

May 20, 2021

Mr. Thomas Harrigan  
Zoning and Planning Administrator  
Village of Elm Grove  
13600 Juneau Boulevard  
Elm Grove, WI 53122-0906

Re: 13105 Watertown Plank Road  
SSND Revised Redevelopment Plan Review

Dear Mr. Harrigan:

We have reviewed the revised redevelopment plan documents submitted to the Village for the multi-family redevelopment proposed to be constructed on the School Sisters of Notre Dame (SSND) campus at 13105 Watertown Plank Road. Various revisions of the some of the documents were received on April 8, 2021, May 3, 2021 and May 6, 2021 and May 12, 2021. The findings and recommendations are as follows:

1. General:

- a. Wetlands: Mapping from the Wisconsin Department of Natural Resources (DNR) Water Surface Data Viewer website shows wetland indicators exist on the property. Matt Parsons from Applied Ecological Services (AES) conducted a wetland investigation of the project site on April 16, 2020. No wetlands were found on the project site during the investigation according to the report prepared by AES dated April 29, 2020. Matt Parsons is a DNR assured wetland delineator.
- b. Floodplain: The effective FEMA floodplain map shows the property is located outside of a regulatory floodplain.
- c. Previous Development: During our January site visit it was noted there are several buildings on the site that appeared to be constructed at different times. Periodic air photos viewed on Waukesha County's GIS taken since 1941 confirm the assumption of phased development of the campus. The photos would also suggest some demolition has also occurred. We do not have records of previous demolition on the site. However, during our site visit we also observed a dump site located in the trees in the southwest part of the existing lot.
- d. Phase 1 Environmental Assessment (ESA): K Singh prepared a Phase 1 ESA that is dated March 19, 2020. The executive summary of the assessment recommends a limited Phase 2 ESA be completed that should include the following:
  - i. An additional geoprobe soil boring be taken near the existing vehicle service pit and be tested for PAHs.
  - ii. Further investigation of historic reports to assess potential of PCBs or an additional geoprobe soil boring be taken near the outside transformers pad and be tested for PCBs if historic reports are not available.
  - iii. Regular testing of the existing well for radium concentrations.

The limited Phase 2 ESA should be completed as recommended and the results need to be provided to the Village.

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- e. Permits and Approvals: A copy of all permits and approvals for the proposed improvements that have or will be obtained from regulatory agencies having jurisdiction over the project need to be provided to the Village.
- f. We recommend the Village enter into a development agreement with the applicant. The approved developer agreement should run with the land for each parcel.
- g. Historical/Cultural Investigations:
  - i. It is known that historical/cultural artifacts have been found in an area near the project site. In addition, a note on the development plan indicates burial graves exist in the northwest corner of CSM Lot 4 where future development is proposed. The applicant hired University of Wisconsin-Milwaukee Cultural Resource Management (UWM-CRM) to conduct a literature review and land use history review of the project site.
  - ii. UWM-CRM issued Archaeological Research Laboratory Report of Investigations No 590 as a result of their work, which took place in August and September 2020.
  - iii. A summary in the report provides recommendations for additional testing and monitoring for the Convent Knoll burial site (BWK-0261) and careful management and preservation of the School Sisters of Notre Dame Convent Cemetery (BWK-0096). The applicant will need to follow all recommendations made by UWM-CRM in their report.
  - iv. Additional materials provided with the revised submittal indicate an intent to move graves from the northwest corner of proposed CSM Lot 4 to another part of the site. Details of the relocation and information documenting all required approvals to move the graves needs to be provided to the Village.
- h. Historical Registry:
  - i. We understand the applicant has reached out to the State Historical Society to determine what restrictions apply to or approvals are needed for this development because the complex is listed on the National Register of Historic Places. Approval of the project from the State Historical Society will need to be provided to the Village.
- i. We did not review the petition to amend the Comprehensive Plan.
- j. Rezoning Petition: The property is currently zoned as an I-1 district. The property is proposed to be split into four lots and petitioned for CSM Lots 1, 2 and 4 to be rezoned to separate underlying districts with a Planned Development Overlay (PDO) as follows:
  - i. CSM Lot 1 is petitioned to be rezoned from I-1 to RS-3.
  - ii. CSM Lot 2 is petitioned to be rezoned from I-1 to RM-1.
  - iii. The plan does not request a zoning change for Lot 3, which will remain as I-1.
  - iv. CSM Lot 4 is petitioned to be rezoned from I-1 to RS-4.
  - v. We did not review the underlying rezoning petition.
- k. Planned Development Overlay (PDO) petition: We did not review the PDO petition.
  - i. Section 335-30 of the Village Code may provide some flexibility on certain zoning requirements. Approved variations to the zoning requirements will impact our review and Village approval of those elements. Therefore, in accordance with Section 335-30.G of the Village Code, the petition will need to include details of each proposed deviation from current zoning ordinance requirements including, but not limited to, building footprint coverages, total impervious area coverages,

