MEETING:	**REGULAR MEETING OF THE PLAN COMMISSION**
DATE & TIME:	**Monday, January 8, 2024 at 6:30 PM**
LOCATION:	**Germantown Village Hall Board Room** **N112 W17001 Mequon Road**

Any member of the body and/or citizen also attend the meeting virtually through the WebEx platform, Meeting #: **2553 216 2843** Password: **qRNiKJrY345** which can be accessed by phone at **408-418-9388** or by logging on at: https://villageofgermantown.my.webex.com/villageofgermantown.my/j.php?MTID=m3e60c9657945a5ad89155bdbfd3c356f
Citizens not wishing to attend the meeting personally or virtually may submit any public comments by sending an email to comments@germantownwi.gov by 4 p.m. on the day of the meeting so that it can be provided to the members of the body for their consideration. Previously recorded Plan Commission Meeting Videos can be viewed at **https://www.youtube.com/channel/UCOYp0EgELzTCa9X_iCohyhQ.**

AGENDA

I. **CALL TO ORDER:** *This meeting has been given public notice in accordance with Section 19.83 and 19.84, Wis. Stats, in such form that will apprise the general public and news media of subject matter that is intended for consideration and action.*

II. **ROLL CALL:**

III. **APPROVAL OF MINUTES:**

A. December 11, 2023

IV. **NEW BUSINESS:**

A. American Architectural Group, Agent for Petersen Global, LLC, Property Owner of Krenz & Company - W132 N10940 Eisenhower Drive. Site Plan Review for a 41,616 sqft building addition and parking lot expansion. (ACTION)

B. American Architectural Group, Agent for Washington Drive LLC, Property Owner, and Midwest Products, Inc. - W129 N11025 Washington Drive. Site Plan Review for a new 52,038 sqft manufacturing and warehouse building. (ACTION)

C. Excel Engineering, Inc., Agent for Bethlehem Lutheran Church, Property Owner N100 W14290 Bel Aire Lane. Site Plan Review for a 23,471 sqft building addition and parking lot expansion. (ACTION)

D. Fastsigns of Menomonee Falls, Agent for Frank & Mary Ann Waldron, Property Owners of Countryaire Kennels - W140 N11445 Country Aire Drive. Sign Review application (ACTION)

V. **CITIZEN INPUT/PUBLIC APPEARANCE:** *(Please be advised per 19.84(2) that information and comment will be received from the public. It is the policy of this municipality that public input be limited to a three (3) minute period per person with a time extension granted at the discretion of the Chairperson. Be advised that there may be limited discussion of the information received but no action will be taken under public comments.)*

VI. **ANNOUNCEMENTS:**

VII. **ADJOURNMENT:**

UPON REASONABLE NOTICE, efforts will be made to accommodate the needs of disabled individuals through appropriate aids and services. For additional information or to request this service, please contact the Village Clerk at (262)250-4745 at least 2 days prior to the meeting. Notice is given that a majority of the Village Board may attend this meeting to gather information about an item over which they have decision-making responsibility. This may constitute a meeting of the Village Board per State ex rel.Badke v Greendale Village Board, even though the Village Board will not take formal action at this meeting.

MEETING:	**REGULAR MEETING OF THE PLAN COMMISSION**
DATE AND TIME:	**Monday, December 11, 2023 6:30 PM**
LOCATION:	**Germantown Village Hall Board Room** **N112 W17001 Mequon Road**

MINUTES

I. CALL TO ORDER: *This meeting has been given public notice in accordance with Section 19.83 and 19.84, Wis. Stats, in such form that will apprise the general public and news media of subject matter that is intended for consideration and action.*

Chairman Wolter called the meeting to order at 6:30 pm.

II. ROLL CALL:

Chairman Dean Wolter, Trustee Rep David Baum, Commissioners Peter Nilles, Bob Williams, Bill Shadid, Tony Laszewski and Josh Tarantino were present. Also present were Community Development Director Jeff Retzlaff and Planning Assistant Lori Johnson.

III. APPROVAL OF MINUTES:

A. November 13, 2023

MOTION Baum second Shadid to approve the minutes from 11-13-23.
MOTION carried unanimously.

IV. NEW BUSINESS:

A. Truck Country of Wisconsin, Inc., Agent for RA Steinman Legacy LLC, Property Owner - N128 W21795 Holy Hill Road. (1) Rezoning application from M-1: Limited Industrial to B-5: Highway Business Zoning District and (2) Conditional Use Permit (CUP) to allow development and operation of a 37,700 sqft Motor Vehicle Sales and Service Facility. (PUBLIC HEARING & ACTION)

Director Retzlaff summarized the proposal. Chris Johns, EUA, representing the architecture for Truck Country spoke on the project. Discussion followed. Director Retzlaff asked how long the billboards would remain on the property. Jim Barry, representative for RA Steinman Legacy LLC, stated the billboards are subject to a lease agreement that would travel with the ownership, but there is a provision in the lease that it can be terminated if the property is developed so at that point the lease could end. Director Retzlaff asked if the Village required that the billboards be removed as a condition of approval for the development, that could happen. Mr. Barry agreed that could happen.

Chairman Wolter opened the public hearing at: 6:51 pm.
Public hearing closed at 6:53 pm.

MOTION Baum second Shadid to Approve rezoning the 15.85 acre property owned by

RA Steinman Legacy LLC from M-1: Limited Industrial to the B-5: Highway Business Zoning District as proposed.

Discussion continued regarding access issues on the site. Director Retzlaff explained there is one driveway and it is very awkward for trucks to turn into the site. Given the amount of truck traffic destined for Truck County, the staff recommendation is to not allow that driveway to be used for access purposes until there is a traffic study that supports that it can be used in a safe and efficient manner. Truck Country intends to use the southern driveway access as the primary means to the site. He said Truck Country and Holy Hill Storage are working diligently to try and come up with a mutually acceptable solution to the access situation. Trustee Baum asked if the road can be reconfigured. Justin, JSD, said they could analyze it to see whether a truck can make that movement safely and efficiently. Trustee Baum said it is critical we know if trucks can maneuver the driveway before we approve it.

MOTION carried unanimously.

MOTION Baum second Shadid to Approve the Conditional Use Permit (CUP) application for Truck Country of Wisconsin Inc. for the development and operation of a 37,700 sqft facility for motor vehicle sales and service on the property located at N128 W21795 Holy Hill Road subject to the following conditions:

1. The uses and activities allowed on the property shall be limited to those uses and activities specified in the conditional use permit (CUP) application and supporting documents dated October 9, 2023. Uses and features common to “truck stop” operations are prohibited, including but not limited to customer showers, laundry facilities, in-vehicle or on-site over-night sleeping accommodations. The size and location of buildings, parking, storm water management, and those areas within the property from which said uses and activities are permitted are limited to that presented in the “Architectural Site Plan” Sheet AS100 and “Exterior Rendering” dated October 9, 2023, and description submitted in the application and supporting documents. Days and hours of operation shall be limited to those specified in the CUP application and supporting documents submitted to the Village (Monday through Friday 7:00am to 11:00pm and Saturday from 7:00am to 4:00pm).
2. The Owner/Operator is responsible for reporting any significant changes in the type, intensity, amount, or location of the land uses and activities, days and hours of operation, size or location or other operational characteristics of said uses and activities authorized under this CUP to the Village Zoning Administrator.
3. If the use, activities and/or operation subject of this permit falls out of conformity with the conditions herein, or, where there is a change in the nature, character, intensity or extent of the activities or uses which causes problems or harmful effects that were not anticipated at the time of approval of this CUP, the conditional use permit may be modified or terminated by the Village Board by the amendment to or addition of conditions after public hearing thereon.
4. All temporary and permanent exterior signs require a permit and shall comply with all current sign regulations. Off-premises advertising and directional signage is regulated by the Village and requires a permit if/when allowed.
5. Use of the existing non-conforming billboards located on the property for advertising and/or wayfinding for the Truck Country operation shall be prohibited.
6. All future site improvements, including all building, parking area, landscaping, storm water management facilities, signage, exterior lighting, and any other improvements made to or on the property that are necessary for the land uses and activities

authorized under this CUP shall be submitted for review and approval by the Village through the Zoning Permit or Site Plan application process as determined by the Village Zoning Administrator. If required, Site Plan review and approval will include Plan Commission review and approval.

7. Building permits and commercial building code plan approval are required for the planned demolition of existing structures on the site and the proposed 37,700 sqft building. Contact SAFEbuilt staff in Inspection Services at Village Hall prior to any work for information about required permits and/or plan approvals.
8. If the existing north driveway is intended to be used for any type of access to the Truck Country site, a traffic impact study (TIS) for the Truck Country operation shall be prepared and submitted prior to or concurrent with the submittal of site development & building plan applications. Said TIS should include an analysis of all existing and proposed intersections and driveways serving the Truck Country site to determine the adequacy of site distance, available ingress/egress maneuvering, site distances, corner clearances and driveway separation, turning lane and traffic control requirements, etc. Said analysis shall consider the impact of future development traffic from future development north and south of Holy Hill Road with and without the Village's proposed frontage road and railroad crossing.
9. Site development and building plans for the proposed 37,700 sqft Truck Country building and site shall not be approved by the Village until a mutually acceptable and code compliant access road/driveway(s) has been determined and agreed to by the Village, Truck Country/RA Steiman Legacy LLC, and Holy Hill Self Storage LLC. Zoning Compliance & Occupancy Permits for the proposed building and use of the site as authorized under this CUP shall not be issued until construction of said access road/driveway(s) and the extension/installation of sewer & water utilities has been completed or is scheduled to be completed prior to or concurrent with the business startup date.

Director Retzlaff explained the original staff report presented to the Village Attorney contained a requirement that the billboards on the property be removed. However, the Attorney flagged that as a potential problem, not knowing what the lease arrangements are. Director Retzlaff stated billboards are a non-conforming use and there is an opportunity to now remove them. He asked to add "subject to further review by the Village Attorney that billboards be removed from the property" to the condition.

MOTION to Amend Condition #5 Baum second Shadid that the Village Attorney shall review and advise the Village Board whether the billboards can be removed or not.
MOTION to Amend carried unanimously.
MOTION to Approve as amended carried unanimously.

B. Fabrizio Montermini, Agent for Sentinel-Germantown, LLC, Property Owner - W180 N11070 River Lane. 2-Lot Certified Survey Map application (CSM) to divide a 14.7 acre property and create a 5.6 acre parcel. (ACTION)

Director Retzlaff summarized the proposal. He commented on the road access issues and explained Lot 2 does not have frontage on a public or private right of way. Staff discussed the possibility of a cross access easement across lot 1 to serve lot 2. However, after speaking with Mr. Montermini, representing the property owner, their lease agreement with Aurora prohibits them from providing access across the Aurora property to an adjoining property. He requested the staff recommendation requiring a cross access easement be eliminated from the conditions of approval. Director

Retzlaff did not have an issue with that and revised the conditions as presented to members at the meeting. He explained access alternatives could be extending Grace Way or by an existing road reservation on Stonewood Drive. He indicated he had spoken with Berean Bible and Berean Church who are both interested in dividing the south side of their properties. Discussion followed.

MOTION Baum second Tarantino to Approve the proposed Certified Survey Map (CSM) for the Sentinel Germantown LLC property located at W180 N11070 River Lane subject to the following conditions:

1. All technical issues and corrections identified by the Village Surveyor (see October 31, 2023 memo from Burt Naumann, GRAEF) shall be addressed and reflected in a revised CSM reviewed and approved by Village staff prior to recording.
2. The name of the Village Clerk shown in the Village approval certificate on Sheet 4 of 4 should be changed to the current Village Clerk "Donna S. Cox, Village Clerk".
3. ~~A cross-access easement shall be placed on the CSM across Lot 1 from River Lane to the west side of Lot 2 for purposes of providing access to/from Lot 2.~~
4. The developer shall dedicate 60' of right-of-way for the extension and connection of Grace Way to Stonewood Drive and further extension to serve the property to the south. The location of said right-of-way shall be determined at the time development of Lot 2 is proposed. ~~Said 60' right-of-way shall be shown along the north and east property lines;~~
5. A note shall be placed on the CSM indicating the following: *"The development of Lot 2 shall not be permitted by the Village of Germantown until a mutually acceptable and code compliant means of public or private street access to serve future development on Lot 2 and the other undeveloped property located to the south of Lot 2 has been determined and constructed to serve such development. If the type and amount of development warrants access by way of an extension of Grace Way and/or Stonewood Drive, the developer/property owner may ~~shall~~ be responsible for the construction of Grace Way and/or Stonewood Drive to public road standards approved by the Village of Germantown subject to mutually acceptable terms set forth in a development agreement with between the property owner of Lot 2 and the Village".*

Director Retzlaff explained after reviewing with Public Works staff, the conclusion was the Village should proceed with the steps to accept the road reservation for Grace Way and the possible extension of Stonewood Drive. Discussion continued.

MOTION carried unanimously.

C. The Architects Partnership (TAP), Agent for County Line LLC, Property Owner of Fleet Farm - N96 W18200 County Line Road. Revised building elevations for the new Chase Bank building. (ACTION)

Director Retzlaff summarized the proposed revisions to the west elevation of the Chase Bank building.
Henry, representative for Chase Bank commented on the proposed modifications to the building. Discussion followed.

MOTION Baum second Shadid to Approve the REVISED site development and building plans for the proposed 3,245 sqft Chase banking facility located at N96 W18200 County Line Road subject to the following REVISED conditions from the

November 13 approval (all other conditions from the November 13 Plan Commission approval remain valid):

1. This approval is subject to all the conditions and requirements set forth herein and adopted by the Plan Commission. Approval is granted for the following plans unless said plan sheets are revised pursuant to revisions required under the specific conditions of approval included by the Plan Commission:

    1. Architectural plan set dated June 8 (floor plan) and November 30 ~~June 14,~~ 2023 (color renderings)
    2. Civil Engineering plan dated July 17, 2023

1. ~~The west building elevation has a plain, monotonous appearance that should be improved/enhanced with additional architectural features, projections, articulation, changes in material or color, and/or additional foundation landscaping. The revised plan should be brought back to the Plan Commission for review and approval.~~

MOTION carried 6-1 (Baum)

V. CITIZEN INPUT/PUBLIC APPEARANCE: *(Please be advised per 19.84(2) that information and comment will be received from the public. It is the policy of this municipality that public input be limited to a three (3) minute period per person with a time extension granted at the discretion of the Chairperson. Be advised that there may be limited discussion of the information received but no action will be taken under public comments.)*

None

VI. ANNOUNCEMENTS:

None

VII. ADJOURNMENT:

The meeting was adjourned at 7:36 pm.

SITE PLAN APPLICATION

1/8/24 Plan Commission Meeting

Krenz & Company, Inc.

Village Staff Report & Recommendation **Germantown, Wisconsin**

Summary

Adam Hertel, American Architectural Group, agent for Krenz & Company, Inc. and Petersen Global, LLC, property owner, is seeking approval of site development and building plans for a 41,616 sqft addition to the existing building located on the 9.27-acre parcel at W132 N10940 Eisenhower Drive. This property is located within the Germantown Business Park.

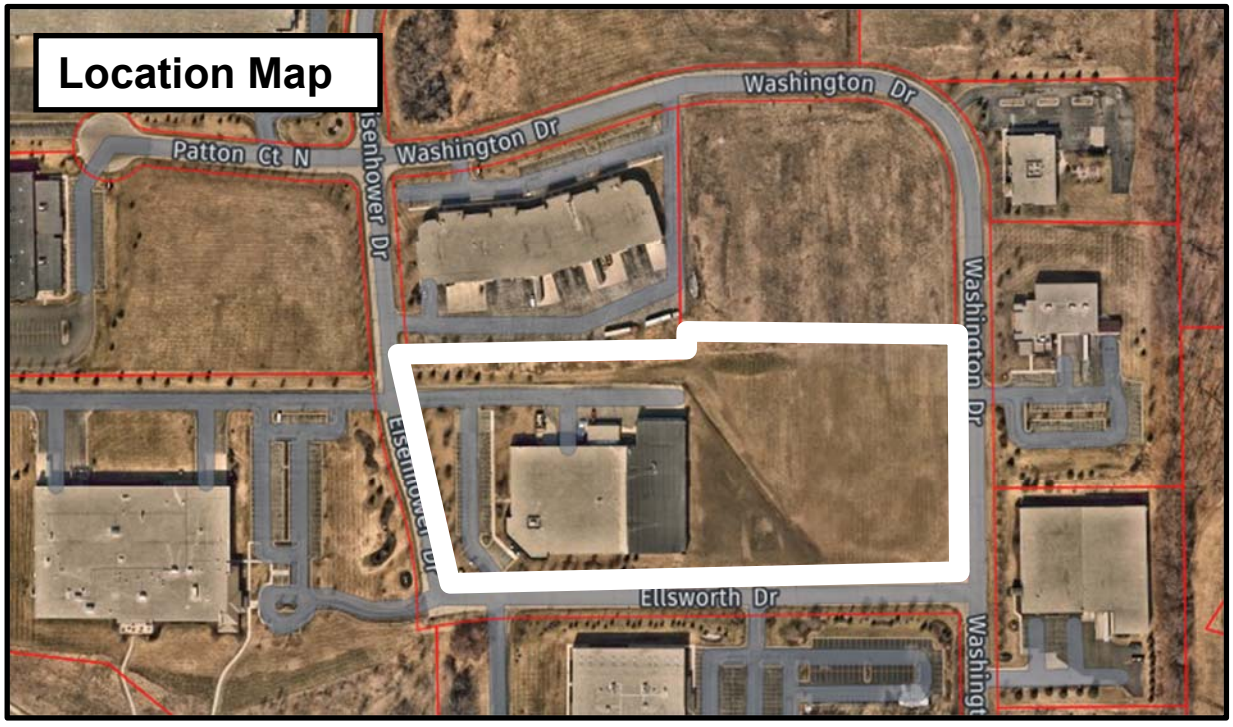
Property Location: W132 N10940 Eisenhower Drive (Germantown Business Park)

Applicant/
Property Owner:

Adam Hertel	Ryan Petersen
American Architectural Group	Petersen Global, LLC
3350 South River Road	W132 N10940 Eisenhower Drive
West Bend, WI 53095	Germantown, WI 53022

Current Zoning: M-1: Limited Industrial

Adjacent Land Uses		Zoning
North	Industrial	M-1
South	Industrial	M-1
East	Industrial	M-1
West	Industrial	M-1



Proposal

Adam Hertel, American Architectural Group, agent for Krenz & Company, Inc. and Petersen Global, LLC, property owner, is seeking approval of site development and building plans for a 41,616 sqft addition to the existing building located on the 9.27-acre parcel at W132 N10940 Eisenhower Drive. This property is located within the Germantown Business Park.

Krenz & Company, Inc. has been designing, engineering, and manufacturing transformer cooling fans and accessories for over 80 years. The original 43,420 sqft building was constructed in 2009 when the business relocated from the Germantown Industrial Park to the Germantown Business Park. In 2019, the building was expanded to the current total size of 68,732 sqft.

The current proposal would increase the building area to 107,880 sqft and includes the following features:

- 41,616 sqft addition to the east side of the existing building for additional storage space
    - Insulated precast concrete panel walls formed with split-faced block liner to mimic the existing building texture and colors.
    - Stone sills, smooth horizontal reveals, 4” pilasters, cornices, and cast stone medallions are used to enhance character and appearance
    - 8,168 square feet of asphalt and a concrete pad on the north side of the addition for access to five (5) overhead doors and one (1) man door (west facing)
    - Two (2) additional elevated dock bays w/ 9’x9’ doors
    - Two (2) man doors on the east & north elevations
- Fifty-eight (58) additional parking spaces located on the north side of the building with a new access road to Washington Drive to the east

Access & Parking. The development will be served by the existing driveway that accesses the northwest corner of the site off Eisenhower Drive. Fifty-eight (58) additional parking stalls will be constructed in a new lot located north of the building, bringing the total number of stalls to 116. Additional pavement will be added to connect the existing and new parking lots along the north side of the building and provide a continuous drive lane from Eisenhower Drive to Washington Drive. A 150’ length of retaining wall ranging in height from 3’-6’ will also be added along the north property line.

Storm Water Management. The 9.27 acre property will contain a total of approximately 4.7 acres (50.7%) of impervious surfaces with the proposed building addition and parking lot expansion, leaving 4.6 acres (49.3%) of open/green space on the site. This site is served with on-site storm sewer with connections to the regional stormwater basin located south of the site off Washington Drive.

Landscaping & Buffering. Additional planting areas are proposed on the south side of the proposed addition. These planting areas are approximately 400 square feet in size and a mix of six (6) deciduous trees, (60) deciduous shrubs and (36) perennials. The site contains existing deciduous street trees along the south and east property lines, which will also help to screen the new addition to the building.

Lighting. Exterior lighting to be added to the building addition includes:

- (7) 96W LED 4000K pole-mounted (22' mounted height) cut-off fixtures located in the new parking lot
- (3) 14W & 37W LED wall-mounted cut-off fixtures above the (2) dock bays and man doors on the north elevation

Signage. No new or additional signage is proposed at this time.

Staff Comments

Community Development: Planning & Zoning

No landscaping is proposed along the north or east property lines nor within the new parking lot. Additional landscaping should be installed along the north property line and east side of the new parking lot (like what is installed at the existing driveways on Eisenhower Drive) for screening from the public view and overall enhancement of the site as required under the Germantown Business Park covenants.

No roof plan has been provided showing what, if any, roof-mounted mechanicals and any other roof-mounted equipment is proposed. As required by the Germantown Business Park covenants, all roof-mounted equipment shall be architecturally screened. A proposed roof plan showing all roof mounted equipment and screening shall be submitted to the Village Planner (or Plan Commission if determined necessary by the Village Planner) for review and approval prior to build out construction and occupancy.

Community Development: Inspection Services

State agency (DSPS) approved plans and a $20,000 occupancy bond are required by Inspection Services at the time of building permit application. The Village of Germantown is an authorized delegated agent of DSPS to provide all commercial plan review and inspection services through SAFEBuilt of WI and the Village of Germantown.

Fire & Police Departments

All concerns have been addressed and incorporated into the site plans. All exterior doors (except primary entrance) shall be clearly marked with reflective 5" or larger letters/numbers to aid emergency personnel access as required by the Police Department.

Village Forester

With respect to page 10, the landscape plan as presented does not include interior parking lot tree plantings in the new parking lot as required by Village Code 17.43(5). The code requires 5% of the interior parking lot be landscaped with one 2" caliper tree for every 10 parking spaces. The plan should be revised accordingly and reviewed and approved by Village staff prior to construction.

Public Works/ Village Engineer/Village Surveyor

The Village Engineer and Public Works Department staff have identified several technical issues and plan revisions that need to be resolved or otherwise addressed by the Developer prior to commencing construction activities and issuance of building permits. Nonetheless, Staff is recommending conditional approval of the site development and building plans subject to all the outstanding items and issues identified in the following review memos being resolved and reflected in additional information and/or revised plans submitted to Staff for further review, comment, and approval prior to commencing any site construction or issuance of building permits (excluding early start site preparation and footing and foundation installation):

- January 3, 2024 memo from Kevin Driscoll, PE Village Engineer.

VILLAGE STAFF RECOMMENDATIONS

APPROVE the site development and building plans submitted by Krenz & Company for the proposed 41,616 sqft addition to the existing building located at W132 N10940 Eisenhower Drive in the Germantown Business Park subject to the following conditions:

1. This approval is for the various plan sheets that comprise the site plan set as noted below and is subject to compliance with all the conditions and requirements set forth herein and subsequently adopted and/or revised by the Plan Commission. Approval is granted for the following unless superseded by subsequent plan sheets approved by Village Staff pursuant to revisions required herein and/or by the Plan Commission:
   a. *Architectural plans dated November 13, 2023;*
   b. *Civil Engineering plans dated November 13, 2023;*
   c. *Landscaping plans dated November 13, 2023;*
   d. *Lighting plans (photometric plan) dated November 13, 2023;*

   If revised plan sheets are necessary, each revised sheet shall contain the date of said revision clearly stamped in the lower right corner.

2. All landscaping, screening, grading, and paving improvements shown on the approved site plans shall be installed as proposed prior to issuance of an occupancy permit unless a cash bond or letter of credit in an amount equal to 120 percent of the estimated installation and material costs reviewed and approved by the Village is submitted to the Village as necessary to ensure that installation of the proposed features and improvements will be completed within one (1) year after issuance of the occupancy permit for the shell building.

3. All exterior doors (except primary entrance) shall be clearly marked with reflective 5” or larger letters/numbers to aid emergency personnel access as required by the Police Department.

4. All outstanding items and issues identified by Village Staff in the following review memos shall be resolved and reflected in additional information and/or revised plans submitted to Staff for further review, comment, and approval prior to commencing construction or issuance of building permits (excluding “early start” site clearing and footing/foundation work approved by the Village and/or WI DSPS):
   a. January 3, 2024 memo from Kevin Driscoll, PE, Village Engineer

5. State agency (DSPS) approved plans and a $20,000 occupancy bond are required by Inspection Services at the time of building permit application. The Village of Germantown is an authorized delegated agent of DSPS to provide all commercial plan review and inspection services through SAFEBuilt of WI and the Village of Germantown.

6. No roof plan has been provided showing what, if any, roof-mounted mechanicals, and any other roof-mounted equipment is proposed. As required by the Germantown Business Park covenants, all roof-mounted equipment shall be architecturally screened. A proposed roof plan showing all roof mounted equipment and screening shall be submitted to the Village Planner (or Plan Commission if determined necessary by the Village Planner) for review and approval prior to build out construction and occupancy.

7. The Village’s minimum landscape requirements for interior parking lots (Section 17.43(5) requires 5 percent of the interior parking lot be landscaped with one 2” caliper tree per every 10 parking spaces. The landscape plan shall be revised accordingly and reviewed and approved by Village staff prior to construction.

8. Additional landscaping shall be installed along the north property line and along the north and east sides of the new parking lot (like what is installed at the existing driveways on Eisenhower Drive) for screening from the public view and overall enhancement of the site as required under the Germantown Business Park covenants. The landscape plan shall be revised accordingly and reviewed and approved by Village staff prior to construction.

9. The minimum planting size requirements in the Germantown Business Park covenants require 3” caliper for deciduous canopy and ornamental trees; minimum 6’ height for all evergreen trees; and 5 gal. for all shrubs. The Plant List on Sheet C1.05 of the landscape plan shall be revised to include these minimum requirements for planting at the time of installation.

10. Right-of-way permits are required for any/all construction conducted in the public right-of-way for Eisenhower Drive and Washington Drive. Contact the Public Works Department/Highway Superintendent for permit applications and submittal requirements.

Engineering Department Memorandum

To: **Jeff Retzlaff**

From: **Kevin Driscoll, P.E.**

Date: **January 3, 2023**

Re: **Planning Commission Item Review - Krenz & Company**
W132 N10940 Eisenhower Drive - 40,000 square foot addition

Items Reviewed:
1. Civil Plan Set Dated: 11-13-2023

General Comments:
1. Please respond to each item below. **A written response addressing each item shall be included in your submittal**.
2. The submitted plans have been reviewed for general conformance with State and Village design guidelines. Additional comments could arise as a result of the plan completion and modifications. The items listed below will need to be fully resolved before the Engineering Dept. can recommend a formal approval of the plans and permit for construction.
3. If this project disturbs over one area it will require a WRAPP/NOI from the DNR. Please submit a copy of the approved permit prior to final approval.
4. As-builts prepared to Village standards shall be prepared and provided to the Village post-construction (for all applicable items).
5. A professional engineer's original seal is to be affixed, signed and dated on the final set of construction plans.
6. Utility permits and permits for work within the ROW are required. Contact the Village Engineering Department to obtain permits.
7. As a guide to the review response: Items in *italics* are resolved or acknowledged, items in regular font are to be addressed yet, items in **Bold** are additional feedback to remaining original comment.
8. Please provide a summary letter showing how the stormwater management requirements for the site are being met. Reference the previous regional stormwater management plan, planned CN for the site and actual CN for the site.
9. Please provide storm sewer calculations

Waste Water Utility Comments
1. Provide a sampling manhole meeting the Village requirements.

C1.02 Proposed Site Plan
1. Provide a site data table showing total lot size, existing impervious, proposed impervious and disturbed area.
2. Revised ADA parking to include required access aisles.

C1.03 Grading and Erosion Control Plan

1. Add pipe sizes and invert elevations for the existing storm sewer at the southeast corner of the site.

C1.04 Utility Plan

1. Clarify how building roof is drained. Show roof drain discharges to grass/vegetation and is consistent with the Declaration of Restrictions and Covenants document 815478, dated 2/23/1999.

Village of Germantown ...Willkommen

Fee must accompany application

- ☐ $700 Minor Addition
- ☐ $1,240 Construction <10,000 SF
- ☒ $2,095 Construction 10,000 SF to 50,000
- ☐ $3,460 Industrial Construction >50,000 SF
- ☐ $3,460 Commercial Construction >50,000
- ☐ $200 Plan Commission Consultation
- ☒ $125 Fire Department Plan Review

PAID $2,220 DATE 11/10/2023

SITE PLAN REVIEW APPLICATION

Pursuant to Section 17.43 of the Municipal Code

Please read and complete this application carefully. **All applications must be signed and dated.**

1 APPLICANT OR AGENT

Adam Hertel
American Architectural Group
3350 South River Road
West Bend, WI 53095

Phone (262) 334-3811
E-Mail adam@teamaag.net

PROPERTY OWNER

Ryan Petersen
Petersen Global, LLC
PO Box 187
W132N10940 Eisenhower Drive
Germantown, WI 53022

Phone (262) 255-2310
E-Mail ryan@krenzvent.com

2 PROPERTY ADDRESS

W132N10940 Eisenhower Drive
Germantown, WI 53022

3 NEIGHBORING USES – Specify name and type of use, e.g. Enviro Tech – Industrial, Smith – Residential, etc.

North: American Enterprises International - Industrial	South: Ellsworth Adhesives - Industrial	East: Technitrol, Inc. - Industrial	West: KitPackers, LLC - Industrial

4 READ AND INITIAL THE FOLLOWING:

X I am aware of the Village of Germantown ordinance requiring fire sprinklers in most new construction.

X I understand that all new development is subject to Impact and/or Connection Fees that must be paid before building permits will be issued.

X I understand that an incomplete application will be withdrawn from the Plan Commission agenda and that all resubmissions to the Plan Commission are subject to a new application fee.

5 SIGNATURES – ALL APPLICATION MUST BE SIGNED BY OWNER!

Adam Hertel 11/10/2023
Applicant Date

11-10-2023
Owner Date

SITE PLAN REVIEW CHECKLIST

Pursuant to Section 17.43 of the Municipal Code

This checklist provides a summary of requirements found in the Municipal Code. It is intended purely as a guide for developers and should not substitute for a full review of the Code and applicable regulations. (Revised 1/02)

GENERAL INFORMATION

- [X] Provide Completed Checklist with submittal
- [X] Names and addresses of owner/developer/designer
- [X] Graphic scale, north arrow
- [X] Location sketch
- [X] Size of site (gross and net acreage)
- [X] Existing zoning
- [X] Adjacent zoning and uses
- [ ] Number of residents (subdivisions)
- [X] Number of employees

EXISTING SITE INFORMATION

- [X] Dimensions of site and lot lines (pipes found, pipes set, monuments)
- [X] Existing grades (2' contours minimum)
- [X] Adjacent property grades (within 10' minimum of property lines)
- [ ] Adjacent structures (within 20' minimum of property lines)
- [X] Drainage systems and structures
- [ ] Natural features (woods, streams, lakes, ponds, outcroppings)
- [ ] Wetland boundaries (provide date of staking)
- [ ] Floodplain elevation and boundaries
- [ ] Environmental concerns (underground tanks, etc)
- [X] Roads, curbs, parking lots, pavement areas
- [X] Structures (location, size)
- [X] Rights-of-Way (existing/ultimate)
- [X] Easements (drainage, utility)
- [X] Existing utilities (sanitary, water, electric, gas, telephone)
- [X] Benchmark locations and elevations
- [X] Location of fences, wells, borings, etc.

ARCHITECTURAL PLANS

- [X] Existing building location
- [X] Existing building elevations/materials
- [X] Proposed use (use list from Section 17.45)
- [X] Statement of design intent (narrative)
- [X] Proposed floor plans (dimension)
- [X] Square footage (total and individual rooms/stores)
- [X] Proposed elevations (dimension)
- [X] Proposed building height
- [X] Proposed materials and colors (material sample board required for new construction)
- [ ] Proposed signage (elevations, color, square footage, height, construction material, lighting)
- [ ] Details of any special features

PROPOSED SITE PLAN

- [X] Grading and spot elevations
- [X] Erosion control measures (silt fencing, hay bales, rip-rap, tracking mat, stockpile locations)
- [X] Stormwater management
  - stormwater management design report
  - general drainage pattern
  - swales w/ arrows for direction of flow
  - pond design with outfalls
  - culverts (location/size)
- [X] Utilities (size, invert elevations, length, slope, etc.)
  - sanitary
  - water
  - stormsewer
- [X] Building location (dimension)
- [X] Building elevation (finished grade)
- [ ] Location of proposed signage
- [ ] Details of outside storage (including trash receptacles)
- [X] Setbacks (clearly marked and dimensioned)
- [X] Vehicular entrances (dimension to centerline of nearest intersection)
- [X] Streets (dimension and direction for one-ways)
- [X] Curve radii
- [X] Sidewalks (dimension)
- [X] Parking areas (show striping/spot elevations)
- [X] Parking setback from property line
- [X] Loading areas (dimension)
- [X] Lot coverage
  - Square footage total
  - Impervious surfaces total (%)
  - Green space total (%)
  - Percent permitted (over/under %)
- [X] Municipal utility connections
  - Sanitary sewer (pipe size/elevations)
  - Water (size, valve location, elevations)
  - Location of hydrants
- [ ] Easement for public water mains

LIGHTING PLAN

- [X] Major improvements for context
- [X] Location/nature of existing fixtures
- [X] Location of proposed fixtures
- [X] Photometric report (to scale on plan)
- [X] Manufacturers cut-sheets of all fixtures
- [X] Lighting schedule
  - key to plan
  - number/type of fixtures
  - output (wattage)
- [ ] Installation details as appropriate

LANDSCAPING PLAN

- [X] Major improvements for context (building, drives, walks)
- [ ] Proposed outdoor amenities (benches, paths, etc.)
- [ ] Existing vegetation
  - Species
  - Size
  - Approximate canopy in plan
- [ ] Vegetation to be destroyed
  - List and show location
- [ ] Proposed method of saving existing vegetation during construction
- [ ] Proposed landscape features (berms, fountains)
- [ ] Existing/proposed lighting
- [ ] Irrigation/watering systems (locate outlets)
- [X] Plant lists or schedules
  - Keyed to plan
  - Number of each species
  - Size when planted (caliper)
- [X] Installation details/staking

MODEL SUBMITTAL INCLUDES THE FOLLOWING PLANS:

1. Cover / Title Page
2. Existing Conditions Survey
3. General Site Plan
4. Grading, Paving & Erosion Control Plan
5. Utility Plan
6. Site Details (curbing, catch basins, detention ponds, pavement, erosion control and sign details)
7. Landscape Plan
8. Landscape details (planting schedule, berming cross-sections, method of installation)
9. Lighting Plan
10. Floor Plan
11. Exterior Building Elevations
12. Building Material Sample Board

In addition to the items on this list, Village Staff and/or the Plan Commission may require additional drawings and data to be submitted for approval.

If any public improvements or work is to be done in the Public Right-of-Way, the Village will require that a Developer's Agreement be submitted and approved by the Village Board.

November 13, 2023

Village of Germantown
N112 W17001 Mequon Road
P.O. Box 337
Germantown, WI 53022-0337

RE: Statement of Design Intent

Krenz & Company has been successfully designing and manufacturing transformer cooling fans for over 80 years which has led to the need to expand their current facility. The proposed project is a 40,000 sf addition to their existing 68,000 sf facility, and would accommodate their ever growing storage and manufacturing needs. The company currently employs approximately 40 full time employees, and even more during seasonal times of the year. The proposed addition brings the potential to hire even more employees. The existing building is built of load bearing masonry walls and steel girders and joists. Aesthetically the existing building is extremely well detailed with the use of split face and smooth CMU, pilasters, stone sills, cornices, and meaningful cast stone medallions.

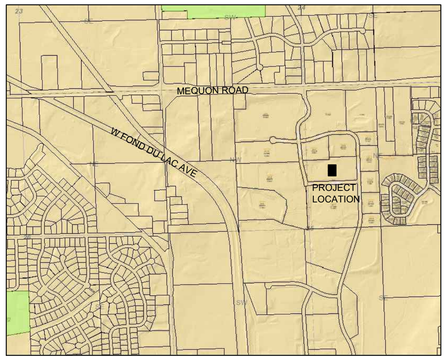
The design intent is to continue the aesthetic of the original building and the recent addition. The majority of the existing precast wall panels will be reused in this addition project. Where new panels are needed they will again be insulated precast concrete panel formed with a split-faced block liner. Many of the same decorative elements such as sills below the windows, smooth horizontal reveals, and white medallions will be used. The goal is to match the existing colors as closely as possible. Like the existing building, we will be including the same style windows and 4" pilasters along the main elevation.

The existing site is 9.27 acres of which Krenz & Company currently only uses about 4.25 acres. The balance of the property is open green space that has the potential for future additions. Sixty new parking stalls are proposed for this project as this addition will move the primary entrance for a majority of the employees to a new entrance adjacent to the new parking area. Site lighting at the parking lot and building will be accomplished by matching new fixtures with the existing LED fixtures, and all existing landscaping will remain. New planting beds will match the existing beds along the South side of the building. These plantings will be a nice addition to the existing tree line the Owner has established along the entire West and South sides of the property.

PROPOSED ADDITION:

KRENZ & COMPANY, INC.

W132N10940 EISENHOWER DRIVE
VILLAGE OF GERMANTOWN, WASHINGTON COUNTY



LOCATION MAP

SHEET INDEX

GENERAL
G-101 TITLE SHEET/ PROJECT DATA

CIVIL
C1.00 OVERALL EXISTING CONDITIONS
C1.01 SITE LAYOUT PLAN
C1.02 EROSION CONTROL PLAN
C1.03 GRADING PLAN
C1.04 UTILITY PLAN
C1.05 LIGHTING PLAN
C1.06 LANDSCAPE PLAN
C1.05 SITE DETAILS

ARCHITECTURAL
A-101 OVERALL FLOOR PLAN
A-102 PROPOSED ADDITION FLOOR PLAN
A-201 EXTERIOR ELEVATIONS
A-202 ENLARGED EXTERIOR ELEVATIONS

PROJECT TEAM

OWNER CONTACT: Ryan Petersen
Krenz & Company, Inc.
W132N10940 Eisenhower Drive
PO Box 187
Germantown, WI 53022
EMAIL: ryan@krenzvent.com

ARCHITECT: Adam Hertel
American Architectural Group, Inc.
3350 South River Road
West Bend, WI 53095
PH: (262) 334-3811
EMAIL: adam@teamaag.net

CIVIL ENGINEER: Kevin Parish
Parish Surveying & Engineering, Inc.
122 Wisconsin Street
West Bend, WI 53095
EMAIL: kparish@parishse.com

AMERICAN CONSTRUCTION SERVICES, INC.
3350 SOUTH RIVER ROAD
WEST BEND, WI 53095-7884
(262) 334-3811 FAX: (262) 334-4990

AMERICAN ARCHITECTURAL GROUP, INC.
3350 SOUTH RIVER ROAD
WEST BEND, WI 53095-7884
(262) 334-3811 FAX: (262) 334-4990

Stamp

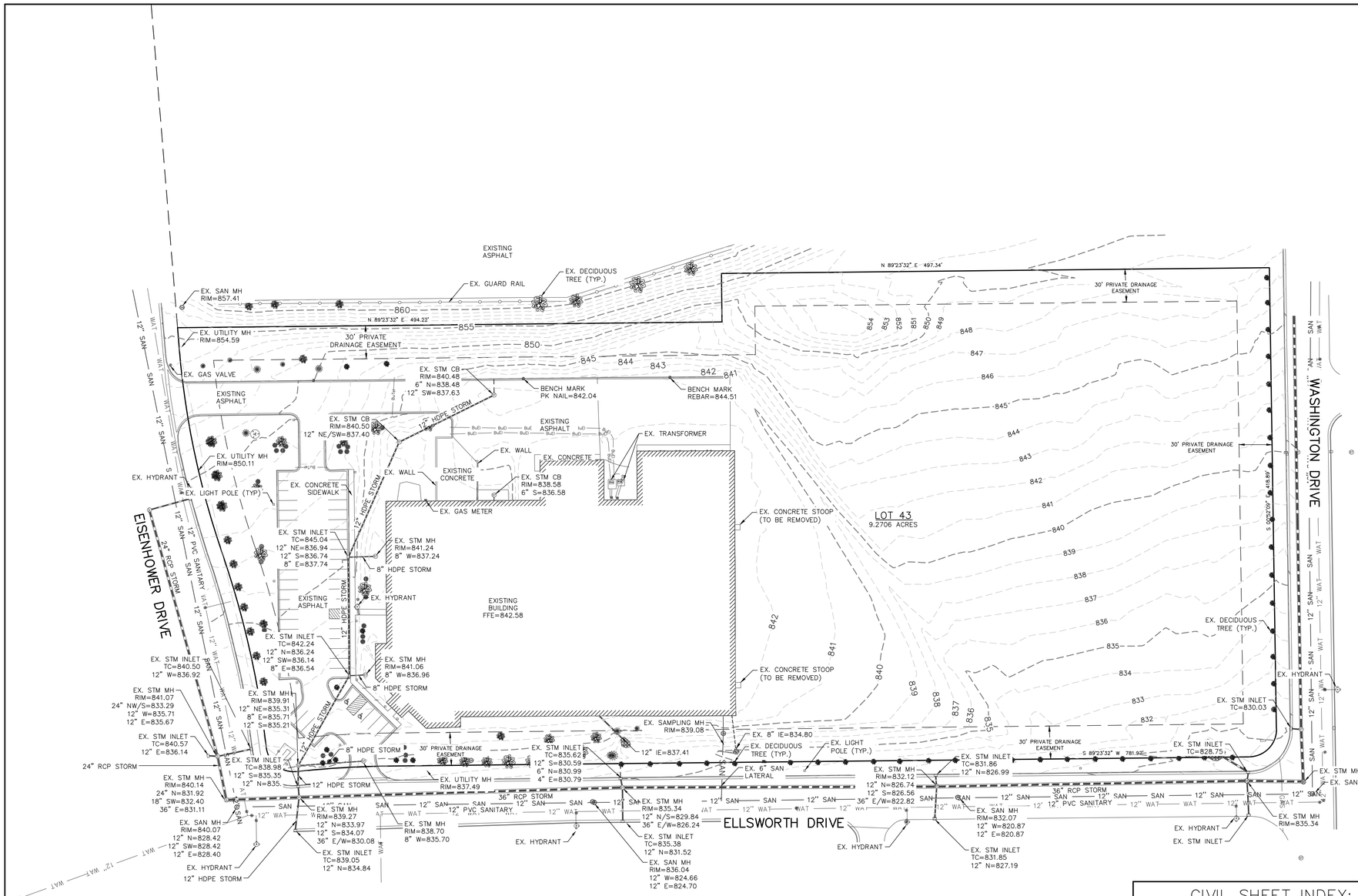
Issue Date:
11 / 13 / 2023
NOT FOR CONSTRUCTION

Revision:

Project Number:
23000

Sheet Title:
TITLE SHEET AND CODE INFORMATION

Sheet Number:
G-101



CIVIL SHEET INDEX:

SHEET	SHEET TITLE
C1.01	EXISTING CONDITIONS PLAN
C1.02	PROPOSED SITE PLAN
C1.03	GRADING & EROSION CONTROL PLAN
C1.04	UTILITY PLAN
C1.05	LANDSCAPE PLAN
C1.06	LIGHTING PLAN
C2.01	CONSTRUCTION NOTES
C2.02	SITE DETAILS
C2.03	EROSION CONTROL DETAILS
C2.04	UTILITY DETAILS

LEGEND:

- 896 – EXISTING MINOR CONTOUR.
- 895 – EXISTING MAJOR CONTOUR.
- OHEL – OVERHEAD ELECTRIC LINE.
- BuEl – BURIED ELECTRIC LINE.
- BuTel – BURIED TELEPHONE LINE.
- FO – FIBER OPTIC LINE.
- GAS – GAS LINE.
- SAN – SANITARY SEWER MAIN OR LATERAL.
- WAT – WATER MAIN OR SERVICE.
- STORM SEWER LINE.
- ELEC – ELECTRIC METER.
- GAS – GAS METER.
- GAS VALVE.
- FIRE HYDRANT.
- POWER POLE.
- SN – SANITARY SEWER MANHOLE.
- ST – STORM SEWER MANHOLE.
- STORM SEWER INLET.
- T – TELEPHONE PEDESTAL.
- TRAN – TRANSFORMER.
- W – WATER VALVE.

