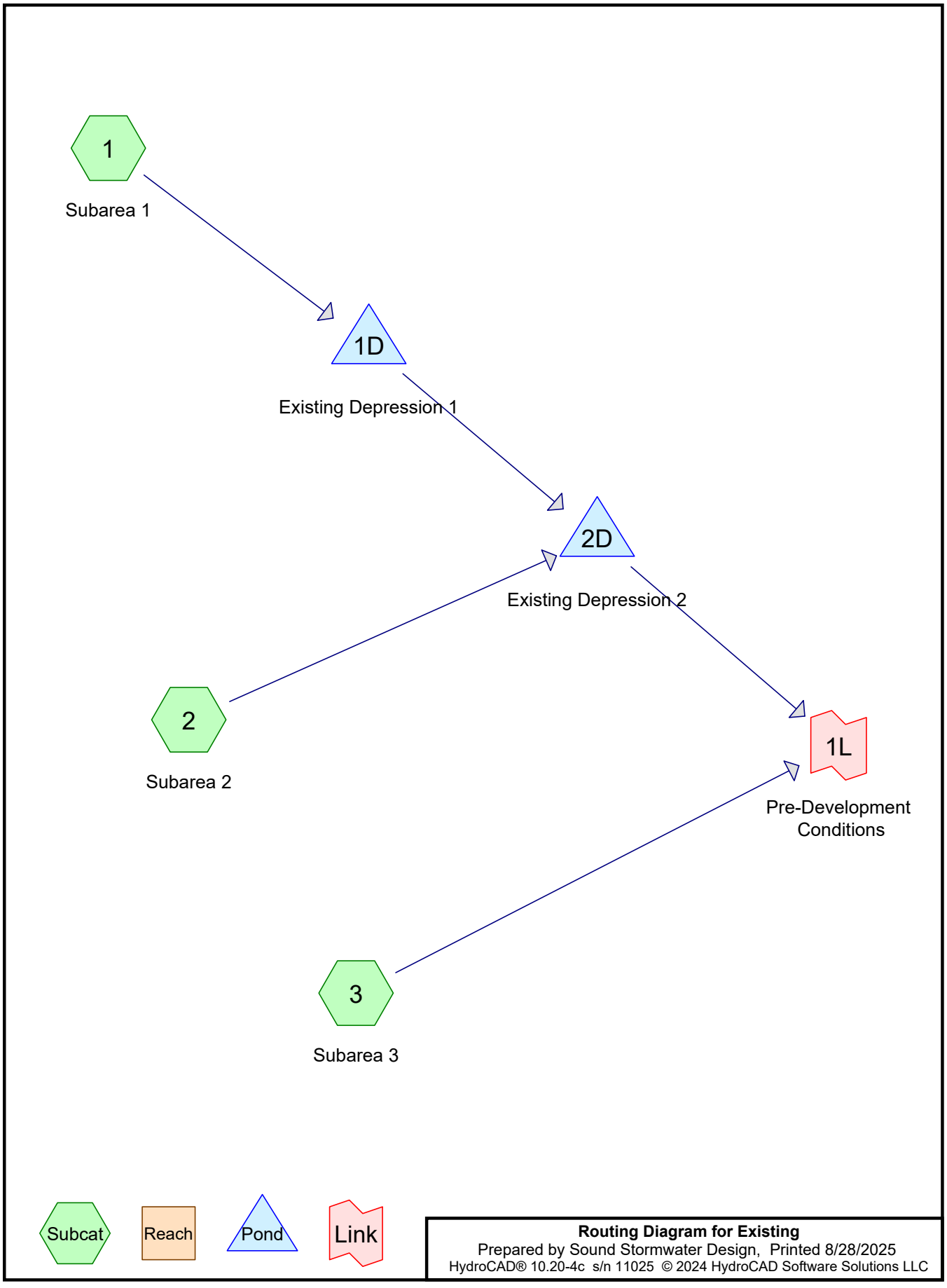
ESSER DEVELOPMENT
CITY OF PEWAUKEE, WISCONSIN

0 40' 80' 160'
SCALE: 1" = 80'

FIGURE 3

APPENDIX A

Pre-Development Hydrologic Analysis


1
Subarea 1
1D
Existing Depression 1
2D
Existing Depression 2
2
Subarea 2
1L
Pre-Development
Conditions
3
Subarea 3
Subcat
Reach
Pond
Link
Routing Diagram for Existing
Prepared by Sound Stormwater Design, Printed 8/28/2025
HydroCAD® 10.20-4c s/n 11025 © 2024 HydroCAD Software Solutions LLC

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	1 yr	MSE 24-hr	3	Default	24.00	1	2.38	2
2	2 yr	MSE 24-hr	3	Default	24.00	1	2.69	2
3	10 yr	MSE 24-hr	3	Default	24.00	1	3.80	2
4	100 yr	MSE 24-hr	3	Default	24.00	1	6.17	2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
7.600	81	offsite 1/3 acre lots, 30% imp, HSG C (1, 2, 3)
1.130	74	offsite grass, C soils (1, 3)
0.610	98	offsite impervious (1, 3)
57.320	70	pre-development, C soils (1, 2, 3)
66.660	**72**	**TOTAL AREA**

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1: Subarea 1 Runoff Area=18.890 ac 9.43% Impervious Runoff Depth>0.50"
Flow Length=635' Tc=15.6 min CN=73 Runoff=10.38 cfs 0.792 af

Subcatchment2: Subarea 2 Runoff Area=11.350 ac 3.46% Impervious Runoff Depth>0.43"
Flow Length=545' Tc=12.1 min CN=71 Runoff=5.66 cfs 0.409 af

Subcatchment3: Subarea 3 Runoff Area=36.420 ac 1.96% Impervious Runoff Depth>0.43"
Flow Length=2,120' Tc=37.9 min CN=71 Runoff=9.82 cfs 1.307 af

Pond 1D: Existing Depression 1 Peak Elev=835.45' Storage=0.792 af Inflow=10.38 cfs 0.792 af
Outflow=0.00 cfs 0.000 af

Pond 2D: Existing Depression 2 Peak Elev=829.84' Storage=0.409 af Inflow=5.66 cfs 0.409 af
Outflow=0.00 cfs 0.000 af

Link 1L: Pre-DevelopmentConditions Inflow=9.82 cfs 1.307 af
Primary=9.82 cfs 1.307 af

Total Runoff Area = 66.660 ac Runoff Volume = 2.507 af Average Runoff Depth = 0.45"
95.66% Pervious = 63.770 ac 4.34% Impervious = 2.890 ac

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1: Subarea 1 Runoff Area=18.890 ac 9.43% Impervious Runoff Depth>0.67"
Flow Length=635' Tc=15.6 min CN=73 Runoff=14.63 cfs 1.058 af

Subcatchment2: Subarea 2 Runoff Area=11.350 ac 3.46% Impervious Runoff Depth>0.59"
Flow Length=545' Tc=12.1 min CN=71 Runoff=8.40 cfs 0.556 af

Subcatchment3: Subarea 3 Runoff Area=36.420 ac 1.96% Impervious Runoff Depth>0.59"
Flow Length=2,120' Tc=37.9 min CN=71 Runoff=14.28 cfs 1.779 af

Pond 1D: Existing Depression 1 Peak Elev=835.56' Storage=1.058 af Inflow=14.63 cfs 1.058 af
Outflow=0.00 cfs 0.000 af

Pond 2D: Existing Depression 2 Peak Elev=830.00' Storage=0.556 af Inflow=8.40 cfs 0.556 af
Outflow=0.00 cfs 0.000 af

Link 1L: Pre-DevelopmentConditions Inflow=14.28 cfs 1.779 af
Primary=14.28 cfs 1.779 af

Total Runoff Area = 66.660 ac Runoff Volume = 3.394 af Average Runoff Depth = 0.61"
95.66% Pervious = 63.770 ac 4.34% Impervious = 2.890 ac

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1: Subarea 1 Runoff Area=18.890 ac 9.43% Impervious Runoff Depth>1.38"
Flow Length=635' Tc=15.6 min CN=73 Runoff=32.39 cfs 2.179 af

Subcatchment2: Subarea 2 Runoff Area=11.350 ac 3.46% Impervious Runoff Depth>1.26"
Flow Length=545' Tc=12.1 min CN=71 Runoff=19.77 cfs 1.190 af

Subcatchment3: Subarea 3 Runoff Area=36.420 ac 1.96% Impervious Runoff Depth>1.25"
Flow Length=2,120' Tc=37.9 min CN=71 Runoff=33.86 cfs 3.807 af

Pond 1D: Existing Depression 1 Peak Elev=835.93' Storage=2.178 af Inflow=32.39 cfs 2.179 af
Outflow=0.00 cfs 0.000 af

Pond 2D: Existing Depression 2 Peak Elev=830.52' Storage=1.190 af Inflow=19.77 cfs 1.190 af
Outflow=0.00 cfs 0.000 af

Link 1L: Pre-DevelopmentConditions Inflow=33.86 cfs 3.807 af
Primary=33.86 cfs 3.807 af

Total Runoff Area = 66.660 ac Runoff Volume = 7.176 af Average Runoff Depth = 1.29"
95.66% Pervious = 63.770 ac 4.34% Impervious = 2.890 ac

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1: Subarea 1 Runoff Area=18.890 ac 9.43% Impervious Runoff Depth>3.23"
Flow Length=635' Tc=15.6 min CN=73 Runoff=77.25 cfs 5.080 af

Subcatchment2: Subarea 2 Runoff Area=11.350 ac 3.46% Impervious Runoff Depth>3.03"
Flow Length=545' Tc=12.1 min CN=71 Runoff=49.14 cfs 2.870 af

Subcatchment3: Subarea 3 Runoff Area=36.420 ac 1.96% Impervious Runoff Depth>3.03"
Flow Length=2,120' Tc=37.9 min CN=71 Runoff=85.65 cfs 9.187 af

Pond 1D: Existing Depression 1 Peak Elev=836.14' Storage=2.940 af Inflow=77.25 cfs 5.080 af
Outflow=12.45 cfs 2.609 af

Pond 2D: Existing Depression 2 Peak Elev=832.33' Storage=5.477 af Inflow=49.14 cfs 5.478 af
Outflow=0.00 cfs 0.000 af

Link 1L: Pre-DevelopmentConditions Inflow=85.65 cfs 9.187 af
Primary=85.65 cfs 9.187 af

Total Runoff Area = 66.660 ac Runoff Volume = 17.137 af Average Runoff Depth = 3.08"
95.66% Pervious = 63.770 ac 4.34% Impervious = 2.890 ac

Summary for Subcatchment 1: Subarea 1

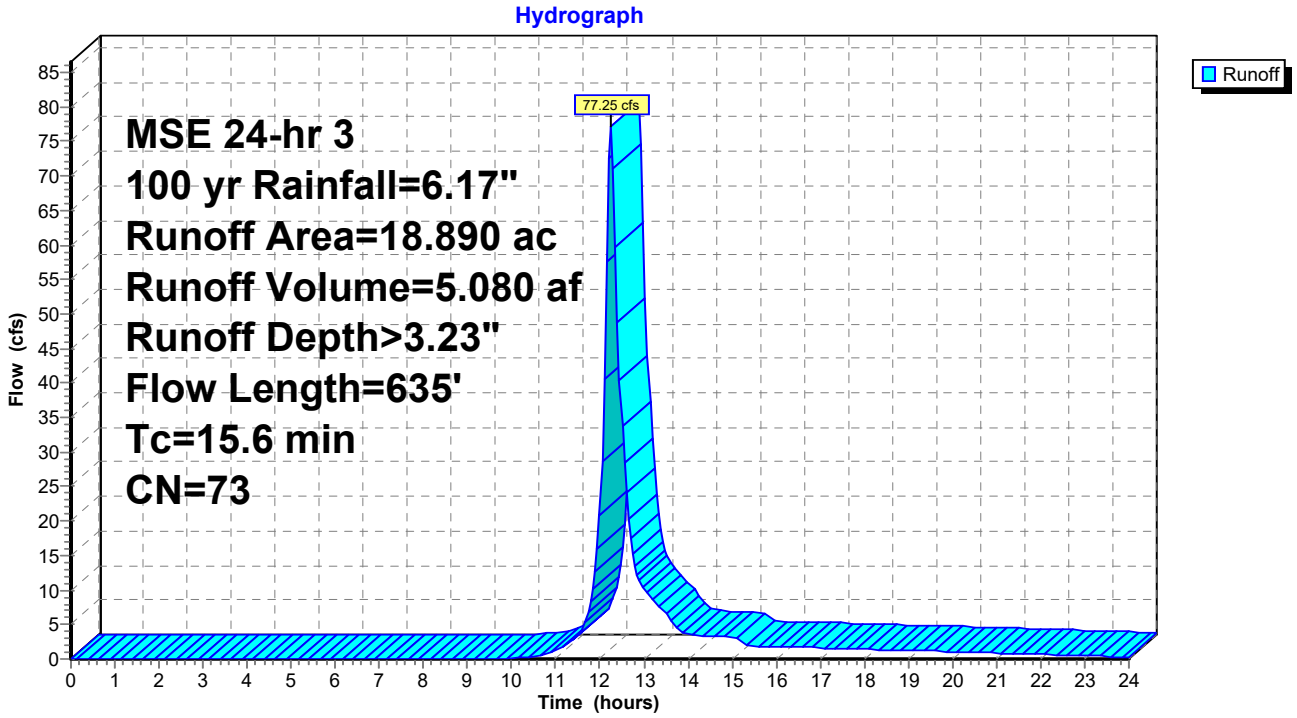
Runoff = 77.25 cfs @ 12.25 hrs, Volume= 5.080 af, Depth> 3.23"
Routed to Pond 1D : Existing Depression 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100 yr Rainfall=6.17"

	Area (ac)	CN	Description
*	13.150	70	pre-development, C soils
*	0.010	74	offsite grass, C soils
*	0.090	98	offsite impervious
*	5.640	81	offsite 1/3 acre lots, 30% imp, HSG C
	18.890	73	Weighted Average
	17.108		90.57% Pervious Area
	1.782		9.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.5	100	0.0200	0.18		**Sheet Flow,** Range n= 0.130 P2= 2.70"
2.1	290	0.0200	2.28		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
4.0	245	0.0040	1.02		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
15.6	635	Total			

Subcatchment 1: Subarea 1



Summary for Subcatchment 2: Subarea 2

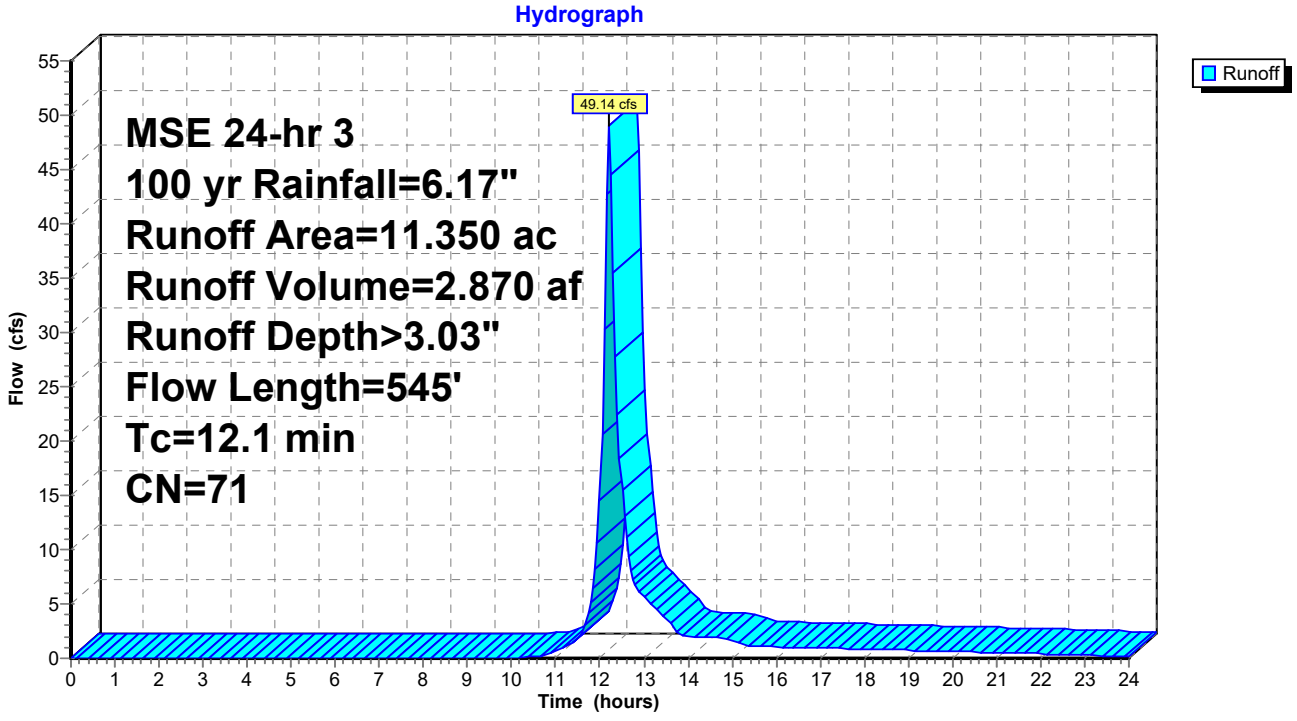
Runoff = 49.14 cfs @ 12.20 hrs, Volume= 2.870 af, Depth> 3.03"
Routed to Pond 2D : Existing Depression 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100 yr Rainfall=6.17"

	Area (ac)	CN	Description
*	10.040	70	pre-development, C soils
*	1.310	81	offsite 1/3 acre lots, 30% imp, HSG C
	11.350	71	Weighted Average
	10.957		96.54% Pervious Area
	0.393		3.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.4	90	0.0300	0.20		**Sheet Flow,** Range n= 0.130 P2= 2.70"
4.7	455	0.0100	1.61		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
12.1	545	Total			

Subcatchment 2: Subarea 2



Summary for Subcatchment 3: Subarea 3

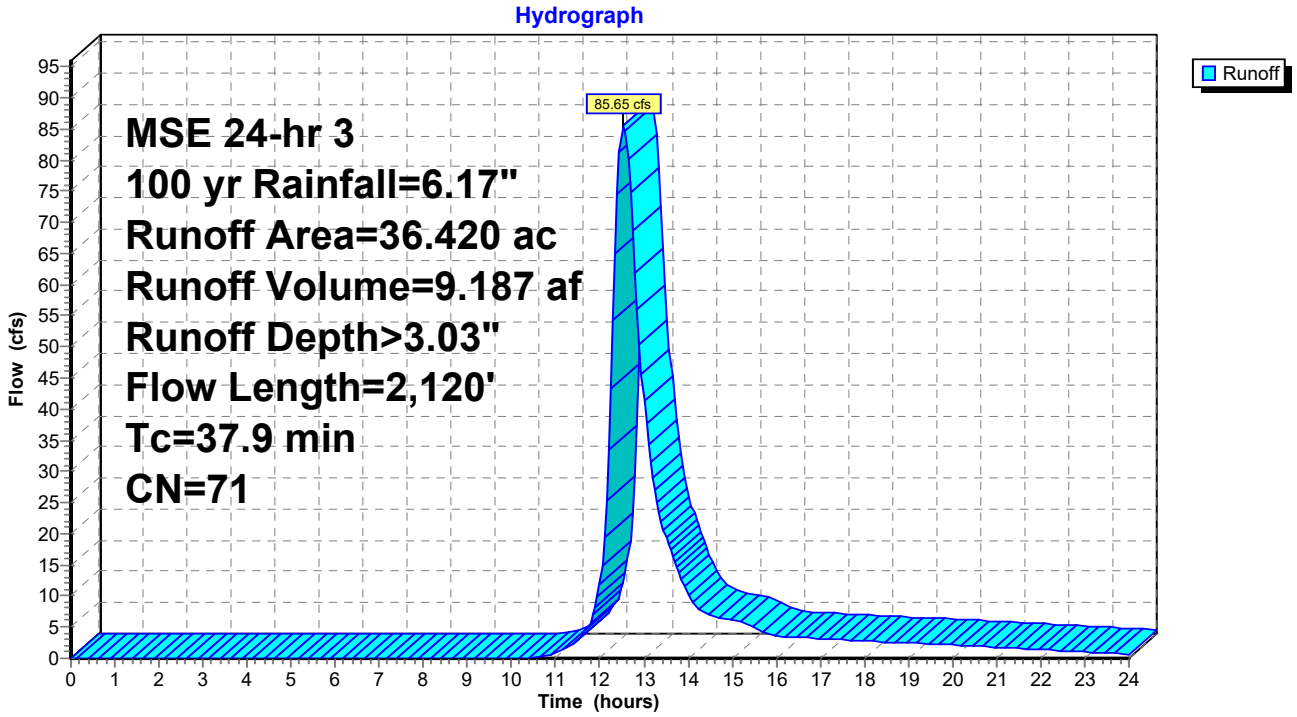
Runoff = 85.65 cfs @ 12.54 hrs, Volume= 9.187 af, Depth> 3.03"
Routed to Link 1L : Pre-Development Conditions

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100 yr Rainfall=6.17"

	Area (ac)	CN	Description
*	34.130	70	pre-development, C soils
*	0.650	81	offsite 1/3 acre lots, 30% imp, HSG C
*	0.520	98	offsite impervious
*	1.120	74	offsite grass, C soils
	36.420	71	Weighted Average
	35.705		98.04% Pervious Area
	0.715		1.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.6	100	0.0100	0.13		**Sheet Flow,** Range n= 0.130 P2= 2.70"
0.8	75	0.0100	1.61		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.8	175	0.0500	3.60		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
23.7	1,770	0.0060	1.25		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
37.9	2,120	Total			

Subcatchment 3: Subarea 3



Summary for Pond 1D: Existing Depression 1

Inflow Area = 18.890 ac, 9.43% Impervious, Inflow Depth > 3.23" for 100 yr event
Inflow = 77.25 cfs @ 12.25 hrs, Volume= 5.080 af
Outflow = 12.45 cfs @ 12.85 hrs, Volume= 2.609 af, Atten= 84%, Lag= 36.1 min
Primary = 12.45 cfs @ 12.85 hrs, Volume= 2.609 af
Routed to Pond 2D : Existing Depression 2

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 836.14' @ 12.85 hrs Surf.Area= 4.034 ac Storage= 2.940 af

Plug-Flow detention time= 196.1 min calculated for 2.603 af (51% of inflow)
Center-of-Mass det. time= 111.9 min (925.4 - 813.5)

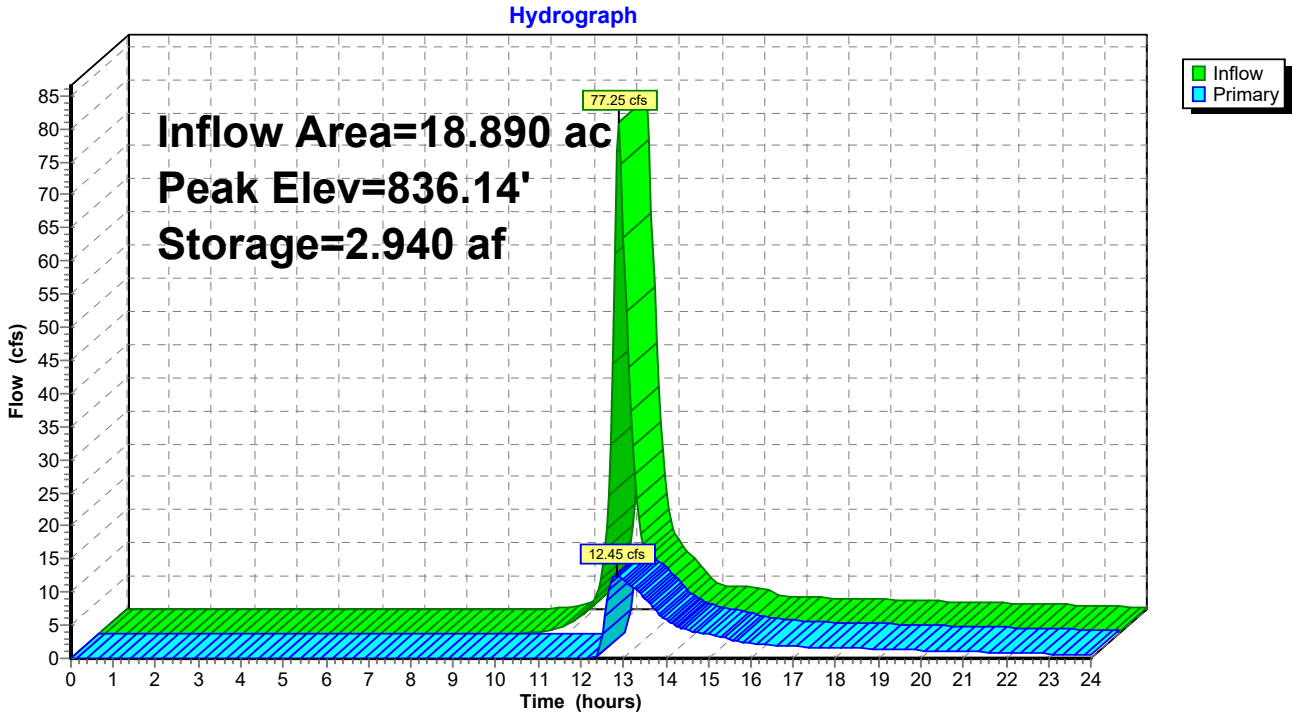
Volume	Invert	Avail.Storage	Storage Description
#1	835.00'	7.418 af	**Custom Stage Data (Conic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
835.00	1.320	0.000	0.000	1.320
836.00	3.710	2.414	2.414	3.710
837.00	6.420	5.003	7.418	6.420

Device	Routing	Invert	Outlet Devices
#1	Primary	836.00'	**100.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=12.44 cfs @ 12.85 hrs HW=836.14' TW=831.07' (Dynamic Tailwater)
↑—**1=Broad-Crested Rectangular Weir** (Weir Controls 12.44 cfs @ 0.92 fps)

Pond 1D: Existing Depression 1



Summary for Pond 2D: Existing Depression 2

Inflow Area = 30.240 ac, 7.19% Impervious, Inflow Depth > 2.17" for 100 yr event
Inflow = 49.14 cfs @ 12.20 hrs, Volume= 5.478 af
Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Link 1L : Pre-Development Conditions

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 832.33' @ 24.00 hrs Surf.Area= 3.522 ac Storage= 5.477 af

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no outflow)

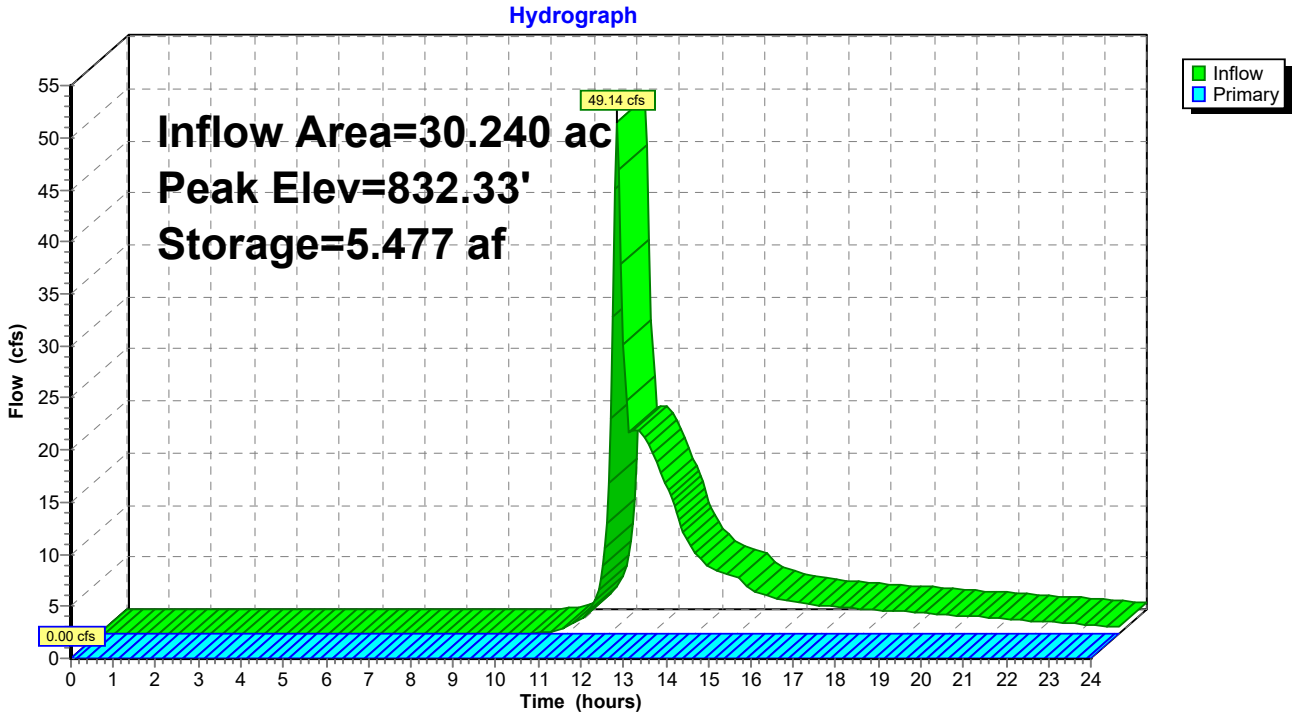
Volume	Invert	Avail.Storage	Storage Description
#1	829.00'	8.273 af	**Custom Stage Data (Conic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
829.00	0.200	0.000	0.000	0.200
830.00	1.020	0.557	0.557	1.020
831.00	1.910	1.442	1.999	1.910
832.00	2.970	2.421	4.420	2.971
833.00	4.810	3.853	8.273	4.811

Device	Routing	Invert	Outlet Devices
#1	Primary	832.50'	**100.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=829.00' TW=0.00' (Dynamic Tailwater)
↑—**1=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 2D: Existing Depression 2

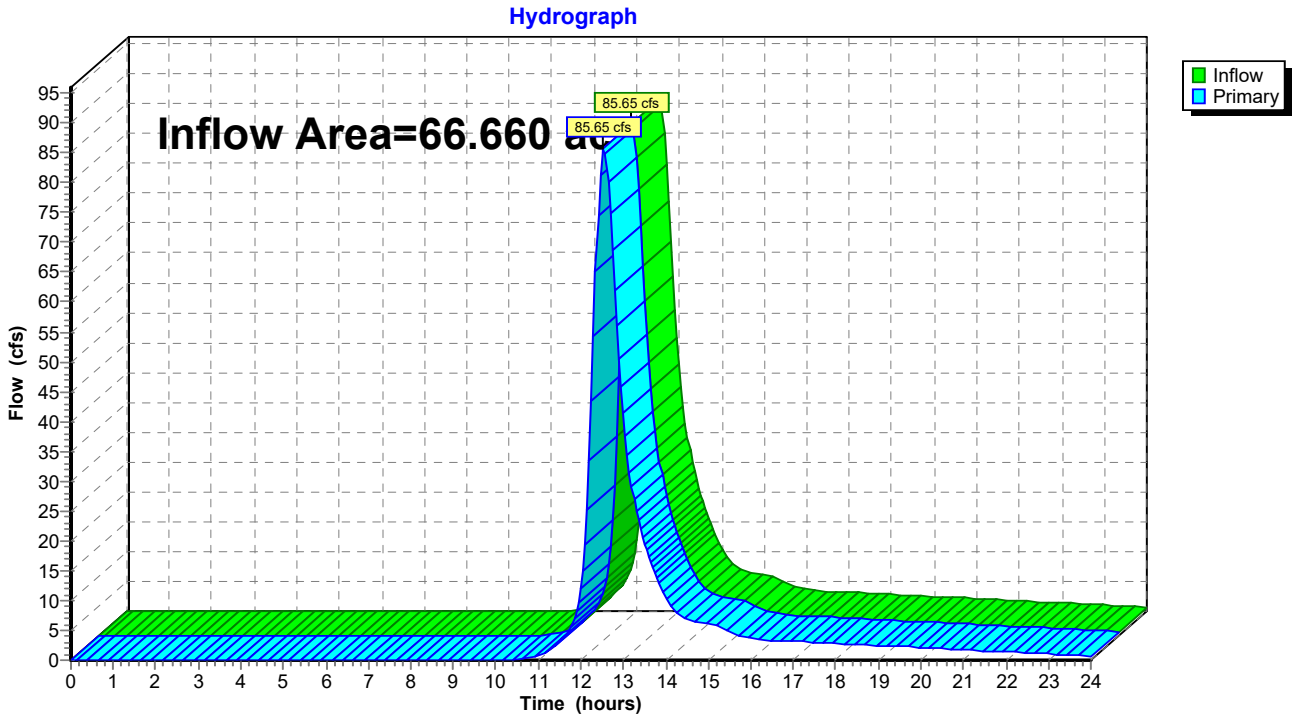


Summary for Link 1L: Pre-Development Conditions

Inflow Area = 66.660 ac, 4.34% Impervious, Inflow Depth > 1.65" for 100 yr event
Inflow = 85.65 cfs @ 12.54 hrs, Volume= 9.187 af
Primary = 85.65 cfs @ 12.54 hrs, Volume= 9.187 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 1L: Pre-Development Conditions