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- building height, lot size and building setback requirements. Flexibility for approval of each of the requested deviations is at the discretion of the Village.
- I. Setbacks: Village Code requirements for setbacks for properties zoned RS-3, RS-4 and RM-1 are as follows:
    - i. Minimum building setback along street frontages: 50 feet.
    - ii. Minimum building setback along side yards: 20 feet.
    - iii. Minimum building setback along rear yards: 25 feet.
    - iv. Setbacks shown for the existing and proposed development on CSM Lot 2 do not meet the requirements for the requested RM-1 zoning.
  - m. Building Height:
    - i. Section 335-21.E.1 for the requested RM-1 zoning on CSM Lot 2 allows principal structure height to be as much as 36 feet above the surrounding grade (up to 41 feet if the building is actually set back at least 10 feet more than the minimum).
    - ii. Section 335-21.E.1 for the requested RM-1 zoning also allows principal structure height to be as much as 46 feet above the surrounding grade for building faces with exposed foundations (up to 51 feet if the building is actually set back at least 10 feet more than the minimum).
    - iii. The architectural drawings show the existing Notre Dame Hall has a height of 91'-1" above grade.
    - iv. Several of the proposed building heights shown on the elevation drawings exceed the requirements of Section 335-21.E.1 of the Village Code. The tallest proposed building height measured to the peak of the roof shown on the proposed building elevation drawings is 53'-6".
    - v. If the applicant desires to exceed the building height limitations in the Village Code as part of the Planned Development Overlay, then that flexibility needs to be requested by the applicant for Village review.
  - n. Construction access:
    - i. The erosion control plan shows a primary and secondary construction access is provided to the site from Watertown Plank Road. We recommend the primary and secondary construction access points be labeled on the Demolition Plan (Sheets C100 and C101), Site Plan (Sheet C200), Grading Plan (Sheet C300) and the Utility Plan (Sheet C400).
    - ii. The erosion control plan also shows another construction access is provided to the site from the end of Green Meadow Place. A note has been added indicating this access is only to be used for construction of the single-family homes on CSM Lot 4. Since there will be some construction on CSM Lot 4 at the same time improvements on CSM Lot 2 are constructed, we recommend the note be changed to only allow access for construction on CSM Lot 4 (future single-family home sites). Further, we recommend the note limiting construction access to the site from Green Meadow Place be added to Sheets C100, C102, C200, C300 and C400.
2. Topographic Map/Plat of Survey:
- a. We have confirmed the Topographic Map prepared by Chaput Land Surveys is the Plat of Survey showing existing site conditions. We recommend the title of the drawing be changed from "Topographic Map" to "Plat of Survey" since that is how it is referred to in the notes on the Demolition Plan.

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- b. The existing sanitary lateral to the powerhouse needs to be shown on the drawing. The sanitary sewer as-built drawing shows the lateral connection at the sewer main is approximately 200.3 feet northeast of the sanitary manhole at the intersection of Church Street and Watertown Plank Road.
  - c. The existing sanitary sewer along Red Barn Lane is shown to be adjacent to the surveyed manholes. The location discrepancy needs to be resolved.
3. Certified Survey Map (CSM):
- a. Future Development:
    - i. CSM Lot 1 and CSM Lot 4 are proposed to be sold as undeveloped property. These lots will then be able to be further divided and developed into single family homes by a subsequent owner/developer.
    - ii. The future single-family lots are not shown on the CSM because a CSM can only create up to four lots. Creating 5 or more parcels that are 1.5 acres or less, or 5 or more of 1.5 acres or less by successive divisions within 5 years will require a subdivision plat to be filed rather than a CSM.
    - iii. Village approval of the currently planned development on CSM Lot 2 is predicated on the future development plan for CSM Lot 1 and CSM Lot 4. In addition, the SSND redevelopment plan for CSM Lot 2 includes elements that assume impacts from future development such as the recommendations from the traffic impact analysis, sanitary sewer service and storm water management facilities. The type and density of future development on CSM Lots 1 and 4 must be reasonably identified before the SSND redevelopment plan is approved so that the common infrastructure serving the development of CSM Lots 1, 2 and 4 is properly designed and constructed. Furthermore, it will be critical for the future developer of CSM Lot 1 and CSM Lot 4 to understand the limitations assumed and approved by the Village during this current development phase and adhere to the approved future development plan so that existing and new infrastructure shared by the three lots does not need to be reapproved, redesigned and reconstructed.
  - b. The revised CSM was reviewed for compliance with Wisconsin Administrative Code Chapter A-E 7, Wisconsin Statute Chapter 236 and the Village of Elm Grove Chapter 305 Land Division Regulations:
    - i. Per Wisconsin Administrative Code Chapter A-E 7: No comments at this time.
    - ii. Per Wisconsin Statute Chapter 236: No comments at this time.
    - iii. Village of Elm Grove Chapter 305 Land Division Regulations: No comments at this time.
    - iv. Easements for public infrastructure such as water mains and sanitary sewers need to be shown on the CSM.
    - v. Easements for private storm water management facilities and other private infrastructure improvements that will have shared use by the apartment complex on CSM Lot 2 and the future single-family homes on CSM Lot 1 and CSM Lot 4 need to be shown on the CSM.
    - vi. Easement information on the CSM needs to include a description as well as a listing of rights and conditions.
    - vii. A developer agreement has not yet been finalized. However, when it is finalized, we understand that it will be recorded and will include requirements that will run with the land. Notes need to be added to the CSM that reference the developer agreement and any other deed restrictions by document number for reference to future owners of Lots 1 and 4 and parts thereof.