REVISIONS:

NO.	DATE	DESCRIPTION
1	XX-XX-XX	XXXXXXXXXXXXXXXXX

PSE
PARISH SURVEY & ENGINEERING
122 Wisconsin Street, West Bend, WI 53095
262.346.7800
www.parishse.com

PROJECT TITLE:
KRENZ & COMPANY BUILDING AND PARKING ADDITION
W132 N10940 EISENHOWER DRIVE
GERMANTOWN, WI 53022

PLAN TITLE:
EXISTING CONDITIONS PLAN

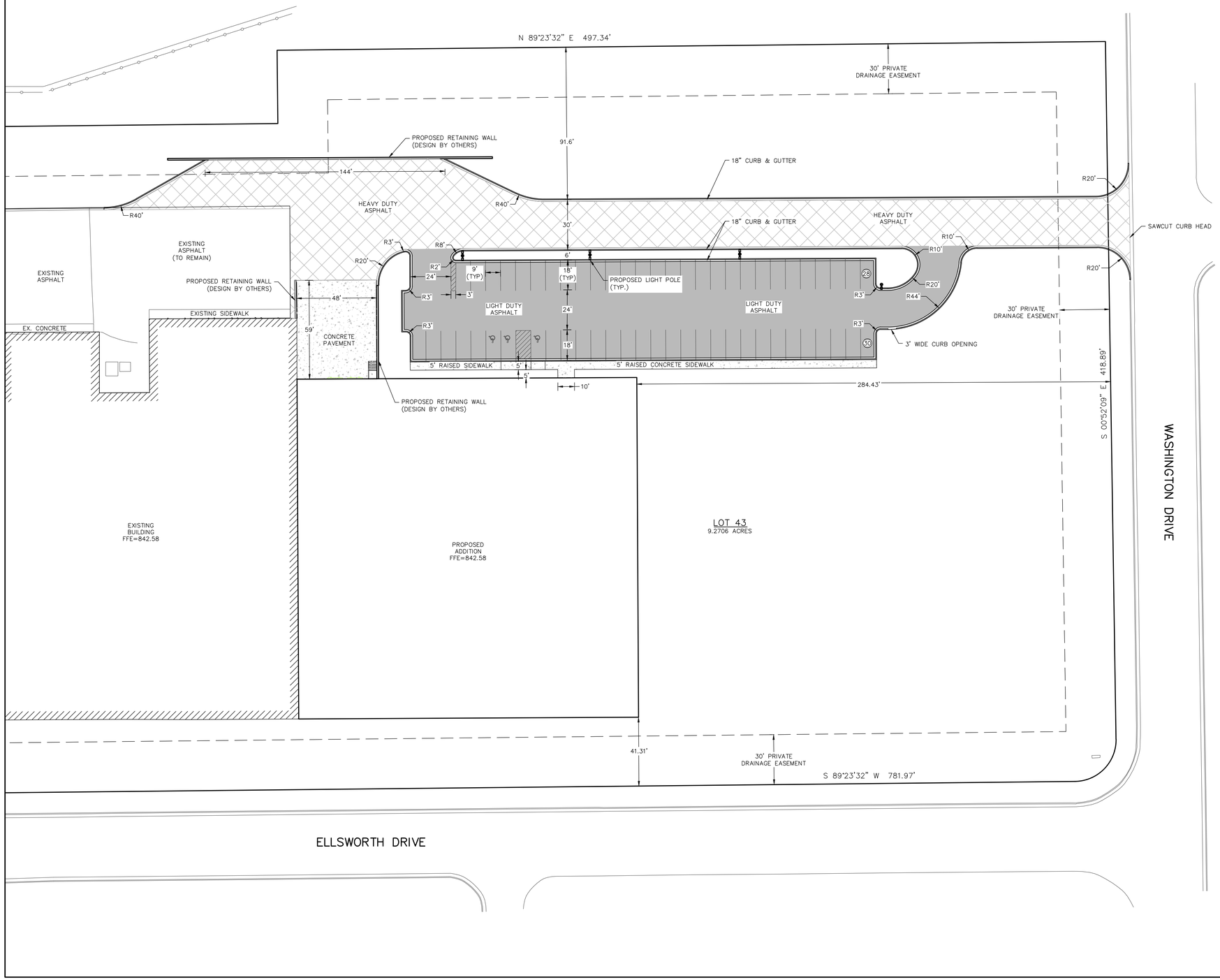
DRAWN BY: **JDR**
DESIGNED BY: **JDR**
CHECKED BY: **KJP**

PLAN DATE: **11-13-2023**

PROJECT NO: \AM-59-19\

PC SUBMITTAL

SHEET NO:
C1.01



SITE INFORMATION BLOCK	
Site Address:	W132 N10940 EISENHOWER DRIVE
Legal Description:	Lot 43, CSM 6493
Site Acreage	9.2706
Current Zoning:	M-1

Building & Paving Setback Requirements

	Building	Pavement
Front	30 feet	10 feet
Side	10 feet	10 feet
Rear	25 feet	10 feet

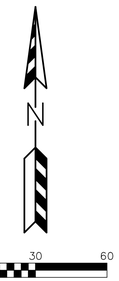
Parking Stalls Provided: 108 stalls

Existing Site Areas

Description	Area (sf)	% Impervious
Building	68,732	17.02
Asphalt/Concrete	50,047	12.39
Impervious	118,779	29.41
Lawn	285,047	70.59
Total	403,826	100.00

Proposed Site Areas

Description	Area (sf)	% Impervious
Building	110,348	27.33
Asphalt/Concrete	95,406	23.63
Impervious	205,754	50.95
Lawn	198,072	49.05
Total	403,826	100.00



LEGEND:

(#) – PARKING STALLS IN A ROW
(R) – REJECT CURB
(A) – ACCEPT CURB

PAVING LEGEND

HEAVY DUTY ASPHALT PAVEMENT
8" CRUSHED AGGREGATE BASE COURSE
2 1/4" ASPHALTIC BINDER 3 LT 58-28 S
1 3/4" ASPHALTIC SURFACE 4 LT 58-28 S

LIGHT DUTY ASPHALT PAVEMENT
8" CRUSHED AGGREGATE BASE COURSE
1 3/4" ASPHALTIC BINDER 4 LT 58-28 S
1 1/4" ASPHALTIC SURFACE 5 LT 58-28 S

CONCRETE SIDEWALK
6" CRUSHED AGGREGATE BASE COURSE
4" CONCRETE

CONCRETE PAVEMENT
6" CRUSHED AGGREGATE BASE COURSE
6" 4,000 PSI AIR ENTRAINED CONCRETE

REVISIONS:

NO.	DATE	DESCRIPTION

PARISH SURVEY & ENGINEERING
122 Wisconsin Street, West Bend, WI 53095
262.346.7800
www.parishse.com

PROJECT TITLE:
KRENZ & COMPANY
BUILDING AND PARKING ADDITION
W132 N10940 EISENHOWER DRIVE
GERMANTOWN, WI 53022

PLAN TITLE:
PROPOSED SITE PLAN

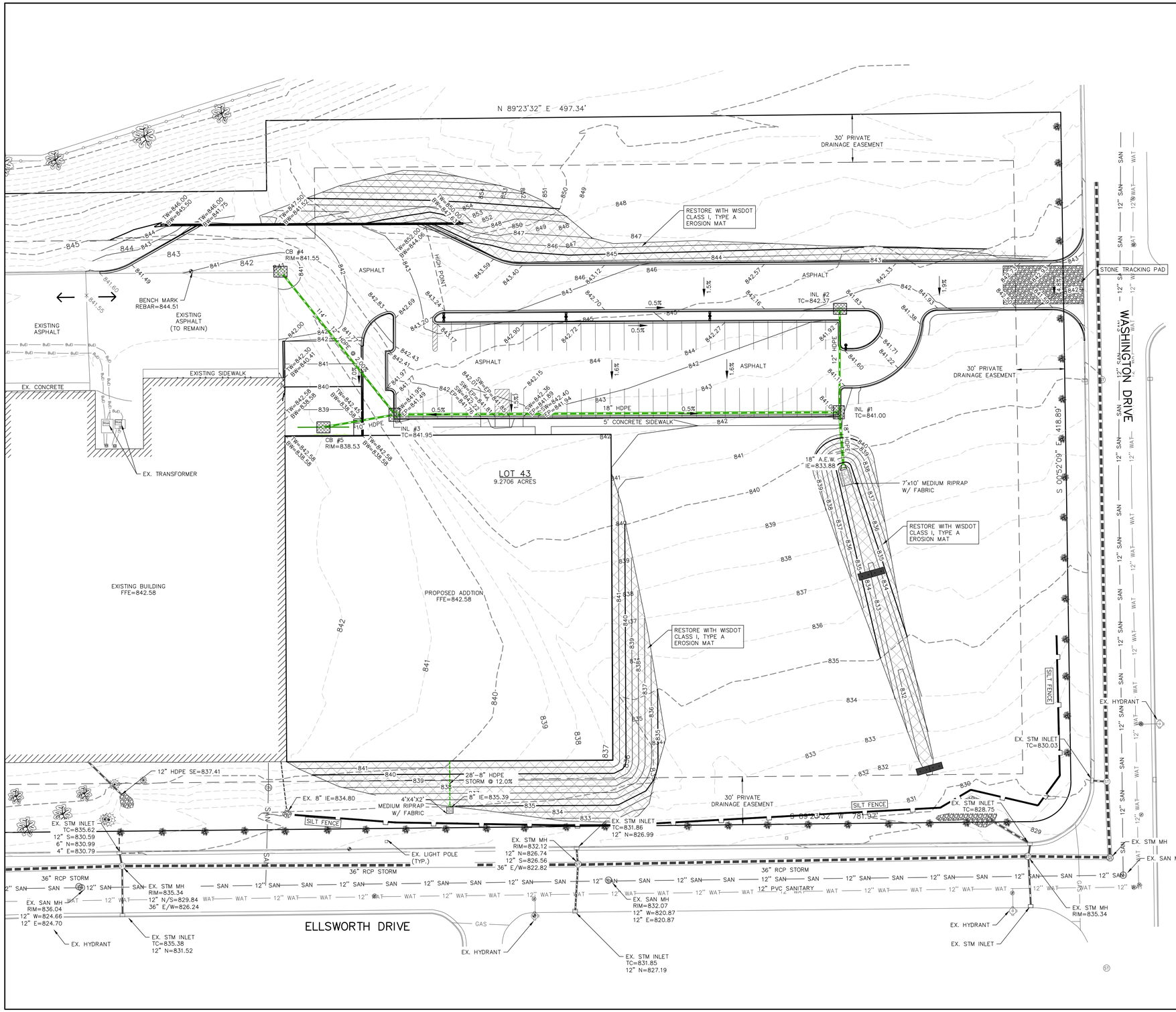
DRAWN BY: **JDR**
DESIGNED BY: **JDR**
CHECKED BY: **KJP**

PLAN DATE: **1-4-2024**

PROJECT NO: \AM-59-19\

PC SUBMITTAL

SHEET NO:
C1.02



LEGEND:

- 936 – EXISTING MINOR CONTOUR.
- 935 – EXISTING MAJOR CONTOUR.
- 936 – PROPOSED MINOR CONTOUR.
- 935 – PROPOSED MAJOR CONTOUR.
- – PROPOSED STORM SEWER.
- – EXISTING STORM SEWER.
- – INSTALL WISDOT TYPE D INLET PROTECTION.
- – INSTALL SILT FENCE.
- – INSTALL DITCH CHECK.
- – DRAINAGE ARROW.
- EX 934.23 – EXISTING SPOT ELEVATION.
- 934.23 – PROPOSED CURB FLANGE ELEVATION.
- TC 934.23 – PROPOSED TOP OF CURB ELEVATION.
- SW 934.23 – PROPOSED SIDEWALK ELEVATION.
- EP 934.23 – PROPOSED EDGE OF PAVEMENT ELEVATION.
- EXP 934.23 – PROPOSED BUILDING EXPOSURE ELEVATION.
- FFE 934.23 – PROPOSED BUILDING FIRST FLOOR ELEVATION.

STAGES OF CONSTRUCTION TIME SCHEDULE:

APRIL 15, 2024

1. INSTALL SITE SILT FENCE, INLET PROTECTION AND TEMPORARY CONSTRUCTION ENTRANCES AS SHOWN ON PLANS. ANY ADDITIONAL CONSTRUCTION ENTRANCES IF APPROVED BY THE VILLAGE OF GERMANTOWN SHALL HAVE A TRACKING PAD.

APRIL 16, 2024 – SEPTEMBER 1, 2024

2. STRIP TOPSOIL WITHIN GRADING LIMITS AND CONSTRUCT TEMPORARY TOPSOIL STOCKPILE LOCATION ACCORDING TO "SPECIFICATIONS FOR GRADING & EROSION CONTROL" ON "CONSTRUCTION NOTES PAGE".
3. BEGIN PROPOSED SITE GRADING – RESEED SECTIONS OF PROJECT THROUGHOUT THE GRADING PROCESS TO MINIMIZE RUN–OFF.
4. START CONSTRUCTION OF UTILITIES: STORM SEWER.
5. CONSTRUCT BUILDING PADS AND BUILDINGS.
6. CONTINUE SITE GRADING.
7. INSTALL BASE COURSES, PROPOSED PAVEMENTS
8. INSTALL LANDSCAPING.
9. APPLY FINAL STABILIZATION TO ENTIRE SITE.

SEPTEMBER 2 – 15, 2024

ALL PERMANENT SEEDING SHALL BE COMPLETED BY SEPTEMBER 15. ALL TEMPORARY SEEDING SHALL BE COMPLETED BY OCTOBER 15 (REFER TO DNR STANDARD 1059.)

STABILIZATION FOR ALL EXPOSED SOIL AFTER OCTOBER 15 SHALL CONSIST OF ANIONIC POLYARCRYLAMIDE (PAM) IN ADDITION TO TEMPORARY SEEDING IN AREAS WITHOUT EROSION CONTROL MAT. PLACE PAM IN ACCORDANCE WITH WDNR TECHNICAL STANDARD 1050. AFTER OCTOBER 15 ALL SLOPES 4:1 OR STEEPER THAT ARE NOT PERMANENTLY VEGETATED SHALL HAVE EROSION MAT INSTALLED IN PREPARATION OF WINTER CONDITIONS.

SPREAD SALVAGED OR IMPORTED TOPSOIL IN PROPOSED LANDSCAPE AREAS AND RESTORE.

CONTRACTOR MAY MODIFY SEQUENCING AS NEEDED TO COMPLETE CONSTRUCTION IF EROSION CONTROLS ARE MAINTAINED IN ACCORDANCE WITH THE CONSTRUCTION SITE EROSION CONTROL REQUIREMENTS SET FORTH IN FEDERAL, STATE & LOCAL PERMITS. NOTIFY VILLAGE OF GERMANTOWN PRIOR TO CHANGE.

AS CONDITIONS WARRANT DURING CONSTRUCTION ADDITIONAL BMPS SHALL BE INSTALLED TO REDUCE THE MIGRATION OF SEDIMENT THE THE MAXIMUM EXTENT PRACTICABLE

REMOVE ALL TEMPORARY EROSION CONTROL MEASURES AFTER SITE IS STABILIZED AND STABILIZE AND AREAS DISTURBED BY REMOVAL OF BMPS.

REVISIONS:

NO.	DATE	DESCRIPTION

PSE
PARISH SURVEY & ENGINEERING
122 Wisconsin Street, West Bend, WI 53095
262.346.7800
www.parishse.com

PROJECT TITLE:
KRENZ & COMPANY BUILDING AND PARKING ADDITION
W132 N10940 EISENHOWER DRIVE
GERMANTOWN, WI 53022

PLAN TITLE:
GRADING & EROSION CONTROL PLAN

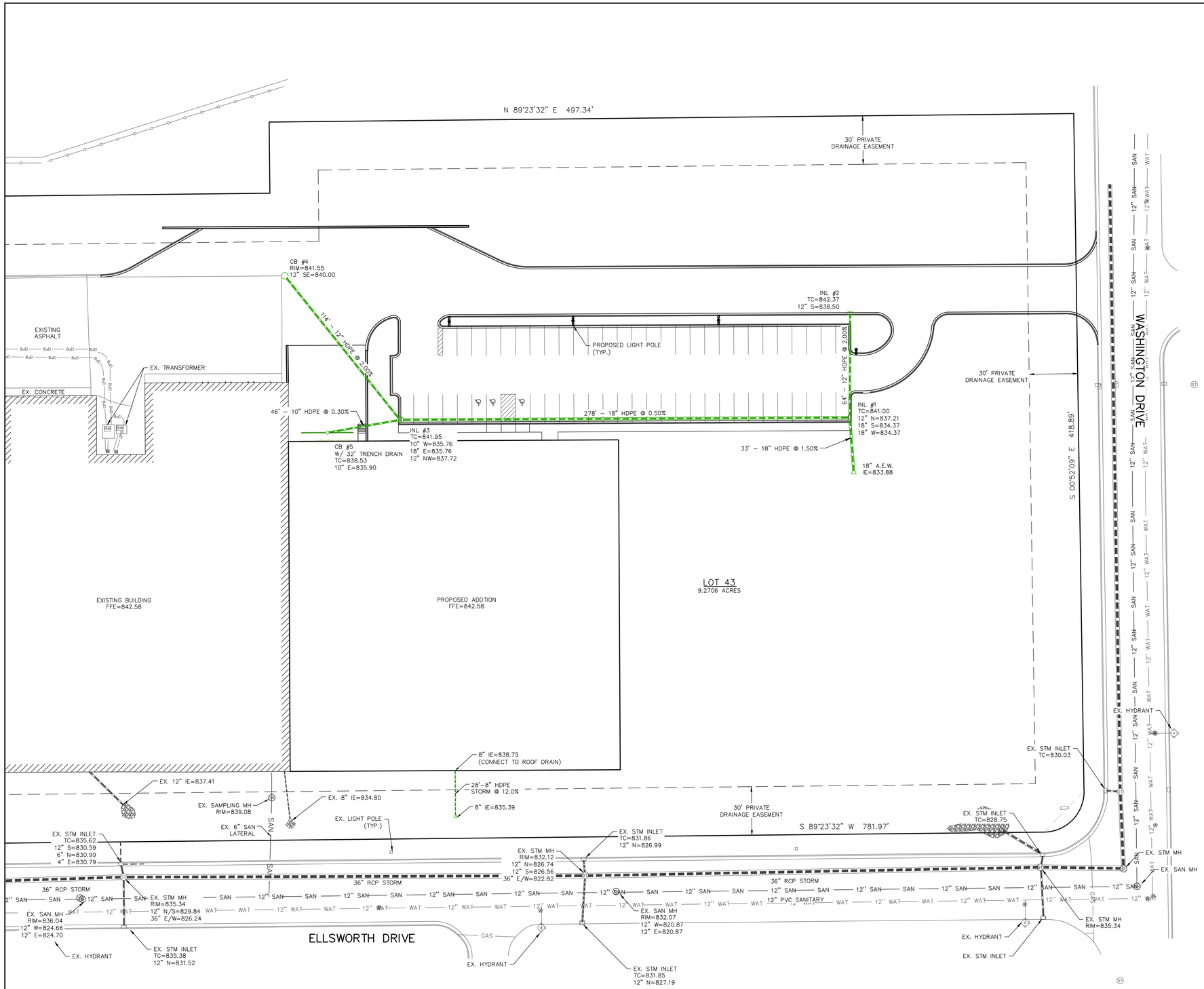
DRAWN BY: **JDR**
DESIGNED BY: **JDR**
CHECKED BY: **KJP**

PLAN DATE: **11-13-2023**

PROJECT NO: \AM-59-19\

PC SUBMITTAL

SHEET NO:
C1.03



STORM SEWER CASTINGS:

STRUCTURE	STRUCTURE DIAMETER	NEENAH CASTING OR EQUIVALENT
INL #1	2' x 3'	R-3067
INL #2	2' x 3'	R-3067
INL #3	2' x 3'	R-3067
CB #4	4' DIA	R-2510
CB #5 (TRENCH DRAIN)	3' DIA.	R-4996-C

NO.	DATE	REVISIONS: DESCRIPTION

PSE
PARISH SURVEY & ENGINEERING
122 Wisconsin Street, West Bend, WI 53095
262.346.7800
www.parishse.com

PROJECT TITLE:
KRENZ & COMPANY
BUILDING AND PARKING ADDITION
W132 N10940 EISENHOWER DRIVE
GERMANTOWN, WI 53022

PLAN TITLE:
UTILITY PLAN

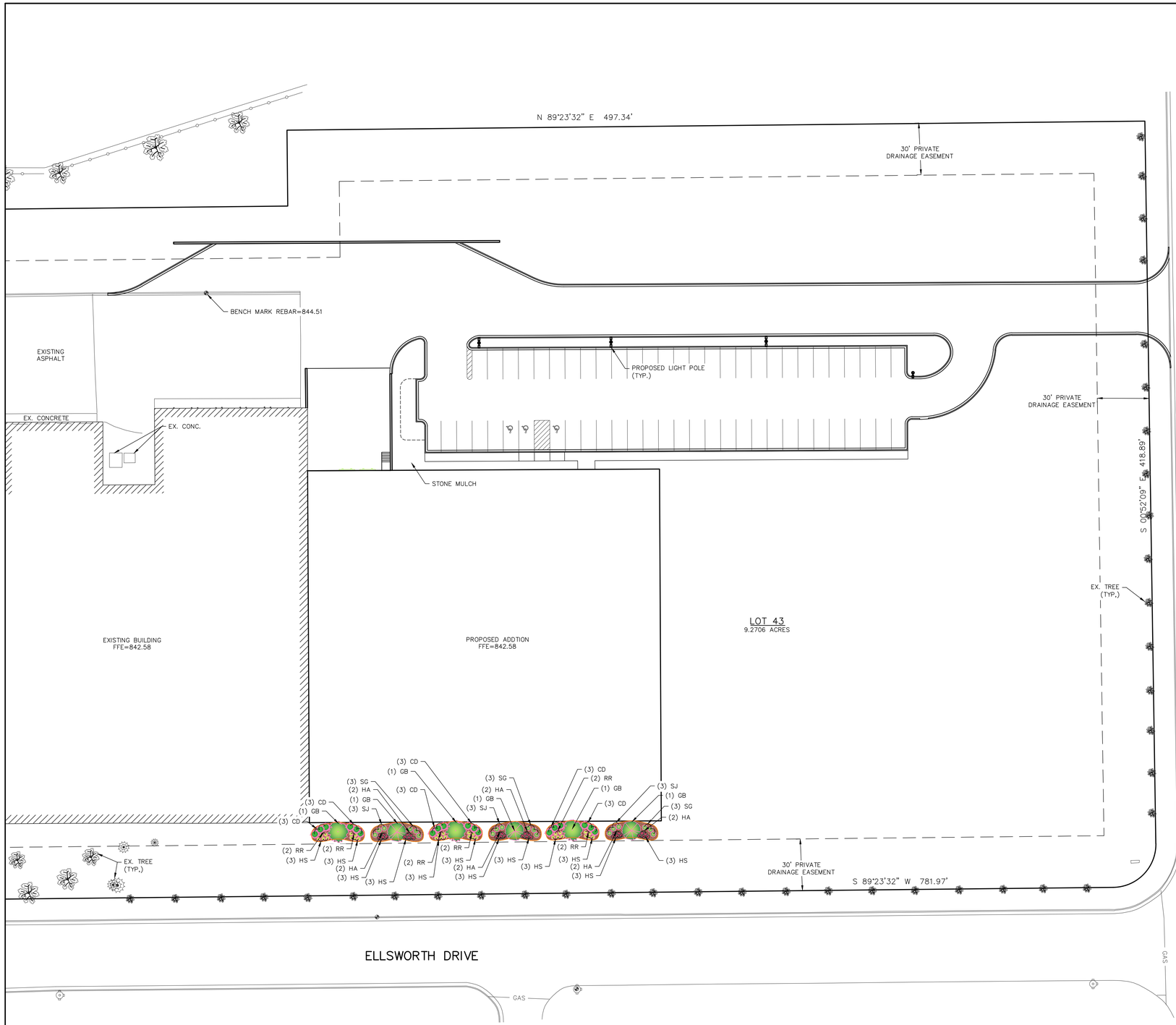
DRAWN BY:
JDR
DESIGNED BY:
JDR
CHECKED BY:
KJP

PLAN DATE:
11-13-2023

PROJECT NO:
\AM-59-19

PC SUBMITTAL

SHEET NO:
C1.04



PLANT LIST

KEY	QTY	SIZE	COMMON NAME	ROOT
	(6)		DECIDUOUS TREES	
GB	3	2 ½"	GINGKO BILOBA	BB
TC	3	2 ½"	TILIA CORDATA	BB
	(60)		DECIDUOUS SHRUBS	
SJ	18	18"	SPIREA JAPONICA 'ANTHONY WATERER'	POT
CD	18	36"	COTONEASTER DIVARICATUS	POT
RR	12	24"	ROSA RADRAZZ	POT
HA	12	24"	HYDRANGES ARBORESCENS 'ANNABELLE'	POT
	(36)		DECIDUOUS SHRUBS	
HS	36	36"	HEMEROCALLIS STELLA D' ORO	CON

NOTES:

1) DESIGNATED LAWN AREAS TO RECEIVE A MINIMUM OF 6? OF TOPSOIL, STARTER FERTILIZER, AND LOCALLY GROWN BLUEGRASS SOD.
2) PARKING LOT ISLANDS AND DESIGNATED PLANTING BEDS TO BE MULCHED WITH #2 WASHED STONE MULCH SPREAD TO A DEPTH OF 3? OVER WEED BARRIER FABRIC.
3) FOUNDATION PLANTING BEDS AND DESIGNATED PLANTING BEDS TO BE MULCHED WITH SHREDDED HARDWOOD BARK MULCH SPREAD TO A DEPTH OF 3?
4) INDIVIDUAL TREES AND SHRUB GROUPINGS IN LAWN AREAS TO RECEIVE SHREDDED HARDWOOD BARK MULCH PLANT RINGS (4' DIAMETER) SPREAD TO A DEPTH OF 3?
5) DESIGNATED PLANTING BEDS TO BE SEPARATED FROM LAWN AREAS WITH 5? BLACK VINYL EDGING.
6) OWNER WILL BE RESPONSIBLE FOR LANDSCAPE MAINTENANCE AFTER COMPLETION AND ACCEPTANCE OF THE PROJECT.

REVISIONS:

NO.	DATE	DESCRIPTION

PARISH SURVEY & ENGINEERING
122 Wisconsin Street, West Bend, WI 53095
262.346.7800
www.parishse.com

PROJECT TITLE:
KRENZ & COMPANY
BUILDING AND PARKING ADDITION
W132 N10940 EISENHOWER DRIVE
VILLAGE OF GERMANTOWN, WI 53022

PLAN TITLE:
LANDSCAPE PLAN

DRAWN BY:
JDR

DESIGNED BY:
JDR

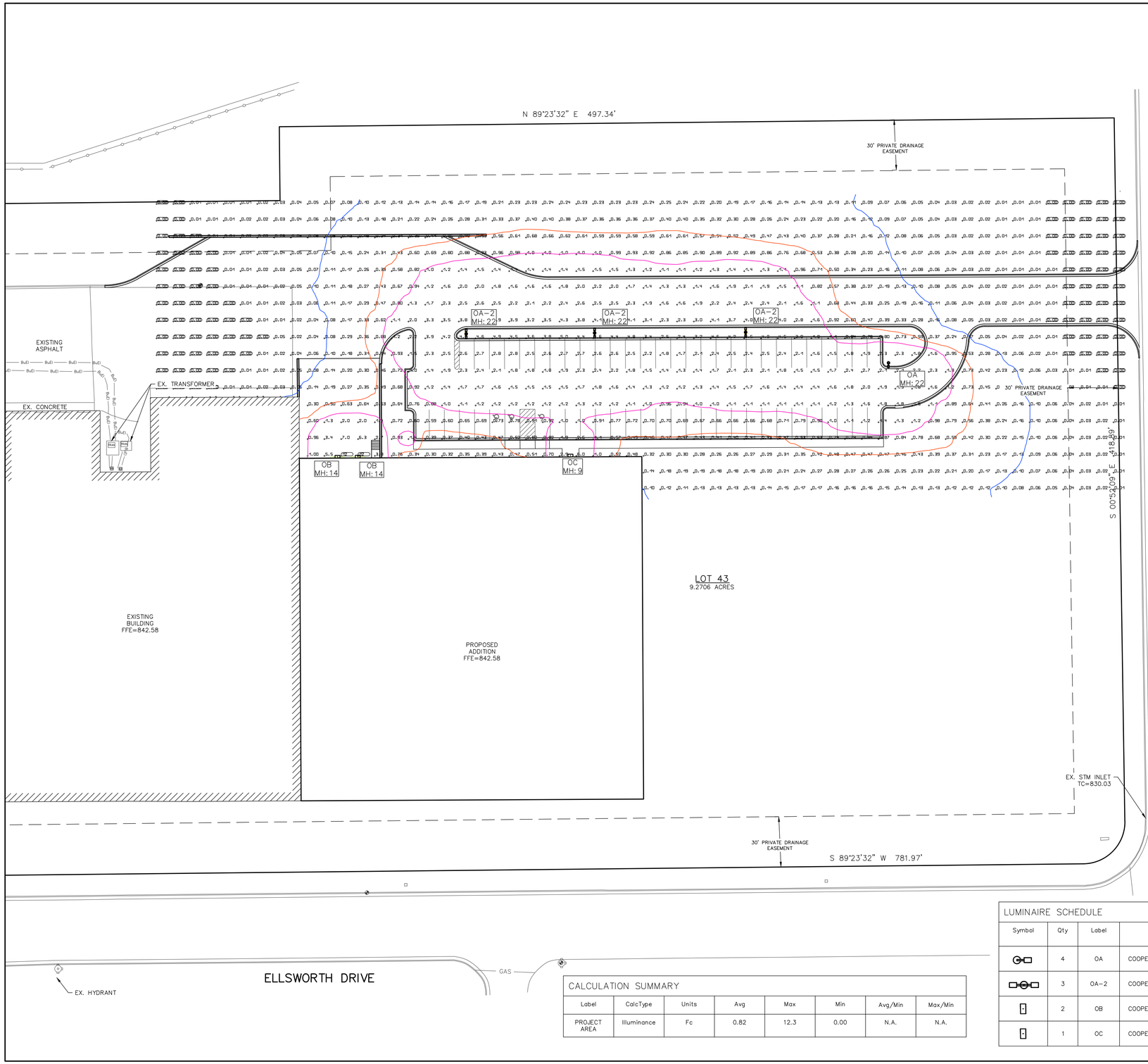
CHECKED BY:
KJP

PLAN DATE:
11-13-2023

PROJECT NO:
\AM-59-19\

PC SUBMITTAL

SHEET NO:
C1.05



0 30 60

NOTES:

1) STANDARD REFLECTANCE OF 80/50/20 UNLESS NOTED OTHERWISE
2) NOT A CONSTRUCTION DOCUMENT, FOR DESIGN PURPOSES ONLY
3) STANDARD INDOOR CALC POINTS @ 30 A.F.F. UNLESS NOTED OTHERWISE
4) STANDARD OUTDOOR CALC POINTS @ GRADE UNLESS NOTED OTHERWISE
5) PSE ASSUMES NO RESPONSIBILITY FOR INSTALLED LIGHT LEVELS DUE TO FIELD CONDITIONS, ETC.

CALCULATION SUMMARY

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
PROJECT AREA	Illuminance	Fc	0.82	12.3	0.00	N.A.	N.A.

LUMINAIRE SCHEDULE

Symbol	Qty	Label	Manufacturer	Description	Arrangement	Lum. Lumens	Lum. Watts	LLF
	4	OA	COOPER LIGHTING – LUMARK	PRV-C25-D-UNV-T4	SINGLE	13,184	96	0.900
	3	OA-2	COOPER LIGHTING – LUMARK	PRV-C25-D-UNV-T4	DOUBLE	13,184	96	0.900
	2	OB	COOPER LIGHTING – LUMARK	XTOR4B-W	SINGLE	4,203	37.7	0.900
	1	OC	COOPER LIGHTING – LUMARK	AXCS1A	SINGLE	1,806	13.5	0.900

REVISIONS:

NO.	DATE	DESCRIPTION

PSE
PARISH SURVEY & ENGINEERING
122 Wisconsin Street, West Bend, WI 53095
262.346.7800
www.parishse.com

PROJECT TITLE:
KRENZ & COMPANY
BUILDING AND PARKING ADDITION
W132 N10940 EISENHOWER DRIVE
VILLAGE OF GERMANTOWN, WI 53022

PLAN TITLE:
LIGHTING PLAN

DRAWN BY: **JDR**
DESIGNED BY: **JDR**
CHECKED BY: **KJP**

PLAN DATE: **11-13-2023**

PROJECT NO: \AM-59-19\

PC SUBMITTAL

SHEET NO:
C1.06

GENERAL SPECIFICATIONS FOR CONSTRUCTION ACTIVITIES:

1. THE PROPOSED IMPROVEMENTS SHALL BE CONSTRUCTED ACCORDING TO THE WISCONSIN D.O.T. STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, LATEST EDITION, THE STANDARD SPECIFICATIONS FOR SEWER & WATER IN WISCONSIN, AND WISCONSIN ADMINISTRATIVE CODE, SPS 360 382–383, AND THE LOCAL ORDINANCES AND SPECIFICATIONS.
2. THE CONTRACTOR SHALL OBTAIN ALL PERMITS REQUIRED FOR EXECUTION OF THE WORK. THE CONTRACTOR SHALL CONDUCT HIS WORK ACCORDING TO THE REQUIREMENTS OF THE PERMITS.
3. THE CONTRACTOR SHALL NOTIFY THE OWNER AND THE MUNICIPALITY FORTY–EIGHT (48) HOURS PRIOR TO THE START OF CONSTRUCTION.
4. THE MUNICIPALITY SHALL HAVE THE RIGHT TO INSPECT, APPROVE, AND REJECT THE CONSTRUCTION OF THE PUBLIC PORTIONS OF THE WORK. THE OWNER SHALL HAVE THE RIGHT TO INSPECT, APPROVE, AND REJECT THE CONSTRUCTION OF ALL PRIVATE PORTIONS OF THE WORK.
5. THE CONTRACTOR SHALL INDEMNIFY THE OWNER, THE ENGINEER, AND THE MUNICIPALITY, THEIR AGENTS, ETC, FROM ALL LIABILITY INVOLVED WITH THE CONSTRUCTION, INSTALLATION, AND TESTING OF THE WORK ON THIS PROJECT.
6. SITE SAFETY SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
7. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL UTILITY INFORMATION SHOWN ON THE PLANS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL CALL DIGGERS HOTLINE AT 1–800–242–8511 TO NOTIFY THE UTILITIES OF HIS INTENTIONS, AND TO REQUEST FIELD STAKING OF EXISTING UTILITIES.
8. SILT FENCE AND OTHER EROSION CONTROL FACILITIES MUST BE INSTALLED PRIOR TO CONSTRUCTION OR ANY OTHER LAND DISTURBING ACTIVITY. FOLLOW THE SEQUENCE OF CONSTRUCTION ON THE EROSION CONTROL PLAN FOR MORE DETAILS. INSPECTIONS SHALL BE MADE WEEKLY OR AFTER EVERY RAINFALL OF 0.5" OR MORE. REPAIRS SHALL BE MADE IMMEDIATELY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL EROSION CONTROL FACILITIES ONCE THE THREAT OF EROSION HAS PASSED WITH THE APPROVAL OF THE GOVERNING AGENCY.
9. ANY ADJACENT PROPERTIES OR ROAD RIGHT–OF–WAYS WHICH ARE DAMAGED DURING CONSTRUCTION MUST BE RESTORED BY THE CONTRACTOR.
10. TRASH AND DEBRIS SHALL NOT BE ALLOWED TO ACCUMULATE ON THIS SITE AND THE SITE SHALL BE CLEAN UPON COMPLETION OF WORK.
11. THE OWNER SHALL HAVE THE RIGHT TO HAVE ALL MATERIALS USED IN CONSTRUCTION TESTED FOR COMPLIANCE WITH THESE SPECIFICATIONS.

SPECIFICATIONS FOR GRADING & EROSION CONTROL:

1. THE CONTRACTOR SHALL ASSUME SOLE RESPONSIBILITY FOR THE COMPUTATIONS OF ALL GRADING AND FOR ACTUAL LAND BALANCE, INCLUDING UTILITY TRENCH SPOIL. THE CONTRACTOR SHALL IMPORT OR EXPORT MATERIAL AS NECESSARY TO COMPLETE THE PROJECT. CONTRACTOR SHALL NOTIFY OWNER OF THE NEED TO IMPORT OR HAUL OFF SOIL. ON–SITE LOCATIONS SUITABLE FOR BORROW OR FILL MAY BE PRESENT. COORDINATE WITH OWNER.
2. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING SOIL CONDITIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION. A GEOTECHNICAL REPORT MAY BE AVAILABLE FROM THE OWNER.
3. SITE SHALL BE CLEARED TO THE LIMITS SHOWN ON THE PLANS. REMOVE VEGETATION FROM THE SITE BURNING IS NOT PERMITTED. PROTECT TREES AND OTHER FEATURES FROM DAMAGE WITH FENCING.
4. THE GEOTECHNICAL ENGINEER IS RESPONSIBLE FOR VERIFYING COMPACTION AND FILL PLACEMENT IN THE FIELD. THE GEOTECHNICAL ENGINEER MAY SUPERCEDE THESE SPECIFICATIONS IF THERE IS GOOD CAUSE TO DO SO. AN EXPLANATION MUST BE SUBMITTED TO THE ENGINEER IN WRITING BEFORE ANY DEVIATIONS ARE MADE.
5. IF NO GEOTECHNICAL RECOMMENDATION IS AVAILABLE, THEN THE FOLLOWING SPECIFICATIONS SHALL APPLY. ALL FILL SHALL BE CONSIDERED STRUCTURAL FILL AND SHALL BE PLACED IN ACCORDANCE WITH THE FOLLOWING: THE COMPACTED FILL SUBGRADE SHALL CONSIST OF AND SHALL BE UNDERLAIN BY SUITABLE BEARING MATERIALS, FREE OF ALL ORGANIC, FROZEN OR OTHER DELETERIOUS MATERIAL AND INSPECTED AND APPROVED BY THE RESIDENT GEOTECHNICAL ENGINEER.PREPARATION OF THE SUBGRADE, AFTER STRIPPING, SHALL CONSIST OF PROOF–ROLLING TO DETECT UNSTABLE AREAS THAT MIGHT BE UNDERCUT, AND COMPACTING THE SCARIFIED SURFACE TO THE SAME MINIMUM DENSITY INDICATED BELOW.THE COMPACTED FILL MATERIALS SHALL BE FREE OF ANY DELETERIOUS, ORGANIC OR FROZEN MATTER AND SHALL HAVE A MAXIMUM LIQUID LIMIT (ASTM–D–423) AND PLASTICITY INDEX (ASTM D–424) IF 30 AND 10 RESPECTFULLY, UNLESS SPECIFICALLY TESTED AND FOUND TO HAVE LOW EXPANSIVE PROPERTIES AND APPROVED BY AN EXPERIENCED SOILS ENGINEER. THE TOP TWELVE (12") INCHES OF COMPACTED FILL SHOULD HAVE A MAXIMUM THREE (3") INCH PARTICLE DIAMETER AND ALL UNDERLYING COMPACTED FILL A MAXIMUM SIX (6") INCH PARTICLE DIAMETER UNLESS SPECIFICALLY APPROVED BY AN EXPERIENCED SOILS ENGINEER. ALL FILL MATERIAL MUST BE TESTED AND APPROVED UNDER THE DIRECTION AND SUPERVISION OF AN EXPERIENCED SOILS ENGINEER PRIOR TO PLACEMENT, IF THE FILL IS TO PROVIDE NON–FROST SUSCEPTIBLE CHARACTERISTICS, IT MUST BE CLASSIFIED AS A CLEAN GW, GP, SW, OR SP PER UNITED SOIL CLASSIFICATION SYSTEM(ASTM D–2487). FOR STRUCTURAL FILL THE DENSITY OF THE STRUCTURAL COMPACTED FILL AND SCARIFIED SUBGRADE AND GRADES SHALL NOT BE LESS THAN 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR (ASTM D–698) WITH THE EXCEPTION TO THE TOP 12 INCHES OF PAVEMENT SUBGRADE WHICH SHALL A MINIMUM IN–SITU DENSITY OF 100 PERCENT OF THE MAXIMUM DRY DENSITY, OR 5 PERCENT HIGHER THAN UNDERLYING FILL MATERIALS.THE MOISTURE CONTENT OF COHESIVE SOIL SHALL NOT VARY BY MORE THAN –1 TO +3 PERCENT AND GRANULAR SOIL ±3 PERCENT OF OPTIMUM WHEN PLACED AND COMPACTED OR RECOMPACTED, UNLESS SPECIFICALLY APPROVED BY THE SOILS ENGINEER TAKING INTO CONSIDERATION THE TYPE OF MATERIALS AND COMPACTION EQUIPMENT BEING USED. THE COMPACTION EQUIPMENT SHOULD CONSIST OF SUITABLE MECHANICAL EQUIPMENT SPECIFICALLY DESIGNED FOR SOIL COMPACTION. BULLDOZERS OR SIMILAR TRACKED VEHICLES ARE TYPICALLY NOT SUITABLE FOR COMPACTION. MATERIAL THAT IS TOO WET TO PERMIT PROPER COMPACTION MAY BE SPREAD ON THE FILL AND PERMITTED TO DRY. DISCING,HARROWING OR PULVERIZING MAY BE NECESSARY TO REDUCE THE MOISTURE CONTENT TO A SATISFACTORY VALUE, AFTER WHICH IT SHALL BE COMPACTED. THE FINISHED SUBGRADE AREAS OF THE SITE SHALL BE COMPACTED TO 100 PERCENT OF THE STANDARD PROCTOR (ASTM D–398) MAXIMUM DENSITY.
6. NO FILL SHALL BE PLACED ON A WET OR SOFT SUBGRADE THE SUBGRADE SHALL BE PROOF–ROLLED AND INSPECTED BY THE GEOTECHNICAL ENGINEER BEFORE ANY MATERIAL IS PLACED.
7. SUBGRADE TOLERANCES ARE +/– 1" FOR LANDSCAPE AREAS AND +/– ½" FOR ALL PAVEMENT AND BUILDING AREAS.
8. TOPSOIL SHALL BE FREE OF DELETERIOUS MATERIALS, ROOTS, OLD VEGETATION, ROCKS OVER 2" DIAMETER AND SHALL NOT BE EXCESSIVELY CLAYEY IN NATURE. NO CLUMPS LARGER THAN 4" ARE ACCEPTABLE. TOPSOIL MAY BE AMENDED AS NEEDED WITH SAND OR COMPOST TO BE LOOSE WHEN SPREAD.
9. THE CONTRACTOR SHALL MAINTAIN SITE DRAINAGE THROUGHOUT CONSTRUCTION. THIS MAY INCLUDE THE EXCAVATION OF TEMPORARY DITCHED OR PUMPING TO ALLEVIATE WATER PONDING. ANY DEWATERING SHALL NOT GO DIRECTLY TO STREAMS, CREEKS, WETLANDS OR OTHER ENVIRONMENTALLY SENSITIVE AREAS WITHOUT BEING TREATED FIRST. A DIRT BAG OR OTHER DEWATERING TREATMENT DEVICE MAY BE USED TO CAPTURE SEDIMENT FROM THE PUMPED WATER.
10. THE STONE TRACKING PAD SHALL BE INSTALLED PRIOR TO ANY CONSTRUCTION. THE TRACKING PAD IS TO BE MAINTAINED BY THE CONTRACTOR IN A CONDITION, WHICH WILL PREVENT THE TRACK OF MUD OR DRY SEDIMENT ONTO THE ADJACENT PUBLIC STREETS. SEDIMENT REACHING THE PUBLIC ROAD SHALL BE REMOVED BY STREET CLEANING (NOT HYDRAULIC FLUSHING) BEFORE THE END OF EACH WORKDAY.
11. SOIL STOCKPILES SHALL BE LOCATED A MINIMUM OF 75 FEET FROM LAKES, STREAMS, WETLANDS, DITCHES, DRAINAGE WAYS, CURBS AND GUTTERS OR OTHER STORMWATER CONVEYANCE SYSTEM, UNLESS OTHERWISE APPROVED BY THE ENGINEER. MEASURES SHALL BE TAKEN TO MINIMIZE EROSION AND RUNOFF FROM ANY SOIL STOCKPILES THAT WILL LIKELY REMAIN FOR MORE THAN FIVE WORKING DAYS. ANY STOCKPILE THAT REMAINS FOR MORE THAN 30 DAYS SHALL BE COVERED OR TREATED WITH STABILIZATION PRACTICES SUCH AS TEMPORARY OR PERMANENT SEEDING AND MULCHING.
12. EROSION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO GRADING OPERATIONS AND SHALL BE PROPERLY MAINTAINED FOR MAXIMUM EFFECTIVENESS UNTIL VEGETATION IS ESTABLISHED. ALL EROSION CONTROL MEASURES AND STRUCTURES SERVING THE SITE MUST BE INSPECTED AT LEAST WEEKLY OR WITHIN 24 HOURS OF A 0.5 INCH RAIN EVENT. ALL MAINTENANCE WILL FOLLOW AN INSPECTION WITHIN 24 HOURS.
13. CUT AND FILL SLOPES SHALL BE NO GREATER THAN 3:1.
14. EROSION CONTROL IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ACCEPTANCE OF THIS PROJECT. EROSION CONTROL MEASURES AS SHOWN SHALL BE THE MINIMUM PRECAUTIONS THAT WILL BE ALLOWED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECOGNIZING AND CORRECTING ALL EROSION CONTROL PROBLEMS THAT ARE A RESULT OF CONSTRUCTION ACTIVITIES. ADDITIONAL EROSION CONTROL MEASURES, AS REQUESTED IN WRITING BY THE STATE OR LOCAL INSPECTORS, OR THE DEVELOPER'S ENGINEER, SHALL BE INSTALLED WITHIN 24 HOURS.
15. ALL DISTURBED SLOPES OF 4:1 OR GREATER AND DRAINAGE SWALES SHALL BE STABILIZED WITH CURLEX EROSION CONTROL FABRIC (INSTALL PER MANUFACTURER'S SPECIFICATIONS).

