Village of Somers
7511 12th Street
Somers, WI 53171

Village Work Session Meeting
Agenda
Tuesday, May 20, 2025
5:30 p.m.

Village Board Work Session Meeting:	
Item #	
1	Call to Order
2	President & Trustee Reports
3	Discuss Plan Commission Recommendations (Willow Creek): a. Request by Berwick Properties Inc, 4011 80th St, Kenosha, WI 53142 (Owner), Daniel Szczap, Bear Development, LLC, 4011 80th St., Kenosha, WI 53142 (Agent); requesting approval of a rezoning from R-9 Multiple-Family Residential Dist., C-1 Lowland Resource Conservancy Dist., and A-2 General Agricultural Dist. to R-5 Urban Single-Family Residential Dist. & C-1 Lowland Resource Conservancy Dist., on Tax Parcel #s 82-4-222-151-0560, 82-4-222-151-0561, 82-4-222-151-0563, located in the NE 1/4 of Section 15, T2N, R22E, Village of Somers. *(For information use only the property fronts Highway E (12th Street) and wraps south along the creek behind the Pike Creek Lift Station).* b. Request by Berwick Properties Inc, 4011 80th St, Kenosha, WI 53142 (Owner), Daniel Szczap, Bear Development, LLC, 4011 80th St., Kenosha, WI 53142 (Agent); requesting approval of a preliminary plat (dated March 20, 2025 and prepared by John P. Konopacki of Pinnacle Engineering Group), on Tax Parcel #s 82-4-222-151-0560, 82-4-222-151-0561, 82-4-222-151-0563, located in the NE 1/4 of Section 15, T2N, R22E, Village of Somers. *(For information use only the property fronts Highway E (12th Street) and wraps south along the creek behind the Pike Creek Lift Station).*
4	Discuss the possibility of sharing cost with other municipalities to hire a lobbyist to advance Bills in Congress to have municipalities get their own ZIP Code.

5	Discuss the possibility of a Levy Limit Referendum for the purpose of Public Safety
6	Discuss proposed changes to the Shoreland Development Agreement sent to Village Attorney Davison.
7	Discuss proposed Ordinance 2025-XXX on Ordinance to repeal and recreate sections 18.30(E) and (F) of the code of Ordinances of the Village of Somers relating to preliminary plat and final plat fees.
8	Review tentative agenda for Village Board meeting on May 27, 2025
9	Adjourn

I hereby certify that as the designee of the chief elected official of the Village of Somers, I posted this notice of the May 20, 2025 Village Work Session & Agenda in 1 public place & on the Village website.

Dated this 16th day of May, 2025. Wendy Burnette, Clerk-Treasurer

Requests from person with disabilities who need assistance to participate in this meeting should be made to the Clerk's Office at 262-859-2822 with as much notice as possible. **Notice is hereby given that members of the Village Board may participate telephonically. Notice is hereby given that members of the Town Board may be in attendance for the sole purpose of gathering information. A quorum may be present. However, no Board action will be taken**.

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VILLAGE OF SOMERS
VILLAGE BOARD
WORK SESSION ITEM MEMORANDUM

WORK SESSION: May 20, 2025

TO: Village President Stoner and Board of Trustees

PREPARED BY: Kevin Poirier, Assistant Administrator

AGENDA ITEM: #3 Discuss Plan Commission Recommendations:

a. Request by Berwick Properties Inc, 4011 80th St, Kenosha, WI 53142 (Owner), Daniel Szczap, Bear Development, LLC, 4011 80th St., Kenosha, WI 53142 (Agent); requesting approval of a rezoning from R-9 Multiple-Family Residential Dist., C-1 Lowland Resource Conservancy Dist., and A-2 General Agricultural Dist. to R-5 Urban Single-Family Residential Dist. & C-1 Lowland Resource Conservancy Dist., on Tax Parcel #s 82-4-222-151-0560, 82-4-222-151-0561, 82-4-222-151-0563, located in the NE 1/4 of Section 15, T2N, R22E, Village of Somers. (For information use only the property fronts Highway E (12th Street) and wraps south along the creek behind the Pike Creek Lift Station).

b. Request by Berwick Properties Inc, 4011 80th St, Kenosha, WI 53142 (Owner), Daniel Szczap, Bear Development, LLC, 4011 80th St., Kenosha, WI 53142 (Agent); requesting approval of a preliminary plat (dated March 20, 2025 and prepared by John P. Konopacki of Pinnacle Engineering Group), on Tax Parcel #s 82-4-222-151-0560, 82-4-222-151-0561, 82-4-222-151-0563, located in the NE 1/4 of Section 15, T2N, R22E, Village of Somers. (For information use only the property fronts Highway E (12th Street) and wraps south along the creek behind the Pike Creek Lift Station).

BACKGROUND:

The Willow Creek Subdivision has been planned since 2018. The Developer, Bear Realty, is well know and has met regularly with the Village over the years. The

development originally included a mix of single-family homes and owner-occupied duplexes. None were going to have basement due to the high water table on the property. The development was dependent on TID incentive and in 2019, TID 4 was amended to allow for the development to occur within the 35 percent residential cap.

In 2024, the developer contacted the Village and in light of the fact that they were able to secure some fill for the site, they proposed to change the project to single-family houses with basement throughout the property.

The new concept was presented to the Plan Commission in July and was well received. The Village granted them the necessary fill permit.

UPDATE:

On May 12, the Plan Commission held the necessary public hearing for the Rezoning and the Preliminary Plat. The requests were discussed and the commission recommended approval for the Rezoning (5-0) and the Preliminary Plat (5-0).

Administration will point out that this project is the first Plat development the Village Plan Commission has approved in decades.

COMMENTS:

Kenosha County Planning has reviewed the application and materials submitted and recommends approval with several conditions listed in report dated April 28, 2025. Baxter Woodman provided additional comments in a report dated April 28, 2025.

ATTACHMENTS:

Minutes from the May 12 Plan Commission

Planning and Zoning Reported dated April 28, 2025

Baxter and Woodman Review dated April 28, 2025

Rezoning Cover Letter

Project Narrative

Rezoning Application

Land Division Application

Preliminary Plat (with Comment)

Preliminary Plat

Preliminary Stormwater Management Plan

Village of Somers
Proceeding from the Village Plan Commission Meeting
May 12, 2025

1. **Call to Order**

   Chairman Stoner called the meeting to order at 5:30 p.m.

Present:

- Chairman George **Stoner**
- Commissioner Troy **Steege**
- Commissioner Vinnie **Chambers**
- Commissioner Don **Boxx**
- Commissioner Michael **DeLuca**

Absent:

- Commissioner Gregg **Thompson**
- Alternate Pat Juliana
- Commissioner Jerry **Romanowski**

Staff present in person: Assistant Administrator Kevin Poirier, Deputy Clerk Treasure Eugenia Lara, Chief Ben Anderson
Village Trustees: Ben Harbach, Jackie Nelson, Joe Smith
Kenosha County Planners: Andy Buehler
Others: Gregg Sinnen, Luke Zoning, Brett Engineer

2. **Pledge of Allegiance**

   Chairman Stoner led everyone in the Pledge of Allegiance.

3. **Approve Minutes of March 10, 2025 Meeting**

   Commissioner Donald Boxx moved to approve to the minutes.
   Seconded by Commissioner Troy Steege.
   Motion carried. 5-0 vote.

4. **Correspondence**
   None

5. **Citizen Comments**

None

6. **Discussion and Action on Changing the mode of delivery documents to Plan Commissioners to e-delivery only and recommending that the Village Board update Ordinances accordingly.**

Admin Assistant Poirier requesting the change of delivery of documents to Plan Commissioners. It takes a significant amount of time from staff.

Commissioner Donald Boxx asked what the Trustees are doing.

Admin Assistant Poirier stated that the Trustees do online.

Commissioner Troy Steege is okay with online documents to be sent through email.

Commissioner Michael Deluca is not in favor of having to print out documents.

Chairman George Stoner mentioned that if someone would like a copy of packet to contact Kevin and he will make sure to get the information out to who would like a hard copy.

7. **FEMA Maps**

Public Hearing and Action on proposed Village Resolution regarding FEMA's recent Letter of Map Revision and proposed Ordinance to Repeal and Recreate Section ZN 4.08(1)(a) 5b of Code of Ordinance of the Village of Somers Relating to the Official Map and Revisions.

Commissioner Donald Boxx motion to accept FEMA letter of Map Revision.
Seconded by Commissioner Troy Steege
Motion carried 5-0 vote.

Chairman George Stoner mentioned FEMA went through entire area and revised flood plain. If anyone would like to see this Admin Assistant Kevin could give you a copy.

8. **Rezoning**

Public Hearing and Action on Request by Berwick Properties Inc, 4011 80th St, Kenosha, WI 53142(Owner), Daniel Szczap, Bear Development, LLC, 4011 80th St., Kenosha, WI 53142 (Agent); requesting approval of a **rezoning** from R-9 Multiple-Family Residential Dist., C-1 Lowland Resource Conservancy Dist., and A-2 General Agricultural Dist. to R-5 Urban Single-Family Residential Dist. & C-1 Lowland Resource Conservancy Dist., on Tax Parcel #s 82-4-222-151-0560, 82-4-222-151-0561, 82-4-222-151-0563, located in the NE 1/4 of Section 15, T2N, R22E, Village of Somers. (For information use only the

property fronts Highway E (12th Street) and wraps south along the creek behind the Pike Creek Lift Station).

Commissioner Donald Boxx moved to motion for rezoning.
Seconded by Commissioner Troy Steege
Motion carried. 5-0 vote.

S.R. Mills Bear Development, not much of a change, other than importing some dirt converted into single family homes. Had some two-family homes but had some purchase ground water issues and ducts can only do slab on grade. Mitigated that as best as we can. I still have some engineering work from Prelim to final. Assuming we can get to the prelim Plat. I appreciate the staff efforts to move forward thank you.

9. Preliminary Plat (land division)

Public Hearing and Action on Request by Berwick Properties Inc, 4011 80th St, Kenosha, WI 53142 (Owner), Daniel Szczap, Bear Development, LLC. 4011 80th St., Kenosha, WI 53142 (Agent); requesting approval of a **preliminary plat** (dated March 20, 2025, and prepared by John P. Konopacki of Pinnacle Engineering Group), on Tax Parcel #'s 82-4-222-151-0560, 82-4-222-151-0561, 82-4-222-151-0563, located in the NE 1/4 of Section 15, T2N, R22E, Village of Somers. (For information use only the property fronts Highway E (12th Street) and wraps south along the creek behind the Pike Creek Lift Station).

Commissioner Donald Boxx motion to approve the Preliminary Plat and Rezoning.
Seconded by Commissioner Michael DeLuca
Motion carried. 5-0 vote.

S.R. Mills gave handouts on what homes could look like, not exactly. Homes that have been constructed in the last 24-36 months in Paddock Lake, Union Grove and Pleasant Prairie. Lot house packages prices jump 13,500 sq ft and 83ft wide to 3 car garages. It's a step up from Paddock Lake and Salem ranging from 525,000-700,000. We can do any house plan. This has been a long time since Somers single family with basements.

Commissioner Donald Box had a question regarding the exterior finishes.
S. R. Mills 15% stone/brick in front and high-grade vinyl and many people like the variety of vinyl packages. Pictures that you have in front of you will be similar to the homes that will be built.

Commissioner Donald Boxx questioned the elevation change, what looks like a mountain of fill that was brought in and what will be the increase.

S.R. Mills dirt fill would be spread out and not be so dramatic as it is currently, and the elevation would be 3-4ft on average. We had a water table issue on a 1/3 of this site about 6ft, and by pushing back a little. We can pull it out of the water table so we can do full basements.

Chairman George Stoner there were water issues in that area because Hawthorne put apartments there, they were unable to do basements because of that.

Daniel Szczap of Willow Creek the water issues or soil issues NE is on SW.

Commissioner Donald Boxx, it's refreshing not to have to consider PUD in subdivision finally.

Commissioner Troy Steege as far as zoning everything complies. It is a great package excited for the single-family homes.

Commissioner Michael DeLuca everything is good, and we need Single family homes.

Chairman Stoner mentioned the only concerns that he has is all utilities will be on back of homes not in the front. That is what is asked of all homes with a 10ft walking path of gravel along sewer. The Vision of the Village Hwy E from 31st St by Walmart and some point in time that is where sewer goes. Requirement of all subdivisions. People can stay off Green Bay Road and other road that connects. It only makes sense and if we can work that it would be great.

S.R Mills mentioned this shouldn't be a problem, but some homeowners may complain but understand. We may have a little push back from the owners for having a path in their backyard. You have an easement for the sewer which makes sense.

Chairman George Stoner a 50ft easement. If you have a problem with, WE Energies have them, come and talk to me at the Village and we will set up a meeting at the Village Hall.

S.R. Mills we may have to render it a little bit due we have some PC and Wetlands and things, but we can figure it out.

Chairman George Stoner mentioned S.R we have had a phenomenal relationship so far and I am really excited for this subdivision.

S.R. Mills great so are we.

Chairman George mentioned that the board as well is very receptive of things but may have some concerns in certain areas, but it is 100% better than what we have seen at first. Not that it was better, but we took the duplexes away and now have single family homes and there is a big need for that. I have visited two subdivisions that were single family homes. As soon as those have gone up, they are gone. There is a need for that. I appreciate all you have done and the partnership with the Village. I hope it continues, and I know it will.

S.R. Mills mentioned like wise.

10. <u>Comprehensive Plan Amendment</u>

Public hearing and Action on Request by Maplecrest Country Club Inc, 9401 18th St, Kenosha, WI 53144-7748 (Owner), Ken Frank, Home Path Financial, LP, 5116 N 126th St., Butler, WI 53007 (Agent), request an amendment to the land use plan map for the Village of Somers (Map 80)as adopted in the Multi-Jurisdictional Comprehensive Plan for Kenosha County: 2035 from "Park and Recreational", "High-Density Residential", "Nonfarmed Wetland" and "Other Conservancy Land to be Preserved " on Tax Parcel #82-4-222-201-0100, located in located in the NE 1/4 of Section 20, T2N, R22E, Village of Somers. (For information use only, the property is the site of the former Maplecrest Golf Course on the southwest corner of Highway H 88th (Avenue) and L (18th Street))

Ken Frank- 1435 W. Capitol Drive, Brookfield, WI of Home Path Financial we are asking for three things.

1. Revision (Comp Plan & Revision from the Park Recreation to Medium density residential and High residential)
2. CSM Land Division to 4 lots
3. Change to current PR-1 zoning current land division to R5 zoning and R11 zoning for a multi-family section or piece with PUD overlay

The existing site is 161 acres formally Maple Crest Golf Club, located SW corner of Hwy H and 18th Street 2 acres low grade wetland and existing 1 acre pond on site will remain. 4 buildings that will be removed from some scattered low quality wooded areas that will be impacted. In the final land plan, it will shake out. History on site it has been brought to the Village in the past several years. Last proposal last spring of 2024 was voted to approve by the Village and Plan Commission. Generally, in conformance to that overall density 4.4 unit to acre. 230 single-family detached homes, 46 twin homes, 276 residential lots in total. The multi-family that proposed 443 apartment units had variation with PUD 9000sq ft lots 14ft total side yard separation 5 & 9 ft. The open space was approximately 34%. So, what we are bringing forth to you tonight is generally in conformance to that some differences but for the most part is consistent to that. What is on the screen is an early version.w23

Admin Assistant Kevin Poirier mentioned that what was being viewed has not been seen by the Village Board and believe they will like it.

Ken Frank mentioned he has been around for 30 years and have multiple divisions. We are currently building in Somers as well as numerous other sites. 24 communities around southeast are of Wisconsin, those are some of the communities we are in. Some of the developments we are in doing from dirt through vertical. Prior proposal from PR-1 to and 8 4 holding 276 single-family and 443 apartments. What we are proposing is rezoning PR-1 to R5 and R-11 with PUD overlay. We are asking for 4 deviations with an overlay. Minimum lot size 9,000 from 10,000 ft. We are dropping 1000 sq ft. 75ft frontage to go to

64ft and asking for front yard setbacks to go from 30ft to 20ft. The last variance we are to go to 7ft side yard totaling the 14. Which was approved from the prior project. We do have a foot of slop in those setbacks for the larger product. For our product it will effectively be 16ft. between buildings. We just like to have a little bit of wiggle room for layout extra for errors or mistakes that might occur. The other part with the setbacks there were some discussions earlier concerned with the 7ft, and I did include as exhibits and back part of presentation there are only two instances that they would come close to 16ft separation between buildings. One if the building was built in 3 consecutive lots. Which we wouldn't do just doesn't make sense. To build the same unit next to each other. It's really to accommodate the much larger product on part of site rather than having to restrict it to a certain percentage of lots. That ask on deviations.

We came up with a plan and this was submitted 60 days ago that is in your packet so we can discuss to be on today's agenda. We have been working with the Village to come up with a better plan. Zoning and variances have not changed. Everything asking tonight is the same. Regardless, land plan is preferable all the things being asked and act on tonight will remain. None of that has changed. Eric will be go over more of site but this is currently what we have honed in on with staff and others in the Village. We think it is a better plan. There are fewer single-family units on it we laid out a general concept of the multi-family site. Right now the multi-family site we are at 250 units versus the 443 that was originally planned for that. We are asking for R11 zoning on there, which would allow 400. We are not a multi-family developer. We will build 8-unit buildings that cluster buildings on the screen. 88 of those we will build. We would build roughly 150 common entry buildings. Asking for R11 to leave options open for a multi-family developer. We don't build that product. We want to market to those folks. Would like to move this alternate plan into workshop.

Eric Issacs project manager of Manhart Consultants. Trying to tweak the prior plans. The lighter color yellow lots interior those will be the Pathway series that is being offered those are the smaller of the lots but there is a mix of 2-3 cars shown. The Orange in color are the Flagship series that are found on the perimeter South a little on East and Southwest of the area are the bigger models. Duplexes remaining on the Northend. The multifamily portion is just a conceptional layout that can prove out what is possible. What could be there and its function amongst the single portion on the site. On the interior sidewalks along all right ways and showing a path currently navigating from current access point off 18th street and 88th South binds around wetland and ponds and backs interior to site and connecting back into the network . Realistically people can walk quite a way as far as they would like to walk. Interior on the site and beneath the proposed retention pond currently proposed a dog park there. Which is connected by a trail, also navigating around the pond and getting people from East to West and North to South are all taken care of by the paths. There is a proposed club house for the single-family portion of the site and a clubhouse for the multifamily to have their own. Landscaping that was added is a conceptional landscaping but a realistic of potentially be there adding tree and shrubs and making landscaping layout pop. Landscaping islands in the center. On the rear yards of all Pathway series a lot of green and open yards will be big.

Ken Frank regarding product. 37 Flagship products around perimeter better known as the premium lots 2,000 to 3,000 sq ft. 234 Pathway single-family 1450sq ft and 22 Ranch Villas duplex 1600 sq ft all with garages.

Chairman George Stoner asked the lot sizes along if all had garages.

Eva Fryer – Stepping Stone Homes, Division President all have garages and the biggest of the buildings are the Flagship series at 2,000 to 3,000 sq ft.

Ken Frank mentioned this revised land plan. One of the ways we have made it work is to get rid of the 4 Plexes that the unit that looks like a long town home with all the garage doors. We introduced as part of the multi-family this stacked 4 unit building which we call and 8 plex. We are currently building that one and show you a few elevations, all single-entry units garages, that is what we are looking at for the multi-family site. We don't build the bigger building but guess that you probably in the range of 150-200 of the total units for multi-family site. Probably about 150 for the bigger buildings. Again, I want to leave that zoning somewhat flexible so we can have those types of buildings some flexibility.

Chairman George Stoner I like the look of those 8 units, and I understand that. The units that are on the other side. The right-hand side up at the top. Apartment building George likes everything but the cluster in corner not a friend.

Ken Frank mentioned those are the common hallway building duplexes. Common entry buildings are like an apartment. We are not building those. We would be building 8 plexes and the single-family detached products. This is just to prove out what a multi-family site would look like. It is well below the R-11, which allows 450 units in there we are considerably below that.

Chairman George Stoner I personally like the whole layout except that one section and have a big concern. I can envision what it looks like, but I am not a friend of that. If it was more of the 8 units that is more attractive to me, and I understand the philosophy that you must have on that. I am not in propionate to the long hallways in between.

Ken Frank we can work on these on the workshop level we are just asking for the zoning and comp plan overlay and PUD.

Chairman George Stoner had the same concerns as Chris Interim Administrator and Andy in planning and zoning is out there now. We usually don't pre zone anything until we see the product.

Andy B planning from Kenosha County we would not rezone without knowing product. Just seen today not saying that it would not be good for the Village. Once zoning is granted it been granted. Zoning is the biggest card what will be built there.

Chairman George Stoner if given zoning forgets the blank area the 8 units would go there. What was presented is that they can't change and put high rises because it falls in zoning.

Andy B planning That area is not a plat so what you see is what you are going to get. Once R11 is there the density could be utilized from low end that they are proposing to a high end as it was mentioned and in previous developers and anything in between. Up for everyone to discuss. Even with last proposals worked with using PUD overlay for entire property to allow for flexibility and in the future areas that were not being developed. Which in this case was flip flopped The residential areas but then we were not going to zone those areas those would be left for A4 because we did not know enough about them. That is just the recommendations to the Plan Commission and up to you to decide.

Commission Troy Steege would be in position to qualify how we would look at this. Potentially we would be acting on zoning or looking at a plan only for the single family duplex by keeping the zoning for the upper west corner as is right now until there is a plan on how everything is going to be developed.

Andy B, that is correct, that is how we would recommend that.

Commissioner Michael DeLuca, for lack of experience and all technicalities would a conditional use permit in that section limit what would could be done and control what could be built?

Andy B, a conditional use, is not a part a village code for multi-family. In some communities but not the Village Avenue. But it could be if it was available.

Chairman George Stoner protect the Village we could zone all single family and duplexes and zone for that and leaving the upper portion to A4. Until someone comes up with a plan and says this is what we want there. Then decides and rezone A4 to protect the Village.

Commissioner Michael DeLuca still move project along tonight is not a bad thing we can change later.

Ken Frank This is what we would like to get out to the workshop before it goes to the board. Address issues and concerns.

Andy B Concerns should be addressed prior to the board so proper language goes to the agenda. If you want the A4 there Its not possible they are not asking for it. Then it will be left to PR-1 which in one sense is okay but not practical. To move forward you could but Village would have to take additional action to A4. From a standpoint now it's kind of being introduced. It's new for all to digest. Maybe that is an area that will remain, or Plan Commission will have the ability change it to A4. Work out and figure out what that might be and everyone is comfortable at this point.

Commissioner Michael DeLuca a lot of things need to be worked out its moving to the next level.

Commissioner Donald Boxx is this just broad base or are we just on item 10?

Chairman George We are talking about the entire project.

Andy B if you keep this in mind the Plan Commission is the recommendation to the board. With the conversation and some are present sitting here. They are understanding your concerns, those are things that can be worked on and through.

Commissioner Donald Boxx, you mentioned a couple of things regarding setbacks why ask for things that you wouldn't do?

Ken Frank, We need that for larger units and don't want to drop those. Would like flexibility to put units on any lots within that subdivision. That can be put as additional condition 7 and 7 can't exceed certain dimensions or less than 16 or 14 ft. Restrictions can be put. We just don't want to build those two units on any lot within the subdivision. We still have a foot of slop for errors and mistakes.

Commissioner Donald Boxx, you mentioned several times precedent referring to prior developers plan for the land. But several months ago, several commissioners expressed their concerns about variance and specific lots size and setbacks. How did you mitigate our concerns.

Ken Frank trying to get apartment count down and add more single detached family homes. It's a map game to make site work. Dropped 200 apartments and added single family detached products.

Commissioner Donald Boxx as I recall the concern, I heard was minimum lot sq ft and setbacks not for multi-family but for single family residential. You're not trying to hear what the Village is asking. Asking for a variance front yard 20ft not acceptable.

Commissioner Vinnie Chambers Flagship front entry and front setbacks.

Chairman George Depth of garage 24-25ft and comprise 25ft.

Admin Assistant Kevin Poirer Bear Development is a TID District and will be asking for help of the Village.

Commissioner Boxx is rejecting all and not in agreement.

Ken Frank if the Village put money, then we can do a lot. Address variances.

Andy B apologizes for the misunderstanding.

Commissioner Michael DeLuca would like to see this project moving forward. We will learn as we go forward. I would like to make this happen.

Commissioner Vince Chambers appreciates and wants to see single family communities growing. Agrees to move project forward and being smart about it. Negotiating and agreeing. We may not all agree but learn and keep it going. Concerned for the front setbacks and willing to compromise.

Commissioner Troy Steege agrees and disagrees with agreeing to move forward suggest isolating the deviations. Is in between.

Chairman George Stoner 20-30ft front, separation, side by side does not want homes like Chicago not comfortable with apartments. What is the consensus does not want to pre-zone without knowing end result and leave it up to the Village Board.

Commissioner Donald Boxx would like to see more specifically on this plan deviates from our five and will not vote unless there is a better understanding of variances request come into play.

Andy B point comprehensive plan and corner to change. Rezone everything except R11 require setback 25ft.

Commissioner Michael DeLuca moved to approve comprehensive Plan Amendment.

Second by Commissioner Vinnie Chambers
Motion carried 4-0 vote
Commissioner Donald Chambers Abstain

11.Rezone

Public Hearing and Action on request by Maplecrest Country Club Inc, 9401 18th St, Kenosha, WI 53144-7748 (Owner), Ken Frank Home Path Financial, LP, 5116 N 126th St., Butler, WI 53007 (Agent), request a rezoning from PR-1 Park Recreational Dist. to R-5 Urban Single-Family Residential Dist., R-11 Mutliple-Family Residential Dist. and PUD Planned Unit Development Overlay Dist. On Tax Parcel #82-4-222-201-0100, located in the NE 1/4 of Section 20, T2N, R22E, Village of Somers. (For information use only, the property is the site of the former Maplecrest Golf Course on the southwest corner of Highway H 88th (Avenue) and L (18th Street))

Chairman George Stoner amends the motion to have PUD changed to a minimum front yard setback of 25ft.

Seconded by Commissioner Michael DeLuca
Motion carried 4-0 votes.
Commissioner Donald Boxx Abstain

12. Certified Survey Map:

Public Hearing and Action on Request by Maplecrest Country Club Inc, 9401 18th St, Kenosha, WI 53144-7748 (Owner), Ken Frank, Home Path Financial, LP, 5116 N 126th St., Butler, WI 53007 (Agent), requests approval of a Certified Survey Map (dated 2/28/25 and prepared by James D. Baker of Manhard Consulting) to create one (1) 34.874-acre Lot, one (1) 7.421-acre Lot, one (1) 3.574-acre Lot, and one (1) 71.199-acre Lot, along with public right-of-way dedication, on Tax Parcel # 82-4-222-201-0100, located in the NE 1/4 of Section 20, T2N, R22E, Village of Somers. (For information use only, the property is the site of the former Maplecrest Golf Course on the southwest corner of Highway H 88th (Avenue)and L (18th Street))

Commissioner Michael DeLuca motion to carry Certified Survery Map.

Seconded by Commissioner Troy Steege
Commissioner Donald Boxx
Abstain
Motion carried 4-0 votes.

13. Site Plan Review & Exterior Fenestration:

Discussion and Action on Request by Maplecrest Country Club Inc, 9401 18th St, Kenosha, WI 53144-7748 (Owner), Ken Frank, Home Path Financial, LP, 5116 N 126th St., Butler, WI 53007 (Agent), requesting site plan review and exterior fenestration review on Tax Parcel # 82-4-222-201-0100, located in the NE 1/4 of Section 20, T2N, R22E, Village of Somers. *(For information use only, the property is the site of the former Maplecrest Golf Course on the southwest corner of Highway H 88th (Avenue)and L (18th Street)*

Commissioner Michael DeLuca motion to discuss action on request **dated 5/8/2025** Maplecrest Country Club Inc, 9401 18th St, Kenosha, WI 53144-7748 (Owner), Ken Frank, Home Path Financial, LP, 5116 N 126th St., Butler, WI 53007 (Agent), requesting site plan review and exterior fenestration review on Tax Parcel # 82-4-222-201-0100, located in the NE 1/4 of Section 20, T2N, R22E, Village of Somers. *(For information use only, the property is the site of the former Maplecrest Golf Course on the southwest corner of Highway H 88th (Avenue)and L (18th Street))*

Chairman George Stoner mentioned only concerns were walking trails and detention ponds. My biggest concern is 18th street now is the time to fix this. Update sewer and water prior to Village counsel.

Second by Commissioner Troy Steege
Commissioner Donald Box No
Motion carried 4-1 votes

14. <u>Adjourn</u>

Chairman George moved to adjourn at 7:22 p.m.
Seconded by Commissioner Boxx.
Motion carried 5-0 votes.

Drafted May 15, 2025.
These minutes are not official until approved by the Plan Commission. Submitted by Deputy Clerk/Treasurer Eugenia Lara.

KENOSHA COUNTY

Shelly Billingsley, Director
Department of Public Works
& Development Services

Andy M. Buehler, Director
Division of Planning & Development

TO: **Village of Somers Plan Commission**
FROM: **Luke Godshall, Senior Land Use Planner**
APPLN DATE: **03-28-25**
RPT DATE: **04-28-25**
MTG DATE: **05-12-25**
RE: **Willow Creek Rezoning & Preliminary Plat**

PROJECT/SITE INFO:

1. Petitioner/Agent: Daniel Szczap, Bear Development, LLC
2. Property Owner: Berwick Properties Inc
3. Location/Address: Vacant land south of CTH E, adjacent to the east side of Pike Creek
4. Tax key Number(s): 82-4-222-151-0560, 82-4-222-151-0561, 82-4-222-151-0563
5. Area: 43.31 acres
6. Existing Zoning: R-9 Multiple-Family Residential Dist., A-2 General Agricultural Dist., C-1 Lowland Resource Conservancy Dist.
7. Proposed Zoning: R-5 Urban Single-Family Residential Dist., C-1 Lowland Resource Conservancy Dist.
8. Existing Land Use: High-Density Residential, Nonfarmed Wetland, SEC, Other Conservancy Land to be Preserved
9. Proposed Land Use: Medium-Density Residential, Nonfarmed Wetland, SEC, Other Conservancy Land to be Preserved

PROJECT OVERVIEW:
The Petitioner is proposing to amend the zoning designations on the subject parcels, to allow for a proposed 69-Lot single-family residential subdivision development known as Willow Creek.

This project was previously presented to the Plan Commission in October 2024 as a subdivision containing a mixture of single-family Lots and duplex Lots.

PLANNER COMMENTS:
The land use plan amendment application, which was filed by the Petitioner in August 2024 and approved by the Plan Commission in October 2024, to change the land use category from “High-Density Residential” to “Medium-Density Residential” across the project site remains the same, as “Medium-Density Residential” correlates with the requested R-5 Urban Single-Family Residential District zoning designation. Areas containing wetlands and/or environmental corridors would retain the corresponding existing land use categories of “Nonfarmed Wetland”, “SEC (Secondary Environmental Corridor)”, and “Other Conservancy Land to be Preserved”.

The rezoning application proposes R-5 zoning for the development site to accommodate the proposed single-family Lots. Wetland areas located adjacent to Pike Creek will retain the C-1 Lowland Resource Conservancy designation.

The rezoning request does not include a PUD request for ordinance deviations. The proposed Lots shown on the preliminary plat have been designed to meet the minimum lot area, frontage/width, and building setback requirements of the R-5 zoning district. The submitted project narrative from the Petitioner indicates the average Lot size will be 13,520 square feet (0.31 acre).

The submitted preliminary plat, dated March 20, 2025 and prepared by John P. Konopacki of Pinnacle Engineering Group, generally conforms to the requirements found in the Village of Somers Land Division and Platting Control ordinance (Chapter 18). Several items that will need to be added to and revised on the preliminary plat have been indicated in the staff recommendation below. These items, and any other items determined by the Plan Commission and Board, will need to be incorporated into a revised plat for eventual Final Plat approval.

The proposed subdivision will be accessed from CTH "E" (12th Street) via public Village road 58th Avenue, of which only its western 40' is dedicated as public right-of-way, with the eastern half being owned by the Village of Somers as tax parcel #82-4-222-151-0302. This parcel would need to be dedicated as public right-of-way in order to create a conforming public road right-of-way width of at least 66'.

Kenosha County Highways has reviewed the proposed preliminary plat and has indicated that CTH "E" (12th Street) is planned to be a 120-foot right-of-way. With the south half of the CTH "E" right-of-way currently being 50 feet in width, the plat will need to dedicate an additional 10 feet for right-of-way to achieve 60 feet of right-of-way for the south half of CTH "E". Highways has also indicated that the existing gravel construction drive is to be removed as part of development improvements.

Lots within the subdivision will be accessed via two new public streets, labelled on the preliminary plat as "Road A" and "Road B". The County Land Information Office has reviewed the street layout shown on preliminary plat and has indicated that "Road A" shall be called "Willow Creek Court", and "Road B" shall be called "61st Avenue". The previously-dedicated right-of-way of "Willow Creek Court" is indicated in the preliminary plat notes to be vacated via separate document.

The submitted Site Plan from Pinnacle Engineering Group dated 3/28/25, indicates that wetlands were delineated by Heartland Ecological Group, Inc. on March 25, 2025. The site plan indicates wetlands were identified upon portions of proposed Lots 16, 42, 43, 44 and 45. The Petitioner will need to be confirm with the Wisconsin Department of Natural Resources if these wetlands can be filled or mitigated so as to not place any wetlands upon the buildable portion of Lots of the subdivision.

It should be known that the proposed subdivision is within an area that the Comprehensive Bike Plan for Kenosha County had recommended a shared-use path to be known as the "Pike River Trail" running alongside the Pike River. The plan states:

> "The proposed shared use path will connect with the planned segment in Mt. Pleasant in Racine County. The Kenosha portion of this trail will travel south from CTH KR to CTH K. This almost 6.5 mile segment will run alongside the Pike River, providing an excellent off-street alternative within the County. The trail will also provide a connection to Petrifying Springs Park, located in the northeast portion of the county. This county park is home to numerous internal trails, streams and rivers, the Carlisle Family Dog Park and winter

recreation opportunities. The trail system in Petrifying Springs Park hooks into the existing trail located on CTH JR."

If desired, the Village could choose to require that the Petitioner construct the shared-use path or require that the plat identify an area to be set aside for the future construction of the shared-use path.

STAFF RECOMMENDATION:
Should the Plan Commission choose to recommend approval of the proposed rezoning and preliminary plat, staff would recommend the following:

1. The preliminary plat shall be subject to addressing any comments/conditions provided by Wisconsin Department of Administration – Plat Review.

2. The following items shall be added to the face of the preliminary plat:
    a. Add Lot dimensions to Lots 25, 26, 27, 40, 41, 42, 43, 49, 50, 51, 52, 53, 54 to confirm conformance with R-5 zoning standards, specifically in regard to required minimum lot width of 75' (or at least 75' of width at the required building setback line if located on a cul-de-sac or curve).
    b. Per Kenosha County Highways, label an additional 10 feet of right-of-way to be dedicated for public road purposes on the south half of the CTH "E"/12th Street right-of-way, for a total south half right-of-way of 60 feet.
    c. Add a 15'x15' vision corner easement to the southeast corner of Lot 3.
    d. Add a 15'x15' vision corner easement to the southeast corner of Lot 54.
    e. Per Section 18.27(D)(3) of the Village ordinance, the southeast corner of Lot 3 and the northeast corner of Lot 54 shall be rounded with a minimum radius of 15 feet or of a greater radius when required by the Village Plan Commission.
    f. Per Section 18.27(C)(2) of the Village ordinance, add a temporary cul-de-sac or temporary "T" 25 feet wide extending to each adjacent right-of-way to the southern end of proposed "ROAD B".
    g. On Sheet 2, duplicate the note from Sheet 1 indicating the adjacent unplatted tax key #82-4-222-151-0501.
    h. On Sheets 1 and 2, add a note identifying what the green dashed & dotted line represents.
    i. If applicable, identify proposed phases of the proposed subdivision.
    j. If applicable, locate and identify any proposed development sign easements on the face of the preliminary plat.

3. The following items shall be revised on the face of the preliminary plat:
    a. In the legal descriptions on Sheets 1 and 2, revise "Town of Somers" to read "Village of Somers".
    b. On Sheets 1 and 2, relabel "Road A" as "Willow Creek Court", and relabel "Road B" as "61st Avenue".
    c. On Sheets 1 and 2, revise the Existing Zoning note to read "A-2 General Agricultural District, R-9 Multiple-Family Residential District, C-1 Lowland Resource Conservancy District, Airport Overlay Zoning Districts AIR-4 & AIR-5".
    d. On Sheets 1 and 2, revise the Proposed Zoning note to read "R-5 Urban Single-Family Residential District & C-1 Lowland Resource Conservancy District".
    e. On Sheets 1 and 2, revise "Proposed Zoning Requirements" to read "R-5 Urban Single-Family Residential District Requirements".
    f. On Sheets 1 and 2 under the Zoning Requirements section, revise "Front" to read "Street Yard" and revise "Front Street" to read "Street Yard".

g. On Sheets 1 and 2, revise notations of “Racine County Shoreland Zoning Jurisdiction” to read “Kenosha County Shoreland Zoning Jurisdiction”.
h. On Sheets 1 and 2, revise the note for the zoning of adjacent parcel 82-4-222-151-0401 to read “Zoned: B-4 Planned Business District, PUD Planned Unit Development Overlay District & A-2 General Agricultural District”.
i. On Sheet 1, revise the note for the zoning of adjacent parcel 82-4-222-151-0501 to read “Zoned: A-2 General Agricultural District & C-1 Lowland Resource Conservancy District”.
j. On Sheet 2, relocate the text “ZONED: C-1” so that it does not overlap the text referring to the Sec. 15 monument.
k. In Note 13 on Sheet 2, confirm the date of the wetland delineation by Heartland Ecological Group, Inc. (Note 13 indicates wetlands were delineated September 2024, but the submitted Site Plan from Pinnacle Engineering Group dated 3/28/25 indicates the wetlands were delineated March 25, 2025).
l. On Sheet 2, in the third (3rd) bullet point under the WETLAND PRESERVATION AND PRIMARY ENVIRONMENTAL CORRIDOR RESTRICTION note, replace “Kenosha County” with “the Village of Somers”.
m. On Sheet 2, revise the surveyor’s certification to include language certifying that the preliminary plat is a correct representation of all existing land divisions and features and that the plat complies with the provisions of Chapter 18, the Village of Somers Land Division and Platting Control ordinance.

4. Subject to submitting for review a draft of protective covenants whereby the developer intends to regulate land use in the proposed subdivision and otherwise protect the proposed development.

5. Subject to receiving final approval for a stormwater management plan from the Village engineer.

Review Comments and Request for Additional Information

Willow Creek Developement

Plans and Calculations Dated March 28, 2025

Village of Somers

April 28, 2025

We reviewed the engineering documents prepared by Pinnacle Engineering, for the Willow Creek project. Attached are marked-up plans reflecting a portion of the comments below. Please provide or change the following items:

General Comments:

1. Provide a traffic impact analysis or verification from Kenosha County that it is not required.
2. Provide estimates of settlement and construction considerations for public utilities and roads constructed in fill areas from a mutually acceptable geotechnical firm.
3. There are likely farm drain tiles within the proposed development. We recommend a pre-construction tile survey to confirm the presence and location of tiles on the property. All existing surface and subsurface drainage pathways must be maintained or properly rerouted.
4. Provide accomodations for a pedestrian path along the west boundary of the site.
5. Provide copies of all permits when received.
6. Provide a vertical datum conversion from NAVD 88 to NGVD 29.

CSM Comments:

1. Show proposed easements and easements to be abandoned.
2. Provide a vertical datum conversion from NAVD 88 to NGVD 29.

Plan Comments:

1. Sheet 3: Provide an emergency pond overland flow route.
2. Sheet 4:
   a. Provide a 24-inch water main on the entrance road (58th Ave.).
   b. The east pond discharge conflicts with an existing sanitary manhole.
   c. The sanitary sewer tie-in manhole has an existing outside drop. As-builts have been provided.
   d. Provide permit for wetland disturbance.
   e. Provide an 8-inch sanitary sewer stub and easement to serve property to the east.
   f. Coordinate future water main and sanitary sewer extensions to the south with the gas pipeline utility.

Storm Water Management Plan Comments:

1. Provide a stormwater model simulating build out of the property to the east with a 10-year storm entering the east pond.
2. Account for the wet pond areas in the "Proposed East" and "Proposed West" area CN calculations.
3. Provide plans and details corresponding to the HydroCAD and WinSLAMM calculations.
4. Provide a storm sewer design and calculations, including gutter spread.

Status of Engineer's Approval: Not Approved

Brett D. Biwer

Brett D. Biwer, PE

BAXTER & WOODMAN Consulting Engineers

PRELIMINARY ENGINEERING IMPROVEMENT PLANS

FOR

WILLOW CREEK

SOMERS, WISCONSIN

PLANS PREPARED
FOR

BEAR DEVELOPMENT, LLC

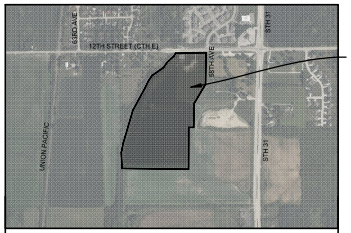
4011 80TH STREET
KENOSHA, WI 53142

LEGEND

	EXISTING	PROPOSED
SANITARY SEWER MANHOLE	S	
STORM SEWER MANHOLE		
STORM SEWER CATCH BASIN (ROUND CASTING)		
STORM SEWER CATCH BASIN (RECTANGULAR CASTING)		
PRECAST FLARED END SECTION		
CONCRETE HEADWALL		
VALVE BOX		
FIRE HYDRANT		
CLEANOUT		
SANITARY SEWER		
FORCE MAIN		
STORM SEWER		
DRAIN TILE		
WATER MAIN	W	W
FIRE PROTECTION		FP
ELECTRICAL CABLE	E	E
OVERHEAD WIRES	OHW	OHW
GAS MAIN	G	G
TELEPHONE LINE	T	T
UTILITY CROSSING		
CAUTION EXISTING UTILITTES NEARBY		CAUTION
GRANULAR TRENCH BACKFILL		
LIGHTING		
ELECTRICAL TRANSFORMER OR PEDESTAL	TF	
POWER POLE		
POWER POLE WITH LIGHT		
GUY WIRE		
STREET SIGN		
CONTOUR	749	749
SPOT ELEVATION	×(750.00)	+750.00
WETLANDS		
PRIMARY ENVIRONMENTAL CORRIDOR		
FLOODWAY		
FLOODPLAIN		
HIGH WATER LEVEL (HWL)		
NORMAL WATER LEVEL (NWL)		
DIRECTION OF SURFACE FLOW		
DITCH OR SWALE		
DIVERSION SWALE		
OVERFLOW RELIEF ROUTING		
TREE WITH TRUNK SIZE		
SOIL BORING		
TOPSOIL PROBE		
FENCE LINE, TEMPORARY SILT	SF	SF
FENCE LINE, WIRE		
FENCE LINE, CHAIN LINK OR IRON		
FENCE LINE, WOOD OR PLASTIC		
CONCRETE SIDEWALK		
CURB AND GUTTER		
DEPRESSED CURB		
REVERSE PITCH CURB & GUTTER		
EASEMENT LINE		

ABBREVIATIONS

BL	BASE LINE	MH	MANHOLE
BP	BOTTOM OF PIPE	NWL	NORMAL WATER LEVEL
C	LONG CHORD OF CURVE	PC	POINT OF CURVATURE
C & G	CURB AND GUTTER	PT	POINT OF TANGENCY
CB	CATCH BASIN	PVI	POINT OF VERTICAL INTERSECTION
CL	CENTERLINE	R	RADIUS
D	DEGREE OF CURVE	ROW	RIGHT-OF-WAY
EP	EDGE OF PAVEMENT	SAN	SANITARY SEWER
FES	FLARED END SECTION	ST	STORM SEWER
FF	FINISHED FLOOR	T	TANGENCY OF CURVE
FG	FINISHED GRADE	TB	TOP OF BANK
FL	FLOW LINE	TC	TOP OF CURB
FP	FLOODPLAIN	TF	TOP OF FOUNDATION
FR	FRAME	TP	TOP OF PIPE
FW	FLOODWAY	TS	TOP OF SIDEWALK
FYG	FINISHED YARD GRADE	TW	TOP OF FOUNDATION WALL
HWL	HIGH WATER LEVEL	WM	WATER MAIN
INV	INVERT	Δ	INTERSECTION ANGLE
L	LENGTH OF CURVE		



PROJECT LOCATION

LOCATION MAP
1" = 1000'

INDEX OF SHEETS

PROJECT TEAM CONTACTS

CIVIL ENGINEER:
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BROOKFIELD, WI 53186
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E-MAIL: aekoch@pinnacle-engr.com

SURVEYOR:
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PINNACLE ENGINEERING GROUP
20725 WATERTOWN ROAD, SUITE 100
BROOKFIELD, WI 53186
MAIN: 262-754-8888
E-MAIL: john.konopacki@pinnacle-engr.com

APPLICANT:
DAN SZCZAP
BEAR DEVELOPMENT, LLC
4011 80TH STREET
KENOSHA, WI 53142

GENERAL NOTES

1. THE INTENTION OF THE PLANS AND SPECIFICATIONS IS TO SET FORTH PERFORMANCE AND CONSTRUCTION MATERIAL STANDARDS FOR THE PROPER EXECUTION OF WORK. ALL WORKS CONTAINED WITHIN THE PLANS AND SPECIFICATIONS SHALL BE COMPLETED IN ACCORDANCE WITH ALL REQUIREMENTS FROM LOCAL, STATE, FEDERAL OR OTHER GOVERNING AGENCY'S LAWS, REGULATIONS, JURISDICTIONAL ORDINANCES/CODES/RULES/ETC., AND THE OWNER'S DIRECTION.
2. A GEOTECHNICAL REPORT HAS BEEN PREPARED BY GESTRA ENGINEERING, INC DATED OCTOBER 11, 2018 FOR THE PROJECT SITE. THE DATA ON SUB-SURFACE SOIL CONDITIONS IS NOT INTENDED AS A REPRESENTATION OR WARRANTY OF THE CONTINUITY OF SUCH CONDITIONS BETWEEN BORINGS OR INDICATED SAMPLING LOCATIONS. IT SHALL BE EXPRESSLY UNDERSTOOD THAT OWNER WILL NOT BE RESPONSIBLE FOR ANY INTERPRETATIONS OR CONCLUSIONS DRAWN THERE FROM BY THE CONTRACTOR. DATA IS MADE AVAILABLE FOR THE CONVENIENCE OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR PERFORMING ANY ADDITIONAL SOILS INVESTIGATIONS THEY FEEL IS NECESSARY FOR THE PROPER EVALUATION OF THE SITE FOR PURPOSES OF PLANNING, BIDDING, OR CONSTRUCTING THE PROJECT AT NO ADDITIONAL COST TO THE OWNER.
3. THE CONTRACTOR IS RESPONSIBLE TO REVIEW AND UNDERSTAND ALL COMPONENTS OF THE PLANS AND SPECIFICATIONS, INCLUDING FIELD VERIFYING SOIL CONDITIONS, PRIOR TO SUBMISSION OF A BID PROPOSAL.
4. THE CONTRACTOR SHALL PROMPTLY REPORT ANY ERRORS OR AMBIGUITIES LEARNED AS PART OF THEIR REVIEW OF PLANS, SPECIFICATIONS, REPORTS AND FIELD INVESTIGATIONS.
5. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE COMPUTATION OF QUANTITIES AND WORK REQUIRED TO COMPLETE THIS PROJECT. THE CONTRACTOR'S BID SHALL BE BASED ON ITS OWN COMPUTATIONS AND IN NO SUCH INSTANCE RELY ON THE ENGINEER'S ESTIMATE.
6. QUESTIONS/CLARIFICATIONS WILL BE INTERPRETED BY ENGINEER/OWNER PRIOR TO THE AWARD OF CONTRACT. ENGINEER/OWNER WILL SUBMIT OFFICIAL RESPONSES IN WRITING. INTERPRETATIONS PRESENTED IN OFFICIAL RESPONSES SHALL BE BINDING ON ALL PARTIES ASSOCIATED WITH THE CONTRACT. IN NO WAY SHALL WORD-OF-MOUTH DIALOG CONSTITUTE AN OFFICIAL RESPONSE.
7. PRIOR TO START OF WORK, CONTRACTOR SHALL BE COMPLETELY FAMILIAR WITH ALL CONDITIONS OF THE SITE, AND SHALL ACCOUNT FOR CONDITIONS THAT AFFECT, OR MAY AFFECT CONSTRUCTION INCLUDING, BUT NOT LIMITED TO, LIMITATIONS OF WORK ACCESS, SPACE LIMITATIONS, OVERHEAD OBSTRUCTIONS, TRAFFIC PATTERNS, LOCAL REQUIREMENTS, ADJACENT ACTIVITIES, ETC. FAILURE TO CONSIDER SITE CONDITIONS SHALL NOT BE CAUSE FOR CLAIM OF JOB EXTRAS.
8. COMMENCEMENT OF CONSTRUCTION SHALL EXPLICITLY CONFIRM THAT THE CONTRACTOR HAS REVIEWED THE PLANS AND SPECIFICATIONS IN ENTIRETY AND CERTIFIES THAT THEIR SUBMITTED BID PROPOSAL CONTAINS PROVISIONS TO COMPLETE THE PROJECT, WITH THE EXCEPTION OF UNFORESEEN FIELD CONDITIONS; ALL APPLICABLE PERMITS HAVE BEEN OBTAINED; AND CONTRACTOR UNDERSTANDS ALL OF THE REQUIREMENTS OF THE PROJECT.
9. SHOULD ANY DISCREPANCIES OR CONFLICTS IN THE PLANS OR SPECIFICATIONS BE DISCOVERED AFTER THE AWARD OF CONTRACT, ENGINEER SHALL BE NOTIFIED IN WRITING IMMEDIATELY AND CONSTRUCTION OF ITEMS AFFECTED BY THE DISCREPANCIES/CONFLICTS SHALL NOT COMMENCE, OR CONTINUE, UNTIL A WRITTEN RESPONSE FROM ENGINEER/OWNER IS DISTRIBUTED. IN THE EVENT OF A CONFLICT BETWEEN REFERENCED CODES, STANDARDS, SPECIFICATIONS AND PLANS, THE ONE ESTABLISHING THE MOST STRINGENT REQUIREMENTS SHALL BE FOLLOWED.
10. THE CONTRACTOR SHALL, AT ITS OWN EXPENSE, OBTAIN ALL NECESSARY PERMITS AND LICENSES TO COMPLETE THE PROJECT. OBTAINING PERMITS, OR DELAYS, IS NOT CAUSE FOR DELAY OF THE CONTRACT OR SCHEDULE. CONTRACTOR SHALL COMPLY WITH ALL PERMIT REQUIREMENTS.
11. THE CONTRACTOR SHALL NOTIFY ALL INTERESTED GOVERNING AGENCIES, UTILITY COMPANIES AFFECTED BY THIS CONSTRUCTION PROJECT, AND DIGGER'S HOTLINE IN ADVANCE OF CONSTRUCTION TO COMPLY WITH ALL JURISDICTIONAL ORDINANCES/CODES/RULES/ETC., PERMIT STIPULATIONS, AND OTHER APPLICABLE STANDARDS.
12. SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE TO INITIATE, INSTITUTE, ENFORCE, MAINTAIN, AND SUPERVISE ALL SAFETY PRECAUTIONS AND JOB SITE SAFETY PROGRAMS IN CONNECTION WITH THE WORK.
13. CONTRACTOR SHALL KEEP THE JOBSITE CLEAN AND ORDERLY AT ALL TIMES. ALL LOCATIONS OF THE SITE SHALL BE KEPT IN A WORKING MANNER SUCH THAT DEBRIS IS REMOVED CONTINUOUSLY AND ALL RESPECTIVE CONTRACTORS OPERATE UNDER GENERAL "GOOD HOUSEKEEPING."
14. THE CONTRACTOR SHALL INDEMNIFY THE OWNER, ENGINEER, AND THEIR AGENTS FROM ALL LIABILITY INVOLVED WITH THE CONSTRUCTION, INSTALLATION, AND TESTING OF THE WORK ON THIS PROJECT.

DIGGERS HOTLINE
Toll Free (800) 242-8511
Milwaukee Area (414) 259-1181
Hearing Impaired TDD (800) 542-2289
www.DiggersHotline.com

PINNACLE ENGINEERING GROUP, LLC
ENGINEER'S LIMITATION

PINNACLE ENGINEERING GROUP, LLC AND THEIR CONSULTANTS DO NOT WARRANT OR GUARANTEE THE ACCURACY AND COMPLETENESS OF THE DELIVERABLES HEREIN. BEYOND A REASONABLE DILIGENCE, IF ANY MISTAKES, OMISSIONS, OR DISCREPANCIES ARE FOUND TO EXIST WITHIN THE DELIVERABLES, THE ENGINEER SHALL BE PROMPTLY NOTIFIED PRIOR TO BID SO THAT HE MAY HAVE THE OPPORTUNITY TO TAKE WHATEVER STEPS NECESSARY TO RESOLVE THEM. FAILURE TO PROMPTLY NOTIFY THE ENGINEER OF SUCH CONDITIONS SHALL ABSOLVE THE ENGINEER FROM ANY RESPONSIBILITY FOR THE CONSEQUENCES OF SUCH FAILURE. ACTIONS TAKEN WITHOUT THE KNOWLEDGE AND CONSENT TO THE ENGINEER, OR IN CONTRADICTION TO THE ENGINEER'S DELIVERABLES OR RECOMMENDATIONS, SHALL BECOME THE RESPONSIBILITY NOT OF THE ENGINEER BUT OF THE PARTIES RESPONSIBLE FOR TAKING SUCH ACTION.

FURTHERMORE, PINNACLE ENGINEERING GROUP, LLC IS NOT RESPONSIBLE FOR CONSTRUCTION SAFETY OR THE MEANS AND METHODS OF CONSTRUCTION.

DRAFTED: AMG DESIGNED: ADK REVIEWED:

PINNACLE ENGINEERING GROUP
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CHICAGO | MILWAUKEE | NATIONWIDE

WILLOW CREEK
SOMERS, WI

COVER SHEET

REVISIONS

PEG JOB No. 1617.00 | AEK
PEG PM | START DATE 3/28/19
SCALE

SHEET 1 OF

COVER SHEET

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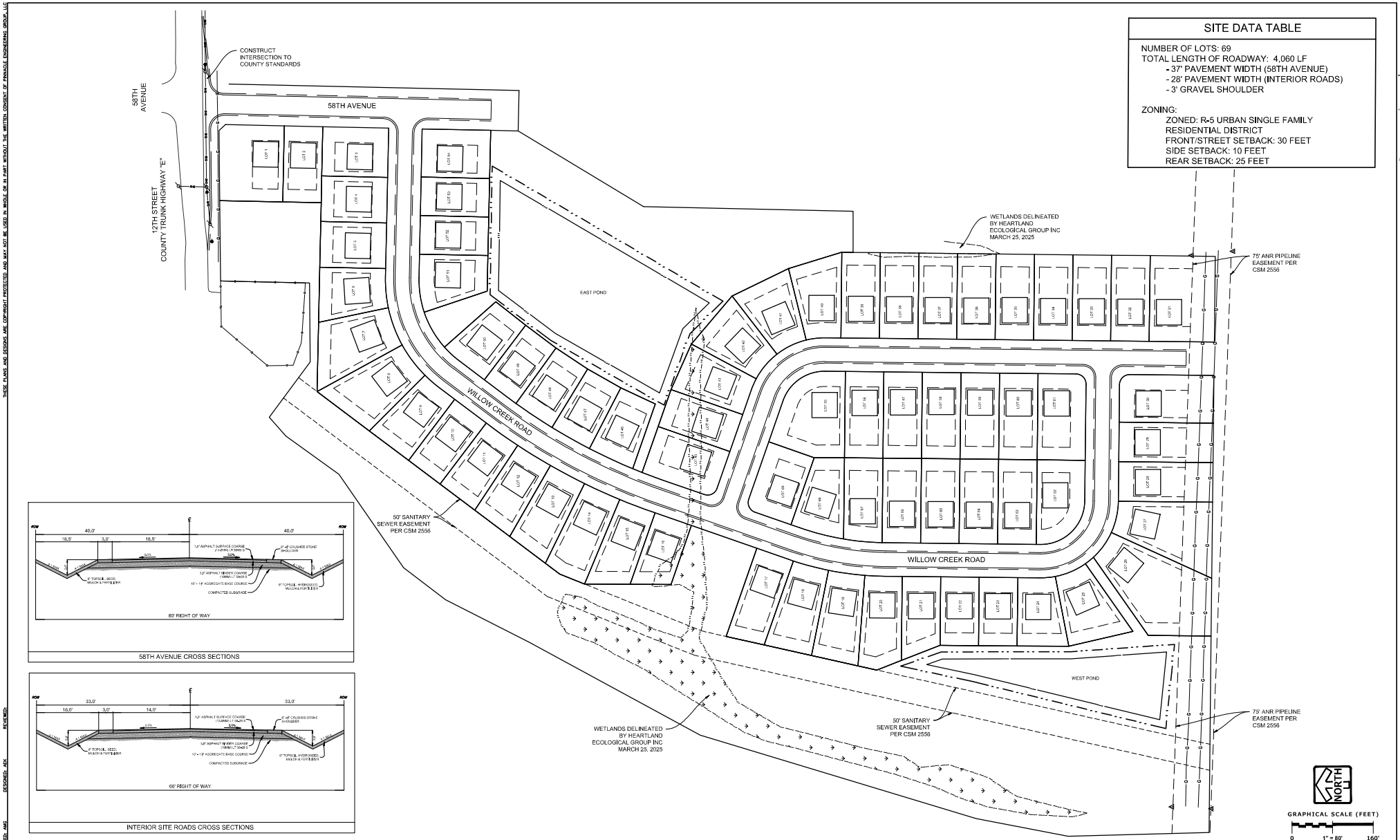

SITE DATA TABLE

NUMBER OF LOTS: 69
TOTAL LENGTH OF ROADWAY: 4,060 LF
- 37' PAVEMENT WIDTH (58TH AVENUE)
- 28' PAVEMENT WIDTH (INTERIOR ROADS)
- 3' GRAVEL SHOULDER

ZONING:
ZONED: R-5 URBAN SINGLE FAMILY RESIDENTIAL DISTRICT
FRONT/STREET SETBACK: 30 FEET
SIDE SETBACK: 10 FEET
REAR SETBACK: 25 FEET

DRAFTED: AMS DESIGNED: ARK REVISIONS:

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WILLOW CREEK

SOMERS, WI

SITE PLAN

REVISIONS

PEG JOB No. 1617.00 ARK
PEG PM
START DATE 3/28/25
SCALE 1" = 80'

SHEET 2

SITE PLAN

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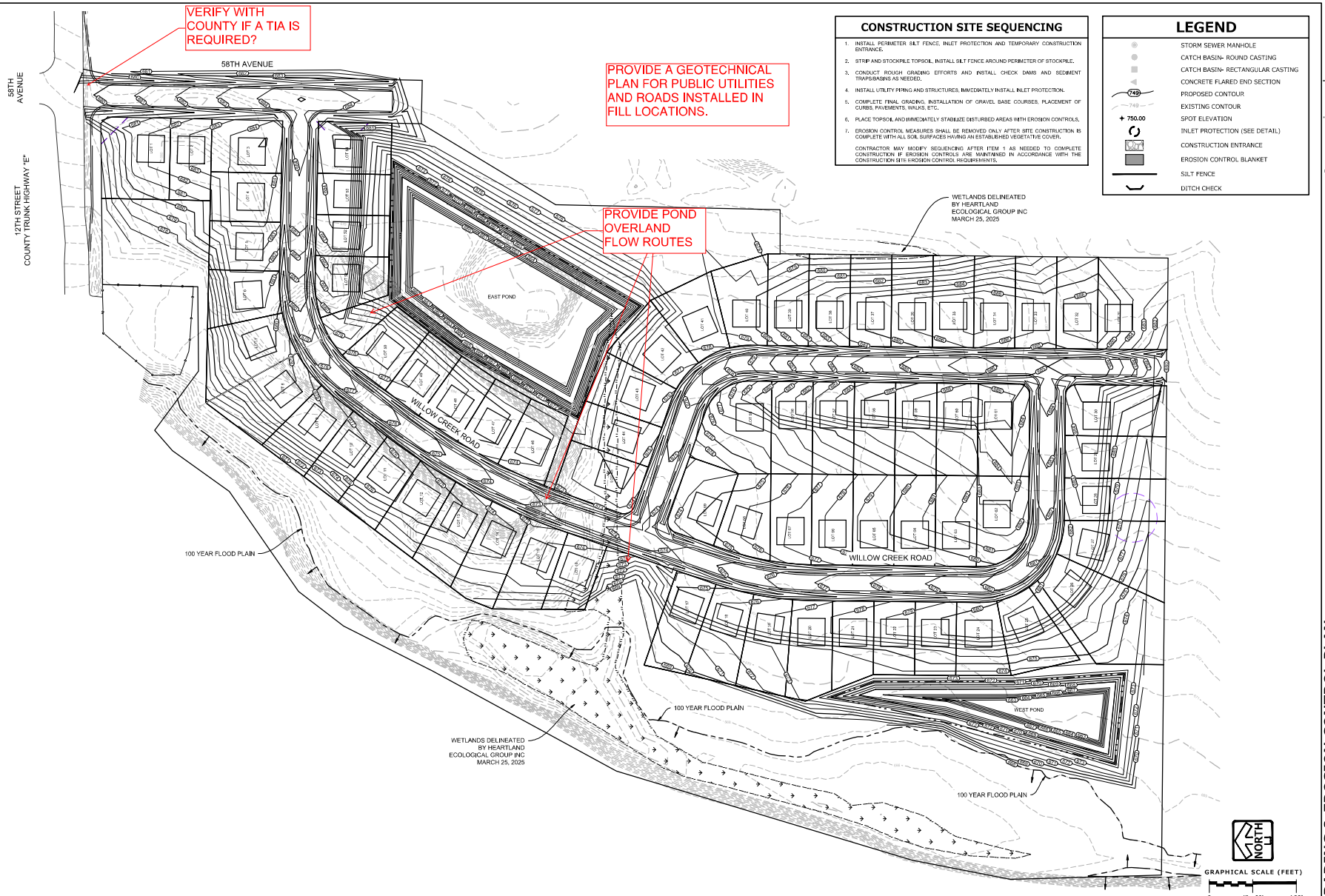

CONSTRUCTION SITE SEQUENCING

1. INSTALL PERIMETER SILT FENCE, INLET PROTECTION AND TEMPORARY CONSTRUCTION ENTRANCE.
2. STRIP AND STOCKPILE TOPSOIL, INSTALL SILT FENCE AROUND PERIMETER OF STOCKPILE.
3. CONDUCT ROUGH GRADING EFFORTS AND INSTALL CHECK DAMS AND SEDIMENT TRAPS/BASINS AS NEEDED.
4. INSTALL UTILITY PIPING AND STRUCTURES, IMMEDIATELY INSTALL INLET PROTECTION.
5. COMPLETE FINAL GRADING, INSTALLATION OF GRAVEL BASE COURSES, PLACEMENT OF CURBS, PAVEMENTS, WALKS, ETC.
6. PLACE TOPSOIL AND IMMEDIATELY STABILIZE DISTURBED AREAS WITH EROSION CONTROLS.
7. EROSION CONTROL MEASURES SHALL BE REMOVED ONLY AFTER SITE CONSTRUCTION IS COMPLETE WITH ALL SOIL SURFACES HAVING AN ESTABLISHED VEGETATIVE COVER.

CONTRACTOR MAY MODIFY SEQUENCING AFTER ITEM 1 AS NEEDED TO COMPLETE CONSTRUCTION IF EROSION CONTROLS ARE MAINTAINED IN ACCORDANCE WITH THE CONSTRUCTION SITE EROSION CONTROL REQUIREMENTS.

LEGEND

- STORM SEWER MANHOLE
- CATCH BASIN- ROUND CASTING
- CATCH BASIN- RECTANGULAR CASTING
- CONCRETE FLARED END SECTION
- 740 PROPOSED CONTOUR
- 740 EXISTING CONTOUR
- + 750.00 SPOT ELEVATION
- INLET PROTECTION (SEE DETAIL)
- CONSTRUCTION ENTRANCE
- EROSION CONTROL BLANKET
- SILT FENCE
- DITCH CHECK

DRAFTED: AMS DESIGNED: ARK REVIEWED:

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WILLOW CREEK

SOMERS, WI

OVERALL GRADING & EROSION CONTROL PLAN

REVISIONS

PEG JOB No. 1617.00 ARK
PEG PM
START DATE 3/28/25
SCALE 1" = 80'

SHEET 3

OVERALL GRADING & EROSION CONTROL PLAN

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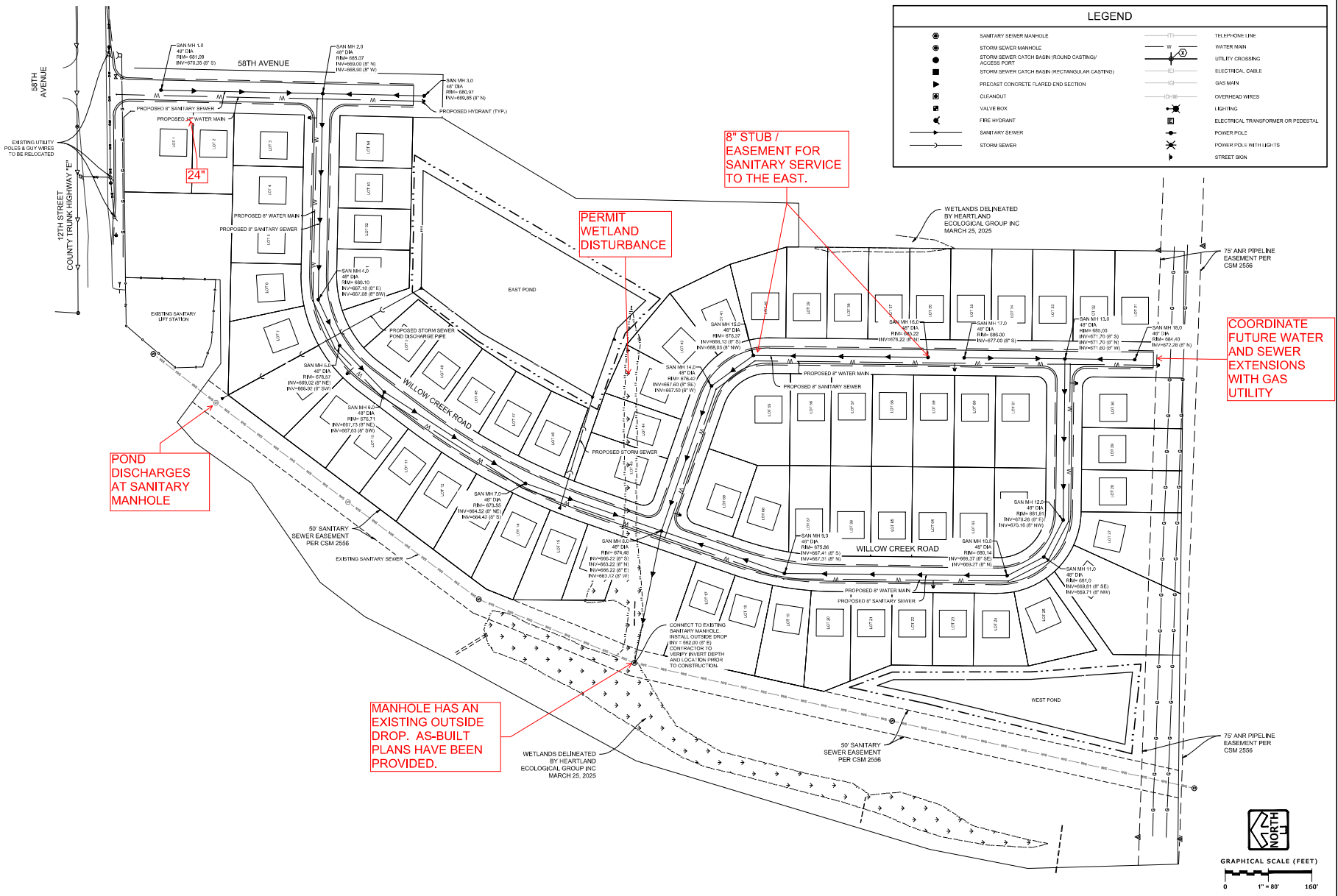

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PINNACLE ENGINEERING GROUP
ENGINEERING | NATURAL RESOURCES | SURVEYING

WISCONSIN OFFICE: 20725 WATERTOWN ROAD, SUITE 100 BROOKFIELD, WI 53186 (262) 754-8888
CHICAGO | MILWAUKEE | WAYNESVILLE

WILLOW CREEK

SOMERS, WI

OVERALL UTILITY PLAN

REVISIONS

PEG JOB No.	1617.00
PEG PM	AEK
START DATE	3/28/25
SCALE	1" = 80'

SHEET 4

OVERALL UTILITY PLAN

DRAFTER: AMS DESIGNER: AEK REVISIONS:

Z:\PROJECTS\2019\1617.00-WI\CAD\SHEETS\PRELIM\OVERALL UTILITY PLAN.DWG

March 31,2025

Mr. Luke Godshall
Kenosha County
19600 75th Street
Bristol, WI 53104

Re: Village of Somers Zoning Amendment-Willow Creek

Dear Mr. Godshall:

Bear Development, LLC is pleased to submit this amended letter and the enclosed submittal materials as formal application for a Zoning Amendment in the Village of Somers. Bear Development is acting on behalf of the record owner, Berwick Properties, Inc.