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- viii. Notes need to be added to page 2 of the CSM stating that the existing 12-foot utility easement will be removed and the existing 20-foot sewer easement will remain.
4. Traffic Impact Analysis (TIA):
  - a. A TIA was prepared for this development by Ayres Associates dated September 23, 2020 with two subsequent updates. Supplement Number 2 of the TIA was received on January 12, 2021. Supplement No 2 shows all of the analyzed intersections except Legion Drive at Watertown Plank Road will operate at a level of service (LOS) D or better at full build out of the development (assumed to be 2028). Supplement 2 also shows Legion Drive will operate with at LOS E or worse in 2028 with or without traffic generated by the SSND development. The supplement recommended modifications to existing traffic signal timing to improve the LOS for the Legion Drive intersection to LOS D.
  - b. The Village hired Traffic Analysis and Design, Inc. (TADI) to conduct an independent analysis. TADI issued a Technical Memorandum dated March 10, 2021. The traffic volumes and intersection capacities developed by TADI in many cases were different than those developed by Ayres & Associates. Using the new data, the TADI memorandum found all intersections analyzed will operate acceptably at LOS D or better during the peak hours with no changes to intersection geometry or traffic control needed.
    - i. The TADI memorandum recommends a separate pedestrian crash risk assessment be completed to prioritize safety improvements by the Ayres & Associates TIA to Watertown Plank Road crosswalks.
5. Sanitary Sewage Flow Allocation:
  - a. We calculated projected sewage flows generated by the proposed development using the MMSD 2020 Facilities Plan Sewershed Flow Allocation Worksheet and the occupancy factors found in the 2021 MMSD Cost Recovery Manual. The 2021 edition of the manual provides the most up to date guidance on occupancy factors to be used when developing projected sanitary sewage flows for different dwelling types based on the number of bedrooms for each. Therefore, the sewage flow allocation computations have been updated in this letter.
  - b. The proposed population growth used in the worksheet was determined by multiplying the number of each of the proposed dwelling units broken down by bedroom counts multiplied by the occupancy factors from the 2021 MMSD Cost Recovery Manual.
  - c. The SSND site is located within the EG3007 Sewershed. According to previous correspondence with MMSD staff in 2019, the 2020 Facilities Plan shows the allowable growth in the EG3007 Sewershed to be 323,000 gallons of sewage per day (gpd).
  - d. Other developments we are aware of that have utilized some of the available growth within the EG3007 Sewershed since the 2020 Facilities Plan was finalized includes the Heritage Assisted Living facility at 800 Wall Street and Elm Grove Heights apartments at 13040 Bluemound Road. We asked the Village to let us know if any other new developments should be included in this list. According to our calculations in January 2021, these two facilities have utilized approximately 89,341 of the 323,000 gpd available growth flow leaving approximately 233,659 gpd available for the SSND and other future developments.
  - e. The revised proposed SSND development plan calls for 237 apartment units and 22 single family home dwellings. The architectural plan drawings show at least 38 one-bedroom units, 130 two-bedroom units and 34 3-bedroom units (Total = 202 Units). The

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bedroom count for the remaining 38 units is unknown. The redevelopment review request letter from Mandel Group dated December 1, 2020 provides anticipated occupancy factors for the apartment and single-family dwelling units on page 8. However, our calculations will use the occupancy factors in the 2021 MMSD Cost Recovery Manual as noted above. According to our calculations, the anticipated sewage flow generated by the proposed development will be 192,624 gpd.

- f. The existing SSND campus includes approximately 168 one-bedroom dwelling units. The sewage flow generated by the existing development is calculated to be approximately 55,104 gpd. Therefore, the net increase in sewage flow created by the proposed development is 137,520 gpd, which is less than the calculated remaining allowable growth for the EG3007 Sewershed.
  - g. If the SSND redevelopment plan as currently proposed is approved, then approximately 96,139 gallons of sewage per day is continues to be available for future growth within the EG3007 Sewershed.
6. Demolition Plan (Sheets C100, C101 and C102):
- a. A note on the plan indicates one of the water wells on the property is to be abandoned. Based on information provided to the Village there are two water wells on the property. The Demolition Plan needs to be revised to show both wells will be abandoned.
  - b. A note on the plan indicates existing utilities will be abandoned at the property boundary. Another note needs to be added to the plan indicating that the existing fire hydrant located within the public right-of-way of Watertown Plank Road and associated underground piping will need to be removed.
  - c. See Utility Plan item for comments regarding demolition of sanitary sewer laterals in the public right-of-way.
  - d. The plan shows an existing cemetery west of Green Meadow Place is to be relocated.
    - i. Details of the cemetery relocation need to be provided.
    - ii. The applicant will need to follow the recommendations made in the Archaeological Research Laboratory Report of Investigations No 590 prepared by UWM-CRM and provide documentation of the steps that were taken to the Village.
    - iii. The applicant will need to provide documentation of approval to relocate the cemetery from appropriate stakeholders and regulatory agencies having jurisdiction over these matters.
7. Erosion Control Plan (Sheet C110):
- a. We assume all of the erosion control devices shown on the Plan will be installed when the improvements on CSM Lot 2 are constructed. If there are devices shown on the Plan that are not going to be installed until the future single-family lots are developed, then they need to be clearly marked as such.
  - b. The area of disturbance is greater than one acre. Therefore, the development may require a construction site stormwater discharge permit (NOI) from the appropriate agency having jurisdiction over the site.
  - c. The note pointing to the tracking pad shown at the west end of Green Meadow Place needs to be revised and copied to other appropriate sheets (see additional comments in Construction Access item above).
  - d. The erosion control notes need to be revised as follows:
    - i. Indicate specifically who is responsible to conduct the periodic erosion control inspections (contractor or someone on the development team).
    - ii. Provide copies of erosion control inspection reports to Village of Elm Grove.