SPECIFICATIONS FOR PRIVATE UTILITIES:

1. EXISTING UTILITIES ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY AND ARE NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE.BEFORE PROCEEDING WITH ANY UTILITY CONSTRUCTION SHALL EXCAVATE EACH EXISTING LATERAL OR POINT OF CONNECTION AND VERIFY THE LOCATION AND ELEVATION OF ALL UTILITIES. IF ANY EXISTING UTILITIES ARE NOT AS SHOWN ON THE DRAWINGS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY FOR POSSIBLE REDESIGN. CONTRACTOR SHALL CALL "DIGGERS HOTLINE" PRIOR TO ANY CONSTRUCTION.
2. ALL CONNECTIONS TO EXISTING PIPES AND MANHOLES SHALL BE CORED CONNECTIONS. CONNECTIONS TO WATER MAIN SHALL BE WET TAPPED WITH A STAINLESS STEEL TAPPING SLEEVE.
3. BUILDING LATERALS SHALL BE CONSTRUCTED IN ACCORDANCE WITH LOCAL AND STATE PLUMBING CODES AND IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION WISCONSIN, LATEST EDITION. PROPOSED SANITARY SEWER AND INTERNALLY CONNECTED STORM SEWER SHOWN IN THIS PLAN SHALL TERMINATE AT A POINT FIVE (5) FEET FROM THE EXTERIOR BUILDING WALL. THE EXACT LOCATION OF ALL DOWN SPOUT CONNECTIONS SHALL BE PER THE ARCHITECTURAL PLANS.
4. CONTRACTOR SHALL NOT SHUT OFF WATER OR PLUG SANITARY SEWER IN MUNICIPAL LINES WITHOUT PRIOR APPROVAL.
5. MATERIALS FOR STORM SEWER SHALL BE AS FOLLOWS: STORM SEWER PIPE 48" OR LESS SHALL BE HIGH DENSITY POLYETHYLENE (HDPE) CORRUGATED PIPE WITH AN INTEGRALLY FORMED SMOOTH WATERWAY SUCH AS ADS N–12. FOR PIPE 10" OR LESS IN DIAMETER, PVC, ASTM D–3034, SDR–26, MAY ALSO BE USED. WHERE SPECIFICALLY REQUIRED, REINFORCED CONCRETE PIPE (RCP), ASTM C–76, CLASS III OR HIGHER, MAY BE USED. TRENCH SECTION SHALL BE CLASS "B" FOR PVC AND HDPE AND CLASS "C" FOR CONCRETE (PER STANDARD SPECIFICATIONS). MANHOLES, INLETS AND CATCH BASINS SHALL BE PRE CAST REINFORCED CONCRETE, ASTM C–478. CASTINGS SHALL BE HEAVY DUTY CAST IRON. AREA DRAINS SHALL BE ADSNYLOPLAST OR EQUIVALENT AND SHALL BE A MINIMUM OF 24" IN DIAMETER. CONNECTIONS TO EXISTING PIPES SHALL BE MADE WITH INSERT A WYE OR EQUIVALENT. LAST (3) THREE JOINTS SHALL BE RESTRAINED WITH RODS. PIPE SHALL MEET THE REQUIREMENTS OF AASHTO M–294, TYPE S.
6. EXTREME CAUTION MUST BE FOLLOWED REGARDING THE COMPACTION OF ALL UTILITY TRENCHES. MECHANICALLY COMPACTED GRANULAR BACKFILL IS REQUIRED UNDER & WITHIN 5 FEET OF ALL PAVEMENT INCLUDING SIDEWALKS. FLOODING OF BACKFILL MATERIAL IS NOT ALLOWED.
7. TRACER WIRE (NO.8 SINGLE STRAND COPPER) AND WARNING TAPE SHALL BE INSTALLED ON ALL UTILITIES IN ACCORDANCE WITH THE LOCAL AND STATE CODES. TRACER WIRE SHALL TERMINATE IN A VALVECO TERMINAL BOX AT EACH END IN ACCORDANCE WITH 182.0715(2R) OF STATE STATUTES.
8. MANDREL TESTING ON SANITARY LINES AND PRESSURE TESTING ON WATER MAIN MAY BE REQUIRED BY THE OWNER OR MUNICIPALITY.
9. UPON COMPLETION OF FINAL PAVING OPERATIONS, THE UTILITY CONTRACTOR SHALL ADJUST ALL MANHOLE AND INLET RIMS AND VALVE BOXES TO FINISHED GRADE.
10. ALL UTILITY CONSTRUCTION SHALL BE DONE IN COMPLIANCE WITH THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN (LATEST EDITION AND ADDENDUM) AND ALL STATE AND LOCAL CODES. IT IS THE CONTRACTORS RESPONSIBILITY TO DETERMINE WHICH SPECIFICATIONS APPLY, AND TO COORDINATE ALL CONSTRUCTION ACTIVITIES WITH THE APPROPRIATE LOCAL AND STATE AUTHORITIES.
11. ALL STORM SEWER CONSTRUCTION SHALL BE IN COMPLIANCE WITH THE VILLAGE OF GERMANTOWN AND WISCONSIN DSPS STANDARDS.
12. THE LENGTHS OF ALL UTILITIES ARE TO CENTER OF STRUCTURES OR FITTINGS AND MAY VARY SLIGHTLY FROM THE PLAN. LENGTHS SHALL BE VERIFIED IN THE FIELD DURING CONSTRUCTION.
13. MAINTAIN AN 8 FOOT MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN PUBLIC SANITARY SEWER, WATER MAIN AND STORM SEWER. PROVIDE 18" MINIMUM VERTICAL SEPARATION WHERE SEWER CROSSES OVER WATER MAIN AND PROVIDE 6" MINIMUM VERTICAL SEPARATION WHERE WATER MAIN CROSSES OVER SEWER.
14. ANY UTILITIES WHICH ARE DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED TO THE OWNER'S SATISFACTION AT THE CONTRACTOR'S EXPENSE.
15. GENERAL CONTRACTOR SHALL COORDINATE WITH LOCAL GAS TELEPHONE, AND ELECTRICAL UTILITIES FOR EXACT LOCATION SIZE AND DEPTH OF NEW SERVICE.
16. ALL WORK WITHIN THE CITY RIGHT–OF–WAY REQUIRES A PERMIT FROM THE VILLAGE OF GERMANTOWN PUBLIC WORKS DEPARTMENT.

SPECIFICATIONS FOR PAVING:

1. AGGREGATES USED IN THE CRUSHED STONE BASE SHALL CONFORM TO THE GRADATION REQUIREMENTS SECTIONS 301.2 AND 305.2.2 OF THE STANDARD SPECIFICATIONS. THICKNESS SHALL BE PER THE DETAIL ON THE PLANS. BASE SHALL BE 1–1/4" INCH DIAMETER LIMESTONE TRAFFIC BOND AGGREGATE BASE COURSE UNLESS NOTED OTHERWISE. SUBSTITUTION AND/OR RECYCLED MATERIALS MAY BE ALLOWED WITH APPROVAL FROM THE OWNER.
2. SUBGRADE SHALL BE PROOFROLLED AND APPROVED BY A GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF STONE BASE. EXCAVATE UNSUITABLE AREAS AND REPLACE WITH BREAKER RUN STONE AND RECOMPACT. REFER TO THE GEOTECHNICAL REPORT FOR ADDITIONAL SPECIFICATIONS.
3. EXISTING PAVEMENT SHALL BE SAWCUT IN NEAT STRAIGHT LINES TO FULL DEPTH AT ANY POINT WHERE EXISTING PAVEMENT IS REMOVED. CURB AND WALK SHALL BE REMOVED TO THE NEAREST JOINT. REMOVED PAVEMENT SHALL BE REPLACED WITH THE SAME SECTION AS EXISTING. MUNICIPAL STANDARDS MAY REQUIRE ADDITIONAL WORK.
4. ASPHALT FOR PARKING AREAS AND THE PRIVATE ROAD SHALL BE PER THE DETAILS MATERIALS AND PLACEMENT SHALL CONFORM TO THE DOT STANDARD SPECIFICATIONS, SECTION 450 AND 460 LT 58–28 S IS REQUIRED UNLESS NOTED OTHERWISE A COMMERCIAL GRADE MIX MAY BE SUBSTITUTED ONLY WITH APPROVAL FROM THE OWNER.
5. TACK COAT SHALL BE IN ACCORDANCE WITH THE SUBSECTION 455.2.5 OF THE STANDARD SPECIFICATIONS. THE RATE OF APPLICATION SHALL BE 0.05 GAL/SY.
6. CONCRETE FOR CURB, DRIVEWAYS, WALKS, AND NON–FLOOR SLABS SHALL CONFORM TO SECTION 415 OF THE STANDARD SPECIFICATIONS, GRADE A, ASTM C–94, 6 BAG MIX WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3,500 PSI. JOINTING SHALL BE PER SECTION 415.3.7 OF THE STANDARD SPECIFICATIONS WITH CONSTRUCTION JOINTS HAVING A MAXIMUM SPACING OF 10". EXPANSION JOINTS SHALL BE PROVIDED EVERY 50'. CONCRETE SHALL BE FINISHED PER SECTION 415.3.8 WITH A MEDIUM BROOM TEXTURE. A CURING MEMBRANE IN CONFORMANCE WITH SECTION 415.3.12 IS REQUIRED.
7. PAVEMENT MARKINGS SHALL BE PAINT IN ACCORDANCE WITH WISCONSIN DOT SECTION 646 OF THE STANDARD SPECIFICATIONS AND WITH LOCAL CODES. THE FOLLOWING ITEMS SHALL BE PAINTED WITH COLORS NOTED BELOW:

   PARKING STALLS: WHITE
   PEDESTRIAN CROSSWALKS: WHITE
   LANE STRIPING WHERE SEPARATING TRAFFIC IS MOVING IN OPPOSITE DIRECTIONS: YELLOW
   LANE STRIPING WHERE SEPARATING TRAFFIC IS MOVING IN SAME DIRECTIONS: WHITE
   ADA SYMBOLS; WHITE

RESTORATION NOTES:

1. ALL DISTURBED AREAS, EXCEPT STREET PAVEMENT AND SIDEWALK AREAS, SHALL RECEIVE A MINIMUM OF FOUR (4) INCHES OF TOPSOIL, FERTILIZER, SEED AND MULCH. RESTORATION WILL OCCUR AS SOON AFTER THE DISTURBANCE AS PRACTICAL. LAWN AREAS WITH SLOPES GREATER THAN 4:1 SHALL BE SEEDED WITH OLDS "NOMOW" MIX OR EQUAL. ALL OTHER DISTURBED AREAS SHALL BE SEEDED WITH MADISON PARKS MIX OR EQUAL. MIXTURES SHALL BE IN ACCORDANCE WITH SECTION 630 OF D.O.T. SPECIFICATIONS.
2. AN EQUAL AMOUNT OF ANNUAL RYEGRASS SHALL BE ADDED TO THE MIX. SEED MIXTURES SHALL BE APPLIED AT THE RATE OF FOUR (4) POUNDS PER 1,000 SQUARE FEET. FERTILIZER SHALL BE APPLIED AT THE RATE OF FOUR (4) POUNDS PER 1,000 SQUARE FEET. FERTILIZER SHALL MEET THE MINIMUM REQUIREMENTS THAT FOLLOW: NITROGEN, NOT LESS THAN 16%; PHOSPHORIC ACID, NOT LESS THAN 6%; POTASH, NOT LESS THAN 6%.
3. ALL FINISH GRADED AREAS SHALL BE SEEDED AND MULCHED BY SEPTEMBER 15TH. IF THE SITE DOES NOT HAVE FINISH GRADED AREAS COMPLETED BY OCTOBER 15TH, ALL DISTURBED AREAS SHALL BE RESTORED WITH TEMPORARY SEEDING (COVER CROP). AREAS NEEDING PROTECTION DURING PERIODS WHEN PERMANENT SEEDING IS NOT APPLIED SHALL BE SEEDED WITH ANNUAL SPECIES FOR TEMPORARY PROTECTION. SEE TABLE 1 OF THE WISCONSIN DNR CONSERVATION PRACTICE STANDARD 1059, FOR SEEDING RATES OF COMMONLY USED SPECIES. THE RESIDUE FROM THIS CROP MAY EITHER BE INCORPORATED INTO THE SOIL DURING SEEDBED PREPARATION AT THE NEXT PERMANENT SEEDING PERIOD OR LEFT ON THE SOIL SURFACE AND THE PLANTING MADE AS A NO–TILL SEEDING.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR A SATISFACTORY STAND OF GRASS ON ALL SEEDED AREAS FOR ONE YEAR AFTER THE PROJECT'S FINAL ACCEPTANCE.

REVISIONS:

NO.	DATE	DESCRIPTION

PSE
PARISH SURVEY & ENGINEERING
122 Wisconsin Street, West Bend, WI 53095
262.346.7800
www.parishse.com

PROJECT TITLE:
KRENZ & COMPANY
BUILDING AND PARKING ADDITION
W132 N10940 EISENHOWER DRIVE
VILLAGE OF GERMANTOWN, WI 53022

PLAN TITLE:
CONSTRUCTION SPECIFICATIONS AND NOTES

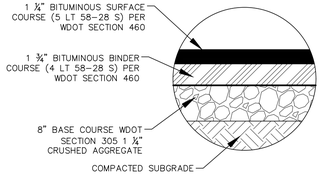
DRAWN BY: JDR
DESIGNED BY: JDR
CHECKED BY: KJP

PLAN DATE: 11-13-2023

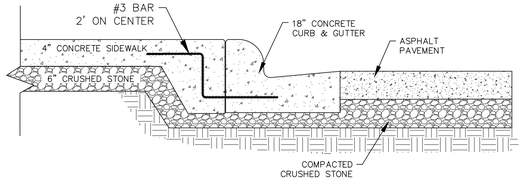
PROJECT NO: \AM-59-19\

PC SUBMITTAL

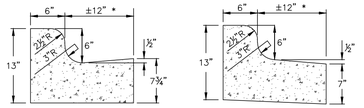
SHEET NO:
C2.01



ASPHALT PAVEMENT SECTION
(LIGHT DUTY)



CONCRETE SIDEWALK/ CURB DETAIL



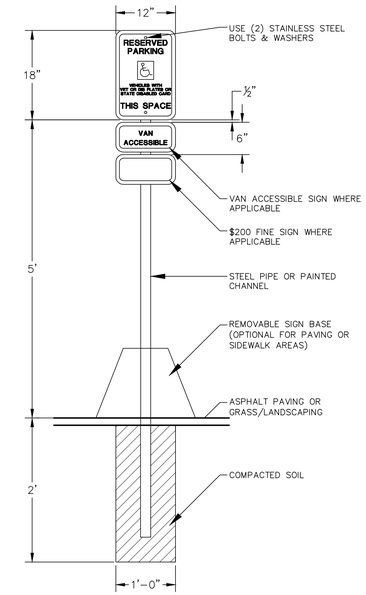
18" STANDARD CONCRETE CURB & GUTTER

18" REJECT CONCRETE CURB & GUTTER

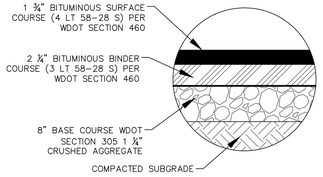
GENERAL NOTES:

1. LATERAL CONTRACTION JOINTS SHALL BE PLACED AT INTERVALS OF NOT MORE THAN 15' NOR LESS THAN 6' IN LENGTH. THE JOINTS SHALL BE A MINIMUM OF 3" IN DEPTH. EXPANSION JOINTS SHALL BE PLACED TRANSVERSELY AT RADIUS POINTS ON CURVES OF RADIUS 200' OR LESS, AND AT ANGLE POINTS, OR AS DIRECTED BY THE ENGINEER. THE EXPANSION JOINT SHALL BE A ONE PIECE ASPHALTIC MATERIAL HAVING THE SAME DIMENSIONS AS CURB & GUTTER AT THAT STATION AND BE 1/2" THICK. IN ALL CASES, CONCRETE CURB & GUTTER SHALL BE PLACED ON THOROUGHLY COMPACTED CRUSHED STONE.
2. * CURB APRON ±12" TO FIT STANDARD CURB MACHINE

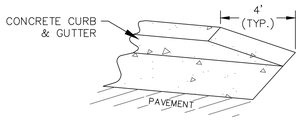
18" CURB AND GUTTER DETAILS



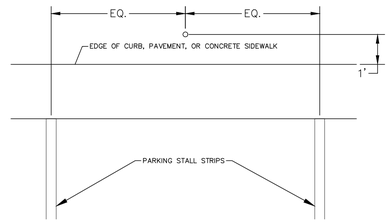
NOTE: SIGN SHALL COMPY WITH CURRENT STATE AND ADA GUIDELINES



ASPHALT PAVEMENT SECTION
(HEAVY DUTY)

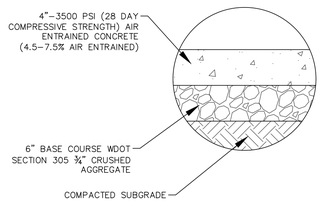


CURB TAPER DETAIL

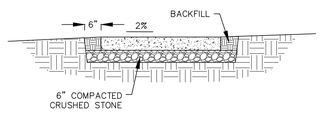


PARKING STALL
PLAN VIEW

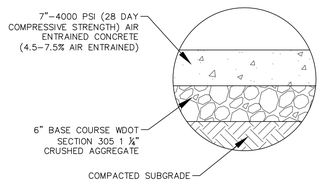
ADA COMPLIANT ACCESSIBLE SIGN DETAIL



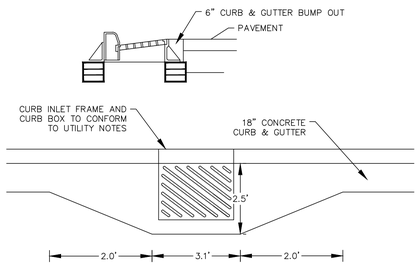
CONCRETE SIDEWALK SECTION



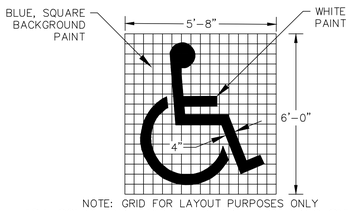
4" CONCRETE SIDEWALK



CONCRETE PAVEMENT SECTION



CURB INLET CONCRETE BUMP OUT DETAIL



NOTE: GRID FOR LAYOUT PURPOSES ONLY

ADA COMPLIANT ACCESSIBLE STALL PAINTED SYMBOL
NOT TO SCALE

REVISIONS:		
NO.	DATE	DESCRIPTION

PARISH SURVEY & ENGINEERING
122 Wisconsin Street, West Bend, WI 53095
262.346.7800
www.parishse.com

PROJECT TITLE:
KRENZ & COMPANY
BUILDING AND PARKING ADDITION
W132 N10940 EISENHOWER DRIVE
VILLAGE OF GERMANTOWN, WI 53022

PLAN TITLE:
SITE DETAILS

DRAWN BY: **JDR**
DESIGNED BY: **JDR**
CHECKED BY: **KJP**

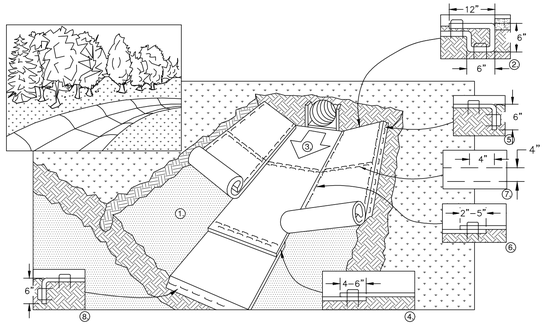
PLAN DATE: **11-13-2023**

PROJECT NO: \AM-59-19\

PC SUBMITTAL

SHEET NO:
C2.02

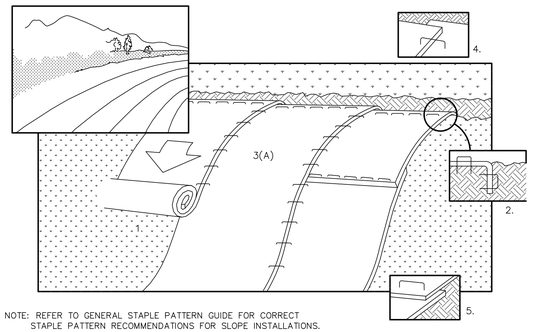
MAXIMUM PERIOD OF BARE SOIL FOR SLOPES > 20%		
SLOPE AREA DRAINS TO SEDIMENT BASIN OR SEDIMENT TRAP?	MAXIMUM PERIOD OF BARE SOIL EXPOSURE (CALENDAR DAYS)	
	LAND DISTURBANCE BETWEEN SEPTEMBER 16TH AND MAY 1ST	LAND DISTURBANCE BETWEEN MAY 2ND AND SEPTEMBER 15TH
YES	90	90
NO	60	30



1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING APPLICATION OF FERTILIZER AND SEED.
2. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE BLANKET
3. ROLL CENTER BLANKET IN DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO THE SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS RECOMMENDED BY THE MANUFACTURER.
4. PLACE CONSECUTIVE BLANKETS END OVER END (SHINGLE STYLE) WITH A 4-6" OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4" APART AND 4" ON CENTER TO SECURE BLANKETS.
5. FULL LENGTH EDGE OF BLANKETS AT TOP OF SIDE SLOPE MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
6. ADJACENT BLANKETS MUST BE OVERLAPPED APPROXIMATELY 4" AND STAPLED.
7. A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT INTERVALS. USE A DOUBLE ROW OF STAPLES STAGGERED 4" APART AND 4" ON CENTER OVER ENTIRE WIDTH OF THE CHANNEL.
8. THE TERMINAL END OF THE BLANKETS MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.

NOTE: ALL STAPLES MUST BE 6" OR GREATER IN LENGTH

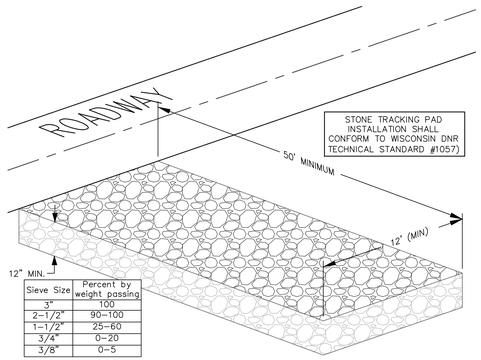
EROSION CONTROL MAT – CHANNEL INSTALLATION



NOTE: REFER TO GENERAL STAPLE PATTERN GUIDE FOR CORRECT STAPLE PATTERN RECOMMENDATIONS FOR SLOPE INSTALLATIONS.

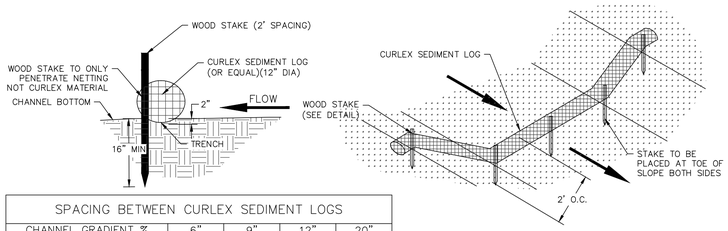
1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING APPLICATION OF FERTILIZER AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
3. ROLL THE BLANKETS (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2" OVERLAP.
5. WHEN BLANKETS MUST BE SPLICED DOWN THE SLOPE, PLACE BLANKETS END OVER END (SHINGLE STYLE) WITH APPROXIMATELY 4" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY
6. ALL BLANKETS MUST BE SECURELY FASTENED TO THE SLOPE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS RECOMMENDED BY THE MANUFACTURER.

EROSION CONTROL MAT – SLOPE INSTALLATION



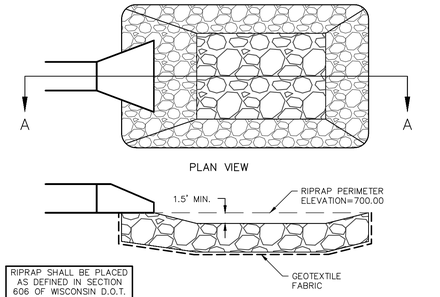
Sieve Size	Percent by weight passing
3"	100
2-1/2"	90-100
1-1/2"	25-60
3/4"	0-20
3/8"	0-5

STONE TRACKING PAD DETAIL

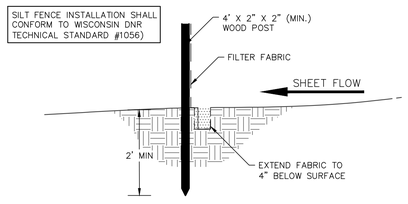


SPACING BETWEEN CURLEX SEDIMENT LOGS				
CHANNEL GRADIENT %	6"	9"	12"	20"
0.5	91.7	136.7	183.3	250.0
1.0	45.8	68.3	91.7	125.0
1.5	30.6	45.6	61.1	83.3
2	22.9	34.2	45.8	62.5

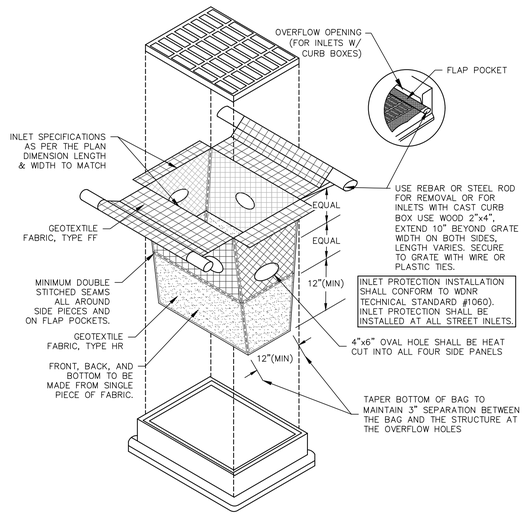
SEDIMENT LOG DETAIL



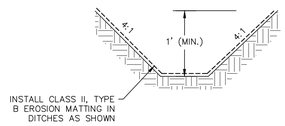
RIPRAP/STILLING BASIN DETAIL



SILT FENCE CONSTRUCTION (SHEET FLOW)



TYPE D-HR INLET PROTECTION DETAIL



SWALE CROSS SECTION

REVISIONS:

NO.	DATE	DESCRIPTION

PSE
PARISH SURVEY & ENGINEERING
122 Wisconsin Street, West Bend, WI 53095
262.346.7800
www.parishse.com

PROJECT TITLE:
KRENZ & COMPANY
BUILDING AND PARKING ADDITION
W132 N10940 EISENHOWER DRIVE
VILLAGE OF GERMANTOWN, WI 53022

PLAN TITLE:
EROSION CONTROL DETAILS

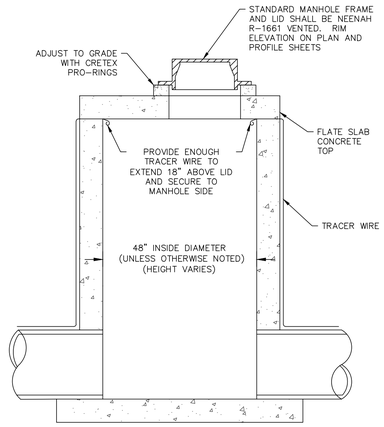
DRAWN BY: **JDR**
DESIGNED BY: **JDR**
CHECKED BY: **KJP**

PLAN DATE: **11-13-2023**

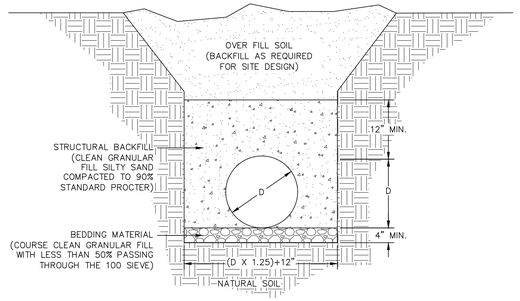
PROJECT NO: \AM-59-19\

PC SUBMITTAL

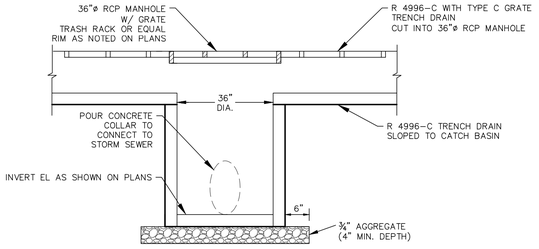
SHEET NO:
C2.03



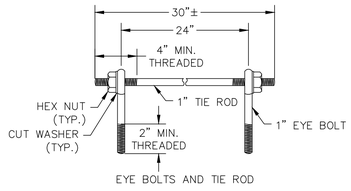
STORM MANHOLE DETAIL



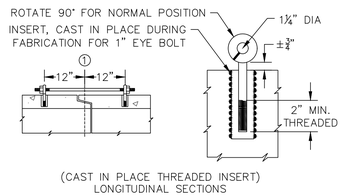
HDPE PIPE BEDDING DETAIL



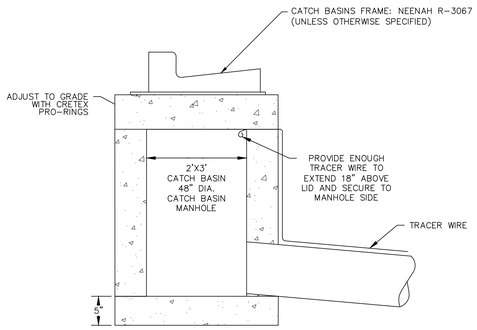
36" CATCH BASIN W/ GRATE & R 4996-C TRENCH DRAIN CONNECTION DETAIL



EYE BOLTS AND TIE ROD



EYE BOLTS AND TIE ROD DETAIL



INLET/CATCH BASIN DETAIL

REVISIONS:

NO.	DATE	DESCRIPTION

PARISH SURVEY & ENGINEERING
122 Wisconsin Street, West Bend, WI 53095
262.346.7800
www.parishse.com

PROJECT TITLE:
KRENZ & COMPANY
BUILDING AND PARKING ADDITION
W132 N10940 EISENHOWER DRIVE
VILLAGE OF GERMANTOWN, WI 53022

PLAN TITLE:
UTILITY DETAILS

DRAWN BY: JDR
DESIGNED BY: JDR
CHECKED BY: KJP

PLAN DATE: 11-13-2023

PROJECT NO: \AM-59-19\

PC SUBMITTAL

SHEET NO:
C2.04

AMERICAN
CONSTRUCTION SERVICES, INC.
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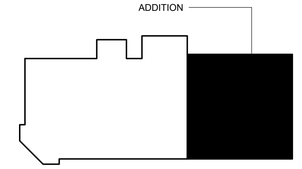
AMERICAN
ARCHITECTURAL GROUP, INC.
3350 SOUTH RIVER ROAD
WEST BEND, WI 53095-7884
(262) 334-3811 FAX: (262) 334-4990

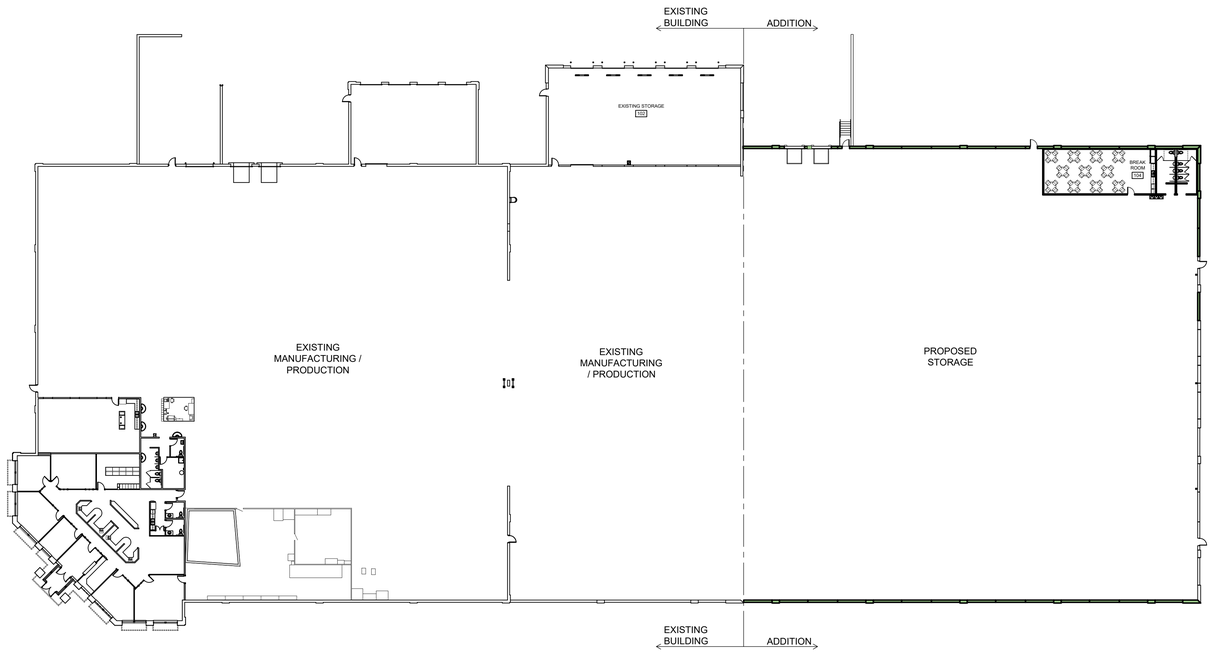
PROPOSED ADDITION

Krenz & Company, Inc.

W132 N10940 Eisenhower Drive
Village of Germantown, Washington County



KEYPLAN



OVERALL FLOOR PLAN

NORTH

1/32" = 1'-0"

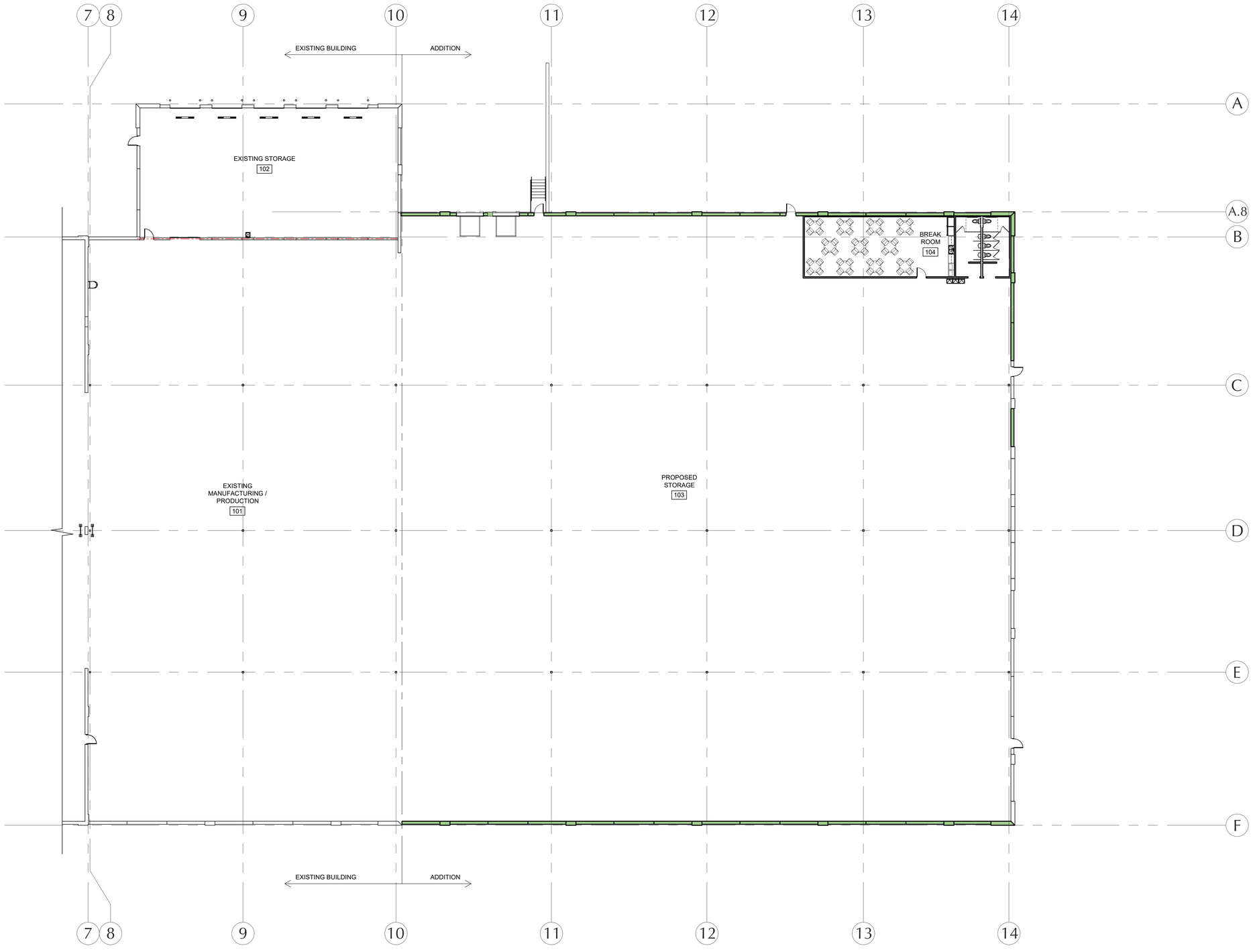
Issue Date:
11 / 13 / 2023
NOT FOR CONSTRUCTION

Revision:

Project Number:
23019

Sheet Title:
OVERALL FLOOR PLAN

Sheet Number:
A-101



FLOOR PLAN

NORTH

1/16" = 1'-0"

AMERICAN CONSTRUCTION SERVICES, INC.
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WEST BEND, WI 53095-7884
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PROPOSED ADDITION

Krenz & Company, Inc.

W132 N10940 Eisenhower Drive
Village of Germantown, Washington County

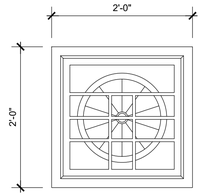
Issue Date:
11 / 13 / 2023
NOT FOR CONSTRUCTION

Revision:

Project Number:
23019

Sheet Title:
PROPOSED ADDITION
FLOOR PLAN

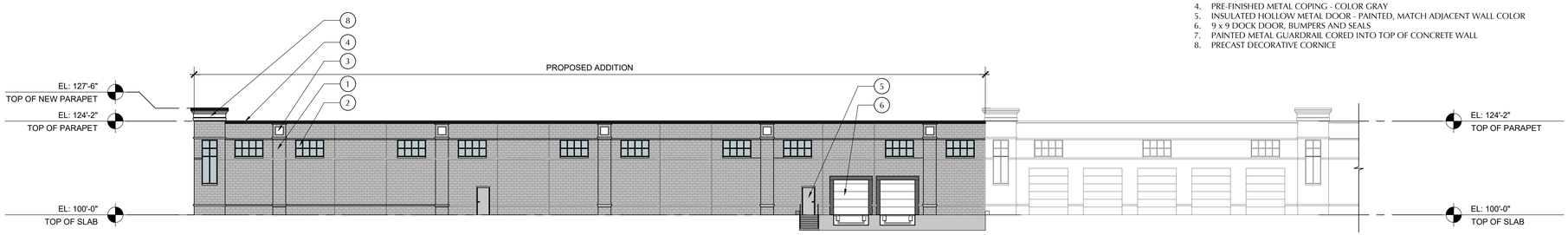
Sheet Number:
A-102



PRECAST MEDALLION

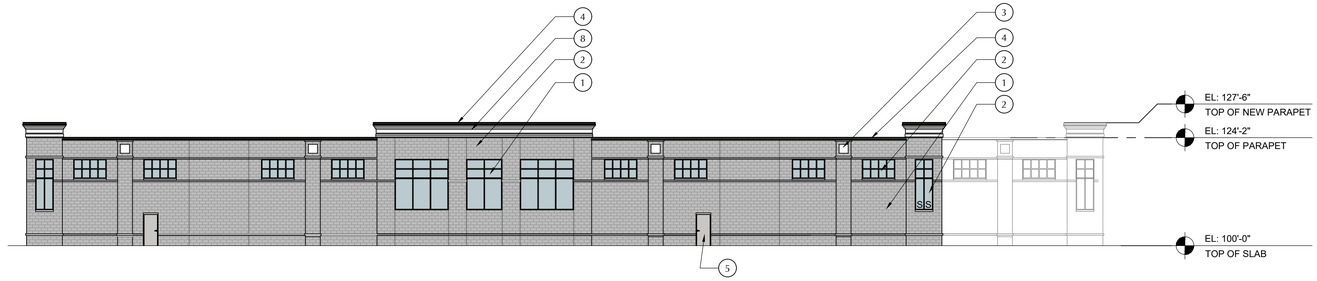
KEYNOTES:

1. INSULATED PRECAST CONCRETE PANEL - PAINTED, BOTTOM COLOR MATCH PEARL GRAY, TOP COLOR MATCH NIGHT GRAY
2. BRONZE ANODIZED ALUMINUM WINDOWS. "S" DENOTES SPANDREL GLAZING
3. DECORATIVE PRECAST MEDALLION - MATCH EXISTING
4. PRE-FINISHED METAL COPING - COLOR GRAY
5. INSULATED HOLLOW METAL DOOR - PAINTED, MATCH ADJACENT WALL COLOR
6. 9 x 9 DOCK DOOR, BUMPERS AND SEALS
7. PAINTED METAL GUARDRAIL CORED INTO TOP OF CONCRETE WALL
8. PRECAST DECORATIVE CORNICE



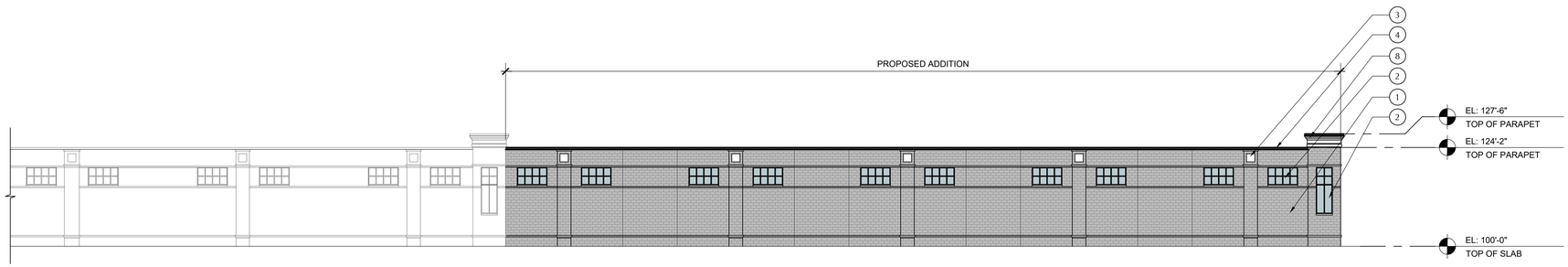
NORTH ELEVATION

1/16" = 1'-0"



EAST ELEVATION

1/16" = 1'-0"



SOUTH ELEVATION

1/16" = 1'-0"

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PROPOSED ADDITION
Krenz & Company, Inc.
W132 N10940 Eisenhower Drive
Village of Germantown, Washington County

Issue Date:
11 / 13 / 2023
NOT FOR CONSTRUCTION

Revision:

Project Number:
23019

Sheet Title:
EXTERIOR ELEVATIONS

Sheet Number:
A-201

AMERICAN
CONSTRUCTION SERVICES, INC.
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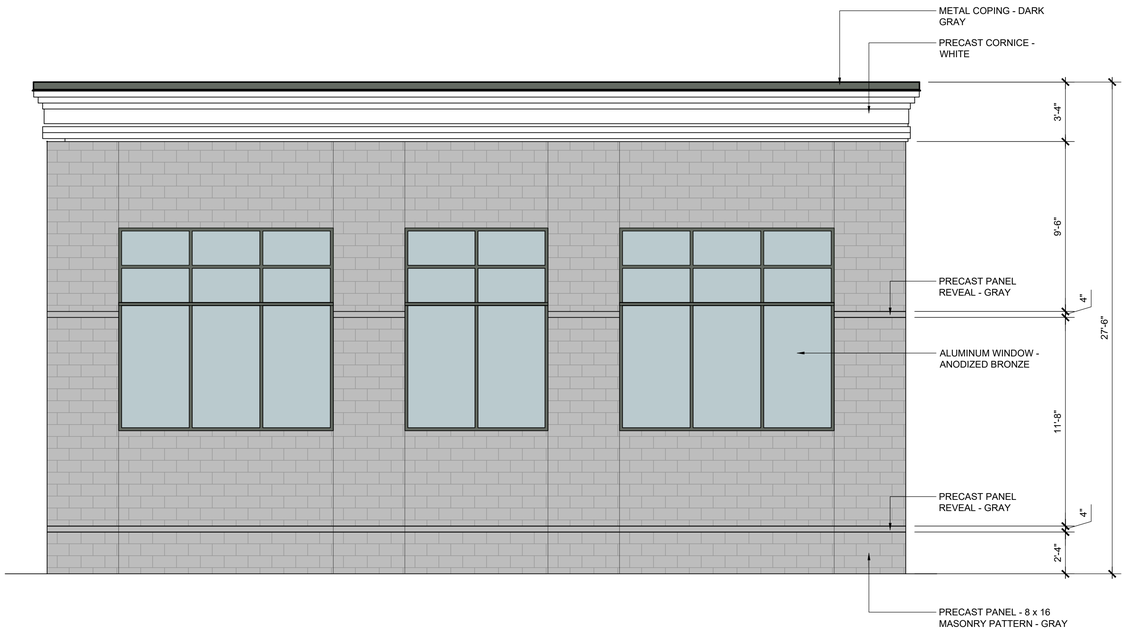
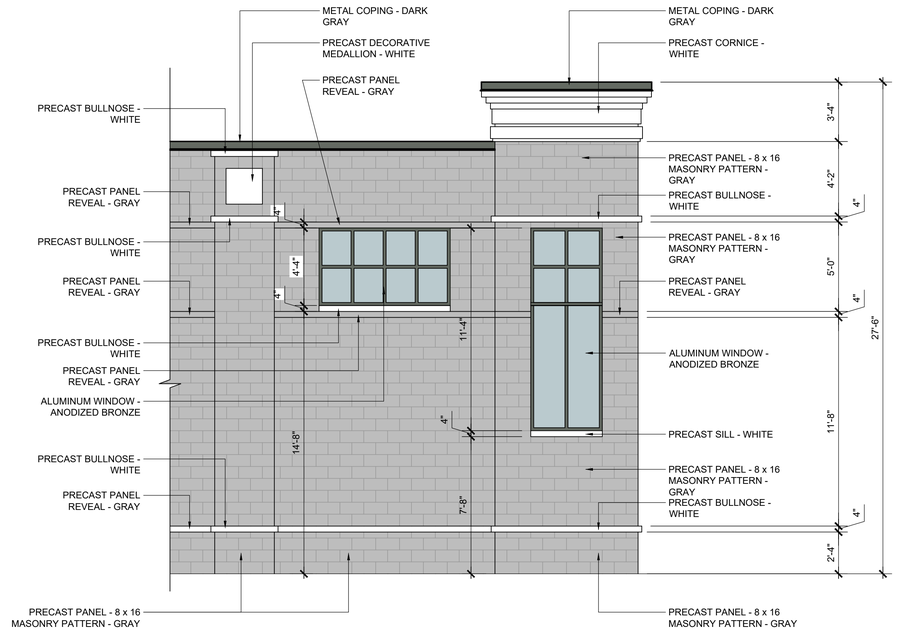
WEST BEND, WI 53095-7884
(262) 334-3811 FAX: (262) 334-4990

PROPOSED ADDITION
Krenz & Company, Inc.
W132 N10940 Eisenhower Drive
Village of Germantown, Washington County



ENLARGED PARTIAL ELEVATION

1/4" = 1'-0"



ENLARGED PARTIAL ELEVATION

1/4" = 1'-0"

Issue Date:
11 / 13 / 2023
NOT FOR CONSTRUCTION

Revision:

Project Number:
23019

Sheet Title:
ENLARGED EXTERIOR ELEVATIONS

Sheet Number:
A-202

Project		Catalog #		Type	
Prepared by		Notes		Date	

Lumark

Prevail LED

Area / Site Luminaire

Product Features

LumenSafe Technology

BAA BUY AMERICAN ACT AVAILABLE

Interactive Menu

- Ordering Information page 2
- Mounting Details page 3, 4
- Optical Configurations page 5
- Product Specifications page 5
- Energy and Performance Data page 6, 7
- Control Options page 8

Product Certifications

ISO CERTIFIED · UL CERTIFIED · DLC LISTED [1] · DLC LISTED PREMIUM [1] · FC CLASS A CAN ICES-005 · RoHS COMPLIANT · IP66 · ida DARK SKY APPROVED [2] · 5 YEAR LIMITED WARRANTY

Quick Facts

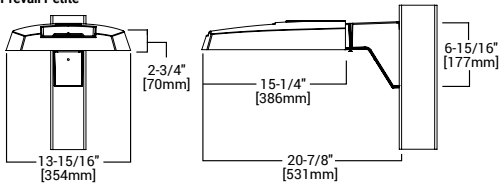
- Lumen packages range from 4,800 - 84,000 lumens (35W - 588W)
- Replaces 70W up to 1,000W HID equivalents
- Efficacies up to 160 lumens per watt
- Energy and maintenance savings up to 85% versus HID solutions
- Standard universal quick mount arm with universal drill pattern

Connected Systems

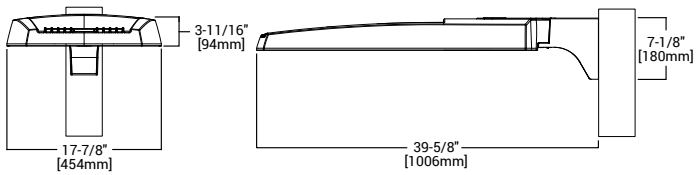
- WaveLinx

Dimensional Details

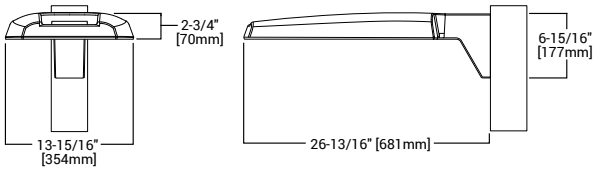
Prevail Petite



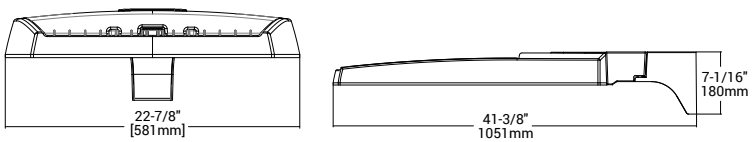
Prevail XL



Prevail



Prevail Maxx



NOTES:
1. Visit https://www.designlights.org/search/ to confirm qualification. Not all product variations are DLC qualified.
2. IDA Certified for 3000K CCT and warmer only.