Subject Property
Berwick Properties, Inc. is the owner of record of approximately 43.31 acres of vacant land in the Village of Somers. The land is located on the east side of CTH E, approximately 900 feet west of STH 31.

Tax Key Numbers: 82-4-222-151-0563, 82-4-222-151-0560 and 82-4-222-151-0561

Current Land Use
The subject property is unimproved and is actively farmed for row crops.

Proposed Use
Bear Development, LLC is seeking approval for mixed residential neighborhood consisting of single-family homes and open space.

Existing Zoning Classifications
A-2 General Agriculture District
C-1 Lowland Resource Conservancy District
R-9 Multiple-Family Residential District

Proposed Zoning Classifications
C-1 Lowland Resource Conservancy District
R-5 Urban Single-Family Residential District

We feel the request for Zoning Amendment is compatible with existing and planned land use in the general area. Further, the proposed development has been planned so that the natural resources on the site, including wetlands, Floodplain and Primary Environmental Corridor are not impacted.

Should you have any questions regarding this request, please do not hesitate to contact me. I can be reached at (262) 842-0556 or by email, dan@beardevelopment.com

Thank you for your time and consideration.

Sincerely,

Daniel Szczap
Bear Development, LLC

BEAR DEVELOPMENT

Providing Creative Real Estate Solutions to Build Better Communities

March 27, 2025

Mr. Jason Peters
Village of Somers
7511 12th Street
Somers, WI 53171

Re: Willow Creek – Preliminary Plat

Dear Mr. Peters:

Bear Development, LLC is pleased to submit this letter and the enclosed submittal materials as formal application for Preliminary Plat review and approval. Bear Development is acting on behalf of the owner of record, Berwick Properties, Inc.

Project Summary
Berwick Properties, Inc. is the owner of record of approximately 43.31 acres of vacant land in the Village of Somers. The land is located on the east side of CTH E, approximately 900 feet west of STH 31.

Current Land Use
The subject property is unimproved and is actively farmed for row crops. The property includes delineated wetlands and woods that border the Pike River. These natural resources are designated as Primary Environmental Corridor.

Village Comprehensive Land Use Map
The subject property is designated Medium Density Residential and Natural Area on the Village Comprehensive Land Use Map.

Proposed Use
Bear Development, LLC is seeking approval for a single-family residential neighborhood consisting of sixty-nine (69) homesites and two (2) outlots.

Existing Zoning
The subject property is zoned A-2 Agricultural District, R-9 Multiple Family Residential District and C-1 Conservancy District.

Proposed Zoning
Bear Development, LLC, under separate application, has applied for a zoning reclassification to the R-5 Urban Single-Family Residential District.

Phone: 262.694.2327 www.beardevelopment.com 4011 80th Street, Kenosha, WI 53142

A BEAR GROUP REAL ESTATE COMPANY

Proposed Preliminary Plat

Bear Development, LLC, respectfully requests Village of Somers review and approval of the enclosed Preliminary Plat. The Preliminary Plat includes:

- Gross Land Area of 43.31 acres
- A total of 69 Lots and 2 Outlots
- Lots 1-69 are Single Family lots with bulk requirements meeting the R-5 Urban Single-Family Residential zoning standards.
- The average lot size is 13,520 Square Feet (0.31 acre).
- The Gross Residential Density is .62 Dwelling Units per Acre
- Outlot 1 is designated for Stormwater Retention and Open Space.
- Outlot 2 is designated for Stormwater Retention and Open Space.
- All Lots are to be serviced by public water and sanitary sewer service.

We feel the Preliminary Plat offers an opportunity to create a residential neighborhood that meets the goals of the Comprehensive Plan while preserving the unique natural resources on the site.

Should you have any questions regarding this request, please do not hesitate to contact me. I can be reached at (262) 842-0556 or by email, dan@beardevelopment.com

Thank you for your time and consideration.

Sincerely,

Daniel Szczap
Bear Development, LLC

Sept. 2021

VILLAGE OF SOMERS
Department of Planning and Development

REZONING APPLICATION

(a) Property Owner's Name:
Berwick Properties, Inc.

Print Name: _____ Signature: _____

Mailing Address: 4011 80th Street

City: Kenosha State: WI Zip: 53142

Phone Number: (262) 949-3788 E-mail (optional): dan@beardevelopment.com

Note: Unless the property owner's signature can be obtained in the above space, a letter of agent status signed by the legal property owner must be submitted if you are a tenant, leaseholder, or authorized agent representing the legal owner, allowing you to act on their behalf.

(b) Agent's Name (if applicable):

Print Name: Daniel Szczap Signature: _____

Business Name: Bear Development, LLC

Mailing Address: 4011 80th Street

City: Kenosha State: WI Zip: 53142

Phone Number: (262) 949-3788 E-mail (optional): dan@beardevelopment.com

(c) Tax key number(s) of property to be rezoned:

82-4-222-151-0563

82-4-222-151-0560

82-4-222-151-0561

Property Address of property to be rezoned:
Vacant Property-No assigned address

(d) Proposed use (a statement of the type, extent, area, etc. of any development project):

~~The applicant is proposing a mixed residential neighborhood consisting of 33 Traditional Single Family Lots and 64 "split lots" to accomodate 32 duplex buildings (64 dwelling units). To facilitate this plan we are requesting rezoning to the R-5 Residential District and teh R-9 Residential District with a Planned Unit Development Overlay.~~

The applicant is requesting R5 Residential zoning to facilitate a single family residential neighborhood.

(e) Check the box next to any and all of the **existing** zoning district classifications present on the subject property:

☐ A-1 Agricultural Preservation District	☐ B-1 Neighborhood Business District
☑ A-2 General Agricultural District	☐ B-2 Community Business District
☐ A-3 Agricultural Related Manufacturing, Warehousing and Marketing District	☐ B-3 Highway Business District
☐ A-4 Agricultural Land Holding District	☐ B-4 Planned Business District
☐ AE-1 Agricultural Equestrian Cluster Single-Family District	☐ B-5 Wholesale Trade and Warehousing District
☐ R-1 Rural Residential District	☐ BP-1 Business Park District
☐ R-2 Suburban Single-Family Residential District	☐ B-94 Interstate Highway 94 Special Use Business District
☐ R-3 Urban Single-Family Residential District	☐ M-1 Limited Manufacturing District
☐ R-4 Urban Single-Family Residential District	☐ M-2 Heavy Manufacturing District
☐ R-4.5 Urban Single-Family Residential District	☐ M-3 Mineral Extraction District
☐ R-5 Urban Single-Family Residential District	☐ M-4 Sanitary Landfill and Hazardous Waste Disposal District
☐ R-6 Urban Single-Family Residential District	☐ I-1 Institutional District
☐ R-7 Suburban Two-Family and Three-Family Residential District	☐ PR-1 Park-Recreational District
☐ R-8 Urban Two-Family Residential District	☐ C-1 Lowland Resource Conservancy District
☑ R-9 Multiple-Family Residential District	☐ C-2 Upland Resource Conservancy District
☐ R-10 Multiple-Family Residential District	☐ FPO Floodplain Overlay District
☐ R-11 Multiple-Family Residential District	☐ PUD Planned Unit Development Overlay District
☐ R-12 Mobile Home/Manufactured Home Park-Subdivision District	☐ AO Airport Overlay District
	☐ RC Rural Cluster Development Overlay District

(f) Check the box next to any and all of the **proposed** zoning district classifications proposed for the subject property:

☐ A-1 Agricultural Preservation District	☐ B-1 Neighborhood Business District
☐ A-2 General Agricultural District	☐ B-2 Community Business District
☐ A-3 Agricultural Related Manufacturing, Warehousing and Marketing District	☐ B-3 Highway Business District
☐ A-4 Agricultural Land Holding District	☐ B-4 Planned Business District
☐ AE-1 Agricultural Equestrian Cluster Single-Family District	☐ B-5 Wholesale Trade and Warehousing District
☐ R-1 Rural Residential District	☐ BP-1 Business Park District
☐ R-2 Suburban Single-Family Residential District	☐ B-94 Interstate Highway 94 Special Use Business District
☐ R-3 Urban Single-Family Residential District	☐ M-1 Limited Manufacturing District
☐ R-4 Urban Single-Family Residential District	☐ M-2 Heavy Manufacturing District
☐ R-4.5 Urban Single-Family Residential District	☐ M-3 Mineral Extraction District
☑ R-5 Urban Single-Family Residential District	☐ M-4 Sanitary Landfill and Hazardous Waste Disposal District
☐ R-6 Urban Single-Family Residential District	☐ I-1 Institutional District
☐ R-7 Suburban Two-Family and Three-Family Residential District	☐ PR-1 Park-Recreational District
☐ R-8 Urban Two-Family Residential District	☐ C-1 Lowland Resource Conservancy District
☑ R-9 Multiple-Family Residential District	☐ C-2 Upland Resource Conservancy District
☐ R-10 Multiple-Family Residential District	☐ FPO Floodplain Overlay District
☐ R-11 Multiple-Family Residential District	☑ PUD Planned Unit Development Overlay District
☐ R-12 Mobile Home/Manufactured Home Park-Subdivision District	☐ AO Airport Overlay District
	RC Rural Cluster Development Overlay District

(g) Your request must be consistent with the existing planned land use category as shown on Map 65 of the adopted "Multi-Jurisdictional Comprehensive Plan for Kenosha County: 2035".

The existing planned land use category for the subject property is:

☐	Farmland Protection	☐	Governmental and Institutional
☐	General Agricultural and Open Land	☐	Park and Recreational
☐	Rural-Density Residential	☐	Street and Highway Right-of-Way
☐	Agricultural and Rural Density Residential	☐	Other Transportation, Communication, and Utility
☐	Suburban-Density Residential	☐	Extractive
☐	Medium-Density Residential	☐	Landfill
☑	High-Density Residential	☐	Primary Environmental Corridor
☐	Mixed Use	☐	Secondary Environmental Corridor
☐	Commercial	☐	Isolated Natural Resource Area
☐	Office/Professional Services	☐	Other Conservancy Land to be Preserved
☐	Industrial	☐	Nonfarmed Wetland
☐	Business/Industrial Park	☐	Surface Water

(h) Attach a plot plan or survey plat of property to be rezoned (showing location, dimensions, zoning of adjacent properties, existing uses and buildings of adjacent properties, floodways and floodplains)—drawn to scale.

(i) The Village of Somers Department of Planning and Development may ask for additional information.

(j) The name of the County Supervisor of the district wherein the property is located (District Map):

Supervisory District Number: 15 County Board Supervisor: David Geertsen

(k) The fee specified in Section 12.05-8 of this ordinance.

Request for Rezoning Petition (payable to "Kenosha County").....$1,450.00

(For other fees see the Fee Schedule)

Note: Agricultural Use Conversion Charge

The use value assessment system values agricultural land based on the income that would be generated from its rental for agricultural use rather than its fair market value. When a person converts agricultural land to a non-agricultural use (e.g. residential or commercial development), that person may owe a conversion charge. To obtain more information about the use value law or conversion charge, contact the Wisconsin Department of Revenue's Equalization Section at 608-266-2149 or visit http://www.revenue.wi.gov/faqs/slf/useassmt.html.

Note that the act of rezoning property from an agricultural zoning district to a non-agricultural zoning district does not necessarily trigger the agricultural use conversion charge. It is when the use of the property changes from agricultural that the conversion charge is assessed.

Interactive Mapping

Kenosha County

Layers | Legend | Details

Find Address, Parcel, or Place

Select Ortho Photo:

- (•) Ortho2022
- ( ) No Ortho
- ( ) Ortho2024
- ( ) Ortho2020
- ( ) Ortho2015
- ( ) Ortho2010
- ( ) Ortho2005
- ( ) Ortho2000
- ( ) Ortho1995
- ( ) Ortho1990
- ( ) Ortho1985
- ( ) Ortho1980
- ( ) Ortho1975
- ( ) Ortho1970
- ( ) Ortho1967
- ( ) Ortho1963
- ( ) Ortho1937

Select Layers:

- Address_Points
- Places
- PLSS
- Water Features
- Recreational Trails
- Streets
- Cadastral
- Buildings
- Contours
- Floodplain
- Environmental
- School Districts
- Election Boundaries
- Zoning
  - County Zoning
  - Bristol Zoning
  - City Zoning
  - Paddock Lake Zoning
  - Pleasant Prairie Zoning
  - Salem Lakes Zoning
  - Somers Zoning
  - Twin Lakes Zoning
- TID Districts

EXISTING ZONING
A-2, R-9 & C-1

1" = 280.81 ft
60 m
300 ft

Powered by Esri

Interactive Mapping

Kenosha County

Layers | Legend | Details

Find Address, Parcel, or Place

Select Ortho Photo:

- (•) Ortho2022
- ( ) No Ortho
- ( ) Ortho2024
- ( ) Ortho2020
- ( ) Ortho2015
- ( ) Ortho2010
- ( ) Ortho2005
- ( ) Ortho2000
- ( ) Ortho1995
- ( ) Ortho1990
- ( ) Ortho1985
- ( ) Ortho1980
- ( ) Ortho1975
- ( ) Ortho1970
- ( ) Ortho1967
- ( ) Ortho1963
- ( ) Ortho1937

Select Layers:

- Address_Points
- Places
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- Recreational Trails
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  - Bristol Zoning
  - City Zoning
  - Paddock Lake Zoning
  - Pleasant Prairie Zoning
  - Salem Lakes Zoning
  - Somers Zoning
  - Twin Lakes Zoning
- TID Districts

C-1
A-2
R-2
R-9
I-1
PR-1
B-3
B-4
63RD
53RD AVE
STH 31
CTH E
13TH ST
WILLOW CREEK DR
CSM 2556
CSM 2899
CSM 1128
CSM 174
LOT 1
LOT 2
LOT 3
LOT 5
OUTLOT 1
NOTE: OVERLAP EXISTING IN LEGAL DESCRIPTIONS
NOTE: GAP EXISTING IN LEGAL DESCRIPTIONS
Village of Somers

PROPOSED ZONING
R-5 : C-1

1" = 280.81 ft
60 m
300 ft
Powered by Esri

34/231

ATTACH TO-SCALE MAP OF PROPERTY SHOWING EXISTING ZONING CLASSIFICATIONS HERE

ATTACH TO-SCALE MAP OF PROPERTY SHOWING PROPOSED ZONING CLASSIFICATIONS HERE

VILLAGE OF SOMERS
Department of Planning & Development

LAND DIVISION APPLICATION

In order for applications to be processed, all information, drawings, application signatures, and fees required shall be submitted at time of application.

Please check the appropriate box below for the type of application being submitted:

- ☐ Certified Survey Map
- ☑ Subdivision Preliminary Plat
- ☐ Subdivision Final Plat
- ☐ Condominium Plat

Applicant is: ☑ Property Owner ☐ Subdivider ☐ Other _____

Applicant Name: Bear Development, LLC (Daniel Szczap) Date 3/25/2025

Mailing Address: 4011 80th Street, Kenosha, WI 53142 Phone # (262) 949-3788

_____ Phone # _____

Tax Parcel Number(s): 82-4-222-151-0560, 82-4-222-151-0563 and 82-4-222-151-0561

_____ Acreage of Project: 43.31

Location of Property (including legal description):

The subject property is located on teh south side of CTH E, west of STH 31

Being a part of Outlot 1 and all of Lot 1 & 3 of Certified Survey Map No. 2556 and all of vacated Willow Creek

Court adjacent thereto, in the Northwest 1/4, Southwest 1/4 and Northwest 1/4 of the Northeast 1/4 of

Section 15, Township 2 North, Range 22 East, Town of Somers, Kenosha County, Wisconsin.

Subdivision/Development Name (if applicable): Willow Creek

Existing Zoning: A-2, C-1 and R-9 Proposed Zoning: R-5 and C-1

Village Land Use Plan District Designation(s) (if applicable):

Present Medium Denisty Residential and Natural Area

Proposed Medium Density Resdential and Natural Area

Present Use(s) of Property: Agriculture and Vacant

Proposed Use(s) of Property: Single Family Residential

The subdivision abuts or adjoins a state trunk highway..... Yes ( ) No (✔)

The subdivision will be served by public sewer ..... Yes (✔) No ( )

The subdivision abuts a county trunk highway ..... Yes (✔) No ( )

The subdivision contains shoreland/floodplain areas ..... Yes (✔) No ( )

The subdivision lies within the extra-territorial plat (ETP) authority area of a nearby Village or City ..... Yes ( ) No (✔)

*Applicant is responsible for submitting to the ETP authority any fees and documentation needed to obtain a recommendation.

REQUIRED SIGNATURE(S) FOR ALL APPLICATIONS:

Property Owner's Signature — Date: 03.25.2025

Property Owner's Signature — Date

REQUIRED APPLICABLE SIGNATURES:

Applicant's Signature — Date: March 25, 2025

Developer's Signature — Date

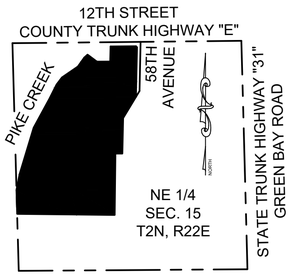
PRELIMINARY PLAT OF
WILLOW CREEK

Being a part of Outlot 1 and all of Lots 1 & 3 of Certified Survey Map No. 2556 and all of vacated Willow Creek Court adjacent thereto, in the Northeast 1/4, Southwest 1/4 and Northwest 1/4 of the Northeast 1/4 of Section 15, Township 2 North, Range 22 East, Town of Somers, Kenosha County, Wisconsin

WISCONSIN
JOHN P. KONOPACKI
S-2461
SUMMIT, WI
LAND SURVEYOR

MARCH 20, 2025

VICINITY MAP
SCALE 1":1000'



PREPARED FOR:
BERWICK PROPERTIES INC.
4011 80th Street
Kenosha, WI 53142

Prepared by:
PINNACLE ENGINEERING GROUP
20725 WATERTOWN ROAD I SUITE 100
BROOKFIELD, WI 53186
OFFICE: (262) 754-8888

REVIEWING AGENCIES:
- Village of Somers
- Department of Administration

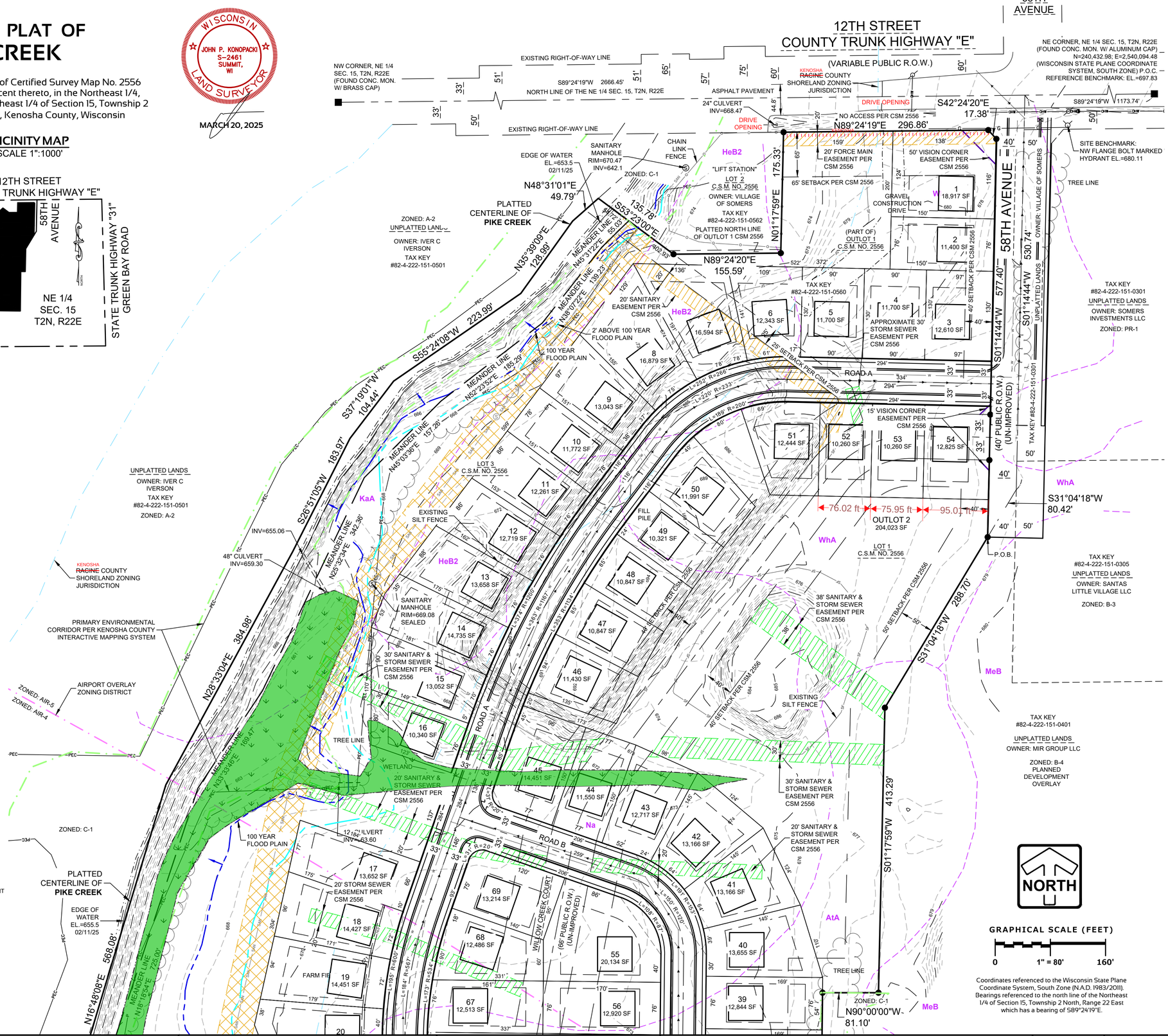
EXISTING ZONING:
A-2 ~~AGRICULTURAL LAND HOLDING~~, R-9 MULTIPLE FAMILY RESIDENTIAL DISTRICT, C-1 ~~UPLAND~~ CONSERVANCY, ~~KENOSHA COUNTY SHORE LAND~~, AIRPORT OVERLAY ZONING DISTRICTS AIR - 4 & AIR-5

PROPOSED ZONING:
R-5 URBAN SINGLE FAMILY RESIDENTIAL DISTRICT
C-1 LOWLAND RESOURCE CONSERVANCY DISTRICT

R-5 ~~PROPOSED~~ ZONING REQUIREMENTS:
MIN. ~~FRONT~~ SETBACK FROM COUNTY TRUNK HIGHWAY "E" = 65 FEET
MIN. ~~FRONT STREET~~ SETBACK = 30 FEET
MIN. SIDEYARD = 10 FEET
MIN. REARYARD = 25 FEET
MIN. SHORE YARD = 75 FEET
MIN. LOT AREA = 10,000 SF
MIN. LOT WIDTH = 75 FEET AT SETBACK LINE

LEGEND OF SYMBOLS & ABBREVIATIONS

SANITARY MANHOLE	FIBER OPTIC MARKER	SIGN	
STORM MANHOLE	FIBER OPTIC MANHOLE/VAULT	MAIL BOX	
STORM INLET	TELEPHONE PEDESTAL	FLAG POLE	
CLEANOUT	TELEPHONE MANHOLE/VAULT	BASKETBALL HOOP	
CATCH BASIN	TELEPHONE MARKER	BOLLARD	
LATERAL	TRANSFORMER	CROSS CUT	
UNKNOWN MANHOLE	ELECTRIC METER/PEDESTAL	FOUND IRON PIPE	
WELL	ELECTRIC MANHOLE/VAULT	SET 3/4" X 18" IRON REBAR	
HYDRANT	CABLE TV RISER/BOX CABLE	MAG NAIL	
WATER VALVE	TV MANHOLE/VAULT	SECTION MONUMENT	
DOWN SPOUT	GAS VALVE	BENCH MARK	
SPRINKLER VALVE	GAS METER	CONIFER TREE	
WATER SHUT OFF	GAS MARKER	DECIDUOUS TREE	
STANDPIPE	AIR CONDITIONING UNIT	BUSH	
WATER MANHOLE	FOUND 1" IRON ROD	WETLAND SYMBOL	
FLOOD LIGHT	DIRECTIONAL ARROW	CL. =CENTERLINE	
LIGHT POLE	DUMPSTER	CONC. =CONCRETE	
TRAFFIC SIGNAL POLE	HANDICAP STALL	EL. =ELEVATION	
UTILITY POLE	SPOT ELEVATION	EXT. =EXISTING	
GUY WIRE		INV. =INVERT	
SANITARY SEWER		MON. =MONUMENT	
STORM SEWER		P.O.B. =POINT OF BEGINNING	
W WATER MAIN		P.O.C. =POINT OF COMMENCEMENT	
FO FIBER OPTIC LINE		R.O.W =RIGHT OF WAY	
T TELEPHONE LINE		SEC. =SECTION	
E ELECTRIC LINE		SQ. FT. =SQUARE FEET	
OHW OVERHEAD WIRES		W/ =WITH	
CATV CABLE TELEVISION		(R) =RECORDED AS	
G GAS MAIN		(D) =DEEDED AS	
WET WETLANDS			
TREE LINE			
NO ACCESS			



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PINNACLE ENGINEERING GROUP
ENGINEERING I NATURAL RESOURCES I SURVEYING

WISCONSIN OFFICE:
20725 WATERTOWN ROAD SUITE 100
BROOKFIELD, WI 53186
(262) 754-8888

CHICAGO I MILWAUKEE : NATIONWIDE

WILLOW CREEK
VILLAGE OF SOMERS

PRELIMINARY PLAT

REVISIONS

PEG JOB No.	1617.00
PEG PM	
DATE	03/20/2025
SCALE	1" = 80'
DRAFTED BY:	ST

SHEET 1 OF 2

PRELIMINARY PLAT

Z:\PROJECTS\2019\1617.00-WI\SURVEY\CAD\1617.00 PRE PLAT.DWG

PRELIMINARY PLAT OF
WILLOW CREEK

Being a part of Outlot 1 and all of Lots 1 & 3 of Certified Survey Map No. 2556 and all of vacated Willow Creek Court adjacent thereto, in the Northeast 1/4, Southwest 1/4 and Northwest 1/4 of the Northeast 1/4 of Section 15, Township 2 North, Range 22 East, Town of Somers, Kenosha County, Wisconsin

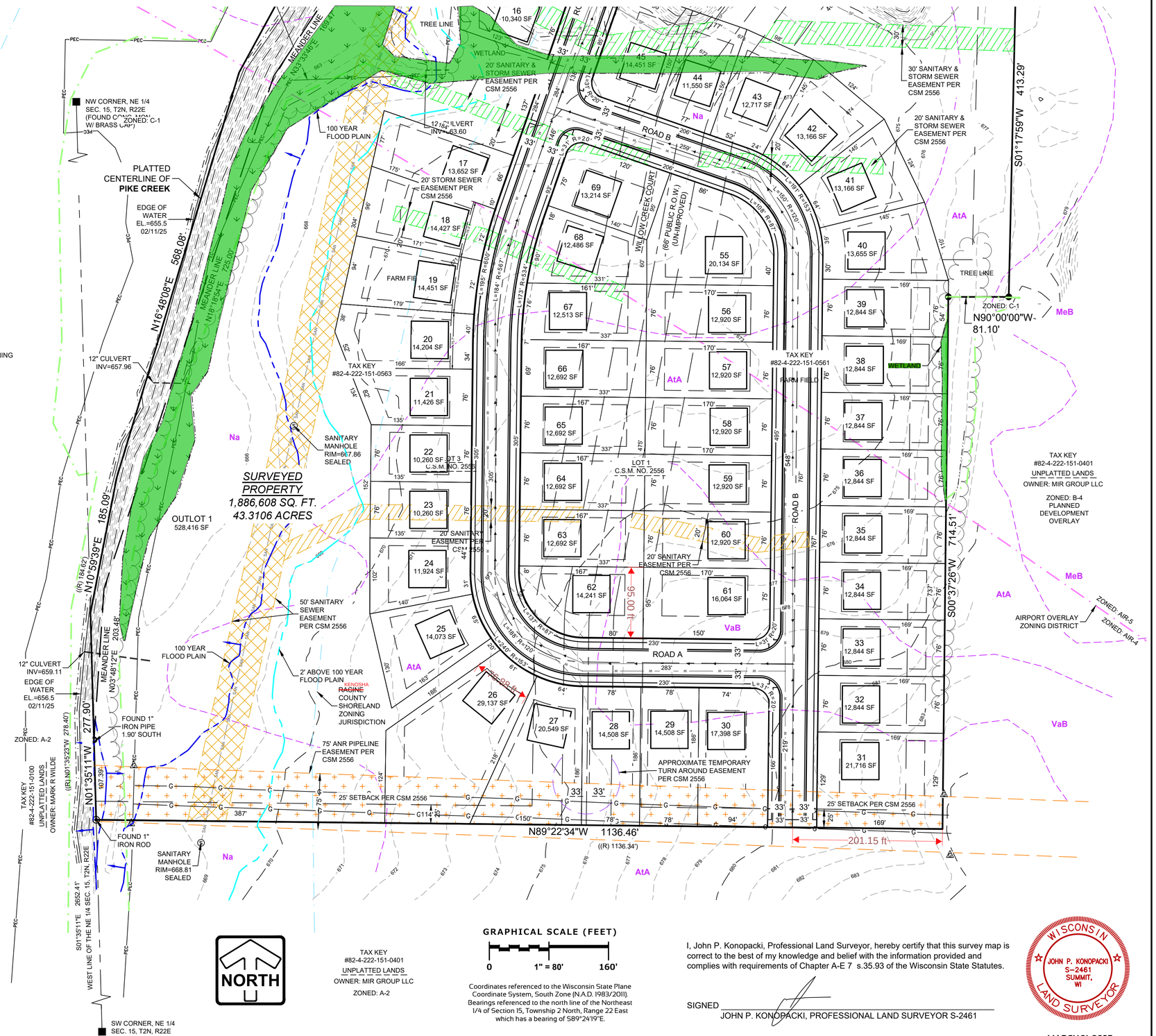
NOTES:

1. Tax Parcel Numbers: 82-4-222-151-0560, 82-4-222-151-0563, 82-4-222-151-0561.
2. Gross land area of the subject property is 1,886,608 square feet (43.3106 acres). Net land area is 1,665,356 square feet (38.2313 acres).
3. Subdivision contains 69 Lots and 2 Outlots.
4. Vertical Datum: North American Vertical Datum of 1988(12), (NAVD88). Survey data was obtained through a combination of ground based survey practices and un-manned aerial systems. Contours are shown at a 1' interval of the current ground terrain. Reference Benchmark: Concrete monument with aluminum cap at the northeast corner of the Northeast 1/4 Section 15, Town 2 North, Range 22 East, Elevation = 697.83.
5. All Lots to be serviced by public sanitary sewer and water main.
6. All streets to be improved with concrete curb and gutter and asphalt pavement.
7. No direct vehicular access shall be allowed on to 12th Street - County Trunk Highway "E".
7. Flood Zone Classification: The property lies with in Zone "X" and Zone "AE" of the Flood Insurance Rate Map Community Panel No. 55059C0069D with an effective date of JUNE 19, 2012. Zone "X" areas are determined to be outside the 0.2% annual chance floodplain. Zone "AE" areas are Special Flood Hazard Areas with Base Flood Elevations determined.
8. Drainage and Utility Easements to be determined during site engineering and will be shown on the final plat.
9. Utilities on or above the surface of the surveyed property observed in the process of conducting the fieldwork graphically shown on the survey. Underground utility locations shown are based on field location markings by Digger's Hotline ticket #20250502586 with a clear date of FEBRUARY 07, 2025. The location and size of underground structures and utilities shown hereon have been located based on a reasonable visual observation and are shown for informational purposes only. PINNACLE ENGINEERING GROUP, LLC. does not guarantee the location of utilities shown. Contact Digger's Hotline prior to the start of any activity.
11. 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.
12. Where the property being surveyed includes a water boundary, the parties relying on the survey should be aware that, (1) laws regarding the delineation between the ownership of the bed of navigable waters and the upland owner differ from state to state, (2) water boundaries are typically subject to change due to natural causes, and (3) as a result, the boundary shown hereon may or may not represent the actual location of the limit of title. The centerline of the Pike Creek shown hereon is based on Certified Survey Map No. 2556 recorded December 6, 2006. The edge of water of the Pike Creek was located on February 11, 2025.
13. Wetlands delineated by Heartland Ecological Group, Inc. September 2024.
14. OUTLOT OWNERSHIP AND PURPOSE: Outlot 1 and Outlot 2 of the plat of WILLOW CREEK shall be maintained by the WILLOW CREEK Homeowners Association for storm water retention purposes and open space and each individual lot owner shall have an undividable fractional ownership of the outlots and that Kenosha County and the Village of Somers shall not be liable for any fees or special assessments in the event Kenosha County or the Village of Somers should become the owner of any lot in the subdivision by reason of delinquency. The Homeowners Association shall maintain said Outlots in an unobstructed condition so as to maintain their intended purpose. Construction of any building, grading, or filling in said Outlots is prohibited unless approved by the Village of Somers. The Homeowners Association grants to the Village the right (but not the responsibility) to enter upon the Outlots in order to inspect, repair, or restore said Outlots to their intended purpose. Expense incurred by the Village for said inspection, repair, or restoration of said Outlots may be placed against the tax roll for said association and collected as a special charge by the Village. The developer and all subsequent owners shall transfer to any subsequent purchaser of any buildable lot within the plat of WILLOW CREEK an undividable one-sixty ninth (1/69th) interest in Outlot 1 and Outlot 2. The developer and all subsequent owners warrant and represent that said outlots for assessment purposes will have no value per se, and the 1/69th interest in said outlots would be assessed with each of the buildable lots. In the event that said outlots are not assessed as above, the developer and all subsequent owners warrant and represent that each will pay 1/69th per buildable lot, of the taxes due on said outlots. In the event that these said taxes are not paid, Kenosha County reserves the right to collect from each and every developer or subsequent owner individually for all taxes due.
15. WETLAND PRESERVATION AND PRIMARY ENVIRONMENTAL CORRIDOR RESTRICTION
    - Grading and filling shall be prohibited unless specifically authorized by the municipality in which they are located and, if applicable, Kenosha County, the Wisconsin Department of Natural Resources and the Army Corps of Engineers.
    - The removal of topsoil or other earthen materials shall be prohibited.
    - The removal or destruction of any native vegetative cover, ie., trees, shrubs, grasses, etc., shall be prohibited, with the exception of the removal of dead, dying or diseased vegetation, non-indigenous species or noxious weeds (as defined by local ordinance) at the discretion of a forester or naturalist and the approval of Kenosha County.
    - Grazing by domesticated animals, ie., horses, cows, etc.., shall be prohibited.
    - The introduction of plant material not indigenous to the existing environment of the wetland area or primary environmental corridor shall be prohibited.
    - Creation of a mown landscape, gardening, cultivating, or depositing yard waste of any type shall be prohibited.
    - Ponds may be permitted subject to the approval of the municipality in which they are located and, if applicable, the Kenosha County, the Wisconsin Department of Natural Resources and the Army Corps of Engineers.
    - Construction of buildings within the wetland boundary is prohibited.
16. BASEMENT RESTRICTION: Although all lots in the Subdivision have been reviewed and approved for development with single-family residential use in accordance with Section 236 Wisconsin Statutes, some lots may contain soil conditions which, due to the possible presence of groundwater near the surface, may require soil engineering and foundation design with regard to basement construction. It is recommended that either a licensed professional engineer or other soils expert design a basement and foundation which will be suitable to withstand the various problems associated with saturated soil conditions on basement walls or floors or that special measures be taken. Soil conditions should be subject to each owners special investigation prior to construction and no specific representation is made herein.
17. Soil Types: AtA - Ashkum silty clay loam, 0-2% slopes; EtB - Elliott silty clay loam, 2 - 6% slopes; HeB2 - Hebron loam, 2-6% slopes, eroded; KaA - Kane loam, 1-3% slopes; MeB - Markham silt loam, 2-6% slopes; Na - Navan silt loam; VaB - Varna silt loam, 2-6% slopes; WhA - Warsaw silt loam, 0-2% slopes; WhB - Warsaw silt loam, 2-6% slopes.
18. At the time of this survey the subject property contained snow covered ground conditions. Pinnacle Engineering Group, LLC takes no responsibility for any improvements that can not be located based on a reasonable visual observation.
19. Temporary Turn-Around Easement, 15' Vision Corner Easements and 20'/30'/38' Sanitary and Storm Sewer Easements as recorded on Certified Survey Map No. 2556 to be modified, amended and/or vacated by separate documents.
20. 66' Willow Creek Court, dedicated to the Town of Somers for Public Street purposes, to be vacated via separate document.
21. VISION CORNER EASEMENT RESTRICTION: Within the area of the vision corner easement, the height of all plantings, berms, fencing, signs, any other structure shall be limited to 24 inches above the intersection elevation. No access to any roadway shall be permitted over the vision corners from the adjacent lots.

EXISTING ZONING:
A-2 AGRICULTURAL LAND HOLDING, R-9 MULTIPLE FAMILY RESIDENTIAL DISTRICT, C-1 UPLAND CONSERVANCY, KENOSHA COUNTY SHORE LAND, AIRPORT OVERLAY ZONING DISTRICTS AIR - 4 & AIR-5

PROPOSED ZONING:
R-5 URBAN SINGLE FAMILY RESIDENTIAL DISTRICT

PROPOSED ZONING REQUIREMENTS:
MIN. FRONT SETBACK FROM COUNTY TRUNK HIGHWAY "E" = 65 FEET
MIN. FRONT STREET SETBACK = 30 FEET
MIN. SIDEYARD = 10 FEET
MIN. REARYARD = 25 FEET
MIN. SHORE YARD = 75 FEET
MIN. LOT AREA = 10,000 SF
MIN. LOT WIDTH = 75 FEET AT SETBACK LINE



NORTH

GRAPHICAL SCALE (FEET)
0 1" = 80' 160'

Coordinates referenced to the Wisconsin State Plane Coordinate System, South Zone (N.A.D. 1983/2011). Bearings referenced to the north line of the Northeast 1/4 of Section 15, Township 2 North, Range 22 East which has a bearing of S89°24'19"E.

I, John P. Konopacki, Professional Land Surveyor, hereby certify that this survey map is correct to the best of my knowledge and belief with the information provided and complies with requirements of Chapter A-E 7 s.35.93 of the Wisconsin State Statutes.

SIGNED _____
JOHN P. KONOPACKI, PROFESSIONAL LAND SURVEYOR S-2461

WISCONSIN JOHN P. KONOPACKI S-2461 SUMMIT, WI LAND SURVEYOR

MARCH 21, 2025

PRELIMINARY PLAT

PLAN | DESIGN | DELIVER
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PINNACLE ENGINEERING GROUP
ENGINEERING | NATURAL RESOURCES | SURVEYING
WISCONSIN OFFICE:
20725 WATERTOWN ROAD SUITE 100
BROOKFIELD, WI 53186
(262) 754-8888
CHICAGO | MILWAUKEE : NATIONWIDE

WILLOW CREEK
VILLAGE OF SOMERS

PRELIMINARY PLAT

REVISIONS

PEG JOB No. 1617.00
PEG PM
DATE 03/20/2025
SCALE 1" = 80'
DRAFTED BY: ST

SHEET 2 OF 2

Z:\PROJECTS\2019\1617.00-WI\SURVEY\CAD\1617.00 PRE PLAT.DWG

PRELIMINARY ENGINEERING IMPROVEMENT PLANS

FOR

WILLOW CREEK

SOMERS, WISCONSIN

PLANS PREPARED
FOR

BEAR DEVELOPMENT, LLC

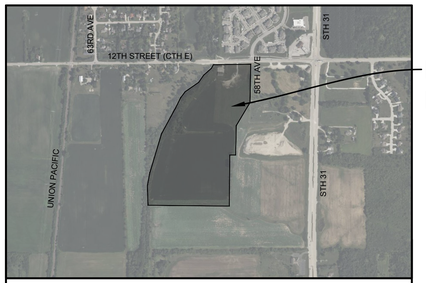
4011 80TH STREET
KENOSHA, WI 53142

LEGEND

	EXISTING	PROPOSED
SANITARY SEWER MANHOLE	S	
STORM SEWER MANHOLE	ST	
STORM SEWER CATCH BASIN (ROUND CASTING)	D	
STORM SEWER CATCH BASIN (RECTANGULAR CASTING)		
PRECAST FLARED END SECTION		
CONCRETE HEADWALL		
VALVE BOX		
FIRE HYDRANT		
CLEANOUT		
SANITARY SEWER		
FORCE MAIN		
STORM SEWER		
DRAIN TILE		
WATER MAIN	W	W
FIRE PROTECTION		FP
ELECTRICAL CABLE	E	E
OVERHEAD WIRES	OHW	OHW
GAS MAIN	G	G
TELEPHONE LINE	T	T
UTILITY CROSSING		X
CAUTION EXISTING UTILITIES NEARBY		CAUTION
GRANULAR TRENCH BACKFILL		
LIGHTING		
ELECTRICAL TRANSFORMER OR PEDESTAL	TF	
POWER POLE		
POWER POLE WITH LIGHT		
GUY WIRE		
STREET SIGN		
CONTOUR	749	749
SPOT ELEVATION	×(750.00)	+750.00
WETLANDS	WET	
PRIMARY ENVIRONMENTAL CORRIDOR	PEC	
FLOODWAY		
FLOODPLAIN		
HIGH WATER LEVEL (HWL)		
NORMAL WATER LEVEL (NWL)		
DIRECTION OF SURFACE FLOW		GRADE / PAVEMENT
DITCH OR SWALE		
DIVERSION SWALE		
OVERFLOW RELIEF ROUTING		
TREE WITH TRUNK SIZE	6" / 6"	
SOIL BORING	B-0	B-1
TOPSOIL PROBE	T-0	T-1
FENCE LINE, TEMPORARY SILT	SF	SF
FENCE LINE, WIRE		
FENCE LINE, CHAIN LINK OR IRON		
FENCE LINE, WOOD OR PLASTIC		
CONCRETE SIDEWALK		
CURB AND GUTTER		
DEPRESSED CURB		
REVERSE PITCH CURB & GUTTER		
EASEMENT LINE		

ABBREVIATIONS

BL	BASE LINE	MH	MANHOLE
BP	BOTTOM OF PIPE	NWL	NORMAL WATER LEVEL
C	LONG CHORD OF CURVE	PC	POINT OF CURVATURE
C & G	CURB AND GUTTER	PT	POINT OF TANGENCY
CB	CATCH BASIN	PVI	POINT OF VERTICAL INTERSECTION
CL	CENTERLINE	R	RADIUS
D	DEGREE OF CURVE	ROW	RIGHT-OF-WAY
EP	EDGE OF PAVEMENT	SAN	SANITARY SEWER
FES	FLARED END SECTION	ST	STORM SEWER
FF	FINISHED FLOOR	T	TANGENCY OF CURVE
FG	FINISHED GRADE	TB	TOP OF BANK
FL	FLOW LINE	TC	TOP OF CURB
FP	FLOODPLAIN	TF	TOP OF FOUNDATION
FR	FRAME	TP	TOP OF PIPE
FW	FLOODWAY	TS	TOP OF SIDEWALK
FYG	FINISHED YARD GRADE	TW	TOP OF FOUNDATION WALL
HWL	HIGH WATER LEVEL	WM	WATER MAIN
INV	INVERT	△	INTERSECTION ANGLE
L	LENGTH OF CURVE		



PROJECT LOCATION

LOCATION MAP
1" = 1000'

INDEX OF SHEETS

PROJECT TEAM CONTACTS

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BROOKFIELD, WI 53186
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E-MAIL: aekoch@pinnacle-engr.com

SURVEYOR:
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BROOKFIELD, WI 53186
MAIN: 262-754-8888
E-MAIL: john.konopacki@pinnacle-engr.com

APPLICANT:
DAN SZCZAP
BEAR DEVELOPMENT, LLC
4011 80TH STREET
KENOSHA, WI 53142

GENERAL NOTES

1. THE INTENTION OF THE PLANS AND SPECIFICATIONS IS TO SET FORTH PERFORMANCE AND CONSTRUCTION MATERIAL STANDARDS FOR THE PROPER EXECUTION OF WORK. ALL WORKS CONTAINED WITHIN THE PLANS AND SPECIFICATIONS SHALL BE COMPLETED IN ACCORDANCE WITH ALL REQUIREMENTS FROM LOCAL, STATE, FEDERAL OR OTHER GOVERNING AGENCY'S LAWS, REGULATIONS, JURISDICTIONAL ORDINANCES/CODES/RULES/ETC., AND THE OWNER'S DIRECTION.
2. A GEOTECHNICAL REPORT HAS BEEN PREPARED BY GESTRA ENGINEERING, INC DATED OCTOBER 11, 2018 FOR THE PROJECT SITE. THE DATA ON SUB-SURFACE SOIL CONDITIONS IS NOT INTENDED AS A REPRESENTATION OR WARRANTY OF THE CONTINUITY OF SUCH CONDITIONS BETWEEN BORINGS OR INDICATED SAMPLING LOCATIONS. IT SHALL BE EXPRESSLY UNDERSTOOD THAT OWNER WILL NOT BE RESPONSIBLE FOR ANY INTERPRETATIONS OR CONCLUSIONS DRAWN THERE FROM BY THE CONTRACTOR. DATA IS MADE AVAILABLE FOR THE CONVENIENCE OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR PERFORMING ANY ADDITIONAL SOILS INVESTIGATIONS THEY FEEL IS NECESSARY FOR THE PROPER EVALUATION OF THE SITE FOR PURPOSES OF PLANNING, BIDDING, OR CONSTRUCTING THE PROJECT AT NO ADDITIONAL COST TO THE OWNER.
3. THE CONTRACTOR IS RESPONSIBLE TO REVIEW AND UNDERSTAND ALL COMPONENTS OF THE PLANS AND SPECIFICATIONS, INCLUDING FIELD VERIFYING SOIL CONDITIONS, PRIOR TO SUBMISSION OF A BID PROPOSAL.
4. THE CONTRACTOR SHALL PROMPTLY REPORT ANY ERRORS OR AMBIGUITIES LEARNED AS PART OF THEIR REVIEW OF PLANS, SPECIFICATIONS, REPORTS AND FIELD INVESTIGATIONS.
5. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE COMPUTATION OF QUANTITIES AND WORK REQUIRED TO COMPLETE THIS PROJECT. THE CONTRACTOR'S BID SHALL BE BASED ON ITS OWN COMPUTATIONS AND IN NO SUCH INSTANCE RELY ON THE ENGINEER'S ESTIMATE.
6. QUESTIONS/CLARIFICATIONS WILL BE INTERPRETED BY ENGINEER/OWNER PRIOR TO THE AWARD OF CONTRACT. ENGINEER/OWNER WILL SUBMIT OFFICIAL RESPONSES IN WRITING. INTERPRETATIONS PRESENTED IN OFFICIAL RESPONSES SHALL BE BINDING ON ALL PARTIES ASSOCIATED WITH THE CONTRACT. IN NO WAY SHALL WORD-OF-MOUTH DIALOG CONSTITUTE AN OFFICIAL RESPONSE.
7. PRIOR TO START OF WORK, CONTRACTOR SHALL BE COMPLETELY FAMILIAR WITH ALL CONDITIONS OF THE SITE, AND SHALL ACCOUNT FOR CONDITIONS THAT AFFECT, OR MAY AFFECT CONSTRUCTION INCLUDING, BUT NOT LIMITED TO, LIMITATIONS OF WORK ACCESS, SPACE LIMITATIONS, OVERHEAD OBSTRUCTIONS, TRAFFIC PATTERNS, LOCAL REQUIREMENTS, ADJACENT ACTIVITIES, ETC. FAILURE TO CONSIDER SITE CONDITIONS SHALL NOT BE CAUSE FOR CLAIM OF JOB EXTRAS.
8. COMMENCEMENT OF CONSTRUCTION SHALL EXPLICITLY CONFIRM THAT THE CONTRACTOR HAS REVIEWED THE PLANS AND SPECIFICATIONS IN ENTIRETY AND CERTIFIES THAT THEIR SUBMITTED BID PROPOSAL CONTAINS PROVISIONS TO COMPLETE THE PROJECT, WITH THE EXCEPTION OF UNFORESEEN FIELD CONDITIONS; ALL APPLICABLE PERMITS HAVE BEEN OBTAINED; AND CONTRACTOR UNDERSTANDS ALL OF THE REQUIREMENTS OF THE PROJECT.
9. SHOULD ANY DISCREPANCIES OR CONFLICTS IN THE PLANS OR SPECIFICATIONS BE DISCOVERED AFTER THE AWARD OF CONTRACT, ENGINEER SHALL BE NOTIFIED IN WRITING IMMEDIATELY AND CONSTRUCTION OF ITEMS AFFECTED BY THE DISCREPANCIES/CONFLICTS SHALL NOT COMMENCE, OR CONTINUE, UNTIL A WRITTEN RESPONSE FROM ENGINEER/OWNER IS DISTRIBUTED. IN THE EVENT OF A CONFLICT BETWEEN REFERENCED CODES, STANDARDS, SPECIFICATIONS AND PLANS, THE ONE ESTABLISHING THE MOST STRINGENT REQUIREMENTS SHALL BE FOLLOWED.
10. THE CONTRACTOR SHALL, AT ITS OWN EXPENSE, OBTAIN ALL NECESSARY PERMITS AND LICENSES TO COMPLETE THE PROJECT. OBTAINING PERMITS, OR DELAYS, IS NOT CAUSE FOR DELAY OF THE CONTRACT OR SCHEDULE. CONTRACTOR SHALL COMPLY WITH ALL PERMIT REQUIREMENTS.
11. THE CONTRACTOR SHALL NOTIFY ALL INTERESTED GOVERNING AGENCIES, UTILITY COMPANIES AFFECTED BY THIS CONSTRUCTION PROJECT, AND DIGGER'S HOTLINE IN ADVANCE OF CONSTRUCTION TO COMPLY WITH ALL JURISDICTIONAL ORDINANCES/CODES/RULES/ETC., PERMIT STIPULATIONS, AND OTHER APPLICABLE STANDARDS.
12. SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE TO INITIATE, INSTITUTE, ENFORCE, MAINTAIN, AND SUPERVISE ALL SAFETY PRECAUTIONS AND JOB SITE SAFETY PROGRAMS IN CONNECTION WITH THE WORK.
13. CONTRACTOR SHALL KEEP THE JOBSITE CLEAN AND ORDERLY AT ALL TIMES. ALL LOCATIONS OF THE SITE SHALL BE KEPT IN A WORKING MANNER SUCH THAT DEBRIS IS REMOVED CONTINUOUSLY AND ALL RESPECTIVE CONTRACTORS OPERATE UNDER GENERAL "GOOD HOUSEKEEPING."
14. THE CONTRACTOR SHALL INDEMNIFY THE OWNER, ENGINEER, AND THEIR AGENTS FROM ALL LIABILITY INVOLVED WITH THE CONSTRUCTION, INSTALLATION, AND TESTING OF THE WORK ON THIS PROJECT.

DIGGERS HOTLINE
Toll Free (800) 242-8511
Milwaukee Area (414) 259-1181
Hearing Impaired TDD (800) 542-2289
www.DiggersHotline.com

PINNACLE ENGINEERING GROUP, LLC
ENGINEER'S LIMITATION

PINNACLE ENGINEERING GROUP, LLC AND THEIR CONSULTANTS DO NOT WARRANT OR GUARANTEE THE ACCURACY AND COMPLETENESS OF THE DELIVERABLES HEREIN BEYOND A REASONABLE DILIGENCE. IF ANY MISTAKES, OMISSIONS, OR DISCREPANCIES ARE FOUND TO EXIST WITHIN THE DELIVERABLES, THE ENGINEER SHALL BE PROMPTLY NOTIFIED PRIOR TO BID SO THAT HE MAY HAVE THE OPPORTUNITY TO TAKE WHATEVER STEPS NECESSARY TO RESOLVE THEM. FAILURE TO PROMPTLY NOTIFY THE ENGINEER OF SUCH CONDITIONS SHALL ABSOLVE THE ENGINEER FROM ANY RESPONSIBILITY FOR THE CONSEQUENCES OF SUCH FAILURE. ACTIONS TAKEN WITHOUT THE KNOWLEDGE AND CONSENT TO THE ENGINEER, OR IN CONTRADICTION TO THE ENGINEER'S DELIVERABLES OR RECOMMENDATIONS, SHALL BECOME THE RESPONSIBILITY NOT OF THE ENGINEER BUT OF THE PARTIES RESPONSIBLE FOR TAKING SUCH ACTION.

FURTHERMORE, PINNACLE ENGINEERING GROUP, LLC IS NOT RESPONSIBLE FOR CONSTRUCTION SAFETY OR THE MEANS AND METHODS OF CONSTRUCTION.

REVIEWED:
DESIGNED: ASK
DRAFTED: AMG

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WILLOW CREEK

SOMERS, WI

COVER SHEET

REVISIONS

PEG JOB No. 1617.00
PEG PM ASK
START DATE 3/28/25
SCALE

SHEET 1 OF

COVER SHEET

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SITE DATA TABLE

NUMBER OF LOTS: 69
TOTAL LENGTH OF ROADWAY: 4,060 LF
- 37' PAVEMENT WIDTH (58TH AVENUE)
- 28' PAVEMENT WIDTH (INTERIOR ROADS)
- 3' GRAVEL SHOULDER

ZONING:
ZONED: R-5 URBAN SINGLE FAMILY RESIDENTIAL DISTRICT
FRONT/STREET SETBACK: 30 FEET
SIDE SETBACK: 10 FEET
REAR SETBACK: 25 FEET

58TH AVENUE

12TH STREET
COUNTY TRUNK HIGHWAY "E"

CONSTRUCT INTERSECTION TO COUNTY STANDARDS

58TH AVENUE

LOT 1 LOT 2 LOT 3 LOT 4 LOT 5 LOT 6 LOT 7 LOT 8 LOT 9 LOT 10 LOT 11 LOT 12 LOT 13 LOT 14 LOT 15 LOT 16 LOT 17 LOT 18 LOT 19 LOT 20 LOT 21 LOT 22 LOT 23 LOT 24 LOT 25 LOT 26 LOT 27 LOT 28 LOT 29 LOT 30 LOT 31 LOT 32 LOT 33 LOT 34 LOT 35 LOT 36 LOT 37 LOT 38 LOT 39 LOT 40 LOT 41 LOT 42 LOT 43 LOT 44 LOT 45 LOT 46 LOT 47 LOT 48 LOT 49 LOT 50 LOT 51 LOT 52 LOT 53 LOT 54 LOT 55 LOT 56 LOT 57 LOT 58 LOT 59 LOT 60 LOT 61 LOT 62 LOT 63 LOT 64 LOT 65 LOT 66 LOT 67 LOT 68 LOT 69

EAST POND

WEST POND

WILLOW CREEK ROAD

WILLOW CREEK ROAD

WETLANDS DELINEATED BY HEARTLAND ECOLOGICAL GROUP INC MARCH 25, 2025

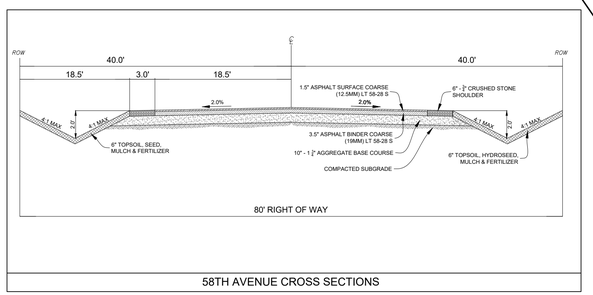
75' ANR PIPELINE EASEMENT PER CSM 2556

50' SANITARY SEWER EASEMENT PER CSM 2556

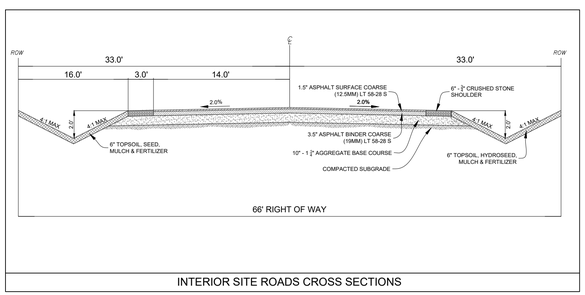
WETLANDS DELINEATED BY HEARTLAND ECOLOGICAL GROUP INC MARCH 25, 2025

50' SANITARY SEWER EASEMENT PER CSM 2556

75' ANR PIPELINE EASEMENT PER CSM 2556



58TH AVENUE CROSS SECTIONS



INTERIOR SITE ROADS CROSS SECTIONS

NORTH

GRAPHICAL SCALE (FEET)

0 1" = 80' 160'

DRAFTED: AMG
DESIGNED: AEK
REVIEWED:

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CHICAGO I MILWAUKEE: NATIONWIDE

WILLOW CREEK

SOMERS, WI

SITE PLAN

REVISIONS

PEG JOB No. 1617.00
PEG PM AEK
START DATE 3/28/25
SCALE 1" = 80'

SHEET 2

SITE PLAN

Z:\PROJECTS\2019\1617.00-WI\CAD\SHEETS\PRELIM\2 SITE PLAN.DWG

CONSTRUCTION SITE SEQUENCING

1. INSTALL PERIMETER SILT FENCE, INLET PROTECTION AND TEMPORARY CONSTRUCTION ENTRANCE.
2. STRIP AND STOCKPILE TOPSOIL, INSTALL SILT FENCE AROUND PERIMETER OF STOCKPILE.
3. CONDUCT ROUGH GRADING EFFORTS AND INSTALL CHECK DAMS AND SEDIMENT TRAPS/BASINS AS NEEDED.
4. INSTALL UTILITY PIPING AND STRUCTURES, IMMEDIATELY INSTALL INLET PROTECTION.
5. COMPLETE FINAL GRADING, INSTALLATION OF GRAVEL BASE COURSES, PLACEMENT OF CURBS, PAVEMENTS, WALKS, ETC.
6. PLACE TOPSOIL AND IMMEDIATELY STABILIZE DISTURBED AREAS WITH EROSION CONTROLS.
7. EROSION CONTROL MEASURES SHALL BE REMOVED ONLY AFTER SITE CONSTRUCTION IS COMPLETE WITH ALL SOIL SURFACES HAVING AN ESTABLISHED VEGETATIVE COVER.

CONTRACTOR MAY MODIFY SEQUENCING AFTER ITEM 1 AS NEEDED TO COMPLETE CONSTRUCTION IF EROSION CONTROLS ARE MAINTAINED IN ACCORDANCE WITH THE CONSTRUCTION SITE EROSION CONTROL REQUIREMENTS.

LEGEND

- STORM SEWER MANHOLE
- CATCH BASIN- ROUND CASTING
- CATCH BASIN- RECTANGULAR CASTING
- CONCRETE FLARED END SECTION
- PROPOSED CONTOUR
- EXISTING CONTOUR
- SPOT ELEVATION
- INLET PROTECTION (SEE DETAIL)
- CONSTRUCTION ENTRANCE
- EROSION CONTROL BLANKET
- SILT FENCE
- DITCH CHECK

58TH AVENUE

58TH AVENUE

12TH STREET
COUNTY TRUNK HIGHWAY "E"

EAST POND

WILLOW CREEK ROAD

WETLANDS DELINEATED
BY HEARTLAND
ECOLOGICAL GROUP INC
MARCH 25, 2025

100 YEAR FLOOD PLAIN

WILLOW CREEK ROAD

WEST POND

100 YEAR FLOOD PLAIN

WETLANDS DELINEATED
BY HEARTLAND
ECOLOGICAL GROUP INC
MARCH 25, 2025

100 YEAR FLOOD PLAIN

NORTH

GRAPHICAL SCALE (FEET)

0 1" = 80' 160'

OVERALL GRADING & EROSION CONTROL PLAN

DRAFTED: AMG
DESIGNED: AEK
REVIEWED:

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OVERALL GRADING & EROSION CONTROL PLAN

REVISIONS

PEG JOB No. 1617.00
PEG PM AEK
START DATE 3/28/25
SCALE 1" = 80'

SHEET 3

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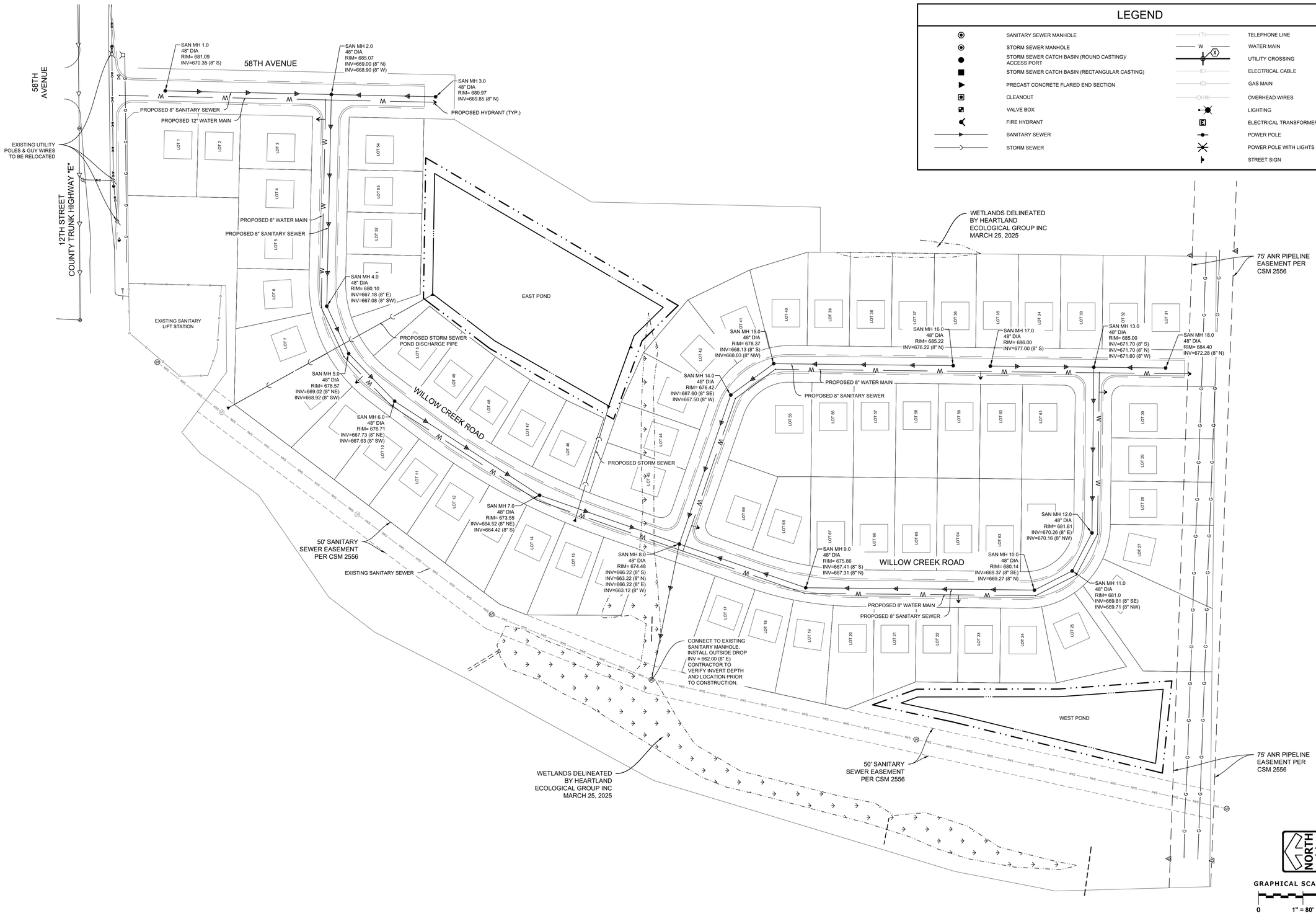

LEGEND

SANITARY SEWER MANHOLE	TELEPHONE LINE
STORM SEWER MANHOLE	WATER MAIN
STORM SEWER CATCH BASIN (ROUND CASTING)/ ACCESS PORT	UTILITY CROSSING
STORM SEWER CATCH BASIN (RECTANGULAR CASTING)	ELECTRICAL CABLE
PRECAST CONCRETE FLARED END SECTION	GAS MAIN
CLEANOUT	OVERHEAD WIRES
VALVE BOX	LIGHTING
FIRE HYDRANT	ELECTRICAL TRANSFORMER OR PEDESTAL
SANITARY SEWER	POWER POLE
STORM SEWER	POWER POLE WITH LIGHTS
	STREET SIGN

NORTH

GRAPHICAL SCALE (FEET)

0 1" = 80' 160'

DRAFTED: AMG DESIGNED: AEK REVIEWED:

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OVERALL UTILITY PLAN

REVISIONS

PEG JOB No. 1617.00 AEK
PEG PM 3/28/25
START DATE 1" = 80'
SCALE

SHEET 4

OVERALL UTILITY PLAN

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PRELIMINARY STORMWATER MANAGEMENT PLAN

WILLOW CREEK

Village of Somers, Wisconsin

PEG Project Number: 1617.00-WI

March 28, 2025

TABLE OF CONTENTS

APPENDICIES

Questions and comments can be directed to:

Aaron E. Koch, P.E.
Principal
Phone: 262.754.8888 | Fax: 262.754.8850
aekoch@pinnacle-engr.com

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www.pinnacle-engr.com

INTRODUCTION

The proposed project consists of a -lot subdivision and is located northeast of the intersection of 12th Street (CTH "E") and 58th Avenue in the Village of Somers, Wisconsin. A location map that illustrates the tract of land is included in **Appendix 1**. The improvements will disturb more than 1 acre and thus will require stormwater management. The Village of Somers and the Wisconsin DNR have jurisdiction on the site with regards to stormwater goals. Pinnacle Engineering Group has prepared a plan which will meet these goals.

DESIGN CRITERIA

*Village of Somers **(Village)**: .....Chapter 17, Municipal Code of Ordinances*

*Wisconsin Department of Natural Resources **(WDNR)**:*..... NR 216 & NR 151

Water Quantity: The Village of Somers requires reduction in stormwater runoff such that the 100-year post-development runoff rate be less than or equal to the 10-year pre-development runoff rate, the 10-year post-development runoff rate be less than or equal to the 10-year pre-development runoff rate, the 2-year post-development runoff rate be less than or equal to the 2-year pre-development runoff rate, and the 1-year post-development runoff rate be less than or equal to the 1-year pre-development runoff rate.

Water Quality: The Village and DNR requirements are to remove 80% of the total suspended solids (TSS) load on an average annual basis from the runoff from the site.