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- iii. Indicate specifically that contractor is responsible for correcting deficiencies noted in the periodic inspections.
          - iv. Allow Village the right, but not the responsibility, to require additional erosion control measures.
          - v. Erosion control devices shall be left in place until the vegetation is established on 100% of the area tributary to the device with at least 80% density.
        - e. The construction sequence needs to be revised to require construction and stabilization of swales and temporary sediment basins before stripping topsoil and mass grading.
        - f. The plan shows a stockpile is planned to be located on top of the underground stormwater storage tank. The structural design of the storage tank will need to account for the temporary loading.
        - g. The temporary stockpile shown over the top of the existing public sanitary sewer at the south end of the site needs to be moved so that it does not impact the sewer line.
        - h. Additional language within the construction sequence should be added to require the sediment traps, basins, diversion berms and swales to be constructed and stabilized prior to mass grading of the site.
        - i. We recommend a temporary ditch check be added to the south end of the South Homes East Swale.
        - j. The Plan shows Dry Pond 1, Dry Pond 2 and Infiltration Basin 1 will be used as temporary sediment basins during construction. During the Public Works Committee meeting held on April 12, 2021, Chairperson Pat Kressin recommended against using infiltrating storm water facilities as temporary sediment basins during construction. We agree with this recommendation. Therefore, separate temporary sediment basins need to be constructed.
8. Erosion Control Details (Sheet C111):
  - a. We recommend the tracking pad detail be revised to label the existing grade line to clarify the pad needs to be buried 6 inches below existing grade.
  - b. We recommend the filter sock detail be revised to call out how the sock will be anchored in place when located next to the safety fence.
9. Erosion Control Details (Sheet C112):
  - a. The typical swale details call for open-graded stone immediately below the topsoil layer. We are concerned that topsoil will migrate into the void spaces of the open-graded stone causing settlement. The design engineer should factor this concern into their design.
  - b. We recommend the riprap detail be revised to clarify geotextile fabric be extended up the sides of the riprap mat to prevent soil from migrating into the spillway area.
10. Site Plan (Sheet C100):
  - a. We understand the single-family home lot layouts shown on the plan are conceptual. However, because the zoning for these lots is proposed to be covered by a Planned Development Overlay, the minimum lot size, minimum frontage and minimum setbacks that will be requested for these lots when they are developed needs to be included on this plan for future reference. Village approval of any deviations from Village Code requirements for the underlying zoning district need to be summarized for Village review.
  - b. We recommend two details be created to show the proposed minimum lot size, minimum frontage and minimum setbacks for the future single-family home sites. One detail for a future lot and single-family home on CSM Lot 1 and another detail for a future lot and single-family home on CSM Lot 4.

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- c. The legend shows the single-family homes on CSM Lot 4 are future development. The Plan needs to be revised to show the single-family homes on CSM Lot 1 are also future development.
- d. The demolition plan shows an underground electric line leading up to one of the light poles along Watertown Plank Road will be removed. We assume the streetlights are to be preserved. If the streetlights are served by power coming from the adjacent property owners, then a plan needs to be provided showing how these lights will be served in the future.
- e. Plan notes on the drawing reference details for new improvements on demolition plan sheets. The details are not included on those sheets. The notes should be revised to reference other sheet numbers and the details on the other sheets will need to be submitted for review.
- f. Extension of Green Meadow Place:
  - i. The plan needs to clearly indicate the extension will be a public street as discussed during the Public Works Committee meeting on April 12, 2021.
  - ii. The dedication of the public right-of-way will need to be included on the CSM.
  - iii. We assume the extension of Green Meadow Place shown on the Plan will be installed when the improvements on CSM Lot 2 are constructed. If construction of the public street extension will be delayed until the future single-family lots are developed, then it needs to be clearly marked as such.
  - iv. Details of the public street need to be provided including a typical cross section.
- g. The Site Plan needs to be reviewed by the Fire Chief to confirm that emergency vehicles can properly access the site when called.
- h. Parking spaces:
  - i. Notes on the Site Plan indicate 457 parking spaces (65 surface spaces and 392 underground spaces) are provided for the development.
  - ii. Section 335-32.J of the Village Code requires multi-family dwelling developments to provide 2 parking spaces per dwelling unit. If the number of apartments being proposed is 237 units, then 474 parking spaces are required on CSM Lot 2. The redevelopment plan does not meet this requirement.
- i. Reserved ADA accessible parking spaces:
  - i. The underground parking plan shows a total of 12 underground parking spaces will be reserved for disabled persons. The underground parking plan indicates that it meets accessible parking space requirements found in Section 1106.2 of the IBC.
  - ii. The Site Plan shows three surface parking spaces will be reserved for disabled persons following the requirements of the Americans With Disabilities Act.
- j. Connected Underground Parking Plan:
  - i. Our previous comment letter recommended the design team verify there is enough room for emergency vehicles to navigate through the structure if called. Information provided with the resubmittal indicate they have verified with the Fire Chief that emergency vehicles will not enter the underground parking structure if called to that location. Instead, emergency personnel will enter the structure on foot with rolling gurneys.
  - ii. The plan shows a storm sewer protruding through the corridor connecting Building 1 and Building 3. A note on the plan indicates clearance under the storm sewer to be 7 feet. We recommend appropriate signage indicating overhead clearance limitations be posted at the entrances of and within the underground facilities as appropriate.



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- iii. Our previous comment letter recommended the plan include provisions to dewater the structure at its lowest point. The revised plan includes a trench drain located at the low point of the underground parking structure near the overhead storm sewer crossing.
- k. The Site Plan does not show a monument sign for the development. If a monument sign will be proposed, then the location of the sign will need to be shown and details of the sign will need to be provided for review.
- l. A boundary line surrounding the total area that is planned to be disturbed needs to be added to the drawing. This boundary line should include areas within the site and any public right-of-way areas that will be disturbed.
- m. Impervious area calculations (Proposed Site Data Notes):
  - i. We recommend the notes be converted into a table and the table be broken out with separate values shown for each of the four lots being created by CSM. For this table, only the areas within the lots should be included (no public rights-of-ways).
  - ii. The following data needs to be shown for each of the four lots in the table: Gross lot area (from CSM), existing impervious building area, other existing impervious area (not including buildings), total existing impervious area, percentage of total existing impervious area relative to the gross lot size, total disturbed area, building area (post construction), percentage of total building area (post construction) relative to the gross lot size, other impervious area (post construction and not including buildings), total impervious area (post construction), and percentage of total impervious area (post construction) relative to the gross lot size.
  - iii. “Post Construction” condition in the table should only include improvements currently being proposed (not including future single-family home sites). Impervious areas for future single-family homes were developed for proper design of shared storm water management facilities only.
  - iv. The applicant is requesting Lot 1 to be rezoned from I-1 to RS-3. Village Code limitations on building footprint and impervious area for RS-3 zoning is as follows:
    - 1. Section 335-19.G: maximum building footprint coverage to 20% of the lot area.
    - 2. Section 335-19.H: maximum impervious surfacing coverage to 30% of the lot area.
  - v. The applicant is requesting Lot 2 to be rezoned from I-1 to RM-1. Village Code limitations on building footprint and impervious area for RM-1 zoning is as follows:
    - 1. Section 335-21.G: maximum building footprint coverage to 30% of the lot area.
    - 2. Section 335-21.H: maximum impervious surfacing coverage to 65% of the lot area.
  - vi. The applicant is requesting Lot 4 to be rezoned from I-1 to RS-4. Village Code limitations on building footprint and impervious area for RS-4 zoning is as follows:
    - 1. Section 335-20.G: maximum building footprint coverage to 25% of the lot area.
    - 2. Section 335-20.H: maximum impervious surfacing coverage to 40% of the lot area.
  - vii. If any building and/or total impervious area coverages are proposed to exceed limitations set in the Village Code for the corresponding underlying zoning