Ordering Information

SAMPLE NUMBER: **PRV-XL-C75-D-UNV-T4-SA-BZ**

Product Family [1, 2]	Light Engine [4]	Color Temperature	Driver	Voltage	Distribution	Mounting	Color
PRV-P=Prevail Petite **BAA-PRV-P**=Prevail Petite BAA Compliant [3] **TAA-PRV-P**=Prevail Petite TAA Compliant [3]	**C10**=(1 LED) 4,900 Nominal Lumens **C15**=(1 LED) 6,900 Nominal Lumens **C20**=(1 LED) 9,800 Nominal Lumens **C25**=(1 LED) 11,800 Nominal Lumens	**740**=70CRI, 4000K **727**=70CRI, 2700K **730**=70CRI, 3000K **750**=70CRI, 5000K **8540**=85CRI, 4000K	**D**=Dimming (0-10V)	**UNV**=Universal (120-277V) **H**=High Voltage, 347-480V **8**=480V [5] **9**=347V **DV**=DuraVolt (277-480V) [5, 6]	**T2**=Type II **T3**=Type III **T4**=Type IV **T5**=Type V	**SA**=QM Standard Versatile Arm **MA**=QM Mast Arm **FMA**= Fixed Mast Arm [28] **WM**=QM Wall Mount Arm **ADJA-WM**=Adjustable Arm–Wall Mount [30] **ADJA**=Adjustable Arm–Pole Mount [30] **ADJS**=Adjustable Arm–Slipfitter, 3" vertical tenon [30] **SP2**=Adjustable Arm–Slipfitter, 2 3/8" vertical tenon [28, 30]	**BZ**=Bronze **AP**=Grey **BK**=Black **DP**=Dark Platinum **GM**=Graphite Metallic **WH**=White
PRV=Prevail **BAA-PRV**=Prevail BAA Compliant [3] **TAA-PRV**=Prevail TAA Compliant [3]	**C15**=(1 LED) 7,100 Nominal Lumens **C25**=(2 LEDs) 13,100 Nominal Lumens **C40**=(2 LEDs) 17,100 Nominal Lumens **C60**=(2 LEDs) 20,000 Nominal Lumens						
PRV-XL=Prevail XL **BAA-PRV-XL**=Prevail XL BAA Compliant [3] **TAA-PRV-XL**=Prevail XL TAA Compliant [3]	**C75**=(4 LED) 26,100 Nominal Lumens **C100**=(4 LED) 31,000 Nominal Lumens **C125**=(4 LED) 36,000 Nominal Lumens **C150**=(6 LED) 41,100 Nominal Lumens **C175**=(6 LED) 48,600 Nominal Lumens						
PRV-M=Prevail Maxx **BAA-PRV-M**=Prevail Maxx BAA Compliant[3] **TAA-PRV-M**=Prevail MaxxTAA Compliant [3]	**C200**=(9 LED) 48,000 Nominal Lumens **C225**=(9 LED) 56,000 Nominal Lumens **C250**=(9 LED) 65,000 Nominal Lumens **C275**=(9 LED) 73,000 Nominal Lumens						

Options (Add as Suffix)

7030=70 CRI / 3000K CCT [7]
7050=70 CRI / 5000K CCT [7]
CC=Coastal Construction finish [31]
HSS=House Side Shield [8]
L90=Optics Rotated 90° Left
R90=Optics Rotated 90° Right
10K=10kV/10kA UL 1449 Fused Surge Protective Device
20MSP=20kV MOV Surge Protective Device
20K=20kV UL 1449 Fused Surge Protective Device
HA=50°C High Ambient Temperature [9]
PR=NEMA 3-PIN Twistlock Photocontrol Receptacle [11]
PR7=NEMA 7-PIN Twistlock Photocontrol Receptacle [11]
MS/DIM-L08=Dimming Motion and Daylight Sensor, IR Remote Programmable, < 8' Mounting Height [12, 13, 22, 28]
MS/DIM-L20=Dimming Motion and Daylight Sensor, IR Remote Programmable, 8' - 20' Mounting Height [12, 22, 13]
MS/DIM-L40=Dimming Motion and Daylight Sensor, IR Remote Programmable, 21' - 40' Mounting [12, 13]
SPB1=Dimming Motion and Daylight Sensor, Bluetooth Programmable, < 8' Mounting Height [12, 14, 22]
SPB2=Dimming Motion and Daylight Sensor, Bluetooth Programmable, 8' - 20' Mounting Height [12, 14, 22]
SPB4=Dimming Motion and Daylight Sensor, Bluetooth Programmable, 21' - 40' Mounting Height [12, 14, 28, 29]
ZW=Wavelinx-enabled 4-PIN Twistlock Receptacle [12]
ZD= DALI-enabled 4-PIN Twistlock Receptacle [12]
ZW-SWPD4XX=WaveLinx Pro, Dimming Motion and Daylight, WAC Programmable, 7' - 15' Mounting [12, 15, 16, 17, 22]
ZW-SWPD5XX=WaveLinx Pro, Dimming Motion and Daylight, WAC Programmable, 15' - 40' Mounting [12, 15, 16, 17, 28, 29]
ZD-SWPD4XX= WaveLinx Pro, SR Driver, Dimming Motion and Daylight, WAC Programmable, 7' - 15' Mounting [12, 15, 16, 17, 22]
ZD-SWPD5XX=WaveLinx Pro, SR Driver, Dimming Motion and Daylight, WAC Programmable, 15' - 40' Mounting [12, 15, 16, 17, 28, 29]
(See Table Below)=LumenSafe Integrated Network Security Camera [18, 19]

Accessories (Order Separately) [20, 21]

PRVSA-XX=Standard Arm Mounting Kit [22]
PRVMA-XX=Mast Arm Mounting Kit [22]
PRVWM-XX=Wall Mount Kit [22]
PRV-ADJA-XX=Adjustable Arm - Pole Mount Kit [22]
PRV-ADJS-XX=Adjustable Arm - Slipfitter Kit [22]
PRV-ADJA-WM-XX=Adjustable Arm - Wall Mount Kit [22]
PRVXLSA-XX=Standard Arm Mounting Kit [29]
PRVXLMA-XX=Mast Arm Mounting Kit [29]
PRVXLWM-XX=Wall Mount Kit [29]
PRV-XL-ADJA-XX=Adjustable Arm - Pole Mount Kit [29]
PRV-XL-ADJS-XX=Adjustable Arm - Slipfitter Kit [29]
PRV-XL-ADJA-WM-XX=Adjustable Arm - Wall Mount Kit [29]
PRV-M-ADJA-XX=Adjustable Arm - Pole Mount Kit [28]
PRV-M-ADJS-XX=Adjustable Arm - Slipfitter Kit [28]
PRV-M-ADJA-WM-XX=Adjustable Arm - Wall Mount Kit [28]
MA1010-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon
MA1011-XX=2@180° Tenon Adapter for 3-1/2" O.D. Tenon
MA1017-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon
MA1018-XX=2@180° Tenon Adapter for 2-3/8" O.D. Tenon
SRA238=Tenon Adapter from 3" to 2-3/8"
PRV/COB-FDV=Full Drop Visor [23]
PRVXL/COB-FDV=Full Drop Visor [18]
HS/VERD=House Side Shield Kit [8, 24]
VGS-F/B= Vertical Glare Shield Kit, Front/Back [24]
VGS-SIDE=Vertical Glare Shield Kit, Side [24]
OA/RA1013=Photocontrol Shorting Cap
OA/RA1014=NEMA Photocontrol - 120V
OA/RA1016=NEMA Photocontrol - Multi-Tap 105-285V
OA/RA1201=NEMA Photocontrol - 347V
OA/RA1027=NEMA Photocontrol - 480V
FSIR-100=Wireless Configuration Tool for Occupancy Sensor [25]
WOLC-7P-10A=WaveLinx Outdoor Control Module (7-PIN) [27]
SWPD4-XX=WaveLinx Sensor, Dimming Motion and Daylight, WAC Programmable, 7' - 15' Mounting [15, 16, 17, 22, 26]
SWPD5-XX=WaveLinx Sensor, Dimming Motion and Daylight, WAC Programmable, 15' - 40' Mounting [15, 16, 17, 26, 28, 29]

NOTES:
1. DesignLights Consortium® Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.
2. Customer is responsible for engineering analysis to confirm pole and fixture compatibility for alll applications. Refer to installation instructions IB500002EN and pole white paper WP513001EN for additional support information.
3. Only product configurations with these designated prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or Trade Agreements Act of 1979 (TAA), respectively. Please refer to DOMESTIC PREFERENCES website for more information. Components shipped separately may be separately analyzed under domestic preference requirements.
4. Standard 4000K CCT and 70CRI.
5. 480V not to be used with ungrounded or impedance grounded systems.
6. DuraVolt drivers feature added protection from power quality issues such as loss of neutral, transients and voltage fluctuations. Visit www.signify.com/duravolt for more information.
7. Use dedicated IES files on product website for non-standard CCTs.
8. House Side Shield not suitable with T5 distribution. Not available with PRV-C60 lumen package.
9. Not available with PRV-C60 lumen package. Not available with PRV-P-C25 lumen package.
10. Coastal construction finish salt spray tested to over 5,000-hours per ASTM B117, with a scribe rating of 9 per ASTM D1654.
11. If DuraVolt (DV) is specified, use a photocontrol that matches the input voltage used.
12. Controls system is not available in combination with a photocontrol receptacle (PR & PER7) or another controls system (MS, SPB, ZD, or ZW). Option not available with DuraVolt (DV) voltage option.
13. Utilizes the Wattstopper sensor FSP-211. Sensor color white unless specified otherwise via PDR. To field-configure, order FSIR-100 accessory separately.
14. Utilizes the Wattstopper sensor FSP-3XX series. Sensor color determined by product finish. See Sensor Color Reference Table. Field-configures via mobile application. See Controls section for details.
15. Sensor passive infrared (PIR) may be overly sensitive when operating below -20°C (-4°F).
16. For the device to be field-configurable, requires WAC Gateway components WAC-PoE and WPOE-120 in appropriate quantities. Only compatible with WaveLinx system and software and requires system components to be installed for operation. See website for more Wavelinx application information.
17. Replace XX with sensor color (WH, BZ, or BK).
18. Only available in PRV-XL configurations C75, C100, C125, C150, or C175.
19. Not available with 347V, 480V, DV, or HA options. Consult LumenSafe system product pages for additional details and compatability information.
20. Replace XX with paint color.
21. For BAA or TAA requirements, Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information.
22. Not for use with PRV-XL or PRV-M configurations.
23. Only for use with PRV. Not applicable to PRV-M, PRV-XL, or PRV-P.
24. Must order one per optic/LED when ordering as a field-installable accessory (1, 2, 4, 6 or 9).
25. This tool enables adjustment to Motion Sensor (MS) parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative for more information.
26. Requires 4-PIN twistlock receptacle (ZD or ZW) option.
27. Requires 7-PIN NEMA twistlock photocontrol receptacle (PR & PER7) option. The WOLC-7 cannot be used in conjunction with other controls systems (MS, ZD, ZW or LWR). Operates on 120-347V input voltages.
28. Only for use with PRV-M configurations.
29. Only for use with PRV-XL configurations.
30. Fixed for PRV-M.

LumenSafe Integrated Network Security Camera Technology Options (Add as Suffix)

Product Family	Camera Type	Data Backhaul		
L=LumenSafe Technology	**H**=Dome Camera, High Res **Z**=Dome Camera, Remote PTZ	**C**=Cellular, Customer Installed SIM Card **A**=Cellular, Factory Installed AT&T SIM Card	**V**=Cellular, Factory Installed Verizon SIM Card **S**=Cellular, Factory Installed Sprint SIM Card	**E**=Ethernet Networking

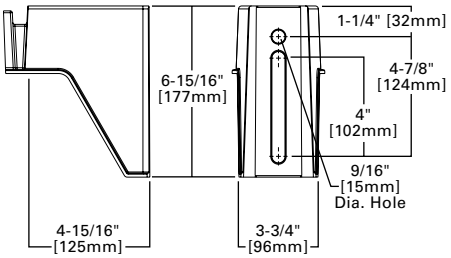
Stock Ordering Information

Product Family [1]	Light Engine	Voltage	Distribution
PRVS=Prevail	**C15**=(1 LED) 7,100 Nominal Lumens **C25**=(2 LEDs) 13,100 Nominal Lumens **C40**=(2 LEDs) 17,100 Nominal Lumens **C60**=(2 LEDs) 20,000 Nominal Lumens	**UNV**=Universal (120-277V) **347**=347V [2]	**T3**=Type III **T4**=Type IV
PRVS-XL=Prevail XL	**C75**=(4 LED) 26,100 Nominal Lumens **C100**=(4 LED) 31,000 Nominal Lumens **C125**=(4 LED) 36,000 Nominal Lumens **C150**=(6 LED) 41,100 Nominal Lumens **C175**=(6 LED) 48,600 Nominal Lumens		

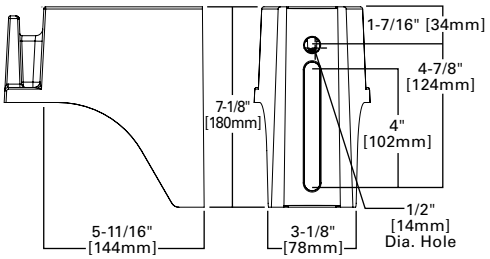
NOTES:
1. All stock configurations are standard 4000K/70CRI, bronze finish, and include the standard versatile mounting arm.
2. Only available in PRVS configurations C15, C25, C40 or C60.

Mounting Details

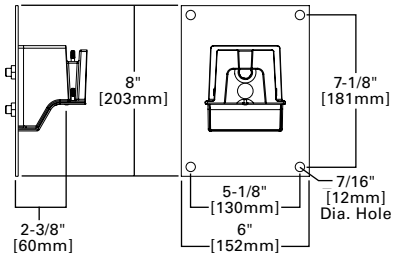
SA=QM Pole Mount Arm (PRV & PRV-P)



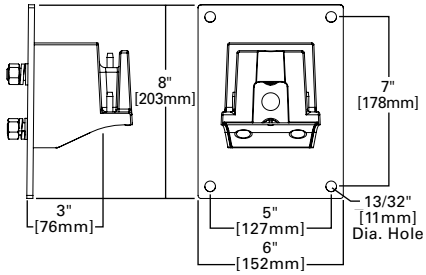
SA=QM Pole Mount Arm (PRV-XL)



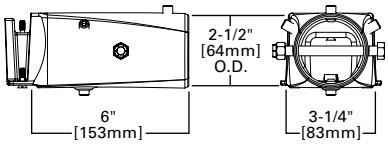
WM=QM Wall Mount Arm (PRV & PRV-P)



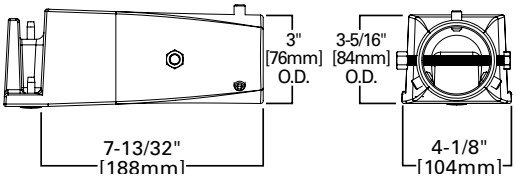
WM=QM Wall Mount Arm (PRV-XL)



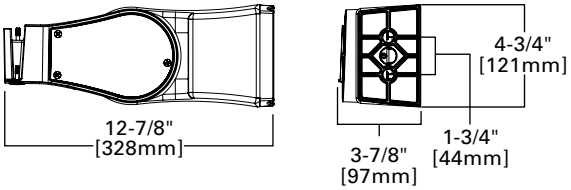
MA=QM Mast Arm (PRV & PRV-P)



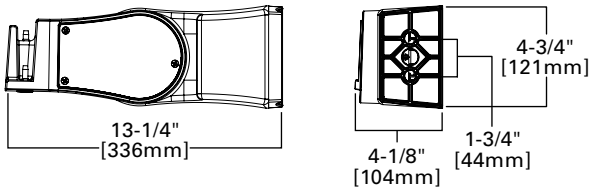
MA=QM Mast Arm (PRV-XL)



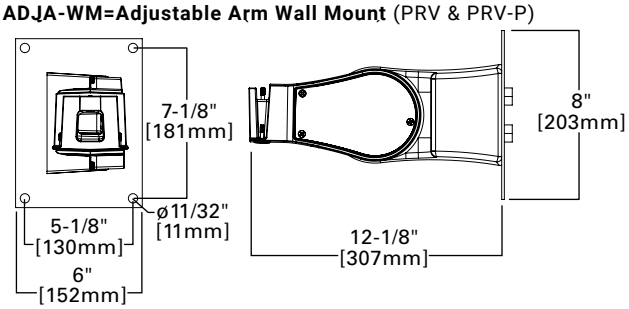
ADJA=Adjustable Arm Pole Mount (PRV & PRV-P)



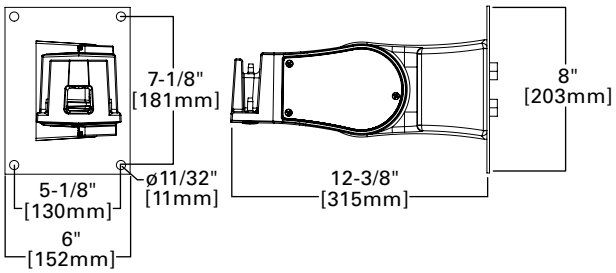
ADJA=Adjustable Arm Pole Mount (PRV-XL)



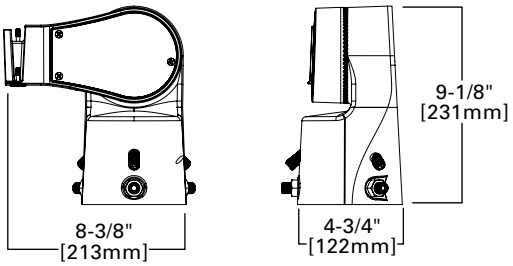
ADJA-WM=Adjustable Arm Wall Mount (PRV & PRV-P)



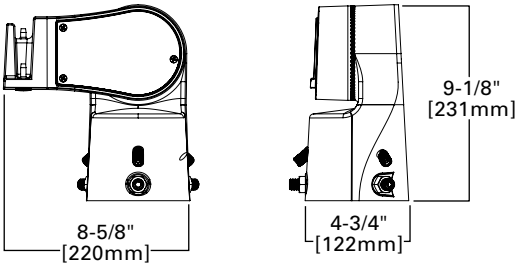
ADJA-WM=Adjustable Arm Wall Mount (PRV-XL)



ADJS=Adjustable Slipfitter 3 (PRV & PRV-P)

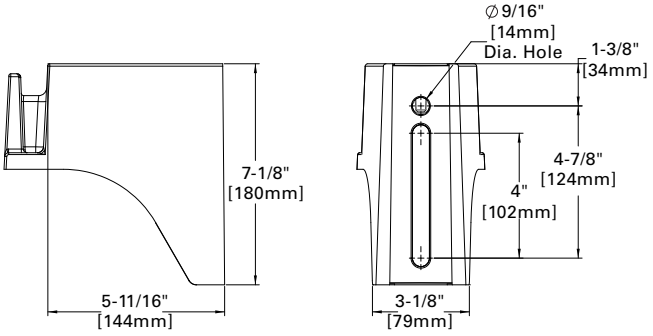


ADJS=Adjustable Slipfitter 3 (PRV-XL)

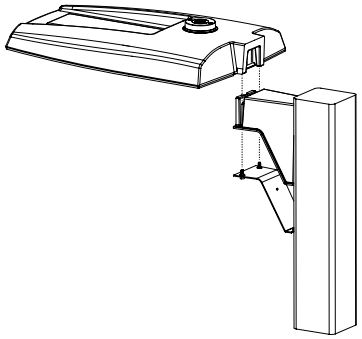


Mounting Details

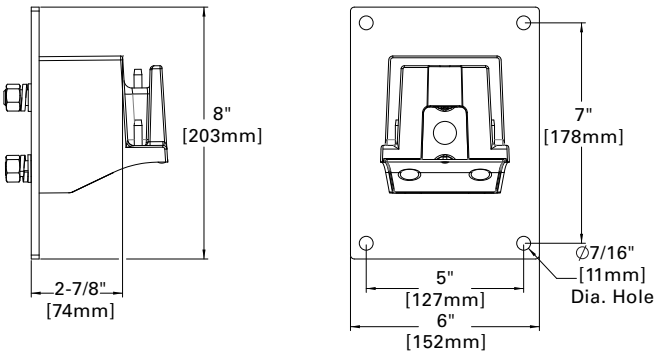
SA=QM Pole Mount Arm (PRV-M)



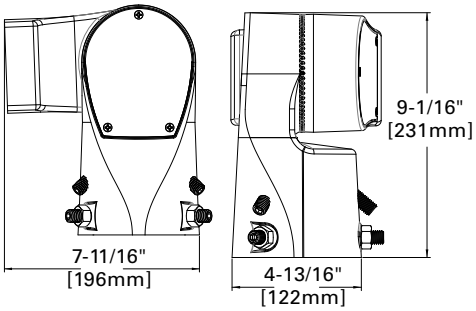
Versatile Mount System



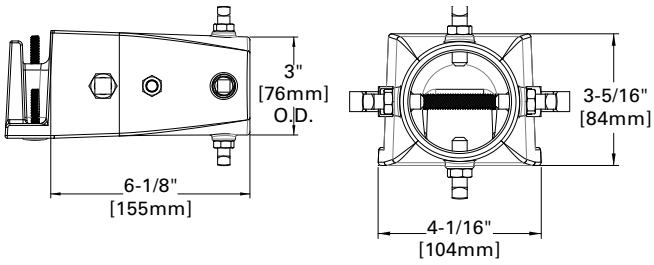
WM=QM Wall Mount Arm (PRV-M)



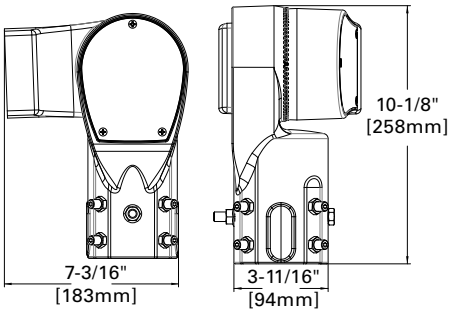
ADJS=Adjustable Slipfitter (PRV-M)



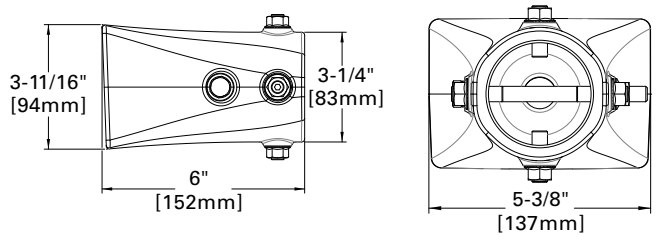
MA=QM Mast Arm (PRV-M)



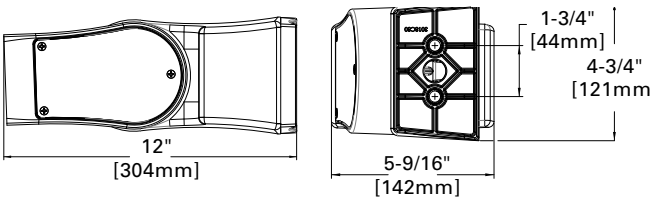
SP2=Adjustable Slipfitter 2-3/8" (PRV-M)



FMA=Fixed Mast Arm (PRV-M)



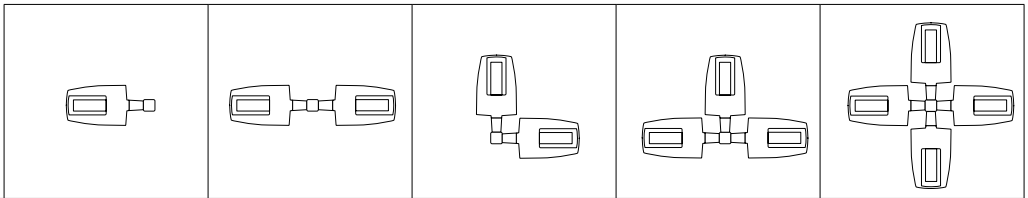
DM=Direct Pole Mount Arm (PRV-M)



Mounting Details

Mounting Configurations and EPAs

NOTE: For 2 PRV's mounted at 90°, requires minimum 3" square or 4" round pole for fixture clearance. For 2 PRV-XL's mounted at 90°, requires minimum 4" square or round pole for fixture clearance. Customer is responsible for engineering analysis to confirm pole and fixture compatibility for applications.

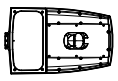


Housing Size	Tilt Angle (Degrees)	Arm Mount Single	Arm Mount 2 @ 180°	Arm Mount 2 @ 90°	Arm Mount 3 @ 90°	Arm Mount 4 @ 90°
Prevail Petite	0°	0.54	1.08	0.84	1.38	1.38
	60°	1.68	1.85	2.42	3.15	3.30
Prevail	0°	0.92	1.35	1.42	1.63	1.63
	60°	2.20	2.40	3.05	3.88	4.07
	60° + Full Drop Visor	2.20	2.40	3.25	4.28	4.47
Prevail XL	0°	1.12	2.25	2.13	2.52	2.52
	60°	3.99	4.30	5.26	6.51	6.79
	60° + Full Drop Visor	3.99	4.30	5.59	7.17	7.49
Prevail Maxx	0°	1.28	2.56	1.7	2.69	2.69
	60°	5.09	5.52	6.34	7.49	7.81

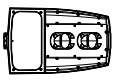
Optical Configurations

PRV-P-C10/C15/C20/C25
(4,900/6,900/9,800/11,800 Nominal Lumens)

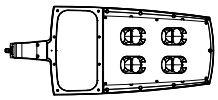
PRV-C15
(7,100 Nominal Lumens)



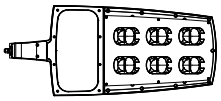
PRV-C25/C40/C60
(13,100/17,100/20,000 Nominal Lumens)



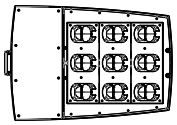
PRV-XL-C75/C100/C125
(26,100/31,000/36,300 Nominal Lumens)



PRV-XL-C150/C175
(41,100/48,600 Nominal Lumens)

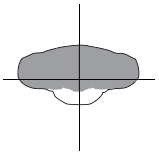


PRV-M-PA6X
(50,000/60,000/70,000/80,000 Nominal Lumens)

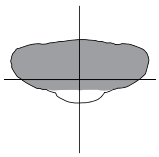


Optical Distributions

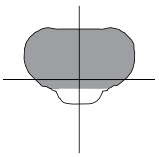
T2
(Type II)



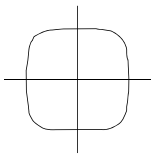
T3
(Type III)



T4
(Type IV)



T5
(Type V)



= Distribution with House Side Shield (HSS)

= Optical Distribution

Product Specifications

Construction

- Single-piece die-cast aluminum housing
- Tethered die-cast aluminum door

Optics

- Dark Sky Approved (3000K CCT and warmer only)
- Precision molded polycarbonate optics

Electrical

- -40°C minimum operating temperature
- 40°C maximum operating temperature
- >.9 power factor
- <20% total harmonic distortion
- Class 1 electronic drivers have expected life of 100,000 hours with <1% failure rate
- 0-10V dimming driver is standard with leads external to the fixture
- Standard MOV surge protective device designed to withstand 10kV of transient line surge

Mounting

- Versatile, patented, standard mount arm accommodates multiple drill patterns ranging from 1-1/2" to 4-7/8" (Type M drilling recommended for new installations)
- A knock-out on the standard mounting arm enables round pole mounting
- Adjustable pole and wall mount arms adjust in 5° increments from 0° to 60°; Downward facing orientation only (Type N drilling required for ADJA mount)
- Adjustable slipfitter arm adjusts in 5° increments from -5° to 85°; Downward facing orientation only
- Adjustable Arms: 1.5G vibration rated
- Prevail and Prevail Petite: 3G vibration rated
- Prevail XL Mast Arm: 3G vibration rated
- Prevail XL Standard Arm: 1.5G vibration rated

Typical Applications

- Parking lots, Walkways, Roadways and Building Areas

Finish

- Five-stage super TGIC polyester powder coat paint, 2.5 mil nominal thickness
- Finish is compliant to 3,000 hour salt spray standard (per ASTM B117)

Shipping Data

- Prevail Petite: 18 lbs. (7.94 kgs.)
- Prevail: 20 lbs. (9.09 kgs.)
- Prevail XL: 45 lbs. (20.41 kgs.)
- Prevail Maxx: 49 lbs. (22.23 kgs.)

Warranty

- Five year limited warranty, consult website for details. www.cooperlighting.com/legal

Energy and Performance Data

View PRV-P IES files | View PRV IES files | View PRV-XL IES files

Power and Lumens

Product Family		Prevail Petite				Prevail				Prevail XL					Prevail Maxx			
Light Engine		C10	C15	C20	C25	C15	C25	C40	C60	C75	C100	C125	C150	C175	C200	C225	C250	C275
Power (Watts)		35	49	73	94	52	96	131	153	176	217	264	285	346	346	418	487	588
Input Current @ 120V (A)		0.29	0.41	0.61	0.79	0.43	0.80	1.09	1.32	1.50	1.84	2.21	2.38	2.92	2.89	3.49	4.06	4.90
Input Current @ 277V (A)		0.13	0.18	0.27	0.35	0.19	0.35	0.48	0.57	0.66	0.82	0.97	1.04	1.25	1.26	1.51	1.72	2.06
Input Current @ 347V (A)		0.11	0.16	0.23	0.29	0.17	0.30	0.41	0.48	0.54	0.66	0.79	0.84	1.02	1.00	1.21	1.40	1.70
Input Current @ 480V (A)		0.08	0.12	0.17	0.22	0.12	0.22	0.30	0.35	0.40	0.48	0.57	0.62	0.74	0.73	0.88	1.00	1.21
Distribution [1]																		
Type II	4000K Lumens	4,775	6,717	9,542	11,521	7,123	13,205	17,172	20,083	26,263	31,231	36,503	41,349	48,876	50,349	59,444	68,447	79,322
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B5-U0-G5
	Lumens per Watt	138	137	131	122	137	138	131	131	149	144	138	145	141	146	142	141	135
	3000K Lumens [1]	4,869	6,595	9,369	11,312	6,994	12,965	16,860	19,718	25,786	30,664	35,840	40,598	47,989	49,437	58,368	67,208	77,886
Type III	4000K Lumens	4,782	6,727	9,556	11,538	7,111	13,183	17,144	20,050	26,120	31,061	36,304	41,124	48,610	50,162	59,223	68,193	79,027
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G3	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	138	137	131	123	137	137	131	131	148	143	138	144	140	145	142	140	135
	3000K Lumens [1]	4,695	6,605	9,383	11,329	6,982	12,944	16,832	19,686	25,646	30,497	35,645	40,377	47,727	49,254	58,151	66,958	77,596
Type IV	4000K Lumens	4,880	6,865	9,752	11,774	7,088	13,140	17,087	19,984	26,098	31,035	36,274	41,089	48,569	50,575	59,711	68,754	79,678
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G3	B1-U0-G3	B2-U0-G4	B2-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B5-U0-G5
	Lumens per Watt	141	140	134	125	136	137	130	131	148	143	137	144	140	146	143	141	136
	3000K Lumens [1]	4,792	6,740	9,575	11,561	6,959	12,901	16,777	19,621	25,624	30,471	35,615	40,343	47,687	49,659	58,630	67,510	78,235
Type V	4000K Lumens	5,067	7,128	10,126	12,226	7,576	14,045	18,264	21,360	28,129	33,450	39,097	44,287	52,349	53,531	63,201	72,773	84,335
	BUG Rating	B3-U0-G2	B3-U0-G2	B4-U0-G3	B4-U0-G3	B3-U0-G3	B4-U0-G3	B4-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	146	145	139	130	146	146	139	140	160	154	148	155	151	155	151	150	144
	3000K Lumens [1]	4,975	6,999	9,942	12,004	7,438	13,790	17,932	20,972	27,618	32,843	38,387	43,483	51,398	52,562	62,057	71,455	82,808

NOTES:
1. For 3000K, 5000K or HSS data, refer to published IES files.

Lumen Maintenance

Configuration	TM-21 Lumen Maintenance (50,000 Hours)	Theoretical L70 (Hours)
Prevail and Prevail Petite at 25°C	91.30%	> 194,000
Prevail and Prevail Petite at 40°C	87.59%	> 134,000
Prevail XL at 25°C	91.40%	> 204,000
Prevail XL at 40°C	89.41%	> 158,000
Prevail Maxx at 25°C	91.40%	> 204,000
Prevail Maxx at 40°C	89.41%	> 158,000

Sensor Color Reference Table (SPBx)

Housing Finish	Sensor Color
AP=Grey	Grey
BZ=Bronze	Bronze
BK=Black	Black
DP=Dark Platinum	Grey
GM=Graphite Metallic	Black
WH=White	White

Lumen Multiplier

Ambient Temperature	Lumen Multiplier
10°C	1.02
15°C	1.01
25°C	1.00
40°C	0.99

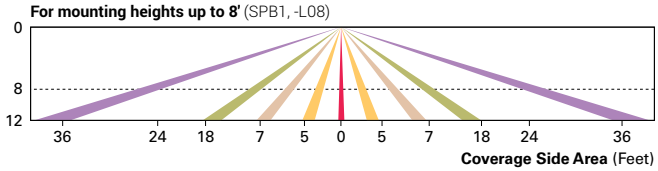
Control Options

0-10V This fixture provides 0-10V dimming wire leads for use with a lighting control panel or other control method.

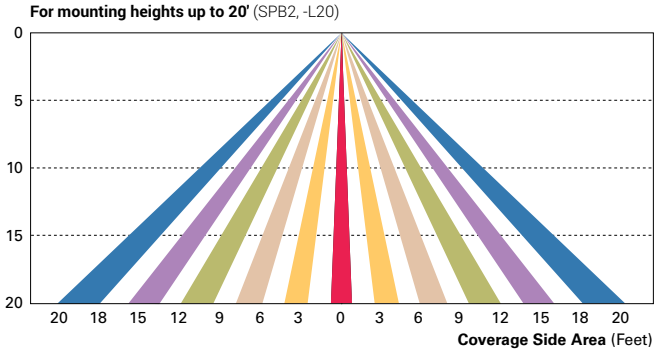
Photocontrol (PR and PR7) Photocontrol receptacles provide a flexible solution to enable "dusk-to-dawn" lighting by sensing light levels. Advanced control systems compatible with NEMA 7-PIN standards can be utilized with the PR7 receptacles.

Dimming Occupancy Sensor (SPB, MS/DIM-LXX) These sensors are factory installed in the luminaire housing. When the SPB or MS/DIM sensor options are selected, the luminaire will dim down after five minutes of no activity detected. When activity is detected, the luminaire returns to full light output. These occupancy sensors include an integral photocell for "dusk-to-dawn" control or "daylight harvesting." Factory default is enabled for the MS sensors and disabled for the SPB. SPB motion sensors require the Sensor Configuration mobile application by Wattstopper to change factory default dimming level, time delay, sensitivity and other parameters. Available for iOS and Android devices. The SPB sensor is factory preset to dim down to approximately 10% power with a time delay of five minutes.

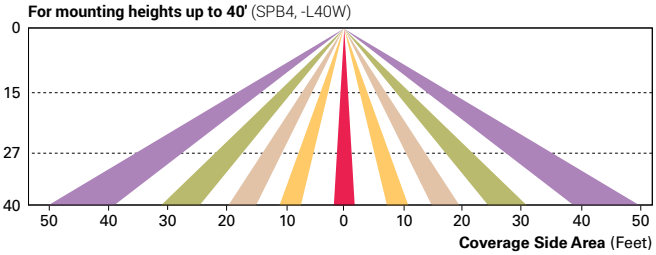
For mounting heights up to 8' (SPB1, -L08)



For mounting heights up to 20' (SPB2, -L20)



For mounting heights up to 40' (SPB4, -L40W)

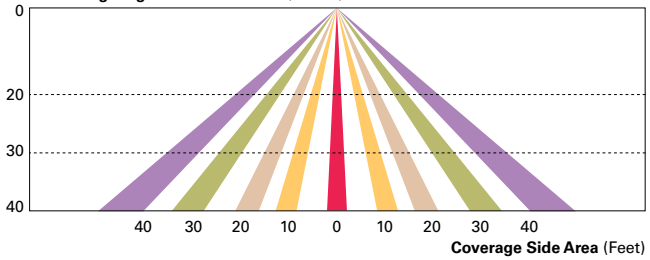


WaveLinx Wireless Control and Monitoring System Available in 7-PIN or 4-PIN configurations, the WaveLinx Outdoor control platform operates on a wireless mesh network based on IEEE 802.15.4 standards enabling wireless control of outdoor lighting. At least one Wireless Area Controller (WAC) is required for full functionality and remote communication (including adjustment of any factory pre-sets).

WaveLinx Outdoor Control Module (WOLC-7P-10A) A photocontrol that enables astronomic or time-based schedules to provide ON, OFF and dimming control of fixtures utilizing a 7-PIN receptacle. The out-of-box functionality is ON at dusk and OFF at dawn.

WaveLinx Wireless Sensor (SWPD4 and SWPD5) These outdoor sensors offer passive infrared (PIR) occupancy sensing and a photocell for closed-loop daylight sensing. These sensors can be factory installed or field-installed via simple, tool-less integration into luminaires equipped with the Zhaga Book 18 compliant 4-PIN receptacle (ZD or ZW). These sensors are factory preset to dim down to approximately 50 percent power after 15 minutes of no activity detected, and the photocell for "dusk-to-dawn" control is default enabled. A variety of sensor lenses are available to optimize the coverage pattern for mounting heights from 7'-40'.

For mounting heights from 16' to 40' (SWPD)



LumenSafe (LD) The LumenSafe integrated network camera is a streamlined, outdoor-ready camera that provides high definition video surveillance. This IP camera solution is optimally designed to integrate into virtually any video management system or security software platform of choice. No additional wiring is needed beyond providing line power to the luminaire. LumenSafe features factory-installed power and networking gear in a variety of networking options allowing security integrators to design the optimal solution for active surveillance.

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www.cooperlighting.com

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Specifications and dimensions
subject to change without notice.