Infiltration: The Village requires developments with more than 40 percent and up to 80 percent connected imperviousness, design practices to infiltrate sufficient runoff volume so that the post-development infiltration volume shall be at least 75 percent of the pre-development infiltration volume, based on an average annual rainfall. Infiltration is not required where the infiltration rate of the soil measured is less than 0.6 inches per hour. Sites where infiltration rates are less than 0.6 inches per hour are exempt from infiltration requirements.

Protective Areas: The Village and DNR require protective areas where impervious areas are adjacent to and drain into wetlands.

EXISTING CONDITIONS

The site is currently an open farm field. The site currently slopes from east to west and to the Pike Creek, which is immediately to the west. The site is comprised of two drainage areas, an onsite area that slopes and drains into the creek and an offsite area to the east that slopes and drains onto the site. The onsite area is comprised of open farm field and the offsite area is a mix of farm fields and a portion of existing Green Bay Road. A Pre-Development Hydrology Exhibit can be found in **Appendix 2**.

A preliminary geotechnical report has been conducted by GESTRA (See **Appendix 5**) and found soils on site to be comprised mostly of sandy lean clay or clayey sand at the top lay with deeper soils found to be primarily silt, sandy silt, and silty sand. The USDA Web Soil Survey Map (**Appendix 1**) indicates a mixture of Hydrologic Soil Groups C, C/D, B, and B/D present on site with much of the site falling into the C/D classification. To account for this range of hydrologic

soil groups, soil group C was used for curve number analysis. A runoff curve number of 78 was used when analyzing the predevelopment conditions per the Village of Somers ordinance for cropland on Hydrologic Soil Group C.

POST-DEVELOPMENT CONDITIONS

The proposed development is a 69-lot subdivision with an associated road, Willow Creek Court, and utilities that also include the extension of 58th Avenue. All runoff will be conveyed to one of two ponds, the West Pond or the East Pond via the proposed storm sewer system. The proposed site is divided into four drainage areas: an Onsite West area that drains to the West Pond, and Onsite East are that drains to the East Pond, the Offsite area the drains onto the site and is passed through the East Pond, and an undetained area that drains directly to the creek. A Post-Development Hydrology Exhibit and Modeling can be found in **Appendix 3** and **Appendix 4**. Both the East and West Pond discharge directly to the Pike Creek.

The stormwater facilities and associated outlet structures have been designed to comply with the requirements for the Village of Somers and the Wisconsin DNR.

ANALYSIS METHODS

HydroCAD® (Version 10.20) software has been used to analyze stormwater characteristics for this stormwater management plan. HydroCAD uses the accepted TR-55 methodology for determining peak discharge runoff rates. Rainfall depths for the 1-year, 2-year, 10-year, and 100-year storm events are 2.39, 2.72, 3.83, and 5.95 inches in accordance with SEWRPC rainfall depths. MSE 3 24-hour rainfall distributions are used.

TSS reduction characteristics for the proposed water quality facilities were determined using WinSLAMM® (Version 10.4.1) Source Loading and Management Model.

SUMMARY OF RESULTS

Since there is an offsite flow into the East Pond that is not required to be detained, the allowable discharge rates are a combination of the onsite 10-year storm combined with the Offsite 100-year storm. This is done so that when looking at the proposed model, there is no detention being provided for the offsite area.

Existing Flows

Area	Area (ac)	CN	Tc (min)	Peak Flows 1-year (cfs)	Peak Flows 2-year (cfs)	Peak Flows 10-year (cfs)	Peak Flows 100-year (cfs)
EXISTING ONSITE	34.9	78	30.2	20.8	27.8	54.0	109.7
OFFSITE AREA	55.3	80	24.2	43.6	57.0	106.2	208.4
ALLOWABLE EXISTING DISCHARGE	---	---	---	**63.0**	**83.0**	**262.4**	**---**

***Allowable 1-yr = 63.0 cfs*
Allowable 2-yr = 83.0 cfs
Allowable 10-yr = 10-yr Ex Onsite (54.0) + 100-yr Offsite (208.4 cfs) = 262.4 cfs

Proposed Flows

Area	Area (ac)	CN	Tc (min)	Peak Flows 1-year (cfs)	Peak Flows 2-year (cfs)	Peak Flows 10-year (cfs)	Peak Flows 100-year (cfs)
PROPOSED EAST	17.2	82	6.0*	28.3	35.9	63.2	118.1
OFFSITE AREA	55.3	80	24.2	43.6	57.0	106.2	208.4
EAST POND	---	---	---	3.7	4.4	18.1	57.0
PROPOSED WEST	14.0	81	6.0*	21.6	27.7	49.6	94.0
WEST POND	---	---	---	0.6	0.8	1.2	6.2
UNDETAINED AREA	3.7	77	6.0*	4.3	5.8	11.2	22.6
Proposed Discharge	**---**	**---**	**---**	**4.7**	**6.7**	**20.0**	**64.9**

**A Tc of 6.0 min is used as it is the minimum allowed for TR55.*

Release Rate Summary Table

	1-year (cfs)	2-year (cfs)	100-year (cfs)
ALLOWABLE DISCHARGE	63.0	83.0	262.4
PROPOSED DISCHARGE	4.7	6.7	64.9

Basin Data

Pond	Bottom Elev.	Peak W.S. Elev. 1-year	Elev. 2-year	Elev. 10-year	Elev. 100-year	Spillway Elev.	Top of Berm Elev.
EAST POND	665.0	666.6	667.1	668.4	670.7	671.0	672.0
WEST POND	668.0	668.9	669.2	670.1	671.4	672.0	673.0

Runoff Water Quality

Post-development water quality will be obtained in the onsite ponds. The ponds have been designed to provide a minimum of 80% TSS removal.

Water Quality Summary

Area/Pond	Pounds of TSS Incoming	Pounds of TSS Remaining	Percent Removal
EAST POND	3698	560	84.9%
WEST POND	2583	282	89.1%
UNDETAINED AREA	335	335	0%
Total	6616	1176	**82.22%**

The WinSLAMM modeling indicates a TSS removal of approximately 82.22% (**Appendix 4**). The stormwater devices will exceed the minimum TSS removal requirements for the Village and DNR.

Infiltration

The site is partially silty clay soils and partially silty sandy soils; however, the portions of the site that are comprised of silty sand have shallow groundwater levels. Due to the presence of clay soils on site and high groundwater levels, we believe the site is exempt from having to provide infiltration and thus it has not been incorporated into this stormwater management plan.

Protective Areas

Protective areas are required along all wetlands in order to minimize the impacts of pollutants from untreated impervious sources. No impervious surfaces will drain directly to the wetlands; therefore, protective areas do not apply to this design.

CONCLUSION

The stormwater management features for the development have been designed to comply with the requirements of the Village of Somers and the WDNR. This includes peak flow reduction, water quality, infiltration, and protective areas. The ponds will serve to meet all these goals. Maintenance is expected to occur on a regular basis. A maintenance agreement will be carried out to ensure this occurs.

APPENDIX 1
MAPS

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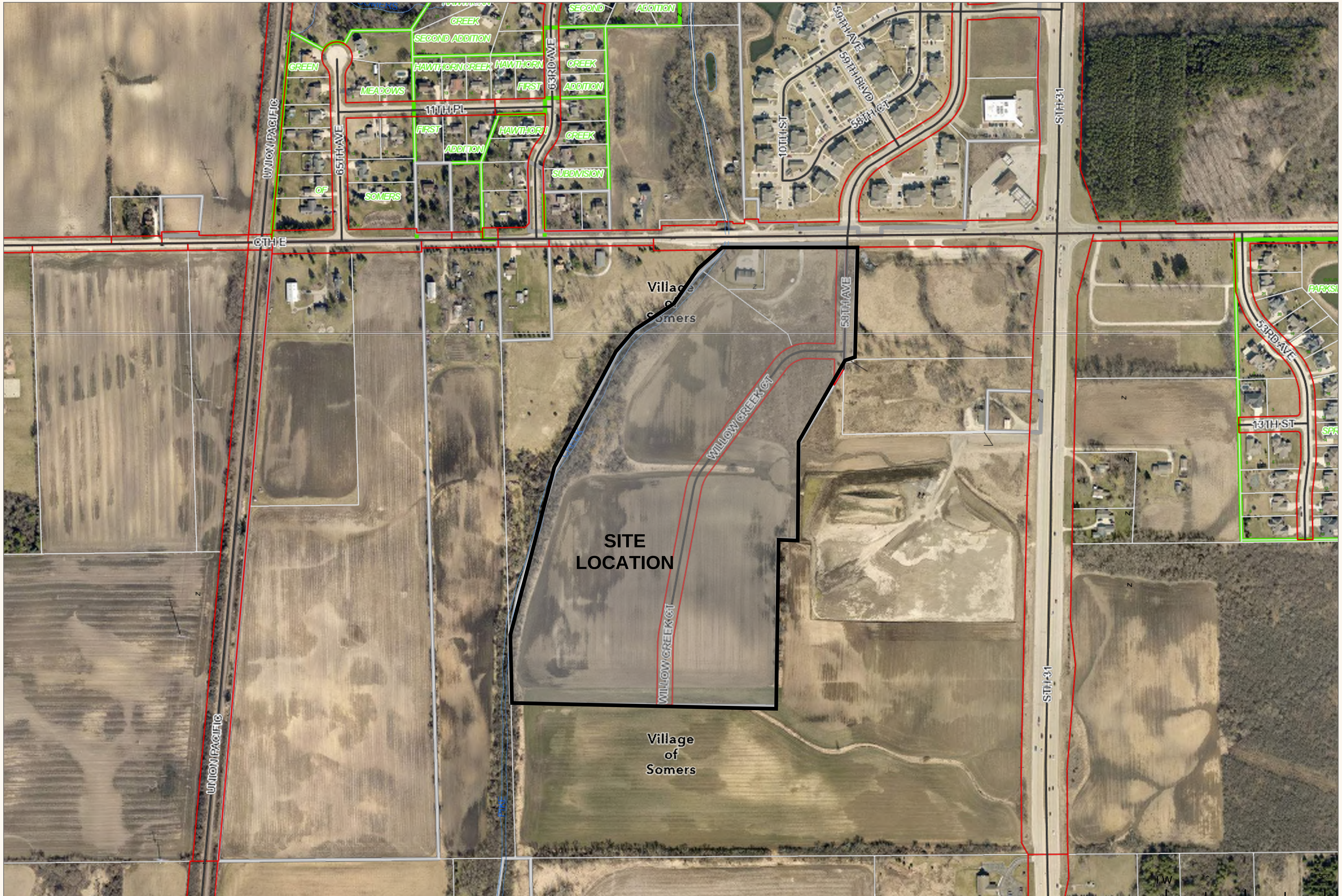

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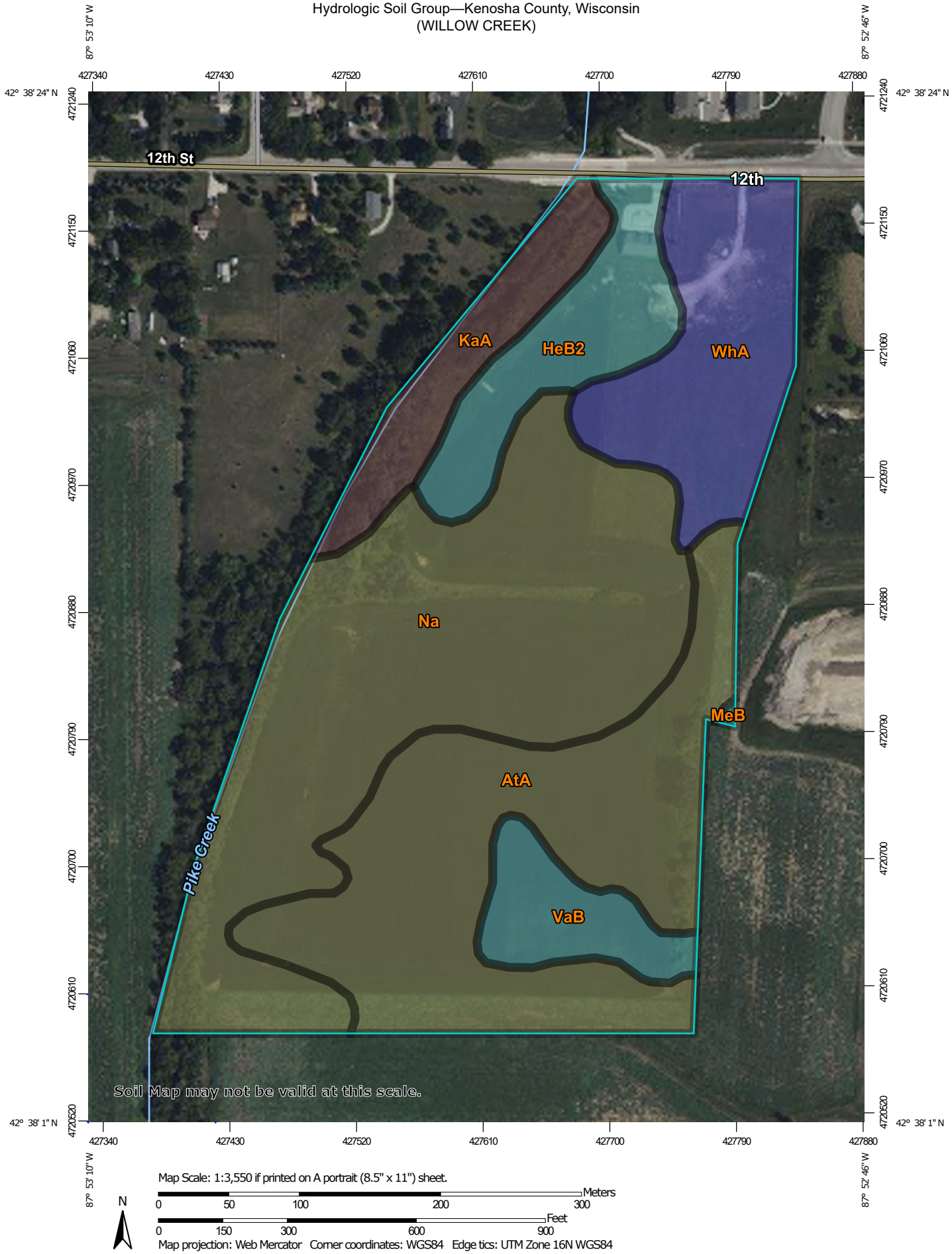
',6&/$,0(5 7KLV PDS LV QHLWKHU D OHJDOO\ UHFRUGHG PDS QRU D VXUYH\ DQG LV QRW LQWHQGHG WR EH XVHG DV RQH 7KLV GUDZLQJ LV D FRPSLODWLRQ RI UHFRUGV GDWD DQG LQIRUPDWLRQ ORFDWHG
DQG RWKHU VRXUFHV DIIHFWLQJ WKH DUHD VKRZQ DQG LV WR EH XVHG IRU UHIHUHQFH SXUSRVHV RQO\ .HQRVKD &RXQW\ LV QRW UHVSRQVLEOH IRU DQ\ LQDFFXUDFLHV KHUHLQ

Hydrologic Soil Group—Kenosha County, Wisconsin
(WILLOW CREEK)



Map Scale: 1:3,550 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: Kenosha 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: Jul 25, 2022—Aug 24, 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
AtA	Ashkum silty clay loam, 0 to 2 percent slopes	C/D	12.9	28.1%
HeB2	Hebron loam, 2 to 6 percent slopes, eroded	C	3.8	8.4%
KaA	Kane loam, 1 to 3 percent slopes	B/D	3.1	6.7%
MeB	Markham silt loam, 2 to 6 percent slopes	C	0.0	0.1%
Na	Navan silt loam	C/D	17.5	38.3%
VaB	Varna silt loam, 2 to 6 percent slopes	C	2.3	5.1%
WhA	Warsaw silt loam, 0 to 2 percent slopes	B	6.1	13.3%
Totals for Area of Interest			**45.8**	**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.

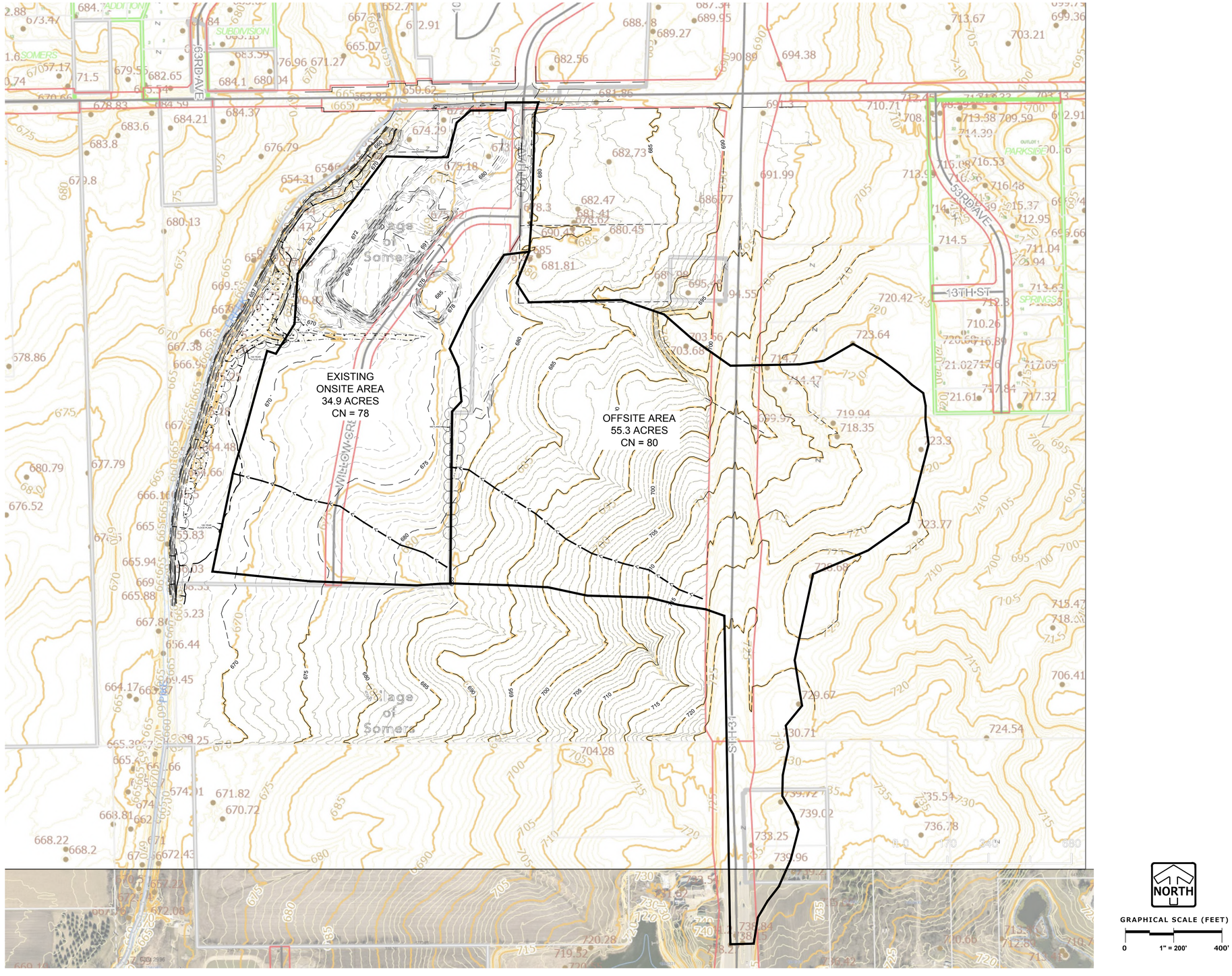
Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

APPENDIX 2
PRE DEVELOPMENT CONDITIONS



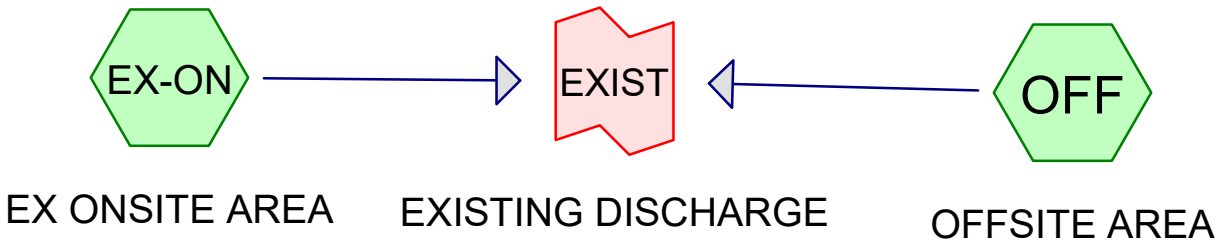
WILLOW CREEK HYDROLOGY EXHIBIT - PRE-DEVELOPMENT

03/28/2025

PINNACLE ENGINEERING GROUP

20725 WATERTOWN ROAD | SUITE 100 | BROOKFIELD, WI 53186 | WWW.PINNACLE-ENGR.COM |

PLAN | DESIGN | DELIVER **PEGJOB#** 1617.00



Subcat Reach Pond Link

Routing Diagram for 1617 WILLOW CREEK
Prepared by Pinnacle Engineering Group, Printed 3/26/2025
HydroCAD® 10.20-6a s/n 07894 © 2024 HydroCAD Software Solutions LLC

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment EX-ON: EX ONSITE AREA Runoff Area=34.900 ac 0.00% Impervious Runoff Depth>0.67"
Flow Length=980' Tc=30.2 min CN=78 Runoff=20.80 cfs 1.952 af

Subcatchment OFF: OFFSITE AREA Runoff Area=55.300 ac 12.12% Impervious Runoff Depth>0.77"
Flow Length=1,200' Tc=24.2 min CN=80 Runoff=43.64 cfs 3.529 af

Link EXIST: EXISTING DISCHARGE Inflow=63.03 cfs 5.481 af
Primary=63.03 cfs 5.481 af

Total Runoff Area = 90.200 ac Runoff Volume = 5.481 af Average Runoff Depth = 0.73"
92.57% Pervious = 83.500 ac 7.43% Impervious = 6.700 ac

Summary for Subcatchment EX-ON: EX ONSITE AREA

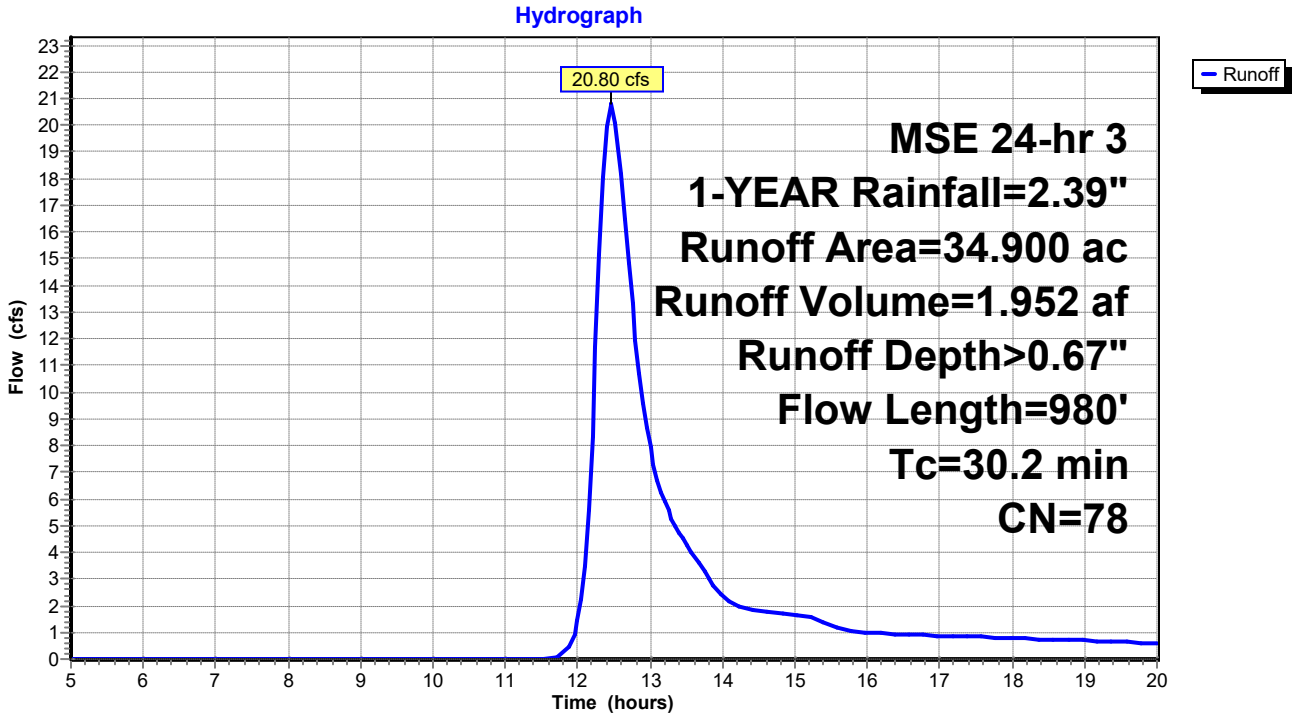
Runoff = 20.80 cfs @ 12.47 hrs, Volume= 1.952 af, Depth> 0.67"
Routed to Link EXIST : EXISTING DISCHARGE

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 1-YEAR Rainfall=2.39"

	Area (ac)	CN	Description
*	34.900	78	PER VILLAGE CODE
	34.900		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.5	300	0.0167	0.20		**Sheet Flow, SHEET** Range n= 0.130 P2= 2.72"
5.7	680	0.0176	1.99		**Shallow Concentrated Flow, SHALLOW** Grassed Waterway Kv= 15.0 fps
30.2	980	Total			

Subcatchment EX-ON: EX ONSITE AREA



Summary for Subcatchment OFF: OFFSITE AREA

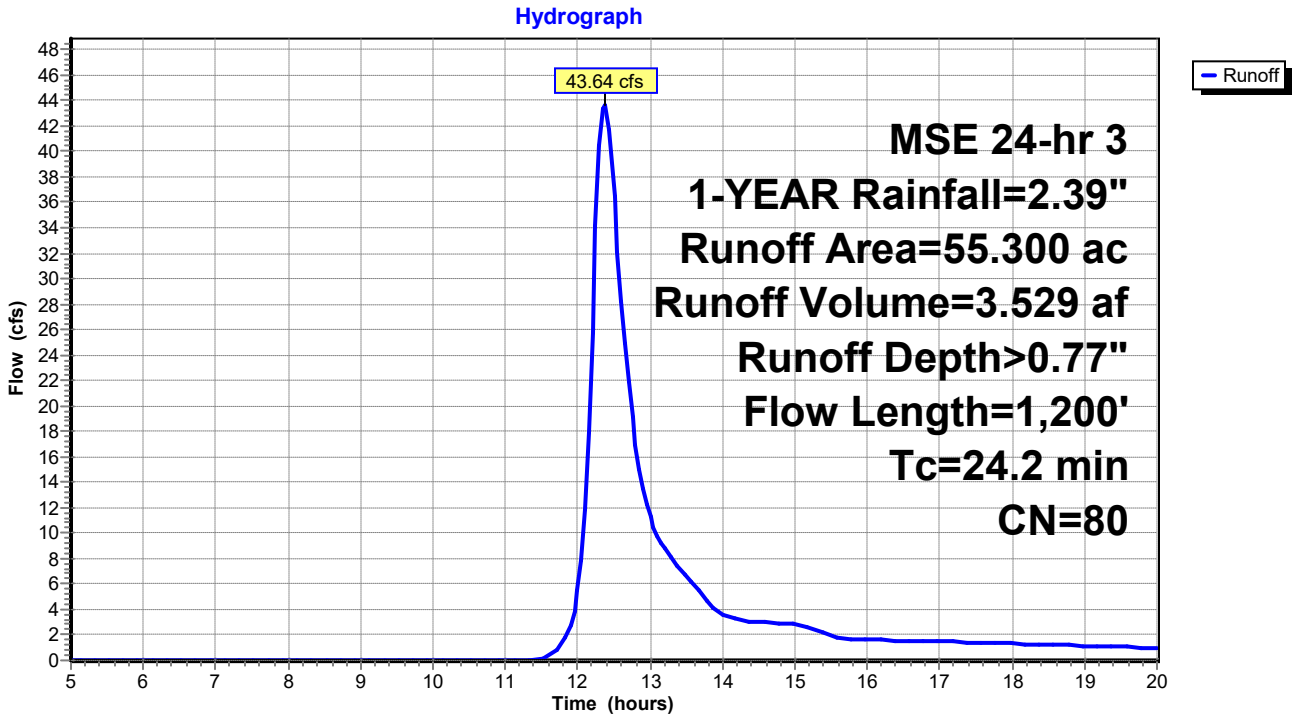
Runoff = 43.64 cfs @ 12.37 hrs, Volume= 3.529 af, Depth> 0.77"
Routed to Link EXIST : EXISTING DISCHARGE

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 1-YEAR Rainfall=2.39"

	Area (ac)	CN	Description
*	48.600	78	PER VILLAGE CODE
*	6.700	98	EX ROAD
	55.300	80	Weighted Average
	48.600		87.88% Pervious Area
	6.700		12.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.7	300	0.0330	0.27		**Sheet Flow, sheet** Range n= 0.130 P2= 2.72"
5.5	900	0.0333	2.74		**Shallow Concentrated Flow, SHALLOW** Grassed Waterway Kv= 15.0 fps
24.2	1,200	Total			

Subcatchment OFF: OFFSITE AREA

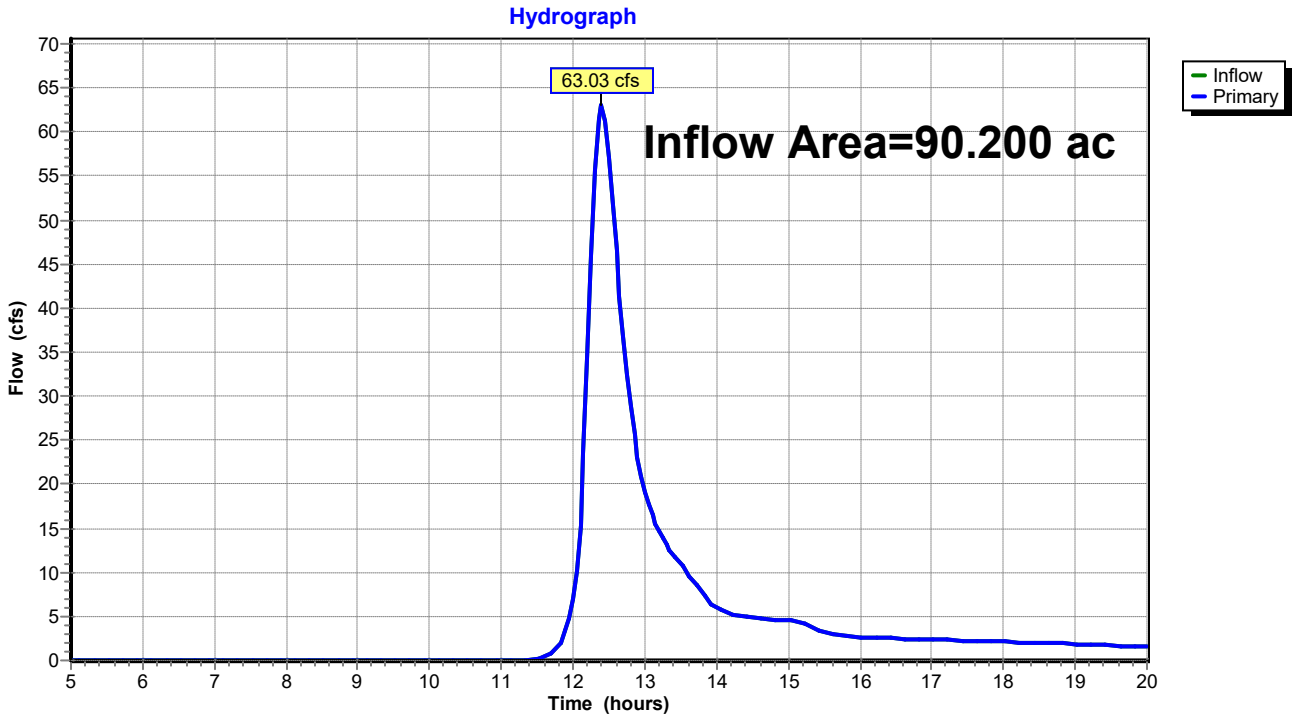


Summary for Link EXIST: EXISTING DISCHARGE

Inflow Area = 90.200 ac, 7.43% Impervious, Inflow Depth > 0.73" for 1-YEAR event
Inflow = 63.03 cfs @ 12.40 hrs, Volume= 5.481 af
Primary = 63.03 cfs @ 12.40 hrs, Volume= 5.481 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link EXIST: EXISTING DISCHARGE



Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment EX-ON: EX ONSITE AREA Runoff Area=34.900 ac 0.00% Impervious Runoff Depth>0.88"
Flow Length=980' Tc=30.2 min CN=78 Runoff=27.78 cfs 2.552 af

Subcatchment OFF: OFFSITE AREA Runoff Area=55.300 ac 12.12% Impervious Runoff Depth>0.99"
Flow Length=1,200' Tc=24.2 min CN=80 Runoff=57.00 cfs 4.544 af

Link EXIST: EXISTING DISCHARGE Inflow=83.00 cfs 7.096 af
Primary=83.00 cfs 7.096 af

Total Runoff Area = 90.200 ac Runoff Volume = 7.096 af Average Runoff Depth = 0.94"
92.57% Pervious = 83.500 ac 7.43% Impervious = 6.700 ac

Summary for Subcatchment EX-ON: EX ONSITE AREA

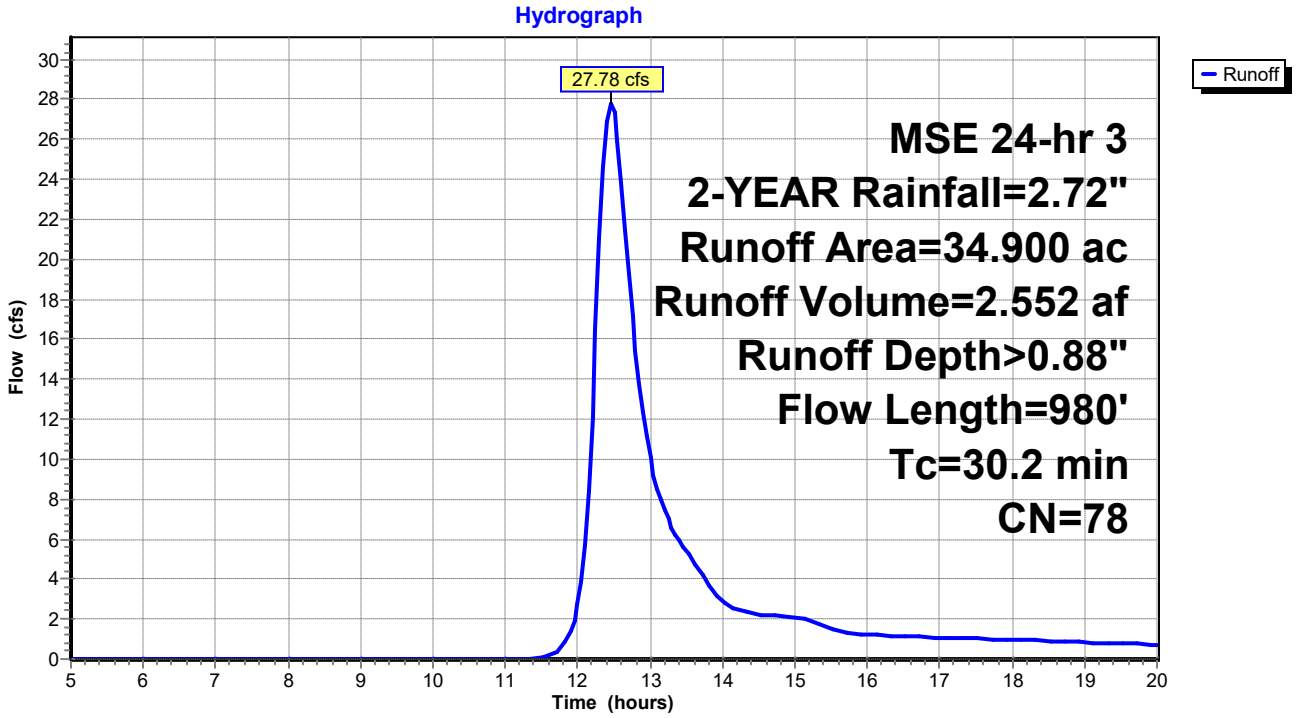
Runoff = 27.78 cfs @ 12.46 hrs, Volume= 2.552 af, Depth> 0.88"
Routed to Link EXIST : EXISTING DISCHARGE

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-YEAR Rainfall=2.72"

	Area (ac)	CN	Description
*	34.900	78	PER VILLAGE CODE
	34.900		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.5	300	0.0167	0.20		**Sheet Flow, SHEET** Range n= 0.130 P2= 2.72"
5.7	680	0.0176	1.99		**Shallow Concentrated Flow, SHALLOW** Grassed Waterway Kv= 15.0 fps
30.2	980	Total			

Subcatchment EX-ON: EX ONSITE AREA



Summary for Subcatchment OFF: OFFSITE AREA

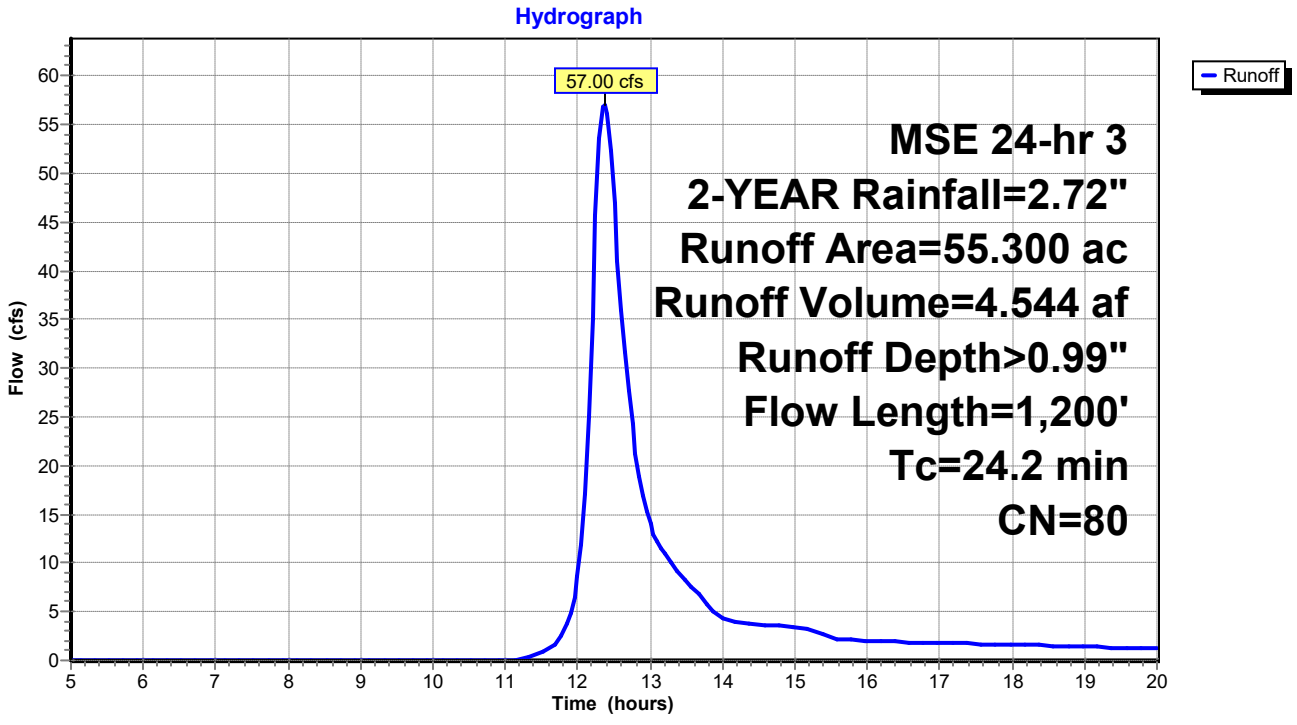
Runoff = 57.00 cfs @ 12.37 hrs, Volume= 4.544 af, Depth> 0.99"
Routed to Link EXIST : EXISTING DISCHARGE

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-YEAR Rainfall=2.72"

	Area (ac)	CN	Description
*	48.600	78	PER VILLAGE CODE
*	6.700	98	EX ROAD
	55.300	80	Weighted Average
	48.600		87.88% Pervious Area
	6.700		12.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.7	300	0.0330	0.27		**Sheet Flow, sheet** Range n= 0.130 P2= 2.72"
5.5	900	0.0333	2.74		**Shallow Concentrated Flow, SHALLOW** Grassed Waterway Kv= 15.0 fps
24.2	1,200	Total			

Subcatchment OFF: OFFSITE AREA

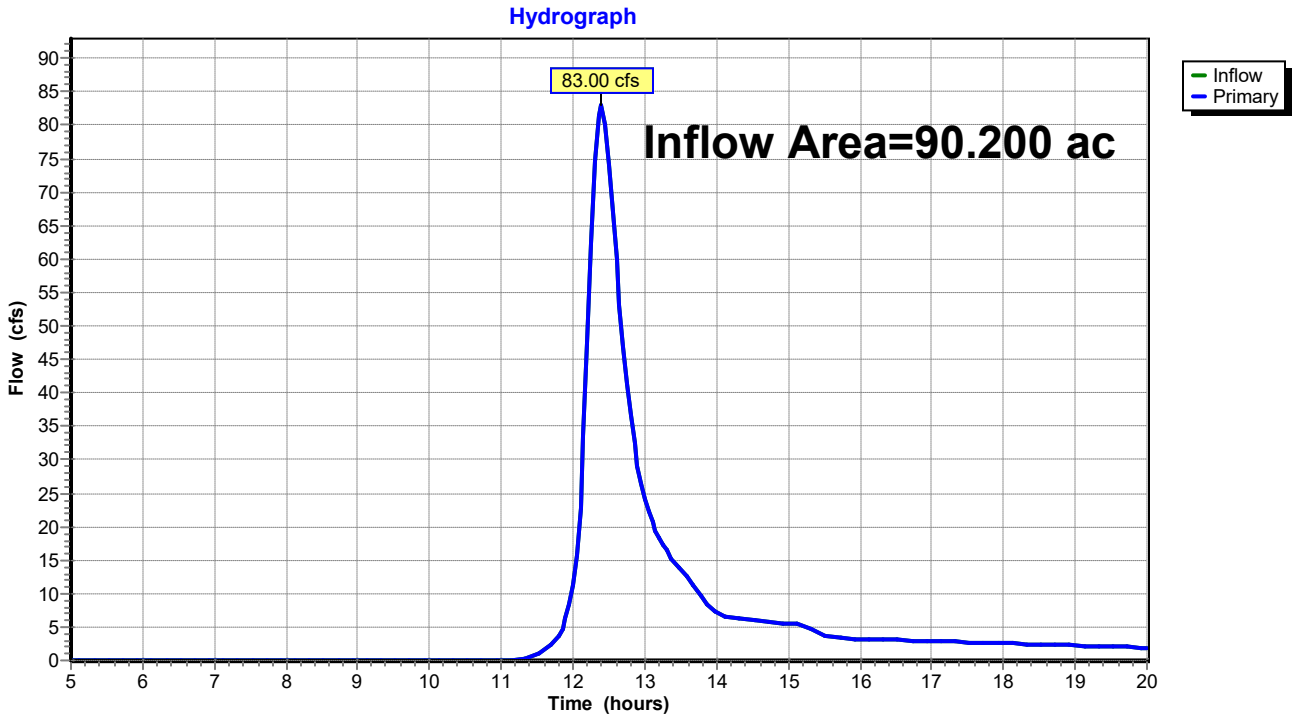


Summary for Link EXIST: EXISTING DISCHARGE

Inflow Area = 90.200 ac, 7.43% Impervious, Inflow Depth > 0.94" for 2-YEAR event
Inflow = 83.00 cfs @ 12.39 hrs, Volume= 7.096 af
Primary = 83.00 cfs @ 12.39 hrs, Volume= 7.096 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link EXIST: EXISTING DISCHARGE



Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment EX-ON: EX ONSITE AREA Runoff Area=34.900 ac 0.00% Impervious Runoff Depth>1.66"
Flow Length=980' Tc=30.2 min CN=78 Runoff=53.95 cfs 4.827 af

Subcatchment OFF: OFFSITE AREA Runoff Area=55.300 ac 12.12% Impervious Runoff Depth>1.81"
Flow Length=1,200' Tc=24.2 min CN=80 Runoff=106.16 cfs 8.337 af

Link EXIST: EXISTING DISCHARGE Inflow=157.03 cfs 13.164 af
Primary=157.03 cfs 13.164 af

Total Runoff Area = 90.200 ac Runoff Volume = 13.164 af Average Runoff Depth = 1.75"
92.57% Pervious = 83.500 ac 7.43% Impervious = 6.700 ac

Summary for Subcatchment EX-ON: EX ONSITE AREA

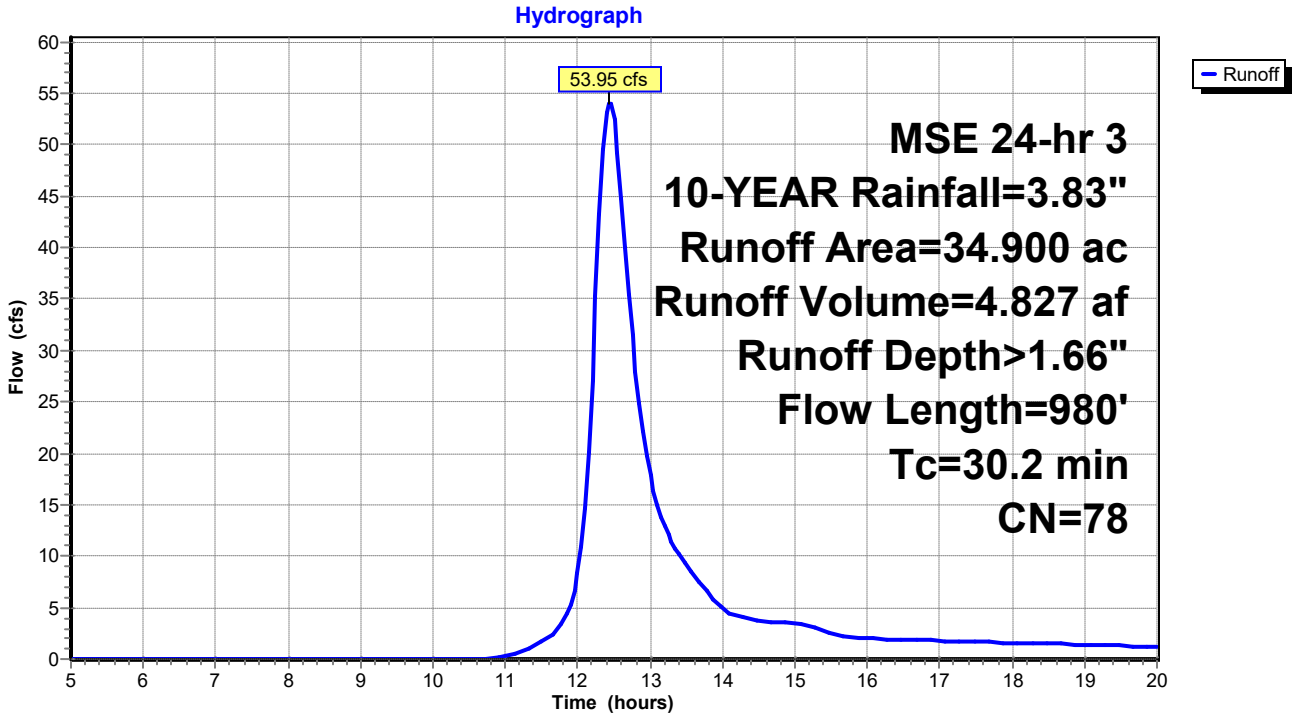
Runoff = 53.95 cfs @ 12.44 hrs, Volume= 4.827 af, Depth> 1.66"
Routed to Link EXIST : EXISTING DISCHARGE

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-YEAR Rainfall=3.83"

	Area (ac)	CN	Description
*	34.900	78	PER VILLAGE CODE
	34.900		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.5	300	0.0167	0.20		**Sheet Flow, SHEET** Range n= 0.130 P2= 2.72"
5.7	680	0.0176	1.99		**Shallow Concentrated Flow, SHALLOW** Grassed Waterway Kv= 15.0 fps
30.2	980	Total			

Subcatchment EX-ON: EX ONSITE AREA



Summary for Subcatchment OFF: OFFSITE AREA

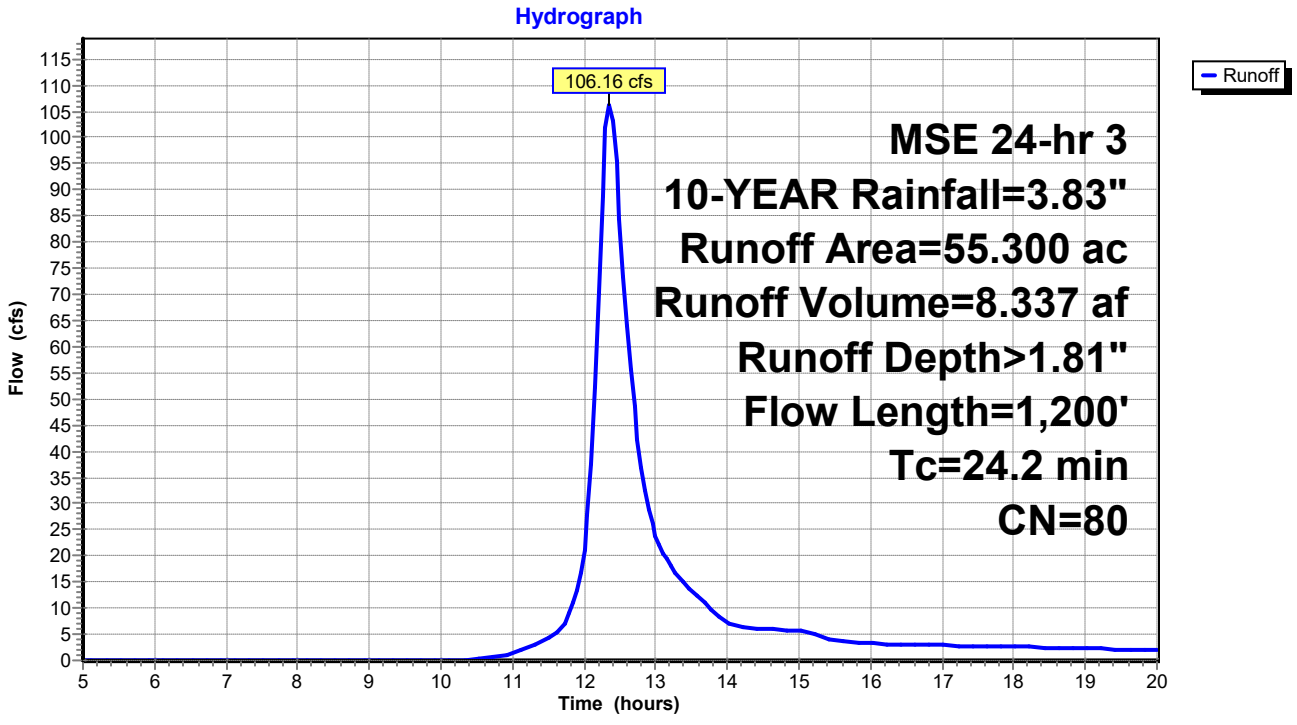
Runoff = 106.16 cfs @ 12.36 hrs, Volume= 8.337 af, Depth> 1.81"
Routed to Link EXIST : EXISTING DISCHARGE

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-YEAR Rainfall=3.83"

	Area (ac)	CN	Description
*	48.600	78	PER VILLAGE CODE
*	6.700	98	EX ROAD
	55.300	80	Weighted Average
	48.600		87.88% Pervious Area
	6.700		12.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.7	300	0.0330	0.27		**Sheet Flow, sheet** Range n= 0.130 P2= 2.72"
5.5	900	0.0333	2.74		**Shallow Concentrated Flow, SHALLOW** Grassed Waterway Kv= 15.0 fps
24.2	1,200	Total			

Subcatchment OFF: OFFSITE AREA

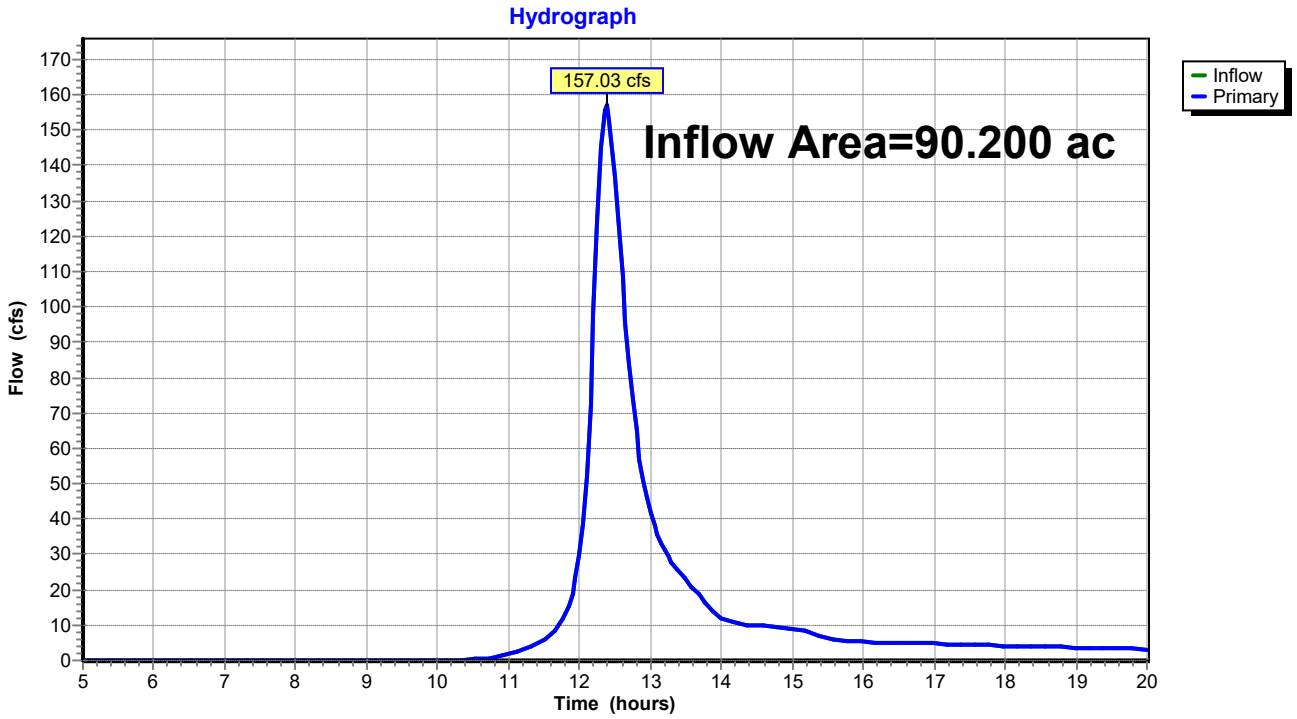


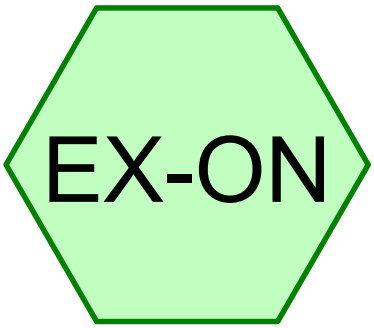
Summary for Link EXIST: EXISTING DISCHARGE

Inflow Area = 90.200 ac, 7.43% Impervious, Inflow Depth > 1.75" for 10-YEAR event
Inflow = 157.03 cfs @ 12.38 hrs, Volume= 13.164 af
Primary = 157.03 cfs @ 12.38 hrs, Volume= 13.164 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

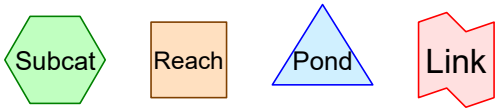
Link EXIST: EXISTING DISCHARGE





EX ONSITE AREA

OFFSITE AREA



Routing Diagram for 1617 WILLOW CREEK
Prepared by Pinnacle Engineering Group, Printed 3/26/2025

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment EX-ON: EX ONSITE AREA Runoff Area=34.900 ac 0.00% Impervious Runoff Depth>3.37"
Flow Length=980' Tc=30.2 min CN=78 Runoff=109.70 cfs 9.810 af

Subcatchment OFF: OFFSITE AREA Runoff Area=55.300 ac 12.12% Impervious Runoff Depth>3.58"
Flow Length=1,200' Tc=24.2 min CN=80 Runoff=208.44 cfs 16.481 af

Total Runoff Area = 90.200 ac Runoff Volume = 26.290 af Average Runoff Depth = 3.50"
92.57% Pervious = 83.500 ac 7.43% Impervious = 6.700 ac

Summary for Subcatchment EX-ON: EX ONSITE AREA

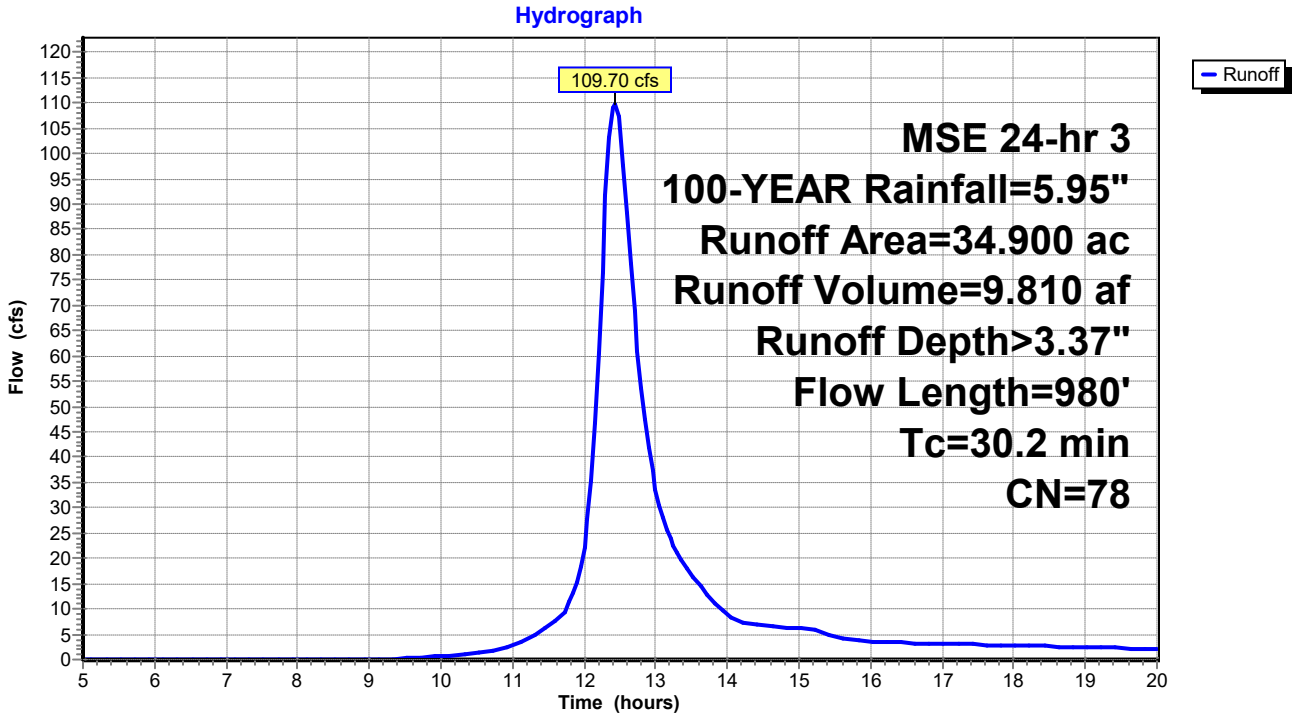
Runoff = 109.70 cfs @ 12.43 hrs, Volume= 9.810 af, Depth> 3.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-YEAR Rainfall=5.95"

	Area (ac)	CN	Description
*	34.900	78	PER VILLAGE CODE
	34.900		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.5	300	0.0167	0.20		**Sheet Flow, SHEET** Range n= 0.130 P2= 2.72"
5.7	680	0.0176	1.99		**Shallow Concentrated Flow, SHALLOW** Grassed Waterway Kv= 15.0 fps
30.2	980	Total			

Subcatchment EX-ON: EX ONSITE AREA



Summary for Subcatchment OFF: OFFSITE AREA

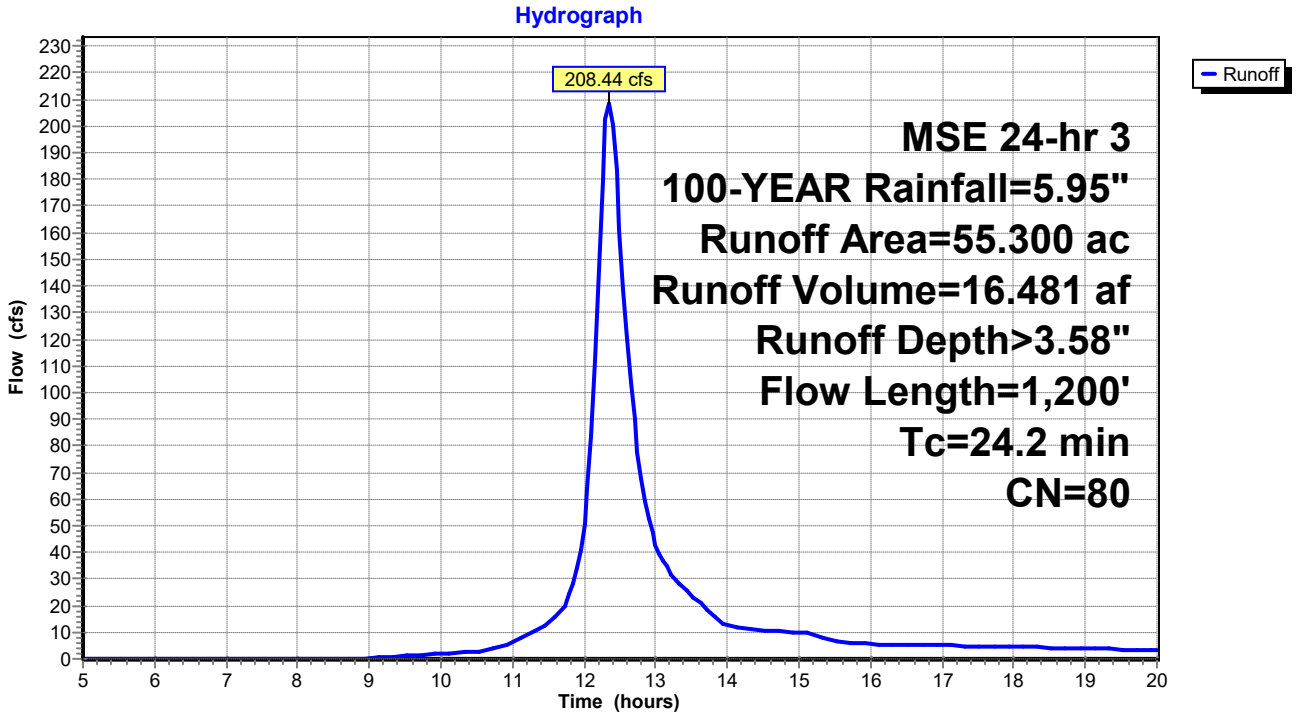
Runoff = 208.44 cfs @ 12.35 hrs, Volume= 16.481 af, Depth> 3.58"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-YEAR Rainfall=5.95"

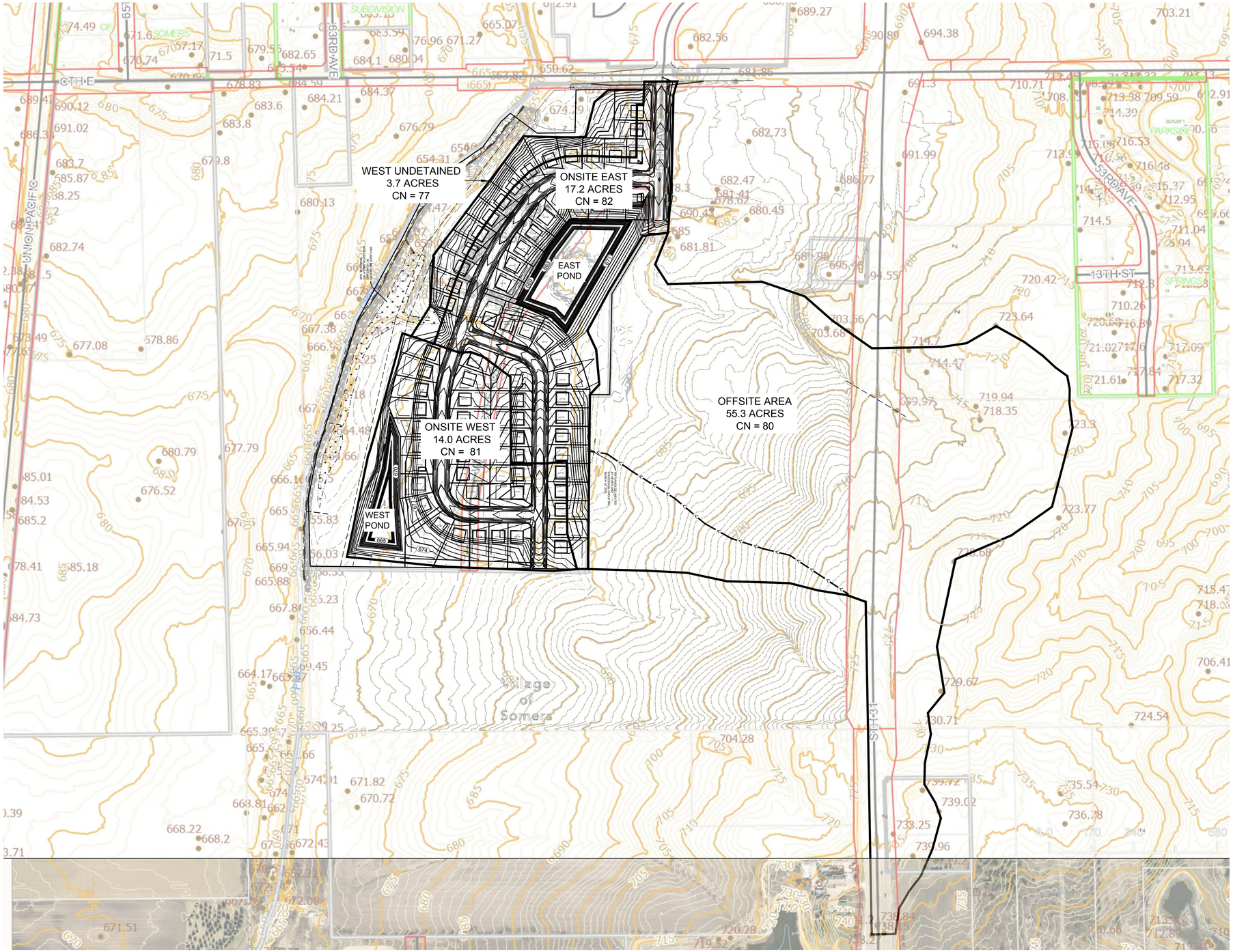
	Area (ac)	CN	Description
*	48.600	78	PER VILLAGE CODE
*	6.700	98	EX ROAD
	55.300	80	Weighted Average
	48.600		87.88% Pervious Area
	6.700		12.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.7	300	0.0330	0.27		**Sheet Flow, sheet** Range n= 0.130 P2= 2.72"
5.5	900	0.0333	2.74		**Shallow Concentrated Flow, SHALLOW** Grassed Waterway Kv= 15.0 fps
24.2	1,200	Total			