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district, then a summary of any exceeded coverage amounts will need to be submitted to the Village for review.

- n. Zoning notes on the plan need to be revised to also show the underlying zoning district that is being requested for each new lot.
11. Grading Plan (Sheet C300):
- a. We assume all grading shown on the Plan will be completed when the improvements on CSM Lot 2 are constructed. If any grading shown on the plan will be delayed until the future single-family lots are developed, then it needs to be clearly marked as such.
  - b. Existing topography of the property generally slopes toward the southwest. The proposed contours appear to show surface water runoff from the site will generally follow the same pattern.
  - c. It is difficult to review the 100-scale grading plan. Spot grade labels and contour elevation labels overlapping other details make this plan difficult to review. The grading plan needs to be revised to include one overall sheet with multiple subsequent grading plan drawings added to show portions of the site at a larger scale.
  - d. CSM Lots 1 and 4:
    - i. The Plan needs to clearly indicate that proposed grading on these lots will be completed at the same time that improvements on Lot 2 are being constructed.
    - ii. The hatching shown on CSM Lot 4 should be deleted. Alternatively, the same hatching needs to be added to CSM Lot 1 and an item calling out the hatching needs to be added to the legend.
  - e. Add a label to the plan indicating the Existing Southeast Basin is to remain in place (protected).
  - f. The Grading Plan needs to be revised to show details and spot grades demonstrating that the accessible routes and ramps meet ADAAG Standards.
  - g. Additional grading details including spot grades on impervious surfacing need to be provided.
  - h. Retaining Walls:
    - i. A retaining wall is proposed in the vicinity of the south end of Building 1. Another retaining wall may be proposed on the east side of Building 2.
    - ii. All retaining walls need to be labeled on the drawing and the top and bottom elevations shown.
    - iii. The possible retaining wall on the east side of Building 2 appears to conflict with a pedestrian path and needs to be revised.
    - iv. Retaining walls greater than 4 feet tall and walls that support additional loadings other than level earth dead loads behind the wall will need to be designed and sealed by a Professional Engineer licensed in the State of Wisconsin with evidence of the design provided to the Village.
  - i. Given the size of CSM Lot 2 and the nature of the development, significant consideration should be given to a phased construction approach to minimize the size of disturbed areas at a given time.
  - j. Notes should be added to the plan outlining measures the contractor needs to take to minimize the potential for their operations to adversely impact infiltration rates.
  - k. The proposed contour lines along the west side of the Existing Southeast Basin including the outlet of the Southern Homes East Swale appear to be overlapping or do not match into appropriate existing contours. The proposed contours need to be revised in this area.
  - l. Building Grades on CSM Lot 2:
    - i. The existing first floor elevation of Notre Dame Hall appears to be approximately 766.8. The appropriate elevation needs to be added to the drawings.

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- ii. The existing first floor elevation of Maria Hall appears to be approximately 762.5. The appropriate elevation needs to be added to the drawings.
      - iii. The proposed first floor elevation of Building 1 varies from 758.00 at the south end to 760.00 at the north end.
      - iv. The proposed first floor elevation of Building 2 varies from 759.00 at the south end to 766.33 at the north end.
      - v. The proposed first floor elevation of Building 3 is 757.00.
      - vi. The first-floor elevations as currently proposed appear to be reasonable for this lot.
    - m. Additional drawings were provided with the submittal showing plan & profile and cross sections for the East Swale, West Swale and the South Campus East Swale. We recommend additional sheets be provided showing the same information for the South Campus West Swale and the South Berm Swale.
- 12. Dry Pond 1 & Dry Pond 2 Cross Sections (Sheet C340):
  - a. Proposed contours need to be revised to show details of the overflow weir for Dry Pond 1 and 2.
  - b. We recommend the overflow weir for Dry Pond 1 be confined to a smaller area if feasible.
- 13. Infiltration Basin 1 & Dry Pond 3 Cross Sections (Sheet C341):
  - a. Proposed contours need to be revised to show details of the overflow weir for Infiltration Basin 1 and Dry Pond 3.
  - b. Proposed contours around the northeast side of Dry Pond 3 appear to overlap and need to be revised.
  - c. Details of the proposed rain gardens need to be provided.
- 14. West Swale Cross Sections (Sheet C350):
  - a. The typical cross section for this swale on Sheet C112 shows a typical depth of 1.33 feet. However, the depth of the swale on these cross sections is as little as 12 inches. The discrepancy needs to be resolved.
- 15. East Swale Cross Sections (Sheet C351):
  - a. No comments at this time.
- 16. Southern Homes East Swale Cross Sections (Sheet C352):
  - a. The drawing title should be changed to match the typical cross section on Sheet C112 as “South Campus East Swale” cross sections.
  - b. The typical cross section for this swale on Sheet C112 shows a trapezoidal shape with a 4-foot wide bottom and a typical depth of 4 feet. However, the depth of the swale on several of these cross sections is less than 4 feet. The discrepancy needs to be resolved.
- 17. West Swale Plan & Profile (Sheet C360):
  - a. No comments at this time.
- 18. East Swale Plan & Profile (Sheet C361):
  - a. The swale appears to conflict with the pedestrian path in the vicinity of the south end of Building 2. The conflict will need to be resolved.
  - b. The swale crosses three pedestrian paths on the south side of Building 2. Culverts will be needed at these crossings.