Project		Catalog #		Type	
Prepared by		Notes		Date	

Lumark

Axcent

Wall Mount Luminaire

Product Features

Selectable lumens · DUSK-TO-DAWN · LumenSafe Technology · Light ARchitect™ · BAA

Interactive Menu

- Ordering Information page 2
- Mounting Details page 3
- Product Specifications page 4
- Energy and Performance Data page 4
- Control Options page 6

Product Certifications

ISO Certified · UL Certified · DLC Listed · DLC Listed Premium · FC Class A CAN ICES-005 · ida Dark Sky Approved · IP66 · 3G VIB · RoHS Compliant · 5 Year Limited Warranty · 2018 Progress Report Selection

Quick Facts

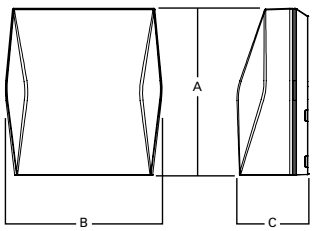
- Available in 14W - 123W (1,800 - 17,000 lumens) models
- Full cutoff and refractive lens models available
- Energy and maintenance savings up to 95% compared to HID
- Energy efficient illumination results in up to 144 LPW
- Replaces 70W up to 450W HID equivalents

Connected Systems

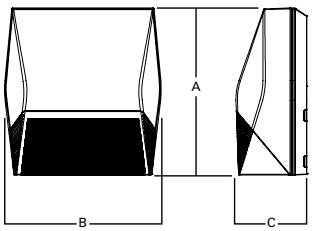
- WaveLinx Lite
- Enlighted

Dimensional Details

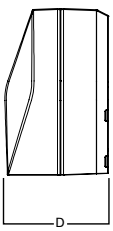
Full Cutoff



Refractive Lens



Deep Back Housing



Dimensional Data

	AXCS Small	AXCL Large
A	8" [202mm]	11-1/2" [292mm]
B	7-1/2" [190mm]	10-3/4" [273mm]
C	3-5/8" [94mm]	4-7/8" [124mm]
D	6-1/8" [155mm]	7-1/8" [181mm]

Ordering Information

SAMPLE NUMBER: **AXCS1A-AP-347V**

Domestic Preferences [28]	Model Series [1]	LED Color Temperature	Color	Options (Add as Suffix)
[Blank]=Standard **BAA**=Buy American Act **TAA**=Trade Agreements Act	**Full Cutoff** **AXCS1A**=14W **AXCS2A**=21W **AXCS3A**=27W **AXCS4A**=44W **AXCS5A**=52W **AXCL6A**=56W **AXCL8A**=72W **AXCL10A**=102W **AXCL12A**=123W **Refractive Lens** **AXCS1ARL**=14W **AXCS2ARL**=21W **AXCS3ARL**=27W **AXCS4ARL**=44W **AXCS5ARL**=52W **AXCL6ARL**=56W **AXCL8ARL**=72W **AXCL10ARL**=102W **AXCL12ARL**=123W	**[Blank]**=4000K, Neutral **C**=5000K, Cool **W**=3000K, Warm	**[Blank]**=Carbon Bronze (Standard) **WT**=Summit White **BK**=Black **AP**=Grey **GM**=Graphite Metallic **DP**=Dark Platinum	**347V**=347V [2] **480V**=480V [2] **PC1**=Photocontrol 120V [3, 4, 5] **PC2**=Photocontrol 208-277V, 347V, 480V [4, 5, 6] **PC**=Photocontrol 120-277V, 347V, 480V [4, 7, 8] **KKIT**=Knuckle Floodlight Mount [7] **TRNKIT**=Trunnion Floodlight Mount **SFKIT**=Slipfitter Floodlight Mount **PMAKIT**=Pole Mount Arm **ZW**=WaveLinx-enabled 4-PIN Twistlock Receptacle [4, 9] **ZW-SWPD4XX**=WaveLinx Wireless Sensor, 7' – 15' Mounting Height [4, 9, 10, 11] **ZW-SWPD5XX**=WaveLinx Wireless Sensor, 15' – 40' Mounting Height [4, 9, 10, 11] **LWR-LW**=Enlighted Wireless Sensor, Wide Lens for 8' - 16' Mounting Height [4, 9, 12] **LWR-LN**=Enlighted Wireless Sensor, Narrow Lens for 16' - 40' Mounting Height [4, 9, 12] **MSP/DIM-L12**=Integrated Sensor for Dimming Operation, 8' - 12' Mounting Height [4, 9, 13] **MSP/DIM-L30**=Integrated Sensor for Dimming Operation, 12' - 30' Mounting Height [4, 9, 13] **MSP-L12**=Integrated Sensor for ON/OFF Operation, 8' - 12' Mounting Height [4, 9, 13] **MSP-L30**=Integrated Sensor for ON/OFF Operation, 12' - 30' Mounting Height [4, 9, 13] **CBP**=Cold Weather Battery Pack [3, 14, 15, 16, 17, 18] **CBP-CEC**=Cold Weather Battery Pack, CEC compliant [3, 14, 15, 16, 17, 18] **10K**=10kV/10kA Surge Protection **HA**=50°C High Ambient [15, 19] **GRF**=Glare Reducing Lens [20] **AHD145**=After Hours Dim, 5 Hours [5, 21] **AHD245**=After Hours Dim, 6 Hours [5, 21] **AHD255**=After Hours Dim, 7 Hours [5, 21] **AHD355**=After Hours Dim, 8 Hours [5, 21]

Accessories (Order Separately) [22,29]

VS/AXCS-XX=Vandal Shield Axcent Small [7, 23]
VS/AXCS-MS=Vandal Shield Axcent Small (With Motion Sensor) [7, 23]
WG/AXCS=Wire Guard Axcent Small [7]
WG/AXCS-MS=Wire Guard Axcent Small (With Motion Sensor) [7]
VS/AXCL-XX=Vandal Shield Axcent Large [5, 23]
VS/AXCL-MS=Vandal Shield Axcent (With Motion Sensor) [5, 23]
WG/AXCL=Wire Guard Axcent Large [5]
WG/AXCL-MS=Wire Guard Axcent (With Motion Sensor) [5]
BB/AXC=Axcent Lumen Select Back Box, Carbon Bronze [24]
BB/AXC-PC=Axcent Lumen Select Back Box with PC, Carbon Bronze [24, 25]
BB/AXC-WT=Axcent Lumen Select Back Box, Summit White [24]
BB/AXC-WT-PC=Axcent Lumen Select Back Box with PC, Summit White [24, 25]

KKIT/AXCS-XX=Knuckle and Visor Floodlight Kit (For Axcent Small) [7]
SFKIT/AXCS-XX=Slipfitter Floodlight Kit (For Axcent Small) [7]
TRNKIT/AXCS-XX=Trunnion and Visor Floodlight Kit (For Axcent Small) [7]
TRNKIT-XX=Trunnion Floodlight Kit (For Axcent Large) [5]
SFKIT-XX=Slipfitter Floodlight Kit (For Axcent Large) [5]
PMAKIT-XX=Pole Mount Kit
ISHH-01=Integrated Sensor Programming Remote [26]
MA1010-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon
MA1011-XX=2@180° Tenon Adapter for 3-1/2" O.D. Tenon
MA1017-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon
MA1018-XX=2@180° Tenon Adapter for 2-3/8" O.D. Tenon
SWPD4-XX=WaveLinx Wireless Sensor, 7' – 15' Mounting Height [10, 11, 27]
SWPD5-XX=WaveLinx Wireless Sensor, 15' – 40' Mounting Height [10, 11, 27]

NOTES:

1. DesignLights Consortium® Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.
2. Transformer used only when ordered with motion sensor or AXCS1 through AXCS5 or AXCL6 fixture wattages.
3. Not available in 347 or 480 VAC.
4. Button photocontrol and any motion sensor (MSP, ZW, or LWR) not offered together.
5. Only available on AXCL6-AXCL12 models.
6. Used with 277, 347, and 480 VAC options.
7. Only available on AXCS1-AXCS5 models.
8. This configuration may contain materials that are not RoHS compliant. Contact your lighting representative for more information.
9. Uses deep back housing.
10. Sensor passive infrared (PIR) may be overly sensitive when operating below -20°C (-4°F). For the device to be field-configurable, requires WAC Gateway components WAC-PoE and WPOE-120 in appropriate quantities. Only compatible with WaveLinx system and software and requires system components to be installed for operation. See website for more Wavelinx application information.
11. Replace XX with sensor color (WH, BZ, or BK).
12. Enlighted wireless sensors are factory installed and require network components LWP-EM-1, LWP-GW-1, and LWP-PoE8 in appropriate quantities. See website for application information.
13. The ISHH-01 accessory is required to adjust parameters.
14. Ambient operating temperature -20°C to 25°C for AXCL6 through AXCL10. Ambient operating temperature -20°C to 30°C on AXCS4 models. Ambient operating temperature -20°C to 40°C on AXCS1 through AXCS3 models.
15. Not available with AXCS5 or AXCL12 models.
16. Uses deep back housing for AXCS1, AXCLS2, AXCS3, and AXCS4 models.
17. Not to be mounted in upwards / inverted orientation. Downlight wall mount only for AXCS1 through AXCS4.
18. CBP cannot be used with PC and motion sensor (MSP, ZW, or LWR). CBP can be used with PC or motion sensor (MSP, ZW, or LWR).
19. Can not be ordered with CBP or PC options.
20. Use dedicated IES files on product website for lumen values and distributions.
21. Requires the use of PC1 or PC2 button photocontrol. See After Hours Dim supplemental guide for additional information.
22. Replace XX with color designation.
23. For use with full cutoff lens configurations only.
24. Lumen Select functionality not available in conjunction with any motion sensor option (MSP, ZW, or LWR). Photocontrol back box not available with any photocontrol or motion sensor options (PC, MSP, ZW, or LWR).
25. Photocell only operates at 120-277V input voltages. Not for use with 347 or 480V systems.
26. This tool enables adjustment to parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult you lighting representative for more information.
27. Requires 4-PIN twistlock receptacle (ZW) option.
28. Only product configurations with these designated prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or Trade Agreements Act of 1979 (TAA), respectively. Please refer to DOMESTIC PREFERENCES website for more information. Components shipped separately may be seperately analyzed under domestic preference requirements.
29. Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information.

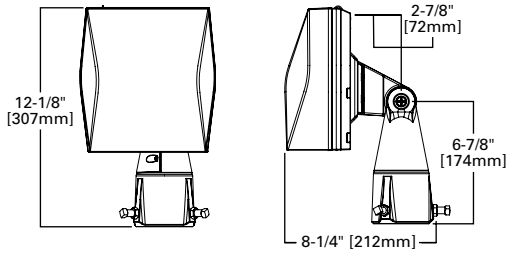
Stock Ordering Information

Model Series [1]			
Full Cutoff		Refractive Lens	
AXCS1A=14W	**AXCL10A**=102W	**AXCS1ARL**=14W	**AXCL10ARL**=102W
AXCS2A=21W	**AXCL12A**=123W	**AXCS2ARL**=21W	**AXCL12ARL**=123W
AXCS3A=27W	**AXCL6A-347V**=56W	**AXCS3ARL**=27W	**AXCL6ARL-347V**=56W
AXCS4A=44W	**AXCL8A-347V**=72W	**AXCS4ARL**=44W	**AXCL8ARL-347V**=72W
AXCS5A=52W	**AXCL10A-347V**=102W	**AXCS5ARL**=52W	**AXCL10ARL-347V**=102W
AXCL6A=56W	**AXCL12A-347V**=123W	**AXCL6ARL**=56W	**AXCL12ARL-347V**=123W
AXCL8A=72W		**AXCL8ARL**=72W	

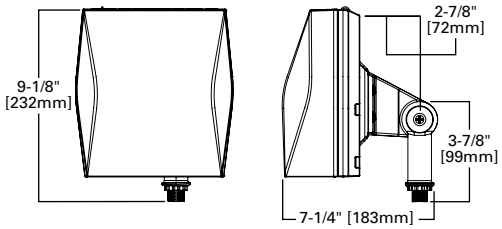
Note: All stock configurations are 4000K color temperatures, standard Carbon Bronze finish, and wall mount configuration.

Mounting Details

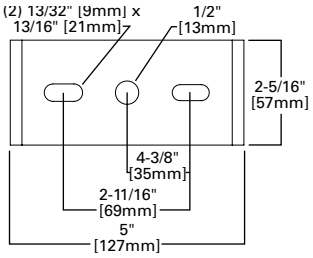
Slipfitter Mount (Small)
Tenon OD: 2-3/8" | **EPA:** 0.60



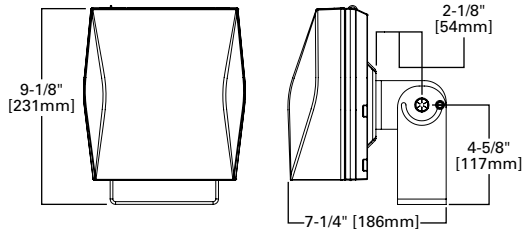
Knuckle Mount (Small)



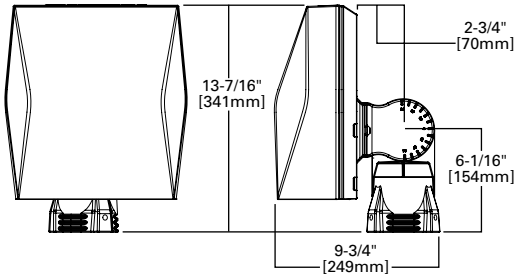
Trunnion Mount Detail



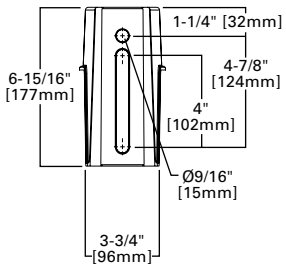
Trunnion Mount (Small)



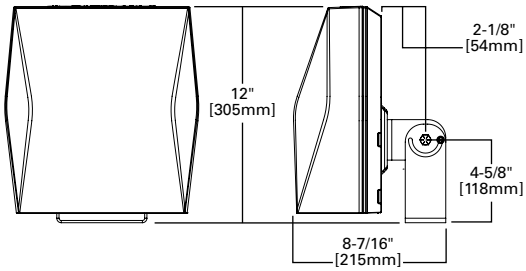
Slipfitter Mount (Large)
Tenon OD: 2-3/8" to 2-7/8" | **EPA:** 1.10



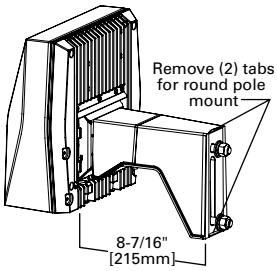
Pole Mount Arm Drill Pattern



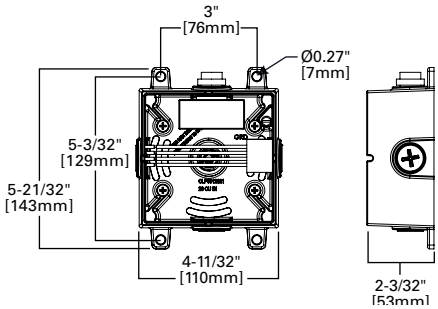
Trunnion Mount (Large)



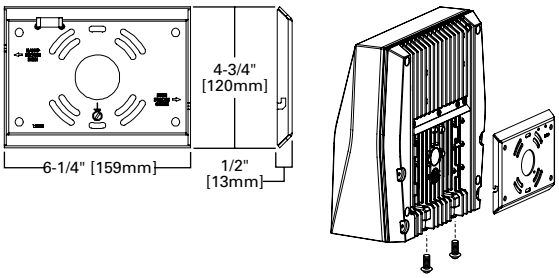
Pole Mount Arm (Large)
EPA: 1.10



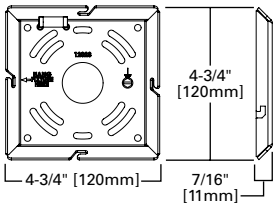
Lumen Select Back Box



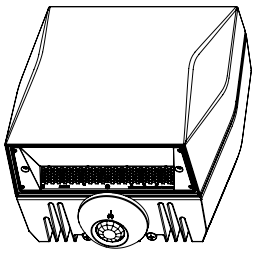
Wall Mount Plate Detail (Large)



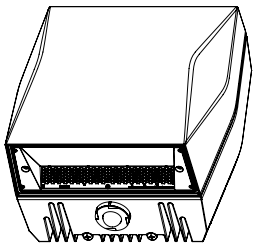
Wall Mount Plate Detail (Small)



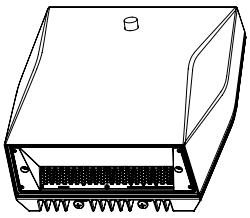
Enlighted Sensor



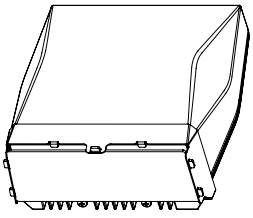
Occupancy Sensor



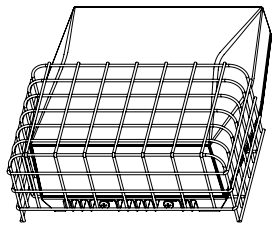
Button Photocontrol



Vandal Shield



Wire Guard



Product Specifications

Construction
- Die-cast aluminum housing
- External back fin design extracts heat from the surface to thermally optimize design for longer luminaire life

Optics
- Dark Sky Approved (Fixed mount, Full cutoff, and 3000K CCT only)
- Silicone-sealed optical LED chamber
- Acrylic refractive or full cutoff lens options for Type IV distributions

Electrical
- Standard universal voltage (120-277V, 50/60Hz)
- Driver incorporates 6kV surge protection
- -40°C minimum operating temperature
- 40°C maximum operating temperature
- <20% total harmonic distortion
- 0-10V dimming driver is standard with leads external to the fixture

Mounting
- Steel wedge mounting plate fits directly to 4" standard j-box or directly to wall with the "Hook-N-Lock" mechanism
- Stainless steel set screws
- Lumen Select Back Box accessory offers four 1/2" NPT conduit entry wire ways. Resistor Pack combinations allow field-dimming of 75% or 50% when connected to luminaire dimming leads
- Not suitable for indoor use when installed in inverted/uplight orientation

Emergency Egress
- Optional integral cold weather battery emergency egress includes emergency operation test switch, an AC-ON indicator light and a premium, maintenance-free battery pack
- The separate emergency lighting LEDs are wired to provide redundant emergency lighting. Listed to UL Standard 924, Emergency Lighting

Finish
- Five-stage super TGIC polyester powder coat paint, 2.5 mil nominal thickness

Shipping Data
- Small fixture=5 lbs. [2.36 kgs.]
- Small with sensor or CBP=10 lbs. [4.40 kgs.]
- Large fixture=12 lbs. [5.45 kgs.]
- Large with sensor or CBP=17 lbs. [7.73 kgs.]
- Large with sensor & CBP=21 lbs. [9.54 kgs.]

Energy and Performance Data

Power and Lumens (Axcent Small)

Light Engine		AXCS1A	AXCS2A	AXCS3A	AXCS4A	AXCS5A
Power (Watts)		14	21	27	44	52
Input Current @ 120V (A)		0.12	0.18	0.23	0.37	0.43
Input Current @ 240V (A)		0.06	0.09	0.11	0.18	0.22
Input Current @ 277V (A)		0.05	0.08	0.10	0.16	0.19
Input Current @ 347V (A)		0.04	0.06	0.08	0.13	0.15
Input Current @ 480V (A)		0.03	0.04	0.06	0.09	0.11
Configuration						
Full Cutoff	4000K/5000K Lumens	1,806	2,561	3,537	5,520	6,300
	3000K Lumens	1,526	2,164	2,989	4,665	5,324
	BUG Rating	B1-U0-G0	B1-U0-G0	B1-U0-G0	B2-U0-G1	B2-U0-G1
Refractive Lens	4000K/5000K Lumens	1,915	2,716	3,704	5,858	6,699
	3000K Lumens	1,618	2,295	3,130	4,950	5,661
	BUG Rating	B1-U3-G2	B1-U3-G2	B1-U3-G2	B1-U4-G3	B1-U4-G3

Power and Lumens (Axcent Large)

Light Engine		AXCL6A	AXCL8A	AXCL10A	AXCL12A
Power (Watts)		49.4	65.3	89.1	115.3
Input Current @ 120V (A)		0.41	0.54	0.74	0.96
Input Current @ 240V (A)		0.21	0.27	0.37	0.48
Input Current @ 277V (A)		0.18	0.24	0.32	0.42
Input Current @ 347V (A)		0.14	0.19	0.26	0.33
Input Current @ 480V (A)		0.10	0.14	0.19	0.24
Configuration					
Full Cutoff	4000K Lumens	7,594	9,716	12,719	16,302
	5000K Rating	7,501	9,598	12,564	16,103
	3000K Lumens	6,502	8,319	10,890	13,958
	BUG Rating	B2-U0-G1	B2-U0-G2	B3-U0-G2	B3-U0-G2
Refractive Lens	4000K Lumens	7,809	10,331	13,665	16,637
	5000K Rating	7,714	10,205	13,498	16,434
	3000K Lumens	6,686	8,845	11,700	14,244
	BUG Rating	B1-U4-G4	B2-U5-G5	B2-U5-G5	B2-U5-G5

Energy and Performance Data

Power and Lumens (Small + CBP)

Light Engine		AXCS1A	AXCS2A	AXCS3A	AXCS4A
Power (Watts)		18	25	31	48
Input Current @ 120V (A)		0.15	0.21	0.26	0.40
Input Current @ 240V (A)		0.08	0.11	0.13	0.20
Input Current @ 277V (A)		0.07	0.09	0.11	0.18
Configuration					
Full Cutoff	4000K/5000K Lumens	629	587	647	570
	3000K Lumens	531	496	547	482
Refractive Lens	4000K/5000K Lumens	667	623	686	605
	3000K Lumens	563	526	580	511

Note: Power and current based on full power consumption while CBP is charging. Lumen outputs are while operating in emergency mode only.

Power and Lumens (Large + CBP)

Light Engine		AXCL6A	AXCL8A	AXCL10A
Power (Watts)		60	76	106
Input Current @ 120V (A)		0.50	0.63	0.88
Input Current @ 240V (A)		0.25	0.32	0.44
Input Current @ 277V (A)		0.22	0.27	0.38
Configuration				
Full Cutoff	4000K/5000K Lumens	1,070		
	3000K Lumens	945		
Refractive Lens	4000K/5000K Lumens	1,098		
	3000K Lumens	973		

Note: Power and current based on full power consumption while CBP is charging. Lumen outputs are while operating in emergency mode only.

Power and Lumens Multipliers
(Lumen Select Back Box + Axcent Small)

Configuration		~75% Nominal Output	~50% Nominal Output
Catalog Number	**Material Number**	**Connect per Installation Instructions**	
AXCS1A*	13109741 or 13109939 or Other	74%	50%
AXCS2A*	13109698 or 13109938 or Other	74%	50%
AXCS3A*	13109697 or 13109937 or Other	74%	50%
AXCS4A*	13109695 or 13109936	75%	40%
AXCS4A*	13495299 or 13495470 or Other	72%	50%
AXCS5A*	13109652 or 13109935	75%	40%
AXCS5A*	13495471 or 13495472 or Other	72%	50%

Power and Lumens Multipliers
(Lumen Select Back Box + Axcent Large)

Configuration		~75% Nominal Output	~50% Nominal Output
Catalog Number	**Material Number**	**Connect per Installation Instructions**	
AXCL6A*	12963843 or 12964235	75%	40%
AXCL6A*	13495473 or 13495474 or Other	69%	47%
AXCL8A*	12963842 or 12964234	84%	48%
AXCL8A*	13495475 or 13495476 or Other	69%	47%
AXCL10A*	12963840 or 12964233	84%	48%
AXCL10A*	13495477 or 13495478 or Other	69%	47%
AXCL12A*	12902056 or 12902057	85%	50%
AXCL12A*	13495479 or 13495480 or Other	72%	49%

Lumen Maintenance (Axcent Small)

Ambient Temperature	TM-21 Lumen Maintenance (72,000 Hours)	Theoretical L70 (72,000 Hours)
Up to 3A		
25°C	90%	246,000
40°C	90%	225,000
50°C	89%	195,000
Up to 5A		
25°C	89%	240,000
40°C	88%	223,000
50°C	87%	186,000

Lumen Maintenance (Axcent Large)

Ambient Temperature	TM-21 Lumen Maintenance (72,000 Hours)	Theoretical L70 (72,000 Hours)
Up to 8A		
25°C	94%	556,000
40°C	94%	556,000
50°C	92%	340,000
Up to 10A		
25°C	94%	556,000
40°C	94%	478,000
50°C	87%	207,000
Up to 12A		
25°C	94%	151,000
40°C	81%	125,000

Lumen Multiplier

Ambient Temperature	Lumen Multiplier
10°C	1.02
15°C	1.01
25°C	1.00
40°C	0.97

Control Options

0-10V This fixture is offered standard with 0-10V dimming driver(s) for use with a lighting control panel or other control method.

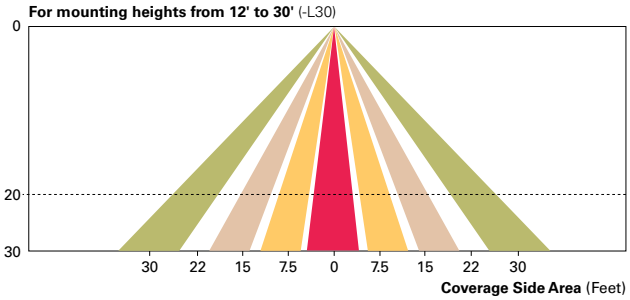
Photocontrol (PC1, PC2 and PC) Optional button-type photocontrol provides a flexible solution to enable "dusk-to-dawn" lighting by sensing light levels.

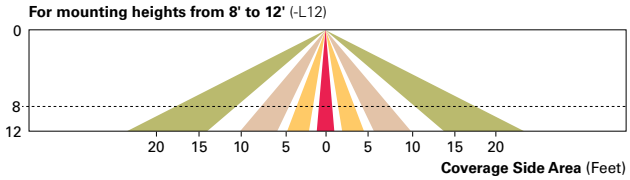
After Hours Dim (AHD) This feature allows photocontrol-enabled luminaires to achieve additional energy savings by dimming during scheduled portions of the night. The dimming profile will automatically take effect after a "dusk-to-dawn" period has been calculated from the photocontrol input. Specify the desired dimming profile for a simple, factory-shipped dimming solution requiring no external control wiring. Reference the After Hours Dim supplemental guide for additional information.

Dimming Occupancy Sensor (MSP/DIM-LXX and MSP-LXX) These sensors are factory installed in the luminaire housing. When the MSP/DIM-LXX sensor option is selected, the occupancy sensor is connected to a dimming driver and the entire luminaire dims when there is no activity detected. When activity is detected, the luminaire returns to full light output. The MSP/DIM sensor is factory preset to dim down to approximately 50 percent power with a time delay of ten minutes. The MSP-LXX sensor is factory preset to turn the luminaire off after five minutes of no activity.

These occupancy sensors includes an integrated photocell that can be activated with the ISHH-01 accessory for "dusk-to-dawn" control or daylight harvesting - the factory preset is ON. The ISHH-01 is a wireless tool utilized for changing the dimming level, time delay, sensitivity and other parameters.

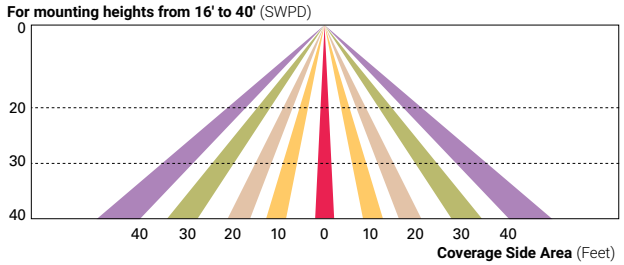
A variety of sensor lens are available to optimize the coverage pattern for mounting heights from 8'-30'.



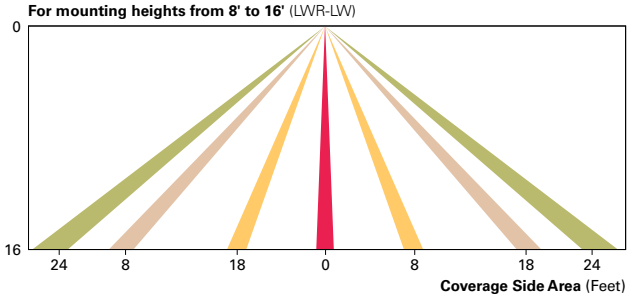


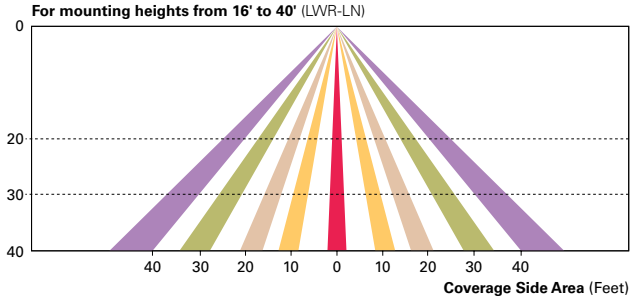
WaveLinx Wireless Control and Monitoring System The WaveLinx Outdoor control platform operates on a wireless mesh network based on IEEE 802.15.4 standards enabling wireless control of outdoor lighting. Use the WaveLinx Mobile application for set-up and configuration. At least one Wireless Area Controller (WAC) is required for full functionality and remote communication (including adjustment of any factory pre-sets).

WaveLinx Wireless Sensor (SWPD4 and SWPD5) These outdoor sensors offer passive infrared (PIR) occupancy and a photocell for closed loop daylight sensing. These sensors can be factory installed or field-installed via simple, tool-less integration into luminaires equipped with the Zhaga Book 18 compliant 4-PIN receptacle (ZW). These sensors are factory preset to dim down to approximately 50 percent power after 15 minutes of no activity detected. These occupancy sensors include an integral photocell for "dusk-to-dawn" control or daylight harvesting that is factory-enabled. A variety of sensor lenses are available to optimize the coverage pattern for mounting heights from 7'-40'.



Enlighted Wireless Control and Monitoring System (LWR-LW and LWR-LN) The Enlighted System is a connected lighting solution that combines LED luminaires with an integrated wireless sensor system. The sensor controls the lighting system in compliance with the latest energy codes and collects valuable data about building performance and use. Software applications turn the granular data into information through energy dashboards and specialized apps that make it simple and help optimize the use of other resources beyond lighting.





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Peachtree City, GA 30269
P: 770-486-4800
www.cooperlighting.com

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Specifications and dimensions
subject to change without notice.

DESCRIPTION

The patented Lumark Crosstour™ LED Wall Pack Series of luminaries provides an architectural style with super bright, energy efficient LEDs. The low-profile, rugged die-cast aluminum construction, universal back box, stainless steel hardware along with a sealed and gasketed optical compartment make the Crosstour impervious to contaminants. The Crosstour wall luminaire is ideal for wall/surface, inverted mount for façade/canopy illumination, post/bollard, site lighting, floodlight and low level pathway illumination including stairs. Typical applications include building entrances, multi-use facilities, apartment buildings, institutions, schools, stairways and loading docks test.

Catalog #		**Type**	
Project			
Comments		**Date**	
Prepared by			

SPECIFICATION FEATURES

Construction
Slim, low-profile LED design with rugged one-piece, die-cast aluminum hinged removable door and back box. Matching housing styles incorporate both a small and medium design. The small housing is available in 12W, 18W and 26W. The medium housing is available in the 38W model. Patented secure lock hinge feature allows for safe and easy tool-less electrical connections with the supplied push-in connectors. Back box includes three half-inch, NPT threaded conduit entry points. The universal back box supports both the small and medium forms and mounts to standard 3-1/2" to 4" round and octagonal, 4" square, single gang and masonry junction boxes. Key hole gasket allows for adaptation to junction box or wall. External fin design extracts heat from the fixture surface. One-piece silicone gasket seals door and back box. Minimum 5" wide pole for site lighting application. Not recommended for car wash applications.

Optical
Silicone sealed optical LED chamber incorporates a custom engineered mirrored anodized reflector providing high-efficiency illumination. Optical assembly includes impact-resistant tempered glass and meets IESNA requirements for full cutoff compliance. Available in seven lumen packages; 5000K, 4000K and 3000K CCT.

Electrical
LED driver is mounted to the die-cast housing for optimal heat sinking. LED thermal management system incorporates both conduction and natural convection to transfer heat rapidly away from the LED source. 12W, 18W, 26W and 38W series operate in -40°C to 40°C [-40°F to 104°F]. High ambient 50°C models available. Crosstour luminaires maintain greater than 89% of initial light output after 72,000 hours of operation. Three half-inch NPT threaded conduit entry points allow for thru-branch wiring. Back box is an authorized electrical wiring compartment. Integral LED electronic driver is standard 0-10V dimming. 120-277V 50/60Hz or 347V 60Hz models.

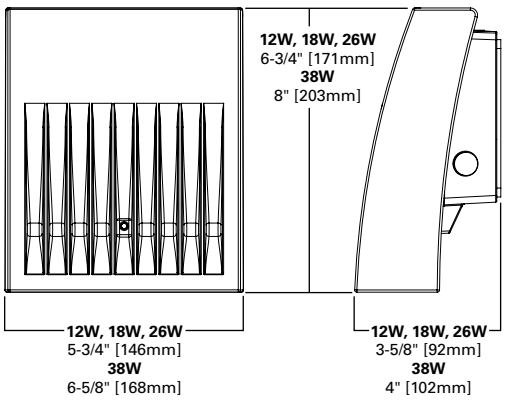
Finish
Crosstour is protected with a Super durable TGIC carbon bronze or summit white polyester powder coat paint. Super durable TGIC powder coat paint finishes withstand extreme climate conditions while providing optimal color and gloss retention of the installed life. Options to meet Buy American and other domestic preference requirements.

Warranty
Five-year warranty.

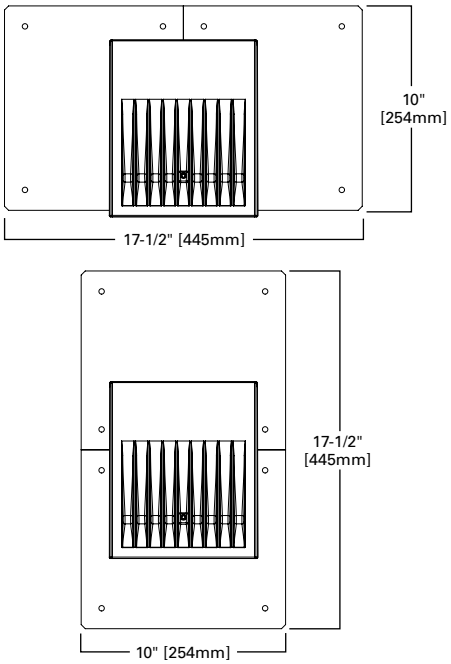
XTOR
CROSSTOUR LED

APPLICATIONS:
WALL / SURFACE
POST / BOLLARD
LOW LEVEL
FLOODLIGHT
INVERTED
SITE LIGHTING

DIMENSIONS



ESCUTCHEON PLATES



CERTIFICATION DATA
Dark Sky Approved (Fixed mount, Full cutoff, and 3000K CCT only)
UL/cUL Wet Location Listed
LM79 / LM80 Compliant
ROHS Compliant
ADA Compliant
NOM Compliant Models
IP66 Ingressed Protection Rated
Title 24 Compliant
DesignLights Consortium® Qualified*

TECHNICAL DATA
40°C Maximum Ambient Temperature
External Supply Wiring 90°C Minimum

EPA
Effective Projected Area (Sq. Ft.):
XTOR1B, XT0R2B, XT0R3B=0.34
XTOR4B=0.45

SHIPPING DATA:
Approximate Net Weight:
3.7 – 5.25 lbs. [1.7 – 2.4 kgs.]

*www.designlights.org

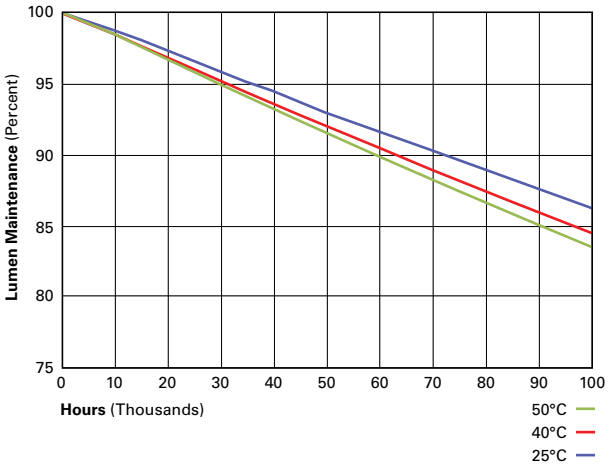
POWER AND LUMENS BY FIXTURE MODEL

LED Information	XTOR1B	XTOR1B-W	XTOR1B-Y	XTOR2B	XTOR2B-W	XTOR2B-Y	XTOR3B	XTOR3B-W	XTOR3B-Y	XTOR4B	XTOR4B-W	XTOR4B-Y
Delivered Lumens (Wall Mount)	1,418	1,396	1,327	2,135	2,103	1,997	2,751	2,710	2,575	4,269	4,205	3,995
Delivered Lumens (With Flood Accessory Kit) [1]	1,005	990	940	1,495	1,472	1,399	2,099	2,068	1,965	3,168	3,121	2,965
B.U.G. Rating [2]	B1-U0-G0	B1-U0-G0	B1-U0-G0	B1-U0-G0	B1-U0-G0	B1-U0-G0	B1-U0-G0	B1-U0-G0	B1-U0-G0	B2-U0-G0	B2-U0-G0	B2-U0-G0
CCT (Kelvin)	5,000	4,000	3,000	5,000	4,000	3,000	5,000	4,000	3,000	5,000	4,000	3,000
CRI (Color Rendering Index)	70	70	70	70	70	70	70	70	70	70	70	70
Power Consumption (Watts)	12W	12W	12W	18W	18W	18W	26W	26W	26W	38W	38W	38W

NOTES: 1 Includes shield and visor. **2** B.U.G. Rating does not apply to floodlighting.

LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance (72,000 Hours)	Theoretical L70 (Hours)
XTOR1B Model		
25°C	> 90%	255,000
40°C	> 89%	234,000
50°C	> 88%	215,000
XTOR2B Model		
25°C	> 89%	240,000
40°C	> 88%	212,000
50°C	> 87%	196,000
XTOR3B Model		
25°C	> 89%	240,000
40°C	> 88%	212,000
50°C	> 87%	196,000
XTOR4B Model		
25°C	> 89%	222,000
40°C	> 87%	198,000
50°C	> 87%	184,000



CURRENT DRAW

Voltage	Model Series			
	XTOR1B	XTOR2B	XTOR3B	XTOR4B
120V	0.103A	0.15A	0.22A	0.34A
208V	0.060A	0.09A	0.13A	0.17A
240V	0.053A	0.08A	0.11A	0.17A
277V	0.048A	0.07A	0.10A	0.15A
347V	0.039A	0.06A	0.082A	0.12A

ORDERING INFORMATION

Sample Number: XTOR2B-W-WT-PC1

Series [1]	**LED Kelvin Color**	**Housing Color**	**Options** (Add as Suffix)	**Accessories** (Order Separately) [8]
XTOR1B=Small Door, 12W **XTOR2B**=Small Door, 18W **XTOR3B**=Small Door, 26W **XTOR4B**=Medium Door, 38W **BAA-XTOR1B**=Small Door, 12W, Buy American Act Compliant [7] **TAA-XTOR1B**=Small Door, 12W Trade Agreements Act Compliant [7] **BAA-XTOR2B** =Small Door, 18W, Buy American Act Compliant [7] **TAA-XTOR2B**=Small Door, 18W, Trade Agreements Act Compliant [7] **BAA-XTOR3B**=Small Door, 26W, Buy American Act Compliant [7] **TAA-XTOR3B**=Small Door, 26W, Trade Agreements Act Compliant [7] **BAA-XTOR4B**= Medium Door, 38W, Buy American Act Compliant [7] **TAA-XTOR4B**= Medium Door, 38W, Trade Agreements Act Compliant [7]	**[Blank]**=Bright White (Standard), 5000K **W**=Neutral White, 4000K **Y**=Warm White, 3000K	**[Blank]**=Carbon Bronze (Standard) **WT**=Summit White **BK**=Black **BZ**=Bronze **AP**=Grey **GM**=Graphite Metallic **DP**=Dark Platinum	**PC1**=Photocontrol 120V [2] **PC2**=Photocontrol 208-277V [2,3] **347V**=347V [4] **HA**=50°C High Ambient [4]	**WG/XTOR**=Wire Guard [5] **XTORFLD-KNC**=Knuckle Floodlight Kit [6] **XTORFLD-TRN**=Trunnion Floodlight Kit [6] **XTORFLD-KNC-WT**=Knuckle Floodlight Kit, Summit White [6] **XTORFLD-TRN-WT**=Trunnion Floodlight Kit, Summit White [6] **EWP/XTOR**=Escutcheon Wall Plate, Carbon Bronze **EWP/XTOR-WT**=Escutcheon Wall Plate, Summit White

NOTES:

1. DesignLights Consortium® Qualified and classified for both DLC Standard and DLC Premium, refer to www.designlights.org for details.
2. Photocontrols are factory installed.
3. Order PC2 for 347V models.
4. Thru-branch wiring not available with HA option or with 347V. XTOR3B not available with HA and 347V or 120V combination.
5. Wire guard for wall/surface mount. Not for use with floodlight kit accessory.
6. Floodlight kit accessory supplied with knuckle (KNC) or trunnion (TRN) base, small and large top visors and small and large impact shields.
7. Only product configurations with these designated prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or Trade Agreements Act of 1979 (TAA), respectively. Please refer to DOMESTIC PREFERENCES website for more information. Components shipped separately may be separately analyzed under domestic preference requirements.
8. Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information.

STOCK ORDERING INFORMATION

Domestic Preferences [1]	**12W Series**	**18W Series**	**26W Series**	**38W Series**
[Blank]=Standard	**XTOR1B**=12W, 5000K, Carbon Bronze	**XTOR2B**=18W, 5000K, Carbon Bronze	**XTOR3B**=26W, 5000K, Carbon Bronze	**XTOR4B**=38W, 5000K, Carbon Bronze
BAA=Buy American Act	**XTOR1B-WT**=12W, 5000K, Summit White	**XTOR2B-W**=18W, 4000K, Carbon Bronze	**XTOR3B-W**=26W, 4000K, Carbon Bronze	**XTOR4B-W**=38W, 4000K, Carbon Bronze
TAA=Trade Agreements Act	**XTOR1B-PC1**=12W, 5000K, 120V PC, Carbon Bronze	**XTOR2B-WT**=18W, 5000K, Summit White	**XTOR3B-WT**=26W, 5000K, Summit White	**XTOR4B-WT**=38W, 5000K, Summit White
	XTOR1B-W=12W, 4000K, Carbon Bronze	**XTOR2B-PC1**=18W, 5000K, 120V PC, Carbon Bronze	**XTOR3B-PC1**=26W, 5000K, 120V PC, Carbon Bronze	**XTOR4B-PC1**=38W, 5000K, 120V PC, Carbon Bronze
		XTOR2B-W-PC1=18W, 4000K, 120V PC, Carbon Bronze	**XTOR3B-W-PC1**=26W, 4000K, 120V PC,Carbon Bronze	**XTOR4B-W-PC1**=38W, 4000K, 120V PC, Carbon Bronze
		XTOR2B-347V=18W, 5000K, Carbon Bronze, 347V	**XTOR3B-347V**=26W, 5000K, Carbon Bronze, 347V	**XTOR4B-347V**=38W, 5000K, Carbon Bronze, 347V
		XTOR2B-WT-PC1=18W, 5000K, 120V PC,Summit White	**XTOR3B-PC2**=26W, 5000K, 208-277V PC, Carbon Bronze	

NOTES:

1. Only product configurations with these designated prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or Trade Agreements Act of 1979 (TAA), respectively. Please refer to DOMESTIC PREFERENCES website for more information. Components shipped separately may be separately analyzed under domestic preference requirements.

COPY

815487
RECORDED
FEB. 23, 1999 AT 09:00AM
DOROTHY C. GONNERING
REGISTER OF DEEDS
WASHINGTON COUNTY, WI
FEE AMOUNT $58.00

DECLARATION OF RESTRICTIONS AND COVENANTS FOR GERMANTOWN BUSINESS PARK TIF #4

Return to: Village of Germantown
% Village Clerk
P O Box 337
Germantown WI 53022

for the following described parcel of land: GTNV 253-992 & 999, 254-993 & 994

All of the W ½ of the SE 1/4 and part of the E ½ of the SW 1/4 of Section 25, T9N, R20E, Village of Germantown, Washington County, Wisconsin, bounded and described as follows:

Commencing at the SW corner of the SW 1/4 of said Section 25; thence N88°08'32" E along the south line of said SW 1/4 of Section 25, 2442.145 feet to the point of beginning. Thence continuing N88°08'32" E 170.675 feet to a point, said point being the SE corner of the SW 1/4 of said Section 25 and the SW corner of the SE 1/4 of said Section 25; thence N88°01'20" E along the south line of said SE 1/4 of Section 25, 1314.55 feet; thence N02°10'17" W 2640.34 feet to a point, said point being the north 1/4 corner of said SE 1/4 of Section 25; thence S87°55'46" W along the north line of said SE 1/4 of Section 25, 1320.71 feet to a point, said point being the NW corner of said SE 1/4 of Section 25; and also the NE corner of said SW 1/4 of Section 25; thence S88°21'41" W along the north line of said SW 1/4 of Section 25, +/- 1316 feet to a point on the east right of way line of the Fox River Valley Railroad (formerly C & NW R.R.); thence southerly along said railroad right of way +/-1560 feet to a point, said point being the NW corner of CSM 3922; thence N88°08'32" E along the north line of CSM 3922, 1050 feet to a point, said point being the NE corner of CSM 3922; thence S04°06'08" W along the east line of CSM 3922, 1083.025 feet to the point of beginning. Said Parcel containing +/- 129 acres gross.