Events for Subcatchment 1: Subarea 1

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
1 yr	2.38	10.38	0.792	0.50
2 yr	2.69	14.63	1.058	0.67
10 yr	3.80	32.39	2.179	1.38
100 yr	**6.17**	**77.25**	**5.080**	**3.23**

Events for Subcatchment 2: Subarea 2

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
1 yr	2.38	5.66	0.409	0.43
2 yr	2.69	8.40	0.556	0.59
10 yr	3.80	19.77	1.190	1.26
100 yr	**6.17**	**49.14**	**2.870**	**3.03**

Events for Subcatchment 3: Subarea 3

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
1 yr	2.38	9.82	1.307	0.43
2 yr	2.69	14.28	1.779	0.59
10 yr	3.80	33.86	3.807	1.25
100 yr	**6.17**	**85.65**	**9.187**	**3.03**

Events for Pond 1D: Existing Depression 1

Event	Inflow (cfs)	Primary (cfs)	Elevation (feet)	Storage (acre-feet)
1 yr	10.38	0.00	835.45	0.792
2 yr	14.63	0.00	835.56	1.058
10 yr	32.39	0.00	835.93	2.178
100 yr	**77.25**	**12.45**	**836.14**	**2.940**

Events for Pond 2D: Existing Depression 2

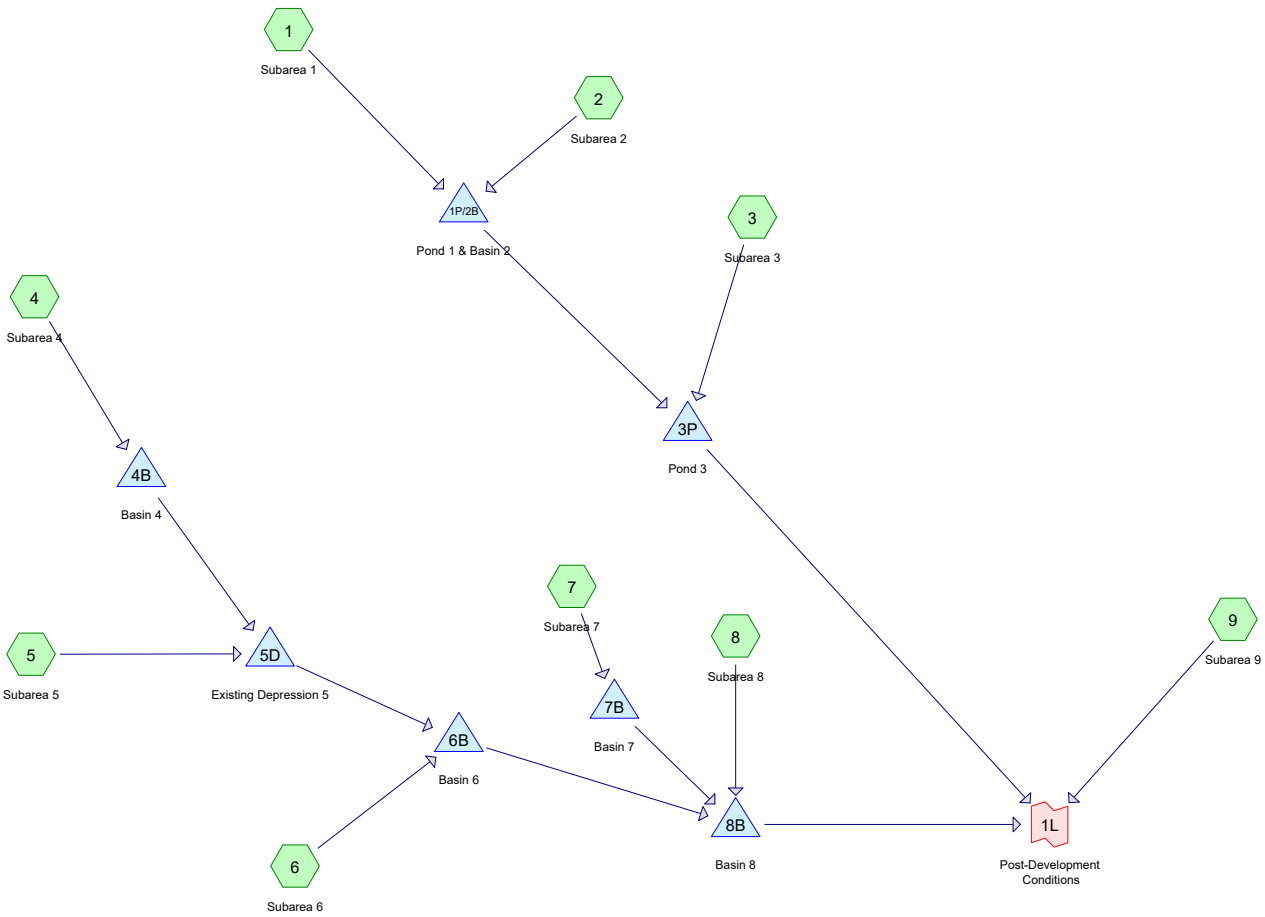
Event	Inflow (cfs)	Primary (cfs)	Elevation (feet)	Storage (acre-feet)
1 yr	5.66	**0.00**	829.84	0.409
2 yr	8.40	0.00	830.00	0.556
10 yr	19.77	0.00	830.52	1.190
100 yr	**49.14**	0.00	**832.33**	**5.477**

Events for Link 1L: Pre-Development Conditions

Event	Inflow (cfs)	Primary (cfs)	Elevation (feet)
1 yr	9.82	9.82	**0.00**
2 yr	14.28	14.28	0.00
10 yr	33.86	33.86	0.00
100 yr	**85.65**	**85.65**	0.00

APPENDIX B

Post-Development Hydrologic Analysis



Subcat Reach Pond Link

Routing Diagram for Proposed
Prepared by Sound Stormwater Design, Printed 8/28/2025
HydroCAD® 10.20-4c s/n 11025 © 2024 HydroCAD Software Solutions LLC

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	1 yr	MSE 24-hr	3	Default	24.00	1	2.38	2
2	2 yr	MSE 24-hr	3	Default	24.00	1	2.69	2
3	10 yr	MSE 24-hr	3	Default	24.00	1	3.80	2
4	100 yr	MSE 24-hr	3	Default	24.00	1	6.17	2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
34.240	74	grass, C soils (1, 2, 3, 4, 5, 6, 7, 8, 9)
18.880	98	impervious (1, 2, 3, 4, 5, 6, 7, 8, 9)
7.600	81	offsite 1/3 acre lots, 30% imp, HSG C (1, 4, 5)
0.260	74	offsite grass, C soils (1)
0.380	98	offsite impervious (1, 4)
0.490	98	water (1, 3)
4.810	70	woods, C soils (9)
66.660	**82**	**TOTAL AREA**

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1: Subarea 1 Runoff Area=17.170 ac 34.54% Impervious Runoff Depth>0.91"
Flow Length=940' Tc=19.3 min CN=82 Runoff=17.47 cfs 1.301 af

Subcatchment2: Subarea 2 Runoff Area=2.380 ac 21.85% Impervious Runoff Depth>0.76"
Flow Length=55' Slope=0.0500 '/' Tc=6.7 min CN=79 Runoff=3.20 cfs 0.150 af

Subcatchment3: Subarea 3 Runoff Area=16.380 ac 49.45% Impervious Runoff Depth>1.14"
Flow Length=770' Slope=0.0100 '/' Tc=22.9 min CN=86 Runoff=19.56 cfs 1.562 af

Subcatchment4: Subarea 4 Runoff Area=7.020 ac 24.74% Impervious Runoff Depth>0.81"
Flow Length=795' Tc=17.3 min CN=80 Runoff=6.60 cfs 0.471 af

Subcatchment5: Subarea 5 Runoff Area=5.860 ac 14.39% Impervious Runoff Depth>0.67"
Flow Length=70' Slope=0.0300 '/' Tc=9.9 min CN=77 Runoff=5.82 cfs 0.325 af

Subcatchment6: Subarea 6 Runoff Area=4.640 ac 42.67% Impervious Runoff Depth>1.02"
Flow Length=440' Tc=9.9 min CN=84 Runoff=7.45 cfs 0.396 af

Subcatchment7: Subarea 7 Runoff Area=0.820 ac 34.15% Impervious Runoff Depth>0.91"
Tc=6.0 min CN=82 Runoff=1.39 cfs 0.062 af

Subcatchment8: Subarea 8 Runoff Area=2.710 ac 56.46% Impervious Runoff Depth>1.28"
Flow Length=285' Tc=9.6 min CN=88 Runoff=5.49 cfs 0.289 af

Subcatchment9: Subarea 9 Runoff Area=9.680 ac 11.47% Impervious Runoff Depth>0.58"
Flow Length=1,840' Tc=28.0 min CN=75 Runoff=4.65 cfs 0.468 af

Pond 1P/2B: Pond 1 & Basin 2 Peak Elev=830.82' Storage=1.127 af Inflow=18.77 cfs 1.451 af
36.0" Round Culvert n=0.012 L=55.0' S=0.0218 '/' Outflow=4.27 cfs 0.373 af

Pond 3P: Pond 3 Peak Elev=830.82' Storage=1.286 af Inflow=23.41 cfs 1.935 af
Outflow=0.72 cfs 0.683 af

Pond 4B: Basin 4 Peak Elev=832.32' Storage=0.120 af Inflow=6.60 cfs 0.471 af
18.0" Round Culvert n=0.011 L=645.0' S=0.0036 '/' Outflow=3.72 cfs 0.458 af

Pond 5D: Existing Depression 5 Peak Elev=830.09' Storage=0.559 af Inflow=6.79 cfs 0.783 af
Outflow=0.33 cfs 0.287 af

Pond 6B: Basin 6 Peak Elev=829.63' Storage=0.259 af Inflow=7.57 cfs 0.682 af
Outflow=0.54 cfs 0.509 af

Pond 7B: Basin 7 Peak Elev=832.09' Storage=0.013 af Inflow=1.39 cfs 0.062 af
Outflow=0.44 cfs 0.062 af

Pond 8B: Basin 8 Peak Elev=828.53' Storage=0.138 af Inflow=6.31 cfs 0.860 af
Outflow=1.43 cfs 0.849 af

Link 1L: Post-DevelopmentConditions Inflow=6.57 cfs 2.000 af
Primary=6.57 cfs 2.000 af

Total Runoff Area = 66.660 ac Runoff Volume = 5.024 af Average Runoff Depth = 0.90"
66.95% Pervious = 44.630 ac 33.05% Impervious = 22.030 ac

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1: Subarea 1 Runoff Area=17.170 ac 34.54% Impervious Runoff Depth>1.14"
Flow Length=940' Tc=19.3 min CN=82 Runoff=22.11 cfs 1.628 af

Subcatchment2: Subarea 2 Runoff Area=2.380 ac 21.85% Impervious Runoff Depth>0.97"
Flow Length=55' Slope=0.0500 '/' Tc=6.7 min CN=79 Runoff=4.13 cfs 0.192 af

Subcatchment3: Subarea 3 Runoff Area=16.380 ac 49.45% Impervious Runoff Depth>1.40"
Flow Length=770' Slope=0.0100 '/' Tc=22.9 min CN=86 Runoff=23.97 cfs 1.908 af

Subcatchment4: Subarea 4 Runoff Area=7.020 ac 24.74% Impervious Runoff Depth>1.02"
Flow Length=795' Tc=17.3 min CN=80 Runoff=8.49 cfs 0.597 af

Subcatchment5: Subarea 5 Runoff Area=5.860 ac 14.39% Impervious Runoff Depth>0.86"
Flow Length=70' Slope=0.0300 '/' Tc=9.9 min CN=77 Runoff=7.71 cfs 0.421 af

Subcatchment6: Subarea 6 Runoff Area=4.640 ac 42.67% Impervious Runoff Depth>1.26"
Flow Length=440' Tc=9.9 min CN=84 Runoff=9.24 cfs 0.489 af

Subcatchment7: Subarea 7 Runoff Area=0.820 ac 34.15% Impervious Runoff Depth>1.14"
Tc=6.0 min CN=82 Runoff=1.74 cfs 0.078 af

Subcatchment8: Subarea 8 Runoff Area=2.710 ac 56.46% Impervious Runoff Depth>1.54"
Flow Length=285' Tc=9.6 min CN=88 Runoff=6.62 cfs 0.349 af

Subcatchment9: Subarea 9 Runoff Area=9.680 ac 11.47% Impervious Runoff Depth>0.76"
Flow Length=1,840' Tc=28.0 min CN=75 Runoff=6.35 cfs 0.615 af

Pond 1P/2B: Pond 1 & Basin 2 Peak Elev=831.13' Storage=1.363 af Inflow=23.76 cfs 1.820 af
36.0" Round Culvert n=0.012 L=55.0' S=0.0218 '/' Outflow=5.23 cfs 0.595 af

Pond 3P: Pond 3 Peak Elev=831.14' Storage=1.455 af Inflow=29.06 cfs 2.503 af
Outflow=1.36 cfs 1.149 af

Pond 4B: Basin 4 Peak Elev=832.52' Storage=0.150 af Inflow=8.49 cfs 0.597 af
18.0" Round Culvert n=0.011 L=645.0' S=0.0036 '/' Outflow=4.96 cfs 0.582 af

Pond 5D: Existing Depression 5 Peak Elev=830.32' Storage=0.760 af Inflow=9.35 cfs 1.003 af
Outflow=0.34 cfs 0.292 af

Pond 6B: Basin 6 Peak Elev=829.84' Storage=0.337 af Inflow=9.41 cfs 0.781 af
Outflow=0.58 cfs 0.536 af

Pond 7B: Basin 7 Peak Elev=832.25' Storage=0.019 af Inflow=1.74 cfs 0.078 af
Outflow=0.47 cfs 0.078 af

Pond 8B: Basin 8 Peak Elev=828.78' Storage=0.168 af Inflow=7.51 cfs 0.963 af
Outflow=1.70 cfs 0.951 af

Link 1L: Post-DevelopmentConditions Inflow=8.53 cfs 2.715 af
Primary=8.53 cfs 2.715 af

Total Runoff Area = 66.660 ac Runoff Volume = 6.276 af Average Runoff Depth = 1.13"
66.95% Pervious = 44.630 ac 33.05% Impervious = 22.030 ac

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1: Subarea 1 Runoff Area=17.170 ac 34.54% Impervious Runoff Depth>2.03"
Flow Length=940' Tc=19.3 min CN=82 Runoff=39.92 cfs 2.905 af

Subcatchment2: Subarea 2 Runoff Area=2.380 ac 21.85% Impervious Runoff Depth>1.80"
Flow Length=55' Slope=0.0500 '/' Tc=6.7 min CN=79 Runoff=7.75 cfs 0.357 af

Subcatchment3: Subarea 3 Runoff Area=16.380 ac 49.45% Impervious Runoff Depth>2.36"
Flow Length=770' Slope=0.0100 '/' Tc=22.9 min CN=86 Runoff=40.38 cfs 3.225 af

Subcatchment4: Subarea 4 Runoff Area=7.020 ac 24.74% Impervious Runoff Depth>1.88"
Flow Length=795' Tc=17.3 min CN=80 Runoff=15.88 cfs 1.097 af

Subcatchment5: Subarea 5 Runoff Area=5.860 ac 14.39% Impervious Runoff Depth>1.66"
Flow Length=70' Slope=0.0300 '/' Tc=9.9 min CN=77 Runoff=15.24 cfs 0.809 af

Subcatchment6: Subarea 6 Runoff Area=4.640 ac 42.67% Impervious Runoff Depth>2.19"
Flow Length=440' Tc=9.9 min CN=84 Runoff=15.95 cfs 0.849 af

Subcatchment7: Subarea 7 Runoff Area=0.820 ac 34.15% Impervious Runoff Depth>2.03"
Tc=6.0 min CN=82 Runoff=3.09 cfs 0.139 af

Subcatchment8: Subarea 8 Runoff Area=2.710 ac 56.46% Impervious Runoff Depth>2.54"
Flow Length=285' Tc=9.6 min CN=88 Runoff=10.71 cfs 0.574 af

Subcatchment9: Subarea 9 Runoff Area=9.680 ac 11.47% Impervious Runoff Depth>1.51"
Flow Length=1,840' Tc=28.0 min CN=75 Runoff=13.44 cfs 1.222 af

Pond 1P/2B: Pond 1 & Basin 2 Peak Elev=832.12' Storage=2.208 af Inflow=42.90 cfs 3.262 af
36.0" Round Culvert n=0.012 L=55.0' S=0.0218 '/' Outflow=7.13 cfs 1.789 af

Pond 3P: Pond 3 Peak Elev=832.18' Storage=2.048 af Inflow=46.50 cfs 5.014 af
Outflow=8.57 cfs 3.492 af

Pond 4B: Basin 4 Peak Elev=833.35' Storage=0.291 af Inflow=15.88 cfs 1.097 af
18.0" Round Culvert n=0.011 L=645.0' S=0.0036 '/' Outflow=7.93 cfs 1.072 af

Pond 5D: Existing Depression 5 Peak Elev=831.10' Storage=1.574 af Inflow=19.72 cfs 1.881 af
Outflow=0.43 cfs 0.346 af

Pond 6B: Basin 6 Peak Elev=830.46' Storage=0.584 af Inflow=16.08 cfs 1.194 af
Outflow=0.88 cfs 0.796 af

Pond 7B: Basin 7 Peak Elev=832.71' Storage=0.046 af Inflow=3.09 cfs 0.139 af
Outflow=0.55 cfs 0.139 af

Pond 8B: Basin 8 Peak Elev=829.59' Storage=0.277 af Inflow=11.64 cfs 1.509 af
Outflow=2.59 cfs 1.491 af

Link 1L: Post-DevelopmentConditions Inflow=17.74 cfs 6.205 af
Primary=17.74 cfs 6.205 af

Total Runoff Area = 66.660 ac Runoff Volume = 11.176 af Average Runoff Depth = 2.01"
66.95% Pervious = 44.630 ac 33.05% Impervious = 22.030 ac

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1: Subarea 1 Runoff Area=17.170 ac 34.54% Impervious Runoff Depth>4.14"
Flow Length=940' Tc=19.3 min CN=82 Runoff=80.52 cfs 5.922 af

Subcatchment2: Subarea 2 Runoff Area=2.380 ac 21.85% Impervious Runoff Depth>3.83"
Flow Length=55' Slope=0.0500 '/' Tc=6.7 min CN=79 Runoff=16.19 cfs 0.760 af

Subcatchment3: Subarea 3 Runoff Area=16.380 ac 49.45% Impervious Runoff Depth>4.57"
Flow Length=770' Slope=0.0100 '/' Tc=22.9 min CN=86 Runoff=76.37 cfs 6.231 af

Subcatchment4: Subarea 4 Runoff Area=7.020 ac 24.74% Impervious Runoff Depth>3.93"
Flow Length=795' Tc=17.3 min CN=80 Runoff=33.14 cfs 2.299 af

Subcatchment5: Subarea 5 Runoff Area=5.860 ac 14.39% Impervious Runoff Depth>3.63"
Flow Length=70' Slope=0.0300 '/' Tc=9.9 min CN=77 Runoff=33.23 cfs 1.771 af

Subcatchment6: Subarea 6 Runoff Area=4.640 ac 42.67% Impervious Runoff Depth>4.35"
Flow Length=440' Tc=9.9 min CN=84 Runoff=30.85 cfs 1.683 af

Subcatchment7: Subarea 7 Runoff Area=0.820 ac 34.15% Impervious Runoff Depth>4.14"
Tc=6.0 min CN=82 Runoff=6.13 cfs 0.283 af

Subcatchment8: Subarea 8 Runoff Area=2.710 ac 56.46% Impervious Runoff Depth>4.79"
Flow Length=285' Tc=9.6 min CN=88 Runoff=19.53 cfs 1.081 af

Subcatchment9: Subarea 9 Runoff Area=9.680 ac 11.47% Impervious Runoff Depth>3.42"
Flow Length=1,840' Tc=28.0 min CN=75 Runoff=30.97 cfs 2.759 af

Pond 1P/2B: Pond 1 & Basin 2 Peak Elev=833.46' Storage=3.726 af Inflow=86.71 cfs 6.682 af
36.0" Round Culvert n=0.012 L=55.0' S=0.0218 '/' Outflow=24.63 cfs 5.025 af

Pond 3P: Pond 3 Peak Elev=833.19' Storage=2.739 af Inflow=76.37 cfs 11.256 af
Outflow=51.86 cfs 9.611 af

Pond 4B: Basin 4 Peak Elev=834.95' Storage=0.825 af Inflow=33.14 cfs 2.299 af
18.0" Round Culvert n=0.011 L=645.0' S=0.0036 '/' Outflow=8.80 cfs 2.150 af

Pond 5D: Existing Depression 5 Peak Elev=832.55' Storage=3.519 af Inflow=40.83 cfs 3.921 af
Outflow=0.73 cfs 0.449 af

Pond 6B: Basin 6 Peak Elev=831.89' Storage=1.249 af Inflow=30.85 cfs 2.133 af
Outflow=1.26 cfs 1.158 af

Pond 7B: Basin 7 Peak Elev=833.33' Storage=0.109 af Inflow=6.13 cfs 0.283 af
Outflow=1.35 cfs 0.283 af

Pond 8B: Basin 8 Peak Elev=831.27' Storage=0.568 af Inflow=20.75 cfs 2.522 af
Outflow=3.62 cfs 2.394 af

Link 1L: Post-DevelopmentConditions Inflow=84.15 cfs 14.764 af
Primary=84.15 cfs 14.764 af

Total Runoff Area = 66.660 ac Runoff Volume = 22.790 af Average Runoff Depth = 4.10"
66.95% Pervious = 44.630 ac 33.05% Impervious = 22.030 ac

Summary for Subcatchment 1: Subarea 1

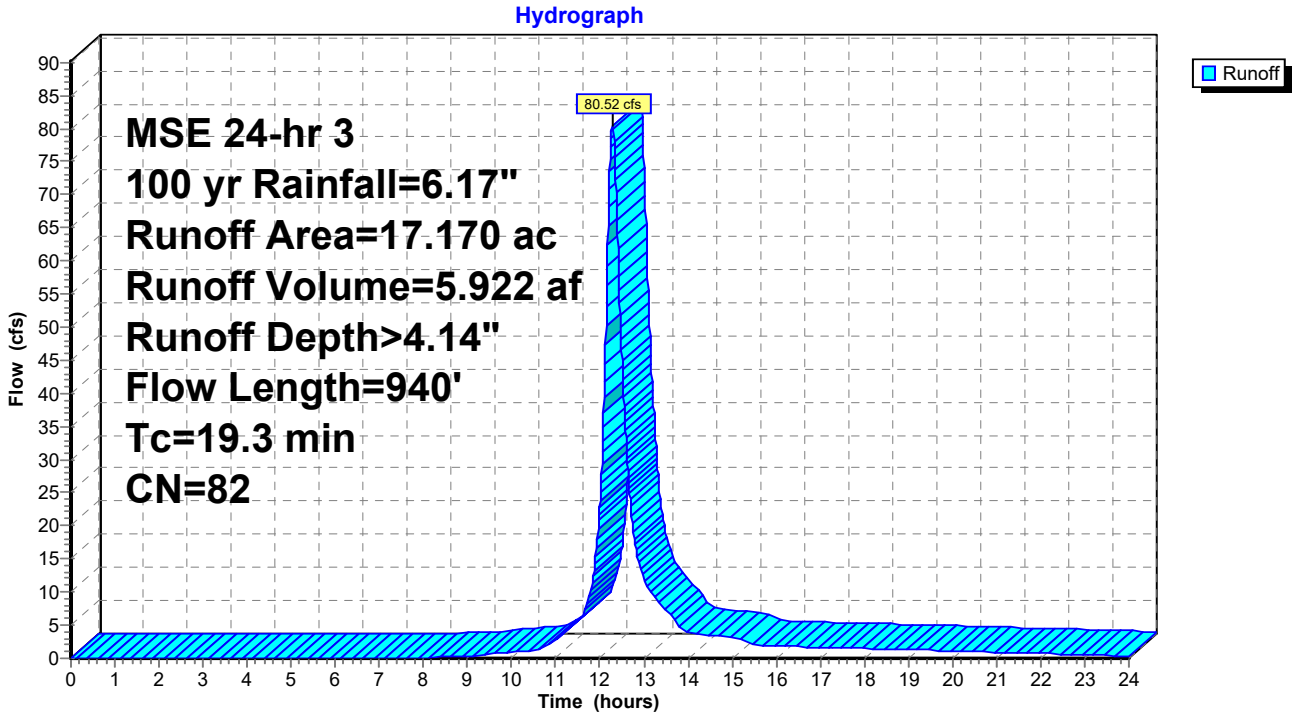
Runoff = 80.52 cfs @ 12.29 hrs, Volume= 5.922 af, Depth> 4.14"
Routed to Pond 1P/2B : Pond 1 & Basin 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100 yr Rainfall=6.17"

	Area (ac)	CN	Description
*	8.040	74	grass, C soils
*	0.260	74	offsite grass, C soils
*	0.170	98	water
*	4.170	98	impervious
*	0.330	98	offsite impervious
*	4.200	81	offsite 1/3 acre lots, 30% imp, HSG C
	17.170	82	Weighted Average
	11.240		65.46% Pervious Area
	5.930		34.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.5	100	0.0200	0.11		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.70"
0.3	35	0.0200	2.28		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
1.4	175	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.1	630		5.00		**Direct Entry, Pipe**
19.3	940	Total			

Subcatchment 1: Subarea 1



Summary for Subcatchment 2: Subarea 2

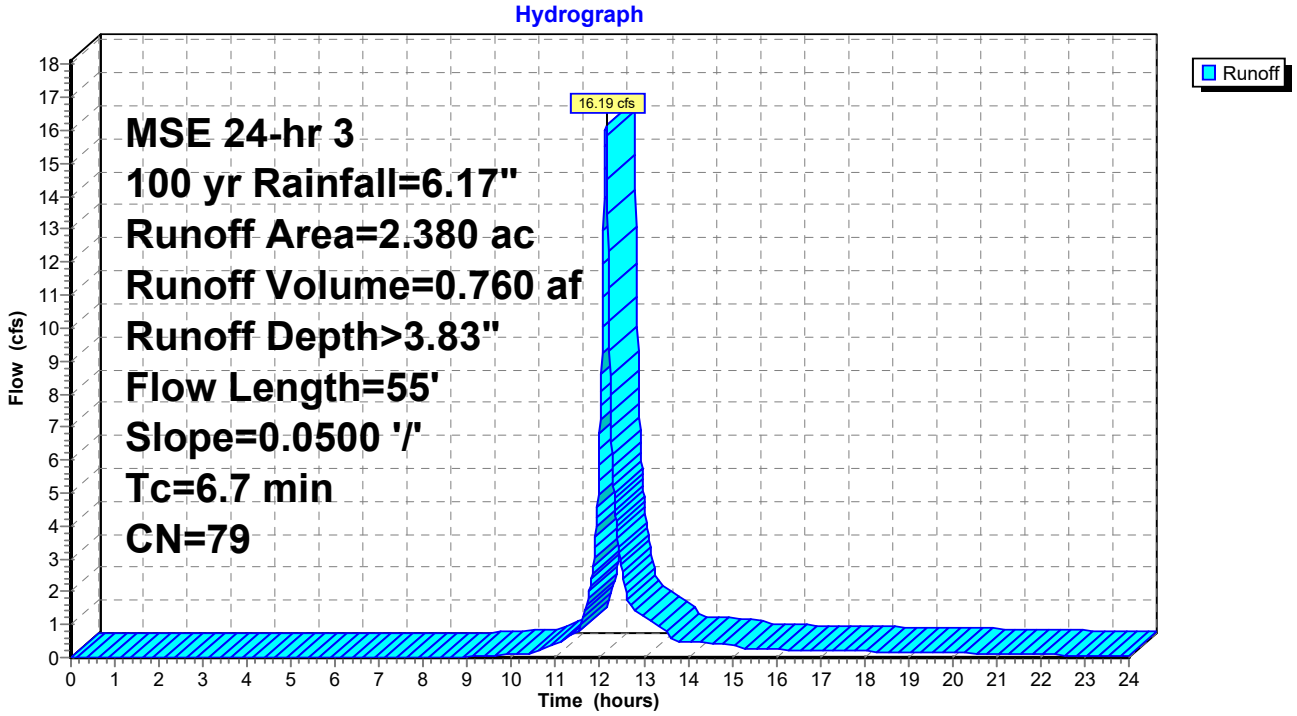
Runoff = 16.19 cfs @ 12.14 hrs, Volume= 0.760 af, Depth> 3.83"
Routed to Pond 1P/2B : Pond 1 & Basin 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100 yr Rainfall=6.17"

	Area (ac)	CN	Description
*	1.860	74	grass, C soils
*	0.520	98	impervious
	2.380	79	Weighted Average
	1.860		78.15% Pervious Area
	0.520		21.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.7	55	0.0500	0.14		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.70"

Subcatchment 2: Subarea 2



Summary for Subcatchment 3: Subarea 3

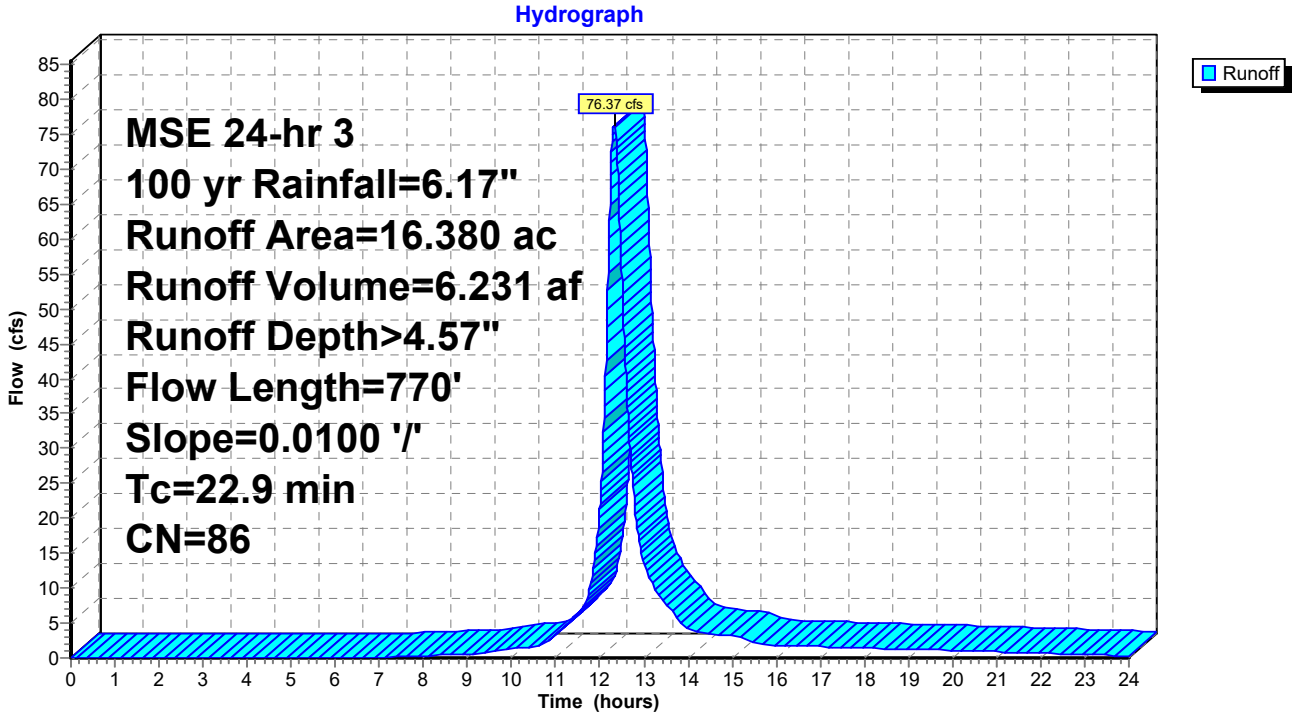
Runoff = 76.37 cfs @ 12.33 hrs, Volume= 6.231 af, Depth> 4.57"
Routed to Pond 3P : Pond 3