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19. Southern Homes East Swale Plan & Profile (Sheet C362):
  - a. The outlet end of the proposed swale terminates at elevation 736. The existing grade at this location is 738. The discrepancy needs to be resolved.
  - b. The proposed contours in the plan view are overlapping each other and/or not tying into an existing contour of a similar elevation. (see grading plan comments).
  - c. The outlet of this swale is very steep and will require post-construction stabilizing measures to prevent erosion.
  
20. Utility Plan - General (Sheet C400):
  - a. Other Underground Utilities: Show proposed gas, electric and other utilities that will serve the new buildings.
  - b. Public utilities need to be clearly labeled as such. It will be assumed that all other utilities will be privately owned.
    - i. Easement information needs to be included on the CSM (descriptions, rights and conditions) for all public utilities located on the School Sisters site or outside of public right-of-way.
  - c. We assume all utilities shown on the Plan within CSM Lot 1 and CSM Lot 4 will be installed when the improvements on CSM Lot 2 are constructed. If any underground utilities shown on the plan will be delayed until the future single-family lots are developed, then they need to be clearly marked as such.
  - d. We assume all utilities shown on the Plan along Green Meadow Place, Red Barn Lane and Stephen Place will be installed when the improvements on CSM Lot 2 are constructed. If any underground utilities shown on the plan will be delayed until the future single-family lots are developed, then they need to be clearly marked as such.
  
21. Utility Plan – Downstream Sewer Capacity (Sheet C400):
  - a. I completed a review of the theoretical remaining capacity of the existing downstream sewers. A summary of the findings from those reviews can be found in my letter dated March 11, 2021. The review used the apartment and residential occupancy factors found in the 2020 MMSD Cost Recovery Manual.
  - b. The letter indicates the existing 8-inch sanitary sewer along Watertown Plank Road, the existing 10-inch diameter sanitary sewer running through the south end of the School Sisters parcel and the 42-inch diameter interceptor sewer running along the Canadian Pacific Railroad all have enough remaining capacity to serve the development as currently proposed.
  - c. The residential occupancy factor in the 2021 MMSD Cost Recovery Manual is slightly lower than the residential occupancy factor in the 2020 edition. Therefore, if the most current residential occupancy factor is used, then the calculated sewage flows from existing and proposed development are slightly lower than what is found in my March 11, 2021 letter. However, the conclusions from the letter are still valid. The existing downstream sanitary sewers have enough remaining capacity to serve the development as proposed.
  
22. Utility Plan – Sanitary Sewer Service (Sheet C400):
  - a. Most of the existing development on the parcel is served by private interceptor sewers that flow southerly and connect to an existing 10-inch diameter public sanitary sewer crossing through the south end of the parcel.
  - b. A sanitary sewer as-built drawing for Watertown Plank Road indicates a sanitary lateral connection was made from the existing 8-inch diameter sewer in Watertown Plank Road to the existing powerhouse on the campus. The as-built drawing shows the lateral

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connection at the sewer main is approximately 200.3 feet northeast of the sanitary manhole at the intersection of Church Street and Watertown Plank Road. It is unknown if the sanitary lateral serves only the powerhouse or if it serves other existing buildings. It is also unknown if there are other existing sanitary laterals connected to the existing sanitary sewer main on Watertown Plank Road.

- i. The existing sanitary lateral needs to be shown on the drawings.
  - ii. Based on the as-built location of the existing sanitary lateral, it appears the lateral will not be reused and a new sanitary lateral connection to the main on Watertown Plank Road will be made.
  - iii. Existing lateral connections not being used in the future will need to be abandoned per Section 232-8 of the Village Code. The existing sanitary lateral will need to be severed from the main and a watertight seal placed at the main connection. The abandonment will need to be inspected and tested to the satisfaction of the Director of Public Works. Information on the abandonment needs to be added to the Demolition Plan.
  - iv. A new lateral connection may be made anywhere along the sewer main except the new lateral may not be directly connected to the sewer manhole or within 5 feet of the manhole structure. The connection of the new lateral to the existing sanitary sewer will also need to be watertight.
  - v. Cement slurry backfill will be required for excavations under the road pavement with pavement replacement in kind.
  - vi. Information regarding the new lateral connections needs to be added to the Utility Plan.
- c. The existing 10-inch diameter public sanitary sewer that crosses the open field in the southern part of the property was intended to be located within a recorded easement. However, according to the plan drawings the existing sanitary sewer is not consistently located within the easement. In fact, it is shown to be located within the front setbacks of four of the proposed future single-family homes on CSM Lot 4.
- i. During the Public Works Committee meeting held on April 12, 2021 a concern was raised regarding the existing sewer being close to the front of four of the future single-family houses. The Public Works Committee determined that the existing 10-inch diameter sewer will need to be televised by the applicant to document its condition. A copy of the televising report needs to be provided to the Village for Review.
  - ii. If the existing sewer is found not to be in good condition, then it will need to be rehabilitated. Rehabilitation may include lining or replacement as appropriate. If it needs to be replaced, then it will need to be moved to the existing easement limits. If it can be lined, then it can remain in its current location. The applicant will need to provide their recommendation for rehabilitation, if any, to the Village for review.
  - iii. If the any portion of the existing sanitary sewer remains in its current location, then the old easement will need to be retired and new sanitary sewer easement information (description, rights and conditions) will need to be included on the CSM for review.
  - iv. Regardless of whether the existing sewer on the School Sisters site remains in its current location or is moved, the applicant will need to revise the portion of the existing easement that crosses the railroad right-of-way.
- d. Additional detailed information for the proposed private and public sanitary sewers including plan and profile drawings need to be provided for review.