DOC# 1218277
815487

This Declaration of Covenants and Restrictions was approved by the Village of Germantown Plan Commission on January 11, 1999 and the Village Board on January 18, 1999.

IN WITNESS WHEREOF, the undersigned officials have hereto set their hands and seal o behalf of the Village of Germantown this 22nd day of February, 1999.

Charles J. Hargan, Village President

Jane A. Wilms, Village Clerk

Personally came before me this 22nd day of February, 1999, the above named Charles J. Hargan, President, and Jane A. Wilms, Clerk, of the Village of Germantown, to me known to be the persons who executed the foregoing instrument and acknowledge that they executed the foregoing instrument as such representatives of the owners of the deed of said property.

Christine M. Micka

Christine M. Micka, Notary Public
Washington County Wisconsin
My Commission Expires: Sept. 19, 1999

This Document Drafted By:
Sigurd Strautmanis, Planner
Village of Germantown
P O Box 337
Germantown WI 53022

DECLARATION OF COVENANTS AND RESTRICTIONS
-- GERMANTOWN BUSINESS PARK --

1. PLAN APPROVALS. No building or any improvements shall be erected, placed or altered on any building site in the Germantown Business Park until plans for such building or improvements, including site and building plans, have been first approved by the Developer and the Village. The Developer and Village shall approve, conditionally approve or deny such plans with respect to conformity with the restrictions contained herein and any other applicable enactments of the Village. If the Developer does not act on the plans within 60 days of submission, the plans shall be considered automatically approved. The Village shall act on such plans within 30 days of official submission.

2. DESIGN OBJECTIVE. The terrain of the Germantown Business Park is unique. A combination of open fields, wetlands, woods and riparian areas form the majority of the Park. In addition, much of the Park is highly visible from major thoroughfares, including Mequon Road (SH 167) and Fond du Lac Avenue (SH 145). The unique environmental attributes, along with the site's high profile in the Germantown community, requires careful consideration of how drives, buildings and parking areas are laid out. The design objective of the Germantown Business Park is to integrate development into the landscape in a coordinated, attractive and well-landscaped fashion.

3. SITE RESTRICTIONS.

   A. *Minimum Building Site.* No individual building site in the Park shall be less than two (2) buildable acres (net of any ROW, wetlands, floodplain or environmental corridor).

   B. *Minimum Building Size.* The initial construction on each site shall be a minimum of 5,000 square feet per buildable acre, or 10,000 square feet on the smallest available parcel.

   C. *Lot Coverage.* Lot coverage shall be calculated on net buildable acreage. Impervious surface coverage (building, parking, drives, concrete walks, etc.) may not exceed:

      - 70% for office (more than 40% of a building dedicated to office uses)
      - 75% for industrial
      - 75% for commercial

   D. *Building Setbacks.* No building, or part thereof (trash enclosures, overhangs, etc.) shall be located within the following distance of a property line:

- Front Yard (corner lots shall have two front yards)
  - Abutting Mequon Road ROW 200'
  - Abutting other primary ROW (Donges Bay Road, FDL Ave) 75'
  - Abutting internal street ROW 30'
- Side Yard 25'
- Rear Yard 25'
- From any wetland boundary 25'
- From any navigable waterway 75'

E. *Parking Setbacks.* No parking areas shall be permitted within the following setbacks:

- Abutting Mequon Road ROW 200'
- Abutting any other ROW 20'
- From any other property boundary 8'
- From any wetland boundary 25'
- From any navigable waterway 75'

4. ARCHITECTURAL CONTROLS. The Germantown Business Park is Germantown's premier office/industrial complex, with high-quality, long-lasting buildings that will maintain their value for years to come. To ensure compatibility among all buildings in the Park, the following controls have been established:

A. *Building Orientation.* Every side of a building will be visible by the public at some point, therefore all building elevations should be designed to be attractive and compatible with surrounding buildings. No building should have its back to any public street and a building's main entrance should be architecturally highlighted with glass, overhangs or other obvious surface articulation. The sides and back of a building should use the same design theme as the primary elevations, although less expensive materials may be used. The primary building material should "wrap" to the sides and/or back of a building, extending a minimum of 20 feet or to some natural dividing line agreed upon by the Developer and Village.

B. *Building Height.* The height of all structures, including chimneys, cooling towers and antennae, shall be governed by the Municipal Code of Germantown. ~~Generally, building height is limited to 45 feet in the M-1 zoning district, with architectural spires, cupola, etc. permitted above this height.~~

C. *Building Materials.* The overall design concept for Park is to create diversity through building design, rather than a plethora of building colors and materials. The emphasis is on low, horizontal forms that fit comfortably on the landscape. There should be no blank walls — the designer should use architectural devices such as pilasters, reveals and material changes to break up a building's mass. The preferred building material for the Germantown Business Park is masonry,

although glass, glass block, EIFS and other accent materials are encouraged to create diversity. Wood and vinyl, in any form, is generally unacceptable in the park. The following materials are appropriate for use in the Park:

- Brick
- Decorative concrete masonry units
- Pre-cast and poured-in-place concrete
- Cut stone or stone-faced concrete block
- Exterior Insulation and Finish Systems (EIFS) such as Dryvit, Sunalar, but should not exceed 30% of a building's wall area
- Architectural metal wall panels with no exposed fastners or corrugation, but should not exceed 30% of a building's wall area (corrugated wall systems may be considered for expansion walls, but must be approved)
- Metal banding and trim, but only as an accent
- Structural steel, when used as part of an exterior structural system
- Glass block, but only as an accent
- Glass spandrel panels
- Tile, but only as an accent
- Smooth-faced concrete block, but only as an accent
- Other materials, including materials not yet developed, may be considered as long as they are compatible with the park's design concept

D. *Building Colors.* The emphasis is on muted earthtones, so buildings recede, rather than stand out, on the landscape. Tans, beige, maroon, deep greens and other natural tints are encouraged. Bright whites and primary accent colors should be avoided. The Developer shall provide the Village with material and color samples as part of the approval process.

E. *Accessory Structures.* No accessory structures are permitted without special approval in the Park. Any accessory structures proposed to the Developer and Village should be designed with the same color and material pallette as the principal structure. They should be located behind buildings where possible. Pole buildings, metal or wood structures will not be permitted.

F. *Roof-mounted Equipment and Utility Structures.* All HVAC, electrical, waste handling and pollution control equipment shall be shown on the building plans at the time of site plan approval. All roof-mounted equipment shall be architecturally screened with a device of similar color and materials as used for the principal structure. All utility structures, including transformers, switching stations and utility meters shall be located underground or away from public view where possible. Under no circumstances shall a transformer or utility structure be located in a property's front yard. All such structures must be screened with an architectural wall or dense vegetation.

5. PARKING AND LOADING. Parking and loading are critical components of an efficient office or industrial facility. In the Germantown Business Park, parking and loading is located on the sides and rear of all buildings to create a visually pleasing street facade by minimizing the visual impact of cars and trucks.

   A. *Off-street Parking Requirements.* Parking ratios are dictated by the Municipal Code of Germantown. The Code requires one parking space (180 square feet) for every 500 square feet of Primary Floor Area. This excludes lobbies, lunchrooms, locker rooms, storage areas and floor area dedicated exclusively to warehousing. Each tenant of the Park is unique. Some will require more parking than others. Thus, each tenant of the Germantown Business Park is required to identify the number of employees expected and provide enough parking for the maximum number of employees on a given shift as well as generous visitor parking near the building's main entrance. The Developer and/or Village may require additional spaces based on past experience.

   B. *Location/Orientation.* Parking in front of buildings should be for visitors only. All employee parking should be located in the side and rear yards of the facility. Parking, generally, should be located to minimize its visibility from the street.

   C. *Loading Docks.* Loading and staging areas should be located behind buildings where possible. In some circumstances, loading docks may be permitted on the sides of buildings. Loading docks shall not be permitted on the street face except in those areas shaded on Exhibit R-1, and then only with prior approval of the Plan Commission. All loading and staging areas should be screened from public view with architectural walls or landscaping.

   D. *Drives and Walks.* All drives and lots must be surfaced with asphalt or cement. All walks shall be hard-surfaced with cement, cobbles or stamped concrete. All drives shall be set at least ten feet from any property boundary.

   E. *Snow storage.* Areas should be designated for stockpiling snow that will not eliminate parking stalls or damage landscaping.

   F. *No On-street Parking Permitted.* Parking by employees, visitors, company or commercial trucks will not be permitted on any Village streets in the Germantown Business Park.

6. LANDSCAPING. Generous landscaping is a hallmark of the Park. A more naturalized approach to landscape design is encouraged, using native species and informal groupings rather than manicured lawn and formal plantings. Afforestation, or replanting native woodlands, is also encouraged between buildings and parking areas, so as to build on the existing stands of trees that give TIF#4 its unique character. The following guidelines should be used in developing the landscape plan for new sites:

A. *Landscaping Required.* All new development must include an approved landscaping plan. The landscaping plan shall be developed simultaneously with the site and building plans and shall be subject to review by both the Developer and Village. All landscaping, including paving of drives and parking areas, shall be complete within 18 months of the start of construction.

B. *Landscaping Methods.* Landscaping is not limited to plant material alone. Landscaping may include decorative berms, fences, architectural walls, boulders, raised planting beds, reflective ponds, fountains and accent lighting. While compatibility among developments is critical, creativity is encouraged.

C. *Required Landscaping.* The following landscaping is required for all new development in the Germantown Business Park:

- Building entrance. A landscape feature is required at the primary building entrance to accentuate its location.
- Front yard. At least two significant groupings/features must be placed between the building and front ROW. The front yard should generally be mowed turf.
- Street trees. The individual property owner shall be responsible for planting at least one appropriate street tree every 25' along public streets.
- Building foundation. Landscaping is required along the foundation line of the most visible elevations. Care should be taken to choose species whose roots will not affect the foundation of the building.
- Driveways. All drives shall have salt-tolerant street trees planted 25 feet on center.
- Parking lot perimeters. Parking lots shall be landscaped to screen vehicles from public view. Emphasis will be placed on the front parking areas, although all parking areas will require some vegetative screening.
- Parking lot interiors. The interior of all parking lots shall be broken up with landscaped islands that must include grass or evergreen groundcover and salt tolerant trees.
- Remaining site. The remaining site should contain landscaping that will further screen the building and otherwise enhance the development. Landscaping closer to buildings and parking areas should be more manicured, then transition to a more natural, maintenance-free type that blends into, and extends the existing natural areas into each site.

D. *Recommended Species.* Exhibit R-2 contains recommended species for use in the Park. The list is derived from the *Street Tree Inventory and Strategic Plan for Germantown*, prepared in 1996 by Arbor Associates. The list is not comprehensive and alternative species will be considered provided they are appropriate for the climate and of an appropriate size. Species should be chosen based on their disease and insect resistance, hardiness to the area, their ability to create seasonal interest and ease of maintenance. Annuals, perennials, native grasses, wildflowers and other plant material are encouraged to add color and interest to the landscape of the Park.

The following matrix indicates minimum sizes and/or calipers for trees and shrubs at the time of planting.

Deciduous species		
Street trees	maples, ash, elms, beech, oaks	min. 3" caliper
Ornamental trees	flowering crabs, redbuds, hawthornes, cherry, ginkos	min. 3" caliper
Trees typically grouped	river birch, lilacs, sumac, dogwood	birch min. 12' others min. 3'
Coniferous species		
Pines, firs	Austrian /scotch pine, white fir	min. 6' tall
Spruce	blue, green, other	min. 8' tall
Occidentalis	techny, sunkist arborvitae	min. 6' tall

E. *Landscape Maintenance.* It shall be the responsibility of the owner to appropriately maintain all landscaping as approved. This includes replacing dead trees, shrubs and plant material in a timely manner. In addition, any changes or variations to the landscape plan must be approved by the Developer and Village. Regular maintenance shall include mowing, watering, trimming, pruning, fertilizing, repairing, transplanting, treating, burning and other maintenance activities required to keep the site's landscaping visually pleasing and in good health. At all times, sites must be kept free of trash and natural debris such as fallen branches, leaves, grass clippings and weeds. Village weed control ordinances shall apply to all property in the Park. The Developer shall notify the Village of non-compliance with any aspect of the ordinance.

7. LIGHTING. The Germantown Business Park has a coordinated lighting plan to ensure uniformity in design, light levels and color rendition throughout the development. The Developer and Village have pre-selected street lights, parking lot lighting and bollard

lighting. Cut sheets are available from the Developer and Village Planner.

A. *Lighting Plan Required.* A lighting plan must be submitted showing the location of pre-selected fixtures, as well as the location and purpose of other fixtures used for accent and safety lighting. All exterior lighting must adhere to the *Village Outdoor Lighting Guidelines*, included as Exhibit R-3 in this document.

B. *Required Lighting.* The following exterior lighting is required for all new development in the Park:

- Parking lots. All parking areas should be well lit using pre-selected pole mounted fixtures. Light levels should meet Village guidelines.
- Entrance drive. One pole mounted fixture shall be located near the main vehicular entrance of each site if no street light is located with 150'.
- Building entrances. The main entrance of the building should be lit for safety, as well as to accent architectural and landscape features.
- Service entrances/loading areas. All service areas should be well lit with full cut-off wall mounted fixtures. Light levels should meet Village guidelines.
- Sidewalks and pedestrian paths. All pedestrian paths should have low-level bollard lighting.

C. *Accent Lighting.* Lighting used to accent the building, landscaping or other features is encouraged. Only low levels of light are permitted for this purpose, however, and buildings should not be "washed" in bright light.

8. SIGNS. A coordinated signage program reinforces the high quality character of the Germantown Business Park. While limits are placed on the size and type of signs permitted, creativity is encouraged in designing individual signs.

A. *Review Required.* All signage must be approved by the Developer and Village before receiving a permit from the Building Inspector. Detailed plans for signs must be included in the site plan review package.

B. *Restrictions.* Each building shall be limited to one monument-style sign for every street face (corner lots may be allowed two signs). The total sign area may not exceed 32 square feet per side, for a total of 64 square feet. The methodology for measuring sign area is included as Exhibit R-4 in this document. No wall mounted signage is permitted in the Germantown Business Park.

C. *Materials.* Signs should be constructed in the same material and color pallette as the principal building. No wood signs are permitted.

D. *Illumination.* Signs may be lit with external lighting, provided they meet Village guidelines. If internal illumination is preferred, the sign shall contain white letters on a dark background.

E. *Landscaping Required.* All signs shall be landscaped with a combination of evergreen and other plant material to screen the sign's base.

9. OUTDOOR STORAGE. To maintain the high quality appearance of the Park, no outside storage of raw materials, finished or semi-finished products, containers or other articles is permitted. Waste and recycling containers must be contained within a decorative architectural wall and screened entirely from public view. Pallets and trailers may be stored on-site, but only if approved by the Developer and Village and screened within a suitable enclosure. The minimum height for any such enclosure shall be six feet and may not be located within 40' of a public street. Wire fence shall not be considered an acceptable enclosure for this purpose.

10. DRAINAGE. No land shall be developed and no use permitted that adversely impacts adjacent properties with flooding, erosion or runoff. All runoff shall be properly channeled into ditches and/or catch basins. All stormsewers will drain into a combined detention pond to be constructed and maintained by the Village. All catch basins shall be directed to a Village detention pond, however, all roof drains must sheet flow across grass before entering the stormsewer system.

11. PERFORMANCE STANDARDS. Determination of potential or actual noncompliance with the Village Performance Standards, included as Exhibit __ in this document, shall be made by the Developer and Village. In addition, all permitted manufacturing uses and conditional uses permitted in the M-1 Limited Industrial District shall give evidence of ability to comply with the standards before a building permit will be issued. Continued compliance shall be required during the operation of such uses and activities. Any use already established on the effective date of these restrictions shall not be modified as to conflict with the performance standards established.

12. INCINERATION. No rubbish or natural material may be burned without a burning permit issued by the Village fire Chief. Applicable restrictions in paragraph 11 (above) shall apply to incineration.

13. EASEMENTS. All owners and occupants of the Germantown Business Park shall cooperate with the Village and other owners and occupants in planning and granting all necessary and reasonable easement to accommodate gas, electric, telephone, sewer, water and other utilities, provided that such easements do not interfere with the present use of the land or unduly restrict future use or development.

14. TIMING. Upon acceptance of an offer to purchase land within the Germantown Business Park, the owner agrees to commence construction of proposed improvements within 18 months of the conveyance of the property to the purchaser.

15. NO FUTURE DIVISION WITHOUT APPROVAL. Lots purchased from the Developer may not be divided without approval from the Developer and the Village.

16. TERMS OF COVENANTS AND RESTRICTIONS: AMENDMENTS. Each lot shall be conveyed subject to this Declaration of Covenants and Restrictions, which shall run with the land and shall be binding on all parties owning or having an interest in lots in TIF#4, and all person claiming under them, for a period of twenty (20) years from the date on which the Declaration of Covenants and Restrictions is duly recorded in the public registry. Subsequent to such time, the Declaration shall automatically be extended for successive periods of ten (10) years each.

    The Declaration of Covenants and Restrictions may be modified and amended, in whole or in part, by the recording in the public registry of an instrument duly enacted and signed by a majority of owners in TIF #4, provided however, that any such modification or amendment must be approved the Developer, so long as the Developer is the owner of any lot in TIF#4, and by the Village.

17. APPROVALS BY DEVELOPER. Any approvals required by this Declaration of Covenant and Restrictions to be obtained from the Developer shall be applicable for so long as the Developer owns a lot in TIF #4, or continues to be obligated under the "Take-out Schedule" of the Developer Agreement by and between the Developer and the Village of Germantown.

18. ENFORCEMENT OF RESTRICTIONS. The enforcement of the rules and restrictions contained in the declaration of restrictions shall be by proceeding at law or in any equity against any person or persons violating or attempting to violate any covenants either to restrain violation or to recover damages. Such proceedings may be commenced by any owner or owners of property in the Germantown Business Park or by the Developer or the Village of Germantown.

19. VALIDITY OF RESTRICTIONS: NON-ABROGATION. Invalidation of any one of these covenants or restrictions contained in this document, by judgement or court order, shall in no way affect any of the other provisions thereof, which shall remain in full force and effect.

    The Covenants and Restrictions contained herein shall in no way impair or abrogate the application or the effect of any ordinance, administrative regulation or statute promulgated by any governmental authority having jurisdiction.

DOC# 1218277

Recorded
Apr. 23, 2009 AT 01:00PM
SHARON A MARTIN, REGISTER OF DEEDS
WASHINGTON COUNTY, WISCONSIN

Fee Amount: $71.00

91-31

Return to:
Attorney John L. DeStefanis
Germantown Village Attorney
W175 N11081 Stonewood Dr., Ste. 105
Germantown, WI 53022

AMENDMENT TO DECLARATION OF RESTRICTIONS AND COVENANTS FOR THE GERMANTOWN BUSINESS PARK TIF #4

For the following described parcel of land:

Being all of the West ½ of the Northeast ¼, the West ½ of the Southeast ¼, the East ½ of the Southwest ¼, the Northwest ¼ of the Southwest ¼, the East ½ of the Northwest ¼ and part of the Southwest ¼ of the Southwest ¼ of Section 25, Township 9 North, Range 20 East; all of the North ½ of the Northwest ¼ and part of the Northwest ¼ of the Northeast ¼ of Section 36, Township 9 North, Range 20 East, in the Village of Germantown, Washington County, Wisconsin, more particularly described as follows:

Commencing at the Southwest corner of Section 25, Township 9 North, Range 20 East, also being the point of beginning; thence North 02°43'15" West along the west line of the SW ¼ of said Section 25, 2648.50 feet to the West ¼ corner of said Section 25; thence North 88°21'41" East along the north line of the Southwest ¼ of said Section 25, 1316.09 feet to the northeast corner of the Northwest ¼ of the Southwest ¼ of said Section 25; thence North 02°29'15" West along the west line of the East ½ of the Northwest ¼ of said Section 25, 2649.17 feet to the northwest corner of the East ½ of the Northwest ¼ of said Section 25 and to a point on the centerline of Mequon Road; thence North 88°23'28" East along the north line of the Northwest ¼ of said Section 25 and

along the centerline of Mequon Road, 1322.70 feet to the North ¼ corner of said Section 25; thence North 88°11'21" East along the north line of the Northeast ¼ of said Section 25 and along the centerline of Mequon Road, 1327.42 feet to the northeast corner of the West ½ of the Northeast ¼ of said Section 25; thence South 02°12'00" East along the east line of said West ½, 2642.34 feet to the southeast corner of said West ½ and to the northeast corner of the West ½ of the Southeast ¼ of said Section 25; thence South 02°10'14" East along the east line of the West ½ of the Southeast ¼ of said Section 25, 2640.33 feet to the southeast corner of said West ½ and to a point on the centerline of Donges Bay Road; thence South 88°01'20" West along the south line of said Southeast ¼ and along the centerline of Donges Bay Road 390.06 feet to the northeast corner of Certified Survey Map No. 278 (recorded in Volume 2 on Page 58 as Document No. 314198); thence South 32°31'20" West (recorded as S. 32°43'44" W.) along the southeast line of said Certified Survey Map, 60.67 feet to the south right-of-way line of Donges Bay Road; thence South 35°58'20" West (recorded as S. 36°10'44" W.) along said southeast line, 502.75 feet to the east line of Lot 2 of Certified Survey Map No. 4324, (recorded in Volume 28 on Page 264 as Document No. 668027); thence South 35°36'02" West along said east line, 158.42 feet; thence South 30°59'19" West, 897.33 feet to the southeast corner of the North ½ of the Northwest ¼ of Section 36; thence South 88°11'44" West along the south line of said North ½, 2621.31 feet to the southwest corner of said North ½; thence North 01°26'22" West along the west line of said Northwest ¼, 1322.45 feet to the point of beginning.

Excepting those lands described in Volume 314 of Deeds on Page 368 as Document No. 241197. Said exception containing 5.50 acres of land.

Said parcel of land contains 487.09 acres of land.

TaxKey	Owner Name
GTNV251967	North Fork Adventures LLC
GTNV251968	Village Of Germantown
GTNV251969	Village Of Germantown
GTNV251970	Village Of Germantown
GTNV251972	BVD Properties LLC
GTNV251973	Aei-Wisconsin LLC
GTNV251976	Cojo Properties LLC
GTNV251978	Kmr Investment Co LLP
GTNV251979	Kmr Investment Co LLP
GTNV251980	Village Of Germantown
GTNV251981	Village Of Germantown
GTNV251988	Heather Lake LLC
GTNV252985	Village Of Germantown
GTNV252986	Village Of Germantown
GTNV252987	Village Of Germantown
GTNV253986	Waste Management Of Wisconsin Inc
GTNV253987	Waste Management Of Wisconsin Inc
GTNV253988	Alice C. Frenz
GTNV253989	Anton Frenz Trust
GTNV253990	Germantown Joint Sch
GTNV253991	Waste Management Of Wisconsin
GTNV253992	Bradley Corporation
GTNV253993	Anton Frenz Trust
GTNV253996	Village Of Germantown
GTNV253997	Village Of Germantown
GTNV254980	Kohl's Department Stores Inc
GTNV254981	W M Building LLC
GTNV254983	Village Of Germantown
GTNV254985	Warehouse Storage LLC
GTNV254986	Ubert Investments LLC
GTNV254987	Bradley Way Partners
GTNV254988	Cml Holdings Inc
GTNV254989	Cambridge Major Laboratories, Inc
GTNV361995	Dale H & Patricia F Schreiner Trust
GTNV361996	Superior Of Wisconsin Inc
GTNV362986	Skyline Development Corp
GTNV362987	Skyline Development Corp
GTNV362988	Skyline Development Corp
GTNV362989	Secure Mini Storage Limited
GTNV362992	Superior Services Inc
GTNV362993	Benz Oil Inc
GTNV362994	Bizzco LLP

Pursuant to Section 16 of the Declaration of Restrictions and Covenants of the Germantown Business Park TIF #4, a majority of all of the lot owners in the Germantown Business Park, having adopted the **Resolution of Property owners Amending Specified Provisions of the Declarations of Restrictions and Covenants of the Germantown Business Park TIF #4,** which is annexed hereto, by their respective **Consent and Affirmative Vote,** which are annexed hereto, the **Declarations of Restrictions and Covenants of the Germantown Business Park TIF #4,** which was originally approved by the Village Board of the Village of Germantown on January 18, 1999* and which is re-recorded herewith, is hereby amended in the form and substance appended hereto.

* and recorded as Document No. 815487

IN WITNESS WHEREOF, the undersigned officer of the Village of Germantown has hereunto set his hand and seal this 22 day of April, 2009.

John L. DeStefanis
Village Attorney

State of Wisconsin)
) SS
Washington County)

Personally came before me this 22 day of April, 2009, the above named John L. DeStefanis, Village Attorney and an Officer of the Village of Germantown, Wisconsin, to me known to be the person who executed the foregoing instrument and acknowledged the same in his official capacity.

Nicholas J. DeStefanis
Notary Public, State of Wisconsin
My commission is permanent.

NICHOLAS J. DESTEFANIS NOTARY PUBLIC STATE OF WISCONSIN

This Document drafted by:
John L. DeStefanis, Germantown Village Attorney
W175 N11081 Stonewood Drive, Suite 105
Germantown, WI 53022

GERMANTOWN BUSINESS PARK TIF #4

RESOLUTION OF PROPERTY OWNERS AMENDING SPECIFIED PROVISIONS OF THE DECLARATION OF RESTRICTIONS AND COVENANTS OF THE GERMANTOWN BUSINESS PARK TIF #4

BE IT RESOLVED by the property owners of the Germantown Business Park TIF #4 that the Declaration of Restrictions and Covenants be and are hereby amended pursuant to Section 16 of said Declaration, in the following respects only:

3. SITE RESTRICTIONS.

B. *Minimum Building Size.* The initial construction on each site shall be a minimum of ~~5,000~~3,500 square feet per buildable acre, or 10,000 square feet on the smallest available parcel.

C. *Building Setbacks.* No building, or part thereof, (trash enclosures, overhangs, etc.) shall be located within the following distances of a property line:

- Front Yard (corner lots shall have two front yards)
  - Abutting Mequon Road ~~200'~~ 50' or the southerly edge of the berm lying along Mequon Road, whichever is greater

E. *Parking Setbacks.* No parking areas shall be permitted within the following setbacks:

- Abutting Mequon Road ROW 50' ~~200'~~
- From any wetland boundary ~~25'~~As provided in the Shoreland Wetland zoning ordinance of the Village of Germantown.
- From any navigable waterway ~~75'~~As provided in the Shoreland Wetland zoning ordinance of the Village of Germantown.

4. ARCHITECTURAL CONTROLS.

B. *Building Height.* The height of all principal buildings and accessory structures, including chimneys, cooling towers and antennae, shall be ~~governed~~ as provided by the Municipal Zoning Code of Germantown for the M-1 zoning district. ~~Generally, building height is limited to 45 feet in the M-1 zoning district, with architectural spires, cupola, etc. permitted above this height.~~

6. LANDSCAPING.

C. *Required Landscaping.* The following landscaping is required for all new development in the Germantown Business Park:

- Street Trees. The individual property owner shall be responsible for planting at least one appropriate street tree for each ~~every~~ 25' of frontage along any abutting public streets, which shall be planted in attractive groupings or clusters.

All remaining provisions of the Declaration of Restrictions and Covenants for the Germantown Business Park TIF #4 shall remain in full force and effect unless and until amended or repealed pursuant to Section 16 of said Declaration.

1341456

RECORDED
July 11, 2013 1:58 PM
SHARON A MARTIN, REGISTER OF DEEDS
WASHINGTON COUNTY, WISCONSIN

Fee Amount: 130.00

15

AMENDMENT NO. 2 TO DECLARATION OF RESTRICTIONS AND COVENANTS FOR GERMANTOWN BUSINESS PARK TIF #4

Parcel Id Numbers:

GTNV251965, GTNV251966, GTNV251967, GTNV251968, GTNV251969, GTNV251970, GTNV251972, GTNV251973, GTNV251976, GTNV251978, GTNV251979, GTNV251988, GTNV252980, GTNV253985, GTNV253986, GTNV253987, GTNV253988, GTNV253989, GTNV253990, GTNV253991, GTNV253993, GTNV253996, GTNV253997, GTNV254273, GTNV254974, GTNV254975, GTNV254980, GTNV254981, GTNV254986, GTNV254987, GTNV362986, GTNV362987, GTNV362988, GTNV362989 and GTNV362993

Instrument Drafted by & Return To:

Brian C. Sajdak, Village Attorney
Wesolowski, Reidenbach & Sajdak
11402 W. Church St.
Franklin, WI 53132

For the following described land:

Being all of the West ½ of the Northeast ¼, the West ½ of the Southeast ¼, the East ½ of the Southwest ¼, the Northwest ¼ of the Southwest ¼, the East ½ of the Northwest ¼ and part of the Southwest ¼ of the Southwest ¼ of Section 25, Township 9 North, Range 20 East; all of the North ½ of the Northwest ¼ and part of the Northwest ¼ of the Northeast ¼ of Section 36, Township 9 North, Range 20 East, in the Village of Germantown, Washington County, Wisconsin more particularly described as follows:

Commencing at the Southwest corner of Section 25, Township 9 North, Range 20 East, also being the point of beginning; thence North 02°43'15" West along the west line of the SW ¼ of said Section 25, 2648.50 feet to the West ¼ corner of said Section 25; thence North 88°21'41" East along the north line of the Southwest ¼ of said section 25, 1316.09 feet to the northeast corner of the Northwest ¼ of the Southwest ¼ of said Section 25; thence North 02°29'15" West along the west line of the East ½ of the Northwest ¼ of said Section 25, 2649.17 feet to the northwest corner of the East ½ of the Northwest ¼ of said Section 25 and to a point on the centerline of Mequon Road; thence North 88°23'28" East along the north line of the Northwest ¼ of said Section 25 and along the centerline of Mequon Road, 1322.70 feet to the North ¼ corner of said Section 25; thence North 88°11'21" East along the north line of the Northeast ¼ of said Section 25 and along the centerline of Mequon Road, 1327.42 feet to the northeast corner of the West ½ of the Northeast ¼ of said Section 25; thence South 02°12'00" East along the east line of said West ½, 2642.34 feet to the southeast corner of said West ½ and to the northeast corner of the West ½ of the Southeast ¼ of said Section 25; thence South 02°10'14" East along the east line of the West ½ of the Southeast ¼ of said Section 25, 2640.33 feet to the southeast corner of said West ½ and to a point on the centerline of Donges Bay Road; thence South 88°01'20" West along the south line of said Southeast ¼ and along the centerline of Donges Bay Road 390.06 feet to the northeast corner of Certified Survey Map No. 278 (recorded in Volume 2 on Page 58 as Document No. 314198); thence South 32°31'20" West (recorded as S. 32°43'44" W.) along the southeast line of said Certified Survey Map, 60.67 feet to the south right-of-way

line of Donges Bay Road; thence South 35°58'20" West (recorded as S. 36°10'44 W.) along said southeast line, 502.75 feet to the east line of Lot 2 of Certified Map No. 4324 (recorded in Volume 28 on Page 264 as Document No. 668027); thence South 35°36'02" West along said east line, 158.42 feet; thence South 30°59'19" West, 897.33 feet to the southeast corner of the North ½ of the Northwest ¼ of Section 36; thence South 88°11'44" West along the south line of said North ½, 2621.31 feet to the southwest corner of said North ½; thence North 01°26'22" West along the west line of said Northwest ¼, 1322.45 feet to the point of beginning.

Excepting those lands described in Volume 314 of Deeds on Page 368 as Document No. 241197. Said exception containing 5.50 acres of land.

Said parcel containing 47.09 acres of land.

AMENDMENT

WHEREAS, the Declaration of Restrictions and Covenants for Germantown Business Park TIF #4 was recorded in the Office of Register of Deeds for Washington County on February 23, 1999 as Document No. 815487; and,

WHEREAS, such Declaration of Restrictions was previously amended in part by an Amendment to Declaration of Restrictions and Covenants for the Germantown Business Park TIF #4 which was recorded in the Office of Register of Deeds for Washington County on April 23, 2009 as Document No. 1218277; and,

WHEREAS, Section 16 of the Declaration of Restrictions and Covenants allows for amendments to the same upon approval of the majority of the lot owners within the Business Park and also by the Village of Germantown;

NOW, THEREFORE, Pursuant to Section 16 of the Declaration of Restrictions and Covenants for Germantown Business Park TIF #4, the undersigned, being a majority of all lot owners in the Germantown Business Park and as representatives of the Village of Germantown, do hereby amend Section 14 of the Declaration of Restrictions and Covenants for Germantown Business Park TIF #4 to read as follows:

14. Timing. Upon acceptance of an offer to purchase land within the Germantown Business Park, the owner agrees to commence construction of proposed improvements within 36 months of the conveyance of the property to the purchaser.

All remaining provisions of the Declaration of Restrictions and Covenants for Germantown Business Park TIF #4 shall remain in full force and effect unless and until amended or repealed pursuant to Section 16 of said Declaration.

IN WITNESS WHEREOF, the undersigned have hereunto set their hand as of the dates specified below.

[SIGNATURE PAGES FOLLOW]

1385207

RECORDED
July 01, 2015 2:30 PM
SHARON A MARTIN
REGISTER OF DEEDS
WASHINGTON COUNTY, WI
Recording Fee Paid: $30.00

AMENDMENT NO. 3 TO DECLARATION OF RESTRICTIONS AND COVENANTS FOR GERMANTOWN BUSINESS PARK TIF #4

Parcel Id Numbers:

GTNV251961, GTNV251967, GTNV251968, GTNV251959, GTNV251972, GTNV251973, GTNV251976, GTNV251978, GTNV251979, GTNV251988, GTNV252963, GTNV252973, GTNV252974, GTNV252980, GTNV252984, GTNV253982, GTNV253983, GTNV253984, GTNV253985, GTNV254273, GTNV254280, GTNV254281, GTNV254974, GTNV254975, GTNV254980, GTNV254981, GTNV254986, and GTNV254987

Instrument Drafted by & Return To:

Brian C. Sajdak, Village Attorney
Wesolowski, Reidenbach & Sajdak
11402 W. Church St.
Franklin, WI 53132

For the following described land:

All that part of the East ½ of the Northwest and Southwest ¼ and all that part of the West ½ of the Northeast and Southeast ¼ of Section 25, Township 9 North, Range 20 East of the Fourth Principle Meridian, located in the Village of Germantown, Washington County, Wisconsin, bounded and described as follows:

Commencing at a concrete monument with brass cap marking the South ¼ corner of said Section 25; thence South 89°28'21" West along the south line of the Southwest ¼ of Section 25, 170.68 feet; thence North 02°46'27" West, 60.05 feet to the southeast corner of Lot 1 of Certified Survey Map No. 3922 and the point of beginning of the lands to be described.

Thence North 02°46'18" West along the west line of Grant Drive, 1022.55 feet to the northeast corner of said Lot 1; thence South 89°29'34" West (South 88°08'32" West, 1050.00 record) along the north line of said Lot 1, 1049.54 feet to the northwest corner of said Lot 1 and the easterly right of way line for the Fox Valley and Western Limited railroad right of way; thence North 02°42'30" West along said east right of way line also being the west line of Lot 14 or Certified Survey Map No. 5805, 601.29 feet; thence North 02°42'43" West along said east right of way line also being the west line of Lot 37 of Certified Survey Map No. 6408, 666.15 feet to the point of curvature to the left; thence continuing northwesterly along the arc of said curve, 249.57 feet, having a radius of 1960.08 feet and a chord which bears North 06°21'35" West, 249.40 feet to the point of tangency and the west line of the East ½ of the Southwest ¼ ; thence North 01°04'40" West along said west line and the west line of said Lot 37, 46.43 feet to the southwest corner of the Southeast ¼ of the Northwest ¼ of said Section 25; thence North 01°09'25" West along the west line of the of the East ½ of the Northwest ¼ of said Section 25, 2569.33 feet to the northwest corner of Lot 24 of Certified Survey Map No. 6318 and the south line of State Trunk Highway 167 (Mequon Road); thence North 89°43'31" East, along said south right of way line, 284.31 feet; thence South 73°34'32" East, along said south right of way line, 104.40 feet; thence North 89°43'31" East along said south right of way line, 789.45 feet; thence South 75°58'59" East along said south right of

way line, 107.88 feet to the west right of way line of Eisenhower Drive; thence North 88°59'12" East, 90.00 feet to the east right of way line of Eisenhower Drive; thence North 01°00'48" West along said east right of way line 55.64 feet to the south right of way line of State Trunk Highway 167 (Mequon Road); thence North 89°31'18" East along said south right of way line and the north line of Lot 44 of Certified Survey Map No. 6552, 617.15 feet; thence South 79°10'06" East along said south right of way line and the north line of said Lot 44, 101.98 feet; thence North 89° 31'18" East along said south right of way line and the north line of Lot 45 of Certified Survey Map No. 6552, 200.00 feet; thence North 78°12" 42" East along said south right of way line and the north line of said Lot 45, 203.96 feet; thence North 89°31'18" East along said south right of way line and the north line of said Lot 45, 165.12 feet and the northeast corner of said Lot 45 and the East line of the West ½ of the Northeast ¼ of said Section 25; thence South 00°52'09" East along said East line of the West ½, 2582.40 feet to the southeast corner of the Southwest ¼ of the Northeast ¼ of said Section 25; thence South 00°50'36" East (South 02°10'15" East record) along the east line of the West ½ of the Southeast ¼ of said Section 25 and the east line of Lot 26 of Certified Survey Map No. 6275, 2580.48 feet to the southeast corner of said Lot 26 and the north right of way line of Donges Bay Road; thence South 89°21'16" West along said north right of way line, 553.70 feet to the east right of way line of Washington Drive; thence continuing South 89°21'16" West, 66.00 feet to the west right of way line of Washington Drive; thence continuing South 89°21'16" West along said north right of way line, 688.56 feet to the intersection of the north right of way line and the West line of the Southeast ¼ of said Section 25; thence South 89°28'28" West along said north right of way line, 113.00 feet to the east right of way line of Grant Drive; thence continuing South 89°27'41" West, 66.05 feet to the point of beginning.

Said Parcel containing 12,335,198 square feet (283.1772 acres gross)

AMENDMENT

WHEREAS, the Declaration of Restrictions and Covenants for Germantown Business Park TIF #4 was recorded in the Office of Register of Deeds for Washington County on February 23, 1999 as Document No. 815487; and,

WHEREAS, such Declaration of Restrictions was previously amended in part by an Amendment to Declaration of Restrictions and Covenants for the Germantown Business Park TIF #4 which was recorded in the Office of Register of Deeds for Washington County on April 23, 2009 as Document No. 1218277; and,

WHEREAS, such Declaration of Restrictions was previously amended in part by Amendment No. 2 to Declaration of Restrictions and Covenants for the Germantown Business Park TIF #4 which was recorded in the Office of Register of Deeds for Washington County on July 11, 2017 as Document No. 1341456; and

WHEREAS, Section 16 of the Declaration of Restrictions and Covenants allows for amendments to the same upon approval of the majority of the lot owners within the Business Park and also by the Village of Germantown;

NOW, THEREFORE, Pursuant to Section 16 of the Declaration of Restrictions and Covenants for Germantown Business Park TIF #4, the undersigned, being a majority of all lot owners in the Germantown Business Park and as representatives of the Village of Germantown, do hereby amend the Declaration of Restrictions and Covenants for Germantown Business Park TIF #4 to create section 9.5 which shall read as follows:

9.5 **SECURITY WALLS AND FENCES.** To maintain a consistent and high quality appearance of developed properties in the Business Park, the installation of security walls or fences is discouraged. When and where perimeter security is necessary, a security fence may be installed provided it is designed in such a manner as to create an attractive appearance to the public and compliment the architecture of the principal building(s) on

the subject property and does not detract from or compromise the overall appearance of the Business Park.

The type, style, design, dimensions, color and material composition, location, landscaping, method of installation, and other details of any proposed security fence shall require review and approval by the Village of Germantown Plan Commission in accordance with the Village's site plan review and approval procedures.

At a minimum, a proposed security fence shall meet the following requirements:

A. *Design, Dimensions, Materials.*

1. The height of a security fence shall not be less than four (4) feet and not more than ten (10) feet measured from the finished grade to the top of the highest horizontal rail or top of the pickets (whichever is higher). Vertical support rails or pillars may extend a maximum of six (6) inches above the height of the fence.
2. Security fences shall be constructed from a combination of: (1) solid pillars (vertical) or short solid wall segments (horizontal) comprised of stone, brick, decorative block or other masonry material; and (2) wrought iron, steel or other solid or tubular metal rails and pickets *(see photo examples attached).*
3. Solid wall sections (horizontal) shall not exceed a height of three (3) feet above the natural finished grade.
4. Support pillars (vertical) shall be a minimum of sixteen (16) inches wide and should not be spaced less than twelve (12) feet and no more than twenty-four (24) feet apart.
5. Long expanses of fence should be avoided where possible or offset and architecturally designed to prevent monotony.
6. Posts and rails must be placed on the inside of the fence so that they are not facing a street.
7. The use of wood, vinyl, plastic, galvanized metal, cable, wire, wire woven or other mesh fabric (e.g. "chain link") fence material is prohibited.
8. Security fences shall not be topped with or otherwise include barbed wire, razor wire, barbed tape concertina wire, electrified wire, or other similar material.
9. Access gates for pedestrian and vehicle ingress/egress shall be provided and integrated into the design of a security fence where deemed necessary by the Village to allow reasonable and adequate access by police, fire and emergency medical personnel, vehicles and equipment. Said personnel shall be provided the necessary keys, pass codes or other means necessary to gain free and unencumbered access at their discretion in the event of an emergency.
10. Vehicle access gates shall be design and located in a manner that will not result in vehicles standing, parking or loading from the adjacent public right-of-way.

B. *Landscaping.* Landscaping comprised of a mix of deciduous and evergreen trees and shrubs should be provided adjacent to the street-facing (out) side of the fence along public right-of-ways and all yards. Landscaping shall be installed adjacent to a security fence in either a continuous swath (not less than 6 feet in width) or intermittent "pockets" (not less than 15 sqft in area) of landscaping located and spaced in attractive groupings at intervals not less than twenty-four (24) feet apart along and adjacent to the security fence.

C. *Setback and Location.*

1. Where possible, security fences should be considered before and integrated into the design and layout of the principal buildings, parking areas, and access driveways.
2. Except for the provision in Section 3. below, the installation and location of security fences shall meet all applicable building setbacks for the subject property as set forth in Section 3.D. herein. *[Note: the minimum building setbacks in Section 3.D. are as follows:*
   (1) *Street/Front Yard:*
   Mequon Road ROW: *50' or edge of berm (whichever is closer)*
   Other Primary ROW: *75'* *(Donges Bay Road, FDL Avenue)*
   Internal roads: *30'*
   (2) *Side Yard:* *25'*
   (3) *Rear Yard:* *25'*
   (4) *Wetlands:* *as specified in Shoreland-Wetland Zoning Code*
   (5) *Navigable Water:* *as specified in Shoreland-Wetland Zoning Code]*
3. In the event a minimum setback set forth herein cannot be met, a reduction in the setback may be granted by the Village Board with a special use permit (i.e. conditional use permit) upon receiving a recommendation from the Plan Commission.
4. When and where a building is placed at the minimum building setback line, a security fence should be attached to or otherwise integrated into the building façade starting at the building corners in order to reduce the amount of fence required and provide the type of security required.

D. *Maintenance.* Property owners are responsible for maintaining all security fences in an attractive, neat, clean and safe condition and appearance, particularly the outward or street-facing side(s) of any security fence. Maintenance shall include (but not limited to): landscape maintenance as set forth herein; maintain proper drainage along, around and through such fencing; prohibiting the accumulation of trash or other similar items; maintain the appearance and structural integrity of all fence materials in good condition, free of rust, broken components, etc.

All remaining provisions of the Declaration of Restrictions and Covenants for Germantown Business Park TIF #4 shall remain in full force and effect unless and until amended or repealed pursuant to Section 16 of said Declaration.

IN WITNESS WHEREOF, the undersigned have hereunto set their hand as of the dates specified below.