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100 yr Rainfall=6.17"

	Area (ac)	CN	Description
*	8.280	74	grass, C soils
*	0.320	98	water
*	7.780	98	impervious
	16.380	86	Weighted Average
	8.280		50.55% Pervious Area
	8.100		49.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.5	100	0.0100	0.08		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.70"
0.3	30	0.0100	1.61		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
2.1	640		5.00		**Direct Entry, Pipe**
22.9	770	Total			

Subcatchment 3: Subarea 3



Summary for Subcatchment 4: Subarea 4

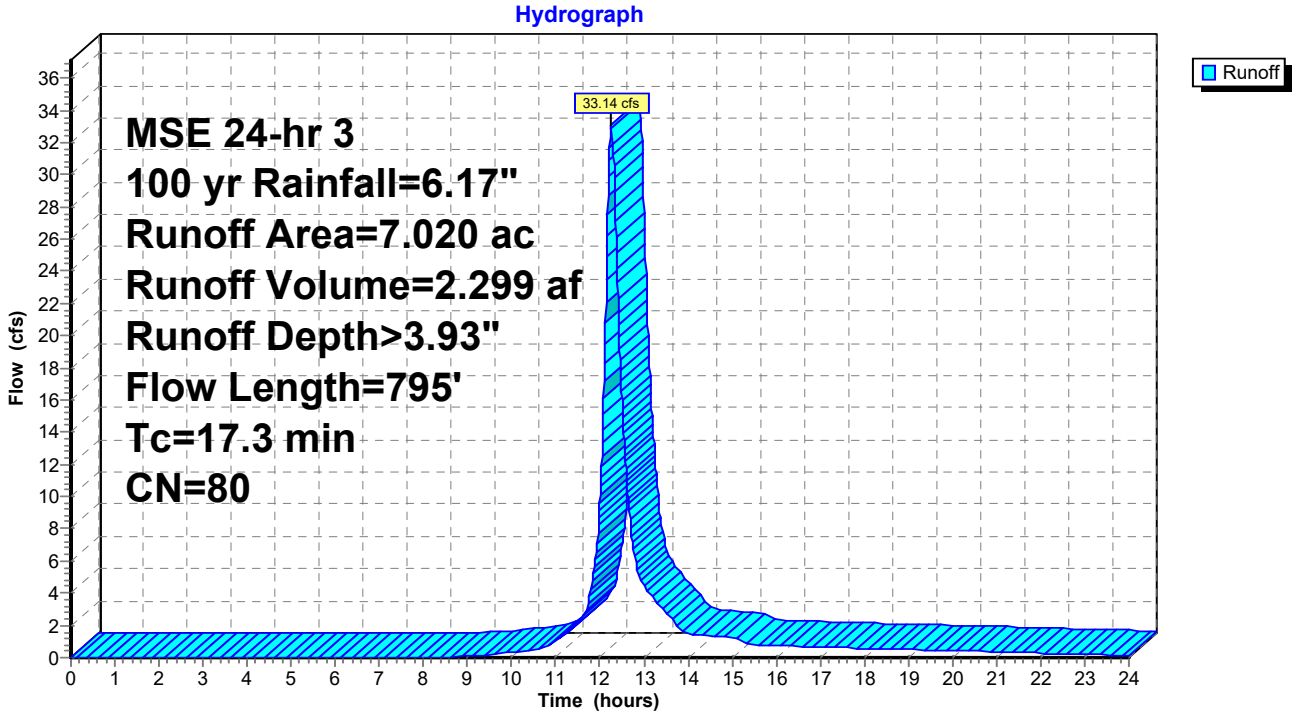
Runoff = 33.14 cfs @ 12.26 hrs, Volume= 2.299 af, Depth> 3.93"
Routed to Pond 4B : Basin 4

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100 yr Rainfall=6.17"

	Area (ac)	CN	Description
*	3.820	74	grass, C soils
*	1.060	98	impervious
*	0.050	98	offsite impervious
*	2.090	81	offsite 1/3 acre lots, 30% imp, HSG C
	7.020	80	Weighted Average
	5.283		75.26% Pervious Area
	1.737		24.74% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.3	75	0.0200	0.10		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.70"
3.8	370	0.0100	1.61		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
1.2	350		5.00		**Direct Entry, Pipe**
17.3	795	Total			

Subcatchment 4: Subarea 4



Summary for Subcatchment 5: Subarea 5

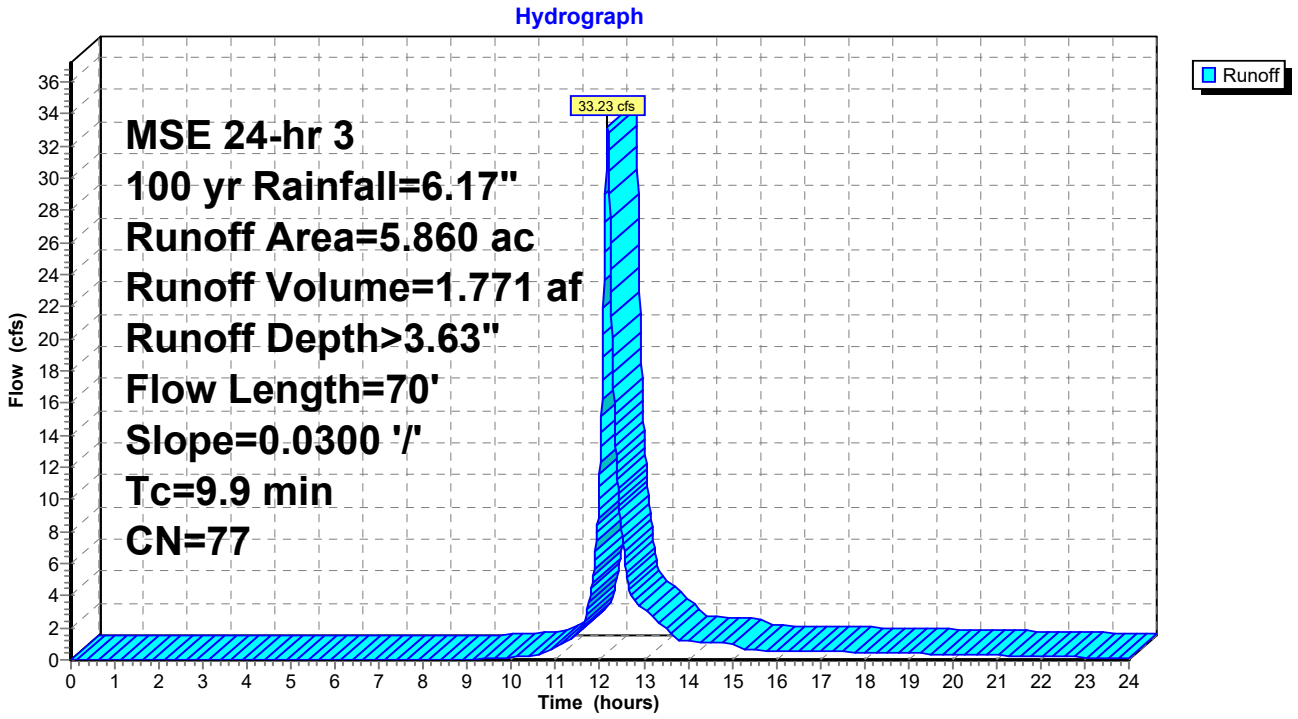
Runoff = 33.23 cfs @ 12.17 hrs, Volume= 1.771 af, Depth> 3.63"
Routed to Pond 5D : Existing Depression 5

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100 yr Rainfall=6.17"

	Area (ac)	CN	Description
*	4.100	74	grass, C soils
*	0.450	98	impervious
*	1.310	81	offsite 1/3 acre lots, 30% imp, HSG C
	5.860	77	Weighted Average
	5.017		85.61% Pervious Area
	0.843		14.39% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.9	70	0.0300	0.12		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.70"

Subcatchment 5: Subarea 5



Summary for Subcatchment 6: Subarea 6

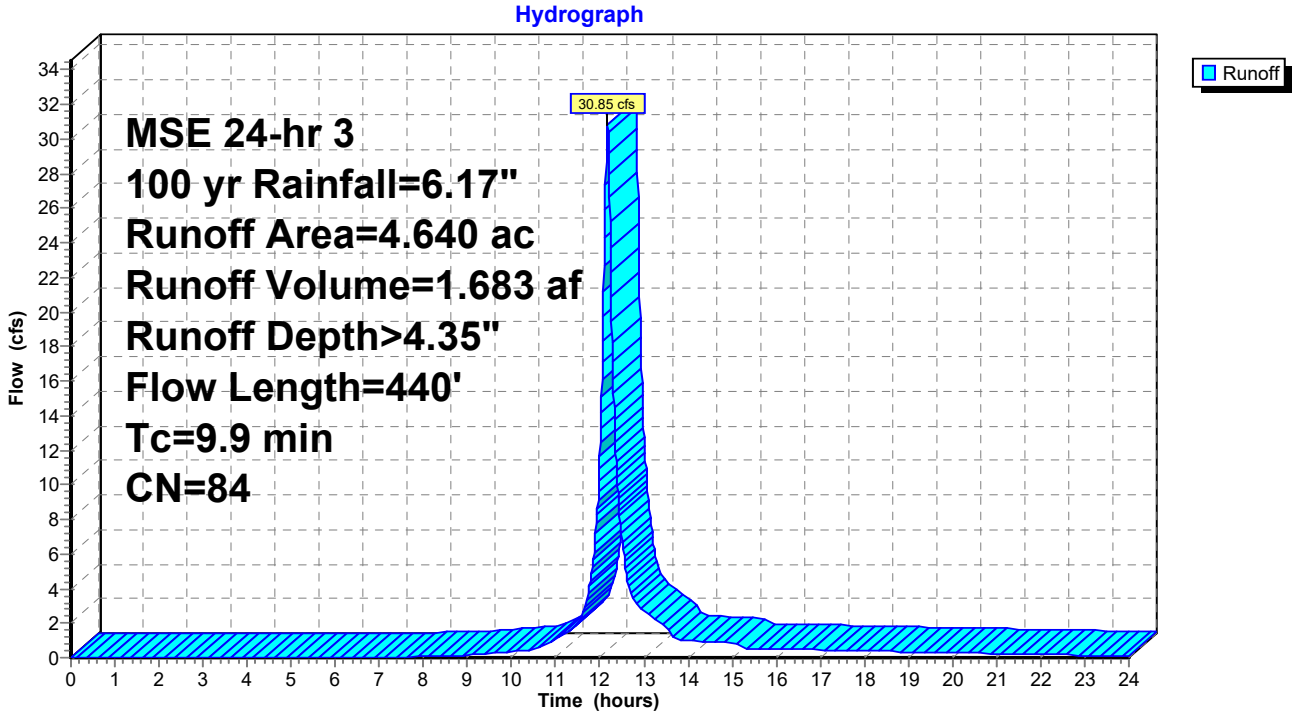
Runoff = 30.85 cfs @ 12.17 hrs, Volume= 1.683 af, Depth> 4.35"
Routed to Pond 6B : Basin 6

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100 yr Rainfall=6.17"

	Area (ac)	CN	Description
*	2.660	74	grass, C soils
*	1.980	98	impervious
	4.640	84	Weighted Average
	2.660		57.33% Pervious Area
	1.980		42.67% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.2	55	0.0300	0.11		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.70"
0.7	80	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.0	305		5.00		**Direct Entry, Pipe**
9.9	440	Total			

Subcatchment 6: Subarea 6



Summary for Subcatchment 7: Subarea 7

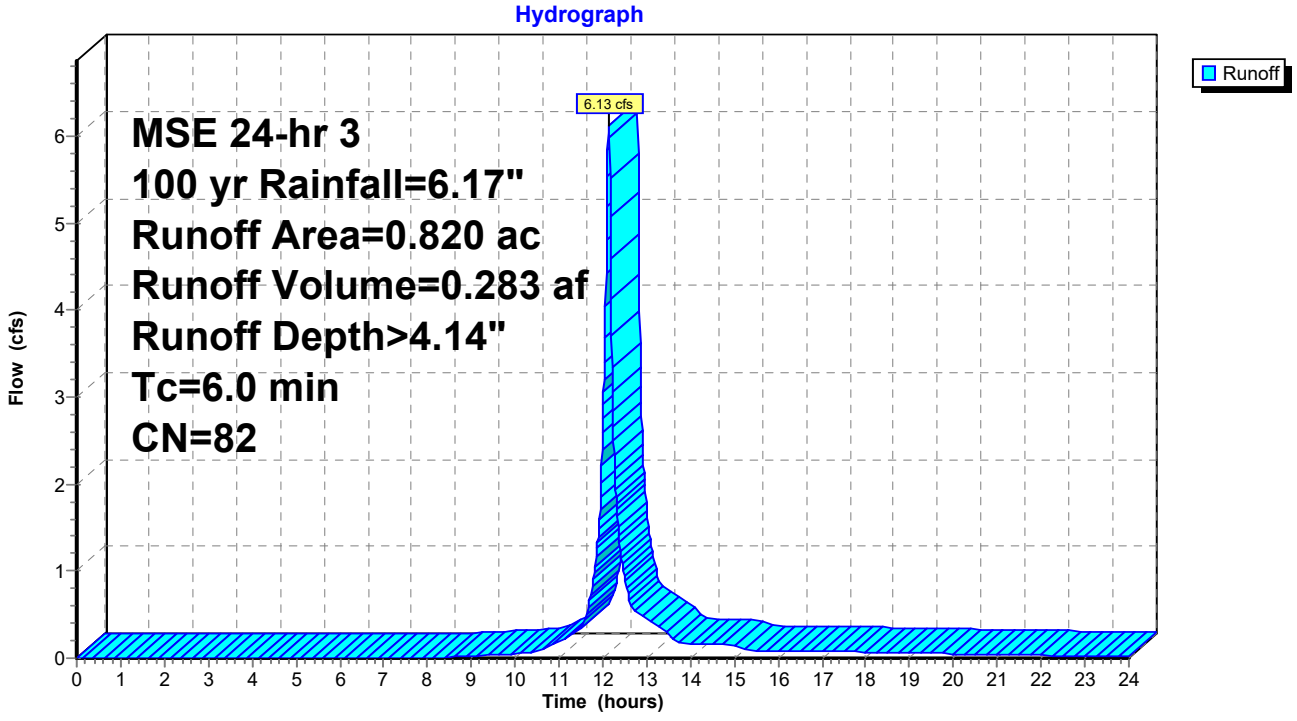
Runoff = 6.13 cfs @ 12.13 hrs, Volume= 0.283 af, Depth> 4.14"
Routed to Pond 7B : Basin 7

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100 yr Rainfall=6.17"

	Area (ac)	CN	Description
*	0.540	74	grass, C soils
*	0.280	98	impervious
	0.820	82	Weighted Average
	0.540		65.85% Pervious Area
	0.280		34.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 7: Subarea 7



Summary for Subcatchment 8: Subarea 8

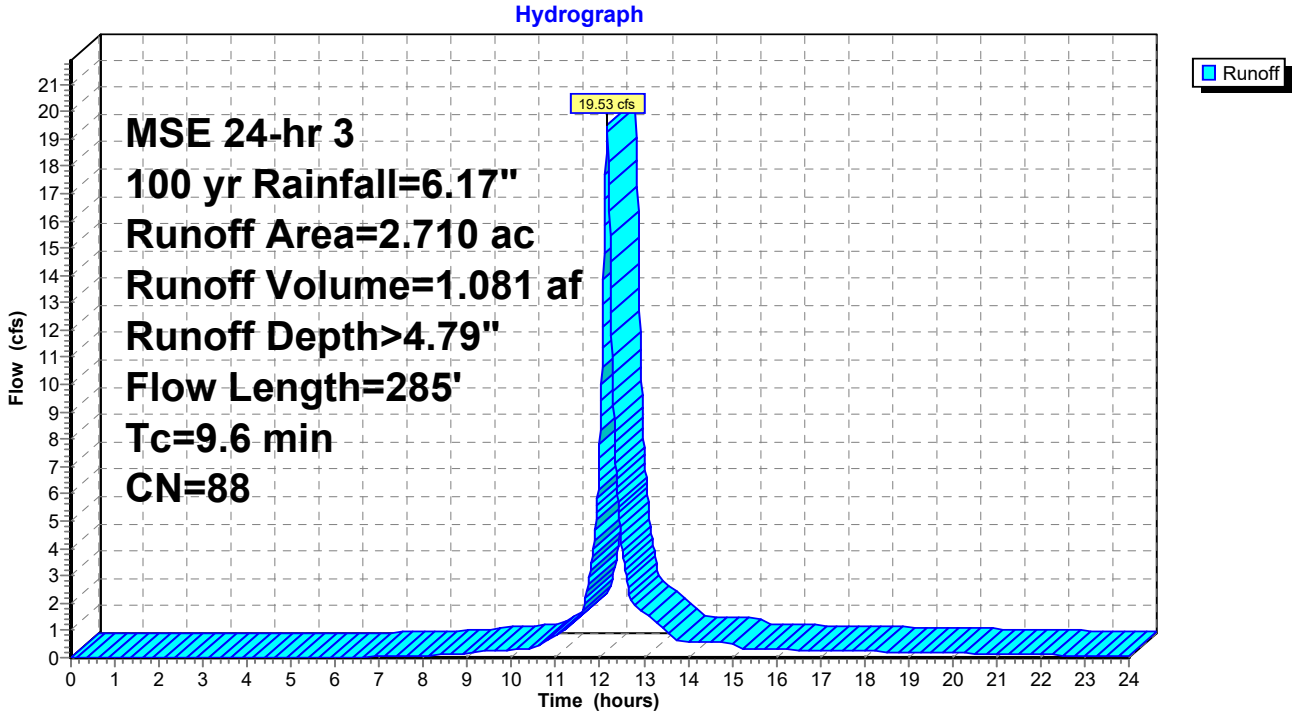
Runoff = 19.53 cfs @ 12.17 hrs, Volume= 1.081 af, Depth> 4.79"
Routed to Pond 8B : Basin 8

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100 yr Rainfall=6.17"

	Area (ac)	CN	Description
*	1.180	74	grass, C soils
*	1.530	98	impervious
	2.710	88	Weighted Average
	1.180		43.54% Pervious Area
	1.530		56.46% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.6	50	0.0300	0.11		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.70"
1.8	175	0.0100	1.61		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.2	60		5.00		**Direct Entry, Pipe**
9.6	285	Total			

Subcatchment 8: Subarea 8



Summary for Subcatchment 9: Subarea 9

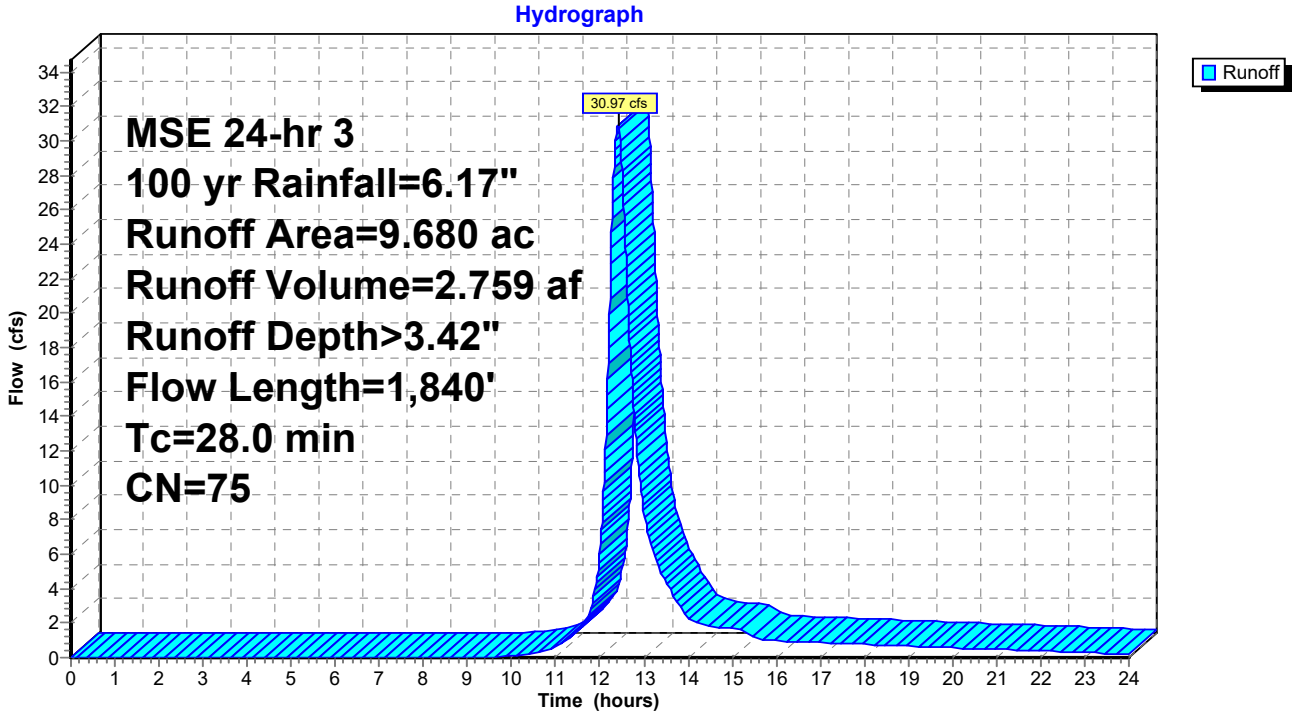
Runoff = 30.97 cfs @ 12.41 hrs, Volume= 2.759 af, Depth> 3.42"
Routed to Link 1L : Post-Development Conditions

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100 yr Rainfall=6.17"

	Area (ac)	CN	Description
*	3.760	74	grass, C soils
*	1.110	98	impervious
*	4.810	70	woods, C soils
	9.680	75	Weighted Average
	8.570		88.53% Pervious Area
	1.110		11.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.7	20	0.0100	0.06		**Sheet Flow,** Grass: Dense n= 0.240 P2= 2.70"
10.5	1,015	0.0100	1.61		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
11.8	805	0.0050	1.14		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
28.0	1,840	Total			

Subcatchment 9: Subarea 9



Summary for Pond 1P/2B: Pond 1 & Basin 2

Inflow Area = 19.550 ac, 32.99% Impervious, Inflow Depth > 4.10" for 100 yr event
Inflow = 86.71 cfs @ 12.27 hrs, Volume= 6.682 af
Outflow = 24.63 cfs @ 13.06 hrs, Volume= 5.025 af, Atten= 72%, Lag= 47.1 min
Primary = 24.63 cfs @ 13.06 hrs, Volume= 5.025 af
Routed to Pond 3P : Pond 3

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 833.46' @ 12.78 hrs Surf.Area= 1.395 ac Storage= 3.726 af

Plug-Flow detention time= 173.7 min calculated for 5.023 af (75% of inflow)
Center-of-Mass det. time= 107.8 min (908.4 - 800.6)

Volume	Invert	Avail.Storage	Storage Description
#1	829.10'	1.751 af	**Pond 1 (Conic)** Listed below (Recalc)
#2	829.00'	2.798 af	**Basin 2 (Conic)** Listed below (Recalc)
		4.550 af	Total Available Storage

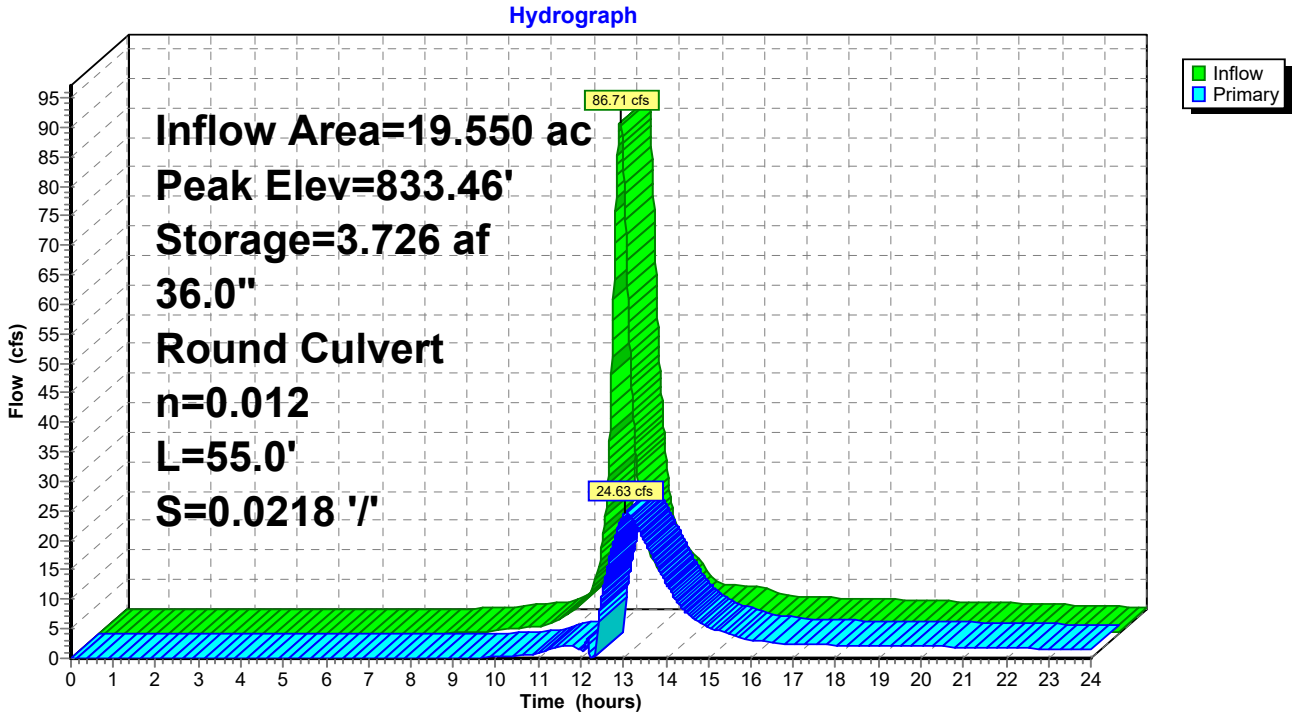
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
829.10	0.200	0.000	0.000	0.200
830.00	0.240	0.198	0.198	0.241
831.00	0.290	0.265	0.462	0.291
832.00	0.350	0.320	0.782	0.352
833.00	0.450	0.399	1.181	0.453
834.00	0.700	0.570	1.751	0.703

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
829.00	0.330	0.000	0.000	0.330
830.00	0.400	0.364	0.364	0.401
831.00	0.470	0.435	0.799	0.472
832.00	0.560	0.514	1.313	0.562
833.00	0.720	0.638	1.952	0.723
834.00	0.980	0.847	2.798	0.983

Device	Routing	Invert	Outlet Devices
#1	Primary	829.00'	**36.0" Round Culvert** L= 55.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 829.00' / 827.80' S= 0.0218 '/' Cc= 0.900 n= 0.012, Flow Area= 7.07 sf

Primary OutFlow Max=24.80 cfs @ 13.06 hrs HW=833.34' TW=832.80' (Dynamic Tailwater)
↑—**1=Culvert** (Inlet Controls 24.80 cfs @ 3.51 fps)

Pond 1P/2B: Pond 1 & Basin 2



Summary for Pond 3P: Pond 3

[80] Warning: Exceeded Pond 1P/2B by 0.15' @ 12.31 hrs (13.18 cfs 0.259 af)

Inflow Area = 35.930 ac, 40.50% Impervious, Inflow Depth > 3.76" for 100 yr event
Inflow = 76.37 cfs @ 12.33 hrs, Volume= 11.256 af
Outflow = 51.86 cfs @ 12.62 hrs, Volume= 9.611 af, Atten= 32%, Lag= 17.9 min
Primary = 51.86 cfs @ 12.62 hrs, Volume= 9.611 af
Routed to Link 1L : Post-Development Conditions

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 833.19' @ 12.62 hrs Surf.Area= 0.744 ac Storage= 2.739 af

Plug-Flow detention time= 112.1 min calculated for 9.611 af (85% of inflow)
Center-of-Mass det. time= 50.5 min (897.0 - 846.5)

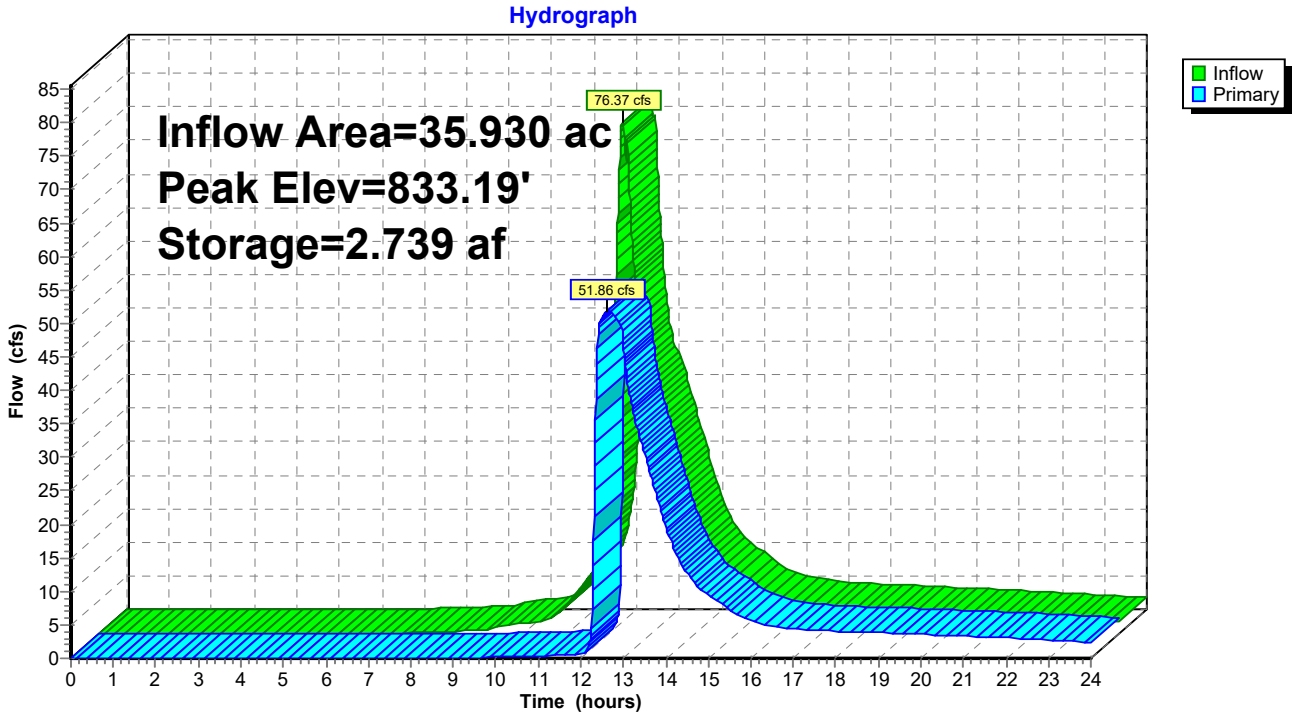
Volume	Invert	Avail.Storage	Storage Description
#1	827.80'	3.382 af	**Custom Stage Data (Conic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
827.80	0.340	0.000	0.000	0.340
828.00	0.360	0.070	0.070	0.360
829.00	0.410	0.385	0.455	0.411
830.00	0.460	0.435	0.889	0.462
831.00	0.520	0.490	1.379	0.524
832.00	0.600	0.560	1.939	0.605
833.00	0.720	0.659	2.598	0.725
834.00	0.850	0.784	3.382	0.856