Subcatchment OFF: OFFSITE AREA



APPENDIX 3
POST DEVELOPMENT CONDITIONS RATE ATTENUATION



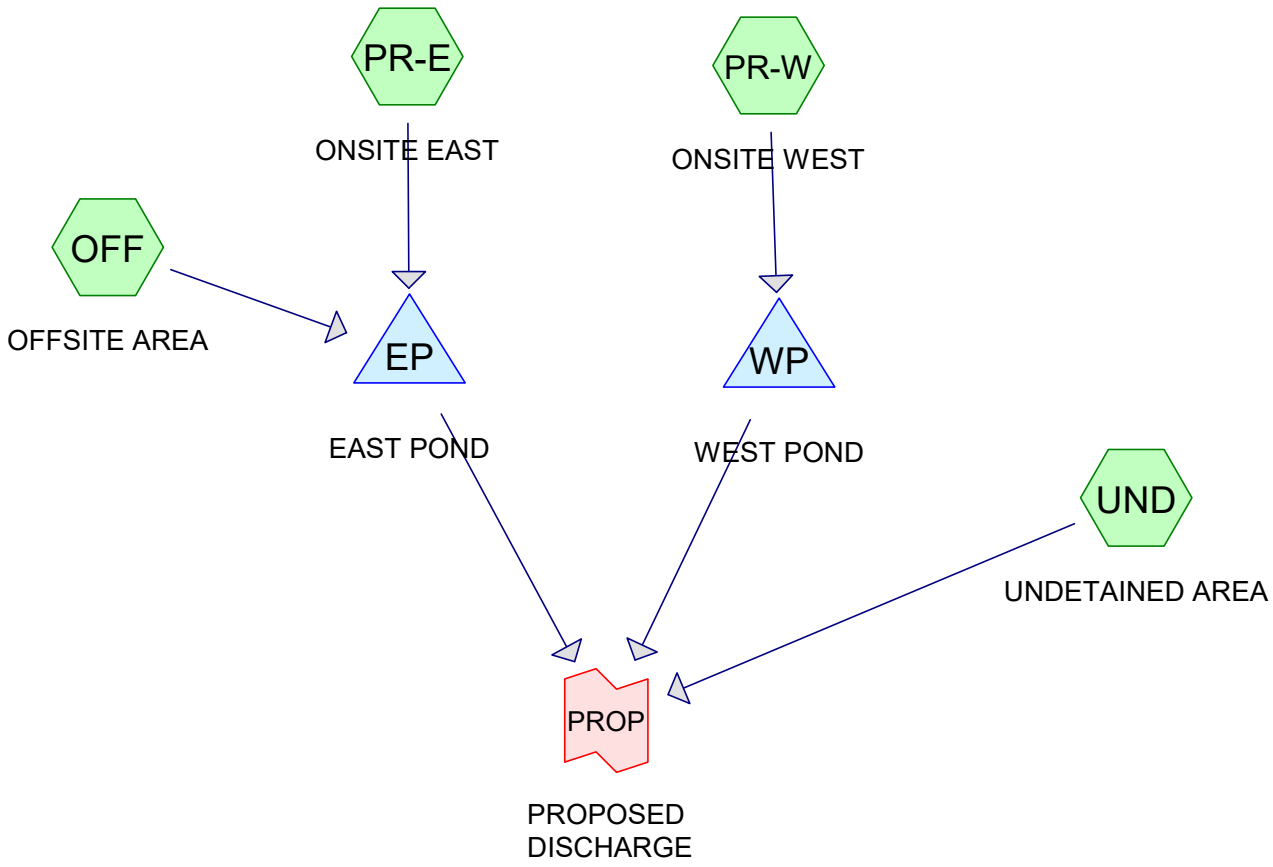
WILLOW CREEK HYDROLOGY EXHIBIT - POST-DEVELOPMENT

03/28/2025

PINNACLE ENGINEERING GROUP
20725 WATERTOWN ROAD | SUITE 100 | BROOKFIELD, WI 53186 | WWW.PINNACLE-ENGR.COM |

PLAN | DESIGN | DELIVER

PEGJOB# 1617.00



Subcat Reach Pond Link

Routing Diagram for 1617 WILLOW CREEK
Prepared by Pinnacle Engineering Group, Printed 3/26/2025
HydroCAD® 10.20-6a s/n 07894 © 2024 HydroCAD Software Solutions LLC

Rainfall Events Listing

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	1-YEAR	MSE 24-hr	3	Default	24.00	1	2.39	2
2	2-YEAR	MSE 24-hr	3	Default	24.00	1	2.72	2
3	10-YEAR	MSE 24-hr	3	Default	24.00	1	3.83	2
4	100-YEAR	MSE 24-hr	3	Default	24.00	1	5.95	2

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment OFF: OFFSITE AREA Runoff Area=55.300 ac 12.12% Impervious Runoff Depth>0.77"
Flow Length=1,200' Tc=24.2 min CN=80 Runoff=43.64 cfs 3.529 af

Subcatchment PR-E: ONSITE EAST Runoff Area=17.200 ac 32.56% Impervious Runoff Depth>0.87"
Tc=6.0 min CN=82 Runoff=28.30 cfs 1.250 af

Subcatchment PR-W: ONSITE WEST Runoff Area=14.000 ac 27.86% Impervious Runoff Depth>0.82"
Tc=6.0 min CN=81 Runoff=21.63 cfs 0.957 af

Subcatchment UND: UNDETAINED AREA Runoff Area=3.700 ac 10.81% Impervious Runoff Depth>0.63"
Tc=6.0 min CN=77 Runoff=4.33 cfs 0.195 af

Pond EP: EAST POND Peak Elev=666.61' Storage=3.195 af Inflow=51.78 cfs 4.779 af
Outflow=3.72 cfs 2.259 af

Pond WP: WEST POND Peak Elev=668.91' Storage=0.682 af Inflow=21.63 cfs 0.957 af
Outflow=0.61 cfs 0.363 af

Link PROP: PROPOSED DISCHARGE Inflow=4.73 cfs 2.818 af
Primary=4.73 cfs 2.818 af

Total Runoff Area = 90.200 ac Runoff Volume = 5.932 af Average Runoff Depth = 0.79"
81.60% Pervious = 73.600 ac 18.40% Impervious = 16.600 ac

Summary for Subcatchment OFF: OFFSITE AREA

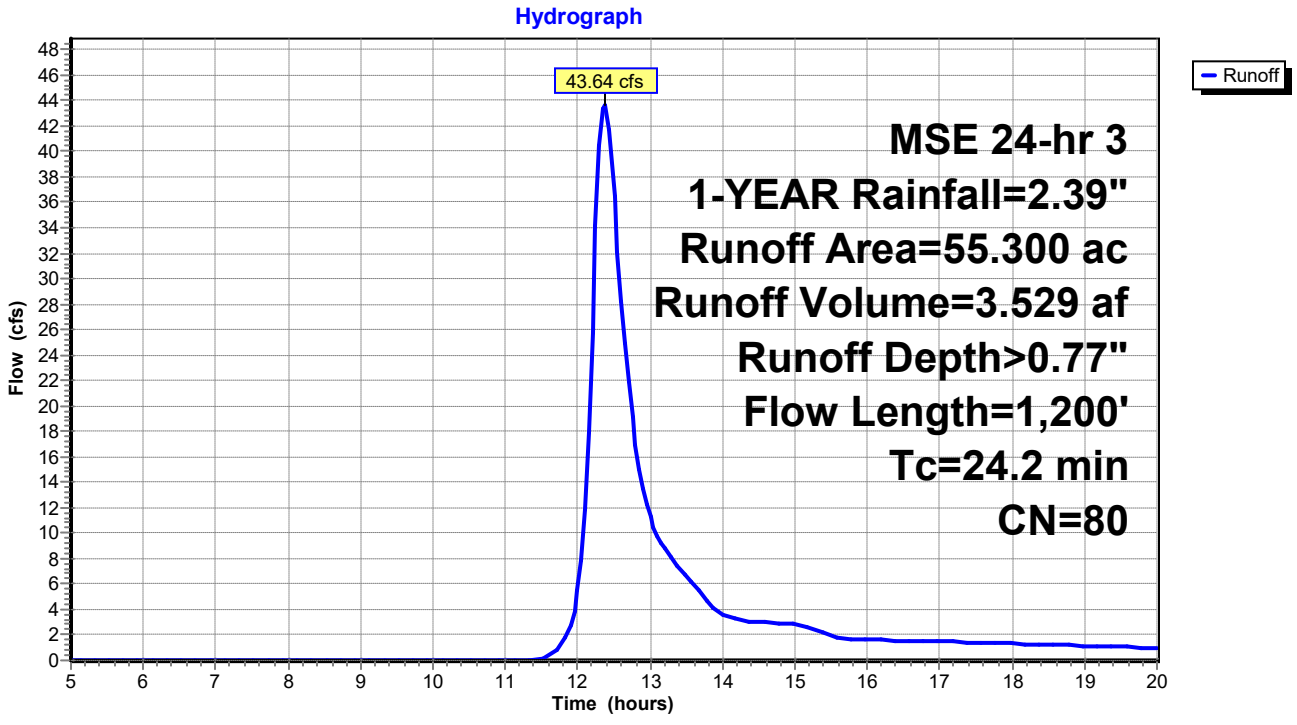
Runoff = 43.64 cfs @ 12.37 hrs, Volume= 3.529 af, Depth> 0.77"
Routed to Pond EP : EAST POND

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 1-YEAR Rainfall=2.39"

	Area (ac)	CN	Description
*	48.600	78	PER VILLAGE CODE
*	6.700	98	EX ROAD
	55.300	80	Weighted Average
	48.600		87.88% Pervious Area
	6.700		12.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.7	300	0.0330	0.27		**Sheet Flow, sheet** Range n= 0.130 P2= 2.72"
5.5	900	0.0333	2.74		**Shallow Concentrated Flow, SHALLOW** Grassed Waterway Kv= 15.0 fps
24.2	1,200	Total			

Subcatchment OFF: OFFSITE AREA



Summary for Subcatchment PR-E: ONSITE EAST

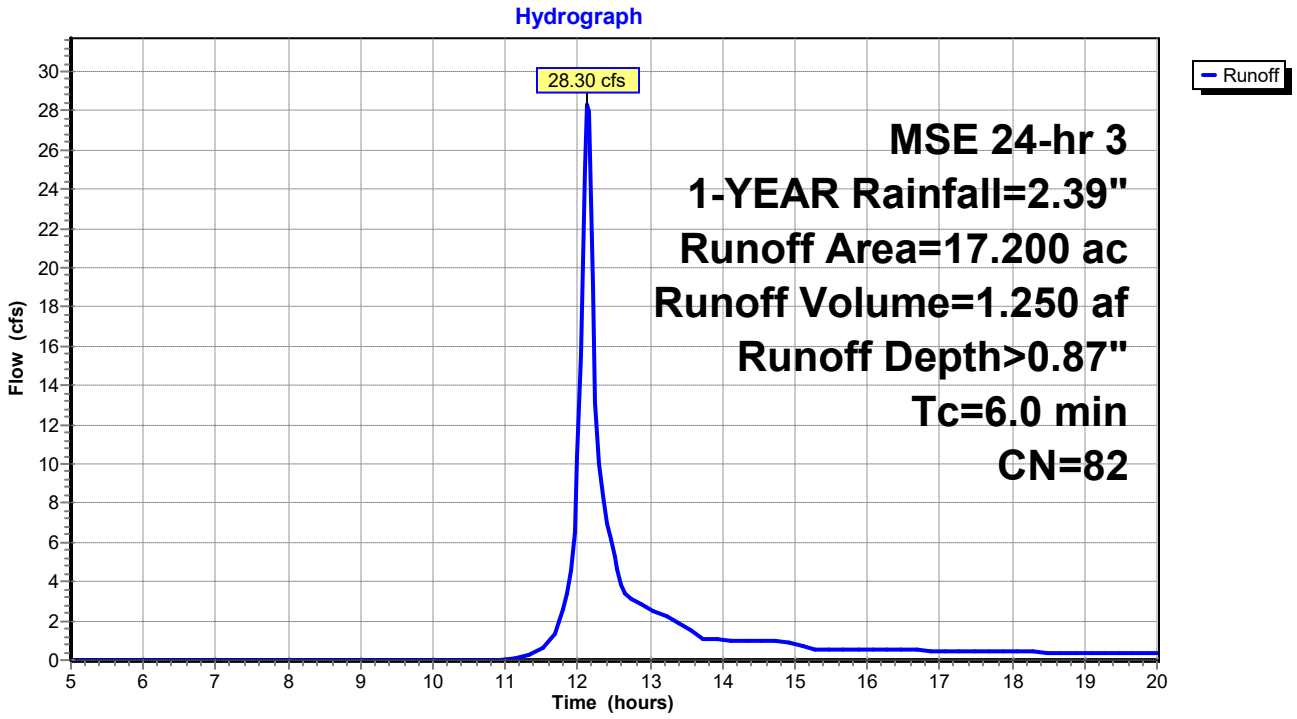
Runoff = 28.30 cfs @ 12.14 hrs, Volume= 1.250 af, Depth> 0.87"
Routed to Pond EP : EAST POND

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 1-YEAR Rainfall=2.39"

	Area (ac)	CN	Description
*	11.600	74	GRASS
*	2.800	98	PAVEMENT
*	0.900	98	DRIVEWAY
*	1.900	98	ROOF
	17.200	82	Weighted Average
	11.600		67.44% Pervious Area
	5.600		32.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, DIRECT**

Subcatchment PR-E: ONSITE EAST



Summary for Subcatchment PR-W: ONSITE WEST

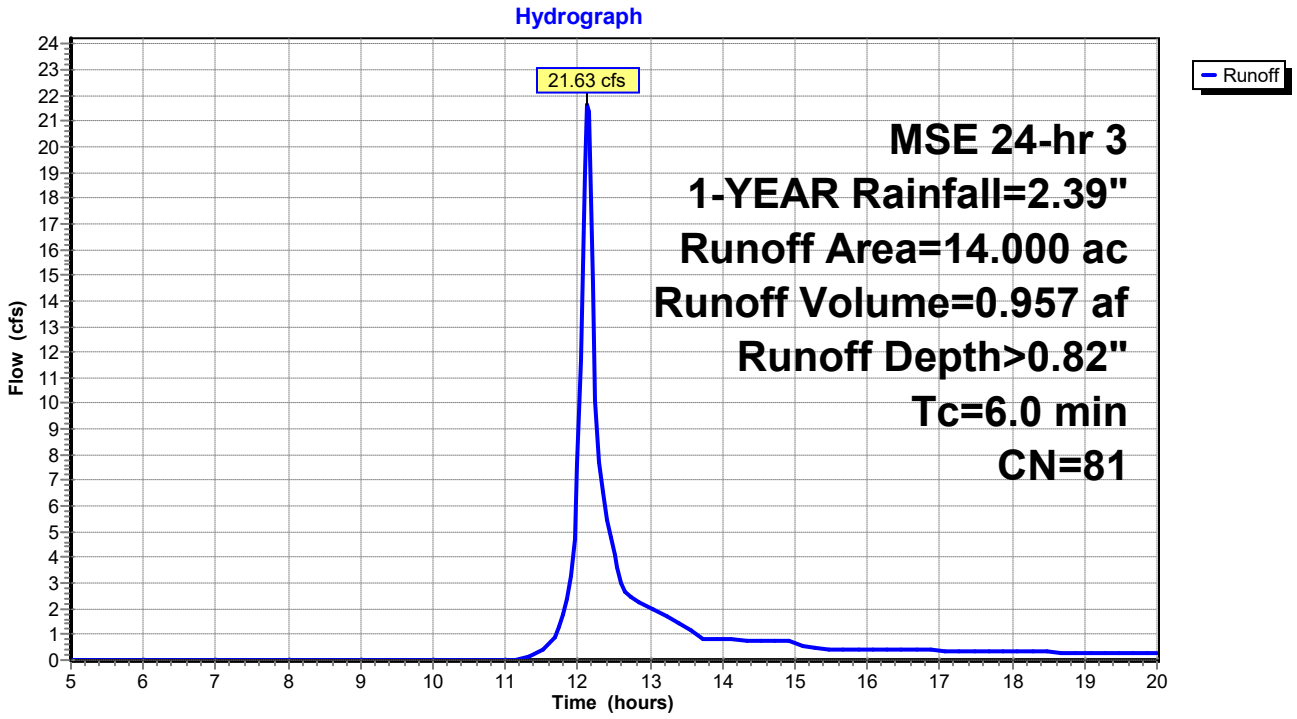
Runoff = 21.63 cfs @ 12.14 hrs, Volume= 0.957 af, Depth> 0.82"
Routed to Pond WP : WEST POND

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 1-YEAR Rainfall=2.39"

	Area (ac)	CN	Description
	10.100	74	>75% Grass cover, Good, HSG C
*	1.500	98	PAVEMENT
*	0.700	98	DRIVEWAY
*	1.700	98	ROOF
	14.000	81	Weighted Average
	10.100		72.14% Pervious Area
	3.900		27.86% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, DIRECT**

Subcatchment PR-W: ONSITE WEST



Summary for Subcatchment UND: UNDETAINED AREA

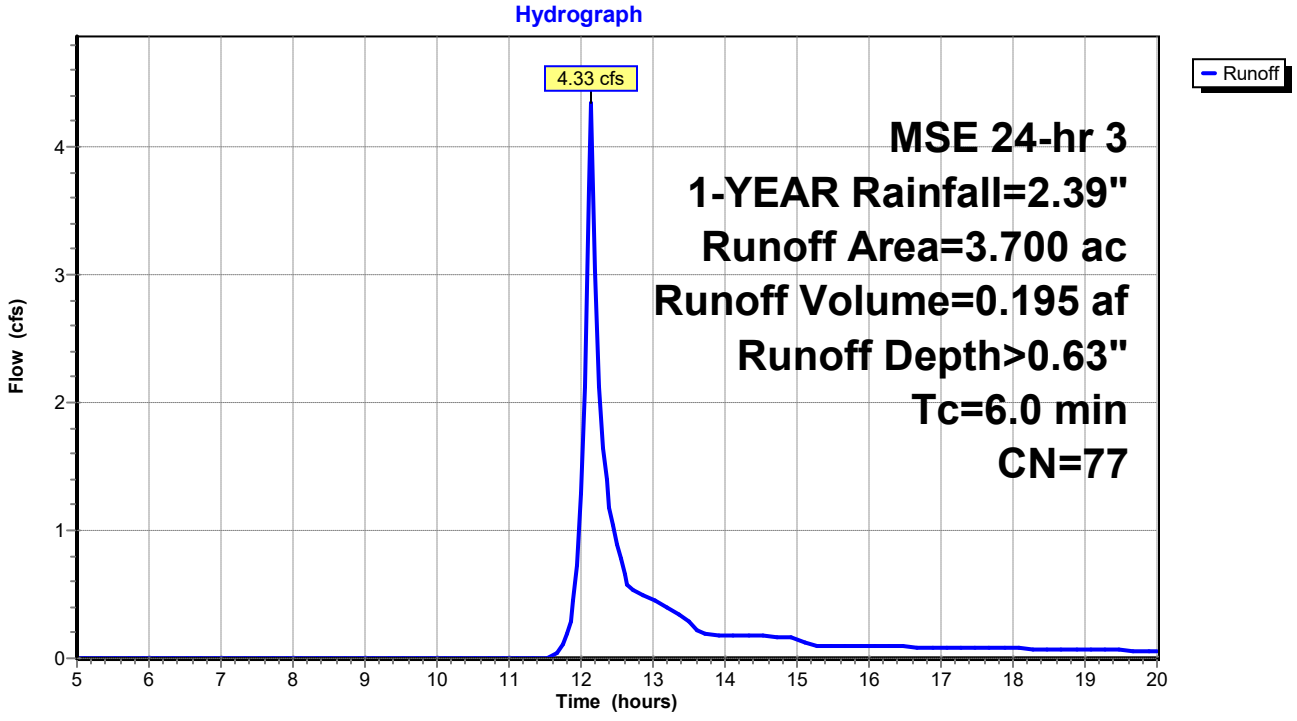
Runoff = 4.33 cfs @ 12.14 hrs, Volume= 0.195 af, Depth> 0.63"
Routed to Link PROP : PROPOSED DISCHARGE

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 1-YEAR Rainfall=2.39"

	Area (ac)	CN	Description
	3.300	74	>75% Grass cover, Good, HSG C
*	0.400	98	ROOF
	3.700	77	Weighted Average
	3.300		89.19% Pervious Area
	0.400		10.81% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, DIRECT**

Subcatchment UND: UNDETAINED AREA



Summary for Pond EP: EAST POND

Inflow Area = 72.500 ac, 16.97% Impervious, Inflow Depth > 0.79" for 1-YEAR event
Inflow = 51.78 cfs @ 12.35 hrs, Volume= 4.779 af
Outflow = 3.72 cfs @ 15.03 hrs, Volume= 2.259 af, Atten= 93%, Lag= 160.9 min
Primary = 3.72 cfs @ 15.03 hrs, Volume= 2.259 af
Routed to Link PROP : PROPOSED DISCHARGE

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 666.61' @ 15.03 hrs Surf.Area= 2.061 ac Storage= 3.195 af

Plug-Flow detention time= 233.1 min calculated for 2.259 af (47% of inflow)
Center-of-Mass det. time= 160.4 min (969.6 - 809.2)

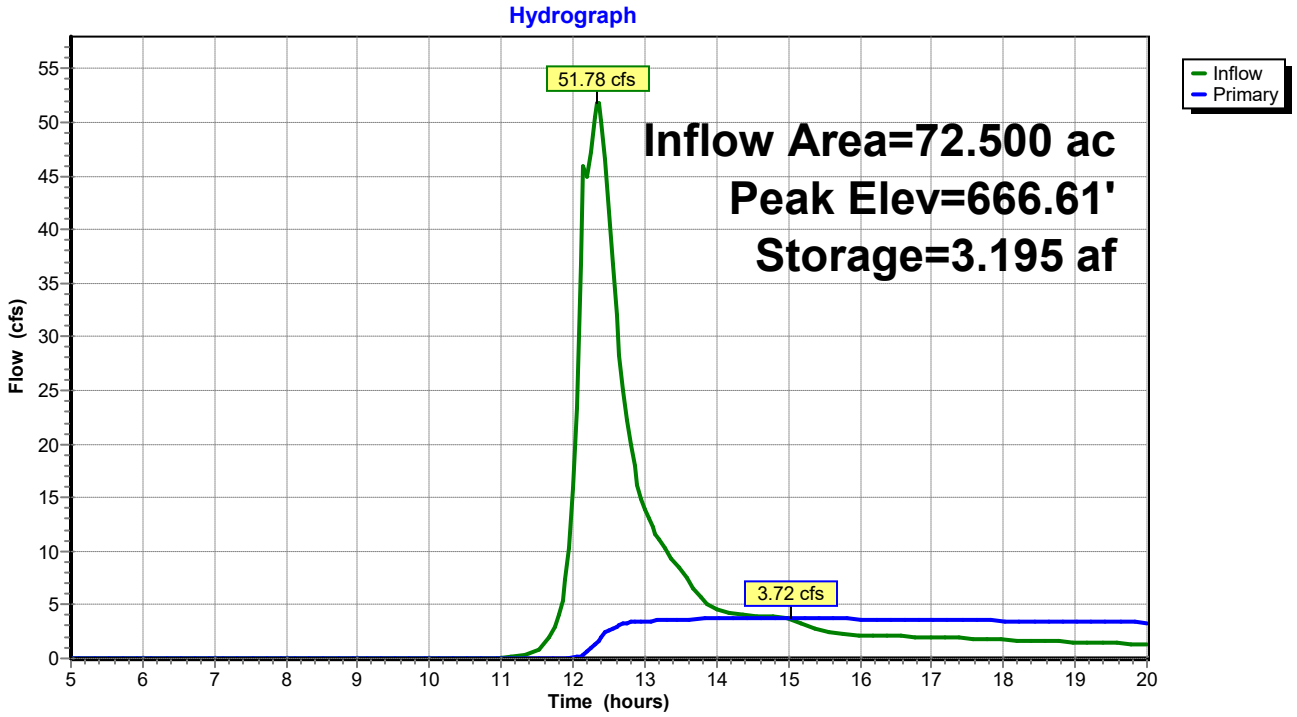
Volume	Invert	Avail.Storage	Storage Description
#1	665.00'	15.750 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
665.00	1.900	0.000	0.000
666.00	2.000	1.950	1.950
667.00	2.100	2.050	4.000
668.00	2.200	2.150	6.150
669.00	2.300	2.250	8.400
670.00	2.400	2.350	10.750
671.00	2.500	2.450	13.200
672.00	2.600	2.550	15.750

Device	Routing	Invert	Outlet Devices
#1	Primary	665.00'	**12.0" Round Culvert** L= 100.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 665.00' / 664.00' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Primary	667.00'	**36.0" Round Culvert** L= 100.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 667.00' / 664.00' S= 0.0300 '/' Cc= 0.900 n= 0.013, Flow Area= 7.07 sf

Primary OutFlow Max=3.72 cfs @ 15.03 hrs HW=666.61' (Free Discharge)
1=Culvert (Barrel Controls 3.72 cfs @ 4.73 fps)
2=Culvert (Controls 0.00 cfs)

Pond EP: EAST POND



Summary for Pond WP: WEST POND

Inflow Area = 14.000 ac, 27.86% Impervious, Inflow Depth > 0.82" for 1-YEAR event
Inflow = 21.63 cfs @ 12.14 hrs, Volume= 0.957 af
Outflow = 0.61 cfs @ 15.08 hrs, Volume= 0.363 af, Atten= 97%, Lag= 176.3 min
Primary = 0.61 cfs @ 15.08 hrs, Volume= 0.363 af
Routed to Link PROP : PROPOSED DISCHARGE

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 668.91' @ 15.08 hrs Surf.Area= 0.791 ac Storage= 0.682 af

Plug-Flow detention time= 245.4 min calculated for 0.363 af (38% of inflow)
Center-of-Mass det. time= 171.0 min (968.6 - 797.6)

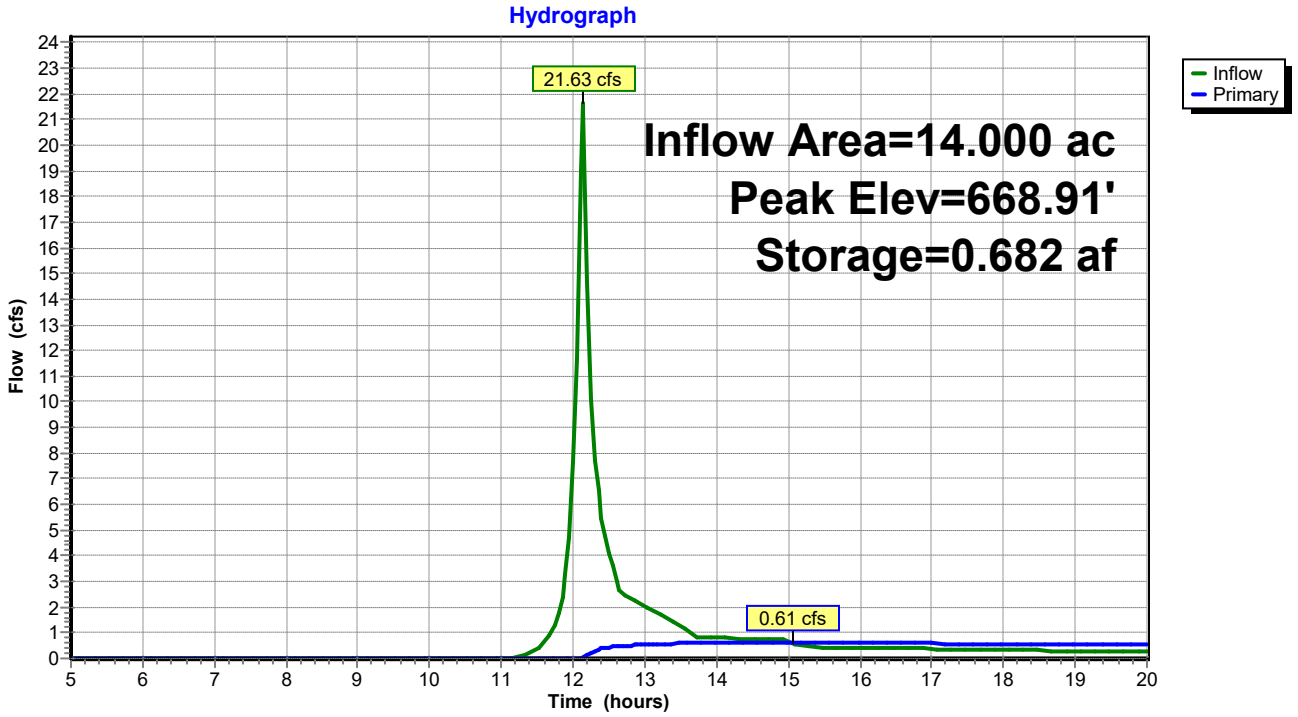
Volume	Invert	Avail.Storage	Storage Description
#1	668.00'	4.900 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
668.00	0.700	0.000	0.000
669.00	0.800	0.750	0.750
670.00	0.900	0.850	1.600
671.00	1.000	0.950	2.550
672.00	1.200	1.100	3.650
673.00	1.300	1.250	4.900

Device	Routing	Invert	Outlet Devices
#1	Primary	668.00'	**12.0" Round Culvert** L= 250.0' Ke= 0.500 Inlet / Outlet Invert= 668.00' / 660.00' S= 0.0320 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	668.25'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	671.00'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.61 cfs @ 15.08 hrs HW=668.91' (Free Discharge)
└**1=Culvert** (Passes 0.61 cfs of 2.45 cfs potential flow)
├**2=Orifice/Grate** (Orifice Controls 0.61 cfs @ 3.10 fps)
└**3=Orifice/Grate** (Controls 0.00 cfs)

Pond WP: WEST POND

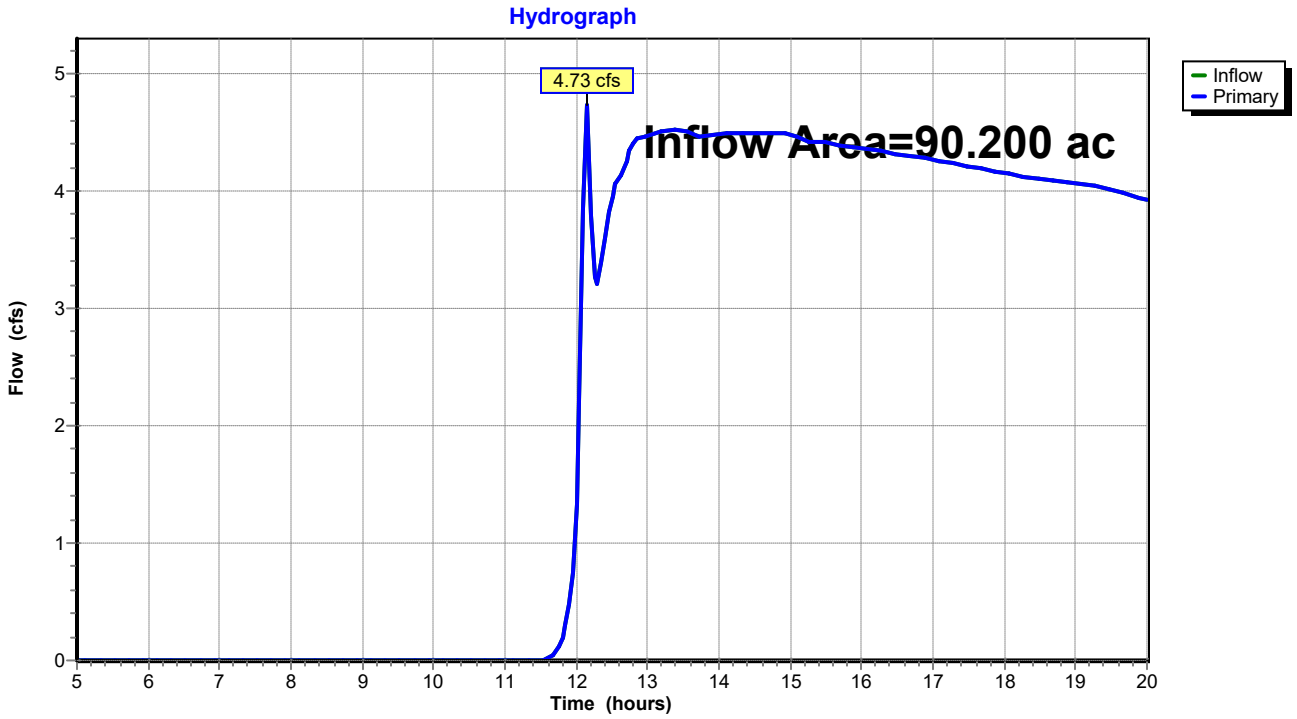


Summary for Link PROP: PROPOSED DISCHARGE

Inflow Area = 90.200 ac, 18.40% Impervious, Inflow Depth > 0.37" for 1-YEAR event
Inflow = 4.73 cfs @ 12.15 hrs, Volume= 2.818 af
Primary = 4.73 cfs @ 12.15 hrs, Volume= 2.818 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link PROP: PROPOSED DISCHARGE



Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment OFF: OFFSITE AREA Runoff Area=55.300 ac 12.12% Impervious Runoff Depth>0.99"
Flow Length=1,200' Tc=24.2 min CN=80 Runoff=57.00 cfs 4.544 af

Subcatchment PR-E: ONSITE EAST Runoff Area=17.200 ac 32.56% Impervious Runoff Depth>1.11"
Tc=6.0 min CN=82 Runoff=35.93 cfs 1.587 af

Subcatchment PR-W: ONSITE WEST Runoff Area=14.000 ac 27.86% Impervious Runoff Depth>1.05"
Tc=6.0 min CN=81 Runoff=27.70 cfs 1.223 af

Subcatchment UND: UNDETAINED AREA Runoff Area=3.700 ac 10.81% Impervious Runoff Depth>0.83"
Tc=6.0 min CN=77 Runoff=5.78 cfs 0.257 af

Pond EP: EAST POND Peak Elev=667.11' Storage=4.234 af Inflow=67.26 cfs 6.131 af
Outflow=4.35 cfs 2.633 af

Pond WP: WEST POND Peak Elev=669.16' Storage=0.877 af Inflow=27.70 cfs 1.223 af
Outflow=0.77 cfs 0.468 af

Link PROP: PROPOSED DISCHARGE Inflow=6.66 cfs 3.358 af
Primary=6.66 cfs 3.358 af

Total Runoff Area = 90.200 ac Runoff Volume = 7.612 af Average Runoff Depth = 1.01"
81.60% Pervious = 73.600 ac 18.40% Impervious = 16.600 ac

Summary for Subcatchment OFF: OFFSITE AREA

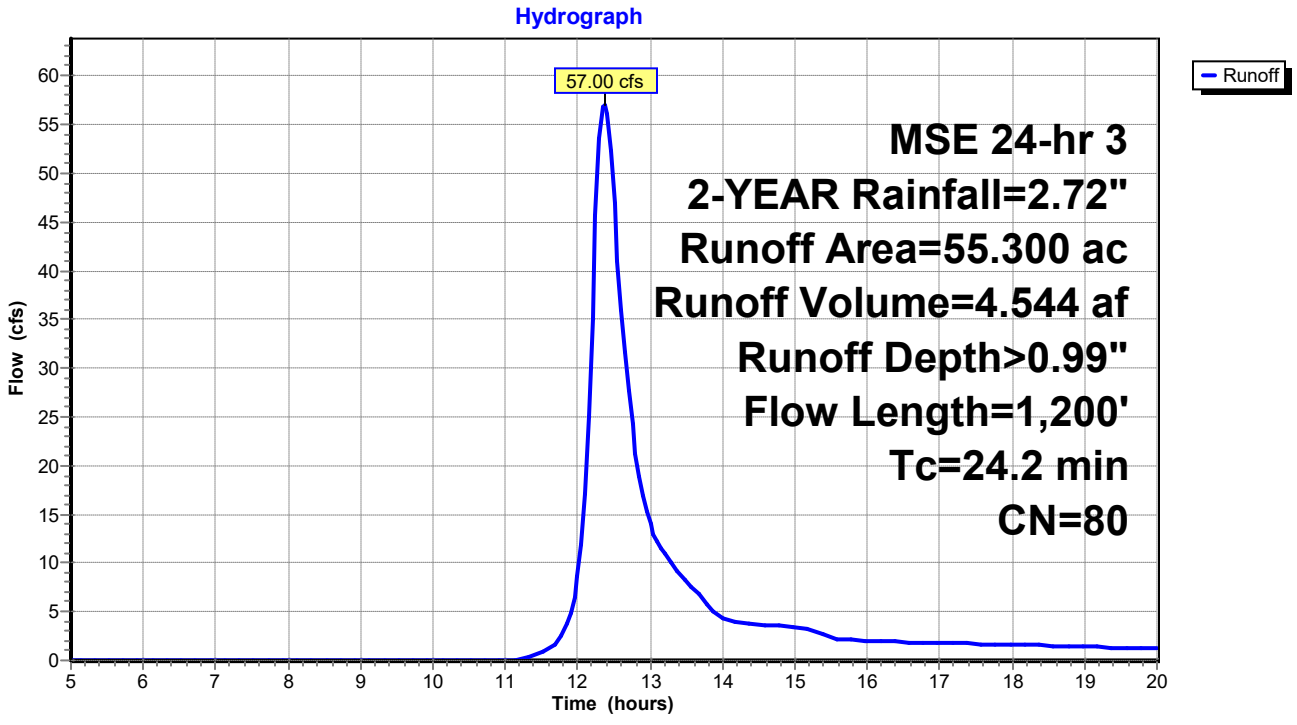
Runoff = 57.00 cfs @ 12.37 hrs, Volume= 4.544 af, Depth> 0.99"
Routed to Pond EP : EAST POND

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-YEAR Rainfall=2.72"

	Area (ac)	CN	Description
*	48.600	78	PER VILLAGE CODE
*	6.700	98	EX ROAD
	55.300	80	Weighted Average
	48.600		87.88% Pervious Area
	6.700		12.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.7	300	0.0330	0.27		**Sheet Flow, sheet** Range n= 0.130 P2= 2.72"
5.5	900	0.0333	2.74		**Shallow Concentrated Flow, SHALLOW** Grassed Waterway Kv= 15.0 fps
24.2	1,200	Total			

Subcatchment OFF: OFFSITE AREA



Summary for Subcatchment PR-E: ONSITE EAST

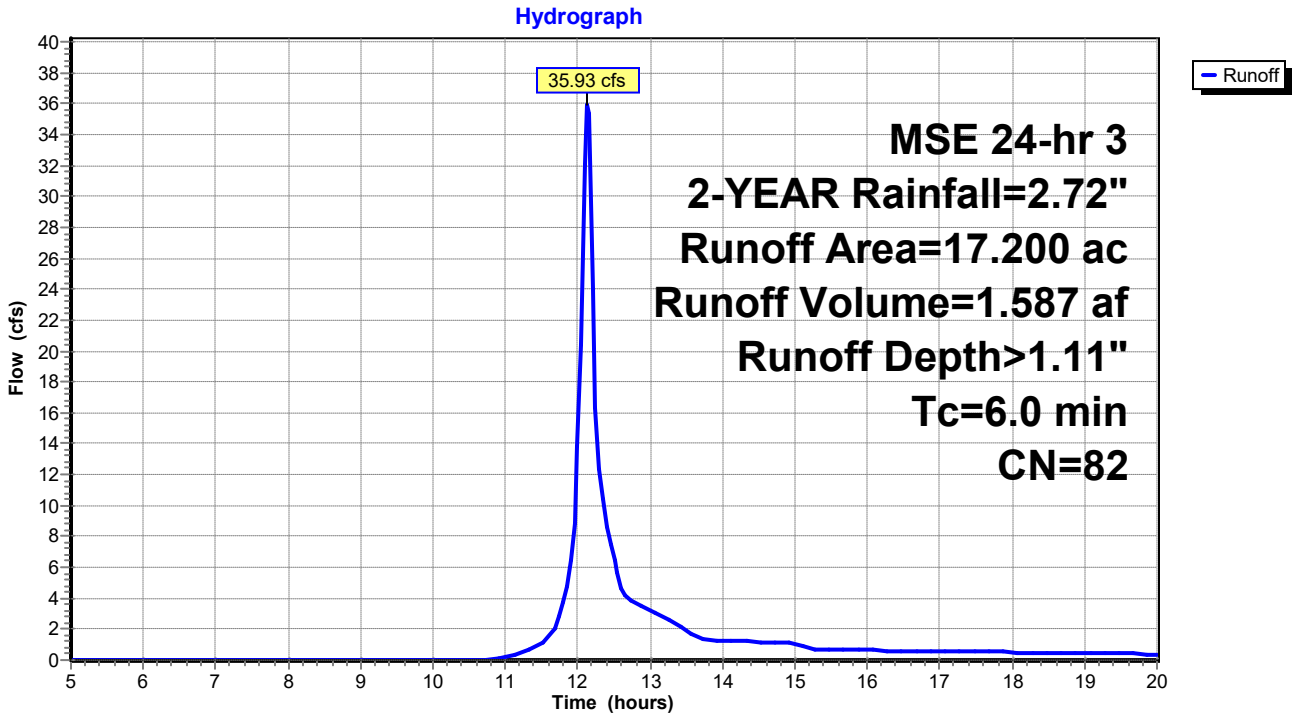
Runoff = 35.93 cfs @ 12.14 hrs, Volume= 1.587 af, Depth> 1.11"
Routed to Pond EP : EAST POND

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-YEAR Rainfall=2.72"

	Area (ac)	CN	Description
*	11.600	74	GRASS
*	2.800	98	PAVEMENT
*	0.900	98	DRIVEWAY
*	1.900	98	ROOF
	17.200	82	Weighted Average
	11.600		67.44% Pervious Area
	5.600		32.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, DIRECT**

Subcatchment PR-E: ONSITE EAST



Summary for Subcatchment PR-W: ONSITE WEST

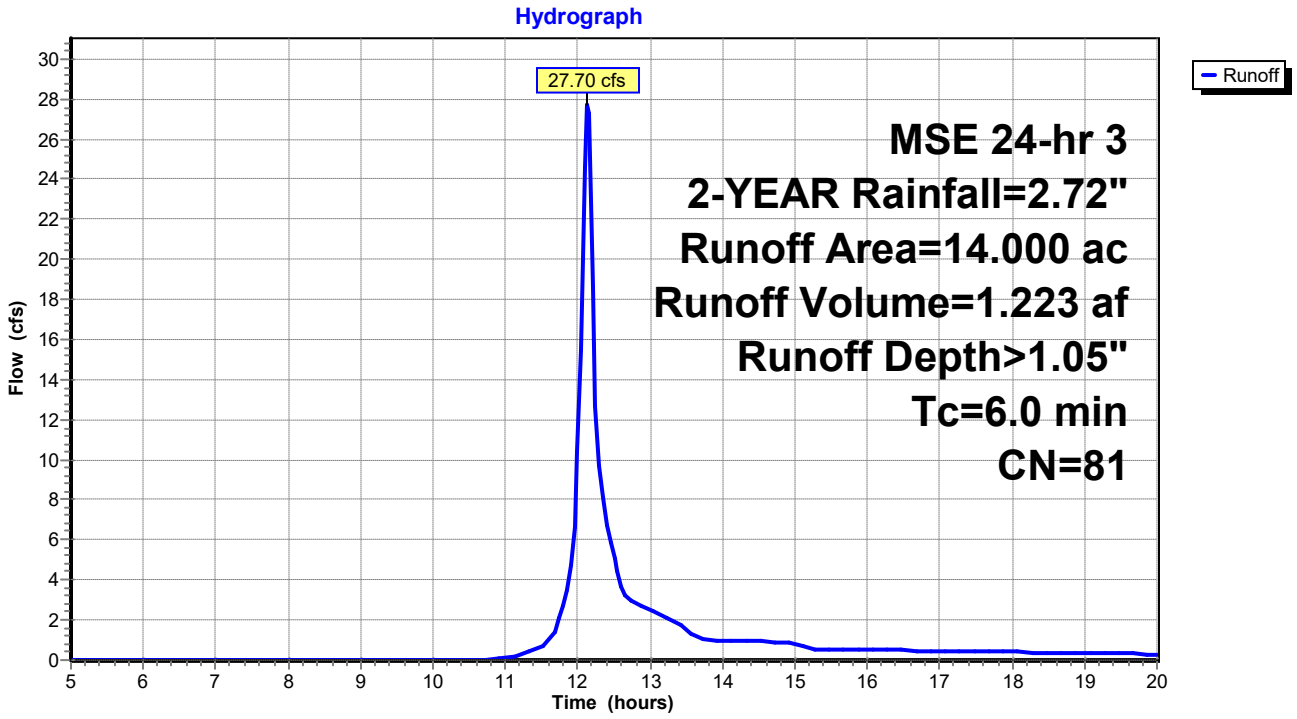
Runoff = 27.70 cfs @ 12.14 hrs, Volume= 1.223 af, Depth> 1.05"
Routed to Pond WP : WEST POND

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-YEAR Rainfall=2.72"

	Area (ac)	CN	Description
	10.100	74	>75% Grass cover, Good, HSG C
*	1.500	98	PAVEMENT
*	0.700	98	DRIVEWAY
*	1.700	98	ROOF
	14.000	81	Weighted Average
	10.100		72.14% Pervious Area
	3.900		27.86% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, DIRECT**

Subcatchment PR-W: ONSITE WEST



Summary for Subcatchment UND: UNDETAINED AREA

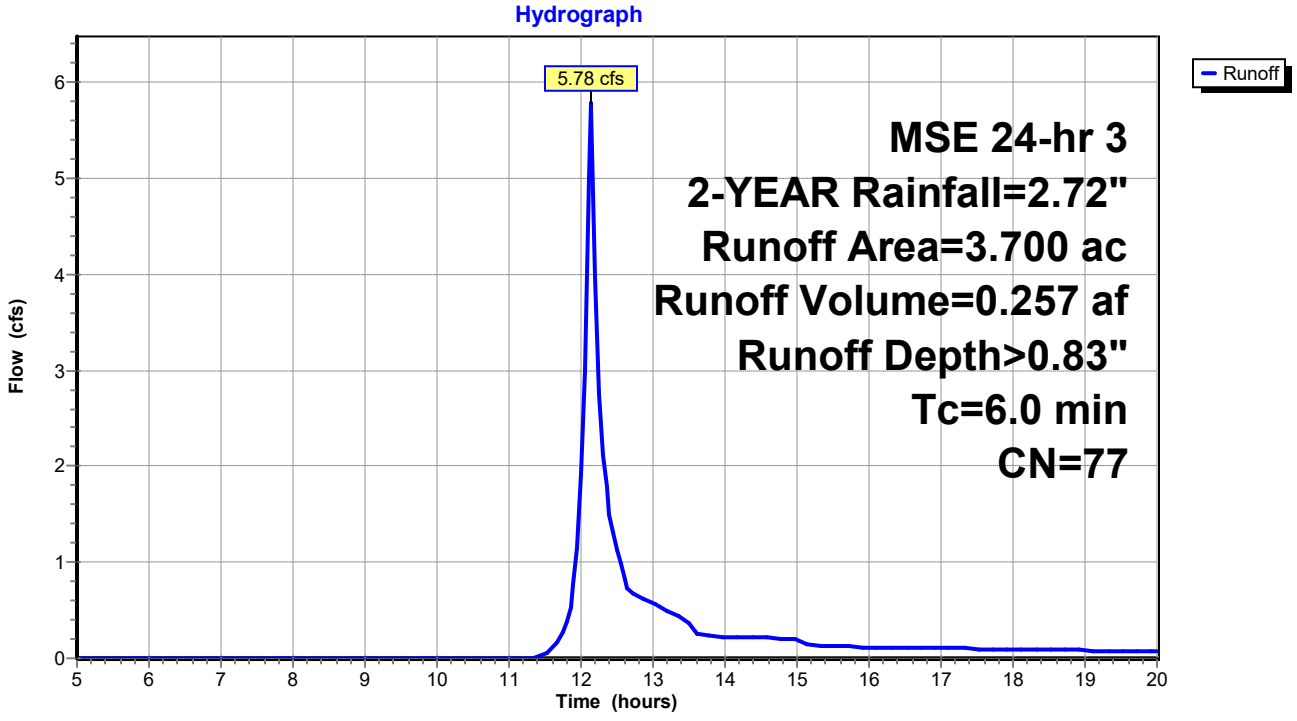
Runoff = 5.78 cfs @ 12.14 hrs, Volume= 0.257 af, Depth> 0.83"
Routed to Link PROP : PROPOSED DISCHARGE

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-YEAR Rainfall=2.72"

	Area (ac)	CN	Description
	3.300	74	>75% Grass cover, Good, HSG C
*	0.400	98	ROOF
	3.700	77	Weighted Average
	3.300		89.19% Pervious Area
	0.400		10.81% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, DIRECT**

Subcatchment UND: UNDETAINED AREA



Summary for Pond EP: EAST POND

Inflow Area = 72.500 ac, 16.97% Impervious, Inflow Depth > 1.01" for 2-YEAR event
Inflow = 67.26 cfs @ 12.34 hrs, Volume= 6.131 af
Outflow = 4.35 cfs @ 15.08 hrs, Volume= 2.633 af, Atten= 94%, Lag= 164.5 min
Primary = 4.35 cfs @ 15.08 hrs, Volume= 2.633 af
Routed to Link PROP : PROPOSED DISCHARGE

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 667.11' @ 15.08 hrs Surf.Area= 2.111 ac Storage= 4.234 af

Plug-Flow detention time= 234.5 min calculated for 2.625 af (43% of inflow)
Center-of-Mass det. time= 162.9 min (968.0 - 805.1)

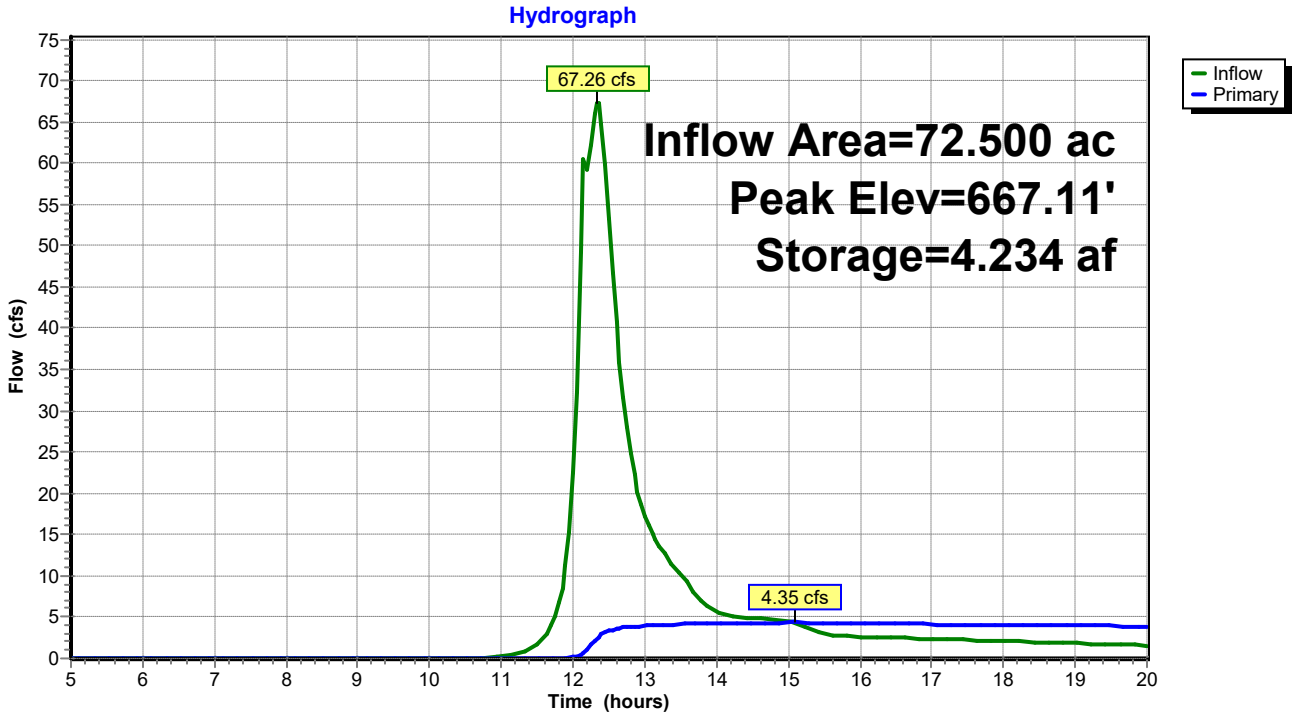
Volume	Invert	Avail.Storage	Storage Description
#1	665.00'	15.750 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
665.00	1.900	0.000	0.000
666.00	2.000	1.950	1.950
667.00	2.100	2.050	4.000
668.00	2.200	2.150	6.150
669.00	2.300	2.250	8.400
670.00	2.400	2.350	10.750
671.00	2.500	2.450	13.200
672.00	2.600	2.550	15.750

Device	Routing	Invert	Outlet Devices
#1	Primary	665.00'	**12.0" Round Culvert** L= 100.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 665.00' / 664.00' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Primary	667.00'	**36.0" Round Culvert** L= 100.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 667.00' / 664.00' S= 0.0300 '/' Cc= 0.900 n= 0.013, Flow Area= 7.07 sf

Primary OutFlow Max=4.35 cfs @ 15.08 hrs HW=667.11' (Free Discharge)
1=Culvert (Barrel Controls 4.25 cfs @ 5.41 fps)
2=Culvert (Inlet Controls 0.10 cfs @ 1.13 fps)

Pond EP: EAST POND



Summary for Pond WP: WEST POND

Inflow Area = 14.000 ac, 27.86% Impervious, Inflow Depth > 1.05" for 2-YEAR event
Inflow = 27.70 cfs @ 12.14 hrs, Volume= 1.223 af
Outflow = 0.77 cfs @ 15.06 hrs, Volume= 0.468 af, Atten= 97%, Lag= 175.7 min
Primary = 0.77 cfs @ 15.06 hrs, Volume= 0.468 af
Routed to Link PROP : PROPOSED DISCHARGE

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 669.16' @ 15.06 hrs Surf.Area= 0.816 ac Storage= 0.877 af

Plug-Flow detention time= 244.3 min calculated for 0.466 af (38% of inflow)
Center-of-Mass det. time= 172.8 min (966.3 - 793.5)

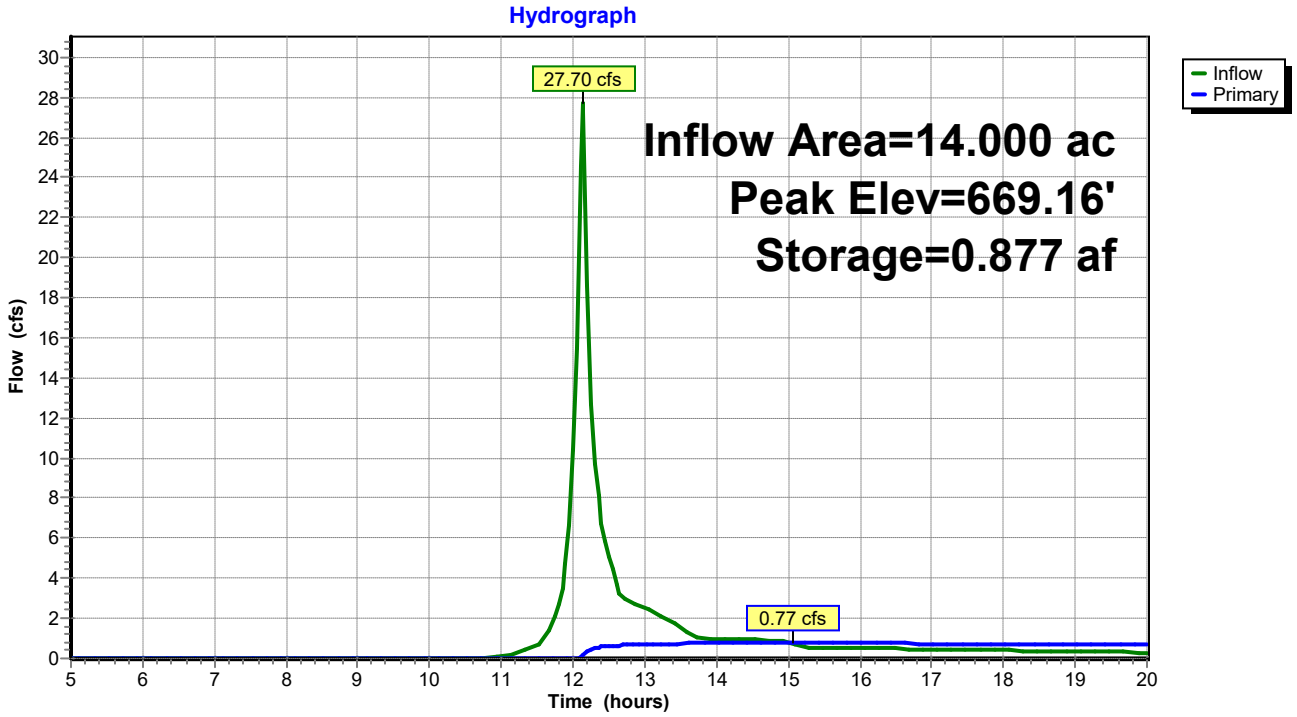
Volume	Invert	Avail.Storage	Storage Description
#1	668.00'	4.900 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
668.00	0.700	0.000	0.000
669.00	0.800	0.750	0.750
670.00	0.900	0.850	1.600
671.00	1.000	0.950	2.550
672.00	1.200	1.100	3.650
673.00	1.300	1.250	4.900

Device	Routing	Invert	Outlet Devices
#1	Primary	668.00'	**12.0" Round Culvert** L= 250.0' Ke= 0.500 Inlet / Outlet Invert= 668.00' / 660.00' S= 0.0320 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	668.25'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	671.00'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.77 cfs @ 15.06 hrs HW=669.16' (Free Discharge)
└**1=Culvert** (Passes 0.77 cfs of 3.07 cfs potential flow)
├**2=Orifice/Grate** (Orifice Controls 0.77 cfs @ 3.90 fps)
└**3=Orifice/Grate** (Controls 0.00 cfs)

Pond WP: WEST POND

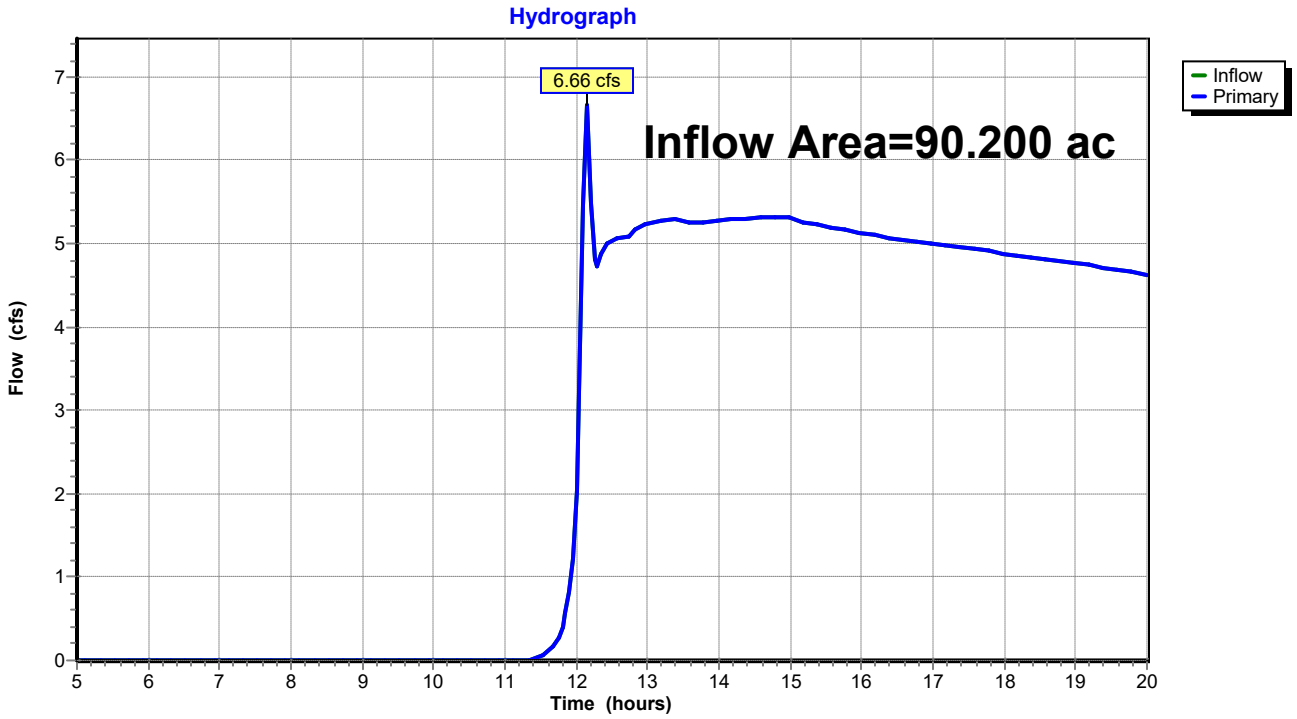


Summary for Link PROP: PROPOSED DISCHARGE

Inflow Area = 90.200 ac, 18.40% Impervious, Inflow Depth > 0.45" for 2-YEAR event
Inflow = 6.66 cfs @ 12.15 hrs, Volume= 3.358 af
Primary = 6.66 cfs @ 12.15 hrs, Volume= 3.358 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link PROP: PROPOSED DISCHARGE



Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment OFF: OFFSITE AREA Runoff Area=55.300 ac 12.12% Impervious Runoff Depth>1.81"
Flow Length=1,200' Tc=24.2 min CN=80 Runoff=106.16 cfs 8.337 af

Subcatchment PR-E: ONSITE EAST Runoff Area=17.200 ac 32.56% Impervious Runoff Depth>1.97"
Tc=6.0 min CN=82 Runoff=63.22 cfs 2.826 af

Subcatchment PR-W: ONSITE WEST Runoff Area=14.000 ac 27.86% Impervious Runoff Depth>1.89"
Tc=6.0 min CN=81 Runoff=49.60 cfs 2.210 af

Subcatchment UND: UNDETAINED AREA Runoff Area=3.700 ac 10.81% Impervious Runoff Depth>1.60"
Tc=6.0 min CN=77 Runoff=11.17 cfs 0.494 af

Pond EP: EAST POND Peak Elev=668.38' Storage=7.000 af Inflow=123.89 cfs 11.163 af
Outflow=18.13 cfs 6.547 af

Pond WP: WEST POND Peak Elev=670.06' Storage=1.652 af Inflow=49.60 cfs 2.210 af
Outflow=1.18 cfs 0.746 af

Link PROP: PROPOSED DISCHARGE Inflow=19.99 cfs 7.787 af
Primary=19.99 cfs 7.787 af

Total Runoff Area = 90.200 ac Runoff Volume = 13.867 af Average Runoff Depth = 1.84"
81.60% Pervious = 73.600 ac 18.40% Impervious = 16.600 ac

Summary for Subcatchment OFF: OFFSITE AREA

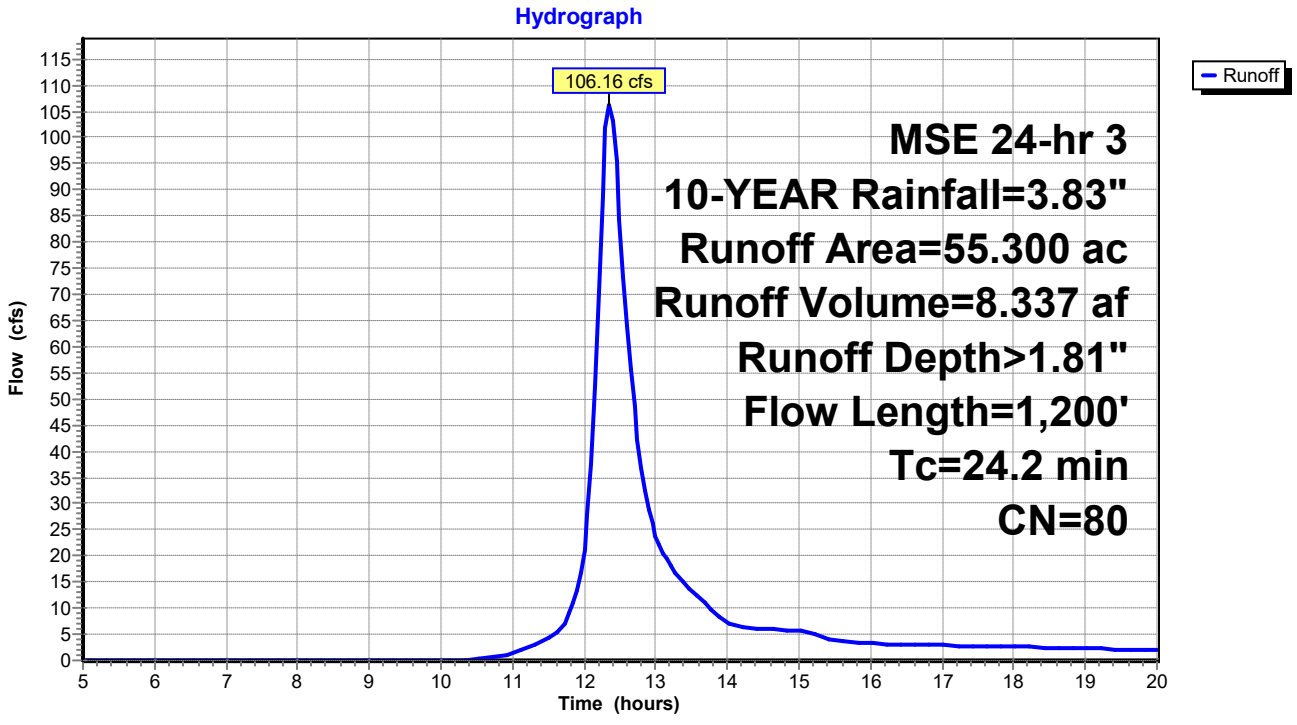
Runoff = 106.16 cfs @ 12.36 hrs, Volume= 8.337 af, Depth> 1.81"
Routed to Pond EP : EAST POND

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-YEAR Rainfall=3.83"

	Area (ac)	CN	Description
*	48.600	78	PER VILLAGE CODE
*	6.700	98	EX ROAD
	55.300	80	Weighted Average
	48.600		87.88% Pervious Area
	6.700		12.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.7	300	0.0330	0.27		**Sheet Flow, sheet** Range n= 0.130 P2= 2.72"
5.5	900	0.0333	2.74		**Shallow Concentrated Flow, SHALLOW** Grassed Waterway Kv= 15.0 fps
24.2	1,200	Total			

Subcatchment OFF: OFFSITE AREA



Summary for Subcatchment PR-E: ONSITE EAST

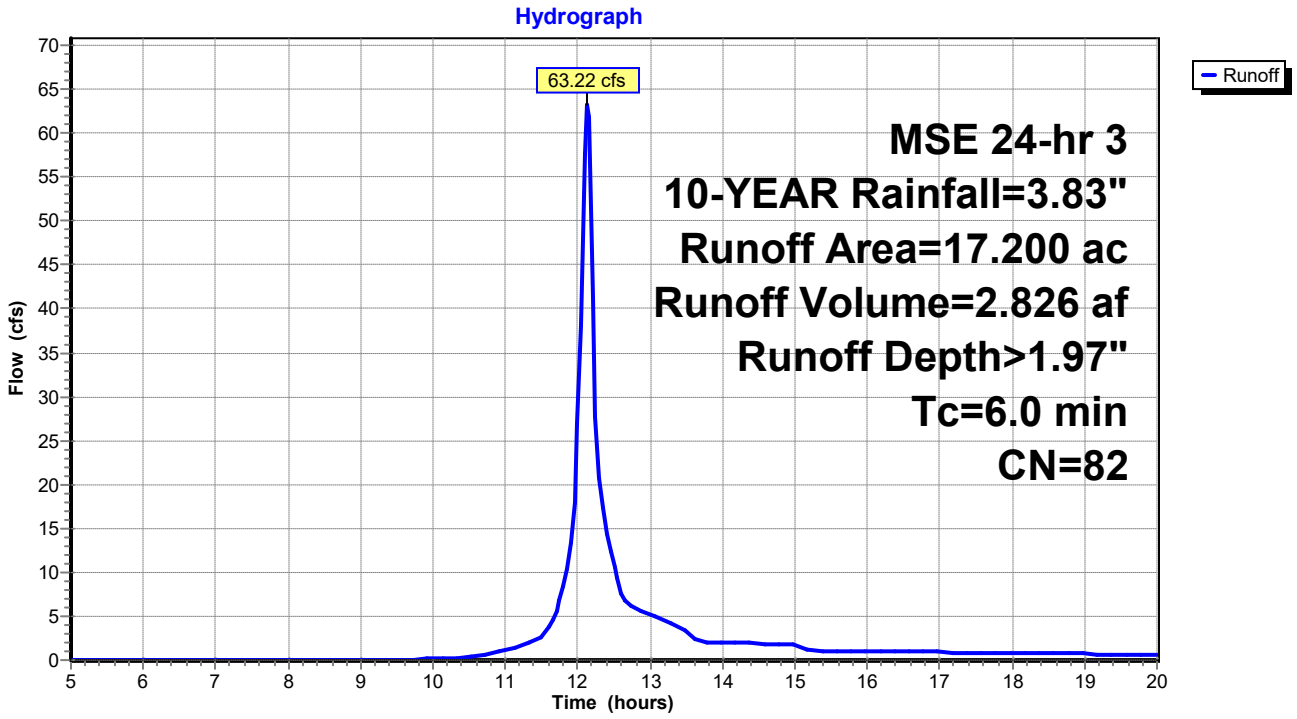
Runoff = 63.22 cfs @ 12.13 hrs, Volume= 2.826 af, Depth> 1.97"
Routed to Pond EP : EAST POND