[SIGNATURE PAGES FOLLOW]

COPY

1388683

RECORDED
August 19, 2015 10:40 AM
SHARON A MARTIN
REGISTER OF DEEDS
WASHINGTON COUNTY, WI
Recording Fee Paid: $30.00

AMENDMENT NO. 4 TO DECLARATION OF RESTRICTIONS AND COVENANTS FOR GERMANTOWN BUSINESS PARK TIF #4

Parcel Id Numbers:

GTNV251959, GTNV251960, GTNV251961, GTNV251967, GTNV251968, GTNV251972, GTNV251973, GTNV251976, GTNV251978, GTNV251979, GTNV251988, GTNV252963, GTNV252973, GTNV252974, GTNV252980, GTNV252984, GTNV253977, GTNV253978, GTNV253980, GTNV253981, GTNV253982, GTNV253983, GTNV253984, GTNV253985, GTNV253993, GTNV254273, GTNV254280, GTNV254281, GTNV254974, GTNV254975, GTNV254980, GTNV254981, GTNV254986, GTNV254987, GTNV361995, GTNV361996, GTNV362983, GTNV362986, GTNV362988, GTNV362989, GTNV362992, GTNV362993, and GTNV362994

17

Instrument Drafted by & Return To:
Village of Germantown
~~Brian C. Sajdak, Village Attorney~~
~~Wesolowski, Reidenbach & Sajdak~~
~~11402 W. Church St.~~ PO Box 337
~~Franklin, WI 53132~~ Germantown, WI
53022

For the following described land:

Being all of the West ½ of the Northeast ¼, of the West ½ of the Southeast ¼, the East ½ of the Southwest ¼, the Northwest ¼ of the Southwest ¼, the East ½ of the Northwest ¼ and part of the Southwest ¼ of the Southwest ¼ of Section 25, Township 9 North, Range 20 East; all of the North ½ of the Northwest ¼ and part of the Northwest ¼ of the Northeast ¼ of Section 36, Township 9 North, Range 20 East, in the Village of Germantown, Washington County, Wisconsin, more particularly described as follows:

Commencing at the Southwest corner of Section 25, Township 9 North, Range 20 East, also being the point of beginning; thence North 02°43'15" West along the west line of the SW ¼ of said Section 25, 2,648.50 feet to the West ¼ corner of said Section 25; thence North 88°21'41" East along the north line of the Southwest ¼ of said Section 25, 1,316.09 feet to the northeast corner of the Northwest ¼ of the Southwest ¼ of said Section 25; thence North 02°29'15" West along the west line of the East ½ of the Northwest ¼ of said Section 25, 2,649.17 feet to the northwest corner of the East ½ of the Northwest ¼ of said Section 25 and to a point on the centerline of Mequon Road; thence North 88°23'28" East along the north line of the Northwest ¼ of said Section 25 and along the centerline of Mequon Road, 1,322.70 feet to the North ¼ corner of said Section 25; thence North 88°11'21" East along the north line of the Northeast ¼ of said Section 25 and along the centerline of Mequon Road, 1,327.42 feet to the northeast corner of the West ½ of the Northeast ¼ of said Section 25; thence South 02°12'00" East along the east line of said West ½, 2,642.34 feet to the southeast corner of said West ½ and to the northeast corner of the West ½ of the Southeast ¼ of said Section 25; thence South 02°10'14" East along the east line of the West ½ of the Southeast ¼ of said Section 25, 2,640.33 feet to the southeast corner of said West ½ and to a point on the centerline of Donges Bay Road; thence South 88°01'20" West along the south line of said Southeast ¼ and along the centerline of Donges Bay Road 390.06 feet to the northeast corner of Certified Survey Map No. 278 (recorded in Volume 2 on Page 58 as Document No. 314198); thence South 32°31'20" West (recorded as S. 32°43'44" W.) along the

southeast line of said Certified Survey Map, 60.67 feet to the south right-of-way line of Donges Bay Road; thence South 35°58'20" West (recorded as S. 36°10'44" W.) along the southeast line, 502.75 feet to the east line of Lot 2 of Certified Survey Map No. 4324, (recorded in Volume 28 on Page 264 as Document No. 668027); thence South 35°36'02" West along said east line, 158.42 feet; thence South 30°59'19" West, 897.33 feet to the southeast corner of the North ½ of the Northwest ¼ of Section 36; thence South 88°11'44" West along the south line of said North ½, 2,621.31 feet to the southwest corner of said North ½; thence North 01°26'22" West along the west line of said Northwest ¼, 1,322.45 feet to the point of beginning.

Excepting those lands described in Volume 314 of Deeds on Page 368 as Document No. 241197. Said exception containing 5.50 acres of land.

Said parcel of land contains 487.0902 acres of land.

AMENDMENT

WHEREAS, the Declaration of Restrictions and Covenants for Germantown Business Park TIF #4 was recorded in the Office of Register of Deeds for Washington County on February 23, 1999 as Document No. 815487; and,

WHEREAS, such Declaration of Restrictions was previously amended in part by an Amendment to Declaration of Restrictions and Covenants for the Germantown Business Park TIF #4 which was recorded in the Office of Register of Deeds for Washington County on April 23, 2009 as Document No. 1218277; and,

WHEREAS, such Declaration of Restrictions was previously amended in part by Amendment No. 2 to Declaration of Restrictions and Covenants for the Germantown Business Park TIF #4 which was recorded in the Office of Register of Deeds for Washington County on July 11, 2013 as Document No. 1341456; and

WHEREAS, such Declaration of Restrictions was previously amended in part by Amendment No. 3 to Declaration of Restrictions and Covenants for the Germantown Business Park TIF #4, which applies only to lands within the Business Park, and which was recorded in the Office of the Register of Deeds for Washington County on July 1, 2015 as Document No. 1385207; and

WHEREAS, Section 16 of the Declaration of Restrictions and Covenants allows for amendments to the same upon approval of the majority of the lot owners within the Business Park and also by the Village of Germantown; and

WHEREAS, the Wisconsin Department of Transportation's planned reconstruction of Fond du Lac Avenue to consist of a roundabout at the intersection of Fond du Lac and Donges Bay and accompanying shift of the Fond du Lac ROW to the east which will negatively impact lands in TID 4 which abut the same;

NOW, THEREFORE, Pursuant to Section 16 of the Declaration of Restrictions and Covenants for Germantown Business Park TIF #4, the undersigned, being a majority of all lot owners in the Germantown Business Park and as representatives of the Village of Germantown, do hereby amend section 3.D. the Declaration of Restrictions and Covenants for Germantown Business Park TIF #4 to read as follows (NOTE: Additions are Underlined; Deleted text is ~~Struek-through~~):

3. **SITE RESTRICTIONS.**

D. *Building Setbacks.* No building, or part thereof (trash enclosures, overhangs, etc.) shall be located within the following distance of a property line:

- Front Yard (corner lots shall have two front yards)
  - Abutting Mequon Road ROW: 50' or the southerly edge of the berm lying along Mequon Road, whichever is greater
  - ~~Abutting other primary ROW (Donges Bay Rd, FDL Ave)~~ ~~75'~~
  - Abutting Donges Bay Rd 50'
  - Abutting ~~internal~~ all other street ROW 30'
- Side Yard 25'
- Rear Yard 25'
- From any wetland boundary 25'
- From any navigable waterway 75'

All remaining provisions of the Declaration of Restrictions and Covenants for Germantown Business Park TIF #4 shall remain in full force and effect unless and until amended or repealed pursuant to Section 16 of said Declaration.

IN WITNESS WHEREOF, the undersigned have hereunto set their hand as of the dates specified below.

[SIGNATURE PAGES FOLLOW]

STREET TREE
SPECIES RECOMMENDATIONS

This list is provided as a guide to some of the most appropiate trees for urban settings in USDA Hardiness Zone 5. There is no single perfect tree. These species have been selected for use in Germantown's demanding street tree situations. There is a much larger group of plants that would grow very well in Germantown and should be considered for other landscape uses. Before selecting any particular species or variety, each site should be evaluated as to: rooting space, soil texture, soil pH, drainage, exposure, overhead wires, and surrounding buildings. The most important thing to remember is to plant the right tree in the right place.

SMALL TREES(Under 30')

Suitable for tree lawns 3 feet wide, under wires, and/or box-outs.

COMMON NAME	GENUS & SPECIES	VARIETY
Crabapples	Malus sp.	Adams
		Indian Summer
		Prairie fire
		Proffessor Springer
		Profusion
		Red Barron
		Red Jewel
		Spring Snow
		Sugar Tyme
Hawthorn; Cockspur	Crataegus crus-galli	Inermis
" Washington	" phaenopyrum	
Lilac: Japanese Tree	Syringa reticulata	Ivory Silk
Magnolia	Magnolia Sp.	Dr. Merril
		Kobus
Maple; Amur	Acer ginnala	
" Tatarian	Acer tataricum	
Ironwood	Ostrya virginiana	

MEDIUM TREES(30' - 45')

Suitable for tree lawns 3 to 5 feet wide.

COMMON NAME	GENUS SPECIES	VARIETY
Alder; Black	Alnus ader	
Cherry; Sargent	Prunus sargentii	Accolade
		Columnar
Corktree; Amur	Phellodendron amurense	Macho
		Shademaster
Honeylocust; Imperial	Gleditsia triancanthos	Imperial
Horsechestnut; Ruby Red	Aesculus x carnea	Briotii
		O'Neill
" White	" hippocastanum	Baumanii
Maple; Hedge	Acer campestre	
Norway	" platanoides	Olmstead
Shantung	" truncatum	Norwegian
		Sunset
		Pacific Sunset
Pear; Callery	Pyrus calleryana	Aristocrat
		Autumn Blaze
		Bradford
		Chanticleer
		Redspire
		Whitehouse

TALL TREES(45'+)

Suitable for tree lawns at least 6 feet wide.

COMMON NAME	GENUS SPECIES	VARIETY
Ash; Green	Fraxinus pennsylvanica	Marshall
		Seedless
		Patmore
		Summit
" White	" americana	Autumn
		applause
		Autumn
		purple
		Skline
Baldcypress	Taxodium distichum	

Tall Trees (cont.)

COMMON NAME	GENUS SPECIES	VARIETY
Coffeetree; Kentucky	Gymnocladus dioicus	
Cucumbertree	Magnolia acuminata	
Elms	Ulmus sp.	Frontier
		Homestead
		Regal
		Sapporo Autumn Gold
		Urban
Ginkgo	Ginkgo biloba	Autumn Gold
		Lakeview
		Princeton Sentry
Hackberry	Celtis occidentalis	Prairie Pride
Honeylocust	Gleditsia triacanthos	Halka
		Moraine
		Shademaster
		Skyline
Katsura Tree	Cercdiphyllum japonicum	
Linden; American	Tilia americana	Redmond
" Littleleaf	" cordata	Chancellor
		Corinthian
		Fairview
		Glenleven
		Greenspire
" Silver	" tomentosa	Green Mountain
		Sterling
Maple; Freeman	Acer x freemanii	Armstrong
		Autumn Blaze
		Celebration
		Scarlet Sentinal
" Norway	" platanoides	Cleveland
		Columnar
		Deborah
		Emerald Lustre
		Emerald Queen
		Parkway

Tall Trees (cont.)

COMMON NAME	GENUS SPECIES	VARIETY
Maple Norway	Acer platanoides	Schwedler
		Summershade
		Super form
Oak; English	Quercus robur	Attention
		Fastigiate
		Skymaster
		Skyrocket
Planetree; London	Platanus x acerifolia	Bloodgood
Redwood; Dawn	Metasequoia glyptostroboide	
Zelkova; Japanese	Zelkova serrata	

UNDESIRABLE STREET TREES

Species	Comments
Beech-Fagus	too large
Birch, paper-Betula papyrifera	intolerant of stress
Catalpa-Catalpa speciosa	messy fruit
Cottonwood-Populus deltoides	Weak, messy cotton, too large
Elm; American-Ulmus americana	Disease
Siberian-Ulmus pumila	Weak wood
Fir-Abies sp.	Clearance problems
Horsechestnut-Aesculus sp.	Messy fruit
Locust-Black-Robinia pseudoacacia	Insects, borers on poor sites
Maple; Silver-Acer saccharinum	Weak wood, weak limb attachment
Sugar-Acer saccharum	Very untolerant of road salt
Box Elder-Acer negundo	Weak wook, weak limb attachment
Mulberry-Morus alba	Messy fruit
Pines-Pinus sp.	Clearance problems
Poplar-Lombardy & any variety	Weak wood, short lived
Russian Olive-Elaeagnus angustifolia	disease problems, weak wood
Sycamore-Platanus sp.	Too large, messy, disease prob.
Tree-of-Heaven-Ailanthus altissima	Weak wood
Spruce-Picea sp.	Clearance problems
Willow-Salix sp.	Too large, messy

RECOMMENDED PARK TREES

All trees from the Recommended Street Trees list can be used in the parks. This list is in addition to them.

DECIDUOUS TREES

Name/Species	Comments
Sugar Maple - Acer saccharum	needs a good site
Horsechestnut - Aesculus hippocastanum	accent plant, best in mulched bed due to messy fruit
Beech - Fagus sp.	site properly, large
Poplar sp. - Poplar sp.	use carefully and needs regular mtn., weak wooded
White Oak - Quercus alba	good site, chlorosis problem
Swamp White Oak - Quercus bicolor	site properly
Burr Oak - Quercus macrocarpa	hard to transplant

CONIFERS

Name/Species	Comments
*White Fir - Abies concolor	good replacement for blue spruce, site properly
*Juniper - Juniperus chinensis	upright form, good screen
-Iowa Juniper	
-Mountbatten Juniper	
Redcedar - Juniperus virginiana	upright form, good screen
-Silver Redcedar	
-Canaert Redcedar	
-Hill Dundee Juniper	
*Larch - Larix sp.	deciduous conifer, unique
-European - L. decidua	
-Japanese - L. kaempferi	
-Tamarack - L. laricina	native, not as dense
*Norway Spruce - Picea abies	good for massing, use instead of blue spruce

Conifers continued:	
*Black Hills Spruce - Picea glauca var. densata	good variety of white spruce
Bristlecone Pine - Pinus aristata	low slow grower, specimen plant
Austrian Pine - Pinus nigra	use sparingly (over used), problems in older plants
Macedonian Pine - Pinus puece	like white pine but slower growth
White Pine - Pinus strobus	site properly
Scots Pine - Pinus sylvestris	nice bark when older
Douglasfir - Pseudotsuga menziesii	well drained sites
*Arborvitae - Thuja occidentalis	good screen & accents
-Hetz Wintergreen	good central leader
-Holmstrup	
-Dark Green 'Nigra'	
-Emerald 'Smaragd'	good central leader
-Sudworth	
-Sunkist	gold color
-Techny	
* -Trautman	good central leader & color
* -Siberian 'Wareana'	

UNDESIRABLE PARK TREES

Name/Species	Comments
Balsam Fir - Abies balsamea	intolerant of city conditions
Boxelder - Acer negundo	weak wood, poor form
Silver maple - Acer saccharinum	weak wood & limb attachment
White Spruce - Picea glauca	poor form & problems, use Black Hills Spruce
Blue Spruce - Picea pungens	disease problems when older, some new varieties OK
Cottonwood - Populus deltoides	messy cotton, weak wood
Hemlock - Tsuga canadensis	needs protected sites
Red Oak - Quercus rubra	disease problem (oak wilt)
Willow - Salix sp.	messy, weak wood, short lived

815487

Village of Germantown ...Willkommen

Planning Department
Sigurd Strautmanis, Village Planner
N112 W17001 Mequon Road P.O. Box 337
Germantown, WI 53022-0337
(414) 250-4735 *direct line*
(414) 253-8255 *fax*

OUTDOOR LIGHTING GUIDELINES

To be used in preparing lighting plans as part of the Site Plan Review process.

As Germantown continues to grow, the proper design and maintenance of outdoor lighting is increasingly important. Continued residential, commercial and industrial growth has increased evening activity that requires nighttime illumination: residential traffic has increased, offices remain open later, industrial facilities have second and third shifts and services such as gas stations, grocery stores and ATM's remain open 24 hours a day. Well planned lighting can help prevent accidents, deter crime and maintain an attractive community environment. Poorly designed lighting can cause accidents and be a detriment to a community's image. Germantown desires to balance the need for increased lighting while maintaining the semi-rural character of the Village.

These guidelines provide the necessary guidance to meet Village goals. Rather than being overly prescriptive, they are performance-based, giving the designer maximum flexibility in developing acceptable lighting solutions.

PURPOSE

These guidelines serve as a benchmark for reviewing lighting plans submitted to the Plan Commission. The goal of these guidelines is to:

- Reinforce a positive community identity by promoting continuity within the Village's commercial and industrial districts;
- Ensure the provision of adequate lighting to protect the public from criminal activity;
- Facilitate safe movement by providing adequate levels of illumination for drivers and pedestrians;
- Eliminate excessive and potentially dangerous glare caused by unshielded or poorly aimed light sources.

APPLICABILITY

These guidelines shall apply to all new construction in Germantown's commercial, industrial, institutional and multi-family zoning districts. Additions and/or upgrades to existing lighting schemes (more than two fixtures) shall require Plan Commission review and shall be required to comply with these guidelines. Minor upgrades of 25% or less may be approved through the Building Inspector or Village Planner. Glare control shall apply to all zoning districts.

Holiday lighting between the months of November and February shall be exempt from these guidelines, although holiday decorations should not interfere with the safe operation of motor vehicles (block visibility at intersections, cause excessive glare to passing motorists, etc.).

Site Plan Review? All lighting plans must be approved by the Plan Commission. For a detailed checklist of submission requirements and for more information on applying to the Plan Commission for site plan approval, see the **SITE PLAN REVIEW** information packet or contact the Village Planner.

GENERAL GUIDELINES FOR ALL LIGHTING DESIGNS

A. *Control of Nuisance/Disabling Glare*

No lighting scheme shall cause unnecessary or disabling glare to motorists or pedestrians and all reasonable means shall be taken to prevent the projection of light onto neighboring properties.

- Glare control should be accomplished primarily through the design and selection of appropriate lighting equipment. Only after technical means are exhausted, may a developer substitute vegetative screening, fencing or other indirect means to reduce glare and light trespass;
- No fixture with an output of more than 2,000 lumens (approximately equivalent to a 150-watt incandescent bulb) shall be unshielded;
- Luminaires with adjustable heads must be installed with fixtures perpendicular to the ground plane (0° tilt).

B. *Color*

Color rendition, or the effect of a light source on the appearance of objects compared to their appearance under normal daylight conditions, is greatly affected by the type of lamp used. The Village promotes natural color rendition, or "white" light from artificial light sources.

- Generally, metal halide lamps are the most energy efficient of the white light sources, and thus the most desirable.

C. *Hours of Operation*

- Outdoor lights should be used only when necessary.
- Hours of operation shall be limited to the hours of darkness between 6:00 AM and 11:00 PM, except under the following conditions:
  - Commercial and industrial uses which remain open after 11:00 PM are permitted to keep outdoor lighting on up to ½ hour after employees leave;
  - Approved security lighting may remain on after 11:00 PM;
  - Recreational activities that continue past 11:00 PM may remain lit ½ hour past the conclusion of the event. Ballfield lights should be turned off within 15 minutes of the last game;
  - On premise advertising signs may remain on after 11:00 PM if only if open for business.
- The Plan Commission may require that lighting be controlled by a timing device or photo-electric control if concerns regarding compliance arise.

D. *Installation*

All outdoor lighting must meet applicable Village Codes and should be permanently installed. In addition, the following criteria should be met:

- Electrical feeds to lighting standards should run underground, not overhead;

- Lighting standards set in the perimeter of parking areas should be placed a minimum of five feet outside paved lot areas or five feet behind tire-stops;

- Lighting standards in the middle of parking areas should be mounted on concrete pedestals at least 30" high, or protected by other acceptable means;

E. Maintenance

All exterior lighting shall be properly maintained and remain in good working order so as to meet the objectives of these guidelines.

GUIDELINES FOR SPECIFIC LIGHTING APPLICATIONS

To promote design innovation and creativity, the Plan Commission may consider designs/lighting schemes not outlined in these guidelines, provided they do not compromise the intent presented herein (higher poles, historic fixtures, etc.).

A. Open Parking Lot Lighting

Performance Guidelines: Parking lots should be designed to provide the minimum lighting necessary to facilitate the safe movement of pedestrians and vehicles within parking areas and prevent vandalism, auto theft and personal crime. Lots should be uniformly lit to prevent "dark spots," shadows or excessive contrast.

Illumination Levels: Parking lots should be lit to meet current standards issued by the Illuminating Engineering Society of North America (IESNA). The following general guidelines should be used:

	Highest Activity Levels	Medium Activity Levels	Low Activity Levels
Typical activities	fast food restaurants gas stations convenience stores cultural/institutional facilities	community shopping centers hospital parking areas educational facilities banks, other services	local merchants industrial employee parking multi-family parking lots
Average maintained illumination levels	2.0 - 3.0 footcandles	1.0 - 2.0 footcandles	0.5 - 1.0 footcandles
Uniformity ratios	3:1 average/minimum (.66 f.c. minimum) 12:1 maximum/minimum (8.0 f.c. maximum)	3:1 average/minimum (.33 f.c. minimum) 12:1 maximum/minimum (4.0 f.c. maximum)	4:1 average/minimum (.125 f.c. minimum) 15:1 maximum/minimum (2.5 f.c. maximum)
Maximum light at property boundaries	0.5 footcandles	0.5 footcandles	0.5 footcandles

Luminaire Design: Pole fixtures may not exceed the height of the principal structure, or 25', whichever is less. Generally, "cobra head" fixtures are undesirable, although some designs with fully shielded bulbs may be acceptable. All fixtures should be of a full cut-off design, including wall mounted units.

B. Security Lighting

Performance Guidelines: Security lighting shall be designed to facilitate detection of intruders and risks to personal safety. Security lighting designed to create a sense of occupancy in buildings shall use the minimum light necessary to accomplish the task.

- To the extent that a designated area is illuminated by lighting for other purposes, independent security lighting shall be discouraged.
- Where security lighting is intended to light a perimeter such as a fence line, motion sensors should be used.

Illumination Levels: Security lighting should meet current standards issued by the Illuminating Engineering Society of North America (IESNA). The following general guidelines should be used:

Application	Light Level Needed
Active building entrances	5.0 footcandles max.
Infrequently used entrances	0.5 - 1.0 footcandles
Building grounds	0.5 - 1.0 footcandles
Industrial storage yards	0.5 - 1.0 footcandles
ATM	10 footcandles within 5' of ATM, then 2.0 f.c. for 50' surrounding machine, including parking area.

Luminaire Design: Full cut-off fixtures shall be used. Fixtures shall be shielded and aimed so that light is directed only to designated areas. Bare bulb flood lights shall not be used for security lighting.

C. *Building/Landscape Accent Lighting*

Performance Guidelines: Accent lighting can be used to highlight significant architectural or landscape features where approved by the Plan Commission. "Washing" a building in light should be avoided. All fixtures should be carefully aimed to direct light only where needed.

Illumination Levels: The maximum illumination on any vertical wall surface or angular roof surface shall not exceed 2.5 footcandles. Light levels shall be limited to 0.1 footcandle at the roofline and exterior corners, so as to prevent light trespass and "skyglow."

Luminaire Design: Full cut-off fixtures shall be used. Where practical, lights should be mounted to shine downward, rather than up onto buildings and landscape features. Where fixtures are used to "uplight" trees and other landscape features, they should be fully shielded.

D. *Sign Lighting*

Performance Guidelines: External lighting of signs is preferred, however, internally lit signs are allowed. Internally lit signs should not become major sources of light in their own right. To this end, light letters and logos on dark backgrounds is preferred.

Illumination Levels: The average illumination on the surface of a sign shall not exceed 3.0 footcandles.

Luminaire Design: Fully shielded lights should be used and should shine downward on the sign where possible. The light source of any sign shall not be directly visible from the street or any adjacent properties (no bare bulbs). Flourescent tubes used for internal lighting should be at least 4 inches from the translucent surface material and should be spaced to provide a maximum uniformity ratio of 2:1.

DEFINITIONS/EXAMPLES

Definitions

candela: a unit of luminous intensity.

cutoff: the point at which all light rays emitted from a light source are completely eliminated at a specific angle above the ground.

cutoff fixture: a lighting assembly with shields, reflectors or refractor panels that direct and cut off light at angles less than 90 degrees.

efficacy: the ability of a lighting system to produce a desired result.

fixture: the assembly that holds the lamp in a lighting system. It includes the housing, reflectors, ballast and attachment parts.

footcandle: a unit of illumination produced on a surface, all points of which are one foot from a uniform point source of one candela.

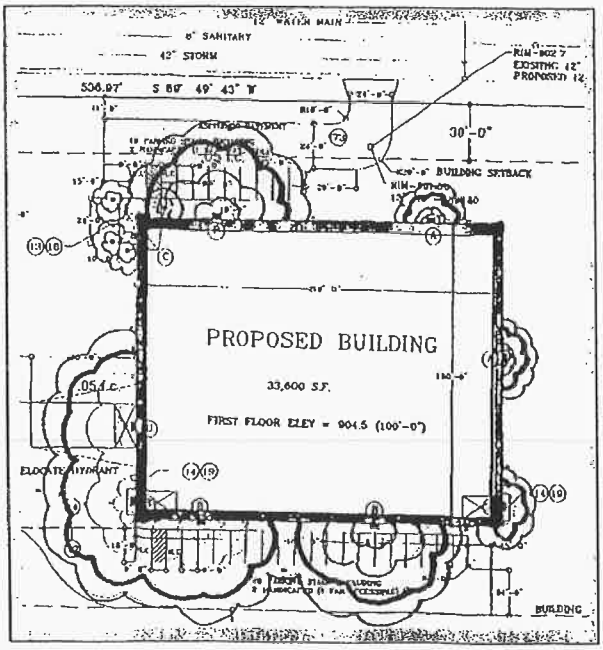
glare: light emitting from a luminaire at an intensity great enough to reduce a viewers' ability to see, and in extreme cases, causing momentary blindness.

light trespass: light falling where it is not desired, e.g. beyond property boundaries, toward the sky, etc.; light spillover.

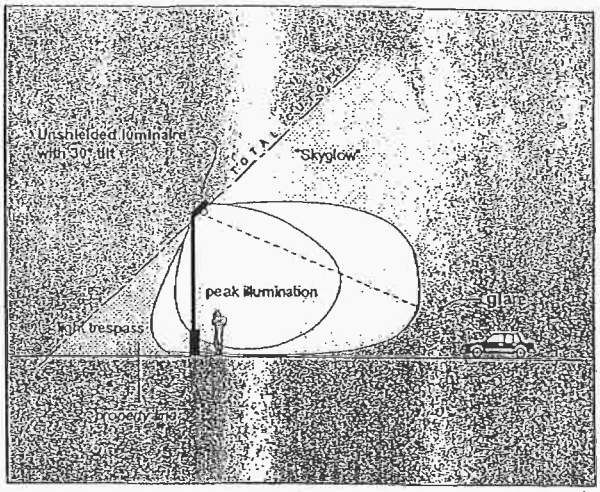
luminaire: the complete lighting unit, including lamp and fixture.

skyglow: a phenomenon caused by artificial light shining into the atmosphere, resulting in a brightening of the night sky.

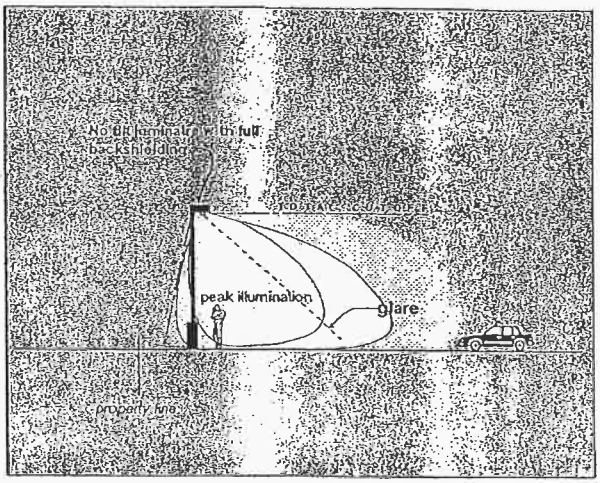
Lighting Plan Example



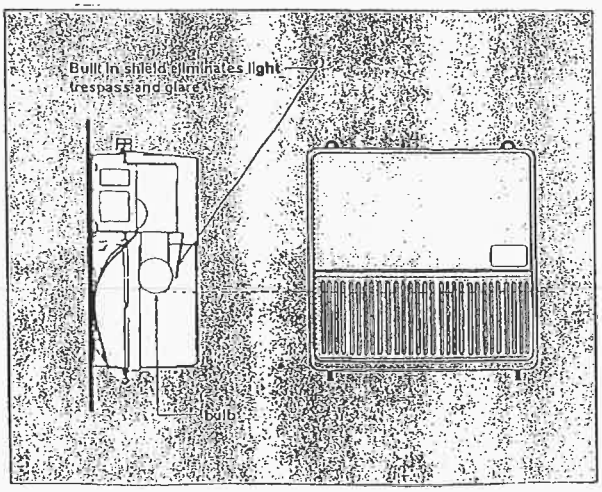
Unshielded Luminaire Causing Glare



Full Cutoff Luminaire



Wall Mounted Full Cutoff Luminaire



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ORDINANCE NO. 3-98

Creating Section 17.46 (14) of the Municipal Code of Ordinances, Village of Germantown, Wisconsin, Methodology for Measuring Sign Area

THE VILLAGE BOARD OF THE VILLAGE OF GERMANTOWN, WASHINGTON COUNTY, WISCONSIN, ORDAINS AS FOLLOWS:

SECTION 1. The following Section of the Village Code of Ordinances of the Village of Germantown is hereby created to provide as follows:

SECTION 17.46 SIGNS.

(14) METHODOLOGY FOR MEASURING SIGN AREA. The area of a sign shall be determined as follows:

(a) The height multiplied by the width of any sign cabinet, fixture or placard used to convey any words, letters, figures, numerals, phrases, sentences, emblems or logos to the public.

(b) Where more than one cabinet, fixture or placard is used, the areas shall be measured by drawing a rectangle enclosing the entire perimeter of all cabinets and/or fixtures.

(c) Where no cabinet or fixture is used (e.g., individual three-dimensional letters or symbols attached directly to a wall), the area shall be measured by drawing a single rectangular box around the extreme limits of the advertising message.

(d) Decoration, framing and other non-structural embellishments shall not be included in the sign area, provided that no advertising copy or graphics are contained on such embellishments. The total area of the sign structure, including any embellishments, may not exceed twice the area of the sign or 160 square feet, whichever is greater.

(e) The permit fee shall be based on the area of the entire sign structure.

SECTION 2. This ordinance shall take effect and be in full force from and after its adoption and publication.

Introduced by: Trustee James Brzezinski

Adopted: February 2, 1998

Vote: Ayes: Brzezinski, Ewert, Johnson, Kempinski, Lalk, Stauffacher, Stone, Vento, Hargan

Nays: None

Ayes: 9 Nays: 0

Charles J. Hargan, Village President

APPROVED AS TO LEGALITY:

John Fuchs, Attorney

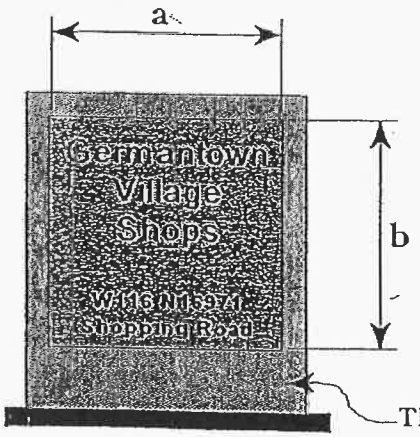
Published: DeSanis
February 12, 1998

ATTEST:

Jane A. Wilms, CMC/AAE; Village Clerk

DISCUSSION

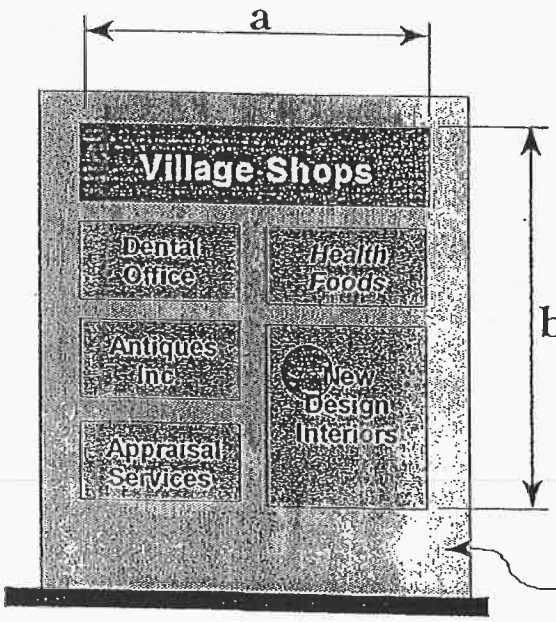
The way a sign would be measured with this methodology is as follows:



Sign Area = (a) x (b)

The total area of the sign structure may not exceed 2 times the sign area.

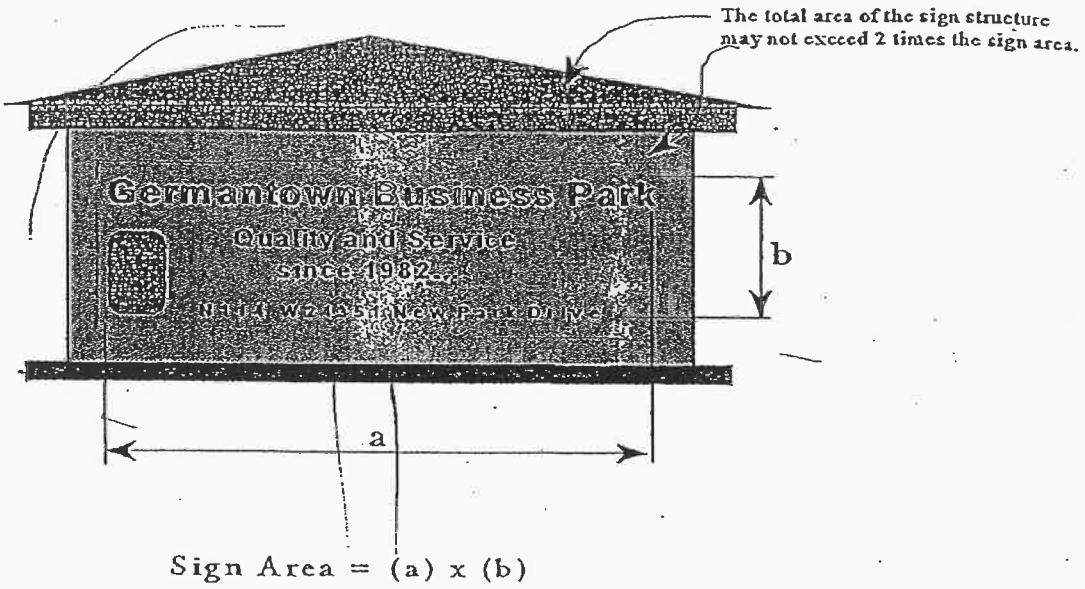
In the event that a sign contains more than one cabinet or panel, the area would be measured by drawing a box around the perimeter of all cabinets and fixtures.



Sign Area = (a) x (b)

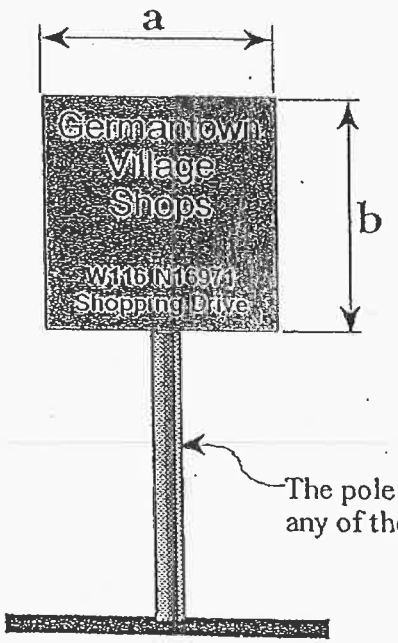
The total area of the sign structure may not exceed 2 times the sign area.

If the sign does not have an obvious or defined cabinet that can be easily measured, then the sign area is measured by drawing a box around the extreme limits of the words or logo of the sign:



Sign Area = (a) x (b)

Any structural elements used to elevate a sign are not included in the calculations. The total height is dictated by Code.



Sign Area = (a) x (b)

SITE PLAN REVIEW

1/8/24 Plan Commission Meeting

Midwest Products Inc.

Village Staff Report & Recommendation **Germantown, Wisconsin**

Summary

Adam Hertel, American Architecture Group, agent for Washington Drive LLC, property owner and Midwest Products Inc., is requesting approval of site development & building plans for a 52,038 sqft manufacturing & warehouse facility located on a 4.6-acre parcel located on Washington Drive in the Germantown Business Park (TID4).

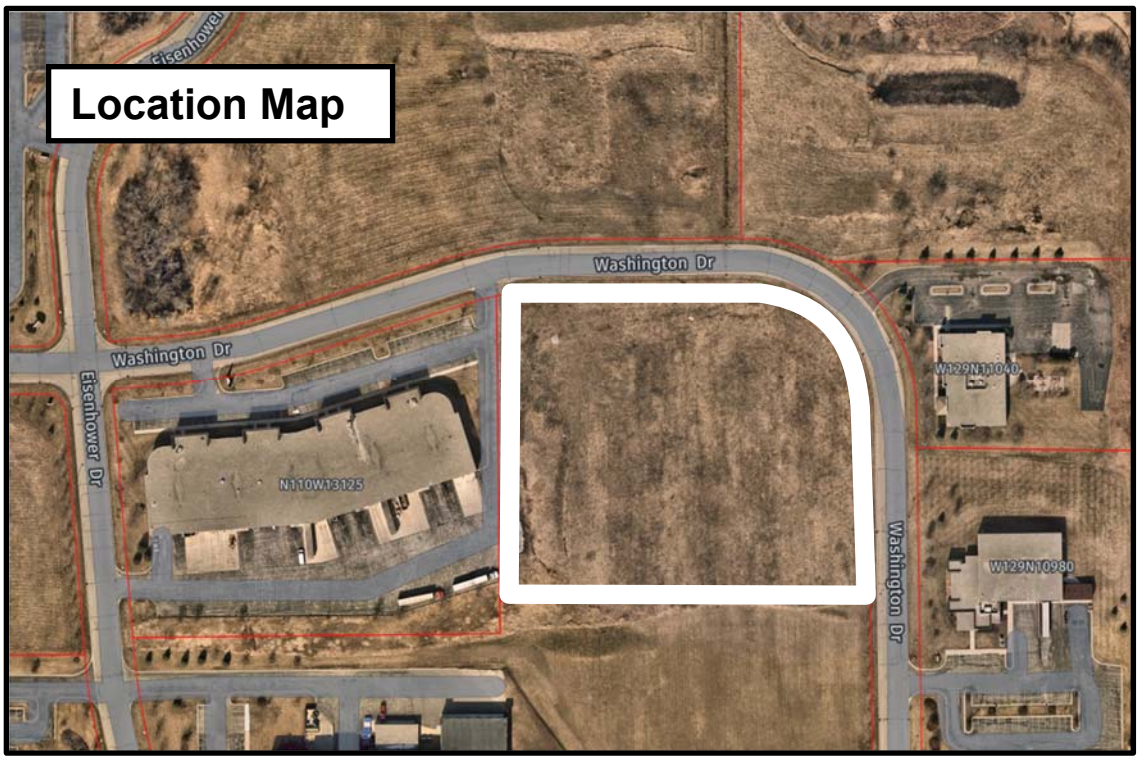
Property Location: Washington Drive (Lot 8 in Germantown Business Park)

Applicant/ Property Owner:

Adam Hertel	Jesse Mack
American Architectural Group	Midwest Products Inc.
3350 South River Road	W194N11665 McCormick Dr
West Bend, WI	Germantown, WI

Current Zoning: M-1: Limited Industrial

Adjacent Land Uses		Zoning
North	Industrial	M-1
South	Industrial	M-1
East	Industrial	M-1
West	Industrial	M-1



Background

Adam Hertel, American Architecture Group, agent for Washington Drive LLC, property owner and Midwest Products Inc., is requesting approval of site development & building plans for a 52,038 sqft manufacturing & warehouse facility located on a 4.6-acre parcel located on Washington Drive in the Germantown Business Park (TID4).

Midwest Products, Inc. started in 1983 as a small home embroidery business called Midwest Embroidery. It grew into a large embroidery company doing contract embroidery for companies such as McDonalds, Coca-Cola, Briggs and Stratton, and even the Olympic Games. In 1998, the HoopMaster was patented and manufactured under the new company name, Midwest Products, Inc. The HoopMaster was so well received within the embroidery industry that Midwest Products, Inc. expanded in 2004 to a 17,000 square foot facility in the Germantown Industrial Park. Today, HoopMaster is the #1 selling commercial embroidery hooping system in the world. Midwest Products, Inc. manufactures parts for the HoopMaster and employs approximately 50 employees. Midwest Products Inc. will be relocating from the Industrial Park to the Business Park.
(you can find additional information about HoopMaster and Midwest Products Inc. at: https://hoopmaster.com)

Proposal

As indicated in the November 13 statement of design intent, the proposed development includes an initial 60,000 sqft building on a 4.6-acre site with the following features:

- 52,038 sqft building w/ 24’ building height (w/ up to 20,000 sqft future addition)
  - 44,038 sqft manufacturing & shipping/receiving
  - 8,000 sqft office
  - Manufacturing: Insulated pre-cast wall panels 20’ & 24’ wall height w/ smooth texture, horizontal & vertical reveals
  - Office: Hardie Smartside panel siding, longboard siding and utility brick
  - Two-tone gray color palette
  - Aluminum-framed anodized windows & door system and aluminum awning system @ office
- Paved curb & gutter parking area w/ 63 vehicle parking stalls (2 ADA compliant)
- Four (4) 9’ x 9’ overhead door loading docks w/ ramp
- Five (5) 12’ x 12’ overhead door

Parking, Access & Traffic Circulation

Access will be provided to/from Washington Drive by one (1) driveway that will serve both the 63 stall parking area on the east side of the building and the shipping/receiving area. The Village’s parking guidelines recommend 116 parking stalls. However, the Business Park covenants are more flexible and allow for excluding warehouse space, lobbies, breakrooms, etc. from calculating the number of parking stalls required. The covenants require that the minimum number of stalls be equal to or greater than the number of employees plus visitor parking. In this case, Midwest Products has 30 full-time employees and 10-15 part-time/seasonal employees. The number of stalls proposed exceeds this amount with an additional 18-23 visitor stalls.

Storm Water Management.
A total of 99,005 sqft (2.3 acres) of impervious surfaces are proposed as part of development or 49.3% of the total 4.6-acre site leaving 50.7% in open/green space. Stormwater facilities include storm sewer, roof drains and grading to convey run-off from the building and parking area to on-site catch basins and storm sewer located at the southeast corner of the property to a proposed manhole in Washington Drive. Run-off is conveyed to the regional storm basin located further south on Washington Drive in the Business Park.

Landscaping & Buffering.
Landscaping is proposed along the perimeter of the parking area and street trees along Washington Drive, within the parking area, and foundation plantings along the north, east and south sides of the building. Plantings include a variety of deciduous and evergreen trees, deciduous and evergreen shrubs (see Sheet C1.06).

Lighting. Exterior lighting of the site and building includes:
- (11) 14W & 37W LED full cut-off building-mounted fixtures at a height of 9' (man doors) and 14' (loading dock doors);
- (7) 96W LED cut-off style pole-mounted fixtures mounted at 23' on poles within and around the perimeter of the shipping/receiving area and parking area

Signage. A monument sign "placeholder" is shown on the east elevation of the building. Details for any signage will be provided as part of separate and future sign permit applications.

Staff Comments
Community Development: Planning & Zoning
Covenants for the Germantown Business Park dictate that building architecture and materials be long-lasting, high quality, diverse, and use architectural devices such as pilasters, reveals, and material changes to break up buildings mass. Earthtone colors are encouraged over bright and primary colors. While the office component of the proposed building appears to satisfy most of these requirements, the manufacturing (and largest) component of the proposed building does not necessarily achieve the same requirements… particularly the north and east elevations. The Plan Commission should focus on the architecture and decide if the standards of the Business Park are being met and, if not, provide guidance on how to enhance the appearance. Staff does not feel that panel reveals and a two-tone color palette alone are sufficient to meet the Business Park architectural requirements.

Staff is concerned that in light of the landscaping requirements of the Business Park the landscape plan is insufficient as proposed. First, the Village's street tree requirement in the Business Park is 1 deciduous street tree with a minimum 3" caliper be installed every 25 feet of road frontage). In this case, a minimum of thirty-four (34) street trees (i.e. deciduous canopy) are required along Washington Drive (for 842 feet of frontage). The landscape plan proposes a total of (5) deciduous street trees and (6) ornamental trees along Washington Drive.

Also, the Business Park covenants require/recommend that employee parking and loading areas be located on the side or rear yards of a site with only visitor parking in

the front yard. Given that the parcel is a double-frontage lot located on an inside curve, doing so is problematic. So, flexibility needs to be allowed for this parcel in terms of parking lot and loading dock location. With that said, the covenants also require the perimeter of parking areas to be buffered or screened from the public view. Unfortunately, the type and amount of plantings proposed around the perimeter are also inadequate to achieve this requirement (see also comments from Village Forester below). The Developer should use other sites in the Business Park as examples to follow with respect to how to achieve compliance with the Business Park covenants for parking lot screening and street tree installation.

Given the above, Staff recommends additional street trees (deciduous vs. ornamental) and additional plantings around the parking area perimeter, driveway entrance and front entry of the building be installed to meet the Business Park requirements. Good examples of how this can be achieved are found throughout the park, including the overflow parking lot for the Ellsworth facility at the southwest corner of the Eisenhower Drive @ Washington Drive intersection (as an example of street trees and parking lot perimeter).

A revised landscape plan (including a revised plant list with installation sizes meeting the minimum requirements) shall be prepared and submitted for review and approval by Village Staff prior to issuance of a building permit.