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23. Utility Plan – Water Service (Sheet C400):

- a. According to information obtained by the Village from the Facilities Manager for the School Sisters site, the existing development is served by two existing wells. The demolition plan indicates one of the wells is to be abandoned.
  - i. The Topographic Map (Plat of Survey) should be revised to call out locations of both wells so they are more easily recognized.
  - ii. The Demolition Plan needs to be revised to show both wells will be abandoned (see previous demolition comments).
  - iii. A note was added to the Demolition Plan indicating well abandonment will need to follow Village Code Chapter 283 and WDNR Administrative Code NR812.
- b. The Plan needs to be revised to extend the water main farther south to the railroad right-of-way. We recommend the extension follow the existing 10-inch sanitary sewer alignment.
- c. We recommend the alignment of the water main at the end of the Green Meadow Place extension be revised so that it maintains adequate horizontal separation from the sanitary sewer and so that the hydrant be located at the anticipated side yard lot line to avoid conflicts with a future driveway.
- d. Additional detailed information for the proposed private and public water main distribution system including plan and profile drawings need to be provided for review.
- e. Public Water Service Requested:
  - i. The applicant has requested public water service to serve the proposed and future development.
  - ii. Fire flows and pressures needed to serve the proposed development provided to the Village previously need to be reviewed.
  - iii. Public water supply is currently available from the City of Brookfield. The Village is currently evaluating the feasibility of alternative water service from the City of Wauwatosa.
- f. Existing public water service from the City of Brookfield:
  - i. An existing 16-Inch diameter public water main is currently extended to the intersection of Elm Grove Road and Wall Street.
  - ii. Another existing 12-inch diameter public water main is currently extended to approximately 200 feet east of Underwood Creek on Wall Street.
  - iii. If the existing service from the City of Brookfield is used to serve the proposed development, then we recommend public water mains be extended north along Elm Grove Road and east along Watertown Plank Road through the downtown area to the north side of CSM Lot 2. A conceptual water main extension plan following this route and a preliminary cost estimate were prepared in March 2020 and updated in October 2020. The updated preliminary estimate for this extension was \$2.3M.
  - iv. In addition, if the existing service from the City of Brookfield is used to serve the proposed development, then we also recommend a public water main loop be extended easterly along Wall Street and northeasterly across the railroad tracks to the south side of CSM Lot 4 for improved flow, pressure and system

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redundancy. A conceptual water main extension plan following this route and a preliminary cost estimate were prepared in June 2015. The estimate was updated in October 2020. The updated preliminary estimate for these extensions was \$0.36M.

- g. Possible alternate public water service from City of Wauwatosa:
  - i. An existing 24-inch diameter water main at the intersection of 118<sup>th</sup> Street and Watertown Plank Road in the City of Wauwatosa may be available for use as a supply connection point to serve development in the Village of Elm Grove. The connection point is currently being evaluated.
  - ii. If public water service is provided from the City of Wauwatosa, then a public water main will need to be extended from 118<sup>th</sup> Street along Watertown Plank Road into the Village of Elm Grove to the north side of CSM Lot 2. The initial water main extension may extend farther west along Watertown Plank Road to the vicinity of the intersection with Legion Drive.
  - iii. A conceptual water main extension plan following the route from 123<sup>rd</sup> Street and a preliminary cost estimate were prepared in October 2020. The preliminary estimate for this extension was \$1.7M. The conceptual extension plan and cost estimate needs to be updated for the additional length between 123<sup>rd</sup> Street and 118<sup>th</sup> Street.
  - iv. Currently, the water main extension along Watertown Plank Road is anticipated to be a 16-inch diameter pipe. The City and the Village are evaluating the possible need for a booster station.
  - v. The water main extension is anticipated to initially serve the proposed development on the School Sisters site as well as existing development along Watertown Plank Road. Future extensions could serve additional existing development in the Village.
  - vi. An intermunicipal agreement with the City of Wauwatosa will need to be developed.

24. Utility Plan – Storm Sewer Service (Sheet C400):

- a. Additional detailed information for the proposed private and public storm sewer system including plan and profile drawings need to be provided for review.
- b. Additional culverts are needed where the pedestrian pathways are proposed to cross open channel swales.

25. Preliminary Storm Water Management Plan:

- a. The storm water management plan as currently proposed meets MMSD Chapter 13 peak flow reduction requirements.
- b. The storm water management plan as currently proposed shows the proposed facilities are reducing total suspended solids (TSS) by 74.43%, which meets the requirements for TSS reduction in the Village's proposed ordinance.
- c. The storm water management plan needs to be revised to report how much phosphorus reduction is achieved. The proposed ordinance requires a 30% reduction (See table on page 17 of the draft ordinance document).
- d. The infiltration rates used in the hydraulic computations appear to be reasonable based upon the results of the infiltration testing.