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-YEAR Rainfall=3.83"

	Area (ac)	CN	Description
*	11.600	74	GRASS
*	2.800	98	PAVEMENT
*	0.900	98	DRIVEWAY
*	1.900	98	ROOF
	17.200	82	Weighted Average
	11.600		67.44% Pervious Area
	5.600		32.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, DIRECT**

Subcatchment PR-E: ONSITE EAST



Summary for Subcatchment PR-W: ONSITE WEST

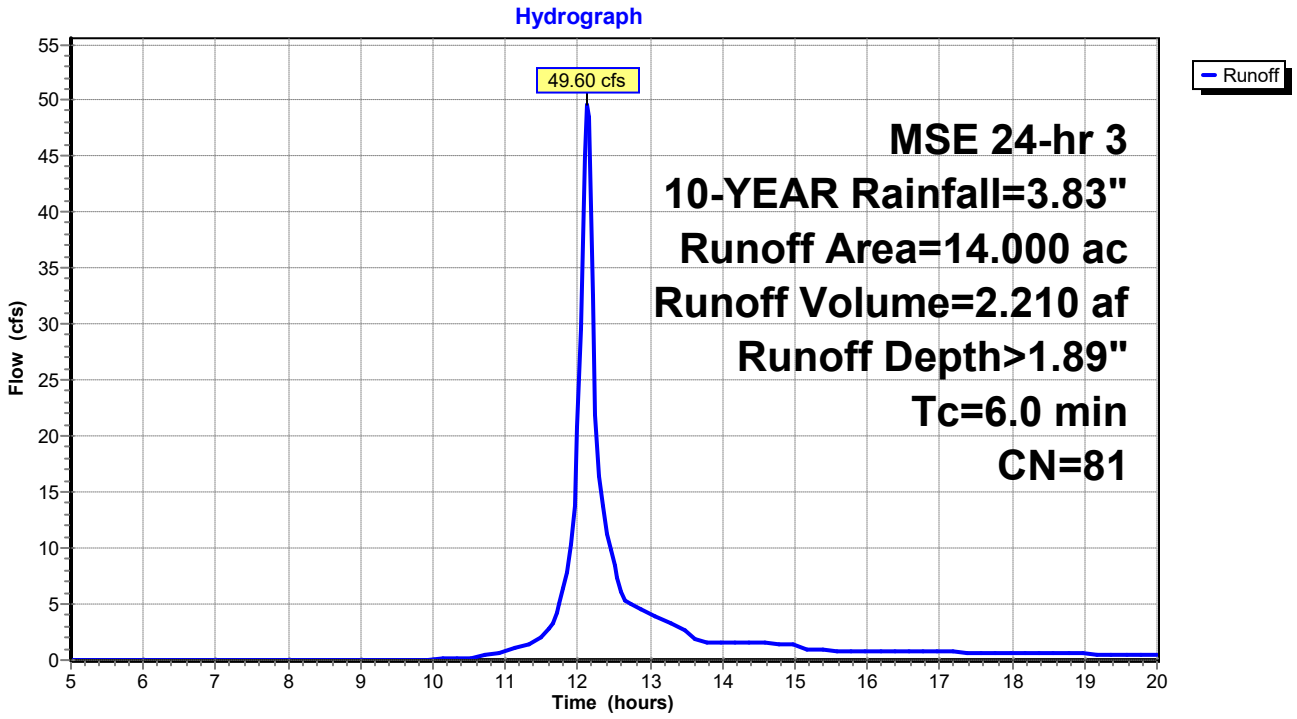
Runoff = 49.60 cfs @ 12.13 hrs, Volume= 2.210 af, Depth> 1.89"
Routed to Pond WP : WEST POND

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-YEAR Rainfall=3.83"

	Area (ac)	CN	Description
	10.100	74	>75% Grass cover, Good, HSG C
*	1.500	98	PAVEMENT
*	0.700	98	DRIVEWAY
*	1.700	98	ROOF
	14.000	81	Weighted Average
	10.100		72.14% Pervious Area
	3.900		27.86% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, DIRECT**

Subcatchment PR-W: ONSITE WEST



Summary for Subcatchment UND: UNDETAINED AREA

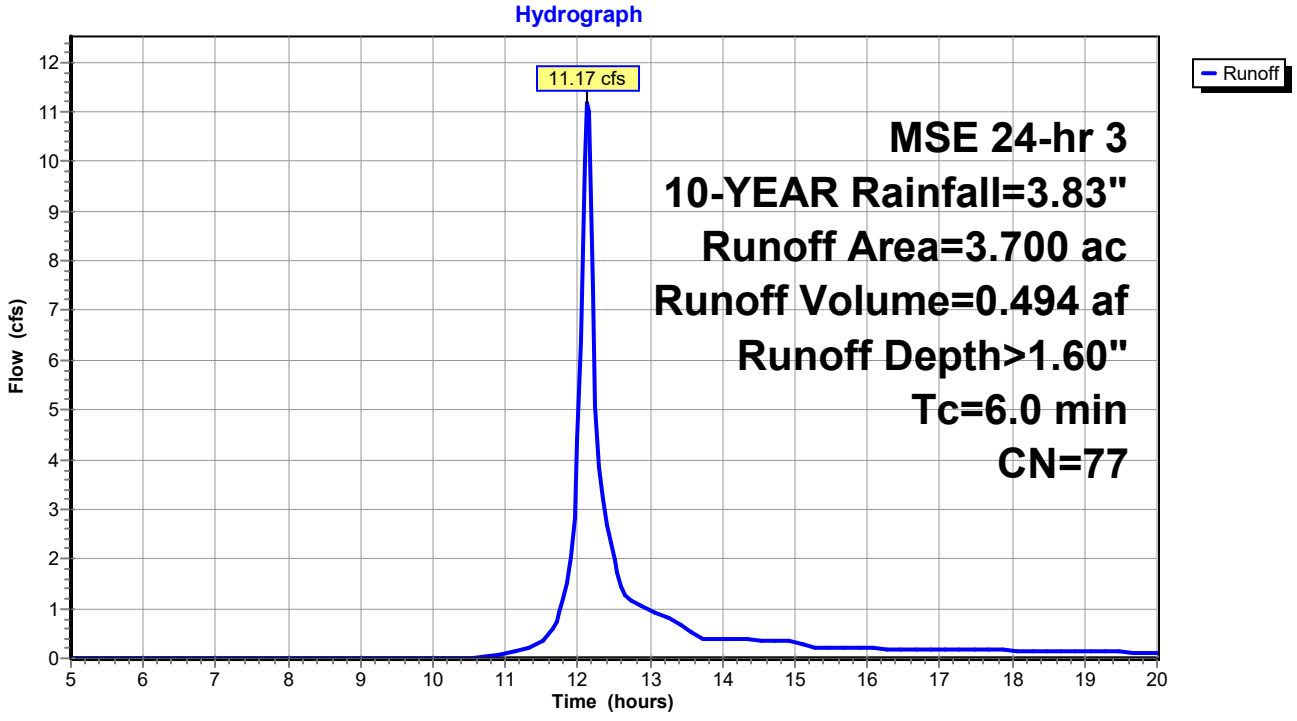
Runoff = 11.17 cfs @ 12.14 hrs, Volume= 0.494 af, Depth> 1.60"
Routed to Link PROP : PROPOSED DISCHARGE

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-YEAR Rainfall=3.83"

	Area (ac)	CN	Description
	3.300	74	>75% Grass cover, Good, HSG C
*	0.400	98	ROOF
	3.700	77	Weighted Average
	3.300		89.19% Pervious Area
	0.400		10.81% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, DIRECT**

Subcatchment UND: UNDETAINED AREA



Summary for Pond EP: EAST POND

Inflow Area = 72.500 ac, 16.97% Impervious, Inflow Depth > 1.85" for 10-YEAR event
Inflow = 123.89 cfs @ 12.33 hrs, Volume= 11.163 af
Outflow = 18.13 cfs @ 13.42 hrs, Volume= 6.547 af, Atten= 85%, Lag= 65.3 min
Primary = 18.13 cfs @ 13.42 hrs, Volume= 6.547 af
Routed to Link PROP : PROPOSED DISCHARGE

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 668.38' @ 13.42 hrs Surf.Area= 2.238 ac Storage= 7.000 af

Plug-Flow detention time= 186.7 min calculated for 6.526 af (58% of inflow)
Center-of-Mass det. time= 126.0 min (921.6 - 795.6)

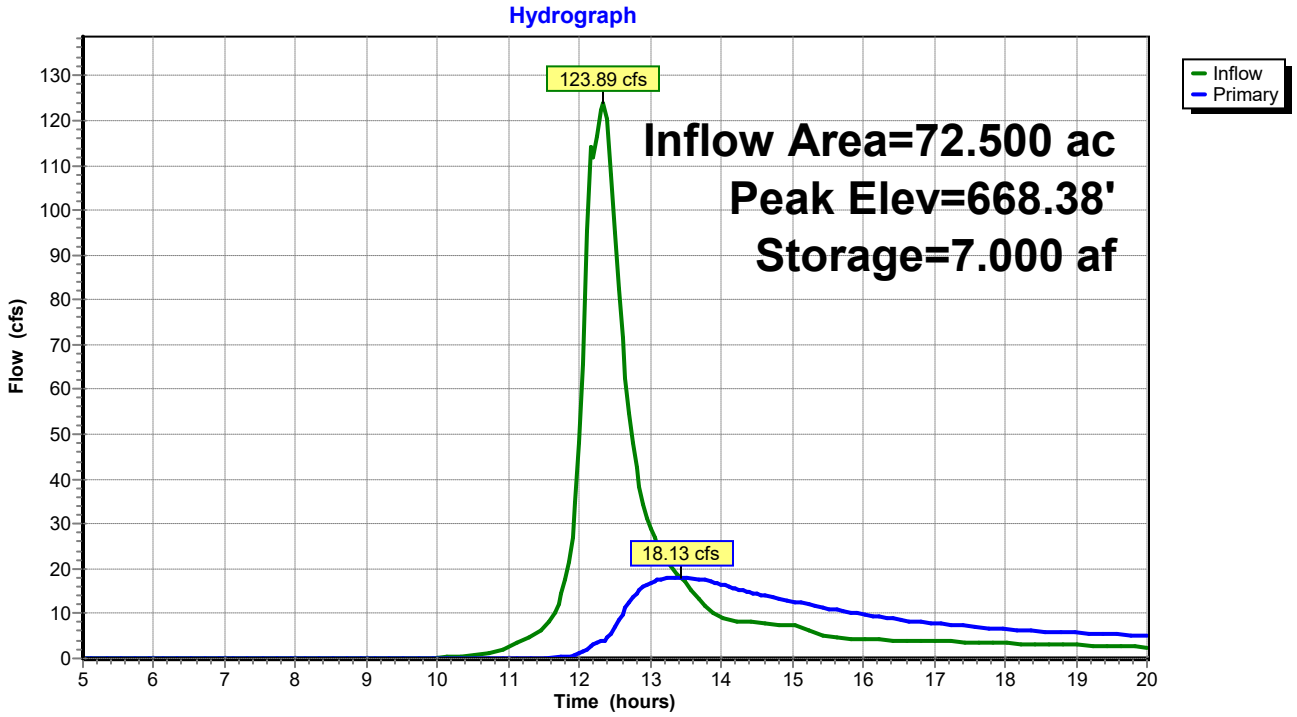
Volume	Invert	Avail.Storage	Storage Description
#1	665.00'	15.750 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
665.00	1.900	0.000	0.000
666.00	2.000	1.950	1.950
667.00	2.100	2.050	4.000
668.00	2.200	2.150	6.150
669.00	2.300	2.250	8.400
670.00	2.400	2.350	10.750
671.00	2.500	2.450	13.200
672.00	2.600	2.550	15.750

Device	Routing	Invert	Outlet Devices
#1	Primary	665.00'	**12.0" Round Culvert** L= 100.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 665.00' / 664.00' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Primary	667.00'	**36.0" Round Culvert** L= 100.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 667.00' / 664.00' S= 0.0300 '/' Cc= 0.900 n= 0.013, Flow Area= 7.07 sf

Primary OutFlow Max=18.13 cfs @ 13.42 hrs HW=668.38' (Free Discharge)
1=Culvert (Barrel Controls 5.38 cfs @ 6.85 fps)
2=Culvert (Inlet Controls 12.74 cfs @ 4.00 fps)

Pond EP: EAST POND



Summary for Pond WP: WEST POND

Inflow Area = 14.000 ac, 27.86% Impervious, Inflow Depth > 1.89" for 10-YEAR event
Inflow = 49.60 cfs @ 12.13 hrs, Volume= 2.210 af
Outflow = 1.18 cfs @ 15.08 hrs, Volume= 0.746 af, Atten= 98%, Lag= 176.7 min
Primary = 1.18 cfs @ 15.08 hrs, Volume= 0.746 af
Routed to Link PROP : PROPOSED DISCHARGE

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 670.06' @ 15.08 hrs Surf.Area= 0.906 ac Storage= 1.652 af

Plug-Flow detention time= 250.4 min calculated for 0.743 af (34% of inflow)
Center-of-Mass det. time= 180.6 min (964.3 - 783.8)

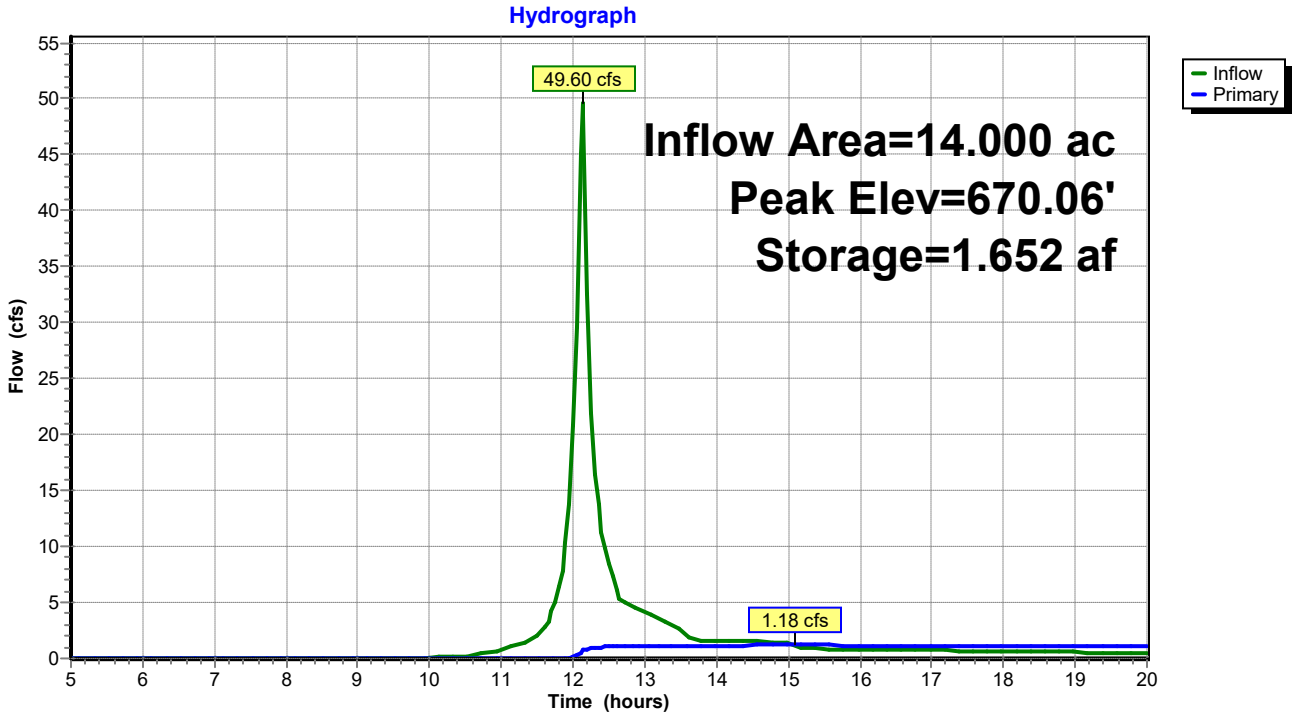
Volume	Invert	Avail.Storage	Storage Description
#1	668.00'	4.900 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
668.00	0.700	0.000	0.000
669.00	0.800	0.750	0.750
670.00	0.900	0.850	1.600
671.00	1.000	0.950	2.550
672.00	1.200	1.100	3.650
673.00	1.300	1.250	4.900

Device	Routing	Invert	Outlet Devices
#1	Primary	668.00'	**12.0" Round Culvert** L= 250.0' Ke= 0.500 Inlet / Outlet Invert= 668.00' / 660.00' S= 0.0320 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	668.25'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	671.00'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=1.18 cfs @ 15.08 hrs HW=670.06' (Free Discharge)
└**1=Culvert** (Passes 1.18 cfs of 4.72 cfs potential flow)
  ├**2=Orifice/Grate** (Orifice Controls 1.18 cfs @ 6.01 fps)
  └**3=Orifice/Grate** (Controls 0.00 cfs)

Pond WP: WEST POND

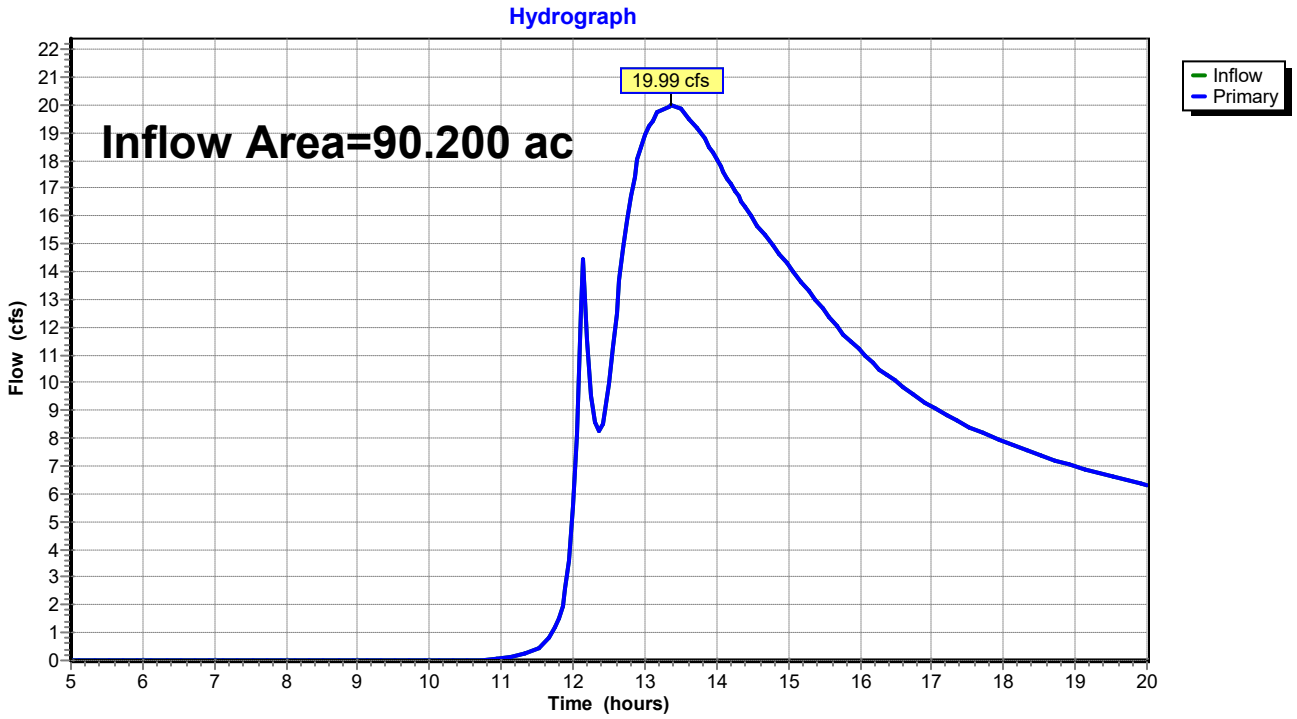


Summary for Link PROP: PROPOSED DISCHARGE

Inflow Area = 90.200 ac, 18.40% Impervious, Inflow Depth > 1.04" for 10-YEAR event
Inflow = 19.99 cfs @ 13.36 hrs, Volume= 7.787 af
Primary = 19.99 cfs @ 13.36 hrs, Volume= 7.787 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link PROP: PROPOSED DISCHARGE



Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment OFF: OFFSITE AREA Runoff Area=55.300 ac 12.12% Impervious Runoff Depth>3.58"
Flow Length=1,200' Tc=24.2 min CN=80 Runoff=208.44 cfs 16.481 af

Subcatchment PR-E: ONSITE EAST Runoff Area=17.200 ac 32.56% Impervious Runoff Depth>3.79"
Tc=6.0 min CN=82 Runoff=118.11 cfs 5.439 af

Subcatchment PR-W: ONSITE WEST Runoff Area=14.000 ac 27.86% Impervious Runoff Depth>3.69"
Tc=6.0 min CN=81 Runoff=94.04 cfs 4.309 af

Subcatchment UND: UNDETAINED AREA Runoff Area=3.700 ac 10.81% Impervious Runoff Depth>3.30"
Tc=6.0 min CN=77 Runoff=22.56 cfs 1.017 af

Pond EP: EAST POND Peak Elev=670.66' Storage=12.359 af Inflow=240.78 cfs 21.920 af
Outflow=57.00 cfs 16.630 af

Pond WP: WEST POND Peak Elev=671.38' Storage=2.939 af Inflow=94.04 cfs 4.309 af
Outflow=6.15 cfs 1.837 af

Link PROP: PROPOSED DISCHARGE Inflow=64.85 cfs 19.483 af
Primary=64.85 cfs 19.483 af

Total Runoff Area = 90.200 ac Runoff Volume = 27.246 af Average Runoff Depth = 3.62"
81.60% Pervious = 73.600 ac 18.40% Impervious = 16.600 ac

Summary for Subcatchment OFF: OFFSITE AREA

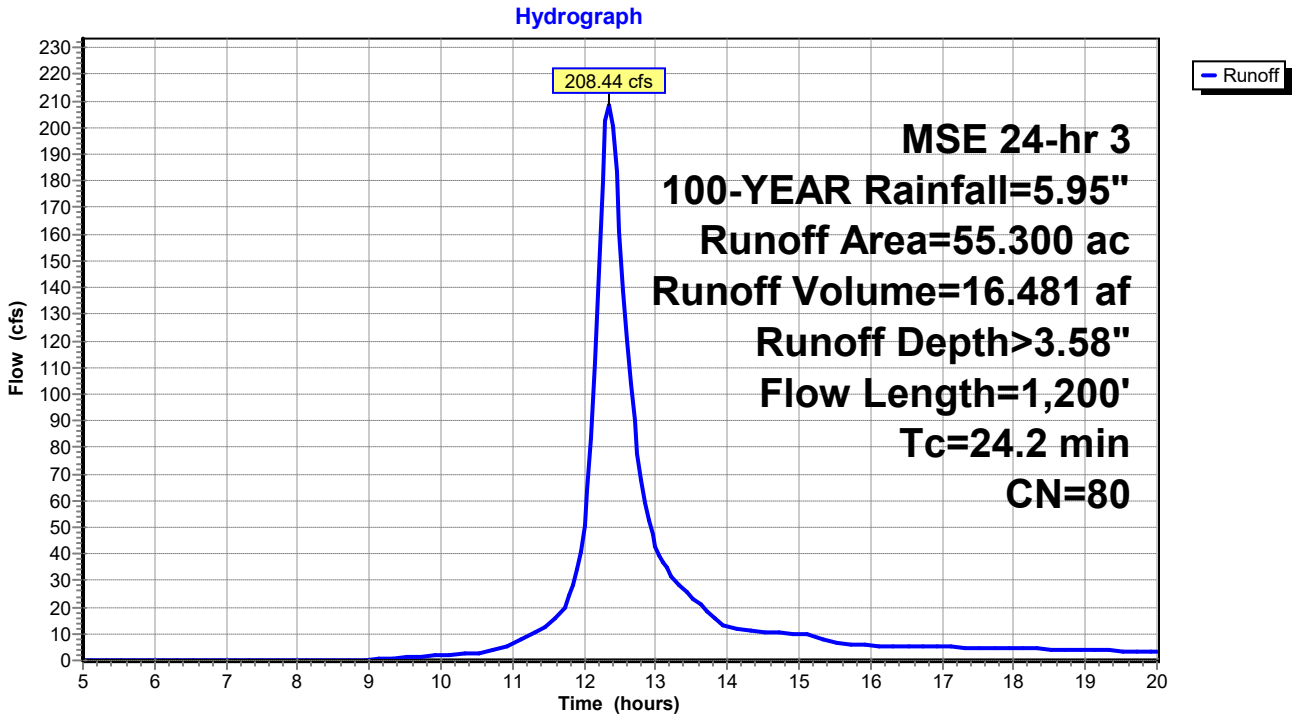
Runoff = 208.44 cfs @ 12.35 hrs, Volume= 16.481 af, Depth> 3.58"
Routed to Pond EP : EAST POND

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-YEAR Rainfall=5.95"

	Area (ac)	CN	Description
*	48.600	78	PER VILLAGE CODE
*	6.700	98	EX ROAD
	55.300	80	Weighted Average
	48.600		87.88% Pervious Area
	6.700		12.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.7	300	0.0330	0.27		**Sheet Flow, sheet** Range n= 0.130 P2= 2.72"
5.5	900	0.0333	2.74		**Shallow Concentrated Flow, SHALLOW** Grassed Waterway Kv= 15.0 fps
24.2	1,200	Total			

Subcatchment OFF: OFFSITE AREA



Summary for Subcatchment PR-E: ONSITE EAST

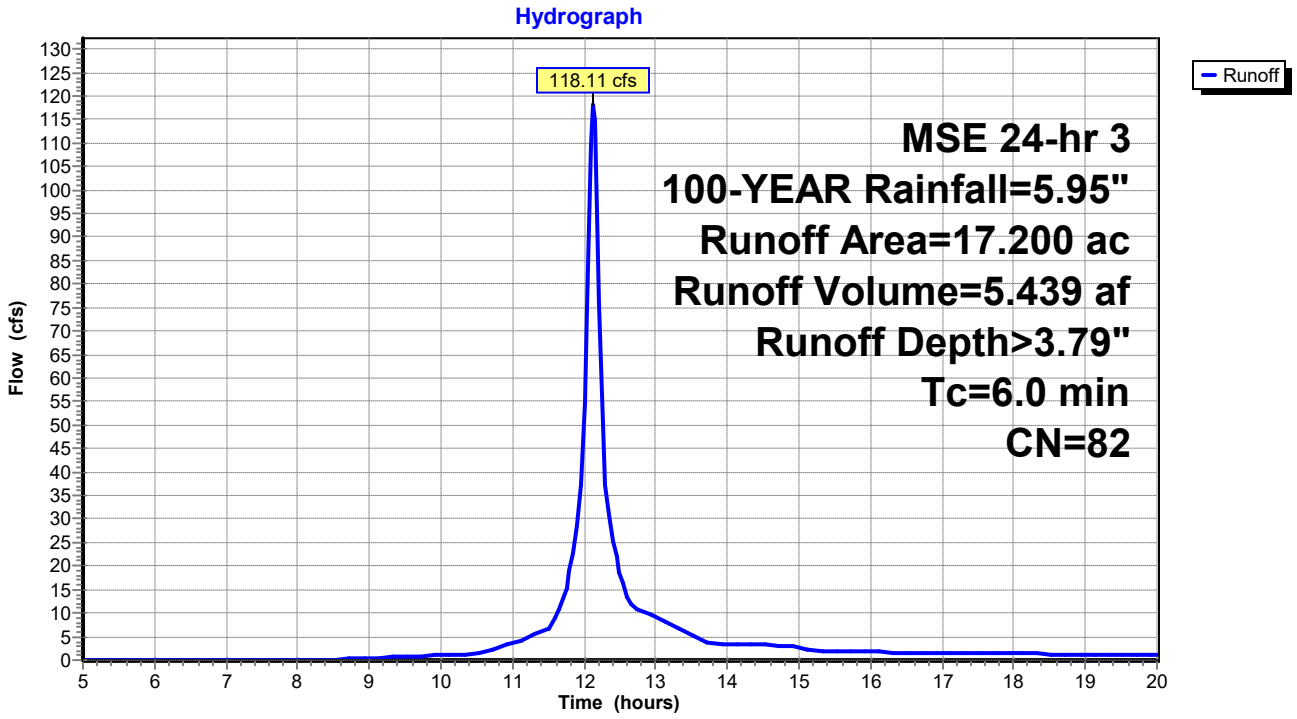
Runoff = 118.11 cfs @ 12.13 hrs, Volume= 5.439 af, Depth> 3.79"
Routed to Pond EP : EAST POND

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-YEAR Rainfall=5.95"

	Area (ac)	CN	Description
*	11.600	74	GRASS
*	2.800	98	PAVEMENT
*	0.900	98	DRIVEWAY
*	1.900	98	ROOF
	17.200	82	Weighted Average
	11.600		67.44% Pervious Area
	5.600		32.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, DIRECT**

Subcatchment PR-E: ONSITE EAST



Summary for Subcatchment PR-W: ONSITE WEST

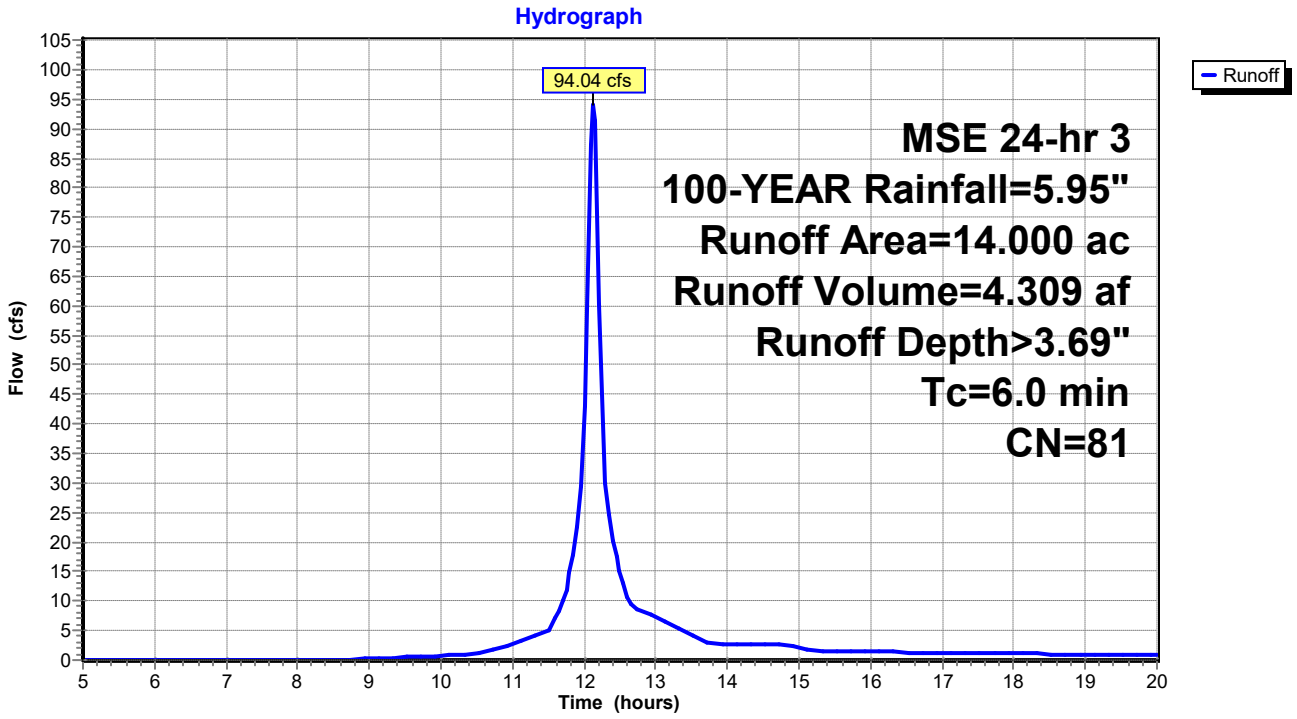
Runoff = 94.04 cfs @ 12.13 hrs, Volume= 4.309 af, Depth> 3.69"
Routed to Pond WP : WEST POND

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-YEAR Rainfall=5.95"

	Area (ac)	CN	Description
	10.100	74	>75% Grass cover, Good, HSG C
*	1.500	98	PAVEMENT
*	0.700	98	DRIVEWAY
*	1.700	98	ROOF
	14.000	81	Weighted Average
	10.100		72.14% Pervious Area
	3.900		27.86% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, DIRECT**

Subcatchment PR-W: ONSITE WEST



Summary for Subcatchment UND: UNDETAINED AREA

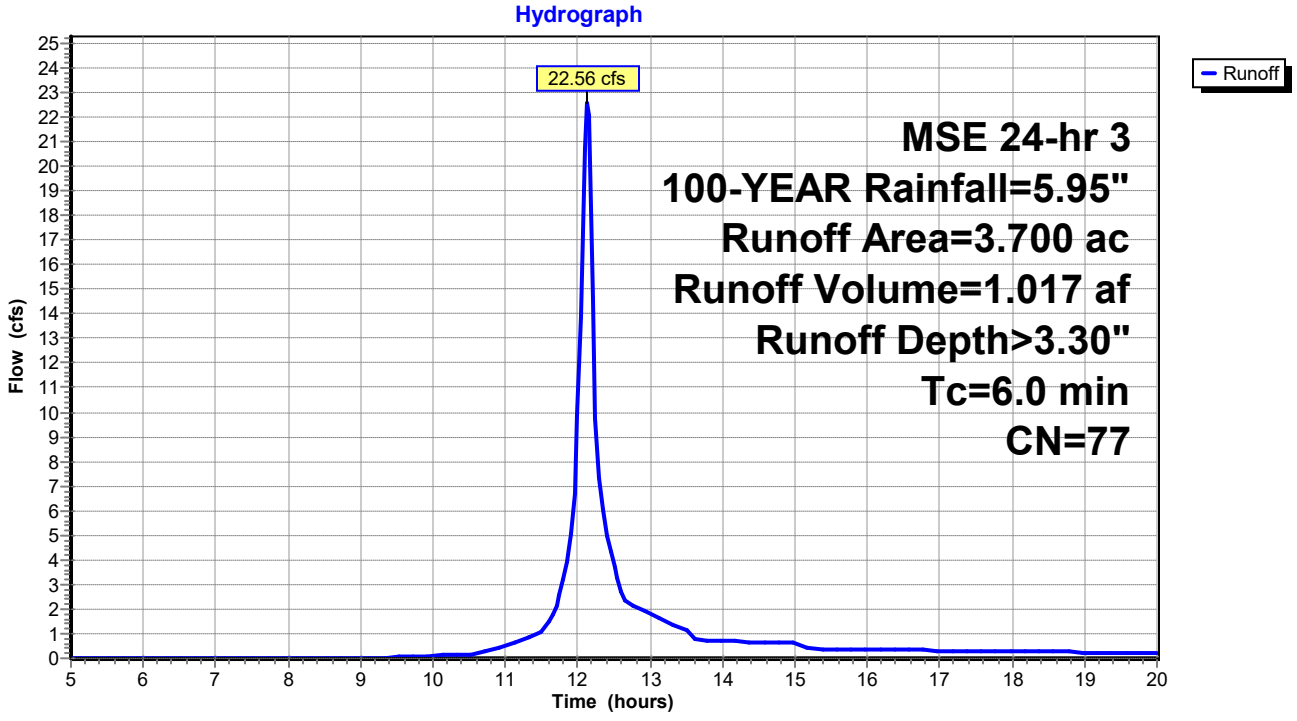
Runoff = 22.56 cfs @ 12.13 hrs, Volume= 1.017 af, Depth> 3.30"
Routed to Link PROP : PROPOSED DISCHARGE

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-YEAR Rainfall=5.95"

	Area (ac)	CN	Description
	3.300	74	>75% Grass cover, Good, HSG C
*	0.400	98	ROOF
	3.700	77	Weighted Average
	3.300		89.19% Pervious Area
	0.400		10.81% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, DIRECT**

Subcatchment UND: UNDETAINED AREA



Summary for Pond EP: EAST POND

Inflow Area = 72.500 ac, 16.97% Impervious, Inflow Depth > 3.63" for 100-YEAR event
Inflow = 240.78 cfs @ 12.32 hrs, Volume= 21.920 af
Outflow = 57.00 cfs @ 12.95 hrs, Volume= 16.630 af, Atten= 76%, Lag= 37.6 min
Primary = 57.00 cfs @ 12.95 hrs, Volume= 16.630 af
Routed to Link PROP : PROPOSED DISCHARGE

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 670.66' @ 12.95 hrs Surf.Area= 2.466 ac Storage= 12.359 af

Plug-Flow detention time= 145.5 min calculated for 16.574 af (76% of inflow)
Center-of-Mass det. time= 98.2 min (882.9 - 784.7)

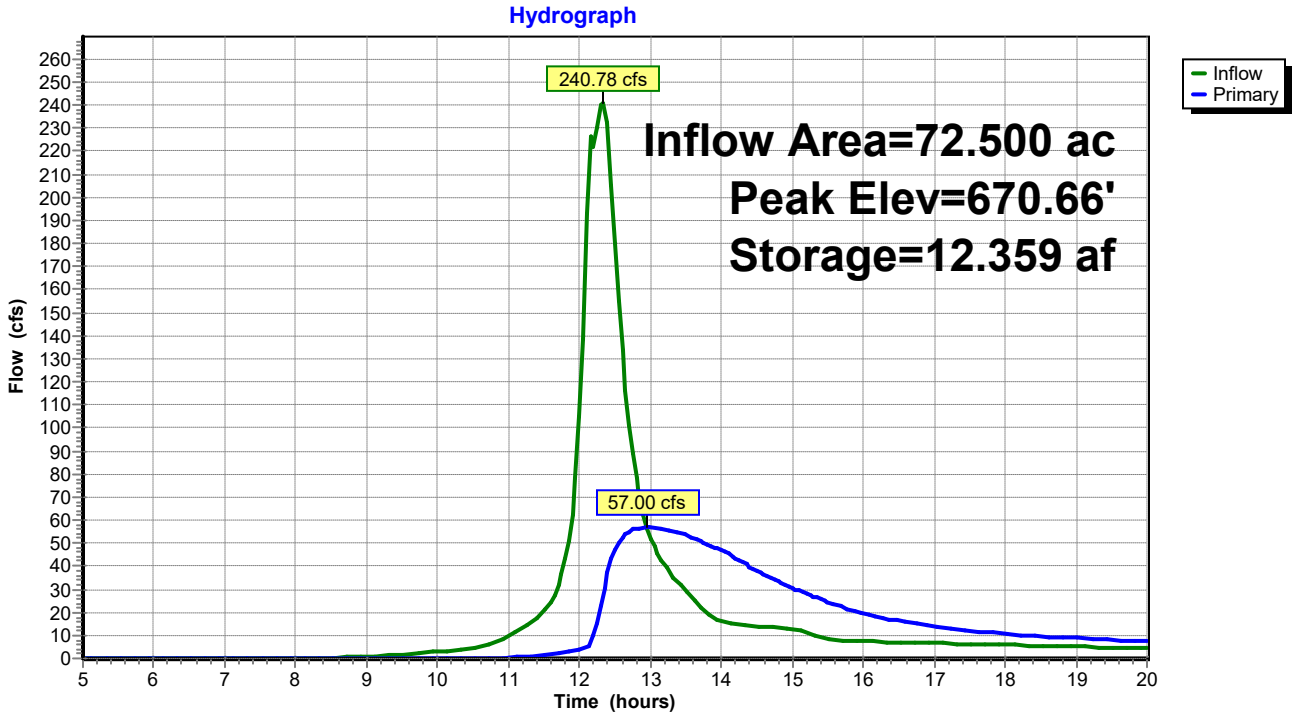
Volume	Invert	Avail.Storage	Storage Description
#1	665.00'	15.750 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
665.00	1.900	0.000	0.000
666.00	2.000	1.950	1.950
667.00	2.100	2.050	4.000
668.00	2.200	2.150	6.150
669.00	2.300	2.250	8.400
670.00	2.400	2.350	10.750
671.00	2.500	2.450	13.200
672.00	2.600	2.550	15.750

Device	Routing	Invert	Outlet Devices
#1	Primary	665.00'	**12.0" Round Culvert** L= 100.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 665.00' / 664.00' S= 0.0100 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Primary	667.00'	**36.0" Round Culvert** L= 100.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 667.00' / 664.00' S= 0.0300 '/' Cc= 0.900 n= 0.013, Flow Area= 7.07 sf

Primary OutFlow Max=57.00 cfs @ 12.95 hrs HW=670.66' (Free Discharge)
1=Culvert (Barrel Controls 6.96 cfs @ 8.86 fps)
2=Culvert (Inlet Controls 50.03 cfs @ 7.08 fps)

Pond EP: EAST POND



Summary for Pond WP: WEST POND

Inflow Area = 14.000 ac, 27.86% Impervious, Inflow Depth > 3.69" for 100-YEAR event
Inflow = 94.04 cfs @ 12.13 hrs, Volume= 4.309 af
Outflow = 6.15 cfs @ 13.20 hrs, Volume= 1.837 af, Atten= 93%, Lag= 64.4 min
Primary = 6.15 cfs @ 13.20 hrs, Volume= 1.837 af
Routed to Link PROP : PROPOSED DISCHARGE

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 671.38' @ 13.20 hrs Surf.Area= 1.075 ac Storage= 2.939 af

Plug-Flow detention time= 195.0 min calculated for 1.831 af (42% of inflow)
Center-of-Mass det. time= 130.1 min (902.8 - 772.7)

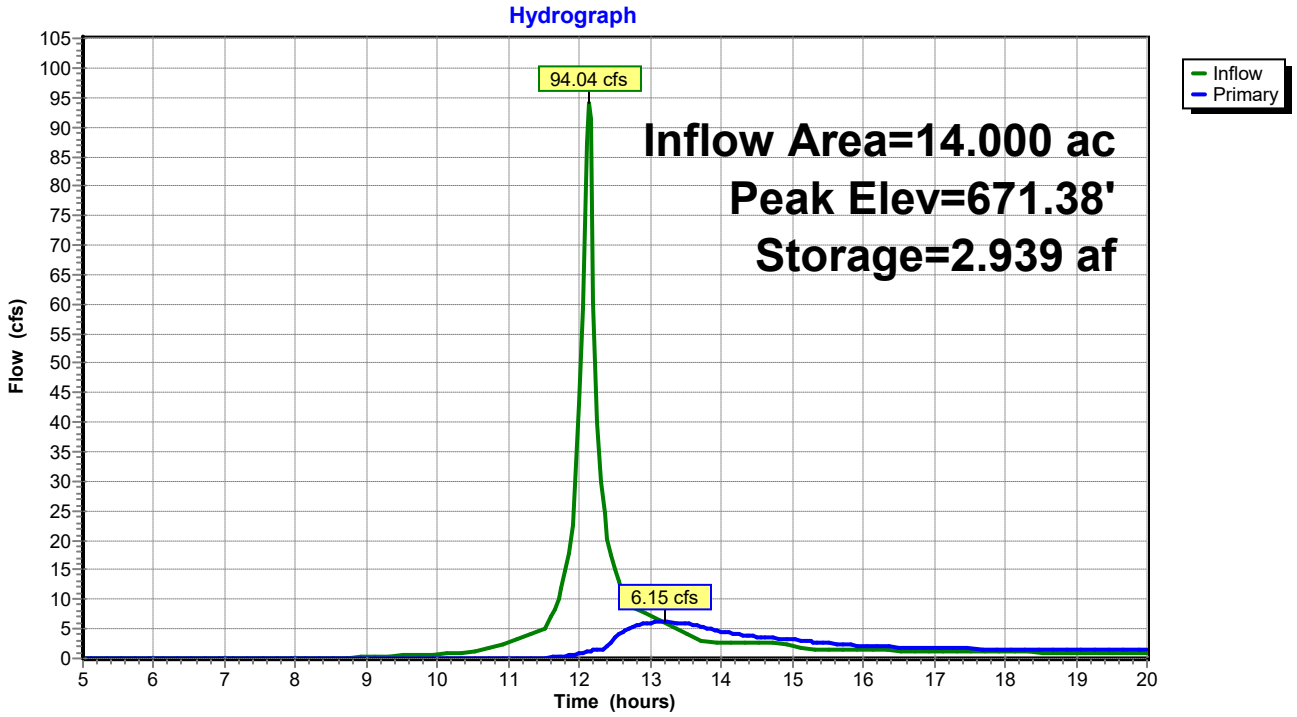
Volume	Invert	Avail.Storage	Storage Description
#1	668.00'	4.900 af	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
668.00	0.700	0.000	0.000
669.00	0.800	0.750	0.750
670.00	0.900	0.850	1.600
671.00	1.000	0.950	2.550
672.00	1.200	1.100	3.650
673.00	1.300	1.250	4.900

Device	Routing	Invert	Outlet Devices
#1	Primary	668.00'	**12.0" Round Culvert** L= 250.0' Ke= 0.500 Inlet / Outlet Invert= 668.00' / 660.00' S= 0.0320 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	668.25'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	671.00'	**24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=6.32 cfs @ 13.20 hrs HW=671.38' (Free Discharge)
└**1=Culvert** (Passes 6.32 cfs of 6.41 cfs potential flow)
├**2=Orifice/Grate** (Orifice Controls 1.60 cfs @ 8.16 fps)
└**3=Orifice/Grate** (Weir Controls 4.72 cfs @ 2.00 fps)

Pond WP: WEST POND

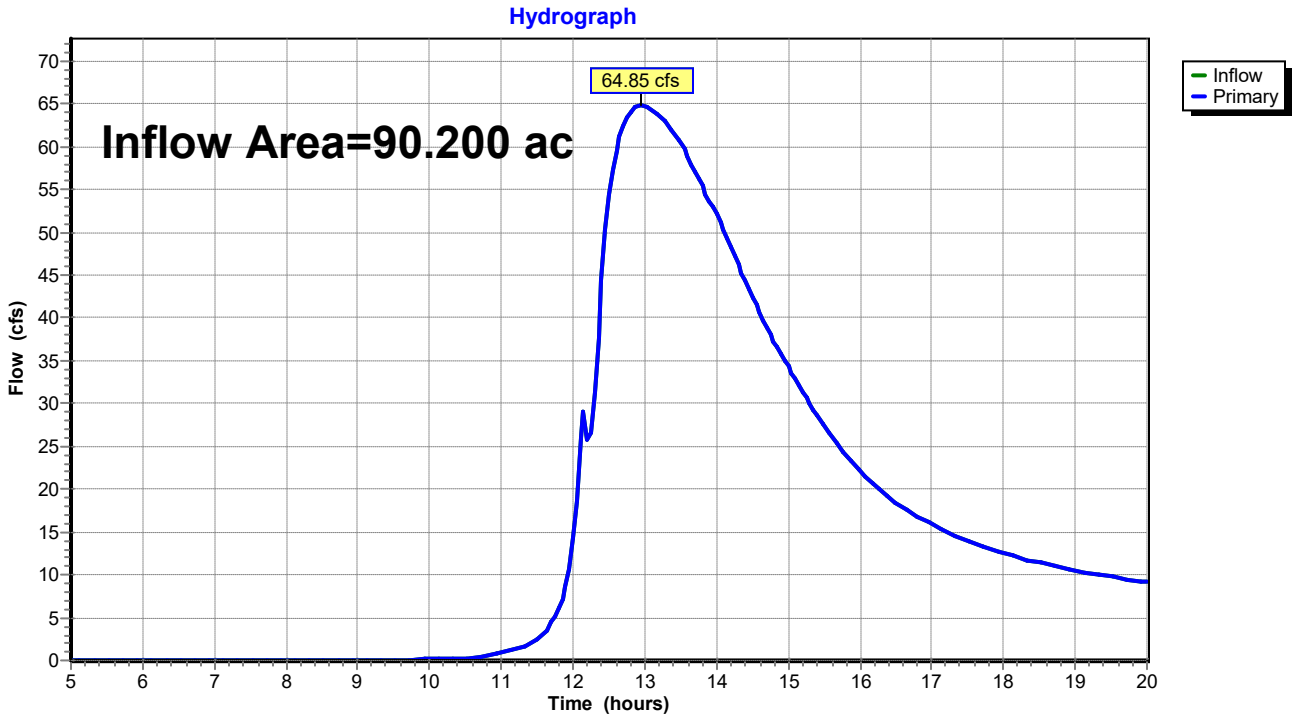


Summary for Link PROP: PROPOSED DISCHARGE

Inflow Area = 90.200 ac, 18.40% Impervious, Inflow Depth > 2.59" for 100-YEAR event
Inflow = 64.85 cfs @ 12.95 hrs, Volume= 19.483 af
Primary = 64.85 cfs @ 12.95 hrs, Volume= 19.483 af, Atten= 0%, Lag= 0.0 min

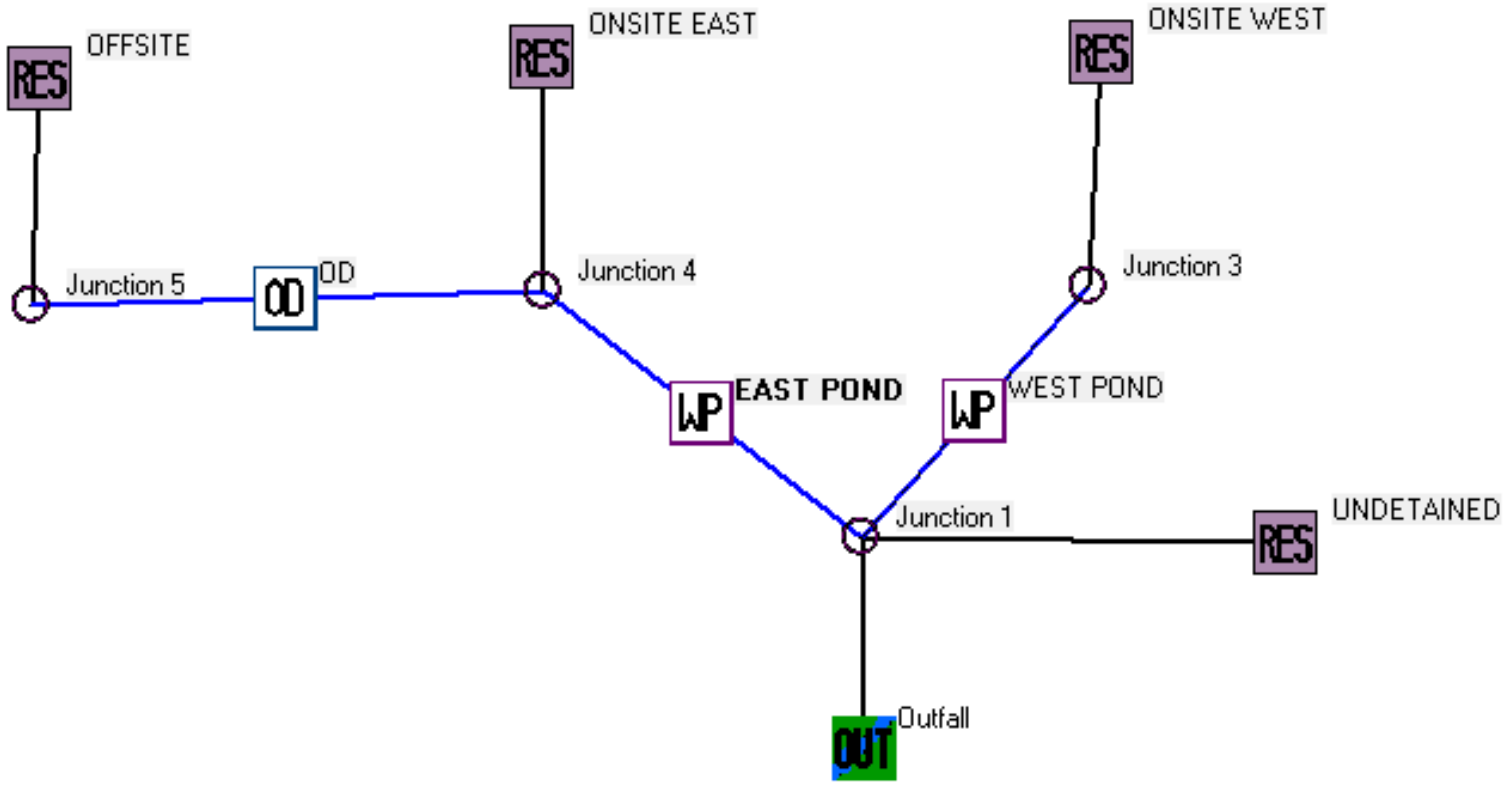
Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link PROP: PROPOSED DISCHARGE



APPENDIX 4
POST DEVELOPMENT CONDITIONS WATER QUALITY

WinSLAMM Post-Development Water Quality Model



Data file name: Z:\Projects\2019\1617.00-WI\DESIGN\SWMP\SLAMM\1617 WILLOW CREEK.mdb
WinSLAMM Version 10.4.1
Rain file name: C:\WinSLAMM Files\Rain Files\WI Milwaukee 69.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: 03-26-2025 Time: 16:55:05
Site information:

LU# 1 - Residential: ONSITE WEST Total area (ac): 14.000
1 - Roofs 1: 1.700 ac. Pitched Connected PSD File: C:\WinSLAMM Files\NURP.cpz
13 - Paved Parking 1: 1.500 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz
25 - Driveways 1: 0.700 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz
45 - Large Landscaped Areas 1: 10.100 ac. Normal Silty PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 2 - Residential: UNDETAINED Total area (ac): 3.700
1 - Roofs 1: 0.400 ac. Pitched Connected PSD File: C:\WinSLAMM Files\NURP.cpz
45 - Large Landscaped Areas 1: 3.300 ac. Normal Silty PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 3 - Residential: ONSITE EAST Total area (ac): 17.200
1 - Roofs 1: 1.900 ac. Pitched Connected PSD File: C:\WinSLAMM Files\NURP.cpz
13 - Paved Parking 1: 2.800 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz
25 - Driveways 1: 0.900 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz
45 - Large Landscaped Areas 1: 11.600 ac. Normal Silty PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 4 - Residential: OFFSITE Total area (ac): 55.300
13 - Paved Parking 1: 6.700 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz
45 - Large Landscaped Areas 1: 48.600 ac. Normal Silty PSD File: C:\WinSLAMM Files\NURP.cpz

Control Practice 1: Wet Detention Pond CP# 1 (DS) - EAST POND
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): 1
2. Number of orifices: 1
3. Invert elevation above datum (ft): 5
Outlet type: Orifice 2
1. Orifice diameter (ft): 3
2. Number of orifices: 1
3. Invert elevation above datum (ft): 7
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: 11.5
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	1.3200	0.00	0.00
2	1.00	1.3900	0.00	0.00
3	2.00	1.4700	0.00	0.00
4	3.00	1.5500	0.00	0.00
5	4.00	1.6300	0.00	0.00
6	5.00	1.9000	0.00	0.00
7	6.00	2.0000	0.00	0.00
8	7.00	2.1000	0.00	0.00
9	8.00	2.2000	0.00	0.00
10	9.00	2.3000	0.00	0.00
11	10.00	2.4000	0.00	0.00
12	11.00	2.5000	0.00	0.00
13	12.00	2.6000	0.00	0.00

Control Practice 2: Wet Detention Pond CP# 2 (DS) - WEST POND

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): 5.25

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: 9.5

Outlet type: Vertical Stand Pipe

1. Stand pipe diameter (ft): 2
2. Stand pipe height above datum (ft): 8

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	0.3000	0.00	0.00
2	1.00	0.3400	0.00	0.00
3	2.00	0.3800	0.00	0.00
4	3.00	0.4300	0.00	0.00
5	4.00	0.4900	0.00	0.00
6	5.00	0.7000	0.00	0.00
7	6.00	0.8000	0.00	0.00
8	7.00	0.9000	0.00	0.00
9	8.00	1.0000	0.00	0.00
10	9.00	1.2000	0.00	0.00
11	10.00	1.3000	0.00	0.00

Control Practice 3: Other Device CP# 1 (DS) - OD

Fraction of drainage area served by device (ac) = 1.00

Particulate Concentration reduction fraction = 1.00

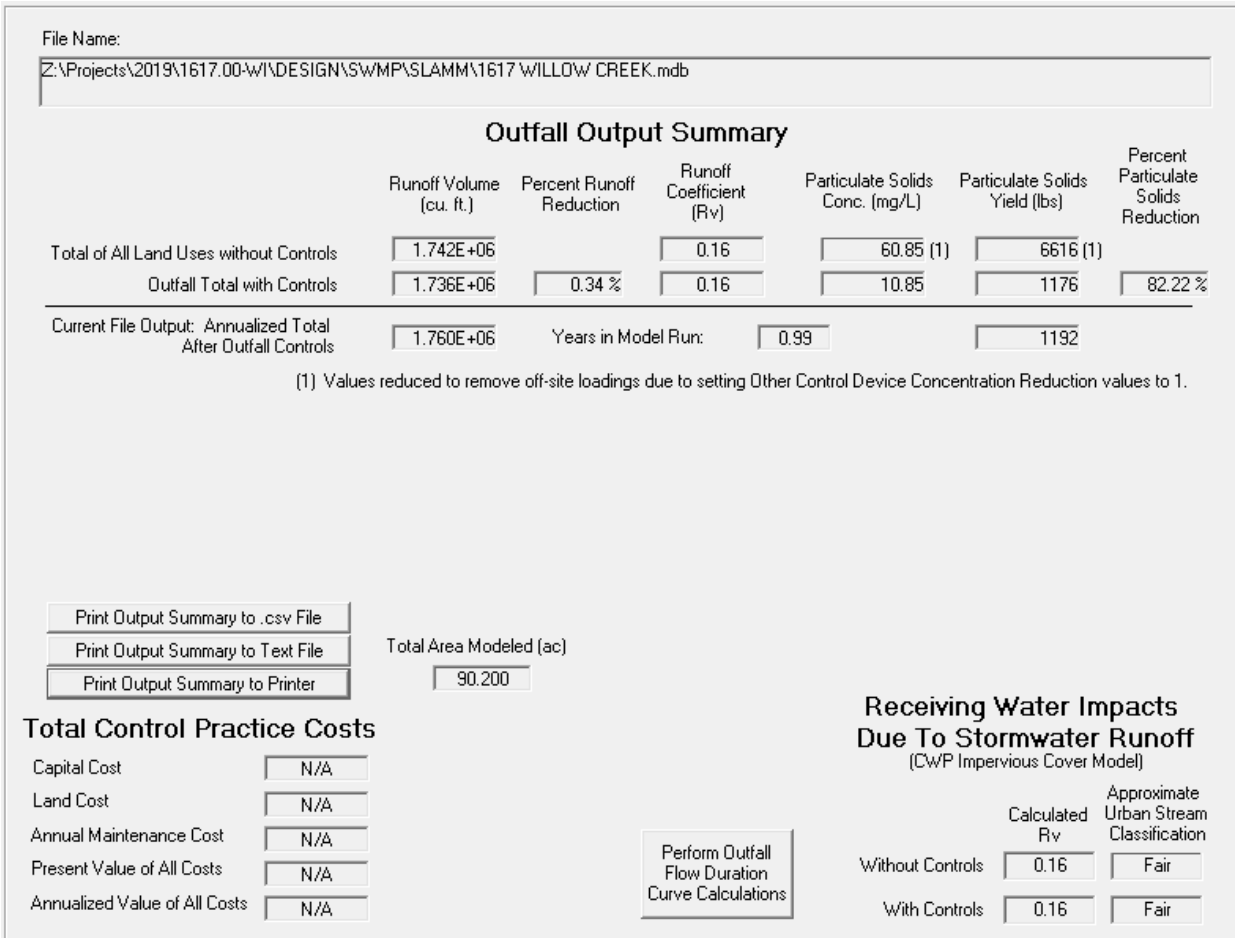
Filterable Concentration reduction fraction = 1.00

Runoff volume reduction fraction = 0

SLAMM for Windows Version 10.4.1

Data file name: Z:\Projects\2019\1617.00-WI\DESIGN\SWMP\SLAMM\1617 WILLOW CREEK.mdb
WinSLAMM Version 10.4.1
Rain file name: C:\WinSLAMM Files\Rain Files\WI Milwaukee 69.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
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
Model Run Start Date: 01/05/69 Model Run End Date: 12/31/69
Date of run: 03-26-2025 Time of run: 16:52:23
Total Area Modeled (acres): 90.200
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:	1.742E+06	-	60.85	6616	-
Outfall Total with Controls:	1.736E+06	0.34%	10.85	1176	82.22%
Annualized Total After Outfall Controls:	1.760E+06			1192	



APPENDIX 5
EXCERPT FROM GEOTECHNICAL REPORT

PRELIMINARY GEOTECHNICAL ENGINEERING REPORT

Proposed Willow Creek Residential Development
Somers, Wisconsin

GESTRA Project No.: 18282-10
October 11, 2018

Prepared For:
Bear Development, LLC
4011 80th Street
Kenosha, WI 53142

GESTRA

Preliminary Geotechnical Engineering Report

Proposed Willow Creek Residential Development
Somers, Wisconsin

GESTRA Project No. 18282-10
October 11, 2018

Prepared For:

Bear Development, LLC
4011 80th Street
Kenosha, WI 53142

Prepared By:

GESTRA Engineering, Inc.
191 W. Edgerton Avenue
Milwaukee, WI 53207
(414) 933-7444

Table of Contents

Preliminary Geotechnical Engineering Report

Proposed Willow Creek Residential Development
Somers, Wisconsin

1.0 INTRODUCTION

GESTRA Engineering, Inc. (GESTRA) was authorized by Bear Development, LLC (Bear) to complete a subsurface exploration and preliminary geotechnical report for the Proposed Willow Creek Residential project located in Somers, Wisconsin. This report presents the results from the subsurface soil exploration and describes the field exploration, laboratory test results, and provides preliminary recommendations pertaining to the design and construction of future development.

The engineering recommendations and analysis contained within this report should be considered preliminary and is intended to be used for site assessment purposes. As the project plans develop, we recommend GESTRA should be contacted so that we can review our recommendations in light of any new information.

1.1 PROJECT INFORMATION

The project is a new residential development south of County Highway E and east of the Pike River. Currently, the property is an undeveloped field with a sanitary easement along the west side of the site and gas line along the south end of the property. The conceptual plans for the development include:

- Eleven, 3-story, slab on grade, multi-family apartment buildings
- Eighteen, 1 to 2-story, slab on grade, duplex apartment buildings
- Twenty-two single family residential lots
- Six storm water management features
- Two primary roads, two cul-de-sacs and pavement/parking in the multi-family portion of the development

2.0 SCOPE OF WORK

GESTRA has performed the following services for the project:

- Contacted Diggers Hotline to locate the public utilities at the site prior to drilling.
- Provided layout of the boring locations and recorded ground surface elevations using GPS survey equipment. The layout and elevations were not be performed by a licensed surveyor.
- Completed twelve (12) standard penetration test (SPT) soil borings, each to a depth of 20 feet. Borings B-1 through B-7 were evaluated for site development and storm water management and were sampled at continuous 2-foot intervals. Borings B-8 through B-12 were considered structure/pavement borings and were sampled at 2 ½ foot intervals to 15 feet and 5-foot intervals thereafter. Our site work included abandonment of the boreholes per WDNR requirements.

- Performed laboratory soil testing to assign classification and engineering properties to the soils encountered. The laboratory testing included hand penetrometer, moisture contents, Atterberg limits and mechanical analysis.
- Prepared this preliminary geotechnical engineering report presenting the results of the field testing as well as providing general recommendations pertaining to proposed development including site preparation, earthwork concerns and consideration, suitability for spread foundations; discussion of stormwater infiltration, and presence of groundwater.

3.0 EXPLORATION RESULTS

3.1 SITE CONDITIONS

The proposed development site is an undeveloped field that was planted in soybeans at the time of our drilling with a sanitary easement along the west side of the site and gas line along the south end of the property. The site generally slopes downward from the east to the west with localized changes in elevations and lower elevation swales. Along the western side, near the Pike River, the downward slope is more significant and wetlands have been mapped adjacent to the river. Ground surface elevations at our borings ranged from 679.1 feet (B-12) near the southeast corner to 666.9 feet (B-3) along the west side of the site.

3.2 SUBSURFACE SOIL PROFILE

Based on field exploration, the subsurface profile generally consists of 8 inches to 24 inches of topsoil underlain by native soils to the termination depth of the borings. The native soils primarily consisted of cohesive soils below the topsoil that extended to the depth of the borings and were characterized with interbedded granular soil layers. The exception was boring B-12, where possible fill or disturbed soils were encountered to a depth of 6 feet. The following is an additional description of the soils encountered at the boring locations below the topsoil.

Native soils: At the majority of the boring locations, a layer of lower strength sandy lean clay or clayey sand was encountered below the topsoil which extended to typical depths of 2 feet to 4 feet. However, the predominate deeper soil was stiff to hard lean clay that included seams and layers of silt, silty sand, clayey sand. Moisture contents of samples of the native cohesive soils tested ranged from approximately 12% to 34%. Soil borings were terminated in granular soil layers in boring B-1, B-2, B-3, B-8 and B-9. These granular soil layers were primarily silt, sandy silt and silty sand.

Results of the field and laboratory tests and observations are depicted on the individual boring logs included in the Appendix I this report. Soils were grouped together based on similar observed properties. The stratification lines were estimated by the reviewing engineer based on the available data and experience. The actual in-situ changes between layers may differ slightly and may be more gradual than depicted on the boring logs. Subsurface and groundwater conditions can vary between borehole locations and in areas not explored.

It is important to note that the soil observations, topsoil and strata thickness estimates were made in small diameter boreholes. Therefore, it should be understood that thicker or thinner deposits of the individual strata are likely to be encountered within other portions of the project. Furthermore, the estimation of strata thickness at a particular location can differ from person to person due to a sometimes indistinct transition between the soils encountered. Additionally, it must be recognized

that in the absence of foreign substances and/or debris within the soil samples obtained, it is sometimes difficult to distinguish between natural soils and clean soil fill.

3.3 GROUNDWATER OBSERVATIONS

Groundwater observations were typically made during and at the completion of drilling operations. In addition, some borings were left open for extended water level readings. Groundwater depths and elevations observed at the borehole locations are provided in Table 3-1.

Table 3-1 - Groundwater Measurements [a]

Boring Number	Ground Surface Elevation (ft)	Groundwater depths (ft)					
		During Drilling	Elevation	After Drilling	Elevation	Day After Drilling	Elevation
B-1	673.5	NE	-	NE [a]	-	NMR	NMR
B-2	671.3	17.5	653.8	NE [a]	-	NMR	NMR
B-3	666.9	17.5	649.4	NE [a]	-	NMR	NMR
B-4	669.7	NE	-	NE [a]	-	10	659.7
B-5	665	8	657	NE [a]	-	5	660
B-6	668.1	NE	-	NE [a]	-	6	662.1
B-7	667	13	654	NE [a]	-	9	658.0
B-8	675.7	19.5	656.2	NMR	-	1	674.7
B-9	675.1	19.5	655.6	NMR	-	NE [a]	-
B-10	675.6	NMR	-	NMR	-	2	673.6
B-11	674.5	9	665.5	9	665.5	0	674.5
B-12	679.1	NE	-	12	667.1	4	675.1

a Groundwater readings may have been obscured by bore hole cave in.