Device	Routing	Invert	Outlet Devices
#1	Primary	827.80'	**36.0" Round Culvert** L= 375.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 827.80' / 827.00' S= 0.0021 '/' Cc= 0.900 n= 0.012, Flow Area= 7.07 sf
#2	Device 1	827.80'	**4.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#3	Device 1	830.80'	**1.0' long x 1.20' rise Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#4	Device 1	832.00'	**60.0" Horiz. Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=51.86 cfs @ 12.62 hrs HW=833.19' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Barrel Controls 51.86 cfs @ 7.34 fps)
├─**2=Orifice** (Passes < 0.96 cfs potential flow)
├─**3=Sharp-Crested Rectangular Weir** (Passes < 5.96 cfs potential flow)
└─**4=Grate** (Passes < 66.88 cfs potential flow)

Pond 3P: Pond 3



Summary for Pond 4B: Basin 4

Inflow Area = 7.020 ac, 24.74% Impervious, Inflow Depth > 3.93" for 100 yr event
Inflow = 33.14 cfs @ 12.26 hrs, Volume= 2.299 af
Outflow = 8.80 cfs @ 12.49 hrs, Volume= 2.150 af, Atten= 73%, Lag= 13.7 min
Primary = 8.80 cfs @ 12.49 hrs, Volume= 2.150 af
Routed to Pond 5D : Existing Depression 5

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 834.95' @ 12.68 hrs Surf.Area= 0.571 ac Storage= 0.825 af

Plug-Flow detention time= 68.3 min calculated for 2.150 af (94% of inflow)
Center-of-Mass det. time= 37.7 min (840.9 - 803.1)

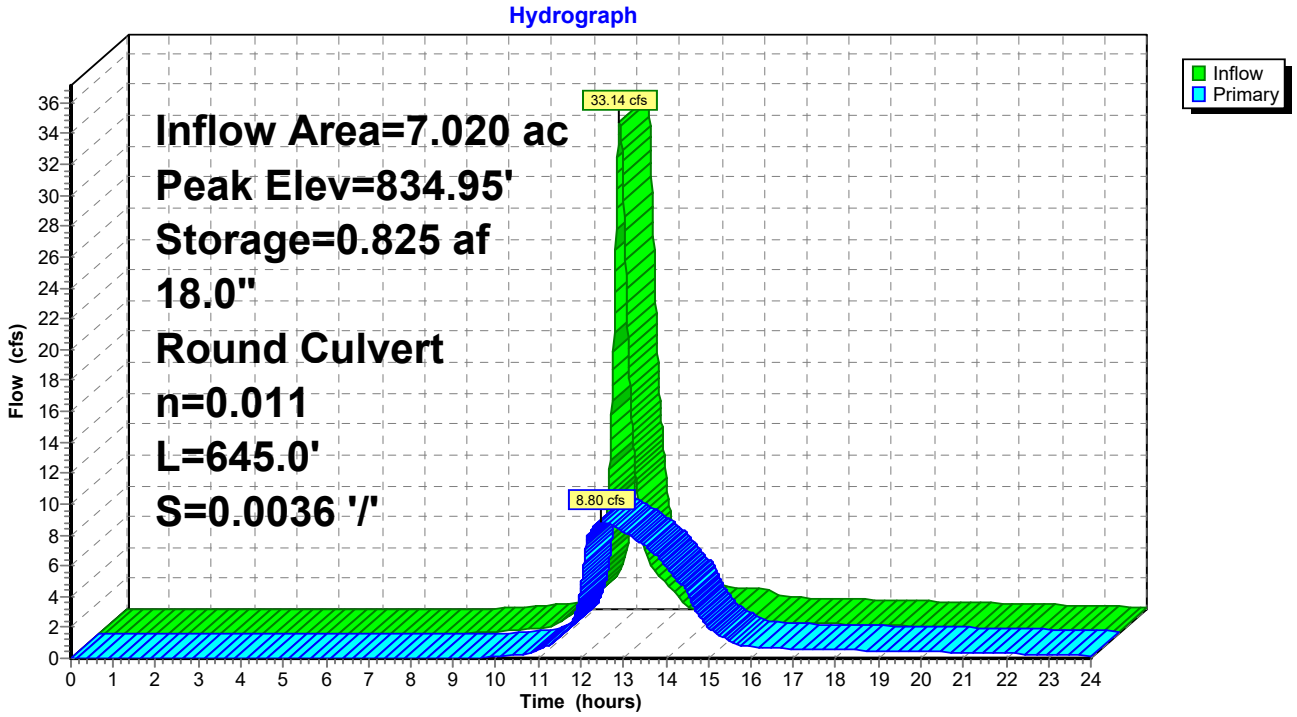
Volume	Invert	Avail.Storage	Storage Description
#1	831.30'	0.853 af	**Custom Stage Data (Conic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
831.30	0.090	0.000	0.000	0.090
832.00	0.130	0.077	0.077	0.130
833.00	0.170	0.150	0.226	0.171
834.00	0.260	0.213	0.440	0.261
835.00	0.590	0.414	0.853	0.591

Device	Routing	Invert	Outlet Devices
#1	Primary	831.30'	**18.0" Round Culvert** L= 645.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 831.30' / 829.00' S= 0.0036 '/' Cc= 0.900 n= 0.011, Flow Area= 1.77 sf

Primary OutFlow Max=8.78 cfs @ 12.49 hrs HW=834.85' TW=831.03' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 8.78 cfs @ 4.97 fps)

Pond 4B: Basin 4



Summary for Pond 5D: Existing Depression 5

Inflow Area = 12.880 ac, 20.03% Impervious, Inflow Depth > 3.65" for 100 yr event
Inflow = 40.83 cfs @ 12.18 hrs, Volume= 3.921 af
Outflow = 0.73 cfs @ 20.54 hrs, Volume= 0.449 af, Atten= 98%, Lag= 501.5 min
Primary = 0.73 cfs @ 20.54 hrs, Volume= 0.449 af
Routed to Pond 6B : Basin 6

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 832.55' @ 20.40 hrs Surf.Area= 1.556 ac Storage= 3.519 af

Plug-Flow detention time= 468.3 min calculated for 0.449 af (11% of inflow)
Center-of-Mass det. time= 337.9 min (1,161.1 - 823.2)

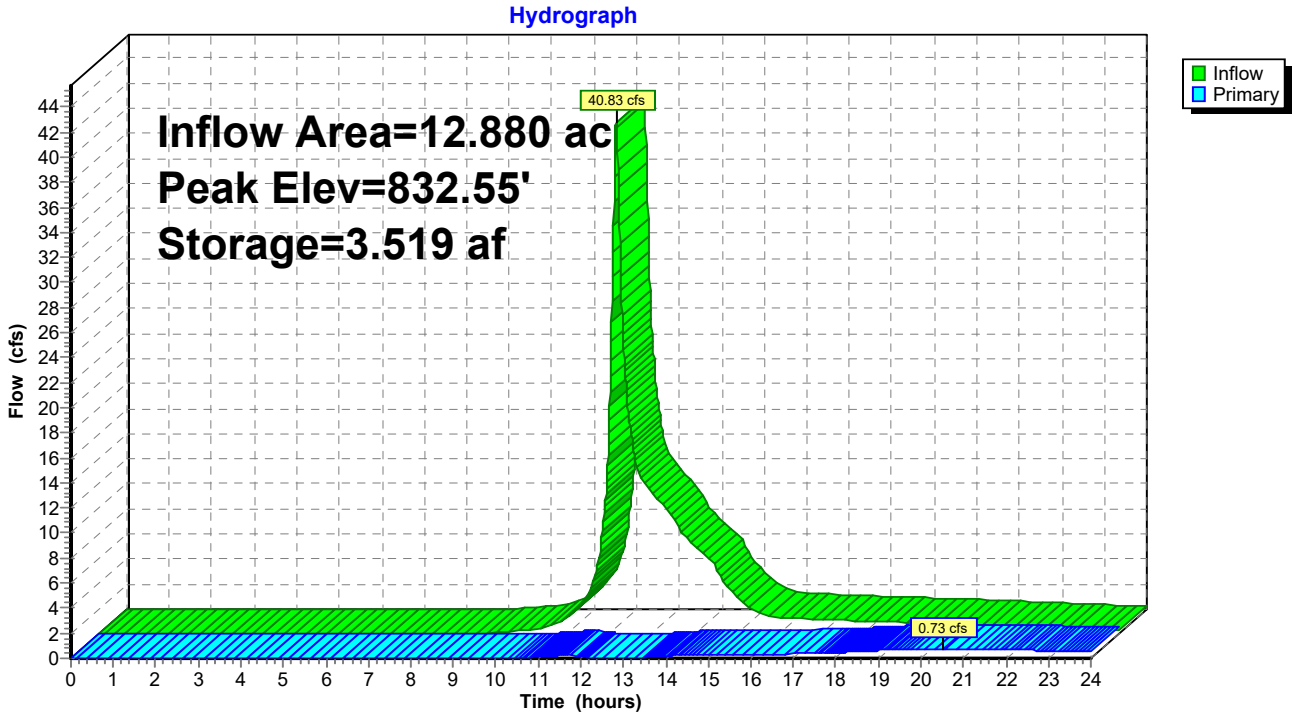
Volume	Invert	Avail.Storage	Storage Description
#1	829.00'	6.108 af	**Custom Stage Data (Conic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
829.00	0.200	0.000	0.000	0.200
830.00	0.830	0.479	0.479	0.830
831.00	1.130	0.976	1.455	1.131
832.00	1.390	1.258	2.713	1.391
833.00	1.700	1.542	4.255	1.702
834.00	2.010	1.853	6.108	2.013

Device	Routing	Invert	Outlet Devices
#1	Primary	829.00'	**12.0" Round Culvert** L= 60.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 829.00' / 827.80' S= 0.0200 '/' Cc= 0.900 n= 0.011, Flow Area= 0.79 sf
#2	Device 1	829.00'	**4.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#3	Device 1	832.50'	**36.0" Horiz. Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	833.50'	**100.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.73 cfs @ 20.54 hrs HW=832.55' TW=831.59' (Dynamic Tailwater)
- **1=Culvert** (Passes 0.73 cfs of 3.66 cfs potential flow)
  - **2=Orifice** (Orifice Controls 0.41 cfs @ 4.72 fps)
  - **3=Grate** (Weir Controls 0.32 cfs @ 0.71 fps)
- **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 5D: Existing Depression 5



Summary for Pond 6B: Basin 6

[80] Warning: Exceeded Pond 5D by 0.36' @ 12.46 hrs (0.25 cfs 0.021 af)

Inflow Area = 17.520 ac, 26.03% Impervious, Inflow Depth > 1.46" for 100 yr event
Inflow = 30.85 cfs @ 12.17 hrs, Volume= 2.133 af
Outflow = 1.26 cfs @ 18.87 hrs, Volume= 1.158 af, Atten= 96%, Lag= 401.9 min
Primary = 1.26 cfs @ 18.87 hrs, Volume= 1.158 af
Routed to Pond 8B : Basin 8

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 831.89' @ 15.09 hrs Surf.Area= 0.521 ac Storage= 1.249 af

Plug-Flow detention time= 373.7 min calculated for 1.157 af (54% of inflow)
Center-of-Mass det. time= 223.8 min (1,091.3 - 867.5)

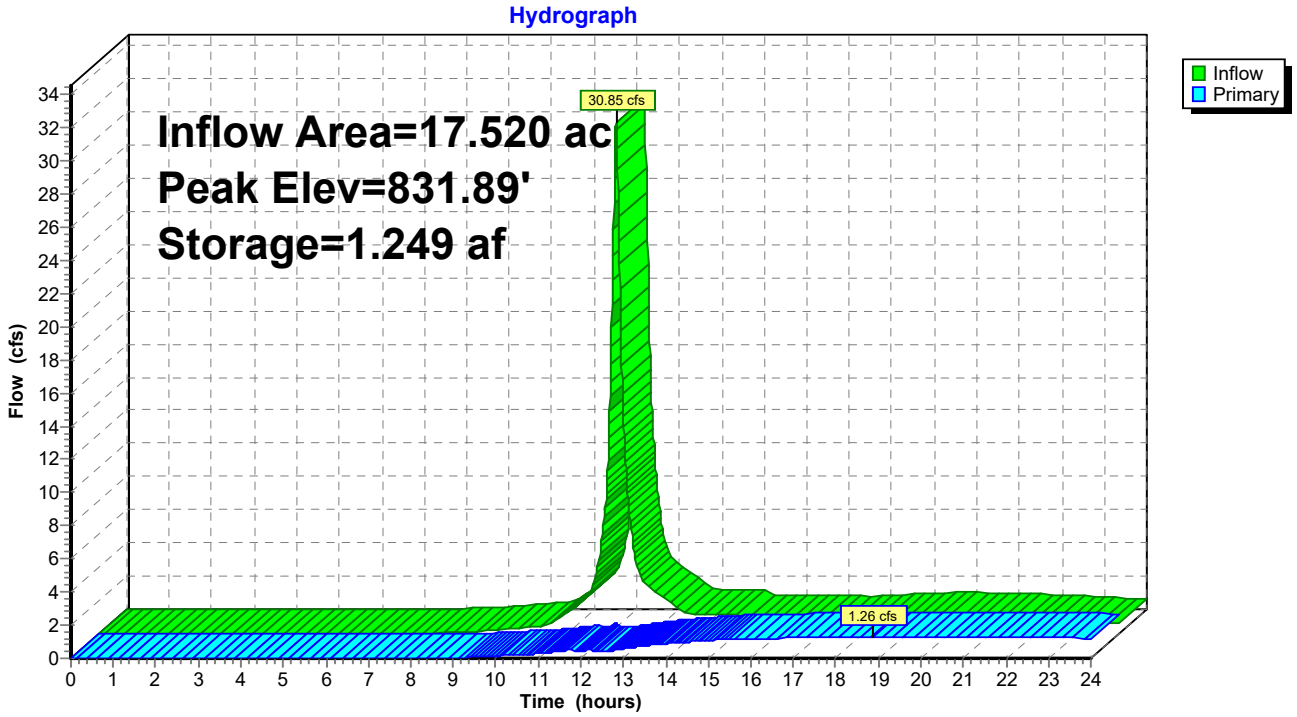
Volume	Invert	Avail.Storage	Storage Description
#1	827.80'	2.574 af	**Custom Stage Data (Conic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Voids (%)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
827.80	0.270	0.0	0.000	0.000	0.270
828.00	0.280	30.0	0.016	0.016	0.280
829.00	0.330	30.0	0.091	0.108	0.331
829.30	0.350	30.0	0.031	0.138	0.351
830.00	0.390	100.0	0.259	0.397	0.392
831.00	0.450	100.0	0.420	0.817	0.453
832.00	0.530	100.0	0.489	1.306	0.534
833.00	0.610	100.0	0.570	1.876	0.615
834.00	0.790	100.0	0.698	2.574	0.795

Device	Routing	Invert	Outlet Devices
#1	Primary	827.80'	**12.0" Round Culvert** L= 355.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 827.80' / 826.00' S= 0.0051 '/' Cc= 0.900 n= 0.011, Flow Area= 0.79 sf
#2	Device 1	827.80'	**4.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#3	Device 1	829.80'	**4.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#4	Device 1	832.00'	**36.0" Horiz. Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=1.26 cfs @ 18.87 hrs HW=831.66' TW=828.77' (Dynamic Tailwater)
└─**1=Culvert** (Passes 1.26 cfs of 3.48 cfs potential flow)
  ├─**2=Orifice** (Orifice Controls 0.71 cfs @ 8.18 fps)
  ├─**3=Orifice** (Orifice Controls 0.55 cfs @ 6.27 fps)
  └─**4=Grate** (Controls 0.00 cfs)

Pond 6B: Basin 6



Summary for Pond 7B: Basin 7

Inflow Area = 0.820 ac, 34.15% Impervious, Inflow Depth > 4.14" for 100 yr event
Inflow = 6.13 cfs @ 12.13 hrs, Volume= 0.283 af
Outflow = 1.35 cfs @ 12.38 hrs, Volume= 0.283 af, Atten= 78%, Lag= 14.7 min
Primary = 1.35 cfs @ 12.38 hrs, Volume= 0.283 af
Routed to Pond 8B : Basin 8

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 833.33' @ 12.38 hrs Surf.Area= 0.129 ac Storage= 0.109 af

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 56.1 min (845.7 - 789.5)

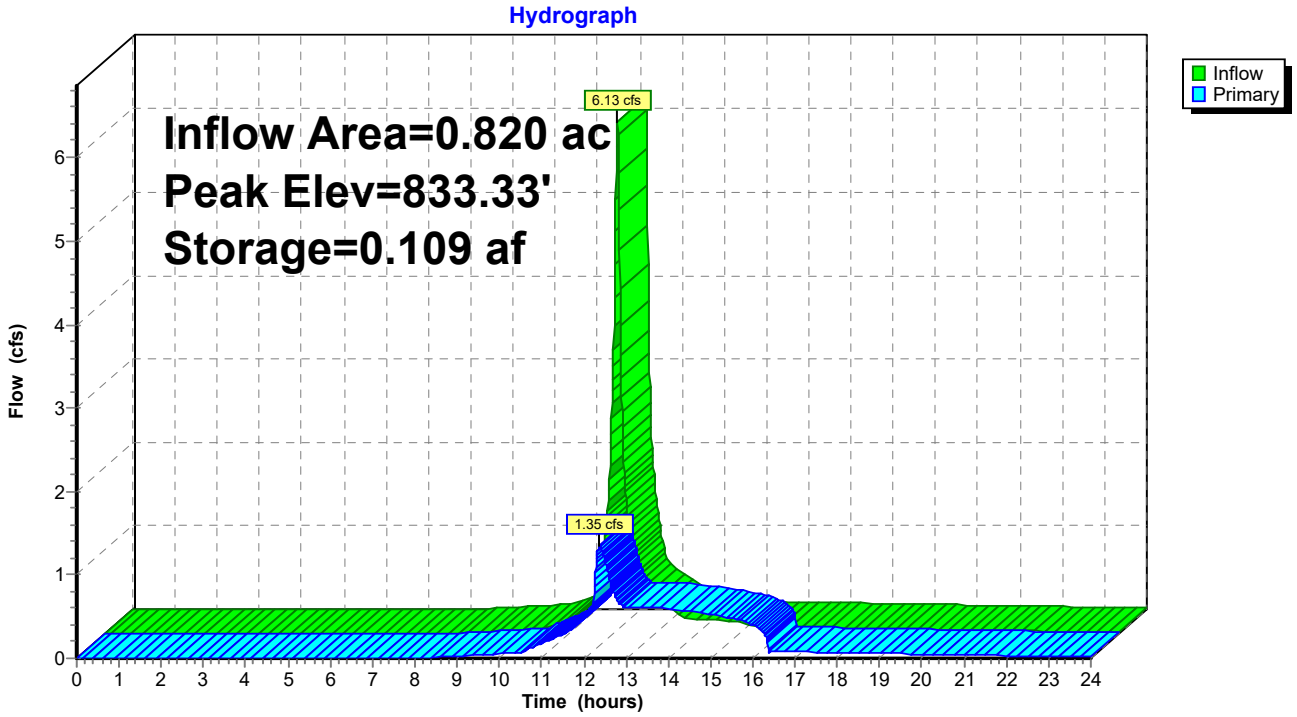
Volume	Invert	Avail.Storage	Storage Description
#1	831.00'	0.219 af	**Custom Stage Data (Conic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
831.00	0.000	0.000	0.000	0.000
832.00	0.030	0.010	0.010	0.030
833.00	0.100	0.062	0.072	0.100
834.00	0.200	0.147	0.219	0.200

Device	Routing	Invert	Outlet Devices
#1	Primary	831.00'	**4.0" Horiz. Orifice** C= 0.600 Limited to weir flow at low heads
#2	Primary	833.25'	**36.0" Horiz. Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=1.35 cfs @ 12.38 hrs HW=833.33' TW=831.03' (Dynamic Tailwater)
1=Orifice (Orifice Controls 0.64 cfs @ 7.30 fps)
2=Grate (Weir Controls 0.71 cfs @ 0.93 fps)

Pond 7B: Basin 7



Summary for Pond 8B: Basin 8

Inflow Area = 21.050 ac, 30.26% Impervious, Inflow Depth > 1.44" for 100 yr event
Inflow = 20.75 cfs @ 12.17 hrs, Volume= 2.522 af
Outflow = 3.62 cfs @ 12.67 hrs, Volume= 2.394 af, Atten= 83%, Lag= 30.1 min
Primary = 3.62 cfs @ 12.67 hrs, Volume= 2.394 af
Routed to Link 1L : Post-Development Conditions

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 831.27' @ 12.67 hrs Surf.Area= 0.200 ac Storage= 0.568 af

Plug-Flow detention time= 78.9 min calculated for 2.393 af (95% of inflow)
Center-of-Mass det. time= 53.7 min (984.1 - 930.4)

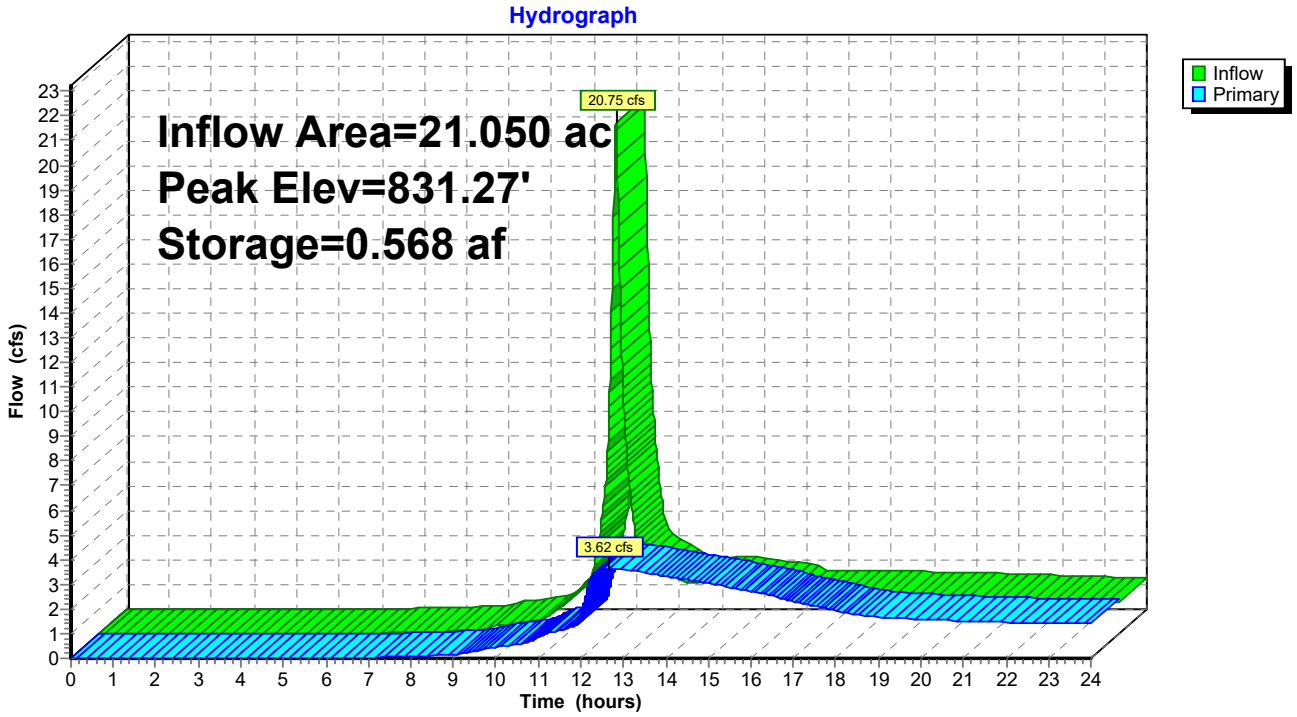
Volume	Invert	Avail.Storage	Storage Description
#1	826.00'	0.852 af	**Custom Stage Data (Conic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Voids (%)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
826.00	0.060	0.0	0.000	0.000	0.060
827.00	0.080	30.0	0.021	0.021	0.080
827.50	0.090	30.0	0.013	0.034	0.091
828.00	0.100	100.0	0.047	0.081	0.101
829.00	0.130	100.0	0.115	0.196	0.132
830.00	0.160	100.0	0.145	0.341	0.162
831.00	0.190	100.0	0.175	0.515	0.193
832.00	0.230	100.0	0.210	0.725	0.234
832.50	0.280	100.0	0.127	0.852	0.284

Device	Routing	Invert	Outlet Devices
#1	Primary	826.00'	**12.0" Round Culvert** L= 170.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 826.00' / 825.40' S= 0.0035 '/' Cc= 0.900 n= 0.011, Flow Area= 0.79 sf
#2	Device 1	826.00'	**6.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#3	Device 1	828.50'	**6.0" Vert. Orifice** C= 0.600 Limited to weir flow at low heads
#4	Device 1	831.25'	**36.0" Vert. Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=3.62 cfs @ 12.67 hrs HW=831.27' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 3.62 cfs of 6.03 cfs potential flow)
  ├**2=Orifice** (Orifice Controls 2.12 cfs @ 10.79 fps)
  ├**3=Orifice** (Orifice Controls 1.50 cfs @ 7.65 fps)
  └**4=Grate** (Orifice Controls 0.00 cfs @ 0.50 fps)

Pond 8B: Basin 8

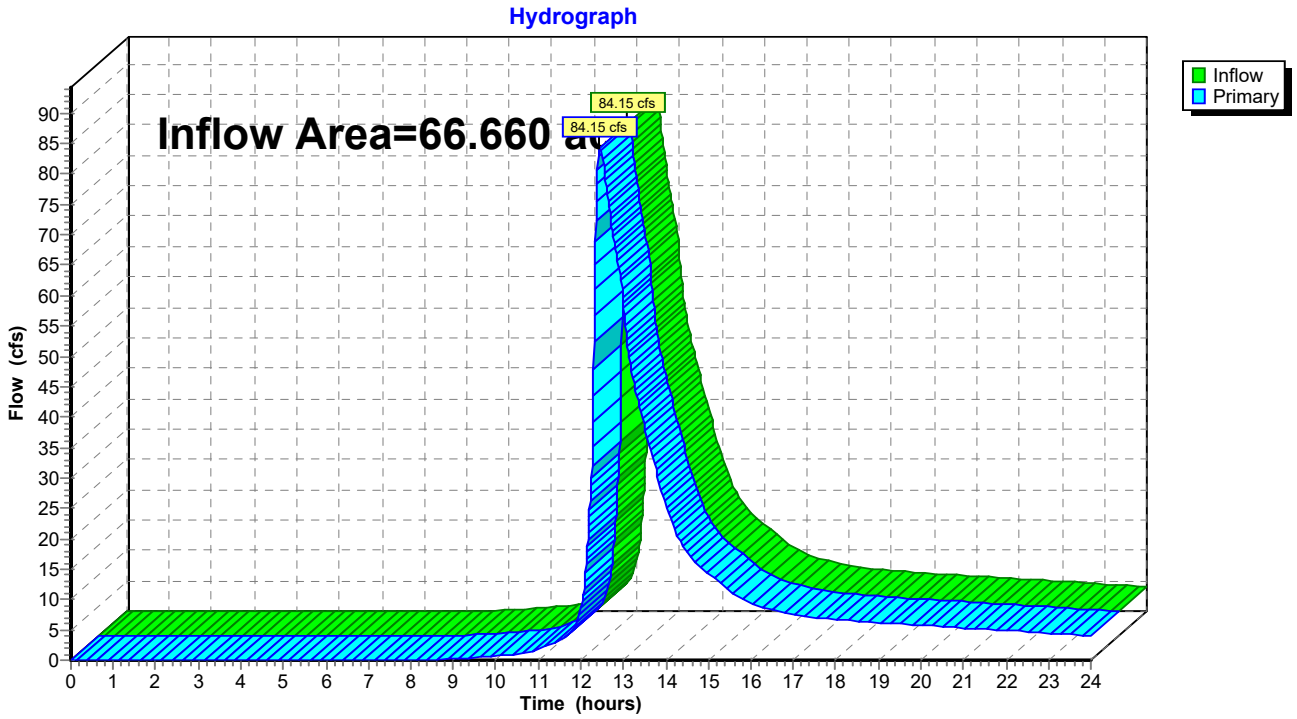


Summary for Link 1L: Post-Development Conditions

Inflow Area = 66.660 ac, 33.05% Impervious, Inflow Depth > 2.66" for 100 yr event
Inflow = 84.15 cfs @ 12.44 hrs, Volume= 14.764 af
Primary = 84.15 cfs @ 12.44 hrs, Volume= 14.764 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Link 1L: Post-Development Conditions



Events for Subcatchment 1: Subarea 1

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
1 yr	2.38	17.47	1.301	0.91
2 yr	2.69	22.11	1.628	1.14
10 yr	3.80	39.92	2.905	2.03
100 yr	**6.17**	**80.52**	**5.922**	**4.14**

Events for Subcatchment 2: Subarea 2

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
1 yr	2.38	3.20	0.150	0.76
2 yr	2.69	4.13	0.192	0.97
10 yr	3.80	7.75	0.357	1.80
100 yr	**6.17**	**16.19**	**0.760**	**3.83**

Events for Subcatchment 3: Subarea 3

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
1 yr	2.38	19.56	1.562	1.14
2 yr	2.69	23.97	1.908	1.40
10 yr	3.80	40.38	3.225	2.36
100 yr	**6.17**	**76.37**	**6.231**	**4.57**

Events for Subcatchment 4: Subarea 4

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
1 yr	2.38	6.60	0.471	0.81
2 yr	2.69	8.49	0.597	1.02
10 yr	3.80	15.88	1.097	1.88
100 yr	**6.17**	**33.14**	**2.299**	**3.93**

Events for Subcatchment 5: Subarea 5

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
1 yr	2.38	5.82	0.325	0.67
2 yr	2.69	7.71	0.421	0.86
10 yr	3.80	15.24	0.809	1.66
100 yr	**6.17**	**33.23**	**1.771**	**3.63**

Events for Subcatchment 6: Subarea 6

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
1 yr	2.38	7.45	0.396	1.02
2 yr	2.69	9.24	0.489	1.26
10 yr	3.80	15.95	0.849	2.19
100 yr	**6.17**	**30.85**	**1.683**	**4.35**

Events for Subcatchment 7: Subarea 7

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
1 yr	2.38	1.39	0.062	0.91
2 yr	2.69	1.74	0.078	1.14
10 yr	3.80	3.09	0.139	2.03
100 yr	**6.17**	**6.13**	**0.283**	**4.14**

Events for Subcatchment 8: Subarea 8

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
1 yr	2.38	5.49	0.289	1.28
2 yr	2.69	6.62	0.349	1.54
10 yr	3.80	10.71	0.574	2.54
100 yr	**6.17**	**19.53**	**1.081**	**4.79**

Events for Subcatchment 9: Subarea 9

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
1 yr	2.38	4.65	0.468	0.58
2 yr	2.69	6.35	0.615	0.76
10 yr	3.80	13.44	1.222	1.51
100 yr	**6.17**	**30.97**	**2.759**	**3.42**