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- e. The storm water management plan shows peak flows and peak water surface elevations within the Existing Southeast Basin for both existing and proposed conditions.
  - i. As currently proposed, the computed peak flows under proposed conditions are less than those computed under existing conditions.
  - ii. As currently proposed, the computed water surface elevations during the modeled storm events under proposed conditions are below those computed under existing conditions.
- f. The development plan includes green infrastructure such as rain gardens and infiltration basins even though they are not required per Section 13.302(3)(c).1 of MMSD Chapter 13 rules.
- g. Inconsistencies between the existing storm water plan as depicted on SWMP-1 and the existing hydrologic calculations need to be corrected.
  - i. Time of concentration listed within the chart on SWMP-1 for area B is 9.6 minutes, whereas in the calculations 19.8 minutes was used.
  - ii. Time of concentration listed within the chart on SWMP-1 for area K is 9.8 minutes, whereas in the calculations 26.2 minutes was used.
  - iii. Time of concentration listed within the chart on SWMP-1 for area L is 11.4 minutes, whereas in the calculations 22.3 minutes was used.
  - iv. Time of concentration listed within the chart on SWMP-1 for area W is 9.3 minutes, whereas in the calculations 17.0 minutes was used.
  - v. Time of concentration listed within the chart on SWMP-1 for area X is 13.0 minutes, whereas in the calculations 15.5 minutes was used.
- h. SWMP-2 indicates 3 infiltration test pits were performed by GZA GeoEnvironmental, Inc. with specific infiltration rates found at each location. A drawing was included in the resubmittal package showing the location of the tests and the results. However, the stormwater management plan indicates that a memo was prepared. The memo documenting the testing and results needs to be provided for review.
- i. SWMP-2 needs to be revised to show conceptual driveways for the future single-family homes proposed on CSM Lot 4 for consistency with what has been shown for the future single-family homes on CSM Lot 1, to ensure that the surfacing type has been included in the storm water management modeling and calculations and to ensure the proposed storm water management facilities are properly designed.
- j. SWMP-2 needs to be revised to include a color category for conceptual driveways in the legend.
- k. SWMP-2 needs to be revised to include a separate column in the subcatchment table for conceptual driveways.
- l. For future single-family home development on CSM Lot 1 and CSM Lot 4, building footprint and total impervious area coverages in the table need to assume the maximum allowable by Village Code for the requested zoning type so that stormwater management facilities are sized for the worst-case scenario.
- m. Inconsistencies between the proposed storm water plan as depicted on SWMP-2 and the proposed hydrologic calculations need to be corrected.
  - i. Some distinct areas on SWMP-2 are shown to have the same label (ex F6 and F7). In addition, there are several distinct areas on SWMP-2 that are not labeled. Each distinct area SWMP-2 needs to be labeled with a unique identifier and each distinct area needs to have a separate line on the subcatchment table to show details for each area.
  - ii. The proposed hydrologic calculations need to be revised to include information for each distinct area to match what is shown on SWMP-2.



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- iii. Hydrologic calculations route area J offsite without treatment. Area J needs to be colored cyan on SWMP-2 to indicate that it drains offsite undetained.
  - n. The discrepancy of the size of Area O2 between the existing condition (129,638sf) and the proposed condition (132,678sf) needs to be resolved.
  - o. Areas O1 and O2 need to be routed to the southeast basin under both existing and proposed condition models to more accurately determine peak elevations within the southeast basin.
  - p. The two F6 areas are shown to be tributary to a rain garden. Details of the rain garden(s) need to be provided for review.
    - i. Specific cross sections, planting plans, sizes and elevations for each rain garden need to be added to the drawings.
    - ii. Detailed information about how the rain garden(s) will be maintained and who will be responsible for maintenance needs to be included in the maintenance agreement.
  - q. Storm water maintenance plans and agreements need to be provided for review. The agreement needs to be included as a deed restriction for each parcel contributing runoff flow to the facility being maintained.
  - r. Hydraulic capacity calculations need to be provided for each segment of storm sewer for review.
  - s. Additional details need to be provided on the Utility Plan that are sufficient for review of storm sewer routing or direction of flow.
  - t. Additional information needs to be provided before we can verify assumptions made and routing of storm sewer sewers as it relates to the storm water management plan and calculations.
  - u. Details of the selected underground detention system need to be provided to confirm data and assumptions used in the storm water management plan. Structural drawings of the underground storage systems need to be stamped and sealed by a professional structural engineer licensed in the State of Wisconsin.
  - v. Dry pond 3 calculations use a 6-inch discharge pipe at elevation 640, however, plan details indicate that the invert of the 6-inch diameter discharge pipe is 639. This discrepancy needs to be resolved.
  - w. The elevation of the 24" weir (rim of the outlet structure) is listed as 754.0 on the plan detail. However, the calculations use elevation is 753.0. This discrepancy needs to be resolved.
  - x. The slope and length of the discharge pipe of Dry Pond 1 needs to be identified in the details.
  - y. The slope and length of the discharge pipe of Dry Pond 2 needs to be identified in the details.
  - z. The Storm Water Management Plan indicates that up-FLO filters are proposed. Information regarding the location, size, number, and areas being treated by these filters needs to be provided.
  - aa. It appears that Dry Ponds 1, 2 and 3 were input as wet ponds into the WinSLAMM model. We suggest revising the model to input these facilities as biofiltration ponds to account for the significant amount of infiltration that occurs within each of these facilities.
26. Landscape Plans:
- a. A revised copy of the landscape plan was not provided for review.
  - b. We recommend the approved tree preservation plan be included as a deed restriction for each new parcel.
  - c. Previous comments for Sheet L-4 are repeated below:

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- i. We recommend keeping plantings out of the vision triangles at the intersections of driveway entrances onto public streets.
- ii. We recommend the keeping plantings out of the vision triangles at the internal intersection of the access drives.
- iii. Vision triangles need to be labeled on the plan.
- iv. The compacted aggregate trail needs to be included in the impervious area computations shown on the Site Plan.

We recommend the items listed above be addressed to the Village's satisfaction prior to approval. Please contact our office with any questions regarding this matter. Thank you for allowing us to be of service to the Village of Elm Grove.

Respectfully,

RUEKERT & MIELKE, INC.

A handwritten signature in blue ink, appearing to read 'Anthony D. Petersen'.

Anthony D. Petersen, P.E. (WI, IA)

Senior Project Manager

[apetersen@ruekert-mielke.com](mailto:apetersen@ruekert-mielke.com)

ADP:adp

cc: David De Angelis, Village of Elm Grove  
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Chris Ruetten, PLS, Ruekert & Mielke, Inc.  
Christopher M. Genellie, P.E., Ruekert & Mielke, Inc.  
File