NE: Not encountered

NMR: No measurement recorded.

The water levels encountered are representative of the conditions at the time of drilling. The depth of groundwater significantly varied between the boring locations. The sloping terrain combined with the variation in soil conditions may result in a fluctuation of the depth to groundwater in other parts of the site not explored by GESTRA. Installation and monitoring of observation wells would be required to assess true groundwater elevations across the site.

Groundwater level fluctuations may occur with time and seasonal changes due to variations in precipitation, evaporation, surface water runoff and local dewatering. Perched water pockets and a higher water table may also be encountered during wet weather periods, particularly in more permeable clayey sand, silt and sand seams or granular fill material overlying less permeable clays.

4.0 ANALYSIS AND RECOMMENDATIONS

4.1 Discussion

The recommendations provided in the following sections are preliminary and are not intended for use in final design or construction. The information collected and presented herein should be used

to help develop future geotechnical services and re-evaluated when additional design information is available.

Based on conditions encountered at the site, a primary geotechnical concern identified in the borings is the presence of higher moisture content, lower strength (Qp of 1 tsf or less) clay and clayey sand generally located immediately below the topsoil. The higher moisture/lower strength material was variable but generally extended to depths of 2 feet to 4 feet below ground surface (bgs). Typically, this type of material will show instability during topsoil removal, especially during times of higher precipitation and spring thaw, and will likely require additional earthwork effort to provide a stable base for additional fill placement.

Boring B-12 encountered possible fill and trace organics at a depth of 5 to 6 feet. This may be an indication of previous fill placement or could be disturbed as a result of farming practices or drain tile. Additional exploration is recommended in this area when detailed design information is available.

Several borings were left open for extended water level readings and water levels measured were higher than during drilling operations. This included 3 boring locations, (B-8, B-10 and B-11), where water was measured within 2 feet of the existing ground surface. At the time of drilling, significant rains had occurred in the area. The typical soil profile encountered consisted of a layer of lower strength sandy lean clay or clayey sand over stiff to hard lean clay. Based on the soil conditions encountered in the borings, the extended water levels are likely the result of perched water above the stiff to hard lean clay that migrated to the borehole when it was left open and is probably not an indication of the long-term groundwater table. Further subsurface exploration is recommended when additional design information is available which may include test pits and groundwater monitoring wells especially in areas of deeper excavation or below grade structures. However, the water encountered is an indication that wet soils or isolated areas of wet or saturated soils may be present.

4.2 General Site Preparation

Site preparation should start with removal of any trees/bushes and vegetation, organic soils and topsoil. Any additional unsuitable soil/materials exposed such as buried topsoil, excessive vegetation, roots, deleterious material, soil that contains significant amounts of organics, or other unsuitable material should be removed entirely from the footprint of future buildings and pavement areas. In addition, all unused utilities (if present) should be properly removed or abandoned. Field drain tile (if present) should be properly removed or abandoned or redesigned/reconnected. Material removed from the project site should be disposed in accordance with all applicable federal, state, and local regulations. Soil should not be stockpiled near or adjacent to the excavations.

In the building slab on grade area and pavement areas, after the initial site preparation described above, we recommend a proof roll with a minimum 20-ton tri-axle dump truck, or like machinery imparting similar static loading on the soil and moving at no more than walking speed. Any areas of significant deflection during re-compaction may be disked, dried, and re-compacted if weather permits, or removed and replaced with engineered fill. A geotechnical engineer or their designated representative should be present during the proof roll in order to identify soft or unstable areas, if any, and subsequently recommend remediation procedures.

The native clay and clayey sand soils encountered below the topsoil is generally a higher moisture content, lower strength material. If the conditions observed in our borings are present throughout the site, unstable subgrade conditions may be encountered in a large portion of the project site area. Assuming conditions are similar across the site, the unstable layer exposed after topsoil removal could be between 12 inches to 24 inches thick. Difficulty may be encountered in trying to stabilize these soils, especially during wet and cold times of the year. If the project construction schedule does not allow for adequate time to rework site subgrade soils, excavation and replacement will likely be required or alternate site preparations could be considered such as chemical stabilization or utilizing geotextile fabric or geogrid and granular fill to provide a stable pavement subgrade. It should be noted that final design elevations will also impact the amount of soil correction as deeper excavations or cuts necessary for plan grades may result in removal of soft or unstable soils.

Chemical stabilization with fly ash or cement can be an effective method of creating a stable subgrade for large areas of soft unstable areas. The stabilization could be considered prior to the initial lift of fill if the native soils cannot be effectively dried or drained of water. Alternatively, the project could consider a reduced compaction requirement and include chemical stabilization at subgrade elevation.

As a general rule for new fill placement, the lift thickness should not exceed 12 inches for granular soils and 9 inches for cohesive soil and the maximum particle size should be limited to 25% of the lift thickness. New structural engineered fill should be compacted to a minimum of 95% of the modified Proctor maximum dry density value. Alternate compaction requirements, such as reduced compaction levels for lightly loaded structures, could be considered as the design elevations and structure loading is determined.

Structural soil fill should be placed a minimum of five feet beyond the edges of the new building and pavement areas, and an additional foot horizontally for each vertical foot of new fill to be placed to provide adequate lateral confinement. The inorganic site soils free of any deleterious material and debris that would be removed from excavations could be reused as structural fill; however, moisture conditioning of the material may be necessary and sorting of unsuitable soils from existing material may be required before it is placed as engineered fill.

4.3 Foundation Discussion

For preliminary planning purposes, the foundations for the proposed buildings can be supported on a typical shallow spread/strip footing system designed for a maximum net allowable soil bearing pressure of 3,000 pounds per square foot (psf) provided the recommendations in this report are followed. Spread foundations designed for a maximum net allowable soil bearing capacity of 3,000 psf should be supported by the native lean clay with a minimum Qp of 1.5 tsf or new engineered fill placed over suitable material. This recommended allowable bearing capacity is for preliminary planning purposes and alternate bearing pressures could be considered when additional design and subsurface information is available. Table 4-1 provides the depths at each of the test boring locations to the soil recommended for an allowable bearing capacity of 3,000 psf.

Table 4-1: Depth to Recommended Bearing Capacity

Boring Location	Existing Surface Ground Elevation	Estimated Depth to 3,000 psf Allowable Bearing Capacity	
		Depth (ft)	Elevation (ft)
B-1	673.5	2	671.5
B-2	671.3	2	669.3
B-3	666.9	2	664.9
B-4	669.7	2	667.7
B-5	665	2	663
B-6	668.1	2	666.1
B-7	667	1.5	665.5
B-8	675.7	4 [a]	671.7
B-9	675.1	2	673.1
B-10	675.6	1.5 [a]	674.1
B-11	674.5	6.5 [a]	668
B-12	679.1	6 [a]	673.1

a Excavation depth is below extended water level reading.

The estimated depths in the above Table provide a general idea of the depth to suitable foundation soil. The boring locations did not explore the entire property and variations from the conditions encountered in the borings should be expected. The site grading may significantly change elevations and may impact the final foundation recommendations. The final foundation recommendations should also consider the groundwater levels encountered and ability to excavate below grade.

4.4 Floor Slab Recommendations

The subgrade material evaluated and prepared according to the recommendations in this report should be suitable to support slab on grade concrete. For preliminary planning purposes, we recommend that a subgrade reaction modulus of 125 pounds per square inch per inch of deflection (pci) be used in the design of the floor slab at grade. The modulus value assumes the subgrade conditions are prepared according to the recommendations of this report and also assumes a 1-foot plate is used to determine the modulus and should be adjusted for the size of the foundation and confinement effect. We recommend that the floor slabs be suitably reinforced and designed to be separate from the foundation system in order to allow for separate movements.

We recommend the installation of a capillary moisture break directly below the slab. It should consist of at least 6 inches of clean sand or gravel with a maximum particle size of 1 inch containing no more than 10% passing the number 200 sieve (fines) and follow the recommendations of ACI 302.1, Section 4.1. If the floor slab is to include floor coverings, we recommend that the manufacturer be consulted to verify the proper incorporation of a vapor retarder. If a vapor retarder is used, we recommend it be placed in accordance with ACI 302.1 Section 3.2 and should meet the requirements of ASTM E1745. The vapor retarder should include proper sealing at

penetrations, overlap at joints, and sealing at the interface of the wall and slab and may require an adequate cushion material to prevent damage.

4.5 Storm Water Basins

We understand the project will include storm water basins, likely located along the west side for the site. However, detailed design information is not available at this time. The soil for borings B-1 through B-7 was evaluated in accordance with WDNR Conservation Practice Standard 1002 (WDNR CPS 1002), "Site Evaluation for Storm Water Infiltration". Infiltration rates for the observed soil textures were estimated based on the information provided in WDNR CPS 1002, Table 2 (dated September 2017), and are presented in the Soil-Evaluation Storm form included in Appendix I. Based on our interpretation of WDNR NR 151.12(5)(c)6.a and WDNR CPS 1002, if sandy clay loam, clay loam, silty clay loam, sandy clay, silty clay, or clay or soil with a measured infiltration rate less than 0.6 inches per hour is located within 5 feet of the native soil interface, the site is exempt from infiltration requirements. Based on the predominate soil types encountered in the borings, we anticipate the site would be classified as being exempt from infiltration. The information presented should be reviewed when final storm water basin locations and elevations are determined. Final design may require additional exploration and should also consider groundwater elevations.

4.6 Seismic Site Classification

Section 1613 of the International Building Code 2015 (IBC) was used to assign a soil site classification. Based on the native soil conditions observed and assuming these are consistent or better to a depth of 100 feet, the soil site classification **D** (stiff soil) should be used in the structural design of the proposed building. Based on site class C, and mapped spectral response acceleration S_s and S_1 for Somers, Wisconsin, the site coefficient Fa and Fv are 1.6 and 2.4, respectively.

4.7 Construction Considerations

The detailed means and method of excavation and construction should be decided by the contractor and approved by the project design team. Based on the specific site information, geotechnical exploration results and requirements for the proposed structure, the following issues should be taken in consideration during construction.

Dewatering

Water from other sources such as surface runoff from rain events should be controlled and prevented from entering site excavations. The contractor should be prepared to control the water and prevent it from accumulating in excavations or otherwise affecting construction.

During mass grading, shallow perched or trapped water should be anticipated, which can affect the grading work and the contractor should have means and methods for correcting and working with soft and/or wet subgrade soils. The contractors should also have construction dewatering plans for below grade excavations.

Excavation Stability

Caving is a common issue for excavation side walls during construction, especially if fill material, granular soils, and/or water seepage are observed. An excavation plan should be developed and the length of excavation left open should be limited to prevent caving soil from covering the suitable bearing soils.

A temporary soil retention system may also be necessary in order to prevent caving or provide support of surrounding structures or utilities during construction. Providing recommendations or designing the retention system is out of the scope for GESTRA. The contractor must comply with the federal, state, local and updated OSHA regulations during excavation and in retention system design to ensure excavation safety.

Occupational Safety and Health Act (OSHA) has instituted strict standards for temporary construction excavations. These standards are outlined in 29 CFR Part 1926 Subpart P. Excavations within unstable soil conditions or extending five feet or more in depth should be adequately sloped or braced according to these standards. Excavation safety is the responsibility of the contractor. Material stockpiles or heavy equipment should not be placed near the edge of the excavation slopes. The actual stable slope angle should be determined during construction and will depend upon the loading, soil, and groundwater conditions encountered.

Weather Implications

The subgrade soil or the soil at foundation level might become unstable with exposure to adverse weather such as rain, snow and freezing temperatures. The unstable areas due to weather exposure may require an additional undercut or stabilization and the representative geotechnical engineer should assist with the determination of the depth of additional undercut or stabilization procedure based on observation of the field condition.

Soil Sensitivity

Soil at the construction site will be exposed to moisture and disturbance from construction traffic, construction equipment and human factors. Due to the disturbance, soil may become sensitive with contact of water. Contractor should try to lessen the exposure the soil at the construction site may encounter to moisture and disturbances. Therefore, the foundations, floor slabs and pavements should be constructed immediately after the review of the representative geotechnical engineer.

5.0 EXPLORATION AND TESTING PROCEDURES

5.1 Layout and Elevation Procedures

A total of twelve (12) soil borings were completed at the locations shown on the attached Borehole Location Plan in Appendix I. GESTRA selected the boring locations, reviewed the locations with our client, and located the borings in the field. Ground surface elevations and locations were recorded by GESTRA using GPS survey equipment and referenced to NAVD83 and WISCORS Kenosha County Coordinates, respectively.

5.2 Field Testing Procedures

The boreholes were drilled using an ATV Diedrich D50 drill rig. The boreholes were initiated and advanced by using hollow stem augers. A 24-inch split spoon sample was typically collected at the surface. Borings B-1 through B-7 were sampled at continuous 2-foot intervals to depth and borings B-8 through B-12 were sampled at 2 ½ foot intervals to 15 feet and 5-foot intervals thereafter.

All representative soil samples were taken in general accordance with the “Standard Method for Penetration Test and Split-Barrel Sampling of Soils” (ASTM D1586) or “Standard Practice for Thin-Walled Tube Sampling of Soils for Geotechnical Purposes” (ASTM D1587). After each

sampling, a soil sample was retained and placed in a jar and recorded for type, color, consistency, and moisture, sealed and then transported to the laboratory for further review and testing, if required. The specific drilling method used including the depths, rig type, crew chief, are included on each of the individual boring logs as it may change for each borehole.

5.3 Laboratory Testing Procedures

After completion of drilling operations, all of the retained soil samples were transported to GESTRA's laboratory and classified by a geotechnical engineer using the Unified Soil Classification System (USCS). A chart describing the classification system used is included in Appendix I of this report. The engineer assigned laboratory testing suited to extract important index properties of the soil layers. These tests included hand penetrometer, moisture contents, Atterberg limits and mechanical analysis.

STANDARD OF CARE

Our exploration was limited to evaluating subsurface soil and groundwater conditions pertaining to the proposed project. GESTRA did not perform any environmental, chemical, or hydrogeologic testing as these were not part of our work scope.

This report should be made available in its entirety to bidding contractors for information purposes. The soil borings and site sketch should not be detached from this report. Our report is not valid if used for purposes other than what is described in the report.

All OSHA regulations such as those regarding proper sloping and temporary shoring of excavations should be followed during the entire construction process.

GESTRA has presented our professional opinions in this report in the form of recommendations. Our opinions are based on our understanding of current project information and related accepted engineering practices at the time of this report. Other than this, no warranty is implied or intended.

Sincerely,

GESTRA Engineering, Inc.

Report Prepared By:

Douglas Dettmers, P.E.
Senior Engineer

Report Reviewed By:

Md. Masud Alam, P.E.
Principal Engineer

APPENDIX I

SITE LOCATION MAP, BOREHOLE LAYOUT PLAN, TEST BORING LOGS, SOIL AND SITE EVALUATION-STORM FORMS, GENERAL NOTES AND SOILS CLASSIFICATION

Map obtained from Kenosha County GIS

= Project Site Location

GESTRA Engineering, Inc.
191 W. Edgerton Avenue
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Phone: (414) 933-7444
Fax: (414) 933-7844

Project Name & Location:
Proposed Willow Creek Residential Development
Somers, WI

Drawing Title:
Site Location Map

Project No.: 18282-10

Scale: Not to Scale

Drawing No.: 1 of 1

Prepared by: CA

Checked by: MA

Date: October 3rd, 2018

141/231

GESTRA

GESTRA Engineering, Inc.
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Project Name & Location:
Proposed Willow Creek Residential Development
Somers, WI

Drawing Title:
Borehole Location Plan

Project No.: 18282-10

Scale: 1" = 150'

Drawing No.: 1 of 1

Prepared by: CA

Checked by: DD

Date: October 3rd, 2018

SOIL BORING LOG

Gestra Engineering Inc.
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Phone: 414-933-7444, Fax: 414-933-7844

PROJECT NAME: Willow Creek Residential		DATE DRILLING STARTED: 9/20/2018	PAGE NUMBER: 1 of 1
PROJECT LOCATION: Somers, WI		DATE DRILLING ENDED: 9/20/2018	BORING NUMBER: B-1
BORING DRILLED BY: FIRM: Gestra; CREW CHIEF: M. Rhodes	FIELD LOG: A. Mughal	NORTHING: 153785	PROJECT NUMBER: 18282-10
	LAB LOG / QC: D. Dettmers	EASTING: 613416	DRILLING RIG: Diedrich D50 ATV
			DRILLING METHOD: 3¼" HSA
			SURFACE ELEVATION: 673.5 ft

Number and Type	Recovery (in)	Blow Counts	N - Value	Depth (ft)	Elevation	Soil Description and Geological Origin for Each Major Unit	USCS Classification	Graphic	Well Diagram	Unconfined Comp. Strength (Q_u or Q_p) (tsf)	Liquid Limit	Plasticity Index	Moisture Content (%)	Comments
SS - 1	24	2 2 4 6	6			TOPSOIL (8"), LEAN CLAY, black, moist 0.7 (672.8) SANDY LEAN CLAY, brown, moist, medium stiff 2 (671.5)	CL						21.7	P200 = 82%
SS - 2	24	4 7 7 9	14		670.0	LEAN CLAY, brown gray mottled to brown, moist, hard, trace sand				4.5+			16.5	
SS - 3	24	4 6 9 9	15	5			CL			4.5+			16.6	
SS - 4	24	8 12 10 20	22			8 (665.5)				4.5			17.1	
SS - 5	24	4 8 9 13	17		665.0	LEAN CLAY, gray, moist, stiff to very stiff				2.5			17.6	
SS - 6	24	4 5 7 8	12	10			CL			1.5			20.7	
SS - 7	24	4 6 8 12	14		660.0	With sand at 12ft. 14 (659.5)				1.0			11.9	
SS - 8	24	7 13 16 10	29	15		LEAN CLAY, gray, moist. hard, trace sand 16 (657.5)	CL			4.5+			11	
SS - 9		8 12 20 10	32			SANDY SILT, gray, moist to very moist, medium dense to dense	ML							
SS - 10		8 13 16 12	29	20	655.0	20 (653.5) End of Boring at 20.0 ft.								
					650.0									
				25										
					645.0									
				30										

WATER & CAVE-IN OBSERVATION DATA

▽	WATER ENCOUNTERED DURING DRILLING: NE ft.	CAVE DEPTH AT COMPLETION: NMR	WET ☐ DRY ☐
▼	WATER LEVEL AT COMPLETION: NE	CAVE DEPTH AFTER 0 HOURS: NMR	WET ☐ DRY ☐
▼	WATER LEVEL AFTER 24 HOURS: NMR		

NOTE: Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.

SOIL BORING LOG

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PROJECT NAME: Willow Creek Residential		DATE DRILLING STARTED: 9/20/2018	PAGE NUMBER: 1 of 1
PROJECT LOCATION: Somers, WI		DATE DRILLING ENDED: 9/20/2018	BORING NUMBER: B-2
BORING DRILLED BY: FIRM: Gestra; CREW CHIEF: M. Rhodes	FIELD LOG: A. Mughal	NORTHING: 153631	PROJECT NUMBER: 18282-10
	LAB LOG / QC: D. Dettmers	EASTING: 613099	DRILLING RIG: Diedrich D50 ATV
			DRILLING METHOD: 3¼" HSA
			SURFACE ELEVATION: 671.3 ft

Number and Type	Recovery (in)	Blow Counts	N - Value	Depth (ft) / Elevation	Soil Description and Geological Origin for Each Major Unit	USCS Classification	Graphic	Well Diagram	Unconfined Comp. Strength (Q_u or Q_p) (tsf)	Liquid Limit	Plasticity Index	Moisture Content (%)	Comments
SS - 1	24	2 3 4 6	7	670.6	TOPSOIL (8") 0.7 (670.6) SANDY LEAN CLAY, brown, moist, medium stiff to stiff, trace to with gravel							14.3	
SS - 2	24	6 6 10 8	16			CL						13.6	
SS - 3	24	4 6 6 6	12	5	wet silt seam at 4 ft. 6 (665.3)							13.8	
SS - 4	24	5 8 10 13	18	665.0	LEAN CLAY, brown, moist, hard 8 (663.3)	CL			4.0			21.1	
SS - 5	24	5 8 8 8	16	10	SANDY LEAN CLAY, brown, very moist, very stiff, silt seams 10 (661.3)	CL			2.0			16	P200 = 73%
SS - 6	24	3 4 5 9	9	660.0	LEAN CLAY, gray, moist, hard 12 (659.3)	CL			4.0			11.8	
SS - 7	24	7 16 25 23	41		SILT WITH SAND, gray, moist, dense 14 (657.3)	ML							
SS - 8	24	7 12 16 23	28	15	SILTY SAND, gray, moist to wet, medium dense to dense								
SS - 9	24	8 12 14 16	26	655.0 ▽		SM							
SS - 10	24	4 4 8 12	12	20	20 (651.3) End of Boring at 20.0 ft.								
				650.0									
				25									
				645.0									
				30									

WATER & CAVE-IN OBSERVATION DATA

▽	WATER ENCOUNTERED DURING DRILLING: 17.5 ft.		CAVE DEPTH AT COMPLETION: NMR	WET ☐ DRY ☐
▼	WATER LEVEL AT COMPLETION: NE		CAVE DEPTH AFTER 0 HOURS: NMR	WET ☐ DRY ☐
▼	WATER LEVEL AFTER 24 HOURS: NMR			

NOTE: Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.

SOIL BORING LOG

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PROJECT NAME: Willow Creek Residential		DATE DRILLING STARTED: 9/20/2018	PAGE NUMBER: 1 of 1
PROJECT LOCATION: Somers, WI		DATE DRILLING ENDED: 9/20/2018	BORING NUMBER: B-3
BORING DRILLED BY: FIRM: Gestra CREW CHIEF: M. Rhodes	FIELD LOG: A. Mughal LAB LOG / QC: D. Dettmers	NORTHING: 153164 EASTING: 612758	PROJECT NUMBER: 18282-10 DRILLING RIG: Diedrich D50 ATV DRILLING METHOD: 3¼" HSA SURFACE ELEVATION: 666.9 ft

Number and Type	Recovery (in)	Blow Counts	N - Value	Depth (ft) / Elevation	Soil Description and Geological Origin for Each Major Unit	USCS Classification	Graphic	Well Diagram	Unconfined Comp. Strength (Q_u or Q_p) (tsf)	Liquid Limit	Plasticity Index	Moisture Content (%)	Comments
SS - 1	12	0 1 3 4	7	665.0	TOPSOIL (8"), LEAN CLAY, dark brown, moist 0.7 (666.2) CLAYEY SAND, brown, moist, loose 2 (664.9)	SC						22.8	
SS - 2	24	5 7 8 10	15		LEAN CLAY, brown with gray mottled to brown, hard, trace sand				4.5			16.3	
SS - 3	24	3 6 13 15	19	5		CL			4.5+			16.2	
SS - 4	24	10 11 15 17	26	660.0	7.5 (659.4) LEAN CLAY, gray, moist, stiff to very stiff, trace sand				4.5			16.2	
SS - 5	24	6 8 8 9	16	10					3.5			17.9	
SS - 6	24	2 3 5 6	8	655.0		CL			1.0			14.2	
SH - 7	15				Sand seams 5" silty clay layer				0.5			14.4	
SS - 8	24	4 7 10 8	17	15	15.5 (651.4) SILTY SAND, gray, moist	SM			2.75			12.7	
SS - 9	24	12 12 12 12	24	650.0 ▽	16 (650.9) SILT, gray, moist to wet, medium dense	ML							
SS - 10	24	12 10 10 11	20	20	20 (646.9)								
					End of Boring at 20.0 ft.								
				645.0									
				25									
				640.0									
				30									

WATER & CAVE-IN OBSERVATION DATA

▽	WATER ENCOUNTERED DURING DRILLING: 17.5 ft.		CAVE DEPTH AT COMPLETION: NMR	WET ☐ DRY ☐
▼	WATER LEVEL AT COMPLETION: NE		CAVE DEPTH AFTER 0 HOURS: NMR	WET ☐ DRY ☐
▼	WATER LEVEL AFTER 24 HOURS: NMR			

NOTE: Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.

SOIL BORING LOG

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PROJECT NAME: Willow Creek Residential		DATE DRILLING STARTED: 9/19/2018	PAGE NUMBER: 1 of 1
PROJECT LOCATION: Somers, WI		DATE DRILLING ENDED: 9/19/2018	BORING NUMBER: B-4
BORING DRILLED BY: FIRM: Gestra; CREW CHIEF: M. Rhodes	FIELD LOG: J. Martinez; LAB LOG / QC: D. Dettmers	NORTHING: 152915; EASTING: 612802	PROJECT NUMBER: 18282-10; DRILLING RIG: Diedrich D50 ATV; DRILLING METHOD: 3¼" HSA; SURFACE ELEVATION: 669.7 ft

Number and Type	Recovery (in)	Blow Counts	N - Value	Depth (ft) / Elevation	Soil Description and Geological Origin for Each Major Unit	USCS Classification	Graphic	Well Diagram	Unconfined Comp. Strength (Q_u or Q_p) (tsf)	Liquid Limit	Plasticity Index	Moisture Content (%)	Comments
SS - 1	12	1 2 4 6	6		TOPSOIL (10"), LEAN CLAY, black, moist 0.8 (668.9) SANDY LEAN CLAY, brown, light brown, moist, stiff, with gravel	CL			1.0			21.1	
SS - 2	12	4 6 8 11	14		2 (667.7) LEAN CLAY, brown, moist, very stiff to hard				4.5+			17.2	
SS - 3	24	5 6 11 14	17	5 / 665.0	Silt seams at 4ft.	CL			3.5			14.2	
SS - 4	24	7 7 7 13	14		7 (662.7) LEAN CLAY, gray, moist, very stiff to hard				4.0			16.6	
SS - 5	24	13 13 12 9	25	10 ▼ 660.0		CL			2.5			21.8	
SS - 6	24	4 4 6 10	10						2.5			21.8	
SS - 7	24	6 8 11 8	19		12 (657.7) CLAYEY SAND, gray, very moist, medium dense	SC						10.7	
SS - 8	24	2 3 4 4	7	15 / 655.0	14 (655.7) SANDY LEAN CLAY, gray, very moist, stiff	CL			1.0			13.5	
SS - 9	24	5 5 4 4	9		CLAYEY SAND layer at 16 ft. 16.8 (652.9) LEAN CLAY, gray, moist, very stiff to hard, with sand and gravel	CL			2.5			18.3	
SS - 10	24	5 8 8 15	13	20 / 650.0	20 (649.7) End of Boring at 20.0 ft.				4.5+			10.4	
				25 / 645.0									
				30 / 640.0									

WATER & CAVE-IN OBSERVATION DATA

▽	WATER ENCOUNTERED DURING DRILLING: NE ft.	CAVE DEPTH AT COMPLETION: NMR	WET ☐ DRY ☐
▼	WATER LEVEL AT COMPLETION: NE	CAVE DEPTH AFTER 0 HOURS: NMR	WET ☐ DRY ☐
▼	WATER LEVEL AFTER 24 HOURS: 10 ft.		

NOTE: Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.

SOIL BORING LOG

Gestra Engineering Inc.
191 W. Edgerton Avenue
Milwaukee, WI 53207
Phone: 414-933-7444, Fax: 414-933-7844

PROJECT NAME: Willow Creek Residential		DATE DRILLING STARTED: 9/19/2018	PAGE NUMBER: 1 of 1
PROJECT LOCATION: Somers, WI		DATE DRILLING ENDED: 9/19/2018	BORING NUMBER: B-5
BORING DRILLED BY: FIRM: Gestra; CREW CHIEF: M. Rhodes	FIELD LOG: J. Martinez; LAB LOG / QC: D. Dettmers	NORTHING: 152803; EASTING: 612576	PROJECT NUMBER: 18282-10; DRILLING RIG: Diedrich D50 ATV; DRILLING METHOD: 3¼" HSA; SURFACE ELEVATION: 665 ft

Number and Type	Recovery (in)	Blow Counts	N - Value	Depth (ft)	Elevation	Soil Description and Geological Origin for Each Major Unit	USCS Classification	Graphic	Well Diagram	Unconfined Comp. Strength (Q_u or Q_p) (tsf)	Liquid Limit	Plasticity Index	Moisture Content (%)	Comments
SS - 1	12	2 3 4 5	7			TOPSOIL (12"), LEAN CLAY, black, moist								
						1 (664)								
SS - 2	12	3 3 4 6	7			LEAN CLAY, brown with gray mottled, moist, stiff to very stiff	CL			1.0			20.8	
						4 (661)				2.5			22.3	
SS - 3	18	3 4 6 9	10	5	660.0	LEAN CLAY, brown, moist, hard	CL			4.0			20.2	
						6 (659)								
SS - 4	24	8 8 12 13	20			LEAN CLAY, gray, moist, very stiff, trace gravel ribboning in sample SS-5	CL			3.0			20	Ribboning in sample SS-5
SS - 5	24	3 4 6 8	10							1.0			18.7	P200 = 47%
						9 (656)								
				10	655.0	SILTY SAND, gray, wet, medium dense, clay seams (SS-5B)	SM							
						10 (655)								
SS - 6	24	3 4 8 5	12			SILTY CLAY, gray, very moist, stiff to very stiff, wet sandy clay layers	CL-ML			1.0	19	7	14	
SS - 7	18	3 7 10 9	17			8 inches of silty sandy clay at 12 ft. (SS-7A)				2.0			14.1	P200 = 55% (SS-7A)
						13.5 (651.5)								
SS - 8	24	4 6 7 7	13	15	650.0	LEAN CLAY, gray, moist, stiff to hard, trace sand	CL			4.5+			12.9	
SS - 9	18	3 5 8 8	13							1.0			20.1	
SS - 10	18	5 7 8 10	15							3.5-4.5			13.8	
				20	645.0	20 (645)								
						End of Boring at 20.0 ft.								
				25	640.0									
				30	635.0									

WATER & CAVE-IN OBSERVATION DATA

▽	WATER ENCOUNTERED DURING DRILLING: 8 ft.	CAVE DEPTH AT COMPLETION: NMR	WET ☐ DRY ☐
▼	WATER LEVEL AT COMPLETION: NE	CAVE DEPTH AFTER 0 HOURS: NMR	WET ☐ DRY ☐
▼	WATER LEVEL AFTER 24 HOURS: 5 ft.		

NOTE: Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.

SOIL BORING LOG

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PROJECT NAME: Willow Creek Residential		DATE DRILLING STARTED: 9/19/2018	PAGE NUMBER: 1 of 1
PROJECT LOCATION: Somers, WI		DATE DRILLING ENDED: 9/19/2018	BORING NUMBER: B-6
BORING DRILLED BY: FIRM: Gestra; CREW CHIEF: M. Rhodes	FIELD LOG: J. Martinez	NORTHING: 152378	PROJECT NUMBER: 18282-10
	LAB LOG / QC: D. Dettmers	EASTING: 612622	DRILLING RIG: Diedrich D50 ATV
			DRILLING METHOD: 3¼" HSA
			SURFACE ELEVATION: 668.1 ft

Number and Type	Recovery (in)	Blow Counts	N - Value	Depth (ft)	Elevation	Soil Description and Geological Origin for Each Major Unit	USCS Classification	Graphic	Well Diagram	Unconfined Comp. Strength (Q_u or Q_p) (tsf)	Liquid Limit	Plasticity Index	Moisture Content (%)	Comments
SS - 1	9	1 4 4 4	8			TOPSOIL (24"), LEAN CLAY, black, moist							18.7	
						2 (666.1)								
SS - 2	18	2 3 3 4	6		665.0	LEAN CLAY, brown with gray mottled, moist, very stiff, with sand	CL			3.0			20	
						4 (664.1)								
SS - 3	24	3 7 9 11	16	5		LEAN CLAY, brown, moist, hard	CL			4.5			17.6	
						6 (662.1)								
SS - 4	24	5 7 7 10	14		660.0	LEAN CLAY, gray, moist, medium stiff to very stiff				3.0			18.3	
SS - 5	24	3 3 4 5	7	10						2.5			20.1	
SS - 6	18	4 5 7 6	12			With gravel at 10-12 ft.				1.0			33.6	
SS - 7	18	1 2 5 7	7		655.0	Sandy clay layer at 12-14 ft.	CL			0.5			13.5	P200 = 65 %
SS - 8	18	4 5 6 6	11	15						1.0			12.5	
SS - 9	18	4 5 6 7	11		650.0					2.0			15.3	
SS - 10	24	2 2 4 5	6	20									17.5	
						20 (648.1)								
						End of Boring at 20.0 ft.								
					645.0									
				25										
					640.0									
				30										

WATER & CAVE-IN OBSERVATION DATA

▽	WATER ENCOUNTERED DURING DRILLING: NE ft.	CAVE DEPTH AT COMPLETION: NMR	WET ☐ DRY ☐
▼	WATER LEVEL AT COMPLETION: NE	CAVE DEPTH AFTER 0 HOURS: NMR	WET ☐ DRY ☐
▼	WATER LEVEL AFTER 24 HOURS: 6 ft.		

NOTE: Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.

SOIL BORING LOG

Gestra Engineering Inc.
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PROJECT NAME: Willow Creek Residential		DATE DRILLING STARTED: 9/19/2018	PAGE NUMBER: 1 of 1
PROJECT LOCATION: Somers, WI		DATE DRILLING ENDED: 9/19/2018	BORING NUMBER: B-7
BORING DRILLED BY: FIRM: Gestra; CREW CHIEF: M. Rhodes	FIELD LOG: J. Martinez	NORTHING: 152300	PROJECT NUMBER: 18282-10
	LAB LOG / QC: D. Dettmers	EASTING: 612484	DRILLING RIG: Diedrich D50 ATV
			DRILLING METHOD: 3¼" HSA
			SURFACE ELEVATION: 667 ft

Number and Type	Recovery (in)	Blow Counts	N - Value	Depth (ft) / Elevation	Soil Description and Geological Origin for Each Major Unit	USCS Classification	Graphic	Well Diagram	Unconfined Comp. Strength (Q_u or Q_p) (tsf)	Liquid Limit	Plasticity Index	Moisture Content (%)	Comments
SS - 1	20	1 4 3 5	8		TOPSOIL (16"), LEAN CLAY, black, moist								Boring offset 20 ft. north from staked location due to gas line
					1.3 (665.7)								
				665.0	LEAN CLAY, brown with gray mottled, moist, very stiff with sand	CL			2.5			17.9	
SS - 2	24	4 5 7 10	17						4.5+			18.6	
					4 (663)								
SS - 3	24	2 6 8 11	18	5	LEAN CLAY, brown, moist, hard, trace sand	CL			4.5+			21.8	
SS - 4	24	9 15 17 20	32	660.0					4.5+			18.7	
					8.5 (658.5)								
SS - 5	24	13 10 13 13	26		LEAN CLAY, gray, moist, hard				4.5			18.4	
				10									
SS - 6		8 11 9 11	20		Sampler drove stone SS-6	CL						18	
				655.0									
					12 (655)								
SS - 7	24	7 10 11 12	23		CLAYEY SAND, gray, moist, medium dense	SC						11.1	
					13 (654)								
					SILTY SAND, gray, wet, medium dense	SM							
					14 (653)								
SS - 8	10	1 2 5 7	12	15	SANDY LEAN CLAY, gray, moist, stiff	CL						15.6	
				650.0									
					17 (650)								
SS - 9	24	3 3 4 7	11		LEAN CLAY, gray, moist, very stiff, trace sand				2.0			13.8	
SS - 10	24	5 5 11 9	20		5 inch layer of red silt	CL			3.5			14.9	
				20									
					20 (647)								
					End of Boring at 20.0 ft.								
				645.0									
				25									
				640.0									
				30									

WATER & CAVE-IN OBSERVATION DATA

▽	WATER ENCOUNTERED DURING DRILLING: 13 ft.		CAVE DEPTH AT COMPLETION: NMR	WET ☐ DRY ☐
▼	WATER LEVEL AT COMPLETION: NE		CAVE DEPTH AFTER 0 HOURS: NMR	WET ☐ DRY ☐
▼	WATER LEVEL AFTER 24 HOURS: 9 ft.			

NOTE: Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.

SOIL BORING LOG

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PROJECT NAME: Willow Creek Residential		DATE DRILLING STARTED: 9/17/2018	PAGE NUMBER: 1 of 1
PROJECT LOCATION: Somers, WI		DATE DRILLING ENDED: 9/17/2018	BORING NUMBER: B-8
BORING DRILLED BY: FIRM: Gestra CREW CHIEF: S. Gonyer	FIELD LOG: S. Gonyer LAB LOG / QC: D. Dettmers	NORTHING: 153834 EASTING: 613685	PROJECT NUMBER: 18282-10 DRILLING RIG: Diedrich D50 ATV DRILLING METHOD: 3¼" HSA SURFACE ELEVATION: 675.7 ft

Number and Type	Recovery (in)	Blow Counts	N - Value	Depth (ft) / Elevation	Soil Description and Geological Origin for Each Major Unit	USCS Classification	Graphic	Well Diagram	Unconfined Comp. Strength (Q_u or Q_p) (tsf)	Liquid Limit	Plasticity Index	Moisture Content (%)	Comments
SS - 1	14	1 2 3 4	5	675.0	TOPSOIL (13")								
					1.1 (674.6) LEAN CLAY WITH SAND, brown with gray mottled, moist, stiff	CL			1.5			19.9	
SS - 2	14	2 3 6	9		2 (673.7) CLAYEY SAND WITH GRAVEL, brown, moist, loose	SC							
					4 (671.7) LEAN CLAY, brown, moist, hard, gravel piece in sample								
SS - 3	18	8 10 17	27	5 670.0		CL			4.5+			15.4	
					6.5 (669.2) LEAN CLAY, gray, moist, very stiff to hard								
SS - 4	18	11 12 15	27						4.5+			15.2	
SS - 5	18	2 7 8	15	10 665.0					3.5			17.9	
						CL							
SS - 6	18	2 4 4	8	15 660.0	Sandy clay and sand layers							8.8	
					18 (657.7) SILTY SAND, gray, wet, dense to very dense								
SS - 7	18	12 30 42	72	20 655.0	9 inch silty clay layer in SS-7	SM							
					21 (654.7) End of Boring at 21.0 ft.								
				25 650.0									
				30									

WATER & CAVE-IN OBSERVATION DATA

▽	WATER ENCOUNTERED DURING DRILLING: 19.5 ft.	CAVE DEPTH AT COMPLETION: NMR	WET ☐ DRY ☐
▽	WATER LEVEL AT COMPLETION: NMR	CAVE DEPTH AFTER 0 HOURS: NMR	WET ☐ DRY ☐
▼	WATER LEVEL AFTER 24 HOURS: 1 ft.		

NOTE: Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.

SOIL BORING LOG

Gestra Engineering Inc.
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PROJECT NAME: Willow Creek Residential		DATE DRILLING STARTED: 9/17/2018	PAGE NUMBER: 1 of 1
PROJECT LOCATION: Somers, WI		DATE DRILLING ENDED: 9/17/2018	BORING NUMBER: B-9
BORING DRILLED BY: FIRM: Gestra CREW CHIEF: S. Gonyer	FIELD LOG: S. Gonyer LAB LOG / QC: D. Dettmers	NORTHING: 153620 EASTING: 613591	PROJECT NUMBER: 18282-10 DRILLING RIG: Diedrich D50 ATV DRILLING METHOD: 3¼" HSA SURFACE ELEVATION: 675.1 ft

Number and Type	Recovery (in)	Blow Counts	N - Value	Depth (ft)	Elevation	Soil Description and Geological Origin for Each Major Unit	USCS Classification	Graphic	Well Diagram	Unconfined Comp. Strength (Q_u or Q_p) (tsf)	Liquid Limit	Plasticity Index	Moisture Content (%)	Comments
SS - 1	18	2 4 4 4	8			TOPSOIL (12") 1 (674.1) SILTY CLAY, brown with gray mottled, moist 2 (673.1)	CL-ML			1.0			19.6	
SS - 2	18	2 7 12	19			CLAYEY SAND, brown, moist, medium dense, trace gravel, clay seams 4 (671.1)	SC						17.6	
SS - 3	8	5 6 11	17	5	670.0	LEAN CLAY, brown, moist, hard, trace sand 6.5 (668.6)	CL			4.5+			15.7	
SS - 4	18	8 8 14	22			LEAN CLAY, gray, moist, very stiff, trace to with sand				3.0			15.7	
SS - 5	18	5 6 9	15	10	665.0					3.0			16.4	
SS - 6	18	5 6 7	13	15	660.0		CL			2.5			12.2	
SS - 7	18	11 14 23	37	20	655.0	18 (657.1) SILTY SAND, gray, moist to wet, dense, clay seams 21 (654.1) End of Boring at 21.0 ft.	SM							
				25	650.0									
				30										

WATER & CAVE-IN OBSERVATION DATA

▽	WATER ENCOUNTERED DURING DRILLING: 19.5 ft.	CAVE DEPTH AT COMPLETION: NMR	WET ☐ DRY ☐
▼	WATER LEVEL AT COMPLETION: NMR	CAVE DEPTH AFTER 0 HOURS: NMR	WET ☐ DRY ☐
▼	WATER LEVEL AFTER 24 HOURS: NE		

NOTE: Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.

SOIL BORING LOG

Gestra Engineering Inc.
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PROJECT NAME: Willow Creek Residential		DATE DRILLING STARTED: 9/17/2018	PAGE NUMBER: 1 of 1
PROJECT LOCATION: Somers, WI		DATE DRILLING ENDED: 9/17/2018	BORING NUMBER: B-10
BORING DRILLED BY: FIRM: Gestra CREW CHIEF: S. Gonyer	FIELD LOG: S. Gonyer LAB LOG / QC: D. Dettmers	NORTHING: 153240 EASTING: 613591	PROJECT NUMBER: 18282-10 DRILLING RIG: Diedrich D50 ATV DRILLING METHOD: 3¼" HSA SURFACE ELEVATION: 675.6 ft

Number and Type	Recovery (in)	Blow Counts	N - Value	Depth (ft) / Elevation	Soil Description and Geological Origin for Each Major Unit	USCS Classification	Graphic	Well Diagram	Unconfined Comp. Strength (Q_u or Q_p) (tsf)	Liquid Limit	Plasticity Index	Moisture Content (%)	Comments
SS - 1	18	3 4 5 6	9	675.0	TOPSOIL (12")								
					1 (674.6)								
					LEAN CLAY, gray with brown mottled, moist, very stiff				2.0			27.5	
SS - 2	18	2 3 3	6			CL			2.0	49	33	27.3	
					4 (671.6)								
SS - 3	18	2 3 3	6	5 670.0	CLAYEY SAND, gray, very moist, loose, silty sand layers	SC							
					6.5 (669.1)								
SS - 4	18	6 8 11	19		LEAN CLAY, gray, moist, stiff to hard				1.5			17.1	
					Sand seams in SS-4, SS-5								
SS - 5	18	3 5 8	13	10 665.0					4.0			17.3	
						CL							
SS - 6	18	3 5 7	12	15 660.0					4.5			15.9	
SS - 7	18	3 3 6	9	20 655.0					2.0			18.6	
					21 (654.6)								
					End of Boring at 21.0 ft.								
				25 650.0									
				30									

WATER & CAVE-IN OBSERVATION DATA

▽	WATER ENCOUNTERED DURING DRILLING: NMR ft.	CAVE DEPTH AT COMPLETION: NMR	WET ☐ DRY ☐
▼	WATER LEVEL AT COMPLETION: NMR	CAVE DEPTH AFTER 0 HOURS: NMR	WET ☐ DRY ☐
▼	WATER LEVEL AFTER 24 HOURS: 2 ft.		

NOTE: Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.

SOIL BORING LOG

Gestra Engineering Inc.
191 W. Edgerton Avenue
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PROJECT NAME: Willow Creek Residential		DATE DRILLING STARTED: 9/17/2018	PAGE NUMBER: 1 of 1
PROJECT LOCATION: Somers, WI		DATE DRILLING ENDED: 9/17/2018	BORING NUMBER: B-11
BORING DRILLED BY: FIRM: Gestra CREW CHIEF: S. Gonyer	FIELD LOG: S. Gonyer LAB LOG / QC: D. Dettmers	NORTHING: 152809 EASTING: 613512	PROJECT NUMBER: 18282-10 DRILLING RIG: Diedrich D50 ATV DRILLING METHOD: 3¼" HSA SURFACE ELEVATION: 674.5 ft

Number and Type	Recovery (in)	Blow Counts	N - Value	Depth (ft) / Elevation	Soil Description and Geological Origin for Each Major Unit	USCS Classification	Graphic	Well Diagram	Unconfined Comp. Strength (Q_u or Q_p) (tsf)	Liquid Limit	Plasticity Index	Moisture Content (%)	Comments
SS - 1	18	3 4 4 4	8		TOPSOIL (12") 1 (673.5) SANDY CLAY, brown with gray mottled, moist, stiff, trace gravel	CL			1.0			29.5	
SS - 2	18	2 4 5	9		2 (672.5) SANDY LEAN CLAY, gray, very moist, medium stiff, trace gravel 4 (670.5)	CL						14	P200 = 60%
SS - 3	18	2 2 5	7	5 670.0	SILTY SAND, gray, very moist, loose 6.5 (668)	SM							
SS - 4	18	1 4 6	10		LEAN CLAY, gray, moist, stiff to very stiff				3.0			15	
				665.0									
SS - 5	18	3 5 8	13	10					3.5			16.3	
				660.0		CL							
SS - 6	18	2 5 6	11	15					2.0			19.3	
				655.0									
SS - 7	18	2 5 6	11	20	21 (653.5)				1.5			22.4	
					End of Boring at 21.0 ft.								
				650.0									
				25									
				645.0									
				30									

WATER & CAVE-IN OBSERVATION DATA

▽	WATER ENCOUNTERED DURING DRILLING: 9 ft.	CAVE DEPTH AT COMPLETION: NMR	WET ☐ DRY ☐
▼	WATER LEVEL AT COMPLETION: 9 ft.	CAVE DEPTH AFTER 0 HOURS: NMR	WET ☐ DRY ☐
▼	WATER LEVEL AFTER 24 HOURS: 0		

NOTE: Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.

SOIL BORING LOG

Gestra Engineering Inc.
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PROJECT NAME: Willow Creek Residential		DATE DRILLING STARTED: 9/19/2018	PAGE NUMBER: 1 of 1
PROJECT LOCATION: Somers, WI		DATE DRILLING ENDED: 9/19/2018	BORING NUMBER: B-12
BORING DRILLED BY: FIRM: Gestra; CREW CHIEF: M. Rhodes	FIELD LOG: J. Martinez	NORTHING: 152283	PROJECT NUMBER: 18282-10
	LAB LOG / QC: D. Dettmers	EASTING: 613305	DRILLING RIG: Diedrich D50 ATV
			DRILLING METHOD: 3¼" HSA
			SURFACE ELEVATION: 679.1 ft

Number and Type	Recovery (in)	Blow Counts	N - Value	Depth (ft) / Elevation	Soil Description and Geological Origin for Each Major Unit	USCS Classification	Graphic	Well Diagram	Unconfined Comp. Strength (Q_u or Q_p) (tsf)	Liquid Limit	Plasticity Index	Moisture Content (%)	Comments
SS - 1	8	2 4 4	8		TOPSOIL (12"), Lean clay, black, moist								Boring offset 20ft. north of staked location due to gas line
					1 (678.1)								
					CLAYEY SAND, brown, moist, loose, trace gravel, medium stiff (Possible FILL)							13.1	
SS - 2	18	5 5 5	10									16.2	
				675.0									
SS - 3	5	5 7 11	18	5	Possible rock at 4.5 ft. , trace to with black lean clay in SS-3							18.7	
					6 (673.1)								
					LEAN CLAY, gray, moist, stiff to very stiff, trace sand								
SS - 4	18	3 7 11	18						2.5-3.5			16.5	
				670.0									
SS - 5	18	4 5 7	12	10					2.5			18	
SS - 6	18	5 9 13	22						3.0			17.5	
				665.0		CL							
SS - 7	18	4 5 7	12	15					3.0			18.5	
				660.0									
SS - 8	18	4 6 11	17	20	With gravel in SS-8				1.0-2.0			19.3	
					21 (658.1)								
					End of Boring at 21.0 ft.								
				655.0									
				25									
				650.0									
				30									

WATER & CAVE-IN OBSERVATION DATA

▽	WATER ENCOUNTERED DURING DRILLING: NE ft.	CAVE DEPTH AT COMPLETION: NMR	WET ☐ DRY ☐
▼	WATER LEVEL AT COMPLETION: 12 ft.	CAVE DEPTH AFTER 0 HOURS: NMR	WET ☐ DRY ☐
▼	WATER LEVEL AFTER 24 HOURS: 4 ft.		

NOTE: Stratification lines between soil types represent the approximate boundary; gradual transition between in-situ soil layers should be expected.

1002-CPS-23
Division of Industry Services
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Scott Walker, Governor
Laura Gutierrez, Secretary

SOIL AND SITE EVALUATION – STORM

In accordance with SPS 382.365, 385, Wis. Adm. Code, and WDNR Standard 1002

Attach a complete site plan on paper not less than 8 ½ x 11 inches in size. Plan must include, but not limited to: vertical and horizontal reference point (BM), direction and percent of 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: Kenosha
Parcel I.D.: Multiple
Reviewed by: DD
Date: 9/27/18

Property Owner: Bear Development
Property Owner' Mail Address: 4011 80th Street
City: Kenosha State: WI Zip Code: 53142 Phone Number:

Property Location
Govt. Lot ¼ ¼ S 15 T 2 N R 22 ☑ E (or) ☐ W
Lot # | Block # | Subd. Name or CSM #
☐ City ■ Village ☐ Town Nearest Road: Sommers — County Highway E

Drainage area _____ ☐ sq .ft ☐ acres

Test site suitable for (check all that apply): ☐ Site not suitable;
☐ Bioretention; ☐ Subsurface Dispersal System;
☐ Reuse; ☐ Irrigation; ☐ Other _____

Hydraulic Application Test Method
■ Morphological Evaluation
☐ Double Ring Infiltrometer
☐ Other: (specify) _____

Soil Moisture
Date of soil borings: 9/19/18-9/20/18
USDA-NRCS WETS Value:
☐ Dry =1;
■ Normal = 2;
☐ Wet = 3.

B-1 #OBS. ☐ Pit ■ Boring Ground surface elevation. 673.5 ft. Elevation of limiting factor 657.5 ft.

Horizon	Depth ft.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frags.	% Fines	Hydraulic App Rate Inches/Hr
	0.7	10YR2/1	-	SiCL	1, F, GR	mFR	-	0-10	-	0.04
	2	10YR3/4	-	C	0, M	mFR	-	0-15	-	0.07
C	8	10YR4/3	-	C	0, M	mVFI	-	0-10	-	0.07
C	16	10YR4/1	-	C	0, M	mFI	-	0-10	-	0.07
C	20	10YR4/1	-	LS	0, SG	mFR	-	0-10	-	3.60

Comments:

B-2 #OBS. ☐ Pit ■ Boring Ground surface elevation. 671.3 ft. Elevation of limiting factor Exempt ft.

Horizon	Depth ft.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frags.	% Fines	Hydraulic App Rate Inches/Hr
	6	10YR4/4	-	SL	1, F, SBK	mFR	-	5-20	-	0.50
B	8	10YR4/3	-	C	2, M, ABK	mFI	-	0-10	-	0.07
C	10	10YR5/3	-	CL	0, M	mFR	-	0-10	-	0.03
C	12	10YR4/1	-	SC	0, M	mFI	-	0-15	-	0.04
C	20	10YR4/1	-	SL	0, M	mFR	-	0-10	-	0.50

Comments:
Wet at 17.5'

Name (Please Print)	Signature	Credential Number
Jeffrey Bruesewitz		PG-1333
Address	**Date Evaluation Conducted**	**Telephone Number**
191 W. Edgerton Ave, Milwauke, WI 53207	9/25/18	414-933-7444

SBD-10793 (R01/17)

WDNR
September 2017

B-3 #OBS. ☐ Pit ■ Boring Ground surface elevation. 666.9 ft. Elevation of limiting factor 659.4 ft. Page 2 of 3

Horizon	Depth ft.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frags.	% Fines	Hydraulic App Rate Inches/Hr
	0.7	10YR2/1	-	CL	0, M	mFR	-	0-10	-	0.03
	2	10YR4/6	-	L	0, M	mFR	-	5-20	-	0.24
C	7.5	10YR4/3	-	C	0, M	mVFI	-	0-10	-	0.07
C	12.8	10YR4/1	-	C	0, M	mFI	-	0-10	-	0.07
C	15.5	10YR4/1	-	SiL	0, M	mFR	-	0-10	-	0.13
C	20	10YR4/1	-	SL	0, M	mFR	-	0-10	-	0.50

Comments:
Wet at 17.5', with sand lenses from 15.5' to 16'

B-4 #OBS. ☐ Pit ■ Boring Ground surface elevation. 669.7 ft. Elevation of limiting factor Exempt ft.

Horizon	Depth ft.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frags.	% Fines	Hydraulic App Rate Inches/Hr
	0.8	10YR2/1	-	CL	1, F, GR	mFR	-	0-10	-	0.03
	2	10YR3/4	-	C	0, M	mFR	-	5-20	-	0.07
C	7	10YR4/3	-	C	0, M	mVFI	-	0-10	-	0.07
C	12	10YR4/1	-	C	0, M	mFI	-	0-10	-	0.07
C	14	10YR4/1	-	GRSL	1, F, SBK	mL	-	15-25	-	0.50
C	16.8	10YR4/1	-	C	0, M	mFR	-	0-10	-	0.07
C	20	10YR4/1	-	C	0, M	mFI	-	0-15	-	0.07

Comments:

B-5 #OBS. ☐ Pit ■ Boring Ground surface elevation. 665.0 ft. Elevation of limiting factor 664.0 ft.

Horizon	Depth ft.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frags.	% Fines	Hydraulic App Rate Inches/Hr
A	1	10YR2/1	-	SiCL	1, F, GR	mFR	-	0-10	-	0.04
B	4	2.5YR6/2	C, 3, P, 10YR5/6	C	1, F, ABK	mFR	-	0-15	-	0.07
C	9	10YR4/2	-	C	0, M	mVFI	-	0-10	-	0.07
C	10	10YR4/1	-	SL	0, M	mL	-	0-10	-	0.50
C	13.5	10YR4/1	-	SCL	0, M	mFR	-	0-15	-	0.11
C	20	10YR4/1	-	C	0, M	mFI	-	0-10	-	0.07

Comments:
Water at 8'

B-6 #OBS. ☐ Pit ■ Boring Ground surface elevation. 668.1 ft. Elevation of limiting factor Exempt ft.

Horizon	Depth ft.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frags.	% Fines	Hydraulic App Rate Inches/Hr
A	2	10YR2/1	-	CL	1, F, GR	mFR	-	0-15	-	0.03
B	4	10YR4/3	-	CL	0, M	mFI	-	0-15	-	0.03
B	6	10YR4/2	-	C	0, M	mVFI	-	0-10	-	0.07
C	10	10YR4/1	-	C	0, M	mFI	-	0-10	-	0.07
C	14	10YR4/1	-	SC	0, M	mFR	-	5-15	-	0.04
C	20	10YR4/1	-	C	0, M	mFR	-	0-10	-	0.07

Comments:
With sand seams from 10' to 14'

SBD-10793 (R 7/17)

Overall Site Comments:

B-7 #OBS. ☐ Pit ■ Boring Ground surface elevation. 667.0 ft. Elevation of limiting factor 658.5 ft. Page 3 of 3

Horizon	Depth ft.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frags.	% Fines	Hydraulic App Rate Inches/Hr
	1.3	10YR2/1	-	CL	1, F, GR	mFR	-	0-15	-	0.03
	2	2.5YR4/6	-	GRSCL	1, M, ABK	mFI	-	15-25	-	0.11
B	8.5	10YR5/3	C, 2, F, 10YR5/6	C	1, M, ABK	mVFI	-	0-10	-	0.07
C	12	10YR4/1	-	C	0, M	mFI	-	0-10	-	0.07
C	14	10YR4/1	-	SL	0, M	mFR	-	0-10	-	0.50
C	20	10YR4/1	-	C	0, M	mFR	-	0-15	-	0.07

Comments:
Wet at 13'

#OBS. ☐ Pit ☐ Boring Ground surface elevation. ___________ ft. Elevation of limiting factor ___________ ft.

Horizon	Depth ft.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frags.	% Fines	Hydraulic App Rate Inches/Hr

Comments:

#OBS. ☐ Pit ☐ Boring Ground surface elevation. ___________ ft. Elevation of limiting factor ___________ ft.

Horizon	Depth ft.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frags.	% Fines	Hydraulic App Rate Inches/Hr

Comments:

#OBS. ☐ Pit ☐ Boring Ground surface elevation. ___________ ft. Elevation of limiting factor ___________ ft.

Horizon	Depth ft.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frags.	% Fines	Hydraulic App Rate Inches/Hr

Comments:

Overall Site Comments: ______________________________

GENERAL NOTES

DRILLING AND SAMPLING SYMBOLS

SYMBOL	DEFINITION
HSA	Hollow Stem Auger
RWB	Rotary Wash Boring (Mud Drilling)
_FA	4", 6" or 10" Diameter Flight Auger
_HA	2", 4" or 6" Hand Auger
_DC	2 1/2" , 4" , 5" or 6" Steel Drive Casing
_RC	Size A, B, or N Rotary Casing
PD	Pipe Drill or Cleanout Tube
CS	Continuous Split Spoon Sampling
DM	Drill Mud
JW	Jetting Water
SS	2" O.D. Split Spoon Sample
_L	2 1/2" or 3 1/2" O.D. SB Liner Sample
ST	3" Thin Walled Tube Sample (Shelby Tube)
3TP	3" Thin Walled Tube (Pitcher Sampler)
_TO	2" or 3" Thin Walled Tube (Osterberg Sampler)
W	Wash Sample
B	Bag Sample
P	Test Pit Sample
_Q	BQ, NQ, or PQ Wireline System
_X	AX, BX, or NX Double Tube Barrel
CR	Core Recovery – Percent
NSR	No Sample Recovered, classification based on action of drilling, equipment and/or material noted in drilling fluid or on sampling bit.
NMR	No Measurement Recorded, primarily due to presence of drilling or coring fluid.
▽	Water Level Symbol

TEST SYMBOLS

SYMBOL	DEFINITION
MC	Moisture Content - % of Dry Wt. – ASTM D 2216
OC	Organic Content - % of Dry Wt. – ASTM D 2974
DD	Dry Density – Pounds Per Cubic Foot
LL, PL	Liquid and Plastic Limit – ASTM D 4318
	Additional Insertions
Qu	Unconfined Comp. Strength-psf – ASTM D 2166
Qp	Penetrometer Reading – Tons/Square Foot
Ts	Torvane Reading – Tons/Square Foot
G	Specific Gravity – ASTM D 854
SL	Shrinkage Limits – ASTM D 427
OC	Organic Content – Combustion Method
SP	Swell Pressure - Tons/Square Foot
PS	Percent Swell
FS	Free Swell – Percent
pH	Hydrogen Ion Content. Meter Method
SC	Sulfate Content – Parts/ Million, same as mg/L
CC	Chloride Content - Parts/ Million, same as mg/L
C*	One Dimensional Consolidation – ASTM D 2453
Qc*	Triaxial Compression
D.S.*	Direct Shear – ASTM D 3080
K*	Coefficient of Permeability – cm/sec
D*	Dispersion test
DH*	Double Hydrometer – ASTM D 4221
MA*	Particle Size Analysis – ASTM D 422
R	Laboratory Receptivity, in ohm – cm – ASTM G 57
E*	Pressuremeter Deformation Modulus – TSF
PM*	Pressuremeter Test
VS*	Field Vane Shear – ASTM D 2573
IR*	Infiltrometer Test – ASTM D 3385
RQD	Rock Quality Designation – Percent

*See attached data sheet or graph

WATER LEVEL

Water levels shown on the boring logs are the levels measured in the borings at the time and under the conditions indicated. In sand, the indicated levels may be considered reliable ground water levels. In clay soil, it may not be possible to determine the ground water level within the normal time required for test borings, except where lenses or layers of more pervious waterbearing soil are present. Even then, an extended period of time may be necessary to reach equilibrium. Therefore, the position of the water level symbol for cohesive or mixed texture soils may not indicate the true level of the ground water table. Perched water refers to water above an impervious layer, thus impeded in reaching the water table. The available water level information is given at the bottom of the log sheet.

DESCRIPTIVE TERMINOLOGY

DENSITY TERM	"N" VALUE
Very Loose	0-4
Loose	4-10
Medium Dense	10-30
Dense	30-50
Very Dense	Over 50

CONSISTENCY TERM	Unconfined Compressive Strength, (tsf)	"N" VALUE
Very Soft	<0.25	0-2
Soft	0.25 - 0.49	2-4
Medium Stiff	0.5 - 0.99	4-8
Stiff	1.0 - 1.99	8-16
Very Stiff	2.0 - 3.99	16-30
Hard	4.0+	Over 30

Standard "N" Penetration: Blows per Foot of a 140 Pound Hammer Falling 30 inches on a 2 inch OD Split Barrel Sampler

Lamination	Up to 1/2" thick stratum
Layer	1/2" to 6" thick stratum
Lens	1/2" to 6" discontinuous stratum
Varved	Alternating laminations
Dry	Powdery, no noticeable water
Moist	Below saturation
Wet	Saturated, above liquid limit
Water bearing	Pervious soil below water

RELATIVE GRAVEL PROPORTIONS

CONDITION	TERM	RANGE
Coarse Grained Soils	trace of gravel	2-14%
	with gravel	15-49%
Fine Grained Soils		
15-29% + No. 200	trace of gravel	2-14%
15-29% + No. 200	with gravel	15-29%
30% + No. 200	trace of gravel	2-14%
30% + No. 200	with gravel	15-24%
30% + No. 200	gravelly	25-49%

RELATIVE SIZES

Boulder	Over 12"
Cobble	3" - 12"
Gravel	
Coarse	3/4" - 3"
Fine	#4 – 3/4"
Sand	
Coarse	#4 - #10
Medium	#10 - #40
Fine	#40- #200
Silt & Clay	- # 200, Based on Plasticity

SOILS CLASSIFICATION FOR ENGINEERING PURPOSES

ASTM Designation: D 2487 - 83

(Based on Unified Soil Classification System)

SOIL ENGINEERING

		Criteria for Assigning GroupSymbols and Group Names Using Laboratory Tests [A]		Soil Classification[B] Group Symble	Group Name
Coarse-Grained Soils More than 50% retained on No. 200 sieve	Gravels More than 50% coarse fraction retained on No. 4 sieve	Clean Gravels Less Less than 5% fines [C]	Cu≥ 4 and 1≤ Cc ≤3[E]	GW	Well graded gravel [F]
			Cu< 4 and/or 1> Cc >3[E]	GP	Poorly graded gravel [F]
		Gravels with Fines more than 12% fines [C]	Fines Classify as ML or MH	GM	Silty gravel [F.G.H.]
			Fines classify as CL or CH	GC	Clayey gravel [F.G.H.]
	Sands 50% or more of coarse fraction passes No. 4 sieve	Clean sands Less than 5% fines [D]	Cu≥ 6 and 1≤ Cc ≤3[E]	SW	Well graded sand [I]
			Cu< 6 and/or 1> Cc >3[E]	SP	Poorly graded sand [I]
		Sands with Fines more than 12% fines [D]	Fines Classify as ML or MH	SM	Silty sand [G.H.I]
			Fines classify as CL or CH	SC	Clayey sand [G.H.I]
Fine-Grained Soils 50% or more passes the No. 200 sieve	Silts and Clays Liquid Limit less than 50	inorganic	PI >7 and plots on or above " A" line	CL	Lean clay [K.L.M]
			PI<4 or plots below " A " line	ML	Silt [K.L.M]
		organic	Liquid limit - oven dried / Liquid limit - not dried < 0.75	OL	Organic clay [K.L.M.N] Organic Silt [K.L.M.O]
	Silts and Clays Liquid Limit 50 or more	inorganic	PI plots on or above " A " line	CH	Fat clay [K.L.M]
			PI plots below " A " line	MH	Elastic silt [K.L.M]
		Organic	Liquid limit - oven dried / Liquid limit - not dried < 0.75	OH	Organic clay [K.L.M.P] Organic Silt [K.L.M.Q]
Highly organic Soils		Primarily organic matter, dark in color, and organic odor		PT	Peat
Fibric Peat > 67% Fibers		Hemic Peat 33 % - 67 % Fibers		sapric	Peat < 33% Fibers

[A] Based on the material passing the 3-in (75- mm)sieve

[B] If field sample contained cobbles or boulders, or both. add with cobbles or boulders, or both to group name

[C] Gravels with 5 to 12 % fines require dual symbols:
GW - GM well-graded gravel with silt
GW - GC well-graded gravel with clay
GP - GM poorly-graded gravel with Silt
GP - GC poorly-graded gravel with clay

[D] Sands with 5 to 12 % fines require dual symbols:
SW -SM well-graded sand with silt
SW - SC well-graded sand with clay
SP - SM poorly-graded sand with Silt
SP - SC poorly-graded sand with clay

[E] $Cu = \frac{D_{60}}{D_{10}}$ $C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$

[F] If soil contains ≥ 15% sand, add "with sand" to group name

[G] If fines classify as CL-ML, use dual symbol GC-GM. or SC-SM

[H] If fines are organic, add "with organic fines" to group name.

[I] If soil contains ≥15% gravel, add "with gravel" to group name.