Events for Pond 1P/2B: Pond 1 & Basin 2

Event	Inflow (cfs)	Primary (cfs)	Elevation (feet)	Storage (acre-feet)
1 yr	18.77	4.27	830.82	1.127
2 yr	23.76	5.23	831.13	1.363
10 yr	42.90	7.13	832.12	2.208
100 yr	**86.71**	**24.63**	**833.46**	**3.726**

Events for Pond 3P: Pond 3

Event	Inflow (cfs)	Primary (cfs)	Elevation (feet)	Storage (acre-feet)
1 yr	23.41	0.72	830.82	1.286
2 yr	29.06	1.36	831.14	1.455
10 yr	46.50	8.57	832.18	2.048
100 yr	**76.37**	**51.86**	**833.19**	**2.739**

Events for Pond 4B: Basin 4

Event	Inflow (cfs)	Primary (cfs)	Elevation (feet)	Storage (acre-feet)
1 yr	6.60	3.72	832.32	0.120
2 yr	8.49	4.96	832.52	0.150
10 yr	15.88	7.93	833.35	0.291
100 yr	**33.14**	**8.80**	**834.95**	**0.825**

Events for Pond 5D: Existing Depression 5

Event	Inflow (cfs)	Primary (cfs)	Elevation (feet)	Storage (acre-feet)
1 yr	6.79	0.33	830.09	0.559
2 yr	9.35	0.34	830.32	0.760
10 yr	19.72	0.43	831.10	1.574
100 yr	**40.83**	**0.73**	**832.55**	**3.519**

Events for Pond 6B: Basin 6

Event	Inflow (cfs)	Primary (cfs)	Elevation (feet)	Storage (acre-feet)
1 yr	7.57	0.54	829.63	0.259
2 yr	9.41	0.58	829.84	0.337
10 yr	16.08	0.88	830.46	0.584
100 yr	**30.85**	**1.26**	**831.89**	**1.249**

Events for Pond 7B: Basin 7

Event	Inflow (cfs)	Primary (cfs)	Elevation (feet)	Storage (acre-feet)
1 yr	1.39	0.44	832.09	0.013
2 yr	1.74	0.47	832.25	0.019
10 yr	3.09	0.55	832.71	0.046
100 yr	**6.13**	**1.35**	**833.33**	**0.109**

Events for Pond 8B: Basin 8

Event	Inflow (cfs)	Primary (cfs)	Elevation (feet)	Storage (acre-feet)
1 yr	6.31	1.43	828.53	0.138
2 yr	7.51	1.70	828.78	0.168
10 yr	11.64	2.59	829.59	0.277
100 yr	**20.75**	**3.62**	**831.27**	**0.568**

Events for Link 1L: Post-Development Conditions

Event	Inflow (cfs)	Primary (cfs)	Elevation (feet)
1 yr	6.57	6.57	**0.00**
2 yr	8.53	8.53	0.00
10 yr	17.74	17.74	0.00
100 yr	**84.15**	**84.15**	0.00

APPENDIX C

Treatment Analysis

Treatment Analysis Results

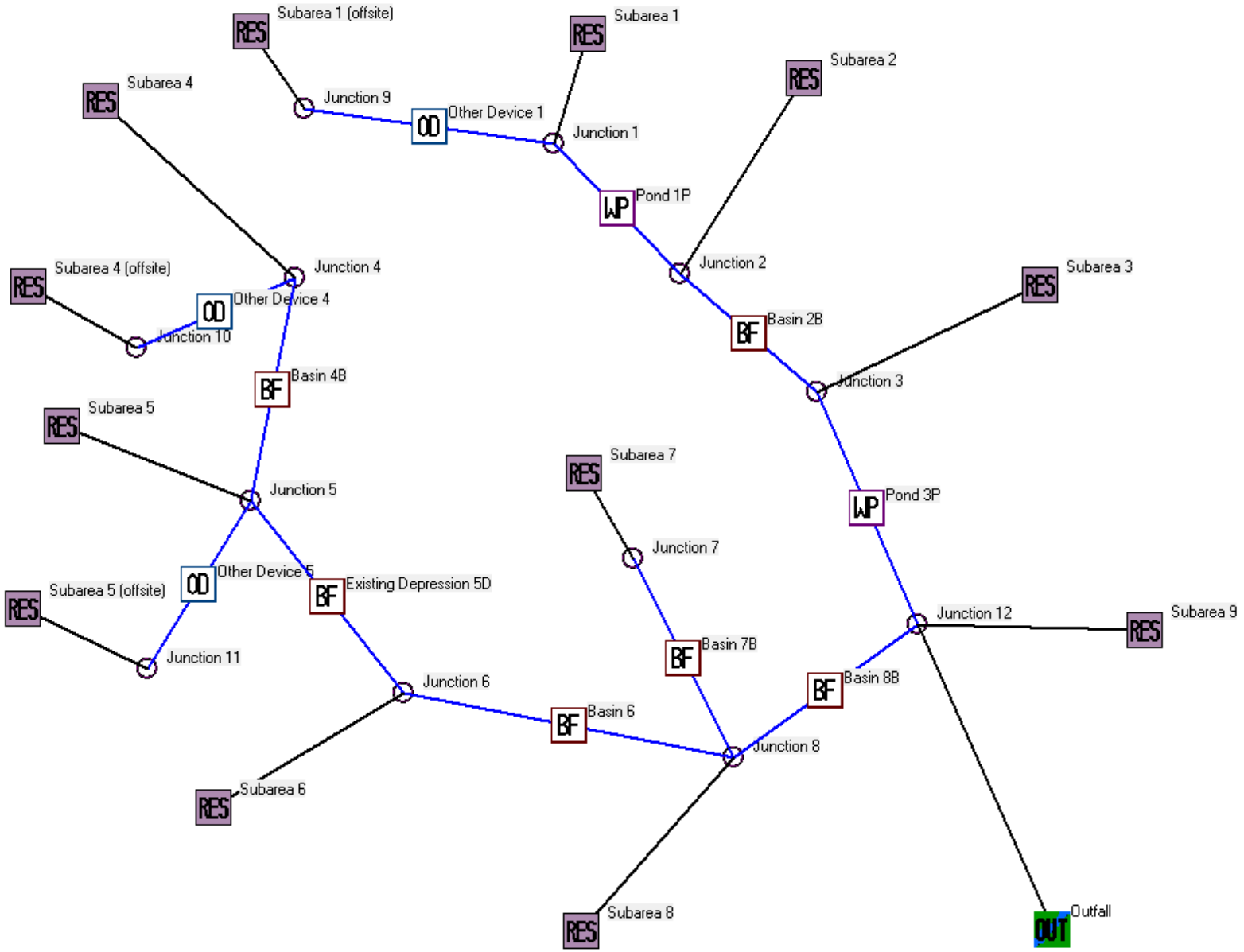
FOR: Esser Development

LOCATION: City of Pewaukee, Wisconsin

Subarea	Total TSS Loading (lbs)	BMP Type	BMP		Total Solids Yield (lbs)	% TSS Removed
			lbs IN	lbs OUT		
Subarea 1	3197	Pond 1P and Disconnected roof/patio (single family)	3197	772	drains to Basin 2B	76%
Subarea 2	331	Infiltration Basin 2B and Disconnected roof/patio	1103	964	drains to Pond 3P	13%
Subarea 3	6040	Pond 3P and Disconnected roof/pation (single family)	7004	1792	1792	74%
Subarea 4	686	Infiltration Basin 4B and Disconnected roof/patio	686	433	drains to Depression 5D	37%
Subarea 5	552	Existing Depression 5D and Disconnected roof/patio	985	612	drains to Basin 6B	38%
Subarea 6	1296	Bioretention Basin 6B and Disconnected roof/patio	1908	242	drains to Basin 8B	87%
Subarea 7	141	Infiltration Basin 7B and Disconnected roof/patio	141	64	drains to Basin 8B	55%
Subarea 8	1012	Bioretention Basin 8B and Disconnected roof/patio	1318	458	458	65%
Subarea 9	864	Disconnection of roof/patios	864	558	558	35%
Total	***14119***	**--**	**--**	**--**	***2808***	***80%***

Subarea	Total Phosphorus Loading (lbs)	BMP Type	BMP		Total Phosphorus Yield (lbs)	% Phosphorus Removed
			lbs IN	lbs OUT		
Total	***62.45***	**--**	***62.45***	***23.38***	***23.38***	***62.6%***

Treatment Analysis
Connected Model



SLAMM for Windows Version 10.5.0
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Data file name: C:\Data\Jobs\2025\2025-017 - Esser - Pewaukee - TRIO\Project_Information\Calcs\SLAMM\Proposed_Connected.mdb
Data file description:
Rain file name: C:\WinSLAMM Files\Rain Files\WisReg - Milwaukee WI 1969.RAN
Particulate Solids Concentration file name: C:\WinSLAMM Files\v10.1 WI_AVG01.pscx
Runoff Coefficient file name: C:\WinSLAMM Files\WI_SL06 Dec06.rsvx
Pollutant Relative Concentration file name: C:\WinSLAMM Files\WI_GEO03.ppdx
Residential Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
Institutional Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Commercial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Industrial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Other Urban Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
Freeway Street Delivery file name: C:\WinSLAMM Files\Freeway Dec06.std
Apply Street Delivery Files to Adjust the After Event Load Street Dirt Mass Balance: False
Source Area PSD and Peak to Average Flow Ratio File: C:\WinSLAMM Files\NURP Source Area PSD Files.csv
Cost Data file name:
If Other Device Pollutant Load Reduction Values = 1, Off-site Pollutant Loads are Removed from Pollutant Load % Reduction calculations
Seed for random number generator: -42
Start of Winter Season: 12/06 End of Winter Season: 03/28
Model Run Start Date: 01/05/69 Model Run End Date: 12/31/69
Date of run: 08-28-2025 Time of run: 18:43:13
Total Area Modeled (acres): 66.660
Years in Model Run: 0.99

	Runoff Volume (cu ft)	Percent Runoff Volume Reduction	Particulate Solids Conc. (mg/L)	Particulate Solids Yield (lbs)	Percent Particulate Solids Reduction
Total of all Land Uses without Controls:	2.108E+06	-	107.3	14119	-
Outfall Total with Controls:	1.926E+06	8.63%	30.07	3615	74.40%
Annualized Total After Outfall Controls:	1.952E+06			3665	

Pollutant	Concentration - No Controls	Concentration - With Controls	Conc. Units	Pollutant Yield No Controls	Pollutant Yield With Controls	Pol. Yield Units	Percent Reduction
Particulate Solids	107.3	30.07	mg/L	14119	3615	lbs	74.40 %
Total Phosphorus	0.4747	0.2333	mg/L	62.45	28.05	lbs	55.08 %

```
Data file name:  C:\Data\Jobs\2025\2025-017 - Esser - Pewaukee - TRIO\Project_Information\Calcs\SLAMM\Proposed_Connected.mdb
WinSLAMM Version 10.5.0
Rain file name:  C:\WinSLAMM Files\Rain Files\WisReg - Milwaukee WI 1969.RAN
Particulate Solids Concentration file name:  C:\WinSLAMM Files\v10.1 WI_AVG01.pscx
Runoff Coefficient file name:  C:\WinSLAMM Files\WI_SL06 Dec06.rsvx
Residential Street Delivery file name:  C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
Institutional Street Delivery file name:  C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Commercial Street Delivery file name:  C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Industrial Street Delivery file name:  C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Other Urban Street Delivery file name:  C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
Freeway Street Delivery file name:  C:\WinSLAMM Files\Freeway Dec06.std
Apply Street Delivery Files to Adjust the After Event Load Street Dirt Mass Balance:  False
Pollutant Relative Concentration file name:  C:\WinSLAMM Files\WI_GEO03.ppdx
Source Area PSD and Peak to Average Flow Ratio File:  C:\WinSLAMM Files\NURP Source Area PSD Files.csv
Cost Data file name:
If Other Device Pollutant Load Reduction Values = 1, Off-site Pollutant Loads are Removed from Pollutant Load % Reduction calculations
Seed for random number generator:  -42
Study period starting date:  01/05/69       Study period ending date:  12/31/69
Start of Winter Season:  12/06              End of Winter Season:  03/28
Date:  08-28-2025                           Time:  18:43:21
Site information:

LU# 1 - Residential:  Subarea 1     Total area (ac):  12.380
     1 - Roofs 1:  0.860 ac.    Pitched    Connected    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     2 - Roofs 2:  1.070 ac.    Pitched    Connected    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     25 - Driveways 1:  0.380 ac.    Connected    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     26 - Driveways 2:  0.260 ac.    Connected    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     31 - Sidewalks 1:  0.320 ac.    Connected    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     32 - Sidewalks 2:  0.170 ac.    Connected    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     37 - Streets 1:  1.110 ac.    Smooth    Street Length = 0.3271 mi    Street Width = 27.99603 ft     Street Edges = 2
            Default St. Dirt Accum.    Annual Winter Load = 2500 lbs    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     45 - Large Landscaped Areas 1:  8.040 ac.    Normal Clayey    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     70 - Water Body Areas:  0.170 ac.    Source Area PSD File:

LU# 2 - Residential:  Subarea 2     Total area (ac):  2.380
     1 - Roofs 1:  0.180 ac.    Pitched    Connected    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     2 - Roofs 2:  0.220 ac.    Pitched    Connected    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     31 - Sidewalks 1:  0.070 ac.    Connected    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     32 - Sidewalks 2:  0.050 ac.    Connected    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     45 - Large Landscaped Areas 1:  1.860 ac.    Normal Clayey    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 3 - Residential:  Subarea 3     Total area (ac):  16.380
     1 - Roofs 1:  1.900 ac.    Pitched    Connected    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     2 - Roofs 2:  0.750 ac.    Pitched    Connected    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     25 - Driveways 1:  0.630 ac.    Connected    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     26 - Driveways 2:  1.460 ac.    Connected    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     31 - Sidewalks 1:  0.220 ac.    Connected    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     32 - Sidewalks 2:  0.330 ac.    Connected    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     37 - Streets 1:  2.490 ac.    Smooth    Street Length = 0.7337 mi    Street Width = 27.9985 ft     Street Edges = 2
            Default St. Dirt Accum.    Annual Winter Load = 2500 lbs    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     45 - Large Landscaped Areas 1:  8.280 ac.    Normal Clayey    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     70 - Water Body Areas:  0.320 ac.    Source Area PSD File:

LU# 4 - Residential:  Subarea 4     Total area (ac):  4.880
     1 - Roofs 1:  0.810 ac.    Pitched    Connected    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     31 - Sidewalks 1:  0.240 ac.    Connected    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
```

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     37 - Streets 1:  0.010 ac.    Smooth    Street Length = 0.0029 mi    Street Width = 28.44828 ft     Street Edges = 2
            Default St. Dirt Accum.    Annual Winter Load = 2500 lbs    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     45 - Large Landscaped Areas 1:  3.820 ac.    Normal Clayey    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 5 - Residential:  Subarea 5     Total area (ac):  4.550
     1 - Roofs 1:  0.350 ac.    Pitched    Connected    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     31 - Sidewalks 1:  0.100 ac.    Connected    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     45 - Large Landscaped Areas 1:  4.100 ac.    Normal Clayey    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 6 - Residential:  Subarea 6     Total area (ac):  4.640
     1 - Roofs 1:  0.830 ac.    Pitched    Connected    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     2 - Roofs 2:  0.180 ac.    Pitched    Connected    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     25 - Driveways 1:  0.100 ac.    Connected    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     26 - Driveways 2:  0.340 ac.    Connected    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     31 - Sidewalks 1:  0.050 ac.    Connected    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     32 - Sidewalks 2:  0.130 ac.    Connected    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     37 - Streets 1:  0.350 ac.    Smooth    Street Length = 0.1031 mi    Street Width = 28.00679 ft     Street Edges = 2
            Default St. Dirt Accum.    Annual Winter Load = 2500 lbs    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     45 - Large Landscaped Areas 1:  2.660 ac.    Normal Clayey    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 7 - Residential:  Subarea 7     Total area (ac):  0.820
     1 - Roofs 1:  0.210 ac.    Pitched    Connected    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     25 - Driveways 1:  0.030 ac.    Connected    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     31 - Sidewalks 1:  0.040 ac.    Connected    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     45 - Large Landscaped Areas 1:  0.540 ac.    Normal Clayey    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 8 - Residential:  Subarea 8     Total area (ac):  2.710
     1 - Roofs 1:  0.630 ac.    Pitched    Connected    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     25 - Driveways 1:  0.540 ac.    Connected    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     31 - Sidewalks 1:  0.080 ac.    Connected    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     37 - Streets 1:  0.280 ac.    Smooth    Street Length = 0.0825 mi    Street Width = 28 ft     Street Edges = 2
            Default St. Dirt Accum.    Annual Winter Load = 2500 lbs    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     45 - Large Landscaped Areas 1:  1.180 ac.    Normal Clayey    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 9 - Residential:  Subarea 9     Total area (ac):  9.680
     1 - Roofs 1:  0.410 ac.    Pitched    Connected    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     2 - Roofs 2:  0.150 ac.    Pitched    Connected    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     25 - Driveways 1:  0.050 ac.    Connected    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     26 - Driveways 2:  0.060 ac.    Connected    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     31 - Sidewalks 1:  0.040 ac.    Connected    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     32 - Sidewalks 2:  0.320 ac.    Connected    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     37 - Streets 1:  0.080 ac.    Smooth    Street Length = 0.0236 mi    Street Width = 27.9661 ft     Street Edges = 2
            Default St. Dirt Accum.    Annual Winter Load = 2500 lbs    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     45 - Large Landscaped Areas 1:  3.760 ac.    Normal Clayey    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     57 - Undeveloped Areas 1:  4.810 ac.    Normal Clayey    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 10 - Residential:  Subarea 1 (offsite)     Total area (ac):  4.790
     1 - Roofs 1:  1.260 ac.    Pitched    Disconnected    Normal Clayey    Low Density    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     37 - Streets 1:  0.330 ac.    Smooth    Street Length = 0.1797 mi    Street Width = 15.15025 ft     Street Edges = 2
            Default St. Dirt Accum.    Annual Winter Load = 2500 lbs    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     45 - Large Landscaped Areas 1:  3.200 ac.    Normal Clayey    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 11 - Residential:  Subarea 4 (offsite)     Total area (ac):  2.140
     1 - Roofs 1:  0.630 ac.    Pitched    Disconnected    Normal Clayey    Low Density    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     37 - Streets 1:  0.050 ac.    Smooth    Street Length = 0.0147 mi    Street Width = 28.06122 ft     Street Edges = 2
            Default St. Dirt Accum.    Annual Winter Load = 2500 lbs    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
```

45 - Large Landscaped Areas 1: 1.460 ac.   Normal Clayey   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 12 - Residential: Subarea 5 (offsite)   Total area (ac): 1.310
1 - Roofs 1: 0.390 ac.   Pitched   Disconnected   Normal Clayey   Low Density   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
45 - Large Landscaped Areas 1: 0.920 ac.   Normal Clayey   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

Control Practice 1: Wet Detention Pond CP# 1 (DS) - Pond 1P
Particle Size Distribution file name: Not needed - calculated by program
Initial stage elevation (ft):   5
Peak to Average Flow Ratio: 3.8
Maximum flow allowed into pond (cfs): No maximum value entered
Outlet Characteristics:
Outlet type: Orifice 1
1. Orifice diameter (ft):   0.5
2. Number of orifices: 1
3. Invert elevation above datum (ft):   5
Outlet type: Broad Crested Weir
1. Weir crest length (ft):   90
2. Weir crest width (ft):   10
3. Height from datum to bottom of weir opening: 6.5
Pond stage and surface area

Entry Number	Stage (ft)	Pond Area (acres)	Natural Seepage (in/hr)	Other Outflow (cfs)
0	0.00	0.0000	0.00	0.00
1	0.01	0.0400	0.00	0.00
2	4.00	0.0900	0.00	0.00
3	5.00	0.2000	0.00	0.00
4	5.90	0.2400	0.00	0.00
5	6.90	0.2900	0.00	0.00
6	7.90	0.3500	0.00	0.00
7	8.90	0.4500	0.00	0.00
8	9.90	0.7000	0.00	0.00

Control Practice 2: Biofilter CP# 1 (DS) - Basin 2B
1. Top area (square feet) = 42719
2. Bottom aea (square feet) = 14533
3. Depth (ft):   5
4. Biofilter width (ft) - for Cost Purposes Only: 10
5. Infiltration rate (in/hr) = 0.13
6. Random infiltration rate generation? No
7. Infiltration rate fraction (side):   0.001
8. Infiltration rate fraction (bottom):   1
9. Depth of biofilter that is rock filled (ft) 0
10. Porosity of rock filled volume = 0
11. Engineered soil infiltration rate: 0
12. Engineered soil depth (ft) = 0
13. Engineered soil porosity = 0.27
14. Percent solids reduction due to flow through engineered soil = 0
15. Biofilter peak to average flow ratio = 3.8
16. Number of biofiltration control devices = 1
17. Particle size distribution file: Not needed - calculated by program
18. Initial water surface elevation (ft):   0
Soil Data Soil Type Fraction in Eng. Soil
User-Defined Media Type 1.000
Saturation water content (Porosity) =   0

Field capacity (fraction) = 0
Permanent Wilting Point (fraction) = 0
Infiltration rate (in/hr) = 0
Biofilter Outlet/Discharge Characteristics:
Outlet type: Broad Crested Weir
1. Weir crest length (ft): 10
2. Weir crest width (ft): 10
3. Height of datum to bottom of weir opening: 4.5
Outlet type: Surface Discharge Pipe
1. Surface discharge pipe outlet diameter (ft): 3
2. Pipe invert elevation above datum (ft): 0
3. Number of surface pipe outlets: 1

Control Practice 3: Wet Detention Pond CP# 2 (DS) - Pond 3P
Particle Size Distribution file name: Not needed - calculated by program
Initial stage elevation (ft): 5
Peak to Average Flow Ratio: 3.8
Maximum flow allowed into pond (cfs): No maximum value entered
Outlet Characteristics:
Outlet type: Sharp Crested Weir
1. Sharp crested weir length (ft): 1
2. Sharp crested weir height from invert: 3.2
3. Sharp crested weir invert elevation above datum (ft): 8
Outlet type: Orifice 1
1. Orifice diameter (ft): 0.33
2. Number of orifices: 1
3. Invert elevation above datum (ft): 5
Outlet type: Broad Crested Weir
1. Weir crest length (ft): 10
2. Weir crest width (ft): 10
3. Height from datum to bottom of weir opening: 10.2
Outlet type: Vertical Stand Pipe
1. Stand pipe diameter (ft): 5
2. Stand pipe height above datum (ft): 9.2
Pond stage and surface area

Entry Number	Stage (ft)	Pond Area (acres)	Natural Seepage (in/hr)	Other Outflow (cfs)
0	0.00	0.0000	0.00	0.00
1	0.01	0.1400	0.00	0.00
2	4.00	0.2000	0.00	0.00
3	5.00	0.3400	0.00	0.00
4	5.20	0.3600	0.00	0.00
5	6.20	0.4100	0.00	0.00
6	7.20	0.4600	0.00	0.00
7	8.20	0.5200	0.00	0.00
8	9.20	0.6000	0.00	0.00
9	10.20	0.7200	0.00	0.00
10	11.20	0.8500	0.00	0.00

Control Practice 4: Biofilter CP# 2 (DS) - Basin 4B
1. Top area (square feet) = 25624
2. Bottom aea (square feet) = 4015
3. Depth (ft): 4.7
4. Biofilter width (ft) - for Cost Purposes Only: 10
5. Infiltration rate (in/hr) = 0.13
6. Random infiltration rate generation? No

```
   7.  Infiltration rate fraction (side):   0.001
   8.  Infiltration rate fraction (bottom):   1
   9.  Depth of biofilter that is rock filled (ft) 0
   10.  Porosity of rock filled volume =  0
   11.  Engineered soil infiltration rate:   0
   12.  Engineered soil depth (ft) =  0
   13.  Engineered soil porosity =  0.27
   14. Percent solids reduction due to flow through engineered soil =  0
   15. Biofilter peak to average flow ratio =  3.8
   16. Number of biofiltration control devices =  1
   17. Particle size distribution file:  Not needed - calculated by program
   18. Initial water surface elevation (ft):   0
        Soil Data                        Soil Type Fraction in Eng. Soil
       User-Defined Media Type                1.000
        Saturation water content (Porosity) =   0
        Field capacity (fraction) =   0
        Permanent Wilting Point (fraction) =   0
        Infiltration rate (in/hr) =   0
        Biofilter Outlet/Discharge Characteristics:
       Outlet type:  Broad Crested Weir
              1.  Weir crest length (ft):   10
              2.  Weir crest width (ft):   10
              3.  Height of datum to bottom of weir opening:   3.7
       Outlet type:  Surface Discharge Pipe
              1.  Surface discharge pipe outlet diameter (ft):   1.5
              2.  Pipe invert elevation above datum (ft):   0
              3.  Number of surface pipe outlets:   1

Control Practice 5:  Biofilter CP# 3 (DS) - Existing Depression 5D
   1.  Top area (square feet) =  87417
   2.  Bottom aea (square feet) =  8902
   3.  Depth (ft):   5
   4.  Biofilter width (ft) - for Cost Purposes Only:   10
   5.  Infiltration rate (in/hr) =  0.13
   6.  Random infiltration rate generation?  No
   7.  Infiltration rate fraction (side):   0.001
   8.  Infiltration rate fraction (bottom):   1
   9.  Depth of biofilter that is rock filled (ft) 0
   10.  Porosity of rock filled volume =  0
   11.  Engineered soil infiltration rate:   0
   12.  Engineered soil depth (ft) =  0
   13.  Engineered soil porosity =  0
   14. Percent solids reduction due to flow through engineered soil =  0
   15. Biofilter peak to average flow ratio =  3.8
   16. Number of biofiltration control devices =  1
   17. Particle size distribution file:  Not needed - calculated by program
   18. Initial water surface elevation (ft):   0
        Soil Data                        Soil Type Fraction in Eng. Soil
        Biofilter Outlet/Discharge Characteristics:
       Outlet type:  Broad Crested Weir
              1.  Weir crest length (ft):   100
              2.  Weir crest width (ft):   10
              3.  Height of datum to bottom of weir opening:   4.5
       Outlet type:  Vertical Stand Pipe
              1.  Stand pipe diameter (ft):   3
              2.  Stand pipe height above datum (ft):   3.5
```

```
       Outlet type:  Surface Discharge Pipe
              1.  Surface discharge pipe outlet diameter (ft):   0.33
              2.  Pipe invert elevation above datum (ft):   0
              3.  Number of surface pipe outlets:   1

Control Practice 6:  Biofilter CP# 4 (DS) - Basin 6
   1.  Top area (square feet) =  34285
   2.  Bottom aea (square feet) =  11672
   3.  Depth (ft):   6.2
   4.  Biofilter width (ft) - for Cost Purposes Only:   10
   5.  Infiltration rate (in/hr) =  0.13
   6.  Random infiltration rate generation?  No
   7.  Infiltration rate fraction (side):   0.001
   8.  Infiltration rate fraction (bottom):   1
   9.  Depth of biofilter that is rock filled (ft) 0
   10.  Porosity of rock filled volume =  0
   11.  Engineered soil infiltration rate:   3.6
   12.  Engineered soil depth (ft) =  1.5
   13.  Engineered soil porosity =  0.27
   14. Percent solids reduction due to flow through engineered soil =  80
   15. Biofilter peak to average flow ratio =  3.8
   16. Number of biofiltration control devices =  1
   17. Particle size distribution file:  Not needed - calculated by program
   18. Initial water surface elevation (ft):   0
        Soil Data                        Soil Type Fraction in Eng. Soil
       User-Defined Media Type                  1.000
        Saturation water content (Porosity) =   0
        Field capacity (fraction) =   0
        Permanent Wilting Point (fraction) =   0
        Infiltration rate (in/hr) =   3.6
        Biofilter Outlet/Discharge Characteristics:
       Outlet type:  Broad Crested Weir
              1.  Weir crest length (ft):   10
              2.  Weir crest width (ft):   10
              3.  Height of datum to bottom of weir opening:   5.8
       Outlet type:  Vertical Stand Pipe
              1.  Stand pipe diameter (ft):   3
              2.  Stand pipe height above datum (ft):   4.2
       Outlet type:  Surface Discharge Pipe
              1.  Surface discharge pipe outlet diameter (ft):   0.33
              2.  Pipe invert elevation above datum (ft):   2
              3.  Number of surface pipe outlets:   1
       Outlet type:  Drain Tile/Underdrain
              1.  Underdrain outlet diameter (ft):   0.33
              2.  Invert elevation above datum (ft):   0
              3.  Number of underdrain outlets:   1

Control Practice 7:  Biofilter CP# 5 (DS) - Basin 7B
   1.  Top area (square feet) =  8794
   2.  Bottom aea (square feet) =  127
   3.  Depth (ft):   3
   4.  Biofilter width (ft) - for Cost Purposes Only:   10
   5.  Infiltration rate (in/hr) =  0.13
   6.  Random infiltration rate generation?  No
   7.  Infiltration rate fraction (side):   0.001
   8.  Infiltration rate fraction (bottom):   1
```

```
   9.  Depth of biofilter that is rock filled (ft) 0
   10.  Porosity of rock filled volume =  0
   11.  Engineered soil infiltration rate:   0
   12.  Engineered soil depth (ft) =  0
   13.  Engineered soil porosity =  0
   14. Percent solids reduction due to flow through engineered soil =  0
   15. Biofilter peak to average flow ratio =  3.8
   16. Number of biofiltration control devices =  1
   17. Particle size distribution file:  Not needed - calculated by program
   18. Initial water surface elevation (ft):   0
        Soil Data                        Soil Type Fraction in Eng. Soil
        Biofilter Outlet/Discharge Characteristics:
       Outlet type:  Broad Crested Weir
              1.  Weir crest length (ft):   10
              2.  Weir crest width (ft):   10
              3.  Height of datum to bottom of weir opening:   2.5
       Outlet type:  Vertical Stand Pipe
              1.  Stand pipe diameter (ft):   3
              2.  Stand pipe height above datum (ft):   2.25
       Outlet type:  Surface Discharge Pipe
              1.  Surface discharge pipe outlet diameter (ft):   0.33
              2.  Pipe invert elevation above datum (ft):   0
              3.  Number of surface pipe outlets:   1