[J] If Atterberg limits plot in hatched area, soil is a CL_ML silty clay
If soil contains 15 to 29% plus No. 200, add, "with sand" or " with gravel", whichever is predominent

[L] If soil contains ≥ 30% plus No.200, predominantly sand, add "sandy" to the group name

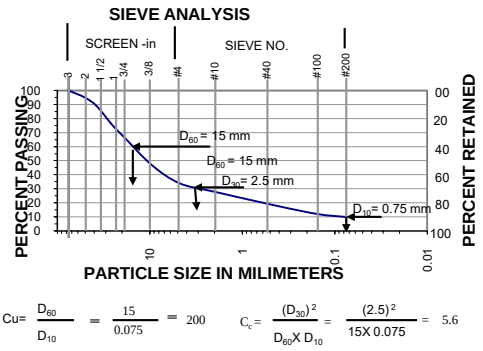
[M] If soil contains ≥ 30% plus No.200, predominantly gravel add "gravelly" to the group name

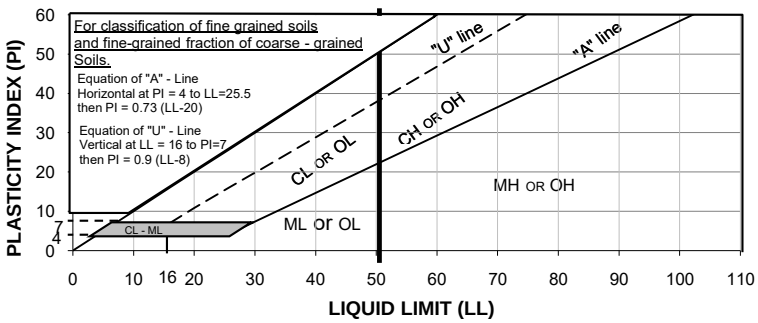
[N] PI ≥4 and plots on or above "A" Line

[O] PI < 4 or plots below "A" Line

[P] PI plots on or above "A" Line

[Q] PI plots below "A" Line





Geotechnical -Structural- Pavement - Construction Materials

SOILS CLASSIFICATION FOR ENGINEERING PURPOSES

(Based on U.S. Dept. of Agriculture & Natural Resources Conservation Service)

SOIL ENGINEERING

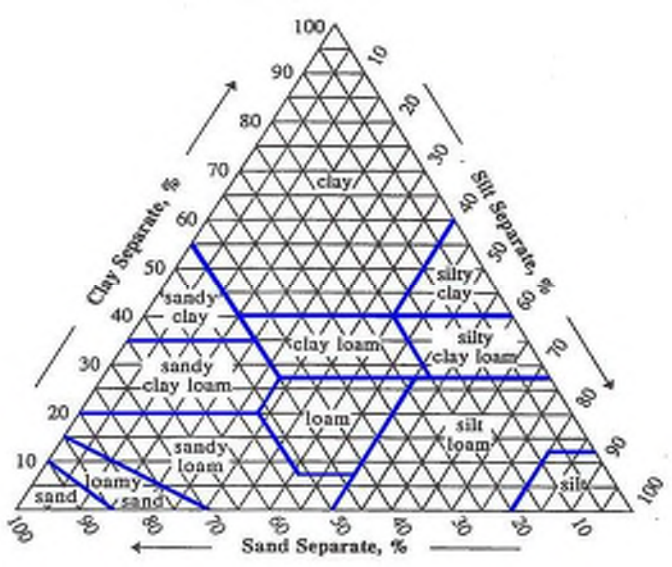
		Criteria for Assigning GroupSymbols and Group Names Using Laboratory Tests		Soil Classification Group Symble	Group Name
Coarse-Grained Soils More than 15% retained on No. 10 sieve	Rock Fragments	≥ 15% but < 35% rock fragments	> 25"	BY	Boulders
			10" < 25"	ST	Stones
			3" < 10"	CB	Cobbles
	Gravels	≥ 15% but < 35% gravel	3/4" < 3"	CGR	Coarse Gravel
			# 4 < 3/4"	MGR	Medium Gravel
			# 10 < # 4	FGR	Fine Gravel
Sands	Texture class based on Texture Triangle	Use rock fragment modifiers if > 15% retained on # 10	# 18 < # 10	VCOS	Very Coarse Sand
			# 35 < # 18	COS	Coarse Sand
			# 60 < # 35	S	Sand
			# 140 < # 60	FS	Fine Sand
			# 300 < # 140	VFS	Very Fine Sand
Fine-Grained Soils 50% or more passes the No. 300 sieve	Silts and Clays Texture class based on Texture Triangle	Use rock fragment modifiers if > 15% retained on # 10	.02 mm < .05 mm		Coarse Silt
			.002 mm < .02 mm		Fine Silt
			.0002 mm < .002 mm		Coarse Clay
			< .0002 mm		Fine Clay

[F] Use Field Book for Describing and Sampling Soils V 2.0

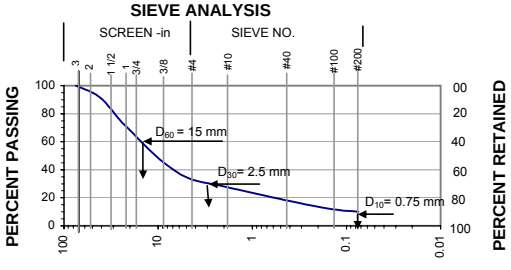
Texture Classes [F]	Code
Loamy Coarse Sand	LCOS
Loamy Sand	LS
Loamy Fine Sand	LFS
Loamy Very Fine Sand	LVFS
Coarse Sandy Loam	COSL
Sandy Loam	SL
Fine Sandy Loam	FSL
Very Fine Sandy Loam	VFSL
Loam	L
Silt Loam	SIL
Silt	SI
Sandy Clay Loam	SCL
Clay Loam	CL
Silty Clay Loam	SICL
Sandy Clay	SC
Silty Clay	SIC
Clay	C

15 < 35 %	size adjective
35 < 60 %	Very (size adj.)
60 < 90 %	Extremely (size adj.)

Texture Triangle



SIEVE ANALYSIS



APPENDIX II

LABORATORY TEST RESULTS

GESTRA Engineering, Inc
191 W. Edgerton Ave
Milwaukee, WI 53207
Phone: (414) 933-7444; Fax: (414) 933-7844

Laboratory Test Results of Atterberg Limits of Soil

Project Name:	Willow Creek	Date:	October 9, 2018
Project Number:	18282-10	Client:	Bear Development
Project Location:	Somers, WI		
ASTM Designation:	**D4318**		

Sample Information

Type of Sample	Split Spoon
Boring Number	B-5
Sample Number	6
Depth of Sample	10'-12'

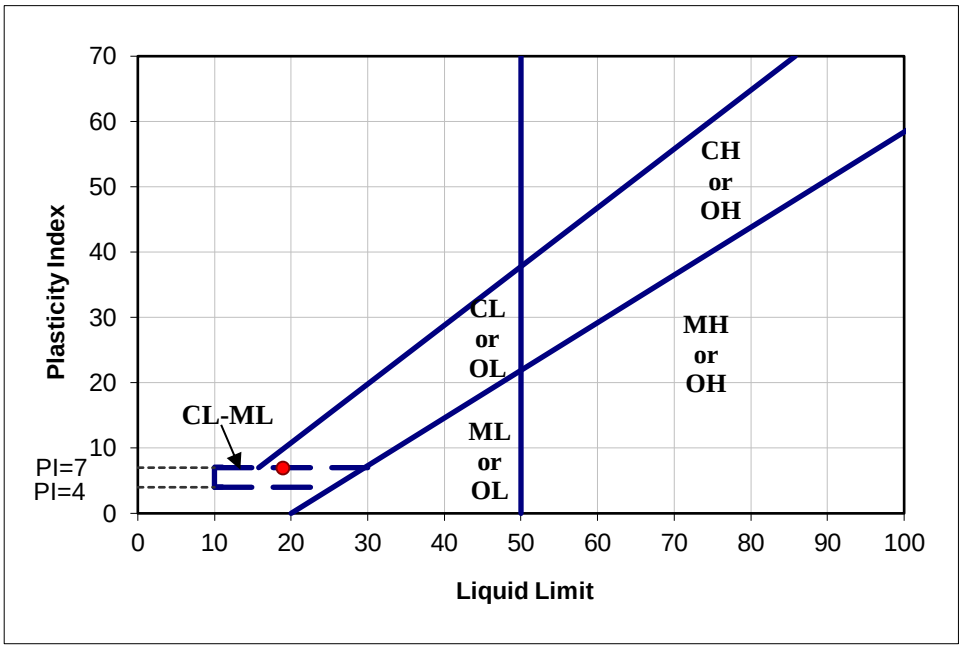
Determination of Liquid Limit

Cup Number	D17	D21	D16
Weight of Cup (g)	14.72	14.55	14.72
Weight of Wet Soil and Cup (g)	33.76	39.88	38.06
Weight of Dry Soil and Cup (g)	30.83	35.80	34.19
Moisture Content (%)	18.2	19.2	19.9
Blow Counts	31	23	17

Determination of Plastic Limit

Cup Number	D28	D8
Weight of Cup (g)	7.45	7.21
Weight of Wet Soil and Cup (g)	14.17	13.42
Weight of Dry Soil and Cup (g)	13.47	12.77
Moisture Content (%)	11.6	11.7

Compilation of Test Results



Liquid Limit	19
Plastic Limit	12
Plasticity Index	7
USCS Symbol	**CL-ML**

Performed by: B. Bills

Reviewed By: D. Dettmers

GESTRA Engineering, Inc
191 W. Edgerton Ave
Milwaukee, WI 53207
Phone: (414) 933-7444; Fax: (414) 933-7844

Laboratory Test Results of Atterberg Limits of Soil

Project Name:	Willow Creek	Date:	September 28, 2018
Project Number:	18282-10	Client:	Bear Development
Project Location:	Somers, WI		
ASTM Designation:	**D4318**		

Sample Information

Type of Sample	Split Spoon
Boring Number	B-10
Sample Number	2
Depth of Sample	2'-3.5'

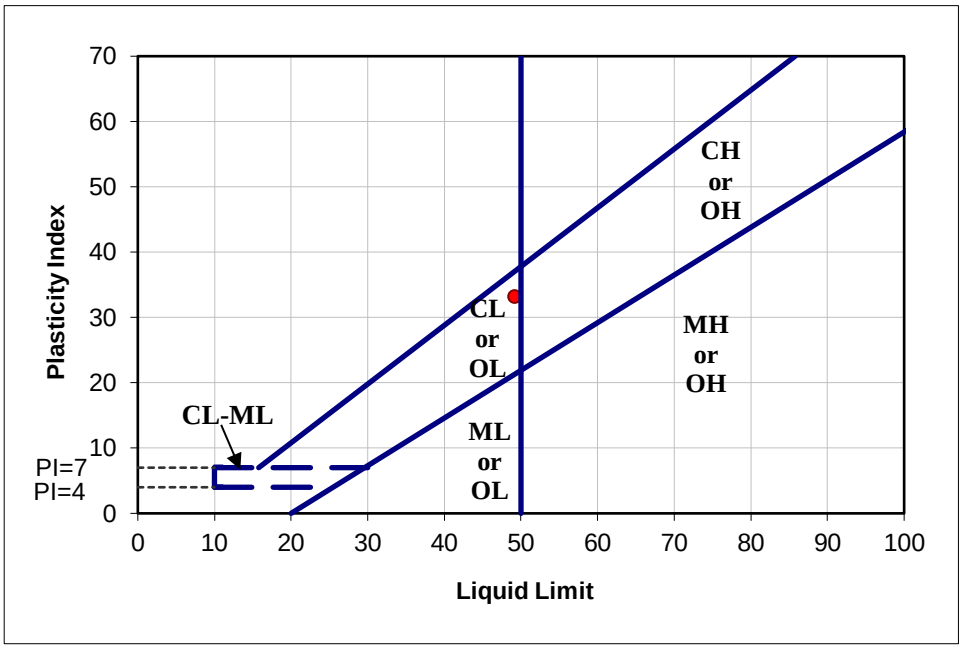
Determination of Liquid Limit

Cup Number	D11	D15	B11
Weight of Cup (g)	14.82	14.57	14.37
Weight of Wet Soil and Cup (g)	35.05	35.55	37.14
Weight of Dry Soil and Cup (g)	28.53	28.63	29.46
Moisture Content (%)	47.6	49.2	50.9
Blow Counts	35	24	15

Determination of Plastic Limit

Cup Number	D28	D13
Weight of Cup (g)	7.44	7.18
Weight of Wet Soil and Cup (g)	13.49	13.49
Weight of Dry Soil and Cup (g)	12.67	12.61
Moisture Content (%)	15.7	16.2

Compilation of Test Results



Liquid Limit	49
Plastic Limit	16
Plasticity Index	33
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Performed by: B. Bills

Reviewed By: D. Dettmers

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VILLAGE & TOWN
www.somers.org
P.O. Box 197, Somers, WI 53171 • PH: (262) 859-2822 • FAX: (262) 859-2331

VILLAGE OF SOMERS
VILLAGE BOARD
WORK SESSION ITEM MEMORANDUM

WORK SESSION: May 20, 2025

TO: Village President Stoner and Board of Trustees

PREPARED BY: Kevin Poirier, Assistant Administrator

AGENDA ITEM: #4 Discuss the possibility of sharing cost with other municipalities to hire a lobbyist to advance Bills in Congress to have municipalities get their own ZIP Code.

BACKGROUND:

Addressing the Village's ZIP Code issues was a 2022 Goal for the Village. As you are aware, Somers residents have 13 different ZIP Codes from seven different municipalities.

On Oct. 25, 2022, the Village adopted resolution 2022-017 requesting a ZIP Code Boundary Review. That application was submitted to the United States Postal Service that fall. The Boundary Review was officially denied November 2024. In December of that year, an appeal was filled with the USPS.

At the March 26, 2024, the Village voted to hire a lobbyist and shared cost with other municipalities up to $10,000 for a duration of two months. The Village was billed $9,375.00. At that time the ZIP Code Bill was stuck in the Oversight Committee. The combined efforts of the lobbyist we retained and the visit that Trustee Ostby and other representatives from our ZIP Code Advocacy Coalition was invaluable in moving the Bill out of committee. It was brought to the floor of the house. At that time Congresswoman Boebert spoke on the floor in favor of the Bill and mentioned Somers by name. A video is available at this link:
https://www.instagram.com/reel/DCnWwY-pT5U/

At the Request of US Congressman Steil, new resolutions were proposed. The Village and the Town approved Resolutions supporting Bills introduced in the 119th Congress at their respective meetings on May 13. Those new resolutions have been sent to the Congressman's office as he renews his efforts to bring our Bill to a vote.

UPDATE:

We have had regular meetings with other municipalities with ZIP Code issues to coordinate efforts. We have gathered national attention. Our coalition has grown and now include additional municipalities facing the same issue as Somers. Some of those have expressed strong interest in hiring a lobbyist again.
The hiring process would be done through a Request For Proposal in which all participating municipalities would help select a lobbyist. The final cost would be shared between participation municipalities. This would be the same process as 2024, with likely more participating municipalities.

COMMENTS:

Village Staff is looking for direction as to whether the Village is willing to spend some money on a lobbyist as they did in 2024.

ATTACHMENTS:

2025 National ZIP Code Advocacy Coalition Lobbyist Preliminary Scope of Work

CITY OF EASTVALE
12363 Limonite Avenue | Suite 910 | Eastvale, CA 91752
951.361.0900

2025 National ZIP Code Advocacy Coalition Lobbyist
Preliminary Scope of Work Draft Document

BACKGROUND

H.R. 3095 was introduced by Congressmember Lauren Boebert on April 30, 2025 to require the United States Postal Service (USPS) to designate single and unique ZIP codes for 75 cities and communities across the nation. The bill is co-sponsored by at least 26 Democrat and Republican Congressmembers. H.R. 3095 is currently referred to the House Oversight and Government Reform Committee.

Several cities listed in the bill, including the Cities of Burr Ridge, IL; Canyon Lake, CA; Castle Pines, CO; Eastvale, CA; Frederick, CO; Goose Creek, SC; Green, OH; Greenfield, WI; Industry, CA; Kinnelon, NJ; Lone Tree, CO; Mills, WY; Mount Pleasant, WI; Ocoee, FL; Somers, WI; Tehachapi, CA; Urbandale, IA; and Wilton Manors, FL, desire to collaborate with a qualified lobbyist and seek passage of H.R. 3095 in the House of Representatives, in the Senate, and then through the White House. Particularly, the interested cities are looking for a lobbyist specializing in engaging with key legislators and staffers in the House of Representatives and in the Senate.

NATIONAL ZIP CODE ADVOCACY COALITION

After facing multiple challenges in advocating for their own independent ZIP codes, the City of Castle Pines, Colorado and the City of Eastvale, California established an informal National ZIP Code Advocacy Coalition to partner with other similarly impacted jurisdictions to raise awareness. The Coalition, now chaired by both Castle Pines and Eastvale, includes more than five dozen municipalities across the nation.

Since 2023, the Coalition has been partnering with federal legislators to introduce bills in Congress, providing opportunities for impacted jurisdictions to pool together funds and resources to coordinate lobbying trips and hiring federal lobbyists, and developing resources and tools for impacted jurisdictions to garner support. Additional information regarding the Coalition can be found at https://www.eastvaleca.gov/community/national-zip-code-advocacy-coalition.

To provide additional context, Congresswoman Lauren Boebert (R-CO) introduced H.R. 8753 last year to direct the USPS to designate single and unique ZIP codes for 51 cities and communities across the nation. The bill successfully passed the House of Representatives via suspension of rules on December 11, 2024; however, the bill failed to pass the Senate via unanimous consent due to limited time before the end of the 118th Congress and due to other Senators' interest in adding their respective impacted jurisdictions to the language.

Other ZIP code bills that were introduced in the previous Congress included:

Bill (118th Congress)	**Cities**

H.R. 169	Fairlawn, VA
H.R. 696	Eastvale, CA
H.R. 860	Caledonia, WI Castle Pines, CO Eastvale, CA Hollywood, FL Miami Lakes, FL Mount Pleasant, WI Somers, WI
H.R. 3441	Silver Cliffs, CO
H.R. 4291	Goose Creek, SC
H.R. 7800	Scotland, CT
S. 278	Estero, FL Hollywood, FL Miami Lakes, FL Oakland, FL Ocoee, FL The Villages, FL
S. 4052	Scotland, CT

Regrettably, only H.R. 8753 advanced beyond the first committee, while other ZIP code bills did not progress in the previous Congress.

SCOPE OF WORK

Task 1: Lobbying Strategy Implementation
Lobbyist shall collaborate with National ZIP Code Advocacy Coalition's participating cities (Participating Cities) to implement a successful strategy with key legislators and Congressional staff to boost support of H.R. 3095 in the House of Representatives and in the Senate.

Lobbyist shall serve as the Participating Cities' advocate and liaison, helping foster and maintain strong bipartisan working relationships between the these cities and their representatives in the State legislature, with legislative committee members, State agencies and Governors' Office representatives; scheduling and facilitating meetings, preparing briefing papers and talking points, presenting testimony, preparing and submitting letters and facilitating direct communication with city officials.

On behalf of the Participating Cities, fulfill State registration and reporting requirements imposed on lobbyists as required by law.

Task 2: Lobbying Trip Coordination
The Lobbyist shall collaborate with participating cities to coordinate a lobbying trip in Washington, D.C. for the participating cities' elected officials and city officials to meet with key legislators and Congressional staff to boost support of H.R. 3095 in the House of Representatives and in the Senate. The lobbying trip shall take place before the end of Fall 2025.

Lobbyist's logistical support for lobbying trip(s) shall include developing proposed agenda and scheduling meetings with the appropriate key figures in the House of Representatives.

Task 3: Meetings and Communications

The Lobbyist shall communicate in biweekly virtual meetings with participating cities to provide updates and obtain directions when necessary. Given that the participating cities are located in different time zones across the country, evening and/or weekend meetings may be required.

Lobbyist shall provide periodic written reports (at least monthly) and present such reports to the Participating Cities' City Council/Board meetings as requested.

Task 4: Invoicing and Contract Management

The nature of this project is unique in that it includes municipalities from multiple states. While this is treated as the same project with the same Scope of Work, Lobbyist shall execute Professional Services Agreements or contracts individually with each of the Participating Cities and issue invoices to each of the participating cities separately. Lobbyist must comply with the contract terms and conditions, and invoicing requirements of each awarding agency/Participating City.

Lobbyist must fulfill any state and/or federal registration and reporting requirements imposed on lobbyists as required by law.

PROJECT TIMELINE

Once a qualified lobbyist or consultant firm is selected, the participating cities will need several weeks to obtain approval from their respective City Councils and/or City Administrators given that this project involves multiple municipalities. It is anticipated that the effective contract timeline will be from July 1, 2025 to June 30, 2026, with an option to extend for up to one additional calendar year. Participating cities may elect to amend the Professional Services Agreements to extend the project timeline if necessary.

IMPORTANT NOTES

The participating cities will equally split the total cost of the contract. Please note that not all H.R. 3095 cities may end up as participating cities. In that case, the lobbyist is only expected to report to the cities that are participating in this contract and represent the participating cities' best interest throughout the term of this contract.

PROPOSAL SUBMISSION AND REVIEW PROCESS

Interested parties and entities are encouraged to submit a proposal, which includes a detailed cost breakdown, the stated Scope of Work, and the stated project timeline, by XXX.

Commented [AF1]: Once the Scope of Work is finalized, it will be included in the formal RFP document.

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VILLAGE OF SOMERS
VILLAGE BOARD
WORK SESSION ITEM MEMORANDUM

WORK SESSION: May 20, 2025

TO: Village President Stoner and Board of Trustees

PREPARED BY: Kevin Poirier, Assistant Administrator
Ben Andersen, Fire Chief

AGENDA ITEM: #5 Discuss the possibility of a Levy Limit Referendum for the purpose of Public Safety

BACKGROUND:

The Village of Somers and the surrounding area has experienced tremendous growth over the past decade. The attractiveness of the area has brought both businesses and people to the area, some residents, some commuters, but all passing through the Village and Town of Somers and supporting local businesses.

These changes have resulted in an increase of calls to the Fire Department, which has been well document in the Annual Fire Department reports.

As you will recall, at the beginning of the year, the Village received MacMahon's Staff Needs Assessment report recommending that long term, the Village should add nine fulltime Firemedics to the department and increase pay to help recruitment and be competitive with other department in the area.

Due to state law limiting our levy, this will not be possible without a referendum to exceed the levy limit.

Village Assistant Administrator Kevin Poirier, Accountant Samone Naylor and President George Stoner attended a referendum presentation at the Ehlers' 2025 Wisconsin Public Finance Seminar this past February. Discussed were successful strategies and why so many communities have to go to referendum to fund public safety. It stressed the need for community outreach and education as a key to success.

Should the Village decide to put a referendum question on the April ballot, the Village Clerk needs to file the question in January. Public outreach should start months before that.

The Village reached out to Mueller Communications for help on the process. Village Staff has identified another company to compare cost and service. A meeting should take place next week.

UPDATE:

The following is not a recommendation and includes some very preliminary calculations. Ehlers and our assessors are working on more precise numbers and these estimates are subject to change.

Working with the Somers Fire & Rescue Department as well as the Sheriff's Office, the following are preliminary key points:

FIRE DEPARTMENT

The levy increase would allow us to add Fire and Law Enforcement staff filling immediate need in one budget cycle and allowing the Village to focus on other areas of need in the future. Fire Chief Andersen currently staffs Fire Stations with a minimum of 5 Firefighters (4 fulltime/1 Part time). This represents three at Station 1 and two at Station 2.

The addition of 8 new Firefighter/medics we would bring minimum daily staff to 7 people per day, covered by fulltime staff. Part time staff will cover vacations and sick time. Those numbers exclude the duty chief.

	Station 1	Station 2
Current	3	2
Proposed	4	3

The proposed increase would bring staffing levels up to the 3-person crew per stations that neighboring departments are requiring for automatic reciprocal aid agreements for fires. It would also give the department the ability to dispatch all 3 ambulances if needed. Somers ambulances are currently licensed to I99 level (right below paramedic and flex up to paramedic when we have a medic on duty). Eight new paramedics would allow:

- Guarantee paramedic level service and upgrade the ambulance licensure
- Ensure a safer and more effective response to fire calls
- Allow the dispatch of two ambulances, a chief officer and a fire engine immediately to car accidents without waiting for staff to come in from home.
- Reduce the dependency on paid on call staffing which is a dying system nationwide

In addition, Fire Chief Ben Andersen would like to point out that fulltime staff generally stays with the department longer than non-full-time staff so they learn more about the community and our businesses which allows them to provide better service to the community.

LAW ENFORCEMENT

Administration proposes the addition of one Sheriff shift as the Village has seen an increase in Law Enforcement activity reflected in the monthly Sheriff's Office Reports.

PLANNING

Staff proposes this question to be on the April election. When referendums are held in the Spring, Staff does not have to prepare two budgets. A Fall referendum would require that.

It has been shown that one key to successful referendum is to have a strong education campaign to inform voters in addition to strong support from elected officials. Education campaign, presentations and surveys are typically done by engaging a third-party communication firm that specialize in those efforts, which has a cost. Village Staff reached out to Mueller Communications, who provided the flyer in this packet. Another firm has been identified and has been contacted. Costs for both options will be presented to the Board at a future meeting.

Ehler will assist us in levy considerations and long-term planning. They have been asked to provide us with a report, which will be provided at a future work session.

IMPACT TO TAXPAYERS (ESTIMATED)

Between Fire and Sheriff staff increase, it is estimated that the Village should aim to increase the levy by $1.5 million.

The attached document shows the Village Mill Rate to be $3.74962.

The TID Out Assessed value of the Village is $1,179,041,800.00 according to the 2024 Statement of Real Estate Assessment. Applying the mill rate to that value comes to a TID out Levy of $4,420,958.71. Adding the $1.5 Million would bring the Levy after referendum to $5,920,958.71

Applying a simple ratio rule to those numbers, we can estimate the new Village Mill Rate to be $5.0218

This number is a **rough** estimate. A more accurate number is being prepared by Ehlers.

If that Mill Rate is correct, the impact on property taxes to the owner of a $250,000.00 would be an increase in their property taxes of about $318.00

The Levy increase could be mitigated if the Town participated in the effort. It is Staff's understanding that Towns get Sheriff coverage for free. Therefore, they would only participate in costs related to the Fire Department. It is also staff's understanding that Towns do not need to go to referendum, but can increase their levy at the Annual Town Meeting. Therefore, if the Village wanted to ask the Town to contribute, they could ask them to add a proportional amount to be determined in the event that the Village referendum passed. This could be discussed in the future at a joint session of both boards.

COMMENTS:

Administration needs direction from the Village Board as to whether they want to pursue a levy limit referendum for the purpose of Public Safety and whether they want to hire a consultant to conduct public outreach.

ATTACHMENTS:

MacMahon Needs Assessment Report Recommendation Summary

Mueller Communication Request for Information

2024 TAX INCREMENT WORKSHEET Mill Rate

Workbook General Fund Levy

2024 Statement of Real Estate Assessments

VI. SUMMARY OF RECOMMENDATIONS

The Somers Fire and Rescue Department currently operates a service-oriented department whose members are committed to providing high level service to the Village and Town of Somers. The nineteen recommendations included in this study, if implemented, can make the Fire and Rescue Department more effective and efficient and improve public safety in the communities served.

The on-going growth in Somers will continue to increase service demand. As the community continues to grow, it is imperative the impact of growth on the service demands of the fire and rescue department be considered and funding be identified to support those needs.

While service demand has increased, changes in the employment market for fire and emergency medical services personnel also continues to challenge the Somers Fire and Rescue Department. The fire and emergency medical services industry faces significant challenges in recruiting and retaining a sufficient number of people to meet employment demands. These recruitment and retention issues have put significant strain on the part-time/paid-on-premise/paid-on-call workforce. What was once a method to gain experience over a course of several years for future full-time employment in a very competitive employment market, the part-time/paid-on-premise/paid-on-call workforce is literally now being considered for full-time employment within months of completing minimum licensure and certification requirements. For decades, the Somers Fire and Rescue Department has relied on the part-time/paid-on-premise/paid-on-call workforce to support staffing its fire and rescue department. The availability of that workforce has gotten smaller in the last several years while demand for workers has increased, leaving a challenge in recruiting and retaining workers and forcing fire and rescue departments across the Country to evaluate how they staff and compensate their first responders.

Summary of Recommendations	
1	It is recommended the structure of the fire and rescue department's command staff structure be transitioned from a fire chief, a deputy chief, 5 captains and 3 lieutenants to a fire chief, a deputy chief, 4 captains and 3 lieutenants as positions are vacated through attrition.
2	MCMAHON recommends the Department set a long-term staffing goal of four personnel on duty at Station 1 and three personnel on duty at Station 2. This allows for a total of seven licensed/certified personnel on duty per day. This will require a total of twenty-three full-time positions in the Fire and Rescue Department. Currently, there are fourteen full-time positions in the Department.
3	MCMAHON recommends that the department consider transitioning the responsibilities for day-to-day operations to the Deputy Chief to allow the chief to concentrate on administrative responsibilities. Once the specific roles and responsibilities for the position are identified, the Fire Chief should ensure they are documented, communicate those responsibilities to the entire Department and monitor performance through the annual performance evaluation process.
4	The Department should continue to plan for a reduction in reliance on part-time/paid-on-premise and paid-on-call staff in the future expecially as the community continues to grow. Until such a time that additional full-time staff can be funded and hired, Recommmendations 5, 6 and 7 (below) regarding part-time/paid-on-premise and paid-on-call personnel should be implemented.
5	MCMAHON recommends pay rates for part-time/paid-on-premise and paid-on-call personnel be raised to between $20 and $25 per hour depending on qualifications to remain competitive with other area departments.
6	A maximum number of paid-on-premise personnel paid to be on-duty should be set for the fire and rescue department. Currently paid-on-premise personnel are allowed to work anytime, resulting in a varying staffing level, which, at times, is more than is necessary.
7	The Department should review the practice of compensating personnel who are not certified or licensed to function as a firefighter or emergency medical services provider to work at the fire station, attend training and respond to calls and alternatively reserve these funds to staff additional certified/licensed personnel. Additionally, personnel who are not licensed or certified as firefighters and EMS providers should be transitioned to an unpaid intern program that is thoroughly vetted by legal counsel before implementation.
8	MCMAHON recommends the fire department complete an all-hazards risk assessment.

9	MCMAHON recommends that the fire department develop a Standard of Cover that includes response time goals and measure and report on performance to the Village Board.
10	MCMAHON recommends that a strategic plan be developed for the Department that is consistent with the community master plan.
11	It is recommended that the Department start evaluating response times using both the average and 90% method rather than just the average method.
12	It is recommended the Town Ordinances be updated to reflect that the Village of Somers Fire and Rescue Department provides services to the Town of Somers.
13	It is recommended that the Village and Town evaluate an exception in State Administrative Code SPS 314 that allows for a specific set of occupancy types to be inspected at least once per calendar year provided the interval between inspections does not exceed 15 months (SPS 314.01(13)(b)5) and update the Village and Town Ordinances if changes to the current inspection frequency are acceptable to the Village and Town Boards.
14	It is recommended the Fire Chief update local ordinances to ensure the ordinance(s) reflect fire code currently enforced in the communities served.
15	It is recommended that job descriptions be adopted for all positions and reviewed regularly.
16	It is recommended that a Safety Committee be established in accordance with SPS 330.
17	Once a consistent staffing of, at minimum, three personnel in each station can be achieved, MCMAHON recommends Somers re-engage neighboring departments in seeking opportunities for automatic aid responses for structure fires and other major emergencies.
18	It is recommended that at least 16 personnel be dispatched to a report of a structure fire by the National Fire Protection Association Standard.
19	It is recommended a plan be developed to ensure each Standard Operating Guidelines is reviewed for needed updates on a cycle of approximately three years.

MUELLER COMMUNICATIONS

VILLAGE OF SOMERS

PUBLIC SAFETY REFERENDUM

ALLOW US TO

INTRODUCE OURSELVES

At Mueller Communications, we are a full-service team of seasoned, well-connected marketing, communications and creative experts.

We leverage decades of experience in communications and marketing to help organizations, leaders and influencers amplify their great work. With integrity at the heart of all we do, our team of strategic communicators and problem solvers **strives to do the right thing for our clients and our communities.**

Across industries and geographies, our comprehensive communications and marketing services consistently deliver measurable results to support the individuals and organizations who are making a difference.

STRATEGY

AT THE **CENTER** OF ALL WE DO

Everyone has a story to tell and challenges to overcome. Whether you have good news to promote or a challenging situation to manage, we have the right team to be your strategic partners.

At Mueller Communications, there is no “one size fits all.” We tailor our approach to each individual client, circumstance and initiative, leveraging decades of experience in public relations, marketing, website development and creative design.

At Mueller Communications, we take a 360° approach to communications to ensure the **right message** is delivered to the **right audience** at the **right time.**

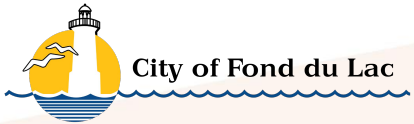
MEET TEAM MUELLER

Our deep bench of big picture thinkers, detail-oriented doers and creative problem solvers are **the best in the business.**

MUELLER COMMUNICATIONS

PREVIOUS EXPERIENCE

Mueller Communications has provided support to a number of municipalities who have gone to referendum. Below is a sampling of communities we've worked with on similar referendum education campaigns:



OUR PROCESS

THREE PHASE

PROCESS

PHASE I: OPTIONS ASSESSMENT

PHASE II: COMMUNITY SURVEY

PHASE III: PUBLIC EDUCATION INITIATIVE

APPROACH

Our preferred approach to referenda includes a three-step process that takes place over the course of 9-12 months and provides opportunities for broad public engagement, education and dialogue.

We work with each community to customize an approach to fit their needs.

PHASE I

OPTIONS ASSESSMENT

Timeline: 7-10 weeks

In this first phase, our team works with Village staff to **review data, develop charts and define both the challenge facing the community and its options to fund a solution** as appropriate. The goal is to ensure complete, digestible information is available to community members as they evaluate a comprehensive set of solutions.

Phase I culminates with the development and presentation of a comprehensive Options Assessment report that can be posted online and used to **educate residents about the community's challenges and the options available to address them**, likely including a potential referendum to increase property taxes.

This report includes narrative, visual and graphical representations of the key findings of our data analysis.

DELIVERABLES:

- Report
- Designed presentation deck
- Website content
- News release
- Social media content
- Key messages, FAQs

PHASE II

COMMUNITY SURVEY

Timeline: 8-10 weeks

In Phase II, Mueller Communications partners with a **third-party vendor to develop a survey designed to educate and to seek community feedback and engagement.** Surveys are sent to all households in the Village, and:

- Include a cover letter explaining the challenge and need for a funding solution, drawn from and referring to the Options Assessment;
- Encourage respondents to participate online by using a unique survey access code provided that ensures no one can take the survey more than once;
- Enable those without internet access to complete the survey on paper and return it by mail;
- Include questions that secure survey respondent feedback on various potential priorities, funding solutions, and/or funding levels; and
- Determine what additional materials or information would support the respondent understanding or supporting the plan.

In addition to collecting feedback, **the survey process also serves as a key educational opportunity** as it highlights key data points driving the challenge – increasing awareness of the situation at hand. Final results, including a comprehensive analysis, can guide municipalities' course of action and can shed light on community preference for various funding options.

PHASE III

REFERENDUM EDUCATION

Timeline: 12-16 weeks

If elected officials opt to move forward with a referendum, Mueller creates and executes a public information and education campaign that clearly articulates for voters the need for additional resources and the impact to the community if the referendum passes or fails.

Outreach Plan & Strategy: Based on the information outlined in the Options Assessment and the solution being pursued by the Village, we develop and refine a communications strategy that may include the following key elements.

Communications Materials: We work to develop clear and concise materials that effectively communicate key information about the referendum:

- Key messages for use in ensuring consistent communication across all outreach methods;
- A fact sheet that explains the situation and the necessity for the referendum; and
- FAQs to help disseminate facts and dispel any misconceptions about the need for the referendum, what the funding would be used for, and the process taken thus far.

THE GOAL:

An informed and engaged electorate.

Municipalities and departments cannot advocate for a specific outcome in an election - or a referendum. Rather, they can **educate and encourage community members to make an informed decision.**

PHASE III

REFERENDUM EDUCATION

Timeline: 12-16 weeks

OUTREACH APPROACHES

We will take key information from communications materials and leverage it to develop and distribute information to the community. Examples of the outreach we might recommend include:

- **Direct Mail:** We will develop and distribute three direct mail pieces to all residences in your community. Each mailer would provide key information about the referendum, as well as links for more information.
- **Posters / Displays:** We will develop informational graphics and/or posters that can be printed and displayed in municipal buildings and shared across social media channels, as appropriate.
- **Presentation Deck:** We will develop a presentation that can be used by officials to explain the referendum at community meetings (in-person and/or online).
- **Information Sessions:** We will work with Village officials to schedule public information sessions to provide an opportunity to share the need for the referendum and allow residents to ask questions. The sessions would be promoted in advance and recorded, as technology allows, to be made available for later viewing.
- **Community Presentations:** We will work with you to identify opportunities to speak to local community organizations about the referendum (e.g. local Rotaries, Chambers of Commerce).

PHASE III

REFERENDUM EDUCATION

Timeline: 12-16 weeks

ONLINE PRESENCE

- **Website:** We will develop content for a landing page that would serve as the hub for information on the referendum including the fact sheet, mailers, an online FAQ and contact information where additional questions can be directed.
- **Social Media:** We will work with you to develop content that can be regularly posted on social media channels to inform the community about the need for the referendum. We will also provide a response guide that identifies likely questions and suggested answers that officials can use in responding to online engagement.
- **Paid Advertising:** We will work with you to develop engaging content to leverage as digital advertising, specifically targeted to reach residents of voting age in Somers.
- **Email / eNewsletter:** We will develop content that can be used as part of regular email or eNewsletter distributions, as appropriate.

EARNED MEDIA

To secure coverage in the local media about the referendum, we work with municipal teams to develop and distribute news releases and media pitches as appropriate. Mueller Communications will also assist with media interview coordination.

We will work closely with you to understand the needs of your community and develop a detailed timeline to meet your needs. We have included the following high-level sample timeline targeting a potential April 2026 referendum vote:

PHASE I: OPTIONS ASSESSMENT | JUNE - AUGUST 2025:

- Village provides all existing materials / data to Mueller Communications
- Mueller reviews relevant studies and data
- Mueller develops a list of questions / prompts to identify any additional information required
- Mueller facilitates a process to prioritize the specific challenges and potential solutions facing the Village that would be assessed in the Options Assessment report
- Mueller develops, refines and finalizes Options Assessment
- Mueller drafts, designs and finalizes collateral materials for Options Assessment rollout including key messages, FAQs, fact sheet, talking points, news release and website language
- Options Assessment presented to Village Board, shared with members of the public and local media
- Mueller and Somers teams meet with survey vendor to begin developing a community survey

TIMELINE

PHASE II: SURVEY | SEPTEMBER - NOVEMBER 2026:

- Survey vendor develops and finalizes survey
- Village provides addresses for all households to survey vendor
- Mueller develops communications materials to promote survey, including news release, website copy, social media materials
- Mueller develops FAQs for Village staff to refer to if community members have questions about the survey
- Survey distributed, responses collected and analyzed
- Survey results presented to the Village, members of the public and the media

IF THE VILLAGE OPTS TO MOVE FORWARD WITH A REFERENDUM, MUELLER COMMUNICATIONS WILL REFINE A REFERENDUM EDUCATION CAMPAIGN BUDGET AND TIMELINE. THAT EFFORT MAY INCLUDE:

PHASE III: REFERENDUM EDUCATION | DECEMBER - APRIL 2026:

- Partner with Village staff and financial advisor to draft and refine referendum language for presentation to the Village Board
- Refine content on landing page, FAQs and fact sheet
- Content for up to three direct mail pieces developed and finalized and distributed by mail
- Ongoing media outreach, as appropriate
- Information session(s) scheduled and facilitated, presentation and talking points prepared for spokespeople
- Ongoing web and social media updates
- Presentations to community groups scheduled and facilitated

TIMELINE

BUDGET

ESTIMATE

PHASES I & II

Professional Fees Phases I & II: **$40,608**
Will be based on actual fees, not to exceed this amount, based on current understanding of the scope of work

Administrative and Technical Fee: **$3,046**

Survey Fees & Expenses, Third-Party:** **$20,119**
Professional fees for third-party service provider, estimate to print and mail a four-page, full-color community survey to all households in the Village of Somers (approx. 3,300 households)

- Professional Fees Estimate (survey vendor): $14,200
- Printing/Mailing Estimate: $5,385
- Paper Survey Data Entry, Postage: $535
  Surveys that are mailed in require manual entry. The survey company charges $1.80 / survey. The estimate is based on 9% of households completing their survey in hard copy.

Total Phases I & II Budget **$63,773**

PHASE III*

**If the Village of Somers moves forward with a referendum, Mueller Communications will refine a budget for public education efforts. This estimate is inclusive of professional fees to execute the comprehensive public education campaign outlined in the recommended approach, as well as anticipated third-party media spend, videography support and printing and mailing expenses.*

Estimated Phase III Budget **$43,000**

We will work with you to refine our scope of work and budget to best meet the needs of your community. This proposed budget is based on the scope of work outlined above.

***These third-party costs are projections as of May 2025 and may be subject to change. We have preferred vendors we frequently work with and who we know are efficient and affordable. We are happy to work with other vendors, but note that it may take additional time to coordinate and their pricing may be different than we have estimated here.*

CITY OF FOND DU LAC

Joe Moore

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LEAGUE OF WIS. MUNICIPALITIES

Jerry Deschane

Executive Director
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VILLAGE OF RICHFIELD

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CITY OF PORTAGE

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OUR REFERENCES

CASE STUDIES

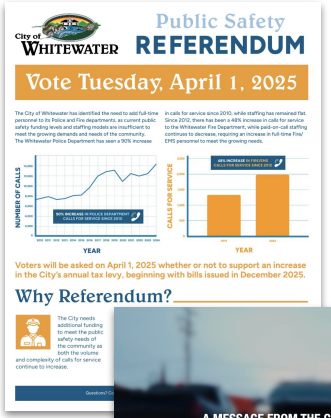
RELEVANT EXPERIENCE

CASE STUDY

CITY OF WHITEWATER

Due to an increase in calls for service, the City of Whitewater identified a need to hire additional, full-time personnel for its Police and Fire departments. The City asked voters via referendum whether or not they'd support an **increase in the property tax levy by $1.3 million to fund five additional police officers, a dispatcher, two cross-trained firefighters/EMTs, and their necessary equipment.**

To help voters understand the importance and implications of the police and fire/EMS referendum, Mueller led a strategic public education campaign. This included crafting clear **key messages, developing fact sheets and FAQs, and producing a range of informative materials**. In collaboration with the City of Whitewater, Mueller also created an **educational video,** for online advertising**,** featuring police, fire, and city personnel; wrote **website content**; and **developed three direct mail pieces, social media posts, and presentation materials for community information sessions** – all aimed at ensuring Whitewater residents were well-informed about the referendum on their ballot.



Ultimately, **residents in the City of Whitewater voted to approve an increase in the property tax levy** to fund additional police and fire/EMS staff and their necessary resources, enabling the City to meet the growing demands of the community and provide the high quality services its residents expect and deserve.

CASE STUDY

CITY OF MONONA

Despite running lean and being on solid financial footing, after years of growing demands and growing costs to provide services and without proportional increases in revenue, the City of Monona **faced budget challenges just maintaining existing services**.

To educate its community about the complex financial challenges it faced and work toward a solution, the City of Monona partnered with Mueller Communications to engage in a **three-phase, 11-month public education campaign** that began with a **comprehensive report presented to the Council**, continued with a **community-wide survey mailed to each household** in Monona to secure input from residents, and concluded with a **referendum-specific education campaign** once a referendum question was placed on Nov. 2024 ballots.

Mueller worked with the City to leverage a variety of communications tactics that help **ensure Monona residents received information about the referendum wherever they get their news**, including through direct mail, information session presentations, posters at key locations, social media content and traditional news media. Throughout the fall, Mueller continued to work closely with the City to manage topical questions and concerns, including about how other Dane County communities are facing similar challenges and about how the Monona-Grove School District funding situation is separate from the City.

As a result of the campaign, electors in the City of Monona ultimately voted to approve the increase in the property tax levy on the November 2024 ballot and increase funding to maintain existing City services.

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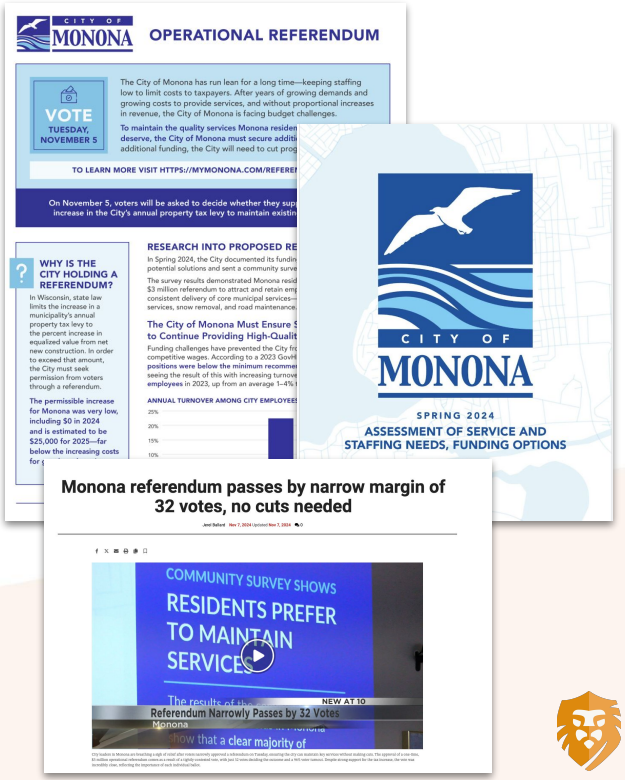


CASE STUDY

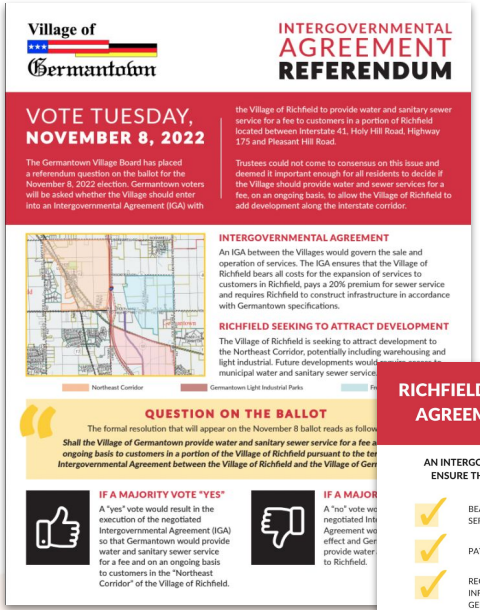
VILLAGE OF GERMANTOWN

The Villages of Germantown and Somers commissioned studies from hydrogeologists that provided insight on the potential impacts and benefits of extending services from Germantown Water and Sewer Utilities to new paying customers in Somers.

The Village of Germantown worked with Mueller Communications between August 2022 and November 2022 to **educate the community on the need for a referendum question to consider whether to approve an Intergovernmental Agreement (IGA)** on November 8, 2022 that would determine whether the Village should provide water and sanitary sewer service for a fee to customers in a portion of the Village of Somers.

Mueller created and executed an educational outreach campaign that included the development of educational materials, including key messages, fact sheets and infographics, and updates to the Village of Germantown website that clearly conveyed the situation. With materials developed, the team prepared two direct mail pieces, drafted posts to share across Germantown social media channels, and created an informational presentation to share with community groups and city council members.

Electors in the Village of Germantown voted to approve the IGA, allowing Germantown to provide water and sanitary sewer service for a fee and on an ongoing basis to customers in the Northeast Corridor of the Village of Somers, ultimately expanding Germantown's water and sewer services customer base.


Village of Germantown

INTERGOVERNMENTAL AGREEMENT REFERENDUM

VOTE TUESDAY, NOVEMBER 8, 2022

The Germantown Village Board has placed a referendum question on the ballot for the November 8, 2022 election. Germantown voters will be asked whether the Village should enter into an Intergovernmental Agreement (IGA) with the Village of Richfield to provide water and sanitary sewer service for a fee to customers in a portion of Richfield located between Interstate 41, Holy Hill Road, Highway 175 and Pleasant Hill Road.

Trustees could not come to consensus on this issue and deemed it important enough for all residents to decide if the Village should provide water and sewer services for a fee, on an ongoing basis, to allow the Village of Richfield to add development along the interstate corridor.

INTERGOVERNMENTAL AGREEMENT

An IGA between the Villages would govern the sale and operation of services. The IGA ensures that the Village of Richfield bears all costs for the expansion of services to customers in Richfield, pays a 20% premium for sewer service and requires Richfield to construct infrastructure in accordance with Germantown specifications.

RICHFIELD SEEKING TO ATTRACT DEVELOPMENT

The Village of Richfield is seeking to attract development to the Northeast Corridor, potentially including warehousing and light industrial. Future developments would

Northeast Corridor | Germantown Light Industrial Parks

QUESTION ON THE BALLOT

The formal resolution that will appear on the November 8 ballot reads as follow

Shall the Village of Germantown provide water and sanitary sewer service for a fee a ongoing basis to customers in a portion of the Village of Richfield pursuant to the te Intergovernmental Agreement between the Village of Richfield and the Village of Ger

IF A MAJORITY VOTE "YES"

A "yes" vote would result in the execution of the negotiated Intergovernmental Agreement (IGA) so that Germantown would provide water and sanitary sewer service for a fee and on an ongoing basis to customers in the "Northeast Corridor" of the Village of Richfield.

IF A MAJOR

A "no" vote w negotiated Int Agreement w effect and Ger provide water to Richfield.

RICHFIELD SEWER AND WATER AGREEMENT REFERENDUM

AN INTERGOVERNMENTAL AGREEMENT WILL ENSURE THAT THE VILLAGE OF RICHFIELD:

- BEARS ALL COSTS FOR THE EXPANSION OF SERVICES TO CUSTOMERS IN RICHFIELD
- PAYS A 20% PREMIUM FOR SEWER SERVICE
- REQUIRES RICHFIELD TO CONSTRUCT INFRASTRUCTURE IN ACCORDANCE WITH GERMANTOWN SPECIFICATIONS.

Village of Germantown

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CASE STUDY

CEDARBURG FIRE DEPARTMENT

The City and Town of Cedarburg's joint Cedarburg Fire Department was staffed, almost entirely, by volunteers until January 1, 2024 when the communities opted to shift to a paid-on-call model. This shift was one of several efforts undertaken to help address the Department's increasing demand for service and decreasing staffing.

CFD worked with Mueller Communications from August 2023 through April 2024 to educate the community **on the need for additional funding to support additional full-time firefighter-paramedic staff**. This education was done in three phases: first through a comprehensive report identifying potential funding options, then through an educational survey aimed to secure community input on referendum viability, and finally through a referendum education campaign targeting residents in both communities.

Following the 9-month effort – which included community information sessions, media outreach and news coverage, social media content, website content, direct mail, Town newsletters, and a video ad playing before each show at the Rivoli Theatre – **voters in both the City and Town of Cedarburg approved increases** in the property tax levies, allowing CFD to **add eight new firefighter-paramedics, maintain funding for two existing full-time staff members, and transition the Fire Chief to a full-time role.**

CASE STUDY

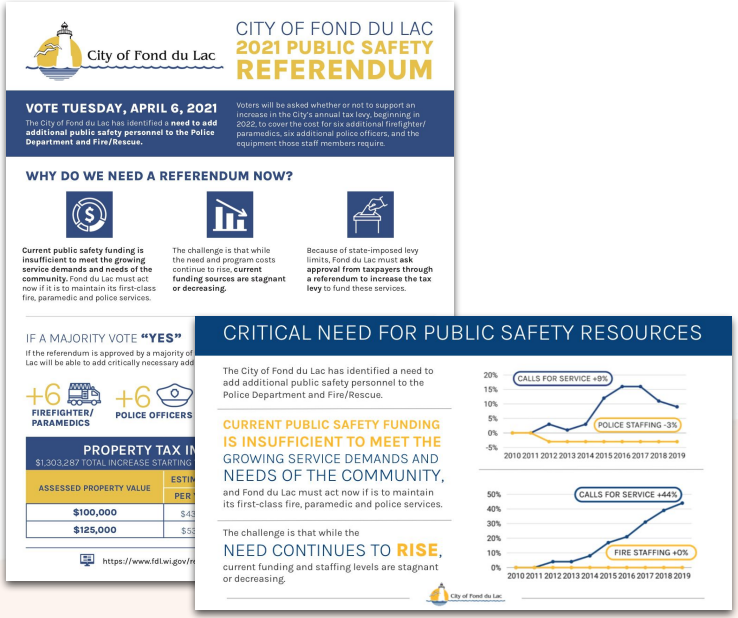
CITY OF FOND DU LAC

Stagnant funding and increasing demand for public safety services **threatened the City of Fond du Lac's ability to provide local fire and paramedic services and to adequately staff its police department** to meet all responsive and preventative responsibilities.

Fond du Lac worked with Mueller Communications between December 2020 and April 2021 to **educate the community on the need for a public safety referendum** on April 6, 2021.

Mueller created and executed a campaign that included the development of educational materials, including key messages, fact sheets and infographics, and informational posters, and updates to the City of Fond du Lac website that clearly conveyed the situation. With materials developed, the team prepared three direct mail pieces, drafted posts to share across Fond du Lac social media channels, and created informational presentations for the City Administrator, Police Chief and Fire Chief to share with community groups and city council members.

Electors in the City of Fond du Lac ultimately voted two-to-one to approve the increase in the property tax levy, allowing Fond du Lac to add six new police officers, six new firefighters/paramedics and the equipment needs for each new staff member.



CASE STUDY

CITY OF PORTAGE

The City of Portage was faced with paying high fees for third-party EMS services that provided limited opportunities for local control. The City unexpectedly received significant invoices from Aspirus, its third-party provider, for ambulance service. Challenged by these unexpected costs, and a lack of control in optimizing service to residents, the Portage Fire Department considered alternate service models, while seeking to minimize the impact on taxpayers.

The City of Portage worked with Mueller Communications between August 2023 and February 2024 to **educate the community on the need for a referendum question to approve an increase in the City's annual tax levy** on February 20, 2024 that would determine whether the City could build a fire-based EMS service model.

Mueller created and executed a public education campaign that included the development of educational materials, including key messages, fact sheets and infographics, and updates to the City of Portage website to share the benefits of a fire-based EMS system with the community. In addition, the team created two direct mailer pieces to educate the community, drafted and designed posts to be shared on Portage social media pages, and created an informational presentation to share with community groups and city council members.

Electors in the City of Portage voted to approve the referendum, allowing the City of Portage to build the fire-based EMS service that will ensure full control over efficiencies and effectiveness, designing and implementing the best EMS services to meet the needs of the Portage community.

CASE STUDY

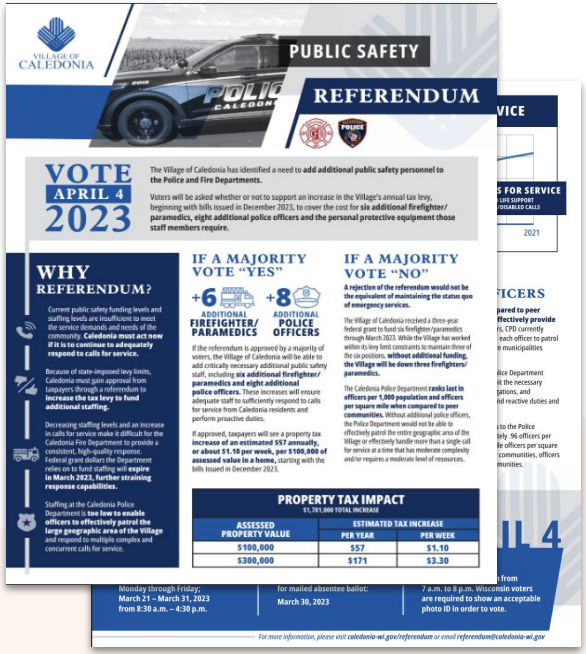
VILLAGE OF CALEDONIA

Due to insufficient public safety funding and growing current service demands, the Village of Caledonia identified a need to add additional full-time personnel to its police and fire departments.

Caledonia worked with Mueller Communications from December 2022 through April 2023 to educate the community **on the need for a public safety referendum** ahead of the April 4, 2023 vote.

Mueller worked closely with the Village of Caledonia to create comprehensive messaging and frequently asked questions to cascade through education materials, including key messages, fact sheets and infographics, and informational posters, and updates to the Caledonia website that clearly conveyed the situation. Mueller also created two direct mail pieces, drafted social media posts to share across Caledonia channels, and executed an on-site video shoot for a social media ad to reach Caledonia voters up until days before the election. Mueller Communications also designed informational presentations for the Village Administrator, Police Chief and Fire Chief to share with community groups and Village Board members

Electors in the Village of Caledonia ultimately voted to approve the increase in the property tax levy, allowing Caledonia to **add eight new police officers, six new firefighters/paramedics and the equipment needs for each new staff member**.



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CASE STUDY

SOUTH MILWAUKEE

A continuing decline in outside funding for paramedic services created **a significant, growing gap in the City of South Milwaukee's municipal budget that threatened its ability to provide local paramedic services and to adequately staff its police department** to meet all responsive and preventative responsibilities.

South Milwaukee worked with Mueller Communications to develop an Options Assessment to identify the potential solutions to the public safety funding challenges. Based on the findings of that assessment, Mueller worked with Community Perceptions to conduct a community survey to gather input on the community's preferred options. The Common Council voted to place a public safety referendum question on the Fall 2017 ballot and engaged engaged Mueller Communications to assist with **a public information campaign in advance of a referendum vote.**

Between July and November, Mueller created and executed a campaign that included the development of educational materials, including key messages, fact sheets and infographics, and informational posters, and a website landing page that clearly conveyed the situation. With materials developed, the team prepared two direct mail pieces, drafted posts to share across South Milwaukee social media channels, and created presentations for the Mayor and City Administrator to share with community groups.

SOUTH MILWAUKEE

2017 Public Safety Referendum

WHAT IS ON THE BALLOT TUESDAY, NOVEMBER 7, 2017?

The South Milwaukee Common Council has unanimously approved an operating funds referendum question asking taxpayers to increase the tax levy by $616,641 to maintain current paramedic services and hire two additional police officers. The special election will be held on Tuesday, November 7. If approved by voters, homeowners would pay an additional $52 per year for every $100,000 of their home's value starting in 2018 and beyond.

The formal resolution requesting permission to exceed the state revenue limit will appear as follows on the November 7 ballot:

Under state law, the increase in the levy of the City of South Milwaukee for the tax to be imposed for the next fiscal year, 2018, is limited to 09%, which results in a levy of $10,774,142. Shall the City of South Milwaukee be allowed to exceed this limit and increase the levy for the next fiscal year, 2018, by a total of 5.73%, which results in a levy of $11,381,095?

city of South Milwaukee

Proud Past ... Promising Future

WHY ARE WE PROPOSING THIS REFERENDUM NOW?

As South Milwaukee seeks to maintain its strong public safety services it faces a growing budget gap — as the demand for these services continues to rise, funding from current sources is either stagnant or decreasing.

The City must take action if it is to preserve locally provided paramedic services into the future. The City has also identified a need for additional police officers to deliver on the department's mission and address growing public safety needs.

We are responding directly to community input.

The City of South Milwaukee evaluated several funding options to maintain the first-class fire and police services residents have come to expect. As part of the decision-making process, the City solicited feedback via a community-wide survey. More than 1,350 residents responded, with the majority supporting an operational referendum.

VOTE NOVEMBER 7

For additional background information, including the community survey results, visit the city website: www.smwi.org

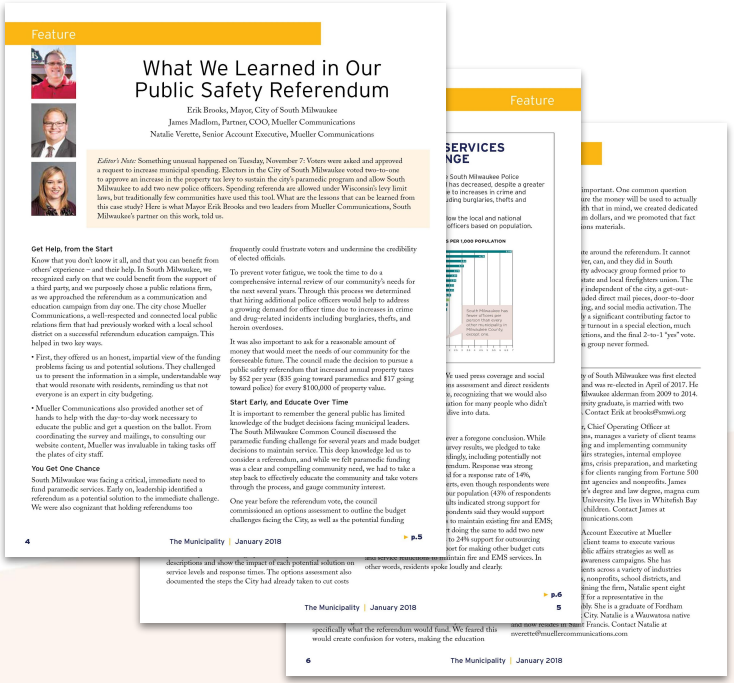
CONTINUED

CASE STUDY

SOUTH MILWAUKEE

Electors in the City of South Milwaukee ultimately **voted two-to-one to approve the increase** in the property tax levy, sustaining the city's paramedic program and allowing South Milwaukee to add two new police officers.

Additional information about this effort is highlighted in the League of Wisconsin Municipalities' The Municipality magazine, in an article entitled "What We Learned in Our Public Safety Referendum."



Feature

What We Learned in Our Public Safety Referendum

Erik Brooks, Mayor, City of South Milwaukee
James Madlom, Partner, COO, Mueller Communications
Natalie Verette, Senior Account Executive, Mueller Communications

Editor's Note: Something unusual happened on Tuesday, November 7: Voters were asked and approved a request to increase municipal spending. Electors in the City of South Milwaukee voted two-to-one to approve an increase in the property tax levy to sustain the city's paramedic program and allow South Milwaukee to add two new police officers. Spending referenda are allowed under Wisconsin's levy limit laws, but traditionally few communities have used this tool. What are the lessons that can be learned from this case study? Here is what Mayor Erik Brooks and two leaders from Mueller Communications, South Milwaukee's partner on this work, told us.

Get Help, from the Start

Know that you don't know it all, and that you can benefit from others' experience – and their help. In South Milwaukee, we recognized early on that we could benefit from the support of a third party, and we purposely chose a public relations firm, as we approached the referendum as a communication and education campaign from day one. The city chose Mueller Communications, a well-respected and connected local public relations firm that had previously worked with a local school district on a successful referendum education campaign. This helped in two key ways.

- First, they offered us an honest, impartial view of the funding problems facing us and potential solutions. They challenged us to present the information in a simple, understandable way that would resonate with residents, reminding us that not everyone is an expert in city budgeting.
- Mueller Communications also provided another set of hands to help with the day-to-day work necessary to educate the public and get a question on the ballot. From coordinating the survey and mailings, to consulting our website content, Mueller was invaluable in taking tasks off the plates of city staff.

You Get One Chance

South Milwaukee was facing a critical, immediate need to fund paramedic services. Early on, leadership identified a referendum as a potential solution to the immediate challenge. We were also cognizant that holding referendums too frequently could frustrate voters and undermine the credibility of elected officials.

To prevent voter fatigue, we took the time to do a comprehensive internal review of our community's needs for the next several years. Through this process we determined that hiring additional police officers would help to address a growing demand for officer time due to increases in crime and drug-related incidents including burglaries, thefts, and heroin overdoses.

It was also important to ask for a reasonable amount of money that would meet the needs of our community for the foreseeable future. The council made the decision to pursue a public safety referendum that increased annual property taxes by $52 per year ($35 going toward paramedics and $17 going toward police) for every $100,000 of property value.

Start Early, and Educate Over Time

It is important to remember the general public has limited knowledge of the budget decisions facing municipal leaders. The South Milwaukee Common Council discussed the paramedic funding challenge for several years and made budget decisions to maintain service. This deep knowledge led us to consider a referendum, and while we felt paramedic funding was a clear and compelling community need, we had to take a step back to effectively educate the community and take voters through the process, and gauge community interest.

One year before the referendum vote, the council commissioned an options assessment to outline the budget challenges facing the City, as well as the potential funding

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Feature

SERVICES
NGE

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CASE STUDY

PLEASANT PRAIRIE

The Village of Pleasant Prairie is home to 21,250 residents and 494 businesses. As the Village continued to grow, public safety staffing models remained outdated and call complexity increased, Pleasant Prairie identified a need for alternative funding sources to continue to service the community.

Once the need for additional public safety funding was identified, the Village of Pleasant Prairie engaged Mueller Communications as a strategic partner to develop a **comprehensive Options Assessment** and facilitate the creation, distribution and reporting of a **community survey** - with the understanding that comprehensive research, alternatives and community input lends itself to the success of a potential referendum.

Mueller Communication's Three-Phased Approach:

- Options Assessment
- Community Survey
- Public Education Campaign

In the summer of 2021, Mueller Communications was engaged by the Village of Pleasant Prairie to develop an Options Assessment to identify the potential solutions to the public safety funding challenges. Based on the findings of that assessment, Mueller worked with Community Perceptions to conduct a community survey to gather input on the community's preferred options.

Following the community survey, the Village Board voted to place a public safety referendum on the on Spring 2022 ballot. **On April 5, 2022, the Village of Pleasant Prairie ultimately voted to approve the increase in the property tax levy,** allowing the Village to add 12 firefighter/paramedics and four police officers.

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CASE STUDY

TOWN OF YORKVILLE

With economic development projects changing the landscape in Racine County, the Town of Yorkville recognized its unique position and opportunity to attract additional development.

In anticipation of this possibility, **the Town sought to protect resident interests by incorporating and updating the Town's comprehensive plan. This measure required a referendum.**

To educate the community about these processes and the benefits Yorkville may see if they proceed, the Town hired Mueller Communications to **provide communications counsel and produce informational materials.** These efforts included drafting and designing materials, including a fact sheet outlining the incorporation process, the referendum, and its impact on municipal governance, creating a presentation and facilitating a public information meeting, and coordinating media interviews regarding the incorporation process.

Voters in Yorkville favored incorporating the Town by a wide margin, with 95% of the population voting in favor (1,060 voting "yes" and only 54 voting "no.")

The Journal Times | Yorkville to host meeting ahead of incorporation referendum

SHARE THIS

Yorkville to host meeting ahead of incorporation referendum

From the Election 2018: Election news, candidate profiles and more series

Journal Times staff Feb 21, 2018 0

YORKVILLE — The Town of Yorkville will host a public informational meeting Thursday, Feb. 22, about a proposed referendum to incorporate the town as a village.

The meeting will take place from 6-8 p.m. in the large gymnasium at Yorkville Elementary School, 18621 Washington Ave. A short presentation during which residents can learn about the proposed incorporation will be made at 6:15 p.m., according to a press release from the town.

The referendum question is set to be on the April 3 ballot.

If the referendum passes, adjacent incorporated villages — Mount Pleasant, Union Grove and Somers — would not be able to annex parts of Yorkville into

VILLAGE OF SOMERS
TID #s 1-11
EQUALIZED TID VALUE INCREMENT $254,228,300
FOR 2024 TAXES PAYABLE 2025
FINAL-

Local Assessment $ 1,655,934,800

2024 Eq. Value

Agg. Ratio

EV With TID Incr. $ 1,583,579,000
EV Less TID Incr. $ (1,227,664,500)
2023 Increment $ 355,914,500

	KUSD	PARIS J1	WESTOSHA
Lottery Credit	$ 150.31	$ 52.21	$ 73.33
First Dollar Credit	$ 46.68	$ 16.22	$ 22.77

TAXING JURISDICTION	APP. LEVY ESTIMATES		EQUALIZED VALUE (LESS TID VALUE INCREMENT)		2024 INTERIM RATE		EQUALIZED VALUE (WITH TID VALUE INCREMENT)		2024 AMOUNT TO BE LEVIED	2024 TAX INCREMENT	2023 TAX INCREMENT
COUNTY	**$3,897,898.25**	/	$1,227,664,500	=	0.003175052	X	$1,583,579,000	=	$5,027,945.67	$1,130,047.42	$685,383.53
LIBRARY	**$269,227.67**	/	$1,227,664,500		0.000219301	X	$1,583,579,000	=	$347,280.46	$78,052.79	$44,108.03
SPECIAL DISTRICT	$0.00	/	$1,227,664,500	=	0.000000000	X	$1,583,579,000	=	$0.00	$0.00	$0.00
TAX DISTRICT-VILLAGE	**$4,813,603.99**	/	$1,227,664,500	=	0.003920944	X	$1,583,579,000	=	$6,209,124.58	$1,395,520.59	$855,470.30
KENOSHA UNIFIED SCHOOL	**$6,162,040.50**	/	**$1,201,206,423**	=	0.005129876	X	**$1,557,120,923**	=	$7,987,837.25	$1,825,796.75	$1,183,670.43
GATEWAY TECH COLLEGE	**$688,768.03**	/	$1,227,664,500	=	0.000561039	X	$1,583,579,000	=	$888,449.58	$199,681.55	$120,962.25
TOTAL FOR TAX INCREMENT	$15,831,538.44	/	**$1,227,664,500**	=	0.012895655	X	**$1,583,579,000**	=	$20,460,637.54	$4,629,099.10	$3,248,393.03

	2024 Actuals	2024 Assessed Value	2024 MILL RATE	2023 MILL RATE	2024 vs. 2023 MILL RATES	PERCENTAGE CHANGE
COUNTY	**$5,027,945.67**	$1,655,934,800	**$3.03632**	$4.25895	-$1.22263	-28.71%
LIBRARY	**$347,280.46**	$1,655,934,800	**$0.20972**	$0.27408	-$0.06437	-23.48%
TAX DISTRICT-VILLAGE	**$6,209,124.58**	$1,655,934,800	**$3.74962**	**$5.31586**	**-$1.56625**	**-29.46%**
KENOSHA UNIFIED SCHOOL	**$7,987,837.25**	$1,572,700,400	$5.07906	$7.35529	-$2.27623	-30.95%
WESTOSHA UNION HS	**$66,215.27**	$83,234,400	$0.79553	$3.39469		
PARIS JR. 1	**$47,149.35**	$83,234,400	$0.56646	$2.97899		
GATEWAY TECH COLLEGE	**$888,449.58**	$1,655,934,800	$0.53652	$0.75166	-$0.21513	-28.62%
STATE	$0.00	$1,655,934,800	$0.00000	$0.00000	$0.00000	0.00%
TOTAL LEVIED	**$20,574,002.16**		$13.97323	$24.32952	-$10.35629	-42.57%
STATE SCH CREDIT	**-$1,413,057.35**	$1,655,934,800	-$0.85333	-$1.24711	$0.39378	31.58%
NET TAX LEVY/MILL RATE	$19,160,944.81		**$13.11990**	**$18.29093**	**-$5.17103**	-28.27%

THIS SHEET INCLUDE ALL TAXING DISTRICTS

2024 Property Tax Configuration Breakdown

*Calculation with 13.36% Increase

STEP 1-Obtain Assessed Value Ratio

Town	$	124,465,500	6.771749%
*Village	$	1,713,545,700	93.228251%
	$	1,838,011,200	100.00%

*Does not include Tax Increment Values

STEP 2-Determine Budget Levy

2024 General Fund Budget Levy	$	4,156,377.00	Fund 101	
2024 Debt Budget Levy	$	1,028,951.78	Fund 301	Includes Ehlers fee $6543.26
Total	$	5,185,328.78		

STEP 3-Subtract Salaries-Elected Officials

Total General Fund Budget Levy	$	4,156,377.00
Town Board Salary	$	25,836.00
Village Board Salary	$	51,672.00
Minus Elected Salaries	$	4,078,869.00

Step 4-Configure Town Levy Amount

*Town General Fund Budget Levy Amoun	$	302,047	*Based on 6.77% of General Fund Budget Levy plus Town Board Salary
Town Debt Levy Amount	$	69,678	
Total Town Levy	$	371,725	

Step 5-Configure Village Levy

*Village General Fund Budget Levy Amou	$	3,854,330	*Based on 93.22% of General Fund Budget Levy plus Village Board Salary
Village Debt Levy Amount	$	959,274	
Total Village Levy	$	4,813,604	

NOTE: SCENARIO #3 Uses $100,000 less of Line E $1,445,878

Village of Somers, Kenosha County

2024 Statement of Real Estate Assessments

Manufacturing values suppressed

Assessments by Tax Classification

Category / Class or Use	Parcel Counts*		Acres	Market Values			Assessed Values		
	Land	Impts		Land	Improvements	Total	Land	Improvements	Total
Residential	2,706	2,556	2,701.471	$233,576,100	$731,064,400	$964,640,500	$233,576,100	$731,064,400	$964,640,500
Commercial	202	150	1,352.050	$116,159,500	$551,617,300	$667,776,800	$116,159,500	$551,617,300	$667,776,800
Manufacturing	3	1	40.094	$0	$0	$0	$0	$0	$0
Agricultural	288	0	8,658.806	$213,303,500	$0	$213,303,500	$3,459,900	$0	$3,459,900
1st grade tillable	265	0	7,536.922	$188,264,500	$0	$188,264,500	$3,082,500	$0	$3,082,500
2nd grade tillable	59	0	1,046.864	$23,938,500	$0	$23,938,500	$360,000	$0	$360,000
3rd grade tillable	11	0	68.140	$1,022,500	$0	$1,022,500	$16,700	$0	$16,700
Pasture	2	0	6.880	$78,000	$0	$78,000	$700	$0	$700
Undeveloped	127	0	557.840	$1,501,500	$0	$1,501,500	$754,300	$0	$754,300
Residential	2	0	17.130	$285,500	$0	$285,500	$142,800	$0	$142,800
1st grade tillable	5	0	18.200	$273,000	$0	$273,000	$136,600	$0	$136,600
2nd grade tillable	2	0	3.740	$65,500	$0	$65,500	$32,800	$0	$32,800
Swamp	13	0	27.145	$180,500	$0	$180,500	$90,400	$0	$90,400
Road ROW	2	0	4.600	$500	$0	$500	$300	$0	$300
Swamp 2	97	0	417.970	$629,500	$0	$629,500	$317,800	$0	$317,800
Swamp 3	16	0	69.055	$67,000	$0	$67,000	$33,600	$0	$33,600
Agricultural use forest	19	0	166.780	$1,976,500	$0	$1,976,500	$988,400	$0	$988,400
Primary forest	2	0	12.000	$180,000	$0	$180,000	$90,000	$0	$90,000
Secondary forest	13	0	124.080	$1,489,500	$0	$1,489,500	$744,900	$0	$744,900
Residual forest	5	0	30.700	$307,000	$0	$307,000	$153,500	$0	$153,500
Productive forest	4	0	23.150	$260,500	$0	$260,500	$260,500	$0	$260,500
Primary forest	1	0	4.150	$62,500	$0	$62,500	$62,500	$0	$62,500
Secondary forest	1	0	4.000	$48,000	$0	$48,000	$48,000	$0	$48,000
Residual forest	2	0	15.000	$150,000	$0	$150,000	$150,000	$0	$150,000
Agricultural homesite	43	43	113.220	$4,436,500	$8,487,200	$12,923,700	$4,436,500	$8,487,200	$12,923,700
Managed forest law	2	0	53.000	$636,000	$0	$636,000	($636,000)	$0	($636,000)
MFL closed pre-2005	1	0	36.000	$432,000	$0	$432,000	($432,000)	$0	($432,000)
MFL closed post-2004	1	0	17.000	$204,000	$0	$204,000	($204,000)	$0	($204,000)
Exempt	87	9	1,643.335	$3,544,000	$15,274,400	$18,818,400	$0	$0	$0
Exempt state	6	1	733.360	$21,500	$0	$21,500	$0	$0	$0
Exempt county	23	3	365.903	$567,500	$453,600	$1,021,100	$0	$0	$0
Exempt local	20	1	141.372	$1,063,500	$19,100	$1,082,600	$0	$0	$0
Exempt other	38	4	402.700	$1,891,500	$14,801,700	$16,693,200	$0	$0	$0
Total for all tax classes*	**3,165**	**2,755**	**15,309.746**	**$575,394,100**	**$1,306,443,300**	**$1,881,837,400**	**$359,635,200**	**$1,291,168,900**	**$1,650,804,100**

* Total parcel counts and parcel counts for a single category or district may not equal the breakdown because a single tax key number can have land or improvements in more than one class or use .

Assessments by Other 1 District

District / Category / Class or Use	Parcel Counts*		Acres	Market Values			Assessed Values		
	Land	Impts		Land	Improvements	Total	Land	Improvements	Total
2020 Aerials	**255**	**151**	**8,723.372**	**$184,600,700**	**$104,615,000**	**$289,215,700**	**$34,622,100**	**$104,615,000**	**$139,237,100**
Residential	108	107	313.101	$16,754,000	$34,157,200	$50,911,200	$16,754,000	$34,157,200	$50,911,200
Commercial	9	6	93.070	$8,828,500	$62,490,400	$71,318,900	$8,828,500	$62,490,400	$71,318,900
Agricultural	236	0	7,526.401	$151,394,000	$0	$151,394,000	$3,010,600	$0	$3,010,600
1st grade tillable	222	0	6,578.560	$135,973,000	$0	$135,973,000	$2,690,500	$0	$2,690,500
2nd grade tillable	49	0	889.651	$14,548,000	$0	$14,548,000	$306,000	$0	$306,000
3rd grade tillable	7	0	56.390	$846,000	$0	$846,000	$13,900	$0	$13,900
Pasture	1	0	1.800	$27,000	$0	$27,000	$200	$0	$200
Undeveloped	104	0	495.900	$1,239,700	$0	$1,239,700	$622,600	$0	$622,600
Residential	2	0	17.130	$285,500	$0	$285,500	$142,800	$0	$142,800
1st grade tillable	4	0	17.430	$261,500	$0	$261,500	$130,800	$0	$130,800
2nd grade tillable	1	0	1.920	$29,000	$0	$29,000	$14,500	$0	$14,500
Swamp	6	0	17.995	$36,500	$0	$36,500	$18,300	$0	$18,300
Road ROW	1	0	1.600	$200	$0	$200	$100	$0	$100
Swamp 2	85	0	374.330	$563,500	$0	$563,500	$284,300	$0	$284,300
Swamp 3	13	0	65.495	$63,500	$0	$63,500	$31,800	$0	$31,800
Agricultural use forest	18	0	164.780	$1,956,500	$0	$1,956,500	$978,400	$0	$978,400
Primary forest	2	0	12.000	$180,000	$0	$180,000	$90,000	$0	$90,000
Secondary forest	13	0	124.080	$1,489,500	$0	$1,489,500	$744,900	$0	$744,900
Residual forest	4	0	28.700	$287,000	$0	$287,000	$143,500	$0	$143,500
Productive forest	4	0	23.150	$260,500	$0	$260,500	$260,500	$0	$260,500
Primary forest	1	0	4.150	$62,500	$0	$62,500	$62,500	$0	$62,500
Secondary forest	1	0	4.000	$48,000	$0	$48,000	$48,000	$0	$48,000
Residual forest	2	0	15.000	$150,000	$0	$150,000	$150,000	$0	$150,000
Agricultural homesite	40	40	106.970	$4,167,500	$7,967,400	$12,134,900	$4,167,500	$7,967,400	$12,134,900
Total for all other 1 districts*	**255**	**151**	**8,723.372**	**$184,600,700**	**$104,615,000**	**$289,215,700**	**$34,622,100**	**$104,615,000**	**$139,237,100**

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Assessments by Other 2 District

District / Category / Class or Use	Parcel Counts*		Acres	Market Values			Assessed Values		
	Land	Impts		Land	Improvements	Total	Land	Improvements	Total
Library	**3,165**	**2,755**	**15,309.746**	**$575,394,100**	**$1,306,443,300**	**$1,881,837,400**	**$359,635,200**	**$1,291,168,900**	**$1,650,804,100**
Residential	2,706	2,556	2,701.471	$233,576,100	$731,064,400	$964,640,500	$233,576,100	$731,064,400	$964,640,500
Commercial	202	150	1,352.050	$116,159,500	$551,617,300	$667,776,800	$116,159,500	$551,617,300	$667,776,800
Manufacturing	3	1	40.094	$0	$0	$0	$0	$0	$0
Agricultural	288	0	8,658.806	$213,303,500	$0	$213,303,500	$3,459,900	$0	$3,459,900
1st grade tillable	265	0	7,536.922	$188,264,500	$0	$188,264,500	$3,082,500	$0	$3,082,500
2nd grade tillable	59	0	1,046.864	$23,938,500	$0	$23,938,500	$360,000	$0	$360,000
3rd grade tillable	11	0	68.140	$1,022,500	$0	$1,022,500	$16,700	$0	$16,700
Pasture	2	0	6.880	$78,000	$0	$78,000	$700	$0	$700
Undeveloped	127	0	557.840	$1,501,500	$0	$1,501,500	$754,300	$0	$754,300
Residential	2	0	17.130	$285,500	$0	$285,500	$142,800	$0	$142,800
1st grade tillable	5	0	18.200	$273,000	$0	$273,000	$136,600	$0	$136,600
2nd grade tillable	2	0	3.740	$65,500	$0	$65,500	$32,800	$0	$32,800
Swamp	13	0	27.145	$180,500	$0	$180,500	$90,400	$0	$90,400
Road ROW	2	0	4.600	$500	$0	$500	$300	$0	$300
Swamp 2	97	0	417.970	$629,500	$0	$629,500	$317,800	$0	$317,800
Swamp 3	16	0	69.055	$67,000	$0	$67,000	$33,600	$0	$33,600
Agricultural use forest	19	0	166.780	$1,976,500	$0	$1,976,500	$988,400	$0	$988,400
Primary forest	2	0	12.000	$180,000	$0	$180,000	$90,000	$0	$90,000
Secondary forest	13	0	124.080	$1,489,500	$0	$1,489,500	$744,900	$0	$744,900
Residual forest	5	0	30.700	$307,000	$0	$307,000	$153,500	$0	$153,500
Productive forest	4	0	23.150	$260,500	$0	$260,500	$260,500	$0	$260,500
Primary forest	1	0	4.150	$62,500	$0	$62,500	$62,500	$0	$62,500
Secondary forest	1	0	4.000	$48,000	$0	$48,000	$48,000	$0	$48,000
Residual forest	2	0	15.000	$150,000	$0	$150,000	$150,000	$0	$150,000
Agricultural homesite	43	43	113.220	$4,436,500	$8,487,200	$12,923,700	$4,436,500	$8,487,200	$12,923,700
Managed forest law	2	0	53.000	$636,000	$0	$636,000	($636,000)	$0	($636,000)
MFL closed pre-2005	1	0	36.000	$432,000	$0	$432,000	($432,000)	$0	($432,000)
MFL closed post-2004	1	0	17.000	$204,000	$0	$204,000	($204,000)	$0	($204,000)
Exempt	87	9	1,643.335	$3,544,000	$15,274,400	$18,818,400	$0	$0	$0
Exempt state	6	1	733.360	$21,500	$0	$21,500	$0	$0	$0
Exempt county	23	3	365.903	$567,500	$453,600	$1,021,100	$0	$0	$0
Exempt local	20	1	141.372	$1,063,500	$19,100	$1,082,600	$0	$0	$0
Exempt other	38	4	402.700	$1,891,500	$14,801,700	$16,693,200	$0	$0	$0
Total for all other 2 districts*	**3,165**	**2,755**	**15,309.746**	**$575,394,100**	**$1,306,443,300**	**$1,881,837,400**	**$359,635,200**	**$1,291,168,900**	**$1,650,804,100**

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Assessments by Sanitary District

District / Category / Class or Use	Parcel Counts*		Acres	Market Values			Assessed Values		
	Land	Impts		Land	Improvements	Total	Land	Improvements	Total
Sanitary 10 - Somers Util #1	**2,106**	**1,925**	**4,355.137**	**$286,298,700**	**$956,774,300**	**$1,243,073,000**	**$236,329,700**	**$942,599,200**	**$1,178,928,900**
Residential	1,889	1,794	1,143.046	$141,562,700	$506,291,200	$647,853,900	$141,562,700	$506,291,200	$647,853,900
Commercial	160	122	882.672	$93,233,000	$434,631,400	$527,864,400	$93,233,000	$434,631,400	$527,864,400
Manufacturing	1	1	0.840	$0	$0	$0	$0	$0	$0
Agricultural	53	0	1,282.599	$49,409,000	$0	$49,409,000	$516,800	$0	$516,800
1st grade tillable	48	0	1,178.608	$46,598,500	$0	$46,598,500	$482,200	$0	$482,200
2nd grade tillable	11	0	92.991	$2,645,500	$0	$2,645,500	$31,900	$0	$31,900
3rd grade tillable	2	0	11.000	$165,000	$0	$165,000	$2,700	$0	$2,700
Undeveloped	24	0	95.700	$182,500	$0	$182,500	$92,200	$0	$92,200
1st grade tillable	1	0	0.770	$11,500	$0	$11,500	$5,800	$0	$5,800
2nd grade tillable	1	0	1.820	$36,500	$0	$36,500	$18,300	$0	$18,300
Swamp	1	0	1.000	$2,000	$0	$2,000	$1,000	$0	$1,000
Swamp 2	20	0	79.950	$120,500	$0	$120,500	$61,100	$0	$61,100
Swamp 3	2	0	12.160	$12,000	$0	$12,000	$6,000	$0	$6,000
Agricultural use forest	3	0	10.500	$139,000	$0	$139,000	$69,500	$0	$69,500
Primary forest	1	0	6.000	$90,000	$0	$90,000	$45,000	$0	$45,000
Secondary forest	1	0	2.000	$24,000	$0	$24,000	$12,000	$0	$12,000
Residual forest	1	0	2.500	$25,000	$0	$25,000	$12,500	$0	$12,500
Productive forest	2	0	8.150	$110,500	$0	$110,500	$110,500	$0	$110,500
Primary forest	1	0	4.150	$62,500	$0	$62,500	$62,500	$0	$62,500
Secondary forest	1	0	4.000	$48,000	$0	$48,000	$48,000	$0	$48,000
Agricultural homesite	6	6	19.300	$745,000	$1,676,600	$2,421,600	$745,000	$1,676,600	$2,421,600
Exempt	24	4	912.330	$917,000	$14,175,100	$15,092,100	$0	$0	$0
Exempt state	3	1	726.360	$21,500	$0	$21,500	$0	$0	$0
Exempt county	4	0	1.110	$172,500	$0	$172,500	$0	$0	$0
Exempt local	5	1	47.840	$0	$19,100	$19,100	$0	$0	$0
Exempt other	12	2	137.020	$723,000	$14,156,000	$14,879,000	$0	$0	$0

* Total parcel counts and parcel counts for a single category or district may not equal the breakdown because a single tax key number can have land or improvements in more than one class or use .

District / Category / Class or Use	Parcel Counts*		Acres	Market Values			Assessed Values		
	Land	Impts		Land	Improvements	Total	Land	Improvements	Total
Sanitary 12 - SomersKR Sewer	**294**	**272**	**438.607**	**$25,714,600**	**$83,485,500**	**$109,200,100**	**$24,110,000**	**$83,485,500**	**$107,595,500**
Residential	284	271	278.521	$23,832,600	$83,348,600	$107,181,200	$23,832,600	$83,348,600	$107,181,200
Agricultural	8	0	100.796	$1,513,500	$0	$1,513,500	$36,800	$0	$36,800
1st grade tillable	6	0	67.976	$1,021,000	$0	$1,021,000	$27,900	$0	$27,900
2nd grade tillable	1	0	7.290	$109,500	$0	$109,500	$2,500	$0	$2,500
3rd grade tillable	1	0	25.530	$383,000	$0	$383,000	$6,400	$0	$6,400
Undeveloped	6	0	13.360	$148,000	$0	$148,000	$74,100	$0	$74,100
Swamp	3	0	4.360	$134,000	$0	$134,000	$67,000	$0	$67,000
Swamp 2	3	0	9.000	$14,000	$0	$14,000	$7,100	$0	$7,100
Agricultural use forest	2	0	9.000	$108,000	$0	$108,000	$54,000	$0	$54,000
Secondary forest	2	0	9.000	$108,000	$0	$108,000	$54,000	$0	$54,000
Agricultural homesite	1	1	2.500	$112,500	$136,900	$249,400	$112,500	$136,900	$249,400
Exempt	4	0	34.430	$0	$0	$0	$0	$0	$0
Exempt county	1	0	2.070	$0	$0	$0	$0	$0	$0
Exempt other	3	0	32.360	$0	$0	$0	$0	$0	$0
Total for all sanitary districts*	**2,400**	**2,197**	**4,793.744**	**$312,013,300**	**$1,040,259,800**	**$1,352,273,100**	**$260,439,700**	**$1,026,084,700**	**$1,286,524,400**

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Assessments by School District

District / Category / Class or Use	Parcel Counts*		Acres	Market Values			Assessed Values		
	Land	Impts		Land	Improvements	Total	Land	Improvements	Total
Kenosha Unified (2793)	**3,157**	**2,752**	**15,018.083**	**$547,084,100**	**$1,240,169,800**	**$1,787,253,900**	**$342,674,300**	**$1,224,895,400**	**$1,567,569,700**
Residential	2,706	2,556	2,701.471	$233,576,100	$731,064,400	$964,640,500	$233,576,100	$731,064,400	$964,640,500
Commercial	197	147	1,219.407	$99,255,000	$485,343,800	$584,598,800	$99,255,000	$485,343,800	$584,598,800
Manufacturing	3	1	40.094	$0	$0	$0	$0	$0	$0
Agricultural	285	0	8,499.786	$201,898,000	$0	$201,898,000	$3,403,500	$0	$3,403,500
1st grade tillable	263	0	7,511.272	$185,714,500	$0	$185,714,500	$3,072,000	$0	$3,072,000
2nd grade tillable	57	0	913.494	$15,083,000	$0	$15,083,000	$314,100	$0	$314,100
3rd grade tillable	11	0	68.140	$1,022,500	$0	$1,022,500	$16,700	$0	$16,700
Pasture	2	0	6.880	$78,000	$0	$78,000	$700	$0	$700
Undeveloped	127	0	557.840	$1,501,500	$0	$1,501,500	$754,300	$0	$754,300
Residential	2	0	17.130	$285,500	$0	$285,500	$142,800	$0	$142,800
1st grade tillable	5	0	18.200	$273,000	$0	$273,000	$136,600	$0	$136,600
2nd grade tillable	2	0	3.740	$65,500	$0	$65,500	$32,800	$0	$32,800
Swamp	13	0	27.145	$180,500	$0	$180,500	$90,400	$0	$90,400
Road ROW	2	0	4.600	$500	$0	$500	$300	$0	$300
Swamp 2	97	0	417.970	$629,500	$0	$629,500	$317,800	$0	$317,800
Swamp 3	16	0	69.055	$67,000	$0	$67,000	$33,600	$0	$33,600
Agricultural use forest	19	0	166.780	$1,976,500	$0	$1,976,500	$988,400	$0	$988,400
Primary forest	2	0	12.000	$180,000	$0	$180,000	$90,000	$0	$90,000
Secondary forest	13	0	124.080	$1,489,500	$0	$1,489,500	$744,900	$0	$744,900
Residual forest	5	0	30.700	$307,000	$0	$307,000	$153,500	$0	$153,500
Productive forest	4	0	23.150	$260,500	$0	$260,500	$260,500	$0	$260,500
Primary forest	1	0	4.150	$62,500	$0	$62,500	$62,500	$0	$62,500
Secondary forest	1	0	4.000	$48,000	$0	$48,000	$48,000	$0	$48,000
Residual forest	2	0	15.000	$150,000	$0	$150,000	$150,000	$0	$150,000
Agricultural homesite	43	43	113.220	$4,436,500	$8,487,200	$12,923,700	$4,436,500	$8,487,200	$12,923,700
Managed forest law	2	0	53.000	$636,000	$0	$636,000	($636,000)	$0	($636,000)
MFL closed pre-2005	1	0	36.000	$432,000	$0	$432,000	($432,000)	$0	($432,000)
MFL closed post-2004	1	0	17.000	$204,000	$0	$204,000	($204,000)	$0	($204,000)
Exempt	87	9	1,643.335	$3,544,000	$15,274,400	$18,818,400	$0	$0	$0
Exempt state	6	1	733.360	$21,500	$0	$21,500	$0	$0	$0
Exempt county	23	3	365.903	$567,500	$453,600	$1,021,100	$0	$0	$0
Exempt local	20	1	141.372	$1,063,500	$19,100	$1,082,600	$0	$0	$0
Exempt other	38	4	402.700	$1,891,500	$14,801,700	$16,693,200	$0	$0	$0

* Total parcel counts and parcel counts for a single category or district may not equal the breakdown because a single tax key number can have land or improvements in more than one class or use .

District / Category / Class or Use	Parcel Counts*		Acres	Market Values			Assessed Values		
	Land	Impts		Land	Improvements	Total	Land	Improvements	Total
Paris Cons Sch Dist JT#1 4235G	**8**	**3**	**291.663**	**$28,310,000**	**$66,273,500**	**$94,583,500**	**$16,960,900**	**$66,273,500**	**$83,234,400**
Commercial	5	3	132.643	$16,904,500	$66,273,500	$83,178,000	$16,904,500	$66,273,500	$83,178,000
Agricultural	3	0	159.020	$11,405,500	$0	$11,405,500	$56,400	$0	$56,400
1st grade tillable	2	0	25.650	$2,550,000	$0	$2,550,000	$10,500	$0	$10,500
2nd grade tillable	2	0	133.370	$8,855,500	$0	$8,855,500	$45,900	$0	$45,900
Total for all school districts*	**3,165**	**2,755**	**15,309.746**	**$575,394,100**	**$1,306,443,300**	**$1,881,837,400**	**$359,635,200**	**$1,291,168,900**	**$1,650,804,100**

* Total parcel counts and parcel counts for a single category or district may not equal the breakdown because a single tax key number can have land or improvements in more than one class or use .

Assessments by TIF District

District / Category / Class or Use	Parcel Counts*		Acres	Market Values			Assessed Values		
	Land	Impts		Land	Improvements	Total	Land	Improvements	Total
TID 1	**6**	**4**	**303.302**	**$30,230,500**	**$96,805,300**	**$127,035,800**	**$9,996,500**	**$96,805,300**	**$106,801,800**
Commercial	3	3	98.164	$9,816,500	$96,760,500	$106,577,000	$9,816,500	$96,760,500	$106,577,000
Agricultural	2	0	195.435	$19,543,500	$0	$19,543,500	$80,000	$0	$80,000
1st grade tillable	2	0	195.435	$19,543,500	$0	$19,543,500	$80,000	$0	$80,000
Agricultural homesite	1	1	2.000	$100,000	$44,800	$144,800	$100,000	$44,800	$144,800
Exempt	1	0	7.703	$770,500	$0	$770,500	$0	$0	$0
Exempt local	1	0	7.703	$770,500	$0	$770,500	$0	$0	$0
TID 10	**13**	**12**	**12.470**	**$1,124,000**	**$5,468,300**	**$6,592,300**	**$1,124,000**	**$5,468,300**	**$6,592,300**
Residential	7	6	6.370	$592,500	$1,573,200	$2,165,700	$592,500	$1,573,200	$2,165,700
Commercial	6	6	6.100	$531,500	$3,895,100	$4,426,600	$531,500	$3,895,100	$4,426,600
TID 11	**3**	**1**	**62.031**	**$1,684,500**	**$202,100**	**$1,886,600**	**$117,700**	**$202,100**	**$319,800**
Residential	1	1	1.000	$95,000	$202,100	$297,100	$95,000	$202,100	$297,100
Agricultural	2	0	46.281	$1,289,500	$0	$1,289,500	$18,900	$0	$18,900
1st grade tillable	2	0	46.281	$1,289,500	$0	$1,289,500	$18,900	$0	$18,900
Undeveloped	1	0	5.000	$7,500	$0	$7,500	$3,800	$0	$3,800
Swamp 2	1	0	5.000	$7,500	$0	$7,500	$3,800	$0	$3,800
Exempt	1	0	9.750	$292,500	$0	$292,500	$0	$0	$0
Exempt local	1	0	9.750	$292,500	$0	$292,500	$0	$0	$0
TID 2	**32**	**24**	**192.791**	**$19,501,500**	**$104,882,800**	**$124,384,300**	**$17,083,000**	**$104,882,800**	**$121,965,800**
Residential	8	8	29.960	$1,274,000	$1,747,200	$3,021,200	$1,274,000	$1,747,200	$3,021,200
Commercial	23	16	69.310	$15,773,000	$103,135,600	$118,908,600	$15,773,000	$103,135,600	$118,908,600
Agricultural	5	0	93.521	$2,454,500	$0	$2,454,500	$36,000	$0	$36,000
1st grade tillable	4	0	79.130	$1,187,000	$0	$1,187,000	$32,300	$0	$32,300
2nd grade tillable	1	0	9.311	$1,216,500	$0	$1,216,500	$3,200	$0	$3,200
Pasture	1	0	5.080	$51,000	$0	$51,000	$500	$0	$500
TID 3	**17**	**7**	**377.642**	**$43,758,500**	**$117,523,800**	**$161,282,300**	**$21,015,000**	**$117,523,800**	**$138,538,800**
Residential	3	3	2.425	$187,000	$603,200	$790,200	$187,000	$603,200	$790,200
Commercial	8	4	157.892	$20,733,500	$116,920,600	$137,654,100	$20,733,500	$116,920,600	$137,654,100
Agricultural	5	0	200.345	$22,745,000	$0	$22,745,000	$81,800	$0	$81,800
1st grade tillable	5	0	198.625	$22,589,000	$0	$22,589,000	$81,200	$0	$81,200
2nd grade tillable	1	0	1.720	$156,000	$0	$156,000	$600	$0	$600
Undeveloped	4	0	16.500	$25,000	$0	$25,000	$12,700	$0	$12,700
Swamp 2	4	0	16.500	$25,000	$0	$25,000	$12,700	$0	$12,700
Exempt	1	0	0.480	$68,000	$0	$68,000	$0	$0	$0
Exempt county	1	0	0.480	$68,000	$0	$68,000	$0	$0	$0

* Total parcel counts and parcel counts for a single category or district may not equal the breakdown because a single tax key number can have land or improvements in more than one class or use .

District / Category / Class or Use	Parcel Counts*		Acres	Market Values			Assessed Values		
	Land	Impts		Land	Improvements	Total	Land	Improvements	Total
TID 4	**18**	**7**	**190.127**	**$8,770,000**	**$44,446,300**	**$53,216,300**	**$6,087,700**	**$44,446,300**	**$50,534,000**
Residential	3	3	14.230	$527,500	$494,300	$1,021,800	$527,500	$494,300	$1,021,800
Commercial	10	4	59.847	$5,509,000	$43,952,000	$49,461,000	$5,509,000	$43,952,000	$49,461,000
Agricultural	5	0	96.880	$2,557,500	$0	$2,557,500	$39,300	$0	$39,300
1st grade tillable	5	0	91.880	$2,482,500	$0	$2,482,500	$37,600	$0	$37,600
2nd grade tillable	1	0	5.000	$75,000	$0	$75,000	$1,700	$0	$1,700
Undeveloped	4	0	15.770	$23,500	$0	$23,500	$11,900	$0	$11,900
Swamp 2	4	0	15.770	$23,500	$0	$23,500	$11,900	$0	$11,900
Exempt	3	0	3.400	$152,500	$0	$152,500	$0	$0	$0
Exempt local	2	0	1.310	$0	$0	$0	$0	$0	$0
Exempt other	1	0	2.090	$152,500	$0	$152,500	$0	$0	$0
TID 5	**17**	**6**	**443.517**	**$12,024,000**	**$9,013,800**	**$21,037,800**	**$3,234,500**	**$9,013,800**	**$12,248,300**
Residential	3	3	5.085	$391,000	$798,400	$1,189,400	$391,000	$798,400	$1,189,400
Commercial	4	1	61.278	$2,471,500	$8,000,000	$10,471,500	$2,471,500	$8,000,000	$10,471,500
Agricultural	10	0	365.774	$8,935,500	$0	$8,935,500	$149,700	$0	$149,700
1st grade tillable	10	0	365.774	$8,935,500	$0	$8,935,500	$149,700	$0	$149,700
Undeveloped	2	0	5.000	$7,500	$0	$7,500	$3,800	$0	$3,800
Swamp 2	2	0	5.000	$7,500	$0	$7,500	$3,800	$0	$3,800
Agricultural homesite	2	2	6.380	$218,500	$215,400	$433,900	$218,500	$215,400	$433,900
TID 6	**20**	**9**	**665.319**	**$29,162,500**	**$17,535,500**	**$46,698,000**	**$13,595,000**	**$3,673,000**	**$17,268,000**
Residential	3	3	6.960	$368,000	$903,800	$1,271,800	$368,000	$903,800	$1,271,800
Commercial	7	5	131.750	$12,795,000	$2,418,700	$15,213,700	$12,795,000	$2,418,700	$15,213,700
Agricultural	13	0	478.729	$15,274,000	$0	$15,274,000	$195,800	$0	$195,800
1st grade tillable	13	0	478.729	$15,274,000	$0	$15,274,000	$195,800	$0	$195,800
Undeveloped	6	0	31.880	$47,000	$0	$47,000	$23,700	$0	$23,700
Swamp 2	6	0	29.880	$45,000	$0	$45,000	$22,700	$0	$22,700
Swamp 3	1	0	2.000	$2,000	$0	$2,000	$1,000	$0	$1,000
Agricultural homesite	2	2	6.000	$212,500	$350,500	$563,000	$212,500	$350,500	$563,000
Exempt	2	1	10.000	$466,000	$13,862,500	$14,328,500	$0	$0	$0
Exempt other	2	1	10.000	$466,000	$13,862,500	$14,328,500	$0	$0	$0

* Total parcel counts and parcel counts for a single category or district may not equal the breakdown because a single tax key number can have land or improvements in more than one class or use .

District / Category / Class or Use	Parcel Counts*		Acres	Market Values			Assessed Values		
	Land	Impts		Land	Improvements	Total	Land	Improvements	Total
TID 7	**50**	**31**	**1,651.943**	**$27,177,000**	**$8,700,800**	**$35,877,800**	**$4,926,500**	**$8,700,800**	**$13,627,300**
Residential	24	24	61.320	$3,544,000	$7,337,000	$10,881,000	$3,544,000	$7,337,000	$10,881,000
Commercial	1	1	6.300	$257,500	$671,000	$928,500	$257,500	$671,000	$928,500
Agricultural	37	0	1,489.133	$22,741,000	$0	$22,741,000	$589,700	$0	$589,700
1st grade tillable	34	0	1,203.065	$18,450,000	$0	$18,450,000	$491,800	$0	$491,800
2nd grade tillable	13	0	281.068	$4,216,000	$0	$4,216,000	$96,700	$0	$96,700
3rd grade tillable	1	0	5.000	$75,000	$0	$75,000	$1,200	$0	$1,200
Undeveloped	15	0	70.770	$176,500	$0	$176,500	$88,500	$0	$88,500
1st grade tillable	1	0	3.250	$49,000	$0	$49,000	$24,500	$0	$24,500
2nd grade tillable	1	0	1.920	$29,000	$0	$29,000	$14,500	$0	$14,500
Swamp 2	13	0	64.850	$97,500	$0	$97,500	$49,000	$0	$49,000
Swamp 3	1	0	0.750	$1,000	$0	$1,000	$500	$0	$500
Agricultural use forest	1	0	1.860	$22,500	$0	$22,500	$11,300	$0	$11,300
Secondary forest	1	0	1.860	$22,500	$0	$22,500	$11,300	$0	$11,300
Agricultural homesite	6	6	10.340	$435,500	$692,800	$1,128,300	$435,500	$692,800	$1,128,300
Exempt	2	0	12.220	$0	$0	$0	$0	$0	$0
Exempt county	1	0	0.090	$0	$0	$0	$0	$0	$0
Exempt other	1	0	12.130	$0	$0	$0	$0	$0	$0
TID 8	**4**	**1**	**220.760**	**$21,695,000**	**$191,400**	**$21,886,400**	**$290,800**	**$191,400**	**$482,200**
Residential	1	1	5.000	$200,000	$191,400	$391,400	$200,000	$191,400	$391,400
Agricultural	3	0	208.060	$21,483,500	$0	$21,483,500	$85,000	$0	$85,000
1st grade tillable	3	0	208.060	$21,483,500	$0	$21,483,500	$85,000	$0	$85,000
Undeveloped	1	0	7.700	$11,500	$0	$11,500	$5,800	$0	$5,800
Swamp 2	1	0	7.700	$11,500	$0	$11,500	$5,800	$0	$5,800
TID 9	**5**	**2**	**6.230**	**$1,329,000**	**$2,055,000**	**$3,384,000**	**$1,329,000**	**$2,055,000**	**$3,384,000**
Residential	4	1	3.890	$673,000	$467,000	$1,140,000	$673,000	$467,000	$1,140,000
Commercial	1	1	2.340	$656,000	$1,588,000	$2,244,000	$656,000	$1,588,000	$2,244,000
Total for all tif districts*	**185**	**104**	**4,126.132**	**$196,456,500**	**$406,825,100**	**$603,281,600**	**$78,799,700**	**$392,962,600**	**$471,762,300**

Assessments by Union School District

District / Category / Class or Use	Parcel Counts*		Acres	Market Values			Assessed Values		
	Land	Impts		Land	Improvements	Total	Land	Improvements	Total
Central/Westosha High School 5	**8**	**3**	**291.663**	**$28,310,000**	**$66,273,500**	**$94,583,500**	**$16,960,900**	**$66,273,500**	**$83,234,400**
Commercial	5	3	132.643	$16,904,500	$66,273,500	$83,178,000	$16,904,500	$66,273,500	$83,178,000
Agricultural	3	0	159.020	$11,405,500	$0	$11,405,500	$56,400	$0	$56,400
1st grade tillable	2	0	25.650	$2,550,000	$0	$2,550,000	$10,500	$0	$10,500
2nd grade tillable	2	0	133.370	$8,855,500	$0	$8,855,500	$45,900	$0	$45,900
Total for all union school districts*	**8**	**3**	**291.663**	**$28,310,000**	**$66,273,500**	**$94,583,500**	**$16,960,900**	**$66,273,500**	**$83,234,400**

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Assessments by Vtech School District

District / Category / Class or Use	Parcel Counts*		Acres	Market Values			Assessed Values		
	Land	Impts		Land	Improvements	Total	Land	Improvements	Total
Gateway Tech	**3,165**	**2,755**	**15,309.746**	**$575,394,100**	**$1,306,443,300**	**$1,881,837,400**	**$359,635,200**	**$1,291,168,900**	**$1,650,804,100**
Residential	2,706	2,556	2,701.471	$233,576,100	$731,064,400	$964,640,500	$233,576,100	$731,064,400	$964,640,500
Commercial	202	150	1,352.050	$116,159,500	$551,617,300	$667,776,800	$116,159,500	$551,617,300	$667,776,800
Manufacturing	3	1	40.094	$0	$0	$0	$0	$0	$0
Agricultural	288	0	8,658.806	$213,303,500	$0	$213,303,500	$3,459,900	$0	$3,459,900
1st grade tillable	265	0	7,536.922	$188,264,500	$0	$188,264,500	$3,082,500	$0	$3,082,500
2nd grade tillable	59	0	1,046.864	$23,938,500	$0	$23,938,500	$360,000	$0	$360,000
3rd grade tillable	11	0	68.140	$1,022,500	$0	$1,022,500	$16,700	$0	$16,700
Pasture	2	0	6.880	$78,000	$0	$78,000	$700	$0	$700
Undeveloped	127	0	557.840	$1,501,500	$0	$1,501,500	$754,300	$0	$754,300
Residential	2	0	17.130	$285,500	$0	$285,500	$142,800	$0	$142,800
1st grade tillable	5	0	18.200	$273,000	$0	$273,000	$136,600	$0	$136,600
2nd grade tillable	2	0	3.740	$65,500	$0	$65,500	$32,800	$0	$32,800
Swamp	13	0	27.145	$180,500	$0	$180,500	$90,400	$0	$90,400
Road ROW	2	0	4.600	$500	$0	$500	$300	$0	$300
Swamp 2	97	0	417.970	$629,500	$0	$629,500	$317,800	$0	$317,800
Swamp 3	16	0	69.055	$67,000	$0	$67,000	$33,600	$0	$33,600
Agricultural use forest	19	0	166.780	$1,976,500	$0	$1,976,500	$988,400	$0	$988,400
Primary forest	2	0	12.000	$180,000	$0	$180,000	$90,000	$0	$90,000
Secondary forest	13	0	124.080	$1,489,500	$0	$1,489,500	$744,900	$0	$744,900
Residual forest	5	0	30.700	$307,000	$0	$307,000	$153,500	$0	$153,500
Productive forest	4	0	23.150	$260,500	$0	$260,500	$260,500	$0	$260,500
Primary forest	1	0	4.150	$62,500	$0	$62,500	$62,500	$0	$62,500
Secondary forest	1	0	4.000	$48,000	$0	$48,000	$48,000	$0	$48,000
Residual forest	2	0	15.000	$150,000	$0	$150,000	$150,000	$0	$150,000
Agricultural homesite	43	43	113.220	$4,436,500	$8,487,200	$12,923,700	$4,436,500	$8,487,200	$12,923,700
Managed forest law	2	0	53.000	$636,000	$0	$636,000	($636,000)	$0	($636,000)
MFL closed pre-2005	1	0	36.000	$432,000	$0	$432,000	($432,000)	$0	($432,000)
MFL closed post-2004	1	0	17.000	$204,000	$0	$204,000	($204,000)	$0	($204,000)
Exempt	87	9	1,643.335	$3,544,000	$15,274,400	$18,818,400	$0	$0	$0
Exempt state	6	1	733.360	$21,500	$0	$21,500	$0	$0	$0
Exempt county	23	3	365.903	$567,500	$453,600	$1,021,100	$0	$0	$0
Exempt local	20	1	141.372	$1,063,500	$19,100	$1,082,600	$0	$0	$0
Exempt other	38	4	402.700	$1,891,500	$14,801,700	$16,693,200	$0	$0	$0
Total for all vtech school districts*	**3,165**	**2,755**	**15,309.746**	**$575,394,100**	**$1,306,443,300**	**$1,881,837,400**	**$359,635,200**	**$1,291,168,900**	**$1,650,804,100**

* Total parcel counts and parcel counts for a single category or district may not equal the breakdown because a single tax key number can have land or improvements in more than one class or use .

Assessments by Water drainage District

District / Category / Class or Use	Parcel Counts*		Acres	Market Values			Assessed Values		
	Land	Impts		Land	Improvements	Total	Land	Improvements	Total
Smrs Water	**3,157**	**2,752**	**15,018.083**	**$547,084,100**	**$1,240,169,800**	**$1,787,253,900**	**$342,674,300**	**$1,224,895,400**	**$1,567,569,700**
Residential	2,706	2,556	2,701.471	$233,576,100	$731,064,400	$964,640,500	$233,576,100	$731,064,400	$964,640,500
Commercial	197	147	1,219.407	$99,255,000	$485,343,800	$584,598,800	$99,255,000	$485,343,800	$584,598,800
Manufacturing	3	1	40.094	$0	$0	$0	$0	$0	$0
Agricultural	285	0	8,499.786	$201,898,000	$0	$201,898,000	$3,403,500	$0	$3,403,500
1st grade tillable	263	0	7,511.272	$185,714,500	$0	$185,714,500	$3,072,000	$0	$3,072,000
2nd grade tillable	57	0	913.494	$15,083,000	$0	$15,083,000	$314,100	$0	$314,100
3rd grade tillable	11	0	68.140	$1,022,500	$0	$1,022,500	$16,700	$0	$16,700
Pasture	2	0	6.880	$78,000	$0	$78,000	$700	$0	$700
Undeveloped	127	0	557.840	$1,501,500	$0	$1,501,500	$754,300	$0	$754,300
Residential	2	0	17.130	$285,500	$0	$285,500	$142,800	$0	$142,800
1st grade tillable	5	0	18.200	$273,000	$0	$273,000	$136,600	$0	$136,600
2nd grade tillable	2	0	3.740	$65,500	$0	$65,500	$32,800	$0	$32,800
Swamp	13	0	27.145	$180,500	$0	$180,500	$90,400	$0	$90,400
Road ROW	2	0	4.600	$500	$0	$500	$300	$0	$300
Swamp 2	97	0	417.970	$629,500	$0	$629,500	$317,800	$0	$317,800
Swamp 3	16	0	69.055	$67,000	$0	$67,000	$33,600	$0	$33,600
Agricultural use forest	19	0	166.780	$1,976,500	$0	$1,976,500	$988,400	$0	$988,400
Primary forest	2	0	12.000	$180,000	$0	$180,000	$90,000	$0	$90,000
Secondary forest	13	0	124.080	$1,489,500	$0	$1,489,500	$744,900	$0	$744,900
Residual forest	5	0	30.700	$307,000	$0	$307,000	$153,500	$0	$153,500
Productive forest	4	0	23.150	$260,500	$0	$260,500	$260,500	$0	$260,500
Primary forest	1	0	4.150	$62,500	$0	$62,500	$62,500	$0	$62,500
Secondary forest	1	0	4.000	$48,000	$0	$48,000	$48,000	$0	$48,000
Residual forest	2	0	15.000	$150,000	$0	$150,000	$150,000	$0	$150,000
Agricultural homesite	43	43	113.220	$4,436,500	$8,487,200	$12,923,700	$4,436,500	$8,487,200	$12,923,700
Managed forest law	2	0	53.000	$636,000	$0	$636,000	($636,000)	$0	($636,000)
MFL closed pre-2005	1	0	36.000	$432,000	$0	$432,000	($432,000)	$0	($432,000)
MFL closed post-2004	1	0	17.000	$204,000	$0	$204,000	($204,000)	$0	($204,000)
Exempt	87	9	1,643.335	$3,544,000	$15,274,400	$18,818,400	$0	$0	$0
Exempt state	6	1	733.360	$21,500	$0	$21,500	$0	$0	$0
Exempt county	23	3	365.903	$567,500	$453,600	$1,021,100	$0	$0	$0
Exempt local	20	1	141.372	$1,063,500	$19,100	$1,082,600	$0	$0	$0
Exempt other	38	4	402.700	$1,891,500	$14,801,700	$16,693,200	$0	$0	$0
Total for all water drainage districts	**3,157**	**2,752**	**15,018.083**	**$547,084,100**	**$1,240,169,800**	**$1,787,253,900**	**$342,674,300**	**$1,224,895,400**	**$1,567,569,700**

* Total parcel counts and parcel counts for a single category or district may not equal the breakdown because a single tax key number can have land or improvements in more than one class or use .

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VILLAGE OF SOMERS
VILLAGE BOARD
WORK SESSION ITEM MEMORANDUM

WORK SESSION: May 20, 2025

TO: Village President Stoner and Board of Trustees

PREPARED BY: Kevin Poirier, Assistant Administrator

AGENDA ITEM: #6 Discuss proposed changes to the Shoreland Development Agreement sent to Village Attorney Davison.

BACKGROUND:

The Village Board made the decision that Shoreland High Lutheran High School's campus expansion would require municipal water. The Draft Development Agreement was drafted to reflect that decision.

Since then, the Village has been waiting for exhibits from the Developer to be turned in

UPDATE:

Shoreland's attorney submitted a proposed amendment to the Development Agreement.

COMMENTS:

Attorney Davison will do over the proposal.

ATTACHMENTS:

Draft DA dated April 8, 2025

DEVELOPMENT AGREEMENT
BETWEEN THE VILLAGE OF SOMERS AND
SHORELAND LUTHERAN HIGH SCHOOL FEDERATION, INC.
A PROPOSED DEVELOPMENT BEING
A PART OF SECTION 8, TOWN 2 NORTH, RANGE 22 EAST

WITNESS THIS AGREEMENT made and entered into this _____ day of _____, 2025, by and between the Village of Somers, Kenosha County, Wisconsin, the Village of Somers Utility District ("District") and the Village of Somers Water Utility ("Utility") (the Village of Somers, the Utility and the District are hereinafter collectively referred to as the "Village") and Shoreland Lutheran High School Federation, Inc. (hereinafter referred to as the "Developer").

WHEREAS, the Developer has proposed to create a Certified Survey Map (CSM) and develop a parcel of land (the "Property") described with more particularity in the attached legal descriptions, which is incorporated herein by reference.

WHEREAS, the Developer has proposed a development on the Property for the construction of stormwater facilities, the exact configurations of which are to be determined and approved by the Village; and

WHEREAS, it is the proposal of the Developer, and the understanding and agreement of the Village, that the approval of the Certified Survey Map, Zoning and the development will be subject to the requirements of this Agreement and the addition of such detail as is necessary shall be submitted for the review and approval of the Village to fulfill the requirements of this Agreement, as well as Wisconsin State Statutes, Wisconsin Administrative Code provisions, and Village of Somers ordinance provisions, prior to construction; and

WHEREAS, the Village Plan Commission has reviewed the Certified Survey Map (Exhibit "A") and has recommended to the Village Board that the Certified Survey Map, be approved, subject to the following terms and conditions:

I. INFRASTRUCTURE IMPROVEMENTS

A. GRADING, EROSION CONTROL AND SURFACE WATER DRAINAGE.

1. The Developer shall be in compliance with requirements and specifications as set forth in the Village Subdivision and Platting Ordinance. Storm and surface waters shall be retained on Property to the extent necessary to assure that the rate of storm and surface water runoff from Property, during the construction and after completion of construction of improvements, shall not be greater than the rate of runoff allowed in the Code of Ordinances. All such plans and specifications referred to above shall be reviewed by the Village Consulting Engineer and approved by the Village, such costs of review to be paid by Developer.

2. All storm and surface water conveyance systems and outlet structures for storm and surface water shall meet Village's and State's requirements. Developer shall submit plans, specifications and calculations for such storm and surface water drainage system to Village Consulting Engineer and obtain written approval from the Village, which shall not be unreasonably withheld or delayed prior to construction. Developer shall be responsible for maintenance, replacement or repair of all storm and surface water conveyance systems or outlet structures lying within Property. Developer shall provide Village with a maintenance easement for the storm and surface water drainage facilities and the Village may specially assess Developer for any service performed by the Village or at its instance.

3. The entire development shall be graded and restored to the proposed elevations to be approved by Village.

4. The Developer will pay for all costs associated with the grading, erosion control and stormwater drainage facilities including the Village's administrative, legal and engineering costs.

5. The Developer's Engineer shall prepare plans and specifications for grading, erosion control and surface stormwater drainage which shall be approved by the Village Consulting Engineer. All appropriate inspections of the grading, erosion control and surface stormwater drainage improvements and construction staking shall be conducted by the Developer's Engineer.

B. REMOVAL OF EXISTING BUILDINGS.

Developer warrants and represents that it shall remove the existing single-family residence and surrounding outbuildings located on the northeastern portion of the Property, not later than May 31, 2025.

C. MUNICIPAL WATER MAINS - VILLAGE CONSTRUCTED.

1. The Developer shall be responsible to pay the full cost for the design and construction of a complete potable water distribution system to service each building of the development including connection to the existing water distribution system of the Somers Water Utility offsite water main will be publicly bid. The Village shall be responsible for the design and construction of all offsite water facilities.

2. The Developer shall be responsible for complete preparation of plans and specifications for the construction of private water mains and laterals to serve each building and/or lot. Following the submission of both paper and electronic format documentation to the Village, the Developer's Engineer shall prepare specifications to be approved by the Village Engineer. The Developer shall connect to the municipal water system within sixty (60) days of approval by the Village consulting engineers.

3. Upon receipt of the construction bids and the determination of a responsible bidder, the Developer shall inform the Developer of the amount of such bid and the Contractor to whom contracts shall be awarded. The Village shall review and confirm the qualifications of the prospective Contractor pursuant to Chapter 22 of the Village Ordinances. The Developer shall deposit with the Village one hundred twenty-five (125%) percent of the full amount of the estimated engineering, administrative and legal fees for the public portion of improvements to be constructed. Such deposit shall be in the form of a letter of credit in a form acceptable to the Village Attorney. Following the delivery of such letter of credit to cover construction, and all expenses to be incurred by the Village, including engineering, legal, administrative and other contingencies, the Village shall then award the contract to a responsible bidder. A sample Letter of Credit is attached hereto, incorporated by reference and marked Exhibit "B".

4. Upon completion of the public portion of the water main adjacent to the Development and verification by the Village Engineer that said water system has been constructed in accordance with plans and specifications, all right, title and interest in, and any public easements required for the installation by the Water Utility, shall be vested in the Utility for the public portion of such improvements without further documentation. The Developer shall assign to the Water Utility any easements or rights-of-way obtained from other owners required for the installation of water lines, and shall cause documents to be executed and delivered to Village which, in the opinion of counsel to the Village, shall be necessary to effectuate the purposes stated in this paragraph.

5. Upon completion of the project, the final costs shall be based on the "as built" plans. Any funds deposited by the Developer that are not required following completion of construction, shall be returned to the Developer. However, in the event additional or unforeseen costs or expenses are incurred by the Village which are in excess of the funds deposited by the Developer with the Village, then the Developer shall within thirty (30) days of demand by the Village reimburse to the Village all such costs and expenses so incurred.

6. The Developer shall provide all construction staking and the Village shall make appropriate inspections of all public water main improvements. The Developer shall prepare all record drawings and system map updates for the public mains. All related costs shall be paid by Developer.

7. Upon completion of public water main improvements, the Village shall allow Developer to connect to the municipal water system of Village, all at the cost and expense of Developer. Village shall cooperate with Developer and shall assist in obtaining all necessary permits required from the State of Wisconsin and the City of Kenosha for such municipal water systems, extensions and connections. Developer, for itself, its successor and assigns, specifically waives any objection to the imposition of future special assessments levied by the Village which benefit lots, outlots or other parcels or units for the municipal water system improvements not originally constructed by Developer pursuant to the terms of this Agreement. Any such future special assessment(s) which would be imposed after construction of future water improvements would occur only after demonstration of a special benefit to such parcel(s) and only on an equal and non-discriminatory basis.

8. The Village shall accept the public portion of all municipal water systems improvements located in the public roadway or in any easement lying within Real Estate upon (i) completion in accordance with approved plans and specifications, (ii) construction and delivery without defect, damage or non-conformance, (iii) delivery to Utility of certified copies of all tests of the municipal water system, (iv) receipt of lien waivers from all contractors, and (v) review and verification by Village Engineer of the above. Said acceptance shall be subject to approval by the Board of Water Commissioners. Upon acceptance by Village, Village shall be responsible for the operation and maintenance of the public portion of said water system. The public portion of the water main improvements is described on the attached Exhibit "C", which is incorporated herein by reference.

9. Special Assessments.

(a) For purposes of this Section C, benefitted properties are those defined as parcels of land outside of but benefitted by the Development and described with more particularity on the attached Exhibit "D", which will, subsequent to the execution of this Agreement, be benefitted by construction of the proposed public portion of the water main improvements.

(b) The total expense of construction of the public portion of the water main improvements within the public right-of-way shall be determined and paid for as set forth above, and the public portion will be assessed. The benefitted properties shall reimburse the total share of the municipal water costs, in the amounts which shall be based upon the "as built" costs and determined by the Village Engineer.

(c) The Village shall collect from the property owners of the benefitted properties, their successors or assignees, the recapture coss as set forth in subparagraph (b) above, if and only if, such benefitted properites or part thereof, shall utilize the water main improvements. Upon the earlier of sixty (60) days following invoicing of final costs by the Village or at such time or times as benefitted owners seek connection to the water main improvements, the Village shall collect from such owner or owners, the amount of the Developer's reimbursement based upon "as built" and administrative costs. The Village agrees not to issue any change in use or to allow division of any benefitted property unless and until such costs have been paid by the benefitted owner or owners. It is understood and agreed that the Village's obligation shall be limited to only the funds collected from such recapture costs. This Agreement shall not be construed as creating any obligation upon the Village or the Village of Somers Water Utility, for any reason whatsoever, to make payments from its general corporation funds or revenue from the operation of the Village of Somers Water Utility or otherwise.

(d) The Developer shall defend and hold harmless the Village, its officials, officers, employees, consulting engineers, attorneys, agents or representatives from any and all costs connected with or resulting from any claim or suit brought by any benefitted owner or interest peson, contesting the Village's right to collect

the Developer's recapture costs under the terms of the Agreement, other than any act of omission of Village, its agents or contractors. The Village shall cooperate with the Developer in defending any such claim or action, at Village's expense if by separate counsel, to the extent permitted by Developer's insurance company.

10. Developer shall, during the term of Agreement, indemnify, defend and hold harmless Village and officers, consulting engineers, attorneys, agents, representatives and employees thereof from and against any and all claims, damages, judgments, costs and expenses and attorneys' fees which any of them may pay, sustain or incur should any person or party including Developer, Developer's contractors, subcontractors and materialmen incur personal injury, property loss or damage arising out of the design or construction of the municipal water system other than any act or omission of Village, its agents or contractors; provided that Village shall cooperate with Developer and Developer's legal counsel in defending against any such claim. Village shall be permitted to assist in the defense of any such claim, at Village's expense if by separate counsel, to the extent permitted by Developer's insurance company.

II. DEVELOPER WARRANTIES AND OBLIGATIONS

A. VILLAGE COSTS.

Upon execution of this Agreement, Developer shall pay to the Village the reasonable costs incurred by the Village for engineering, attorney fees and administrative costs associated directly with this Development incurred prior to the date of this Agreement. Developer shall pay to Village all costs for construction review or inspection of all improvements and any legal and administration costs encountered by the Village in granting approvals for the development of the Property.

B. SUBDIVISION AND CONDOMINIUM PLATTING ORDINANCE.

The Developer represents that it has reviewed the Village Subdivision and Condominium Platting Ordinances as revised and will complete the improvements set forth herein in compliance with the Subdivision and Platting Ordinances, and its revisions and further agrees to comply therewith, except as may be modified by the terms of this Agreement.

C. INDEMNIFICATION.

Developer shall, during the term of this Agreement, indemnify, defend and hold harmless Village and officers, consulting engineers, attorneys, agents, representatives and employees thereof from and against any and all claims, damages, judgments, costs and expenses and attorney fees which any of them may pay, sustain or incur should any person or party incur personal injury, property loss or damage arising out of wrongful, negligent, improper or deficient conduct of Developer in the design or construction of any of the improvements on the Property.

D. CERTIFIED SURVEY MAP APPROVAL AND ZONING; PERMITS AND ASSESSMENTS.

1. The configuration of the Certified Survey Map as depicted on the attached Exhibit "A" and incorporated herein by reference has been approved by the Village Board and the zoning and Certified Survey Map for the Property shall not be changed, modified or altered without the prior written consent of the Developer and the Village.

2. This Development Agreement may be modified or amended as provided in Paragraph IV.B. below.

3. The Village agrees that all special assessments, permit fees, connection fees and other charges by the Village and Utility shall not be charged against any portion of the Property or its users, in a manner which would be in excess of those charged generally for development in the Village.

III. MISCELLANEOUS

A. ASSIGNMENT.

The Developer recognizes that this Agreement is based on Developer's presentation to the Plan Commission and Village Board and Developer shall not assign or transfer this Agreement to any other person or corporation other than a Permitted Assignee without prior written consent of the Village.

B. MODIFICATION.

This Agreement supersedes all prior oral or written understandings or representations between the parties except as may be embodied by applicable state, county or Village statute, code or ordinance. Any modification to the terms of this Agreement shall only be enforceable if in writing signed by duly authorized representatives of each of the parties hereto in the same manner as this Agreement.

C. SANITARY SEWER CONNECTION CHARGES.

Developer agrees to pay all sanitary sewer connection charges or other fees imposed by the Village for all improvements associated with the project. All one-time connection charges for municipal sanitary sewer shall be paid at the time of issuance of a building permit.

D. DEFAULTS.

No default shall arise hereunder unless the non-defaulting party has provided the defaulting party with written notice and a reasonable cure period of at least thirty (30) business days. Following any default either party may exercise all rights and remedies allowed by law and

this Agreement. In the event any default cannot reasonably be cured within said thirty (30) day period, the party shall not be deemed in default as long as the party is acting reasonably and in good faith in curing such default.

E. SEVERABILITY.

If any provision, covenant, or a portion of this Agreement or its application to any person, entity or property is held to be invalid or unenforceable by a court of law or equity, such status shall not affect the application or validity of other provisions, covenants or portions of this Agreement which shall be given effect without the invalid provisions or applications, and to this end, the provisions and covenants of this Agreement are declared to be severable.

F. RECORDATION.

This Agreement shall be recorded in the office of the Register of Deeds for Kenosha County, Wisconsin. Such recordation may, at the discretion of the Village, omit some or all of the attached exhibits delineated in subsection H below.

G. EXECUTION OF COUNTERPARTS.

This Agreement may be executed as three (3) or more counterparts, with each acting as an original.

H. EXHIBITS INCORPORATED BY REFERENCE.

Each of the terms, conditions and specifications described, noted or depicted on the following Exhibits are hereby incorporated herein by reference:

Exhibit "A" Certified Survey Map
Exhibit "B" Letter of Credit
Exhibit "C" Municipal Water Plan
Exhibit "D" Benefitted Owners

I. INTEGRATION.

This Development Agreement, including the exhibits hereto, and such other documents as are incorporated herein embodies the entire agreement and understanding among the parties hereto and supersedes all prior agreements and understandings relating to the subject matter hereof.

J. CHOICE OF LAW AND VENUE.

This Development Agreement and all attached exhibits shall be construed and enforced according to the laws of the State of Wisconsin. The parties agree that any matter which may be brought or pursued in court hereunder shall be brought and maintained only in the Circuit Court

for Kenosha County, Wisconsin, and each party consents to such venue and the court's personal jurisdiction over each party.

K. WAIVER OF BREACH OR VIOLATION NOT DEEMED CONTINUING.

Either party may, to the extent legally allowed, (a) extend the time for performance of any of the obligations or other acts of the other party(s), (b) waive any inaccuracies in the representations or warranties of the other party(s) hereto contained herein, or in any document delivered pursuant hereto and (c) waive any compliance by any of the other parties hereto with any of the agreements or conditions contained herein. The waiver by either party of a breach or violation of any provision of this Agreement shall not operate as, or be construed to be, a waiver of any or other subsequent breach or violation of any provision hereof. No breach or violation of any provision hereof shall be waived except by an agreement in writing signed by the waiving party.

L. CONSTRUCTION.

Each party to this Agreement and their respective legal counsel acknowledge that they have had the opportunity to participate equally in the drafting of this Agreement and that in the event of a dispute, neither party shall be treated, for any purpose as the author of this Agreement nor have any ambiguity resolved against it on account thereof.

M. NOMENCLATURE.

The use of the male gender shall include the female, the individual shall include the corporate, and the singular shall include the plural, and visa versa, wherever such usage is appropriate to the context.

N. NOTICES.

Except as otherwise specifically provided in this Agreement, all notices given in connection with this Agreement shall be in writing, shall specifically refer to this Agreement, and shall be sent to the other party by personal delivery, by established overnight courier, fees prepaid, by certified or registered mail. postage prepaid and return receipt requested, or by facsimile transmission or email transmission to the party (provided that an original of said notice or communication is sent simultaneously by first class United States mail with postage prepaid). Any notice addressed to the Village shall be addressed to the attention of the Village Administrator. Any notice addressed to the Developer shall be addressed to the attention of Shoreland Lutheran High School Federation, Inc., 9026 12th Street, Kenosha, Wisconsin 53144. Either party may give notice to the other, in accordance with the terms of this paragraph, of a change-of-address to which notices under this Agreement may be sent. Any notice given in accordance with this paragraph shall be effective upon delivery, if personally delivered, upon delivery by overnight courier, upon delivery by email or facsimile transmission if transmitted during regular business hours, or three (3) days after notice is deposited in the United States mail if sent by certified mail. Any facsimile or email transmission received after 5:00 pm (Kenosha,

Wisconsin time) or on a day other than a normal business day shall be deemed delivered on the next normal business day.

O. NO THIRD PARTY BENEFICIARIES

This Agreement is not intended to benefit or be enforceable by any person other than the Village, the Developer, and its respective successors and assigns. This Agreement shall be binding upon and be for the benefit of the Village, the Developer, and their respective successors and assigns only.

WITNESS OUR HANDS AND SEALS this _____ day of _____, 2025.

VILLAGE OF SOMERS

By:_____
George Stoner, President

Attest:_____
Wendy Burnette, Clerk/Treasurer

STATE OF WISCONSIN)
) ss.
COUNTY OF KENOSHA)

Personally came before me this _____ day of _____, 2025, the above named George Stoner, President and Wendy Burnette, Clerk/Treasurer of the Village of Somers, to me known to be the persons who executed the foregoing instrument and acknowledged the same.

_____
Printed Name:_____
Notary Public; Kenosha County, WI
My commission expires_____.

DEVELOPER
SHORELAND LUTHERAN HIGH SCHOOL
FEDERATION, INC.

By: _____
Printed Name:_____, Its_____

STATE OF WISCONSIN)
) ss.
COUNTY OF KENOSHA)

Personally came before me this _____ day of _____, 2025, the above, _____, on behalf of Shoreland Lutheran High School Federation, Inc., to me known to be the person who executed the foregoing instrument and acknowledged the same.

_____
Printed Name:_____
Notary Public; Kenosha County, WI.
My commission expires_____.

This instrument is drafted by

Attorney Jeffrey J. Davison
DAVISON LAW OFFICE, LTD.

LEGAL DESCRIPTION

Established 1843
Somers
VILLAGE & TOWN
www.somers.org
P.O. Box 197, Somers, WI 53171 • PH: (262) 859-2822 • FAX: (262) 859-2331

VILLAGE OF SOMERS
VILLAGE BOARD
WORK SESSION ITEM MEMORANDUM

WORK SESSION: May 20, 2025

TO: Village President Stoner and Board of Trustees

PREPARED BY: Kevin Poirier, Assistant Administrator

AGENDA ITEM: #7 Discuss proposed Ordinance 2025-XXX on Ordinance to repeal and recreate sections 18.30(E) and (F) of the code of Ordinances of the Village of Somers relating to preliminary plat and final plat fees.

BACKGROUND:

The Village list development fees in Chapter 18.30 of its Ordinances.
https://ecode360.com/37202758

While reviewing the Development Process, it came to Staff's attention that some of the fees were incorrect. After discussions with Kenosha County Planning and Zoning Staff and in an effort to streamline the fee process for developers, staff will be updating several of the fees listed throughout the review process and as time allows.

UPDATE:

While the Village had not seen any Plat development in years, there are now several going through the approval process. The Preliminary Plat and Final Plat applications fees listed in Chapter 18,30(E) and (F) need to be corrected as to provide clarity and consistency to developers.

COMMENTS:

If the Board agrees, this will be put on the May 27 Board Meeting for approval.

ATTACHMENTS:

Proposed Ordinance 2025-XXX

ORDINANCE NO. 2025- _____

AN ORDINANCE TO REPEAL AND RECREATE SECTIONS 18.30(E) AND (F) OF THE CODE OF ORDINANCES OF THE VILLAGE OF SOMERS RELATING TO PRELIMINARY PLAT AND FINAL PLAT FEES

The Village Board of Trustees of the Village of Somers, Kenosha County, Wisconsin, hereby repeals and recreates Sections 18.30(E) and (F) of the Code of Ordinances of the Village of Somers to read as follows:

(E) **Preliminary Plat Fee**. The developer shall pay to the Village Clerk/Treasurer at the time of filing a preliminary plat, planned unit development, multi-unit dwelling plan or condominium plat an initial fee of Three Thousand ($3,000.00) Dollars plus Twenty-five ($25.00) Dollars for each lot or unit included in the preliminary plat, planned unit development, multi-unit dwelling plan or condominium plat to be applied to the cost of review and evaluation. If it is determined that resubmittal of the preliminary plat, planned unit development, multi-unit dwelling plan or condominium plat is required, then a resubmittal fee of Two Hundred Fifty ($250.00) Dollars shall be due and payable. Additional costs of review and evaluation and additional costs of review and evaluation of modifications to a previously filed preliminary plat, planned unit development, multi-unit dwelling plan or condominium plat shall be invoiced to and paid by the developer on a monthly basis.

(F) **Final Plat Fee**. The developer shall pay to the Village Clerk/Treasurer at the time of filing a final plat, planned unit development, multi-unit dwelling plan or condominium plat an initial fee of Three Thousand ($3,000.00) Dollars plus Twenty-five ($25.00) Dollars for each lot or unit included in the final plat, planned unit development, multi-unit dwelling plan or condominium plat to be applied to the cost of review and evaluation. If it is determined that resubmittal of the final plat, planned unit development, multi-unit dwelling plan or condominium plat is required, then a resubmittal fee of Two Hundred Fifty ($250.00) Dollars shall be due and payable. Additional costs of review and evaluation and additional costs of review and evaluation of modifications to a previously filed final plat, planned unit development, multi-unit dwelling plan or condominium plat shall be invoiced to and paid by the developer on a monthly basis.

Dated at Somers, Wisconsin, this _____ day of _____, 2025.

VILLAGE OF SOMERS

By:_____
George Stoner, President

Attest:_____
Wendy Burnette, Clerk/Treasurer

Village of Somers
7511 12th Street
Somers, WI 53171

Village Board Meeting
Tentative Agenda
Tuesday, May 27, 2025
5:30 p.m.

Village Board Meeting:	
Item #	
1	Call to order
2	Pledge of Allegiance
3	Consent and Approval of Minutes of Regular meetings on May 13, 2025, Vouchers dated May 15 and May 22.
4	Correspondence:
5	Citizens Comments
6	President and Trustee Comments
7	Action on proposed cost sharing with other municipalities to hire a lobbyist to advance Bills in Congress to have municipalities get their own ZIP Code.
8	Motion to approve proposed Ordinance 2025-XXX on Ordinance to repeal and recreate sections 18.30(E) and (F) of the code of Ordinances of the Village of Somers relating to preliminary plat and final plat fees.
9	Action on Operator's Licenses:
10	Adjourn

I hereby certify that as the designee of the chief elected official of the Village of Somers, I posted this notice of the May 27, 2025 Village Board Meeting Agenda in 1 public place & on the Village website.

Dated this _____ day of _____2025 Wendy Burnette, Clerk-Treasurer

Requests from person with disabilities who need assistance to participate in this meeting should be made to the Clerk's Office at 262-859-2822 with as much notice as possible. **Notice is hereby given that members of the Village Board may participate telephonically. Notice is hereby given that members of the Town Board may be in attendance for the sole purpose of gathering information. A quorum may be present. However, no Board action will be taken.**

Original Post Date: , 2025