Control Practice 8:  Biofilter CP# 6 (DS) - Basin 8B
   1.  Top area (square feet) =  12039
   2.  Bottom aea (square feet) =  2470
   3.  Depth (ft):   6.5
   4.  Biofilter width (ft) - for Cost Purposes Only:   10
   5.  Infiltration rate (in/hr) =  0.13
   6.  Random infiltration rate generation?  No
   7.  Infiltration rate fraction (side):   0.001
   8.  Infiltration rate fraction (bottom):   1
   9.  Depth of biofilter that is rock filled (ft) 0
   10.  Porosity of rock filled volume =  0
   11.  Engineered soil infiltration rate:   3.6
   12.  Engineered soil depth (ft) =  1.5
   13.  Engineered soil porosity =  0.27
   14. Percent solids reduction due to flow through engineered soil =  80
   15. Biofilter peak to average flow ratio =  3.8
   16. Number of biofiltration control devices =  1
   17. Particle size distribution file:  Not needed - calculated by program
   18. Initial water surface elevation (ft):   0
        Soil Data                        Soil Type Fraction in Eng. Soil
       User-Defined Media Type                 1.000
        Saturation water content (Porosity) =   0
        Field capacity (fraction) =   0
        Permanent Wilting Point (fraction) =   0
        Infiltration rate (in/hr) =   3.6
        Biofilter Outlet/Discharge Characteristics:
       Outlet type:  Broad Crested Weir
              1.  Weir crest length (ft):   10
              2.  Weir crest width (ft):   10
              3.  Height of datum to bottom of weir opening:   5.5
       Outlet type:  Vertical Stand Pipe
              1.  Stand pipe diameter (ft):   3
```

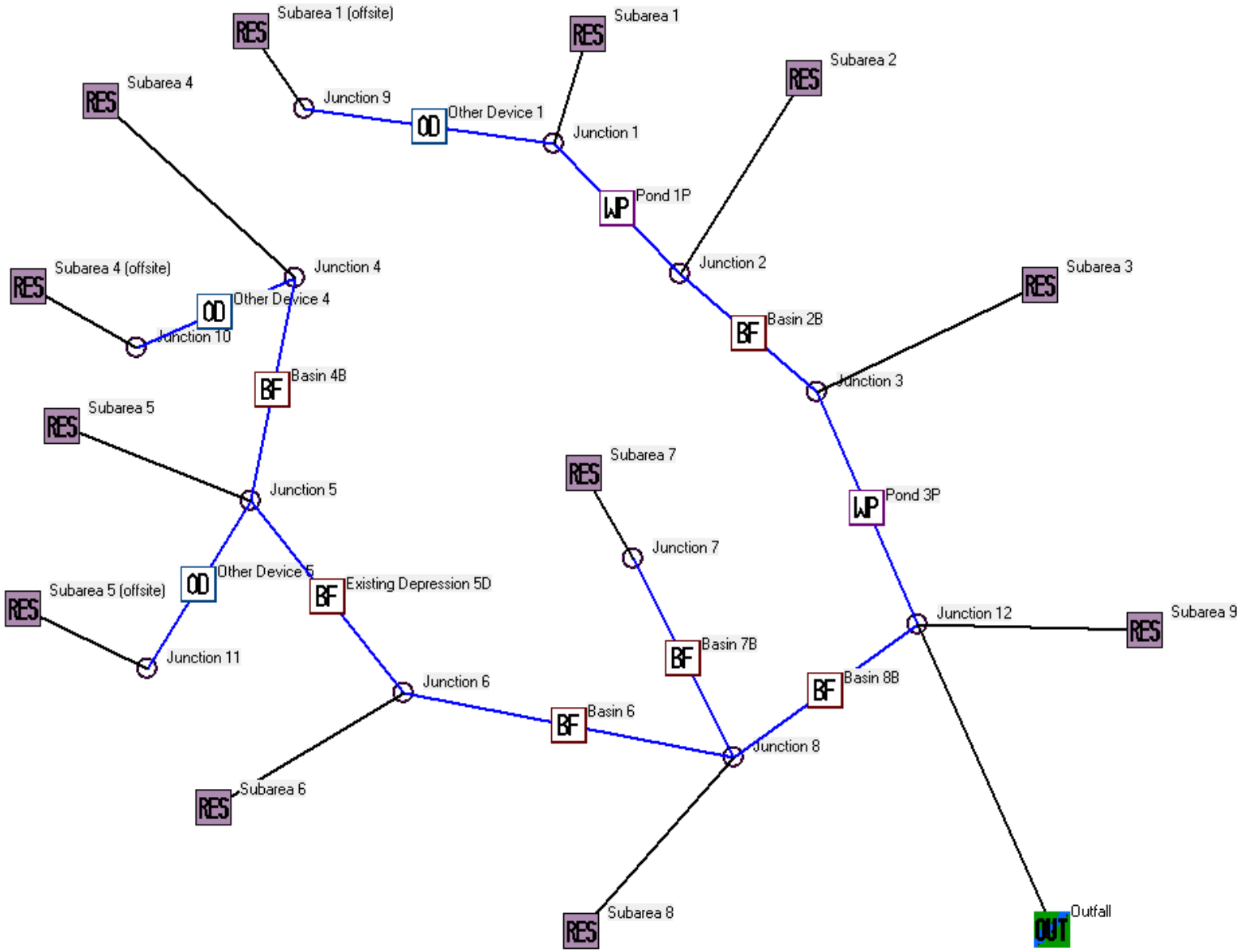
```
               2.  Stand pipe height above datum (ft):   5.25
       Outlet type:  Surface Discharge Pipe
               1.  Surface discharge pipe outlet diameter (ft):   0.5
               2.  Pipe invert elevation above datum (ft):   2.5
               3.  Number of surface pipe outlets:   1
       Outlet type:  Drain Tile/Underdrain
               1.  Underdrain outlet diameter (ft):   0.5
               2.  Invert elevation above datum (ft):   0
               3.  Number of underdrain outlets:   1

Control Practice 9:  Other Device CP# 1 (DS) - Other Device 1
   Fraction of drainage area served by device (ac) = 1.00
   Particulate Concentration reduction fraction = 1.00
   Filterable Concentration reduction fraction = 1.00
   Runoff volume reduction fraction = 0

Control Practice 10:  Other Device CP# 2 (DS) - Other Device 4
   Fraction of drainage area served by device (ac) = 1.00
   Particulate Concentration reduction fraction = 1.00
   Filterable Concentration reduction fraction = 1.00
   Runoff volume reduction fraction = 0

Control Practice 11:  Other Device CP# 3 (DS) - Other Device 5
   Fraction of drainage area served by device (ac) = 1.00
   Particulate Concentration reduction fraction = 1.00
   Filterable Concentration reduction fraction = 1.00
   Runoff volume reduction fraction = 0
```

Treatment Analysis
Disconnected Model



SLAMM for Windows Version 10.5.0
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Data file name: C:\Data\Jobs\2025\2025-017 - Esser - Pewaukee - TRIO\Project_Information\Calcs\SLAMM\Proposed_Disconnected.mdb
Data file description:
Rain file name: C:\WinSLAMM Files\Rain Files\WisReg - Milwaukee WI 1969.RAN
Particulate Solids Concentration file name: C:\WinSLAMM Files\v10.1 WI_AVG01.pscx
Runoff Coefficient file name: C:\WinSLAMM Files\WI_SL06 Dec06.rsvx
Pollutant Relative Concentration file name: C:\WinSLAMM Files\WI_GEO03.ppdx
Residential Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
Institutional Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Commercial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Industrial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Other Urban Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
Freeway Street Delivery file name: C:\WinSLAMM Files\Freeway Dec06.std
Apply Street Delivery Files to Adjust the After Event Load Street Dirt Mass Balance: False
Source Area PSD and Peak to Average Flow Ratio File: C:\WinSLAMM Files\NURP Source Area PSD Files.csv
Cost Data file name:
If Other Device Pollutant Load Reduction Values = 1, Off-site Pollutant Loads are Removed from Pollutant Load % Reduction calculations
Seed for random number generator: -42
Start of Winter Season: 12/06 End of Winter Season: 03/28
Model Run Start Date: 01/05/69 Model Run End Date: 12/31/69
Date of run: 08-28-2025 Time of run: 18:53:25
Total Area Modeled (acres): 66.660
Years in Model Run: 0.99

	Runoff Volume (cu ft)	Percent Runoff Volume Reduction	Particulate Solids Conc. (mg/L)	Particulate Solids Yield (lbs)	Percent Particulate Solids Reduction
Total of all Land Uses without Controls:	1.561E+06	-	127.5	12431	-
Outfall Total with Controls:	1.432E+06	8.26%	31.41	2808	77.41%
Annualized Total After Outfall Controls:	1.452E+06			2847	

Pollutant	Concentration - No Controls	Concentration - With Controls	Conc. Units	Pollutant Yield No Controls	Pollutant Yield With Controls	Pol. Yield Units	Percent Reduction
Particulate Solids	127.5	31.41	mg/L	12431	2808	lbs	77.41 %
Total Phosphorus	0.5685	0.2614	mg/L	55.41	23.38	lbs	57.81 %

```
Data file name:  C:\Data\Jobs\2025\2025-017 - Esser - Pewaukee - TRIO\Project_Information\Calcs\SLAMM\Proposed_Disconnected.mdb
WinSLAMM Version 10.5.0
Rain file name:  C:\WinSLAMM Files\Rain Files\WisReg - Milwaukee WI 1969.RAN
Particulate Solids Concentration file name:  C:\WinSLAMM Files\v10.1 WI_AVG01.pscx
Runoff Coefficient file name:  C:\WinSLAMM Files\WI_SL06 Dec06.rsvx
Residential Street Delivery file name:  C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
Institutional Street Delivery file name:  C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Commercial Street Delivery file name:  C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Industrial Street Delivery file name:  C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Other Urban Street Delivery file name:  C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
Freeway Street Delivery file name:  C:\WinSLAMM Files\Freeway Dec06.std
Apply Street Delivery Files to Adjust the After Event Load Street Dirt Mass Balance:  False
Pollutant Relative Concentration file name:  C:\WinSLAMM Files\WI_GEO03.ppdx
Source Area PSD and Peak to Average Flow Ratio File:  C:\WinSLAMM Files\NURP Source Area PSD Files.csv
Cost Data file name:
If Other Device Pollutant Load Reduction Values = 1, Off-site Pollutant Loads are Removed from Pollutant Load % Reduction calculations
Seed for random number generator:  -42
Study period starting date:  01/05/69       Study period ending date:  12/31/69
Start of Winter Season:  12/06              End of Winter Season:  03/28
Date:  08-28-2025                           Time:  18:53:33
Site information:

LU# 1 - Residential:  Subarea 1     Total area (ac):  12.380
     1 - Roofs 1:  0.860 ac.    Pitched    Connected    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     2 - Roofs 2:  1.070 ac.    Pitched    Disconnected    Normal Clayey    Low Density    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     25 - Driveways 1:  0.380 ac.    Connected    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     26 - Driveways 2:  0.260 ac.    Connected    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     31 - Sidewalks 1:  0.320 ac.    Disconnected    Normal Clayey    Low Density    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     32 - Sidewalks 2:  0.170 ac.    Disconnected    Normal Clayey    Low Density    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     37 - Streets 1:  1.110 ac.    Smooth    Street Length = 0.3271 mi    Street Width = 27.99603 ft     Street Edges = 2
            Default St. Dirt Accum.    Annual Winter Load = 2500 lbs    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     45 - Large Landscaped Areas 1:  8.040 ac.    Normal Clayey    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     70 - Water Body Areas:  0.170 ac.    Source Area PSD File:

LU# 2 - Residential:  Subarea 2     Total area (ac):  2.380
     1 - Roofs 1:  0.180 ac.    Pitched    Disconnected    Normal Clayey    Low Density    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     2 - Roofs 2:  0.220 ac.    Pitched    Disconnected    Normal Clayey    Low Density    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     31 - Sidewalks 1:  0.070 ac.    Disconnected    Normal Clayey    Low Density    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     32 - Sidewalks 2:  0.050 ac.    Disconnected    Normal Clayey    Low Density    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     45 - Large Landscaped Areas 1:  1.860 ac.    Normal Clayey    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 3 - Residential:  Subarea 3     Total area (ac):  16.380
     1 - Roofs 1:  1.900 ac.    Pitched    Connected    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     2 - Roofs 2:  0.750 ac.    Pitched    Disconnected    Normal Clayey    Low Density    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     25 - Driveways 1:  0.630 ac.    Connected    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     26 - Driveways 2:  1.460 ac.    Connected    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     31 - Sidewalks 1:  0.220 ac.    Disconnected    Normal Clayey    Low Density    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     32 - Sidewalks 2:  0.330 ac.    Disconnected    Normal Clayey    Low Density    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     37 - Streets 1:  2.490 ac.    Smooth    Street Length = 0.7337 mi    Street Width = 27.9985 ft     Street Edges = 2
            Default St. Dirt Accum.    Annual Winter Load = 2500 lbs    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     45 - Large Landscaped Areas 1:  8.280 ac.    Normal Clayey    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     70 - Water Body Areas:  0.320 ac.    Source Area PSD File:

LU# 4 - Residential:  Subarea 4     Total area (ac):  4.880
     1 - Roofs 1:  0.810 ac.    Pitched    Disconnected    Normal Clayey    Low Density    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     31 - Sidewalks 1:  0.240 ac.    Disconnected    Normal Clayey    Low Density    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
```

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     37 - Streets 1:  0.010 ac.    Smooth    Street Length = 0.0029 mi    Street Width = 28.44828 ft     Street Edges = 2
            Default St. Dirt Accum.    Annual Winter Load = 2500 lbs    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     45 - Large Landscaped Areas 1:  3.820 ac.    Normal Clayey    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 5 - Residential:  Subarea 5     Total area (ac):  4.550
     1 - Roofs 1:  0.350 ac.    Pitched    Disconnected    Normal Clayey    Low Density    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     31 - Sidewalks 1:  0.100 ac.    Disconnected    Normal Clayey    Low Density    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     45 - Large Landscaped Areas 1:  4.100 ac.    Normal Clayey    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 6 - Residential:  Subarea 6     Total area (ac):  4.640
     1 - Roofs 1:  0.830 ac.    Pitched    Connected    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     2 - Roofs 2:  0.180 ac.    Pitched    Disconnected    Normal Clayey    Low Density    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     25 - Driveways 1:  0.100 ac.    Connected    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     26 - Driveways 2:  0.340 ac.    Connected    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     31 - Sidewalks 1:  0.050 ac.    Disconnected    Normal Clayey    Low Density    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     32 - Sidewalks 2:  0.130 ac.    Disconnected    Normal Clayey    Low Density    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     37 - Streets 1:  0.350 ac.    Smooth    Street Length = 0.1031 mi    Street Width = 28.00679 ft     Street Edges = 2
            Default St. Dirt Accum.    Annual Winter Load = 2500 lbs    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     45 - Large Landscaped Areas 1:  2.660 ac.    Normal Clayey    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 7 - Residential:  Subarea 7     Total area (ac):  0.820
     1 - Roofs 1:  0.210 ac.    Pitched    Disconnected    Normal Clayey    Low Density    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     25 - Driveways 1:  0.030 ac.    Disconnected    Normal Clayey    Low Density    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     31 - Sidewalks 1:  0.040 ac.    Disconnected    Normal Clayey    Low Density    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     45 - Large Landscaped Areas 1:  0.540 ac.    Normal Clayey    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 8 - Residential:  Subarea 8     Total area (ac):  2.710
     1 - Roofs 1:  0.630 ac.    Pitched    Connected    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     25 - Driveways 1:  0.540 ac.    Connected    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     31 - Sidewalks 1:  0.080 ac.    Disconnected    Normal Clayey    Low Density    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     37 - Streets 1:  0.280 ac.    Smooth    Street Length = 0.0825 mi    Street Width = 28 ft     Street Edges = 2
            Default St. Dirt Accum.    Annual Winter Load = 2500 lbs    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     45 - Large Landscaped Areas 1:  1.180 ac.    Normal Clayey    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 9 - Residential:  Subarea 9     Total area (ac):  9.680
     1 - Roofs 1:  0.410 ac.    Pitched    Disconnected    Normal Clayey    Low Density    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     2 - Roofs 2:  0.150 ac.    Pitched    Disconnected    Normal Clayey    Low Density    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     25 - Driveways 1:  0.050 ac.    Disconnected    Normal Clayey    Low Density    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     26 - Driveways 2:  0.060 ac.    Disconnected    Normal Clayey    Low Density    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     31 - Sidewalks 1:  0.040 ac.    Disconnected    Normal Clayey    Low Density    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     32 - Sidewalks 2:  0.320 ac.    Disconnected    Normal Clayey    Low Density    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     37 - Streets 1:  0.080 ac.    Smooth    Street Length = 0.0236 mi    Street Width = 27.9661 ft     Street Edges = 2
            Default St. Dirt Accum.    Annual Winter Load = 2500 lbs    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     45 - Large Landscaped Areas 1:  3.760 ac.    Normal Clayey    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     57 - Undeveloped Areas 1:  4.810 ac.    Normal Clayey    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 10 - Residential:  Subarea 1 (offsite)     Total area (ac):  4.790
     1 - Roofs 1:  1.260 ac.    Pitched    Disconnected    Normal Clayey    Low Density    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     37 - Streets 1:  0.330 ac.    Smooth    Street Length = 0.1797 mi    Street Width = 15.15025 ft     Street Edges = 2
            Default St. Dirt Accum.    Annual Winter Load = 2500 lbs    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     45 - Large Landscaped Areas 1:  3.200 ac.    Normal Clayey    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 11 - Residential:  Subarea 4 (offsite)     Total area (ac):  2.140
     1 - Roofs 1:  0.630 ac.    Pitched    Disconnected    Normal Clayey    Low Density    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
     37 - Streets 1:  0.050 ac.    Smooth    Street Length = 0.0147 mi    Street Width = 28.06122 ft     Street Edges = 2
            Default St. Dirt Accum.    Annual Winter Load = 2500 lbs    Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
```

45 - Large Landscaped Areas 1: 1.460 ac.   Normal Clayey   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 12 - Residential: Subarea 5 (offsite)   Total area (ac): 1.310
1 - Roofs 1: 0.390 ac.   Pitched   Disconnected   Normal Clayey   Low Density   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
45 - Large Landscaped Areas 1: 0.920 ac.   Normal Clayey   Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

Control Practice 1: Wet Detention Pond CP# 1 (DS) - Pond 1P
Particle Size Distribution file name: Not needed - calculated by program
Initial stage elevation (ft): 5
Peak to Average Flow Ratio: 3.8
Maximum flow allowed into pond (cfs): No maximum value entered
Outlet Characteristics:
Outlet type: Orifice 1
1. Orifice diameter (ft): 0.5
2. Number of orifices: 1
3. Invert elevation above datum (ft): 5
Outlet type: Broad Crested Weir
1. Weir crest length (ft): 90
2. Weir crest width (ft): 10
3. Height from datum to bottom of weir opening: 6.5
Pond stage and surface area

Entry Number	Stage (ft)	Pond Area (acres)	Natural Seepage (in/hr)	Other Outflow (cfs)
0	0.00	0.0000	0.00	0.00
1	0.01	0.0400	0.00	0.00
2	4.00	0.0900	0.00	0.00
3	5.00	0.2000	0.00	0.00
4	5.90	0.2400	0.00	0.00
5	6.90	0.2900	0.00	0.00
6	7.90	0.3500	0.00	0.00
7	8.90	0.4500	0.00	0.00
8	9.90	0.7000	0.00	0.00

Control Practice 2: Biofilter CP# 1 (DS) - Basin 2B
1. Top area (square feet) = 42719
2. Bottom aea (square feet) = 14533
3. Depth (ft): 5
4. Biofilter width (ft) - for Cost Purposes Only: 10
5. Infiltration rate (in/hr) = 0.13
6. Random infiltration rate generation? No
7. Infiltration rate fraction (side): 0.001
8. Infiltration rate fraction (bottom): 1
9. Depth of biofilter that is rock filled (ft) 0
10. Porosity of rock filled volume = 0
11. Engineered soil infiltration rate: 0
12. Engineered soil depth (ft) = 0
13. Engineered soil porosity = 0.27
14. Percent solids reduction due to flow through engineered soil = 0
15. Biofilter peak to average flow ratio = 3.8
16. Number of biofiltration control devices = 1
17. Particle size distribution file: Not needed - calculated by program
18. Initial water surface elevation (ft): 0
Soil Data Soil Type Fraction in Eng. Soil
User-Defined Media Type 1.000
Saturation water content (Porosity) = 0

Field capacity (fraction) = 0
Permanent Wilting Point (fraction) = 0
Infiltration rate (in/hr) = 0
Biofilter Outlet/Discharge Characteristics:
Outlet type: Broad Crested Weir
1. Weir crest length (ft): 10
2. Weir crest width (ft): 10
3. Height of datum to bottom of weir opening: 4.5
Outlet type: Surface Discharge Pipe
1. Surface discharge pipe outlet diameter (ft): 3
2. Pipe invert elevation above datum (ft): 0
3. Number of surface pipe outlets: 1

Control Practice 3: Wet Detention Pond CP# 2 (DS) - Pond 3P
Particle Size Distribution file name: Not needed - calculated by program
Initial stage elevation (ft): 5
Peak to Average Flow Ratio: 3.8
Maximum flow allowed into pond (cfs): No maximum value entered
Outlet Characteristics:
Outlet type: Sharp Crested Weir
1. Sharp crested weir length (ft): 1
2. Sharp crested weir height from invert: 3.2
3. Sharp crested weir invert elevation above datum (ft): 8
Outlet type: Orifice 1
1. Orifice diameter (ft): 0.33
2. Number of orifices: 1
3. Invert elevation above datum (ft): 5
Outlet type: Broad Crested Weir
1. Weir crest length (ft): 10
2. Weir crest width (ft): 10
3. Height from datum to bottom of weir opening: 10.2
Outlet type: Vertical Stand Pipe
1. Stand pipe diameter (ft): 5
2. Stand pipe height above datum (ft): 9.2
Pond stage and surface area

Entry Number	Stage (ft)	Pond Area (acres)	Natural Seepage (in/hr)	Other Outflow (cfs)
0	0.00	0.0000	0.00	0.00
1	0.01	0.1400	0.00	0.00
2	4.00	0.2000	0.00	0.00
3	5.00	0.3400	0.00	0.00
4	5.20	0.3600	0.00	0.00
5	6.20	0.4100	0.00	0.00
6	7.20	0.4600	0.00	0.00
7	8.20	0.5200	0.00	0.00
8	9.20	0.6000	0.00	0.00
9	10.20	0.7200	0.00	0.00
10	11.20	0.8500	0.00	0.00

Control Practice 4: Biofilter CP# 2 (DS) - Basin 4B
1. Top area (square feet) = 25624
2. Bottom aea (square feet) = 4015
3. Depth (ft): 4.7
4. Biofilter width (ft) - for Cost Purposes Only: 10
5. Infiltration rate (in/hr) = 0.13
6. Random infiltration rate generation? No

```
   7.  Infiltration rate fraction (side):   0.001
   8.  Infiltration rate fraction (bottom):   1
   9.  Depth of biofilter that is rock filled (ft) 0
   10.  Porosity of rock filled volume =  0
   11.  Engineered soil infiltration rate:   0
   12.  Engineered soil depth (ft) =  0
   13.  Engineered soil porosity =  0.27
   14. Percent solids reduction due to flow through engineered soil =  0
   15. Biofilter peak to average flow ratio =  3.8
   16. Number of biofiltration control devices =  1
   17. Particle size distribution file:  Not needed - calculated by program
   18. Initial water surface elevation (ft):   0
        Soil Data                        Soil Type Fraction in Eng. Soil
       User-Defined Media Type                1.000
        Saturation water content (Porosity) =   0
        Field capacity (fraction) =   0
        Permanent Wilting Point (fraction) =   0
        Infiltration rate (in/hr) =   0
        Biofilter Outlet/Discharge Characteristics:
       Outlet type:  Broad Crested Weir
               1.  Weir crest length (ft):   10
               2.  Weir crest width (ft):   10
               3.  Height of datum to bottom of weir opening:   3.7
       Outlet type:  Surface Discharge Pipe
               1.  Surface discharge pipe outlet diameter (ft):   1.5
               2.  Pipe invert elevation above datum (ft):   0
               3.  Number of surface pipe outlets:   1

Control Practice 5:  Biofilter CP# 3 (DS) - Existing Depression 5D
   1.  Top area (square feet) =  87417
   2.  Bottom aea (square feet) =  8902
   3.  Depth (ft):   5
   4.  Biofilter width (ft) - for Cost Purposes Only:   10
   5.  Infiltration rate (in/hr) =  0.13
   6.  Random infiltration rate generation?  No
   7.  Infiltration rate fraction (side):   0.001
   8.  Infiltration rate fraction (bottom):   1
   9.  Depth of biofilter that is rock filled (ft) 0
   10.  Porosity of rock filled volume =  0
   11.  Engineered soil infiltration rate:   0
   12.  Engineered soil depth (ft) =  0
   13.  Engineered soil porosity =  0
   14. Percent solids reduction due to flow through engineered soil =  0
   15. Biofilter peak to average flow ratio =  3.8
   16. Number of biofiltration control devices =  1
   17. Particle size distribution file:  Not needed - calculated by program
   18. Initial water surface elevation (ft):   0
        Soil Data                        Soil Type Fraction in Eng. Soil
        Biofilter Outlet/Discharge Characteristics:
       Outlet type:  Broad Crested Weir
               1.  Weir crest length (ft):   100
               2.  Weir crest width (ft):   10
               3.  Height of datum to bottom of weir opening:   4.5
       Outlet type:  Vertical Stand Pipe
               1.  Stand pipe diameter (ft):   3
               2.  Stand pipe height above datum (ft):   3.5
```

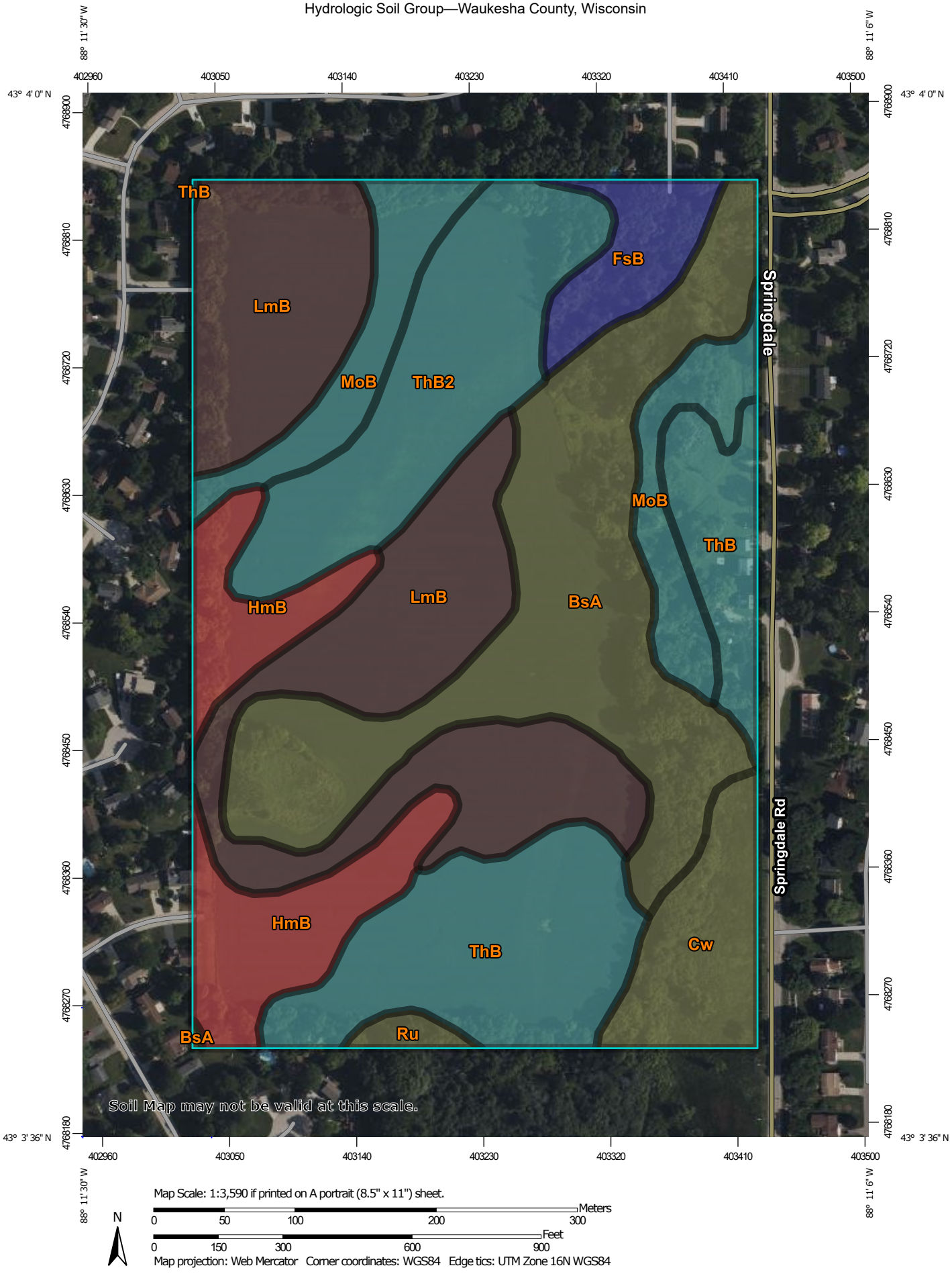
```
       Outlet type:  Surface Discharge Pipe
              1.  Surface discharge pipe outlet diameter (ft):   0.33
              2.  Pipe invert elevation above datum (ft):   0
              3.  Number of surface pipe outlets:   1

Control Practice 6:  Biofilter CP# 4 (DS) - Basin 6
   1.  Top area (square feet) =  34285
   2.  Bottom aea (square feet) =  11672
   3.  Depth (ft):   6.2
   4.  Biofilter width (ft) - for Cost Purposes Only:   10
   5.  Infiltration rate (in/hr) =  0.13
   6.  Random infiltration rate generation?  No
   7.  Infiltration rate fraction (side):   0.001
   8.  Infiltration rate fraction (bottom):   1
   9.  Depth of biofilter that is rock filled (ft) 0
   10.  Porosity of rock filled volume =  0
   11.  Engineered soil infiltration rate:   3.6
   12.  Engineered soil depth (ft) =  1.5
   13.  Engineered soil porosity =  0.27
   14. Percent solids reduction due to flow through engineered soil =  80
   15. Biofilter peak to average flow ratio =  3.8
   16. Number of biofiltration control devices =  1
   17. Particle size distribution file:  Not needed - calculated by program
   18. Initial water surface elevation (ft):   0
        Soil Data                        Soil Type Fraction in Eng. Soil
       User-Defined Media Type                  1.000
        Saturation water content (Porosity) =   0
        Field capacity (fraction) =   0
        Permanent Wilting Point (fraction) =   0
        Infiltration rate (in/hr) =   3.6
        Biofilter Outlet/Discharge Characteristics:
       Outlet type:  Broad Crested Weir
              1.  Weir crest length (ft):   10
              2.  Weir crest width (ft):   10
              3.  Height of datum to bottom of weir opening:   5.8
       Outlet type:  Vertical Stand Pipe
              1.  Stand pipe diameter (ft):   3
              2.  Stand pipe height above datum (ft):   4.2
       Outlet type:  Surface Discharge Pipe
              1.  Surface discharge pipe outlet diameter (ft):   0.33
              2.  Pipe invert elevation above datum (ft):   2
              3.  Number of surface pipe outlets:   1
       Outlet type:  Drain Tile/Underdrain
              1.  Underdrain outlet diameter (ft):   0.33
              2.  Invert elevation above datum (ft):   0
              3.  Number of underdrain outlets:   1

Control Practice 7:  Biofilter CP# 5 (DS) - Basin 7B
   1.  Top area (square feet) =  8794
   2.  Bottom aea (square feet) =  127
   3.  Depth (ft):   3
   4.  Biofilter width (ft) - for Cost Purposes Only:   10
   5.  Infiltration rate (in/hr) =  0.13
   6.  Random infiltration rate generation?  No
   7.  Infiltration rate fraction (side):   0.001
   8.  Infiltration rate fraction (bottom):   1
```

```
   9.  Depth of biofilter that is rock filled (ft) 0
   10.  Porosity of rock filled volume =  0
   11.  Engineered soil infiltration rate:   0
   12.  Engineered soil depth (ft) =  0
   13.  Engineered soil porosity =  0
   14. Percent solids reduction due to flow through engineered soil =  0
   15. Biofilter peak to average flow ratio =  3.8
   16. Number of biofiltration control devices =  1
   17. Particle size distribution file:  Not needed - calculated by program
   18. Initial water surface elevation (ft):   0
        Soil Data                        Soil Type Fraction in Eng. Soil
        Biofilter Outlet/Discharge Characteristics:
       Outlet type:  Broad Crested Weir
              1.  Weir crest length (ft):   10
              2.  Weir crest width (ft):   10
              3.  Height of datum to bottom of weir opening:   2.5
       Outlet type:  Vertical Stand Pipe
              1.  Stand pipe diameter (ft):   3
              2.  Stand pipe height above datum (ft):   2.25
       Outlet type:  Surface Discharge Pipe
              1.  Surface discharge pipe outlet diameter (ft):   0.33
              2.  Pipe invert elevation above datum (ft):   0
              3.  Number of surface pipe outlets:   1

Control Practice 8:  Biofilter CP# 6 (DS) - Basin 8B
   1.  Top area (square feet) =  12039
   2.  Bottom aea (square feet) =  2470
   3.  Depth (ft):   6.5
   4.  Biofilter width (ft) - for Cost Purposes Only:   10
   5.  Infiltration rate (in/hr) =  0.13
   6.  Random infiltration rate generation?  No
   7.  Infiltration rate fraction (side):   0.001
   8.  Infiltration rate fraction (bottom):   1
   9.  Depth of biofilter that is rock filled (ft) 0
   10.  Porosity of rock filled volume =  0
   11.  Engineered soil infiltration rate:   3.6
   12.  Engineered soil depth (ft) =  1.5
   13.  Engineered soil porosity =  0.27
   14. Percent solids reduction due to flow through engineered soil =  80
   15. Biofilter peak to average flow ratio =  3.8
   16. Number of biofiltration control devices =  1
   17. Particle size distribution file:  Not needed - calculated by program
   18. Initial water surface elevation (ft):   0
        Soil Data                        Soil Type Fraction in Eng. Soil
       User-Defined Media Type                 1.000
        Saturation water content (Porosity) =   0
        Field capacity (fraction) =   0
        Permanent Wilting Point (fraction) =   0
        Infiltration rate (in/hr) =   3.6
        Biofilter Outlet/Discharge Characteristics:
       Outlet type:  Broad Crested Weir
              1.  Weir crest length (ft):   10
              2.  Weir crest width (ft):   10
              3.  Height of datum to bottom of weir opening:   5.5
       Outlet type:  Vertical Stand Pipe
              1.  Stand pipe diameter (ft):   3
```

```
               2.  Stand pipe height above datum (ft):   5.25
       Outlet type:  Surface Discharge Pipe
               1.  Surface discharge pipe outlet diameter (ft):   0.5
               2.  Pipe invert elevation above datum (ft):   2.5
               3.  Number of surface pipe outlets:   1
       Outlet type:  Drain Tile/Underdrain
               1.  Underdrain outlet diameter (ft):   0.5
               2.  Invert elevation above datum (ft):   0
               3.  Number of underdrain outlets:   1

Control Practice 9:  Other Device CP# 1 (DS) - Other Device 1
   Fraction of drainage area served by device (ac) = 1.00
   Particulate Concentration reduction fraction = 1.00
   Filterable Concentration reduction fraction = 1.00
   Runoff volume reduction fraction = 0

Control Practice 10:  Other Device CP# 2 (DS) - Other Device 4
   Fraction of drainage area served by device (ac) = 1.00
   Particulate Concentration reduction fraction = 1.00
   Filterable Concentration reduction fraction = 1.00
   Runoff volume reduction fraction = 0

Control Practice 11:  Other Device CP# 3 (DS) - Other Device 5
   Fraction of drainage area served by device (ac) = 1.00
   Particulate Concentration reduction fraction = 1.00
   Filterable Concentration reduction fraction = 1.00
   Runoff volume reduction fraction = 0
```

APPENDIX D

Soil Survey
and
Preliminary Soil Boring Data



Map Scale: 1:3,590 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 150 300 600 900

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

Soil Rating Polygons

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Waukesha County, Wisconsin
Survey Area Data: Version 3, Dec 10, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 4, 2022—Sep 13, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
BsA	Brookston silt loam, 0 to 2 percent slopes	C/D	13.3	21.9%
Cw	Colwood silt loam, 0 to 2 percent slopes	C/D	3.3	5.4%
FsB	Fox silt loam, 2 to 6 percent slopes	B	2.1	3.5%
HmB	Hochheim loam, 2 to 6 percent slopes	D	5.6	9.3%
LmB	Lamartine silt loam, 0 to 3 percent slopes	B/D	14.5	23.8%
MoB	Mayville silt loam, 2 to 6 percent slopes	C	4.9	8.1%
Ru	Edwards muck, 0 to 2 percent slopes	C/D	0.4	0.7%
ThB	Theresa silt loam, 2 to 6 percent slopes	C	9.4	15.4%
ThB2	Theresa silt loam, 2 to 6 percent slopes, eroded	C	7.2	11.9%
Totals for Area of Interest			**60.8**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

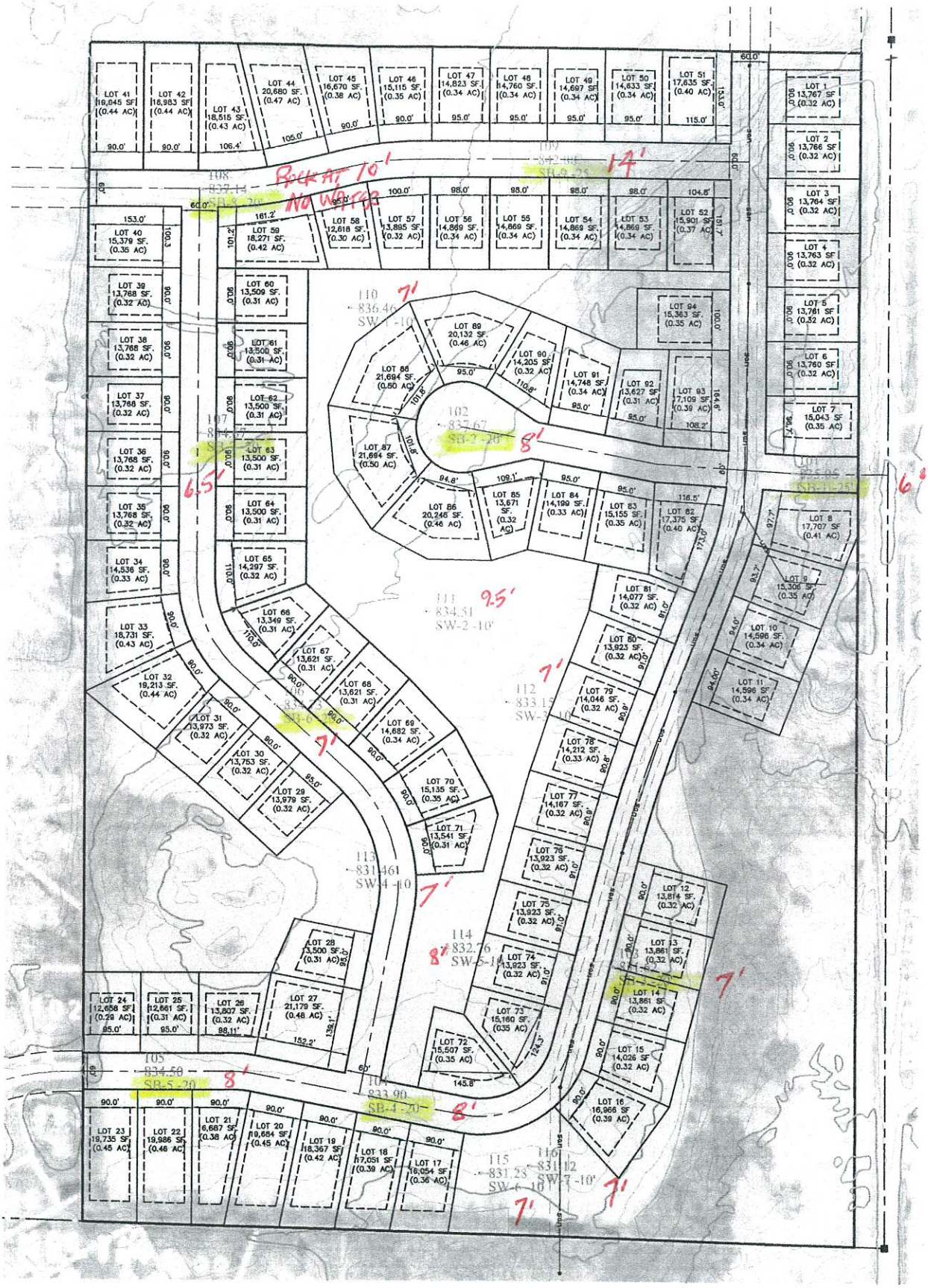
Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

6,000 SF.


ROCK AT 10'
NO WATER
14'
8'
7'
6.5'
9.5'
6'
LOT 1 13,767 SF (0.32 AC)
LOT 2 13,766 SF (0.32 AC)
LOT 3 13,764 SF (0.32 AC)
LOT 4 13,763 SF (0.32 AC)
LOT 5 13,761 SF (0.32 AC)
LOT 6 13,760 SF (0.32 AC)
LOT 7 15,043 SF (0.35 AC)
LOT 8 17,707 SF (0.41 AC)
LOT 9 15,306 SF (0.35 AC)
LOT 10 14,596 SF (0.34 AC)
LOT 11 14,596 SF (0.34 AC)
LOT 12 13,814 SF (0.32 AC)
LOT 13 13,861 SF (0.32 AC)
LOT 14 13,861 SF (0.32 AC)
LOT 15 14,026 SF (0.32 AC)
LOT 16 16,966 SF (0.39 AC)
LOT 17 16,054 SF (0.36 AC)
LOT 18 17,051 SF (0.39 AC)
LOT 19 16,367 SF (0.42 AC)
LOT 20 19,684 SF (0.45 AC)
LOT 21 16,687 SF (0.38 AC)
LOT 22 19,986 SF (0.46 AC)
LOT 23 19,735 SF (0.45 AC)
LOT 24 12,658 SF (0.29 AC)
LOT 25 12,661 SF (0.31 AC)
LOT 26 13,827 SF (0.32 AC)
LOT 27 21,179 SF (0.48 AC)
LOT 28 13,500 SF (0.31 AC)
LOT 29 13,979 SF (0.32 AC)
LOT 30 13,753 SF (0.32 AC)
LOT 31 13,973 SF (0.32 AC)
LOT 32 19,213 SF (0.44 AC)
LOT 33 18,731 SF (0.43 AC)
LOT 34 14,536 SF (0.33 AC)
LOT 35 13,768 SF (0.32 AC)
LOT 36 13,768 SF (0.32 AC)
LOT 37 13,768 SF (0.32 AC)
LOT 38 13,768 SF (0.32 AC)
LOT 39 13,768 SF (0.32 AC)
LOT 40 15,379 SF (0.35 AC)
LOT 41 19,045 SF (0.44 AC)
LOT 42 18,983 SF (0.44 AC)
LOT 43 18,515 SF (0.43 AC)
LOT 44 20,680 SF (0.47 AC)
LOT 45 16,670 SF (0.38 AC)
LOT 46 15,115 SF (0.35 AC)
LOT 47 14,823 SF (0.34 AC)
LOT 48 14,760 SF (0.34 AC)
LOT 49 14,697 SF (0.34 AC)
LOT 50 14,633 SF (0.34 AC)
LOT 51 17,635 SF (0.40 AC)
LOT 52 15,901 SF (0.37 AC)
LOT 53 14,869 SF (0.34 AC)
LOT 54 14,869 SF (0.34 AC)
LOT 55 14,869 SF (0.34 AC)
LOT 56 14,869 SF (0.34 AC)
LOT 57 13,885 SF (0.32 AC)
LOT 58 12,618 SF (0.30 AC)
LOT 59 18,271 SF (0.42 AC)
LOT 60 13,509 SF (0.31 AC)
LOT 61 13,500 SF (0.31 AC)
LOT 62 13,500 SF (0.31 AC)
LOT 63 13,500 SF (0.31 AC)
LOT 64 13,500 SF (0.31 AC)
LOT 65 14,297 SF (0.32 AC)
LOT 66 13,349 SF (0.31 AC)
LOT 67 13,621 SF (0.31 AC)
LOT 68 13,621 SF (0.31 AC)
LOT 69 14,682 SF (0.34 AC)
LOT 70 15,135 SF (0.35 AC)
LOT 71 13,541 SF (0.31 AC)
LOT 72 15,507 SF (0.35 AC)
LOT 73 15,160 SF (035 AC)
LOT 74 13,923 SF (0.32 AC)
LOT 75 13,923 SF (0.32 AC)
LOT 76 13,923 SF (0.32 AC)
LOT 77 14,167 SF (0.32 AC)
LOT 78 14,212 SF (0.33 AC)
LOT 79 14,046 SF (0.32 AC)
LOT 80 13,923 SF (0.32 AC)
LOT 81 14,077 SF (0.32 AC)
LOT 82 17,375 SF (0.40 AC)
LOT 83 15,155 SF (0.35 AC)
LOT 84 14,199 SF (0.33 AC)
LOT 85 13,671 SF (0.32 AC)
LOT 86 20,246 SF (0.46 AC)
LOT 87 21,684 SF (0.50 AC)
LOT 88 21,694 SF (0.50 AC)
LOT 89 20,132 SF (0.46 AC)
LOT 90 14,205 SF (0.32 AC)
LOT 91 14,748 SF (0.34 AC)
LOT 92 13,627 SF (0.31 AC)
LOT 93 17,109 SF (0.39 AC)
LOT 94 15,363 SF (0.35 AC)
102 837.67 SB-2 -20
111 834.51 SW-2 -10
112 833.15 SW-3 -10
113 831.61 SW-4 -10
114 832.76 SW-5 -10
115 831.23 SW-6 -10
116 831.12 SW-7 -10
105 834.50 SB-5 -20
104 833.90 SB-4 -20

CGC Inc.

LOG OF TEST BORING

Project **Springdale Road Subdivision**
Springdale Rd. & Mayrose Blvd.
Location **Pewaukee, Wisconsin**

Boring No. **SB-1**
Surface Elevation (ft) **835.1**
Job No. **CM22244**
Sheet **1** of **1**

336 S. Curtis Rd, West Allis, WI 53214 (414) 443-2000, FAX (414) 443-2099

SAMPLE No.	TYPE	Rec (in.)	Moist	N	Depth (ft)	VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES qu (qa) (tsf)	W	LL	PL	LOI
						12" Black to Dark Brown Silty Clay to Silty Loam TOPSOIL (OL)					
1		10	M	5		Stiff to Very Stiff, Brown Mottled Lean CLAY; Little Fine Sand, Trace Gravel (CL)	(2.0)				
2		12	M	29	5	Medium Dense to Dense, Brown Mottled Silty Fine to Coarse SAND & GRAVEL (SM-GM)					
3		6	M	16		Note: Very dense layer from 5 to 6 ft. Medium Dense, Brownish Gray Sandy SILT; Little Clay, Some Fine to Coarse Gravel (ML)					
4		12	M	29	10		(4.0)				
5		6	M	94	15	Very Dense, Gray Sandy SILT; Little Clay, Some Fine to Coarse Gravel (Hard Pan) (ML)					
6		0	M	50/2"	20	End of Boring & Refusal at 20 ft Backfilled with Bentonite Chips					
					25						

WATER LEVEL OBSERVATIONS

While Drilling ▽ **6.0'** Upon Completion of Drilling **--**
Time After Drilling **15 min.**
Depth to Water **--** ▼
Depth to Cave in

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start **12/19/22** End **12/19/22**
Driller **GeoServe** Chief **Eddie** Rig **7822**
Logger **Eddie** Editor **NIS**
Drill Method **2.25" HSA**

CGC Inc.

LOG OF TEST BORING

Project **Springdale Road Subdivision**
Springdale Rd. & Mayrose Blvd.
Location **Pewaukee, Wisconsin**

Boring No. **SB-2**
Surface Elevation (ft) **837.7**
Job No. **CM22244**
Sheet **1** of **1**

336 S. Curtis Rd, West Allis, WI 53214 (414) 443-2000, FAX (414) 443-2099

SAMPLE No.	TYPE	Rec (in.)	Moist	N	Depth (ft)	VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES qu (qa) (tsf)	W	LL	PL	LOI
						12"-14" Black to Dark Brown Silty Clay to Silty Loam TOPSOIL (OL)					
1		12	M	10		Brown Mottled Silty CLAY; Little Fine Sand and Gravel (CL)	(1.5)				
2		16	M	67	5	Very Dense to Dense, Brown Fine to Coarse SAND & GRAVEL; Trace Silt (SP-GP)					
3		3	M	32							
4		16	W	27	10	Medium Dense to Very Dense, Brown Silty Fine to Coarse SAND & GRAVEL (SM-GM)					
5		16	W	25	15						
6		2	W	50/2"		-- Possible Boulder or Bedrock at 19 ft					
					20	End of Boring at 19 ft Backfilled with Bentonite Chips					
					25						

WATER LEVEL OBSERVATIONS

While Drilling ▽ **8.0' & 14.0'** Upon Completion of Drilling **8.5'**
Time After Drilling **5 mni.**
Depth to Water **8.5'** ▼
Depth to Cave in

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start **12/19/22** End **12/19/22**
Driller **GeoServe** Chief **Eddie** Rig **7822**
Logger **Eddie** Editor **NIS**
Drill Method **2.25" HSA**

CGC Inc.

LOG OF TEST BORING

Project **Springdale Road Subdivision**
Springdale Rd. & Mayrose Blvd.
Location **Pewaukee, Wisconsin**

Boring No. **SB-3**
Surface Elevation (ft) **831.6**
Job No. **CM22244**
Sheet **1** of **1**

336 S. Curtis Rd, West Allis, WI 53214 (414) 443-2000, FAX (414) 443-2099

SAMPLE No.	TYPE	Rec (in.)	Moist	N	Depth (ft)	VISUAL CLASSIFICATION and Remarks	qu (qa) (tsf)	W	LL	PL	LOI
						12" Black to Dark Brown Silty Clay to Silty Loam TOPSOIL (OL)					
1		18	M	7		Stiff, Brown Silty CLAY; Little Fine Sand and Gravel (CL)	(1.5)				
2		12	M	35	5	Medium Dense to Dense, Brown Fine to Coarse SAND & GRAVEL; Trace Silt (SP-GP)					
3		12	W	16		▽					
4		16	W	24	10	Medium Dense, Brown Silty Fine to Coarse SAND & GRAVEL (SM-GM)					
5		18	W	12	15	Medium Dense, Gray and Brown Silty Fine to Coarse SAND & GRAVEL (SM-GM)					
6		18	W	12	20	Medium Dense, Gray Sandy SILT; Little Clay, Some Fine to Coarse Gravel (Hard Pan) (ML)					
						End of Boring at 20 ft Backfilled with Bentonite Chips					
					25						

WATER LEVEL OBSERVATIONS

While Drilling ▽ 7.0'	Upon Completion of Drilling	--		
Time After Drilling				5 min.
Depth to Water				-- ▼
Depth to Cave in				

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start **12/20/22** End **12/20/22**
Driller **GeoServe** Chief **Eddie** Rig **7822**
Logger **Eddie** Editor **NIS**
Drill Method **2.25" HSA**

CGC Inc.

LOG OF TEST BORING

Project **Springdale Road Subdivision**
Springdale Rd. & Mayrose Blvd.
Location **Pewaukee, Wisconsin**

Boring No. **SB-4**
Surface Elevation (ft) **833.9**
Job No. **CM22244**
Sheet **1** of **1**

336 S. Curtis Rd, West Allis, WI 53214 (414) 443-2000, FAX (414) 443-2099

SAMPLE No.	TYPE	Rec (in.)	Moist	N	Depth (ft)	VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES qu (qa) (tsf)	W	LL	PL	LOI
						12" Black to Dark Brown Silty Clay to Silty Loam TOPSOIL (OL)					
1		18	M	4		Very Stiff, Brown Lean CLAY; Little Fine Sand, Trace Gravel (CL)	(2.5)				
2		16	M	16	5	Medium Dense, Brown Silty Fine to Coarse SAND & GRAVEL (SM-GM)					
3		6	M	17							
4		12	W	13	10	Medium Dense, Brown Fine to Coarse SAND & GRAVEL; Trace Silt (SP-GP)					
5		18	W	10	15	Loose to Medium Dense, Brown Silty Fine to Coarse SAND; Trace Gravel, Some Sandy Silt Seams and Layers (SM)					
6		18	W	11	20	Medium Dense, Gray SILT; Some Fine to Coarse Sand and Gravel, Little Clay (ML)					
						End of Boring at 20 ft Backfilled with Bentonite Chips					
					25						

WATER LEVEL OBSERVATIONS

While Drilling ▽ **8.0'** Upon Completion of Drilling **--**
Time After Drilling **5 min.**
Depth to Water **--** ▼
Depth to Cave in

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start **12/20/22** End **12/20/22**
Driller **GeoServe** Chief **Eddie** Rig **7822**
Logger **Eddie** Editor **NIS**
Drill Method **2.25" HSA**

CGC Inc.

LOG OF TEST BORING

Project **Springdale Road Subdivision**
Springdale Rd. & Mayrose Blvd.
Location **Pewaukee, Wisconsin**

Boring No. **SB-5**
Surface Elevation (ft) **834.5**
Job No. **CM22244**
Sheet **1** of **1**

336 S. Curtis Rd, West Allis, WI 53214 (414) 443-2000, FAX (414) 443-2099

SAMPLE No.	TYPE	Rec (in.)	Moist	N	Depth (ft)	VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES qu (qa) (tsf)	W	LL	PL	LOI
						12" Black to Dark Brown Silty Clay to Silty Loam TOPSOIL (OL)					
1		18	M	4		Stiff to Very Stiff, Brown Mottled Lean CLAY; Little Fine Sand, Trace Gravel (CL)	(2.0)				
2		12	M	4		Very Loose, Brown/Whitish Gray Heavily Mottled Clayey SILT; Little Fine Sand and Gravel (CL-ML/ML)	(1.0)				
3		12	M	17	5	Medium Dense, Light Tan and Brown Mottled Silty Fine to Coarse SAND & GRAVEL (SM-GM)					
4		18	W	5		Loose, Grayish Brown Silty Fine to Coarse SAND; Trace Gravel (SM)					
5		18	W	11	10	Medium Dense, Gray Fine to Coarse SAND & GRAVEL; Trace Silt (SP-GP)					
6		18	W	9	15	Loose, Brown Silty Fine to Coarse SAND; Trace Gravel (SM)					
					20	End of Boring at 20 ft Backfilled with Bentonite Chips					
					25						

WATER LEVEL OBSERVATIONS

While Drilling ▽	8.0'	Upon Completion of Drilling	--	
Time After Drilling			5 min.	
Depth to Water			7.0' ▼	
Depth to Cave in				

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start **12/20/22** End **12/20/22**
Driller **GeoServe** Chief **Eddie** Rig **7822**
Logger **Eddie** Editor **NIS**
Drill Method **2.25" HSA**

CGC Inc.

LOG OF TEST BORING

Project **Springdale Road Subdivision**
Springdale Rd. & Mayrose Blvd.
Location **Pewaukee, Wisconsin**

Boring No. **SB-6**
Surface Elevation (ft) **834.7**
Job No. **CM22244**
Sheet **1** of **1**

336 S. Curtis Rd, West Allis, WI 53214 (414) 443-2000, FAX (414) 443-2099

SAMPLE No.	TYPE	Rec (in.)	Moist	N	Depth (ft)	VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES qu (qa) (tsf)	W	LL	PL	LOI
						12" Black to Dark Brown Silty Clay to Silty Loam TOPSOIL (OL)					
1		18	M	5		Stiff to Very Stiff, Brown Mottled Lean CLAY; Little Fine Sand, Trace Gravel (CL)	(1.5-2.0)				
2		4	M	19	5	Medium Dense, Brown Silty Fine to Coarse SAND & GRAVEL; Some Clayey Silt Seams (SM-GM)					
3		8	M/W	7		Loose, Tan/Brown Mottled Sandy SILT; with Some Fine to Coarse Sand and Gravel (ML)					
4		12	W	5	10	Loose, Gray Sandy SILT; Little Clay, Some Fine to Coarse Gravel (ML)					
5		12	M	33	15	Dense, Gray Silty Fine to Coarse SAND; Trace Gravel (SM)					
6		18	W	42	20	Note: Hardpan at 19.5 ft					
						End of Boring at 20 ft Backfilled with Bentonite Chips					
					25						

WATER LEVEL OBSERVATIONS

While Drilling ▽ **7.0'** Upon Completion of Drilling **--**
Time After Drilling **5 min.**
Depth to Water **7.0'** ▼
Depth to Cave in

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start **12/20/22** End **12/20/22**
Driller **GeoServe** Chief **Eddie** Rig **7822**
Logger **Eddie** Editor **NIS**
Drill Method **2.25" HSA**

CGC Inc.

LOG OF TEST BORING

Project **Springdale Road Subdivision**
Springdale Rd. & Mayrose Blvd.
Location **Pewaukee, Wisconsin**

Boring No. **SB-7**
Surface Elevation (ft) **834.7**
Job No. **CM22244**
Sheet **1** of **1**

336 S. Curtis Rd, West Allis, WI 53214 (414) 443-2000, FAX (414) 443-2099

SAMPLE No.	TYPE	Rec (in.)	Moist	N	Depth (ft)	VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES qu (qa) (tsf)	W	LL	PL	LOI
						12" Black to Dark Brown Silty Clay to Silty Loam TOPSOIL (OL)					
1		16	M	4		Very Stiff, Brown Mottled Lean CLAY; Little Fine Sand, Trace Gravel (CL)	(2.5)				
2		12	M	6	5	Loose, Gray and Brown Heavily Mottled SILT; Some Fine to Coarse Sand and Gravel, Little Clay (ML)	(1.5)				
3		4	W	15		Medium Dense, Brown Silty Fine to Coarse SAND & GRAVEL (SM-GM)					
4		16	W	26	10						
5		3	W	10		Loose to Medium Dense, Brown Fine to Coarse SAND & GRAVEL; Trace Silt (SP-GP)					
6		18	W	19	15	Some sandy silt seams and layers from 18.5 to 20 ft					
					20	End of Boring at 20 ft Backfilled with Bentonite Chips					
					25						

WATER LEVEL OBSERVATIONS

While Drilling ▽ **6.5'**			Upon Completion of Drilling	--
Time After Drilling				**5 min.**
Depth to Water				**6.0'** ▼
Depth to Cave in				

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start **12/19/22** End **12/19/22**
Driller **GeoServe** Chief **Eddie** Rig **7822**
Logger **Eddie** Editor **NIS**
Drill Method **2.25" HSA**

CGC Inc.

LOG OF TEST BORING

Project **Springdale Road Subdivision**
Springdale Rd. & Mayrose Blvd.
Location **Pewaukee, Wisconsin**

Boring No. **SB-8**
Surface Elevation (ft) **837.1**
Job No. **CM22244**
Sheet **1** of **1**

336 S. Curtis Rd, West Allis, WI 53214 (414) 443-2000, FAX (414) 443-2099

SAMPLE No.	TYPE	Rec (in.)	Moist	N	Depth (ft)	VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES qu (qa) (tsf)	W	LL	PL	LOI
						12" Black to Dark Brown Silty Clay to Silty Loam TOPSOIL (OL)					
1		12	M	5		Stiff, Brown Mottled Silty CLAY; Little Fine Sand and Gravel (CL)	(1.25)				
2		6	M	13	5	Very Stiff, Brown Mottled Lean CLAY; Little Fine Sand, Trace Gravel (CL)	(2.0)				
3		12	M	90		Very Dense, Brown Fine to Coarse SAND & GRAVEL; Trace Silt (SP-GP)					
4		2	M	50/4"	10	End of Boring & Auger Refusal at 10 ft Due to Rock or Large Boulder Backfilled with Bentonite Chips					
					15						
					20						
					25						

WATER LEVEL OBSERVATIONS

While Drilling ▽	**NW**	Upon Completion of Drilling		**--**
Time After Drilling				**5 min.**
Depth to Water				**--** ▼
Depth to Cave in				

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start **12/19/22** End **12/19/22**
Driller **GeoServe** Chief **Eddie** Rig **7822**
Logger **Eddie** Editor **NIS**
Drill Method **2.25" HSA**

CGC Inc.

LOG OF TEST BORING

Project **Springdale Road Subdivision**
Springdale Rd. & Mayrose Blvd.
Location **Pewaukee, Wisconsin**

Boring No. **SB-8A**
Surface Elevation (ft)
Job No. **CM22244**
Sheet **1** of **1**

336 S. Curtis Rd, West Allis, WI 53214 (414) 443-2000, FAX (414) 443-2099

SAMPLE No.	SAMPLE TYPE	SAMPLE Rec (in.)	SAMPLE Moist	SAMPLE N	Depth (ft)	VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES qu (qa) (tsf)	W	LL	PL	LOI
						Blind drilled to 8.5 ft -- Completed approximately 200 ft south of Boring SB-8.					
1		12	W	15	10	Medium Dense, Tan/Brown Sandy SILT; with Some Fine to Coarse Sand and Gravel (ML)					
						Very Dense, Brown Sandy SILT; Little Clay, Some Fine to Coarse Gravel (Hard Pan) (ML)					
						End of Boring & Auger Refusal at 12 ft Backfilled with Bentonite Chips					

WATER LEVEL OBSERVATIONS

While Drilling ▽ 8.0'	Upon Completion of Drilling --			
Time After Drilling				5 min.
Depth to Water				6.0' ▼
Depth to Cave in				

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start **12/20/22** End **12/20/22**
Driller **GeoServe** Chief **Eddie** Rig **7822**
Logger **Eddie** Editor **NIS**
Drill Method **2.25" HSA**

CGC Inc.

LOG OF TEST BORING

Project **Springdale Road Subdivision**
Springdale Rd. & Mayrose Blvd.
Location **Pewaukee, Wisconsin**

Boring No. **SB-9**
Surface Elevation (ft) **842.9**
Job No. **CM22244**
Sheet **1** of **1**

336 S. Curtis Rd, West Allis, WI 53214 (414) 443-2000, FAX (414) 443-2099

SAMPLE No.	TYPE	Rec (in.)	Moist	N	Depth (ft)	VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES qu (qa) (tsf)	W	LL	PL	LOI
						12"-14" Black to Dark Brown Silty Clay to Silty Loam TOPSOIL (OL)					
1		16	M	7		Stiff, Brown Silty CLAY; Little Fine Sand and Gravel (CL)	(1.5)				
2		16	M	23			(2.25)				
					5	Medium Dense to Very Dense, Brown Fine to Coarse SAND & GRAVEL; Trace Silt (SP-GP)					
3		4	M	50/4"							
4		12	M	50							
					10						
5		0	W	33	▽						
					15	Medium Dense to Dense, Brown Silty Fine to Coarse SAND; Trace Gravel (SM)					
6		18	W	16							
					20						
						End of Boring & Auger Refusal at 22 ft Backfilled with Bentonite Chips					
					25						

WATER LEVEL OBSERVATIONS

While Drilling ▽ **14.0'**	Upon Completion of Drilling	**--**		
Time After Drilling				**5 min.**
Depth to Water				**--** ▼
Depth to Cave in				

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start **12/19/22** End **12/19/22**
Driller **GeoServe** Chief **Eddie** Rig **7822**
Logger **Eddie** Editor **NIS**
Drill Method **2.25" HSA**

CGC Inc.

LOG OF TEST BORING

Project **Springdale Road Subdivision**
Springdale Rd. & Mayrose Blvd.
Location **Pewaukee, Wisconsin**

Boring No. **SW-1**
Surface Elevation (ft) **836.5**
Job No. **CM22244**
Sheet **1** of **1**

336 S. Curtis Rd, West Allis, WI 53214 (414) 443-2000, FAX (414) 443-2099

SAMPLE No.	TYPE	Rec (in.)	Moist	N	Depth (ft)	VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES qu (qa) (tsf)	W	LL	PL	LOI
						16" Black to Dark Brown Silty Clay to Silty Loam TOPSOIL (OL)					
1		12	M	4		Stiff to Very Stiff, Dark Brown to Brown Mottled Lean CLAY; Little Fine Sand, Trace Gravel (CL)	(2.0)				
2		16	M	8		Loose, Tan/Brown Mottled Sandy SILT; with Some Fine to Coarse Sand and Gravel (ML)	(1.5)	11.3			
					5	(P270 = 29.6%)					
3		12	M	26		Medium Dense, Brown Silty Fine to Coarse SAND & GRAVEL (SM-GM)					
4		12	W	16		Some sand silt seams and layers below 8 ft					
					10	End of Boring at 10 ft Backfilled with Bentonite Chips					
					15						
					20						
					25						

WATER LEVEL OBSERVATIONS

While Drilling ▽ **7.0'** Upon Completion of Drilling **--**
Time After Drilling **5 min.**
Depth to Water **7.0'** ▼
Depth to Cave in

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start **12/19/22** End **12/19/22**
Driller **GeoServe** Chief **Eddie** Rig **7822**
Logger **Eddie** Editor **NIS**
Drill Method **2.25" HSA**

CGC Inc.

LOG OF TEST BORING

Project **Springdale Road Subdivision**
Springdale Rd. & Mayrose Blvd.
Location **Pewaukee, Wisconsin**

Boring No. **SW-2**
Surface Elevation (ft) **834.5**
Job No. **CM22244**
Sheet **1** of **1**

336 S. Curtis Rd, West Allis, WI 53214 (414) 443-2000, FAX (414) 443-2099

SAMPLE No.	TYPE	Rec (in.)	Moist	N	Depth (ft)	VISUAL CLASSIFICATION and Remarks	qu (qa) (tsf)	W	LL	PL	LOI
						12" Black to Dark Brown Silty Clay to Silty Loam TOPSOIL (OL)					
1		18	M	4		Stiff to Very Stiff, Brown Mottled Lean CLAY; Little Fine Sand, Trace Gravel (CL)	(1.5-2.0)				
2		4	M	19	5	Medium Dense, Tan/Brown Sandy SILT; with Some Fine to Coarse Sand and Gravel (ML) (P270 = 31.1%)		8.6			
3		2	M	14				8.6			
4		16	M/W	36	▽ 10	Dense, Gray Silty Fine to Coarse SAND & GRAVEL (SM-GM)					
						End of Boring at 10 ft Backfilled with Bentonite Chips					
					15						
					20						
					25						

WATER LEVEL OBSERVATIONS

While Drilling ▽ **9.5'** Upon Completion of Drilling **--**
Time After Drilling **5 min.**
Depth to Water **--** ▼
Depth to Cave in

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start **12/19/22** End **12/19/22**
Driller **GeoServe** Chief **Eddie** Rig **7822**
Logger **Eddie** Editor **NIS**
Drill Method **2.25" HSA**

CGC Inc.

LOG OF TEST BORING

Project **Springdale Road Subdivision**
Springdale Rd. & Mayrose Blvd.
Location **Pewaukee, Wisconsin**

Boring No. **SW-3**
Surface Elevation (ft) **833.2**
Job No. **CM22244**
Sheet **1** of **1**

336 S. Curtis Rd, West Allis, WI 53214 (414) 443-2000, FAX (414) 443-2099

SAMPLE No.	TYPE	Rec (in.)	Moist	N	Depth (ft)	VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES qu (qa) (tsf)	W	LL	PL	LOI
						14" Black to Dark Brown Silty Clay to Silty Loam TOPSOIL (OL)					
1		12	M	4		Stiff, Brown Mottled Lean CLAY; Little Fine Sand, Trace Gravel (CL)	(1.5)				
2		12	M	21	5	Medium Dense, Brown Fine to Coarse SAND & GRAVEL; Trace Silt (SP-GP)					
3		4	M/W	19		Medium Dense, Brown Silty Fine to Coarse SAND; Trace Gravel (SM)					
4		18	W	20	10	End of Boring at 10 ft Backfilled with Bentonite Chips					
					15						
					20						
					25						

WATER LEVEL OBSERVATIONS

While Drilling ▽ **7.0'** Upon Completion of Drilling **--**
Time After Drilling **5 min.**
Depth to Water **7.0'** ▼
Depth to Cave in

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start **12/19/22** End **12/19/22**
Driller **GeoServe** Chief **Eddie** Rig **7822**
Logger **Eddie** Editor **NIS**
Drill Method **2.25" HSA**

CGC Inc.

LOG OF TEST BORING

Project **Springdale Road Subdivision**
Springdale Rd. & Mayrose Blvd.
Location **Pewaukee, Wisconsin**

Boring No. **SW-4**
Surface Elevation (ft) **831.5**
Job No. **CM22244**
Sheet **1** of **1**

336 S. Curtis Rd, West Allis, WI 53214 (414) 443-2000, FAX (414) 443-2099

SAMPLE No.	TYPE	Rec (in.)	Moist	N	Depth (ft)	VISUAL CLASSIFICATION and Remarks	qu (qa) (tsf)	W	LL	PL	LOI
						12"-14" Black to Dark Brown Silty Clay to Silty Loam TOPSOIL (OL)					
1		18	M	5		Very Stiff, Grayish Brown Heavily Mottled Lean CLAY; Little Fine Sand, Trace Gravel (CL)	(2.25)	22.2	43	16	
2		12	M	18		Medium Dense, Brown Silty Fine to Coarse SAND & GRAVEL (SM-GM)					
3		6	M/W	17	5	Medium Dense, Gray Silty Fine to Coarse SAND & GRAVEL; Some Clayey Silt Seams (SM-GM)					
4		18	W	10		Loose to Mediium Dense, Brown Silty Fine to Coarse SAND; Trace Gravel (SM)					
					10	End of Boring at 10 ft Backfilled with Bentonite Chips					
					15						
					20						
					25						

WATER LEVEL OBSERVATIONS

While Drilling ▽ **7.0'** Upon Completion of Drilling **--**
Time After Drilling **5 min.**
Depth to Water **4.0'** ▼
Depth to Cave in

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start **12/20/22** End **12/20/22**
Driller **GeoServe** Chief **Eddie** Rig **7822**
Logger **Eddie** Editor **NIS**
Drill Method **2.25" HSA**

CGC Inc.

LOG OF TEST BORING

Project **Springdale Road Subdivision**
Springdale Rd. & Mayrose Blvd.
Location **Pewaukee, Wisconsin**

Boring No. **SW-5**
Surface Elevation (ft) **832.8**
Job No. **CM22244**
Sheet **1** of **1**

336 S. Curtis Rd, West Allis, WI 53214 (414) 443-2000, FAX (414) 443-2099

SAMPLE					VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES				
No.	TYPE	Rec (in.)	Moist	N	Depth (ft)		qu (qa) (tsf)	W	LL	PL	LOI
						12" Black to Dark Brown Silty Clay to Silty Loam TOPSOIL (OL)					
1		18	M	4		Stiff to Very Stiff, Brown Mottled Lean CLAY; Little Fine Sand, Trace Gravel (CL)	(1.75-2.25)				
2		16	M	10	5	Loose, Tan/Brown Heavily Mottled Sandy SILT; with Some Fine to Coarse Sand and Gravel (ML)					
3		12	M	14		Medium Dense, Grayish Brown Mottled Silty Fine to Coarse SAND & GRAVEL (SM-GM)					
4		18	W	5	10	Loose, Brown Silty Fine to Coarse SAND; Trace Gravel (SM)					
						End of Boring at 10 ft Backfilled with Bentonite Chips					
					15						
					20						
					25						

WATER LEVEL OBSERVATIONS

While Drilling ▽ **8.0'** Upon Completion of Drilling **--**
Time After Drilling **5 min.**
Depth to Water **--** ▼
Depth to Cave in

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start **12/20/22** End **12/20/22**
Driller **GeoServe** Chief **Eddie** Rig **7822**
Logger **Eddie** Editor **NIS**
Drill Method **2.25" HSA**

CGC Inc.

LOG OF TEST BORING

Project **Springdale Road Subdivision**
Springdale Rd. & Mayrose Blvd.
Location **Pewaukee, Wisconsin**

Boring No. **SW-6**
Surface Elevation (ft) **831.3**
Job No. **CM22244**
Sheet **1** of **1**

336 S. Curtis Rd, West Allis, WI 53214 (414) 443-2000, FAX (414) 443-2099

SAMPLE No.	TYPE	Rec (in.)	Moist	N	Depth (ft)	VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES qu (qa) (tsf)	W	LL	PL	LOI
						12" Black to Dark Brown Silty Clay to Silty Loam TOPSOIL (OL)					
1		16	M	12		Medium Dense, Brown Heavily Mottled SILT; Some Fine to Coarse Sand and Gravel, Little Clay (ML)	(1.0)				
2		16	M	24	5	Medium Dense, Brown Fine to Coarse SAND & GRAVEL; Trace Silt (SP-GP)					
3		12	M/W	16		Medium Dense, Brown Silty Fine to Coarse SAND; Trace Gravel (SM)					
4		12	W	11	10	End of Boring at 10 ft Backfilled with Bentonite Chips					
					15						
					20						
					25						

WATER LEVEL OBSERVATIONS

While Drilling ▽ **7.0'** Upon Completion of Drilling **--**
Time After Drilling **5 min.**
Depth to Water **--** ▼
Depth to Cave in

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start **12/20/22** End **12/20/22**
Driller **GeoServe** Chief **Eddie** Rig **7822**
Logger **Eddie** Editor **NIS**
Drill Method **2.25" HSA**

CGC Inc.

LOG OF TEST BORING

Project **Springdale Road Subdivision**
Springdale Rd. & Mayrose Blvd.
Location **Pewaukee, Wisconsin**

Boring No. **SW-7**
Surface Elevation (ft) **831.1**
Job No. **CM22244**
Sheet **1** of **1**

336 S. Curtis Rd, West Allis, WI 53214 (414) 443-2000, FAX (414) 443-2099

SAMPLE No.	TYPE	Rec (in.)	Moist	N	Depth (ft)	VISUAL CLASSIFICATION and Remarks	SOIL PROPERTIES qu (qa) (tsf)	W	LL	PL	LOI
						12" Black to Dark Brown Silty Clay to Silty Loam TOPSOIL (OL)					
1		18	M	4		Stiff, Brown Mottled Silty CLAY; Little Fine Sand and Gravel, Few Silt Seams and Layers (CL)	(1.5)				
2		12	M	19	5	Medium Dense, Brown Silty Fine to Coarse SAND & GRAVEL (SM-GM)					
3		6	W	23							
4		16	W	7	10	Loose, Gray and Brown Silty Fine to Coarse SAND; Trace Gravel (SM)					
						End of Boring at 10 ft Backfilled with Bentonite Chips					
					15						
					20						
					25						

WATER LEVEL OBSERVATIONS

While Drilling ▽ 7.0'			Upon Completion of Drilling	--
Time After Drilling				5 min.
Depth to Water				-- ▼
Depth to Cave in				

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start **12/20/22** End **12/20/22**
Driller **GeoServe** Chief **Eddie** Rig **7822**
Logger **Eddie** Editor **NIS**
Drill Method **2.25" HSA**

Wisconsin Department of Commerce
Division of Safety and Buildings

SOIL AND SITE EVALUATION - STORM

In accordance with SPS 382.365, 385, Wis. Adm. Code, and WDNR Standard 1002

Attach complete site plan on paper not less than 8 1/2 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 BM referenced 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	Waukesha
Parcel I.D.	PWC 0916997
Review by	Date

Property Owner	Property Location
Esser Revocable Trust	Govt. Lot: E 1/2 SE 1/4 S 13 T 7 N R 19 E

Property Address	Lot #	Block #	Subd. Name or CSM#
W220 N2475 Springdale Road			

City	State	Zip Code	Phone Number	[X] City [ ] Village [ ] Town	Nearest Road
Pewaukee	WI	53120	--	Pewaukee	Springdale Road

Drainage area: 58.3 [ ] sq. ft. [X] acres

Test Site Suitable for (check all that apply) [ ] Site not suitable
[ ] Bioretention [ ] Subsurface Dispersal System
[ ] Reuse [ ] Irrigation [ ] Other _____

Hydraulic Application Test Method
[X] Morphological Evaluation
[ ] Double-Ring Infiltrometer
[ ] Other (Specify)_____

Soil Moisture
Date of soil borings: Dec. 19 & 20, 2022
USDA-NRCS WETS Value:
[ ] Dry = 1
[ ] Normal = 2
[X] Wet = 3

SW-1 Obs. # [X] Boring [ ] Pit Ground Surface Elev. 836.5 ft Elevation of limiting factor 835.2 ft

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frag.	% Fines (P270)	Hydraulic App. Rate Inches/Hr
1	0-16	10YR3/2	--	SICL	1fsbk	mfr	tilled	<12	>70	0.04
2	16-42	10YR5/4	c2d 10YR3/2 & 6/2	SIC	2fsbk	mvfi	cw	<10	>70	0.07
3	42-72	10YR6/3	f1f 10YR6/1 & 6/8	VGRL	1fsbk	mlo	cw	38.3	47.9	0.24
4	72-120	10YR6/6	--	GRLS	0sg	mlo	--	35-40	10-20	1.63

Comments: Groundwater encountered at 7 ft (EL 829.5 ft) while drilling.

SW-2 Obs. # [X] Boring [ ] Pit Ground Surface Elev. 834.5 ft Elevation of limiting factor 833.5 ft

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frag.	% Fines (P270)	Hydraulic App. Rate Inches/Hr
1	0-12	10YR3/2	--	SICL	1fsbk	mfr	tilled	<12	>70	0.04
2	12-36	10YR5/4	c2d 10YR3/2 & 6/2	SIC	2fsbk	mvfi	cw	<10	>70	0.07
3	36-102	10YR6/3	--	SIL	1fsbk	mlo	cw	36.1	51.4	0.24
4	102-120	10YR6/1	--	GRLS	0sg	mlo	--	35-40	10-20	1.63

Comments: Groundwater encountered at 9.5 ft (EL 825 ft) while drilling.

CST/PSS Name (Please Print)	Signature	CST Number
Nathan I. Springstead, CST		SP-040900024

Address	Date Evaluation Conducted	Telephone Number
336 S. Curtis Road, West Allis, WI 5321	1/ 23	(414) 443-2000

Preliminary

SBD-10793 (R.01/17)

T:\Projects\2022\22244 Springdale Road Subdivision\Soil & Site Eval.xls

Property Owner Esser Revocable Trust Parcel ID# PWC 0916997 Page 2 of 3

SW-3 Obs. # [X] Boring [ ] Pit Ground Surface Elev. 833.2 ft Elevation of limiting factor 832.0 ft

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frag.	% Fines (P270)	Hydraulic App. Rate Inches/Hr
1	0-14	10YR3/2	--	SICL	1fsbk	mfr	tilled	<10	>70	0.04
2	14-48	10YR4/3	c2d 10YR3/2 & 6/8	SIC	2fsbk	mvfi	cw	<10	>70	0.07
3	48-84	10YR7/3	--	VGRS	1fsbk	mlo	cw	35-45	<10	3.60
4	84-120	10YR5/6	--	LS	0sg	mlo	--	<10	10-20	1.63

Comments: Groundwater encountered at 7 ft (EL 826.2 ft) while and upon completion of drilling.

SW-4 Obs. # [X] Boring [ ] Pit Ground Surface Elev. 831.5 ft Elevation of limiting factor 830.5 ft

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frag.	% Fines (P270)	Hydraulic App. Rate Inches/Hr
1	0-14	10YR3/2	--	SICL	1fsbk	mfr	tilled	<10	>70	0.04
2	14-48	10YR5/2	c2d 10YR6/2 & 3/2	SIC	2fsbk	mvfi	cw	<10	>70	0.07
3	48-84	2.5Y6/3	--	GRLS	0sg	mlo	cw		10-20	1.63
4	84-102	10YR6/3	--	GRLS	0sg	mlo	cw		10-20	1.63
5	102-120	10YR5/6	--	LS	0sg	mlo	--		10-20	1.63

Comments: Groundwater encountered at 4 ft (EL 827.5 ft) upon completion of drilling.

SW-5 Obs. # [X] Boring [ ] Pit Ground Surface Elev. 832.8 ft Elevation of limiting factor 831.8 ft

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frag.	% Fines (P270)	Hydraulic App. Rate Inches/Hr
1	0-12	10YR3/2	--	SICL	1fsbk	mfr	tilled	<10	>70	0.04
2	12-48	10YR4/3	c2d 10YR3/2 & 6/8	SIC	2fsbk	mvfi	cw	<10	>70	0.07
3	48-72	10YR6/6	f1f 10YR6/2	GRSIL	1fsbk	mlo	cw	15-20	40-60	0.13
4	72-102	10YR6/3	f1f 10YR7/1 & 6/8	VGRLS	0sg	mlo	cw	35-45	10-20	1.63
5	102-120	10YR5/6	--	LS	0sg	mlo	--	<10	10-20	1.63

Comments: Groundwater encountered at 8 ft (EL 824.8 ft)

Preliminary

Property Owner: Esser Revocable Trust Parcel ID#: PWC 0916997 Page 3 of 3

SW-6 Obs. # [X] Boring [ ] Pit Ground Surface Elev. 831.3 ft Elevation of limiting factor 830.3 ft

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frag.	% Fines (P270)	Hydraulic App. Rate Inches/Hr
1	0-12	10YR3/2	--	SICL	1fsbk	mfr	tilled	<10	>70	0.04
2	12-24	10YR7/3	c2d 10YR6/3	GRSIL	1fsbk	mfi	cw	15-20	40-60	0.13
3	24-72	10YR6/3	--	VGRS	0sg	mlo	cw	35-45	<10	3.60
4	72-120	10YR5/6	--	LS	0sg	mlo	--	<10	10-20	1.63

Comments: Groundwater encountered at 7 ft (EL 824.3 ft) while drilling.

SW-7 Obs. # [X] Boring [ ] Pit Ground Surface Elev. 831.1 ft Elevation of limiting factor 830.1 ft

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frag.	% Fines (P270)	Hydraulic App. Rate Inches/Hr
1	0-12	10YR3/2	--	SICL	1fsbk	mfr	tilled	<10	>70	0.04
2	12-48	10YR4/3	c2d 10YR3/2 & 6/6	SIC	2fsbk	mvfi	cw	<10	>70	0.07
3	48-102	10YR6/3	--	VGRLS	0sg	mlo	cw	35-45	10-20	3.60
4	102-120	10YR6/2 & 5/6	--	LS	0sg	mlo	--	<10	20-30	1.63

Comments: Groundwater encoiuntered at 7 ft (EL 824.1 ft) while drilling.

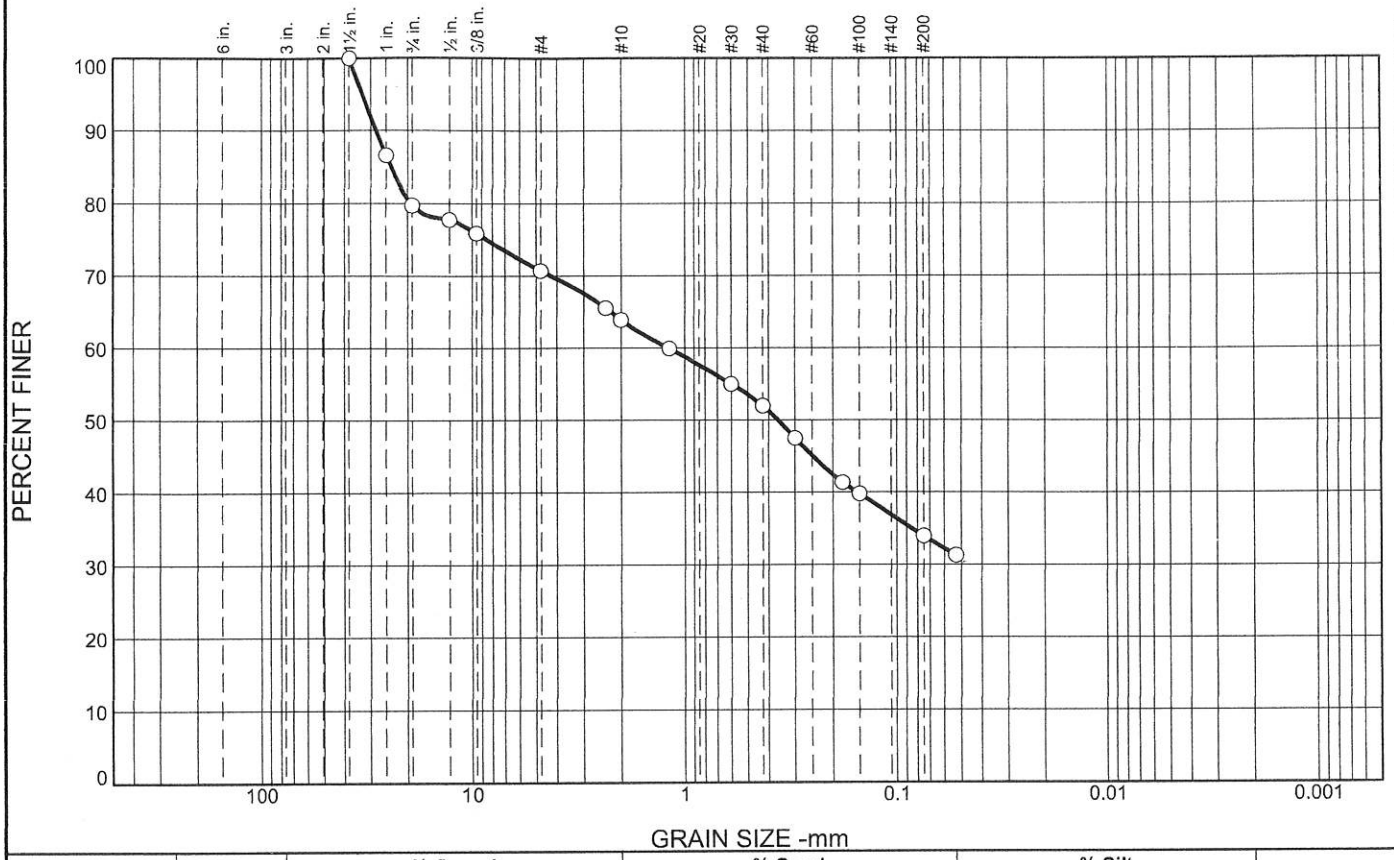
Obs. # [ ] Boring [ ] Pit Ground Surface Elev. _____ ft Elevation of limiting factor _____ ft

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frag.	% Fines	Hydraulic App. Rate Inches/Hr

Comments:

Preliminary

Particle Size Distribution Report



% Stones	% +3"	% Gravel			% Sand					% Silt		% Clay
		Coarse	Medium	Fine	V. Crs.	Crs.	Med.	Fine	V. Fine	Crs.	Fine	
0.0	0.0	20.3	9.0	6.8	5.1	5.3	8.4	8.8	5.0	31.3		

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1.5	100.0		
1	86.6		
.75	79.7		
.5	77.8		
.375	75.9		
#4	70.7		
#8	65.6		
#10	63.9		
#16	59.9		
#30	55.0		
#40	52.0		
#50	47.5		
#80	41.3		
#100	39.8		
#200	33.9		
#270	31.3		

* (no specification provided)

Material Description

Tan/Brown Sandy SILT; Some Fine to Coarse Gravel

Atterberg Limits

PL= NP LL= NV PI= --

Coefficients

D_{90}= 28.3610 D_{85}= 24.0870 D_{60}= 1.1936
D_{50}= 0.3616 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= SM AASHTO= A-2-4(0)

Remarks

Location: Boring SW-2
Sample Number: 2 & 3

Date: 1/3/23

CGC, Inc.

Client: Springdale Development, LLC
Project: Springdale Road Subdivision
Pewaukee, Wisconsin
Project No: CM22244 **Figure**

Tested By: T. Barganz **Checked By:** N. Springstead, P.E.

RECEIVED
OCT 06 2025
OFFICE OF THE
CLERK/TREASURER

October 5, 2025
Ms. Ami Hurd, WCMC
Deputy Clerck Community Development Coordinator.

Dear Ms. Hurd,
Due to conflicting schedules, I will not attend the re-zoning meeting on October 16th, 2025; however, I would like to share some of my concerns, and I trust that you will forward it to the appropriate individual to address these concerns, and I look forward to reading the minutes of the hearing when they are posted.

I have lived in Springdale estates on Glenwood Ln. since 1978 and have witnessed the development of the Springdale Estates to what it is today. Back then I could look out my front door and see North Avenue and beyond. I say this not to date myself but to tell you about my first concern for rezoning the parcel of land that is on the agenda.

I have witnessed firsthand the many construction trucks coming and leaving the subdivision using the convenience of Glenwood Ln., during the construction of the remaining phases of Springdale Estates, which had affected the roadway, and it had to be resurfaced. Now, the proposed development will add two more exit/entry streets to the traffic flow on Glenwood Ln. Since the development will have only one entry into proposed development from Springdale Rd., it's apparent that the back two streets will incur the heaviest traffic load. Not just during the construction phase, but also post construction further straining the roadbed on Glenwood Ln.

I understand its need for progress so that our community can grow, BUT not at the expense of the residents on Glenwood Ln. which has already been turned into a major subdivision thoroughfare. By adding two more streets to Glenwood Ln., it will increase the traffic load and damage the road faster, which will require more frequent repairs and resurfacing.

The City of Pewaukee is planning to resurface Glenwood Ln. in 2026, and I'm assuming that the residents will be assessed for the resurfacing cost. All I'm asking is that the assessment should take into consideration that Glenwood Ln. has become a major thoroughfare through Springdale Estates and any resurfacing costs be allocated equitably across all properties, within Springdale Estates, and the proposed new development. *(Please see attached email I sent to Major Bierce, a month ago to which I have yet to receive a response*)

The next item of concern is not just for this development, but for all developments within the City of Pewaukee.
Quarterly we receive alarming notices along with our water billing statement, explaining that Well #,5 (Gross Alpha Levels) and Well #8 (PFAS) are in violation of safe water regulatory compliance, and this has been going on now for quite some time. The long term solution seems to imply that if you want safe water consider alternative solutions for yourself, because there is no end date specified when these violations will be resolved. Also, how do we (the residents) know from which well their home's water comes from?

In clear conscience I must ask why is the City of Pewaukee is going through the effort to rezone parcels of land just to have more homes built while at the same time facing a potential water safety issue? Where is the logic in all of this?

Thanking you in advance for your help!

Respectfully,

John Plumitis Sr.
W222N2154 Glenwood Ln
Waukesha, WI 53186
plumitisj@gmail.com

Outlook

2026- Proposed resurfacing of Glenwood Lane

From john plumitis <plumitisj@gmail.com>
Date Tue 9/9/2025 7:40 PM
To mayor@pewaukee.wi.us <mayor@pewaukee.wi.us>

Mayor Bierce,

On April 9,2025, I sent the below message to Councilmen Wamser and Dziwulski. Since I have not received an acknowledgment of the message, I will assume that either they did not receive it, or they declined to answer it.

To avoid the issues raised, at the time Glenwood Lane was resurfaced last time, I will now pose the same question to you, as noted in the below in their message.

The resurfacing costs should be fairly allocated to all residents of Springdale Estates and should not be borne only by residents on Glenwood Lane. In order to understand the volume of traffic on Glenwood Lane a traffic study is needed, as it is the major entry and exit point to the subdivision, from Springdale Road.

April 9, 2025

RE: Resurfacing Glenwood Lane, in 2026

In anticipation of the resurfacing of Glenwood Lane in 2026, I would like to request that a traffic study be done on both entrances of Glenwood Lane, for the purpose of an equitable cost allocation.

I have been a resident of Springdale Estates since 1978, and live on Glenwood Lane, so I have firsthand knowledge of the daily volume of traffic that Glenwood Lane has. From cars to a variety of heavy trucks driving through whatever their needs may be. One thing in common, they all enter the subdivision through both ends of Glenwood Lane.

Since Glenwood Lane has become the "de facto" major thoroughfare of Springdale Estates, I feel that the residents living on Glenwood Lane should have some relief from paying for the repaving planned for 2026.

In order to determine the traffic volume on Glenwood Lane, a traffic study is needed.

I would also like to recommend that the study be repeated again, if / when the proposed Cornerstone Development project is completed, which only has a **single (1)** entry into the development but has **three (3)** exits to Glenwood Lane.

Respectfully,

John Plumitis

W222N2154 Glenwood Ln.

Waukesha, Wi 53186

plumitisj@gmail.com

From: Troy Jilot
To: Hurd, Ami
Subject: The Glen at Springdale Stormwater Concerns
Date: Tuesday, October 14, 2025 7:46:13 AM

Good Morning Ami,

I live at N26W22105 Glenwood Lane and my property shares the Northern boundary of the proposed Cornerstone development.

As you can see below I have sent my stormwater concerns to Nick Fuchs and Maggie Wagner but I am still concerned because the agenda items 3.3 and 3.4 are talking about plats and plans without a published stormwater plan.

I am unable to attend the meeting on October 16th. Is there a way I can get my concerns read into the record this night of meeting if I send them in email to you?

Thanks,

Troy Jilot
N26W22105 Glenwood Lane
414-617-6457

On Tue, Sep 30, 2025 at 5:32 PM Wagner, Magdelene <wagner@pewaukee.wi.us> wrote:

> Hi Troy,
>
> I would echo Nick's email. Once we have the storm water management plan, we will be reviewing it for compliance with our ordinances as well as impacts to adjacent properties.
>
> Thank you,
>
> Maggie Wagner
>
> **Magdelene Wagner, P.E.**
>
> **Director of Public Works/City Engineer**
>
> **City of Pewaukee**

W240N3065 Pewaukee Road

Pewaukee, WI 53072

262-691-0804

Strengths: Harmony, Arranger, Positivity, Relator, Responsibility, Developer, Achiever, Consistency

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From: Fuchs, Nick <fuchs@pewaukee.wi.us>
Sent: Tuesday, September 30, 2025 2:11 PM
To: Troy Jilot <troy.jilot@gmail.com>
Cc: Wagner, Magdelene <wagner@pewaukee.wi.us>
Subject: Re: Cornerstone Development on Springdale Road

Hi Troy. We have not received or fully reviewed the storm water management report. The complete review and approval of storm water management is typically a condition of approval. City staff will review it and confirm compliance with storm water regulations prior to land disturbance.

I am copying our City Engineer, Maggie Wagner, in case she has anything else to add regarding your concern.

Thanks.

Nick Fuchs

Planner & Community Development Director

City of Pewaukee

W240N3065 Pewaukee Road

Pewaukee, WI 53072

262-691-6007

fuchs@pewaukee.wi.us

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From: Troy Jilot <troy.jilot@gmail.com>
Sent: Monday, September 29, 2025 2:22 PM
To: Fuchs, Nick <fuchs@pewaukee.wi.us>
Subject: Re: Cornerstone Development on Springdale Road

Hi Nick,

My neighbor talked to Cornerstone and received a new set of plans from them. Cornerstone mentioned they will be at the October Planning Commission meeting. They have added more ponds and other water drainage to the plan. Are you able to share the storm water management study they did? I have concerns that the North side of the development is going to shed storm water to the adjacent houses on Glenwood Lane. The new drawing looks to have water drainage built in at the borders of single home lots one through seven.

I do believe this is the best design I have seen to date but want to make sure the current owners that border the new development will not have water issues after the new homes and roads are built.

Thanks,

Troy Jilot

N26W22105 Glenwood Lane

414-617-6457

From: Mark West
To: Hurd, Ami
Cc: Carley West
Subject: Re: The Glen at Springdale
Date: Tuesday, October 14, 2025 12:35:20 PM

Sorry. I errantly sent that email. Here is the entire email.

Hello Amy,

My name is Mark West, and I am the owner of the property at W220N2615 Maplewood Lane. I am unable to attend the meeting on Thursday, but I would like to have a few items read into the meeting.

I am, in general, in favor of the plans proposed to the planning commission, as I have seen and understand them. I am concerned, however, that some stipulations should be placed on the rezoning for multi-family residences. I would like rezoning to be contingent that development of the property follows the current plans, without major deviation (ex: altering proposed roadways, expanding the number of multi-family units, etc.). Further, I feel that it is important that we have an owner occupancy requirement for these units. If both of those are adequately addressed, I would be in favor of this planned use of the property.

Thank you for your consideration.

Sincerely,
Mark West
262-278-8338

From: Mark West
Sent: Tuesday, October 14, 2025 10:15:04 AM
To: hurd@pewaukee.wi.us <hurd@pewaukee.wi.us>
Subject: The Glen at Springdale

Hello Amy,

My name is Mark West, and I am the owner of the property at W220N2615 Maplewood Lane. I am unable to attend the meeting on Thursday, but I wa
T