No roof plan has been provided showing what, if any, roof-mounted mechanicals and any other roof-mounted equipment is proposed above the office or manufacturing components of the building. As required by the Germantown Business Park covenants, all roof-mounted equipment shall be architecturally screened. A proposed roof plan showing all roof mounted equipment and screening shall be submitted to the Village Planner (or Plan Commission if determined necessary by the Village Planner) for review and approval prior to build out construction and occupancy.

Finally, the building elevations show a wall-mounted sign placeholder on the east elevation of the building. Wall mounted signage is not permitted in the Business Park; only monument signage is allowed. All exterior signage, including on-site direction signs and temporary signs, require a permit or approval from the Village prior to installation.

Village Forester

With respect to the landscaping plan, the Village Forester provides the following comments and recommendations:

1. Need to identify the number, species, size, and existing condition of the proposed tree removals;
2. Include additional street trees, spaced every 25’ on center, along public right-of-way per Germantown Business Park covenants.
3. Increase minimum caliper size of landscape deciduous trees to 3” caliper and all evergreen trees to 6’ height;
4. The driveway entrance in the southeast corner needs additional trees on either side of the drive spaced every 25’ on center;
5. The Pfitzer Junipers proposed for the parking lot screening may not grow to a sufficient height to provide the required screening between the parking lot and adjacent roadway along the entire perimeter. Additional and different plantings are needed;
6. Recommended alternatives to (6) proposed Autumn Blaze Maples include: (seedless) Kentucky Coffeetree, Common Hackberry, Swamp White Oak, Tuliptree;
7. A revised landscape plan should be provided that also includes detailed tree planting specifications.

Community Development: Inspection Services
State agency (DSPS) approved plans and a $20,000 occupancy bond are required by Inspection Services at the time of building permit application. The Village of Germantown is an authorized delegated agent of DSPS to provide all commercial plan review and inspection services through SAFEBuilt of WI and the Village of Germantown.

Public Works/ Village Engineer/Village Surveyor
The Village Engineer, Public Works Department and Utility staff have identified several technical issues and plan revisions that need to be resolved or otherwise addressed by the Developer prior to commencing construction activities and issuance of building permits. Nonetheless, Staff is recommending conditional approval of the site development and building plans subject to all the outstanding items and issues identified in the following review memos being resolved and reflected in additional information and/or revised plans submitted to Staff for further review, comment and approval prior to commencing any site construction or issuance of building permits (excluding early start site preparation and footing and foundation installation):

- January 3, 2024, memo from Kevin Driscoll, Village Engineer

Fire & Police Departments
No comment. Previous concerns have been incorporated into the latest plans.

VILLAGE STAFF RECOMMENDATIONS

APPROVE the site development and building plans submitted by Midwest Products Inc. for a 52,038 sqft manufacturing & warehouse facility located on the 4.6-acre parcel located on Washington Drive in the Germantown Business Park subject to the following conditions:

1. This approval is for the various plan sheets that comprise the site plan set as noted below and is subject to compliance with all the conditions and requirements set forth herein and subsequently adopted and/or revised by the Plan Commission. Approval is granted for the following unless superseded by subsequent plan sheets approved by Village Staff pursuant to revisions required herein and/or by the Plan Commission:
   a. *Architectural plans dated November 13, 2023;*
   b. *Civil Engineering plans dated November 13, 2023;*
   c. *Landscaping plans dated November 13, 2023;*
   d. *Lighting plans (photometric plan) dated November 13, 2023;*

   If revised plan sheets are necessary, each revised sheet shall contain the date of said revision clearly stamped in the lower right corner.

2. All landscaping, screening, grading, and paving improvements shown on the approved site plans shall be installed as proposed prior to issuance of an

occupancy permit unless a cash bond or letter of credit in an amount equal to 120 percent of the estimated installation and material costs reviewed and approved by the Village is submitted to the Village as necessary to ensure that installation of the proposed features and improvements will be completed within one (1) year after issuance of the occupancy permit for the shell building.

3. All exterior doors (except primary entrance) shall be clearly marked with reflective 5” or larger letters/numbers to aid emergency personnel access as required by the Police Department.

4. All outstanding items and issues identified by Village Staff in the following review memos shall be resolved and reflected in additional information and/or revised plans submitted to Staff for further review, comment, and approval prior to commencing construction or issuance of building permits (excluding “early start” site clearing and footing/foundation work approved by the Village and/or WI DSPS):
   a. January 3, 2024 memo from Kevin Driscoll, PE, Village Engineer

5. State agency (DSPS) approved plans and a $20,000 occupancy bond are required by Inspection Services at the time of building permit application. The Village of Germantown is an authorized delegated agent of DSPS to provide all commercial plan review and inspection services through SAFEBuilt of WI and the Village of Germantown.

6. No roof plan has been provided showing what, if any, roof-mounted mechanicals, and any other roof-mounted equipment is proposed. As required by the Germantown Business Park covenants, all roof-mounted equipment shall be architecturally screened. A proposed roof plan showing all roof mounted equipment and screening shall be submitted to Village Staff (or Plan Commission if determined necessary by Village Staff) for review and approval prior to issuance of a building permit.

7. Wall mounted signage is not permitted in the Business Park; only monument signage is allowed. All exterior signage, including on-site direction signs and temporary signs, require a permit or approval from the Village prior to installation.

8. Additional street trees (deciduous vs. ornamental) in an amount equal and planting location equal to 1 tree per 25 feet of street frontage (34 trees) and additional plantings shall be installed around the parking area perimeter, at the driveway entrance on Washington Drive, at the buildings primary entrance to meet the Germantown Business Park covenant requirements.

9. A revised landscape plan (including a revised plant list with installation sizes meeting the minimum requirements) addressing the comments and recommendations of the Village Forester shall be prepared and submitted for review and approval by Village Staff prior to issuance of a building permit.

10. The minimum planting size requirements in the Germantown Business Park covenants require 3” caliper for deciduous canopy and ornamental trees; minimum 6’ height for all evergreen trees; and 5 gal. for all shrubs. The Plant List on Sheet C1.06 of the landscape plan shall be revised to include these minimum requirements for planting at the time of installation.

11. The building architecture has insufficient articulation and/or other architectural and material features necessary to meet the architectural requirements in the Germantown Business Park covenants. Additional reveals, articulation, materials and/or textures should be included in the design. Revised elevation plans shall be prepared and submitted for review and approval by the Plan Commission prior to issuance of a building permit (serving as thew Architectural Review Board for the Village and Germantown Business Park).

12. Right-of-way permits are required for any/all construction conducted in the public right-of-way for Washington Drive. Contact the Public Works Department/Highway Superintendent for permit applications and submittal requirements.

Engineering Department Memorandum

To: **Jeff Retzlaff**

From: **Kevin Driscoll, P.E.**

Date: **January 3, 2024**

Re: **Planning Commission Item Review – Midwest Products, GTNV 25979 – Washington Drive**

Items Reviewed:

1. Civil Plan Set Dated: 11-13-2023

General Comments:

1. Please respond to each item below. **A written response addressing each item shall be included in your submittal**.
2. The submitted plans have been reviewed for general conformance with State and Village design guidelines. Additional comments could arise as a result of the plan completion and modifications. The items listed below will need to be fully resolved before the Engineering Dept. can recommend a formal approval of the plans and permit for construction.
3. If this project disturbs over one area it will require a WRAPP/NOI from the DNR. Please submit a copy of the approved permit prior to final approval.
4. As-builts prepared to Village standards shall be prepared and provided to the Village post-construction (for all applicable items).
5. A professional engineer's original seal is to be affixed, signed and dated on the final set of construction plans.
6. Utility permits and permits for work within the ROW are required. Contact the Village engineering department to obtain permits.
7. As a guide to the review response: Items in *italics* are resolved or acknowledged, items in regular font are to be addressed yet, items in **Bold** are additional feedback to remaining original comment.
8. Please provide a summary letter showing how the stormwater management requirements for the site are being met. Reference the previous regional stormwater management plan for TID#4, planned CN for the site and actual CN for the site.
9. Please provide storm sewer calculations

Waste Water Utility Comments

1. Provide a sampling manhole meeting the Village requirements.

C1.02 Proposed Site Plan

1. Provide a site data table showing total lot size, existing impervious, proposed impervious and disturbed area.
2. Provide ADA ramps with truncated domes at the ADA parking.

1. Recommend evaluating turn movements for the loading dock area. There does not appear to be adequate room to back in or pull out if more than 1 dock is in use.

C1.03 Erosion Control Plan

1. Add silt fence along Washington Ave.
2. Add a temporary sediment basin at the southeast corner of the site to collect construction site sediment prior to discharging to the Village's regional stormwater basin.
3. File Erosion Control Permit with the Village.

C1.05 Utility Plan

1. Clarify how the building roof drain is drained. Show roof drain discharges to grass/vegetation and is consistent with the Declaration of Restrictions and Covenants document 815478, dated 2/23/1999.
2. Prefer a connection to an existing manhole when possible, with 18-inch wall section between pipes. Provide a detail for the connection consistent with the Development Handbook. Reference as-builts. For 30-inch dia. concrete pipe, use reinforced concrete collar to match materials. For plastic pipe, use non-flexible coupling to match materials. Provide submittals for all materials to Engineering@Germantownwi.gov for review to and approval prior to construction. Notify Engineering Department at 262-250-4720 at least 48 hours in advance to observe connections prior to slurry backfill. Complete sawcuts and road restoration consistent with Development Handbook, match existing pavement thickness in kind.

Village of Germantown ...Willkommen

Fee must accompany application
- ☐ $700 Minor Addition
- ☐ $1,240 Construction <10,000 SF
- ☒ $2,095 Construction 10,000 SF to 50,000
- ☐ $3,460 Industrial Construction >50,000 SF
- ☐ $3,460 Commercial Construction >50,000
- ☐ $200 Plan Commission Consultation
- ☒ $125 Fire Department Plan Review

PAID $2,220 DATE 11/13/2023

SITE PLAN REVIEW APPLICATION

Pursuant to Section 17.43 of the Municipal Code

Please read and complete this application carefully. **All applications must be signed and dated.**

1 APPLICANT OR AGENT

Adam Hertel
American Architectural Group
3350 South River Road
West Bend, WI 53095

Phone (262) 334-3811
E-Mail adam@teamaag.net

PROPERTY OWNER

Jesse Mack
Midwest Products, Inc
W194 N11665 McCormick Drive
Germantown, WI 53022

Phone (262) 257-0930
E-Mail jesse@hoopmaster.com

2 PROPERTY ADDRESS

Washington Drive
Germantown, WI 53022

3 NEIGHBORING USES – Specify name and type of use, e.g. Enviro Tech – Industrial, Smith – Residential, etc.

North	South	East	West
Vacant	Krenz & Company - Industrial	American Enterprises International - Industrial	Multi-Use Building - Industrial

4 READ AND INITIAL THE FOLLOWING:

X I am aware of the Village of Germantown ordinance requiring fire sprinklers in most new construction.

X I understand that all new development is subject to Impact and/or Connection Fees that must be paid before building permits will be issued.

X I understand that an incomplete application will be withdrawn from the Plan Commission agenda and that all resubmissions to the Plan Commission are subject to a new application fee.

5 SIGNATURES – ALL APPLICATION MUST BE SIGNED BY OWNER!

Adam Hertel 11/13/2023
Applicant Date

Jesse C Mack 11-13-2023
Owner Date

November 13, 2023

Village of Germantown
N112 W17001 Mequon Road
P.O. Box 337
Germantown, WI 53022-0337

RE: Statement of Design Intent

Midwest Products, Inc is a leader in the embroidery industry and is the #1 selling commercial hooping system in the world which has led to the need to build a new facility that meets their needs now and into the future. The proposed project is a approximately 60,000 sf of which there will be 8,000 sf of office space consisting of sales, accounting, and marketing, and approximately 50,000 sf of manufacturing, warehousing, and shipping space. The company currently employs approximately 30 full time employees, and another 10-15 part-time and seasonal workers.

The design intent is to provide a modern aesthetic that highlights office areas, such as the lunch room, conference room, and entry, against the backdrop of a large manufacturing box, but still tie the whole building together with a consistent use of color, texture, and windows. The proposed exterior office walls will be metal stud walls clad with smooth cementitious wall panels set in a track system and a complimentary brick. Similarly the manufacturing walls will be smooth insulated precast concrete panel painted a two-tone color to match the office space. Wall reveals and large aluminum framed windows will surround the building and tie the two building spaces together. Finally the entry vestibule will be highlighted by a wood grain metal panel that will accent the building's entrance.

The existing site is 4.5 acres that will be developed with adequate parking, drives, and loading docks to accommodate all of the companies needs. Site lighting at the parking lot and building will be accomplished with new LED fixtures, and new landscaping will line the building and parking lot to create a pleasant aesthetic around the property.

SITE PLAN REVIEW CHECKLIST

Pursuant to Section 17.43 of the Municipal Code

This checklist provides a summary of requirements found in the Municipal Code. It is intended purely as a guide for developers and should not substitute for a full review of the Code and applicable regulations. (Revised 1/02)

GENERAL INFORMATION

- [X] Provide Completed Checklist with submittal
- [X] Names and addresses of owner/developer/designer
- [X] Graphic scale, north arrow
- [X] Location sketch
- [X] Size of site (gross and net acreage)
- [X] Existing zoning
- [X] Adjacent zoning and uses
- [ ] Number of residents (subdivisions)
- [X] Number of employees

EXISTING SITE INFORMATION

- [X] Dimensions of site and lot lines (pipes found, pipes set, monuments)
- [X] Existing grades (2' contours minimum)
- [X] Adjacent property grades (within 10' minimum of property lines)
- [ ] Adjacent structures (within 20' minimum of property lines)
- [X] Drainage systems and structures
- [ ] Natural features (woods, streams, lakes, ponds, outcroppings)
- [ ] Wetland boundaries (provide date of staking)
- [ ] Floodplain elevation and boundaries
- [ ] Environmental concerns (underground tanks, etc)
- [X] Roads, curbs, parking lots, pavement areas
- [X] Structures (location, size)
- [X] Rights-of-Way (existing/ultimate)
- [X] Easements (drainage, utility)
- [X] Existing utilities (sanitary, water, electric, gas, telephone)
- [X] Benchmark locations and elevations
- [X] Location of fences, wells, borings, etc.

ARCHITECTURAL PLANS

- [ ] Existing building location
- [ ] Existing building elevations/materials
- [X] Proposed use (use list from Section 17.45)
- [X] Statement of design intent (narrative)
- [X] Proposed floor plans (dimension)
- [X] Square footage (total and individual rooms/stores)
- [X] Proposed elevations (dimension)
- [X] Proposed building height
- [X] Proposed materials and colors (material sample board required for new construction)
- [ ] Proposed signage (elevations, color, square footage, height, construction material, lighting)
- [ ] Details of any special features

PROPOSED SITE PLAN

- [X] Grading and spot elevations
- [X] Erosion control measures (silt fencing, hay bales, rip-rap, tracking mat, stockpile locations)
- [X] Stormwater management
  - stormwater management design report
  - general drainage pattern
  - swales w/ arrows for direction of flow
  - pond design with outfalls
  - culverts (location/size)
- [X] Utilities (size, invert elevations, length, slope, etc.)
  - sanitary
  - water
  - stormsewer
- [X] Building location (dimension)
- [X] Building elevation (finished grade)
- [ ] Location of proposed signage
- [X] Details of outside storage (including trash receptacles)
- [X] Setbacks (clearly marked and dimensioned)
- [X] Vehicular entrances (dimension to centerline of nearest intersection)
- [X] Streets (dimension and direction for one-ways)
- [X] Curve radii
- [X] Sidewalks (dimension)
- [X] Parking areas (show striping/spot elevations)
- [X] Parking setback from property line
- [X] Loading areas (dimension)
- [X] Lot coverage
  - Square footage total
  - Impervious surfaces total (%)
  - Green space total (%)
  - Percent permitted (over/under %)
- [X] Municipal utility connections
  - Sanitary sewer (pipe size/elevations)
  - Water (size, valve location, elevations)
  - Location of hydrants
- [ ] Easement for public water mains

LIGHTING PLAN

- [X] Major improvements for context
- [ ] Location/nature of existing fixtures
- [X] Location of proposed fixtures
- [X] Photometric report (to scale on plan)
- [X] Manufacturers cut-sheets of all fixtures
- [X] Lighting schedule
  - key to plan
  - number/type of fixtures
  - output (wattage)
- [ ] Installation details as appropriate

LANDSCAPING PLAN

- [X] Major improvements for context (building, drives, walks)
- [ ] Proposed outdoor amenities (benches, paths, etc.)
- [ ] Existing vegetation
  - Species
  - Size
  - Approximate canopy in plan
- [ ] Vegetation to be destroyed
  - List and show location
- [ ] Proposed method of saving existing vegetation during construction
- [ ] Proposed landscape features (berms, fountains)
- [ ] Existing/proposed lighting
- [ ] Irrigation/watering systems (locate outlets)
- [X] Plant lists or schedules
  - Keyed to plan
  - Number of each species
  - Size when planted (caliper)
- [X] Installation details/staking

MODEL SUBMITTAL INCLUDES THE FOLLOWING PLANS:

1. Cover / Title Page
2. Existing Conditions Survey
3. General Site Plan
4. Grading, Paving & Erosion Control Plan
5. Utility Plan
6. Site Details (curbing, catch basins, detention ponds, pavement, erosion control and sign details)
7. Landscape Plan
8. Landscape details (planting schedule, berming cross-sections, method of installation)
9. Lighting Plan
10. Floor Plan
11. Exterior Building Elevations
12. Building Material Sample Board

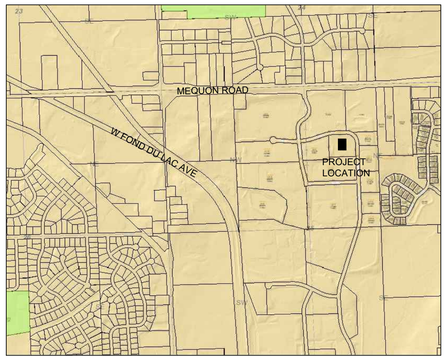
In addition to the items on this list, Village Staff and/or the Plan Commission may require additional drawings and data to be submitted for approval.

If any public improvements or work is to be done in the Public Right-of-Way, the Village will require that a Developer's Agreement be submitted and approved by the Village Board.

PROPOSED NEW BUILDING:

Midwest Products, Inc.

VILLAGE OF GERMANTOWN, WASHINGTON COUNTY



LOCATION MAP

SHEET INDEX

GENERAL
G-101 TITLE SHEET/ PROJECT DATA

CIVIL
C1.01 EXISTING CONDITIONS PLAN
C1.02 PROPOSED SITE PLAN
C1.03 EROSION CONTROL PLAN
C1.04 GRADING PLAN
C1.05 UTILITY PLAN
C1.06 LANDSCAPE PLAN
C2.01 CONSTRUCTION NOTES
C2.02 SITE DETAILS
C2.03 EROSION CONTROL DETAILS
C2.04 UTILITY DETAILS

ARCHITECTURAL
A-101 OVERALL PROPOSED FLOOR PLAN
A-102 ENLARGED OFFICE FLOOR PLAN
A-201 EXTERIOR ELEVATIONS
A-202 TRASH ENCLOSURE

PROJECT TEAM

OWNER: Jesse Mack
Midwest Products, Inc.
W194 N11665 McCormick Drive
Germantown, WI 53022
PH: (262) 257-0930
EMAIL: jesse@hoopmaster.com

ARCHITECT: Adam Hertel
American Architectural Group, Inc.
3350 South River Road
West Bend, WI 53095
PH: (262) 334-3811
EMAIL: adam@teamaag.net

CIVIL: Kevin Parish
Parish Survey & Engineering
122 Wisconsin Street
West Bend, WI 53095
PH: (262) 346-7800
EMAIL: kparish@parishse.com

AMERICAN ARCHITECTURAL GROUP, INC.
3350 SOUTH RIVER ROAD
WEST BEND, WI 53095-7884
(262) 334-3811 FAX: (262) 334-4990

AMERICAN CONSTRUCTION SERVICES, INC.
3350 SOUTH RIVER ROAD
WEST BEND, WI 53095-7884
(262) 334-3811 FAX: (262) 334-4990

Stamp

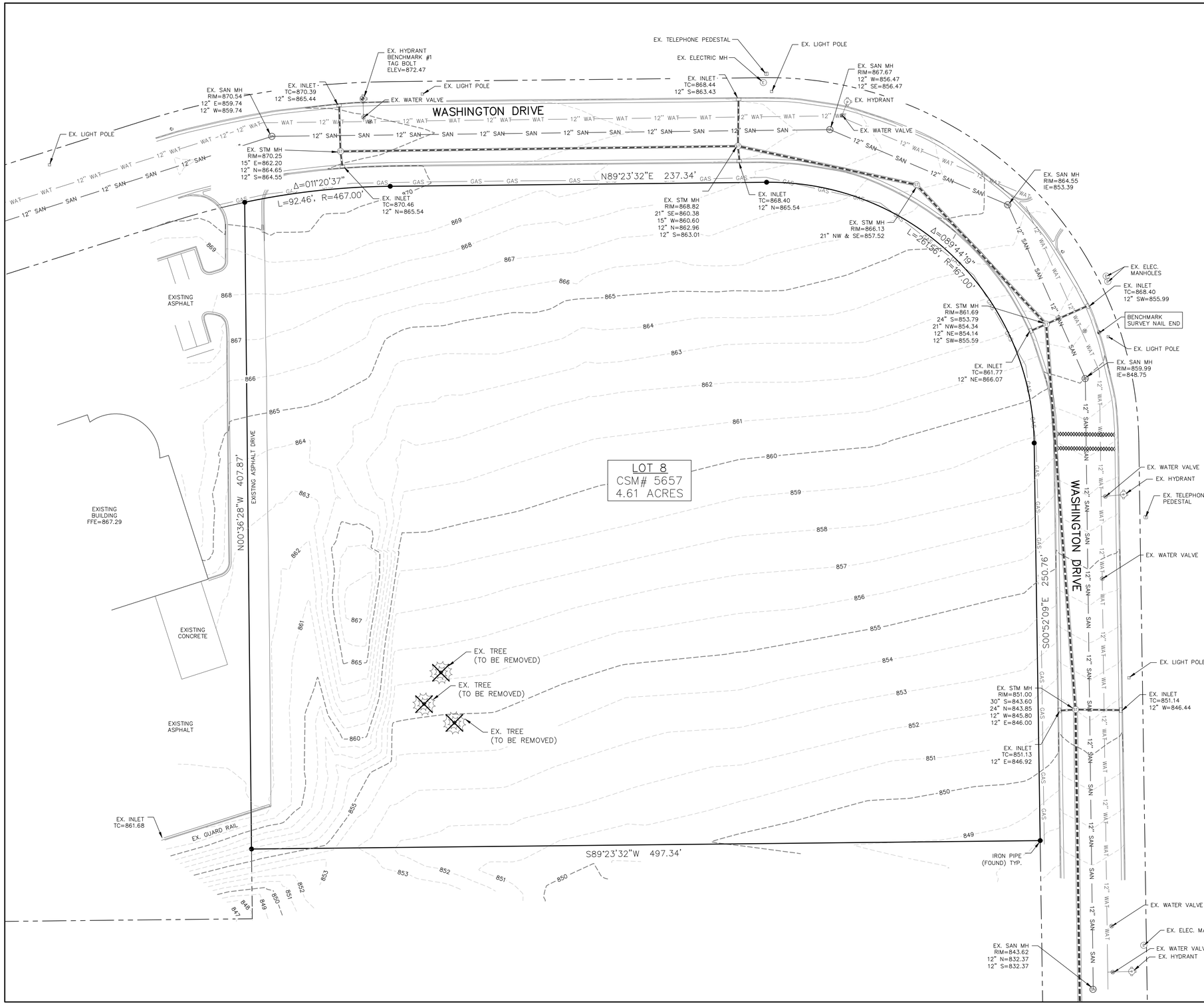
Issue Date:
11 / 13 / 2023

Revision:

Project Number:
23015

Sheet Title:
TITLE SHEET AND CODE INFORMATION

Sheet Number:
G-101



CIVIL SHEET INDEX:

SHEET	SHEET TITLE
C1.01	EXISTING CONDITIONS PLAN
C1.02	PROPOSED SITE PLAN
C1.03	EROSION CONTROL PLAN
C1.04	GRADING PLAN
C1.05	UTILITY PLAN
C1.06	LANDSCAPE PLAN
C1.07	LIGHTING PLAN
C2.01	CONSTRUCTION NOTES
C2.02	SITE DETAILS
C2.03	EROSION CONTROL DETAILS
C2.04	UTILITY DETAILS

LEGEND:

- 896 – EXISTING MINOR CONTOUR.
- 895 – EXISTING MAJOR CONTOUR.
- OHEL – OVERHEAD ELECTRIC LINE.
- BuEl – BURIED ELECTRIC LINE.
- BuTel – BURIED TELEPHONE LINE.
- FO – FIBER OPTIC LINE.
- GAS – GAS LINE.
- SAN – SANITARY SEWER MAIN OR LATERAL.
- WAT – WATER MAIN OR SERVICE.
- STORM SEWER LINE.
- ELEC – ELECTRIC METER.
- GAS – GAS METER.
- GAS VALVE.
- FIRE HYDRANT.
- E – POWER POLE.
- SN – SANITARY SEWER MANHOLE.
- ST – STORM SEWER MANHOLE.
- STORM SEWER INLET.
- T – TELEPHONE PEDESTAL.
- TRAN – TRANSFORMER.
- W – WATER VALVE.

REVISIONS:		
NO.	DATE	DESCRIPTION

PARISH SURVEY & ENGINEERING
122 Wisconsin Street, West Bend, WI 53095
262.346.7800
www.parishse.com

PROJECT TITLE:
MIDWEST PRODUCTS, LLC
WASHINGTON DRIVE
GERMANTOWN, WI 53022

PLAN TITLE:
EXISTING CONDITIONS PLAN

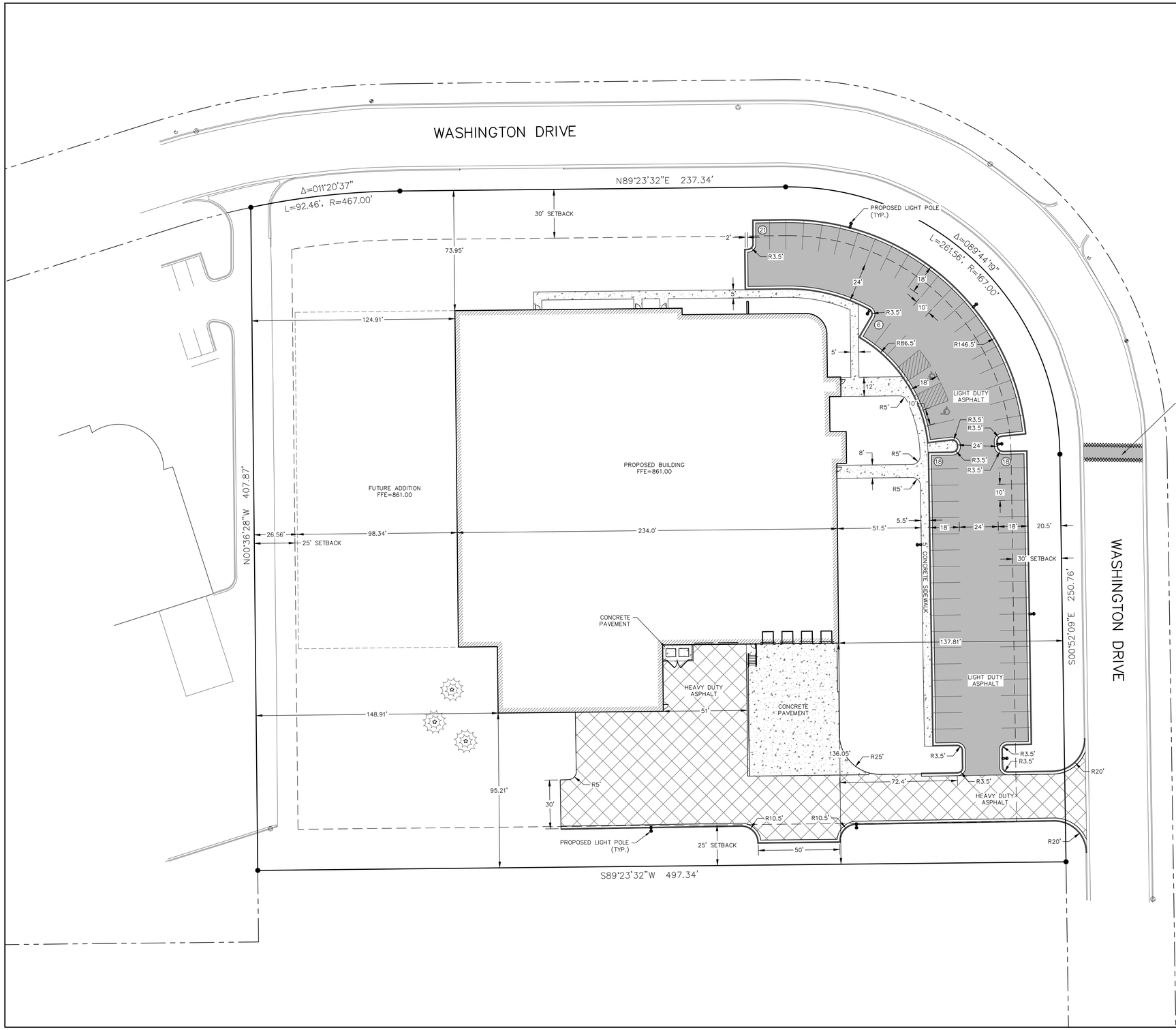
DRAWN BY: **JAB**
DESIGNED BY: **JDR**
CHECKED BY: **KJP**

PLAN DATE: **11-13-2023**

PROJECT NO: \AM-108-23\

PC SUBMITTAL

SHEET NO:
C1.01



SITE INFORMATION BLOCK	
Site Address:	Washington Drive
Legal Description:	Lot 8, CSM 5657
Site Acreage	4.61 Acres
Current Zoning:	M-1

Building & Paving Setback Requirements

	Building	Pavement
Front	30 feet	10 feet
Side	10 feet	10 feet
Rear	25 feet	10 feet

Parking Stalls Provided: 63 stalls

Proposed Site Areas

Description	Area (sf)	% Impervious
Building	52,038	25.91
Asphalt/Concrete	46,967	23.39
Impervious	99,005	49.30
Lawn	101,807	50.70
Total	200,812	100.00

LEGEND:

(#) – PARKING STALLS IN A ROW
(R) – REJECT CURB
(A) – ACCEPT CURB

SITE PLAN NOTES:

1. DIMENSIONS ARE TO FACE OF CURB AND FACE OF BUILDING UNLESS OTHERWISE NOTED.
2. WHERE CURB ENDS AT CONNECTIONS SMOOTHLY TRANSITION FROM FULL CURB HEIGHT TO ZERO CURB HEIGHT WITHIN A 3' LENGTH.
3. ALL STRIPING AND SIGNAGE SHALL COMPLY WITH THE WISCONSIN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.

PAVING LEGEND

HEAVY DUTY ASPHALT PAVEMENT
8" CRUSHED AGGREGATE BASE COURSE
2 1/4" ASPHALTIC BINDER 3 LT 58-28 S
1 3/4" ASPHALTIC SURFACE 4 LT 58-28 S

LIGHT DUTY ASPHALT PAVEMENT
8" CRUSHED AGGREGATE BASE COURSE
1 3/4" ASPHALTIC BINDER 4 LT 58-28 S
1 1/4" ASPHALTIC SURFACE 5 LT 58-28 S

HEAVY DUTY CONCRETE PAVEMENT
6" CRUSHED AGGREGATE BASE COURSE
7" CONCRETE

CONCRETE SIDEWALK
6" CRUSHED AGGREGATE BASE COURSE
4" CONCRETE

REVISIONS:

NO.	DATE	DESCRIPTION

PARISH SURVEY & ENGINEERING
122 Wisconsin Street, West Bend, WI 53095
262.346.7800
www.parishse.com

PROJECT TITLE:
MIDWEST PRODUCTS, LLC'S
WASHINGTON DRIVE
GERMANTOWN, WI 53022

PLAN TITLE:
PROPOSED SITE PLAN

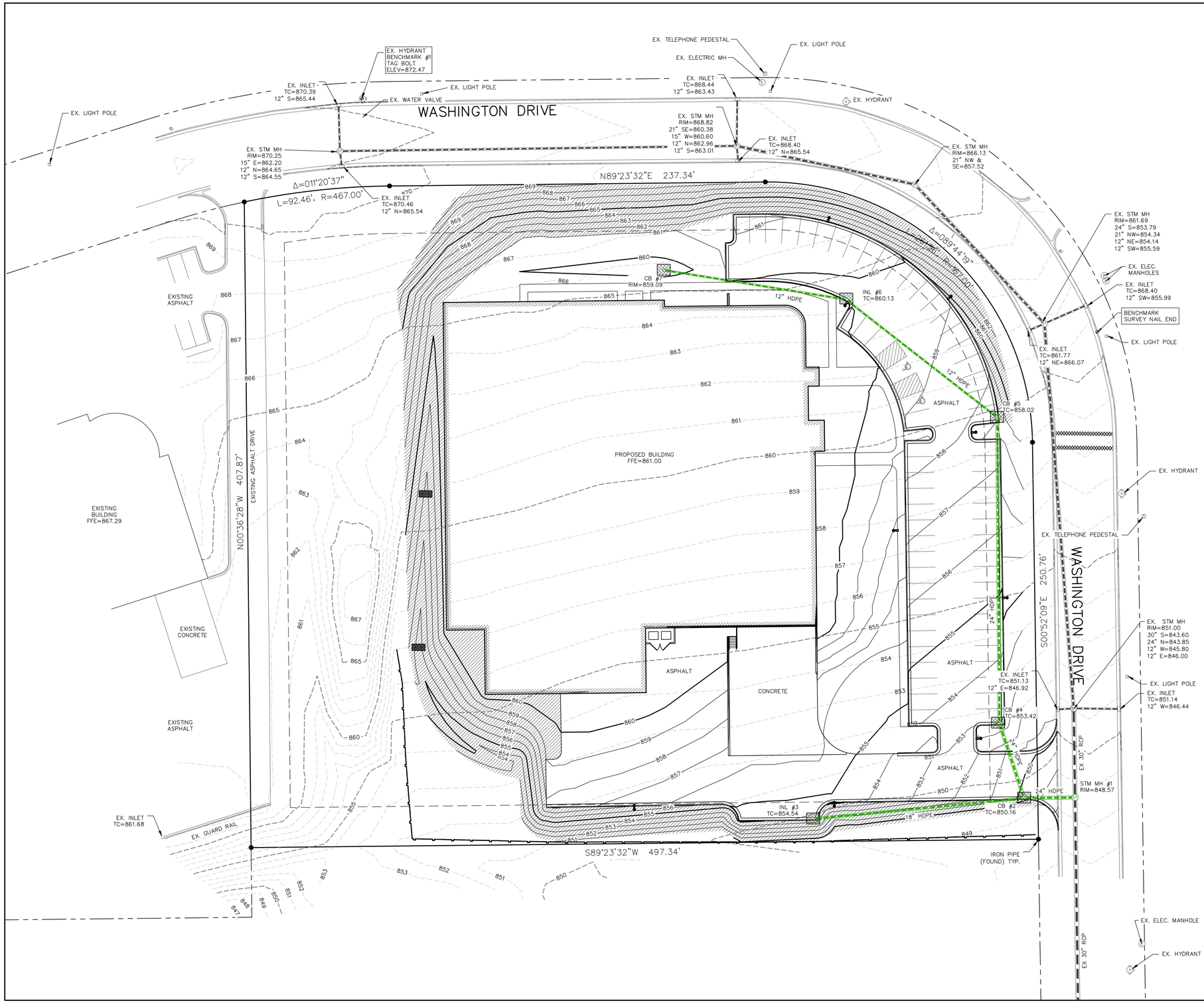
DRAWN BY: **JDR**
DESIGNED BY: **JDR**
CHECKED BY: **KJP**

PLAN DATE: **1-4-2024**

PROJECT NO: \AM-108-23\

PC SUBMITTAL

SHEET NO:
C1.02



N

0 30 60

LEGEND:

- 936 – EXISTING MINOR CONTOUR.
- 935 – EXISTING MAJOR CONTOUR.
- 936 – PROPOSED MINOR CONTOUR.
- 935 – PROPOSED MAJOR CONTOUR.
- – PROPOSED STORM SEWER.
- – EXISTING STORM SEWER.
- – INSTALL WISDOT TYPE D INLET PROTECTION.
- – INSTALL CLASS I TYPE A EROSION MAT
- – INSTALL SILT FENCE.
- – INSTALL DITCH CHECK.
- – DRAINAGE ARROW.

STAGES OF CONSTRUCTION TIME SCHEDULE:

APRIL 15, 2024

1. INSTALL SITE SILT FENCE, INLET PROTECTION AND TEMPORARY CONSTRUCTION ENTRANCES AS SHOWN ON PLANS. ANY ADDITIONAL CONSTRUCTION ENTRANCES IF APPROVED BY THE VILLAGE OF GERMANTOWN SHALL HAVE A TRACKING PAD.

APRIL 16, 2024 – SEPTEMBER 1, 2024

2. STRIP TOPSOIL WITHIN THE LIMITS OF THE WET DETENTION PONDS AND CONSTRUCT A TEMPORARY STOCKPILE, TO BE SEEDED AND SILT FENCE PLACED AROUND THE PERIMETER.
3. CONSTRUCT BOTH WET DETENTION PONDS. ALL GRADING SHALL DIRECT ALL RUN-OFF TO THE WET DETENTION PONDS THROUGHOUT THE CONSTRUCTION PROCESS.
4. STRIP REMAINING TOPSOIL WITHIN GRADING LIMITS AND CONSTRUCT TEMPORARY TOPSOIL STOCKPILE LOCATION ACCORDING TO "SPECIFICATIONS FOR GRADING & EROSION CONTROL" ON "CONSTRUCTION NOTES PAGE".
5. BEGIN PROPOSED SITE GRADING – RESEED SECTIONS OF PROJECT THROUGHOUT THE GRADING PROCESS TO MINIMIZE RUN-OFF.
6. START CONSTRUCTION OF UTILITIES: WATER SERVICE, SANITARY SEWER AND STORM SEWER.
7. CONSTRUCT BUILDING PADS AND BUILDINGS.
8. CONTINUE SITE GRADING.
9. INSTALL BASE COURSES, PROPOSED PAVEMENTS
10. INSTALL LANDSCAPING.
11. APPLY FINAL STABILIZATION TO ENTIRE SITE.

SEPTEMBER 2 – 15, 2024

ALL PERMANENT SEEDING SHALL BE COMPLETED BY SEPTEMBER 15. ALL TEMPORARY SEEDING SHALL BE COMPLETED BY OCTOBER 15 (REFER TO DNR STANDARD 1059.)

STABILIZATION FOR ALL EXPOSED SOIL AFTER OCTOBER 15 SHALL CONSIST OF ANIONIC POLYACRYLAMIDE (PAM) IN ADDITION TO TEMPORARY SEEDING IN AREAS WITHOUT EROSION CONTROL MAT. PLACE PAM IN ACCORDANCE WITH WDNR TECHNICAL STANDARD 1050. AFTER OCTOBER 15 ALL SLOPES 4:1 OR STEEPER THAT ARE NOT PERMANENTLY VEGETATED SHALL HAVE EROSION MAT INSTALLED IN PREPARATION OF WINTER CONDITIONS.

SPREAD SALVAGED OR IMPORTED TOPSOIL IN PROPOSED LANDSCAPE AREAS AND RESTORE.

CONTRACTOR MAY MODIFY SEQUENCING AS NEEDED TO COMPLETE CONSTRUCTION IF EROSION CONTROLS ARE MAINTAINED IN ACCORDANCE WITH THE CONSTRUCTION SITE EROSION CONTROL REQUIREMENTS SET FORTH IN FEDERAL, STATE & LOCAL PERMITS. NOTIFY VILLAGE OF GERMANTOWN PRIOR TO CHANGE.

AS CONDITIONS WARRANT DURING CONSTRUCTION ADDITIONAL BMPS SHALL BE INSTALLED TO REDUCE THE MIGRATION OF SEDIMENT THE THE MAXIMUM EXTENT PRACTICABLE

REMOVE ALL TEMPORARY EROSION CONTROL MEASURES AFTER SITE IS STABILIZED AND STABILIZE AND AREAS DISTURBED BY REMOVAL OF BMPS.

REVISIONS:

NO.	DATE	DESCRIPTION

PSE
PARISH SURVEY & ENGINEERING
122 Wisconsin Street, West Bend, WI 53095
262.346.7800
www.parishse.com

PROJECT TITLE:
MIDWEST PRODUCTS, LLC
WASHINGTON DRIVE
GERMANTOWN, WI 53022

PLAN TITLE:
EROSION CONTROL PLAN

DRAWN BY: **JDR**

DESIGNED BY: **JDR**

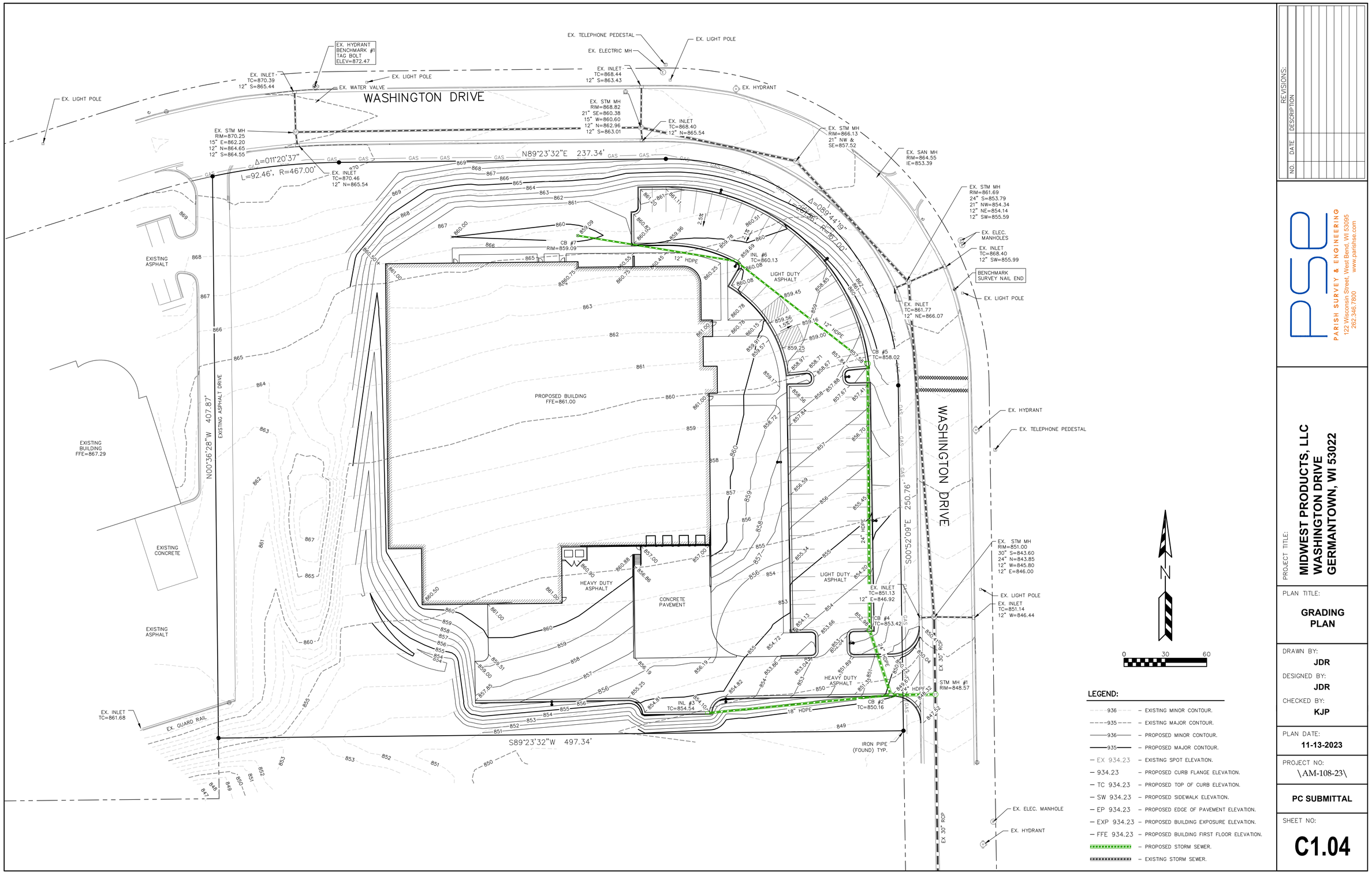
CHECKED BY: **KJP**

PLAN DATE: **11-13-2023**

PROJECT NO: \AM-108-23\

PC SUBMITTAL

SHEET NO:
C1.03



REVISIONS:

NO.	DATE	DESCRIPTION

PARISH SURVEY & ENGINEERING
122 Wisconsin Street, West Bend, WI 53095
262.346.7800
www.parishse.com

PROJECT TITLE:
MIDWEST PRODUCTS, LLC
WASHINGTON DRIVE
GERMANTOWN, WI 53022

PLAN TITLE:
GRADING PLAN

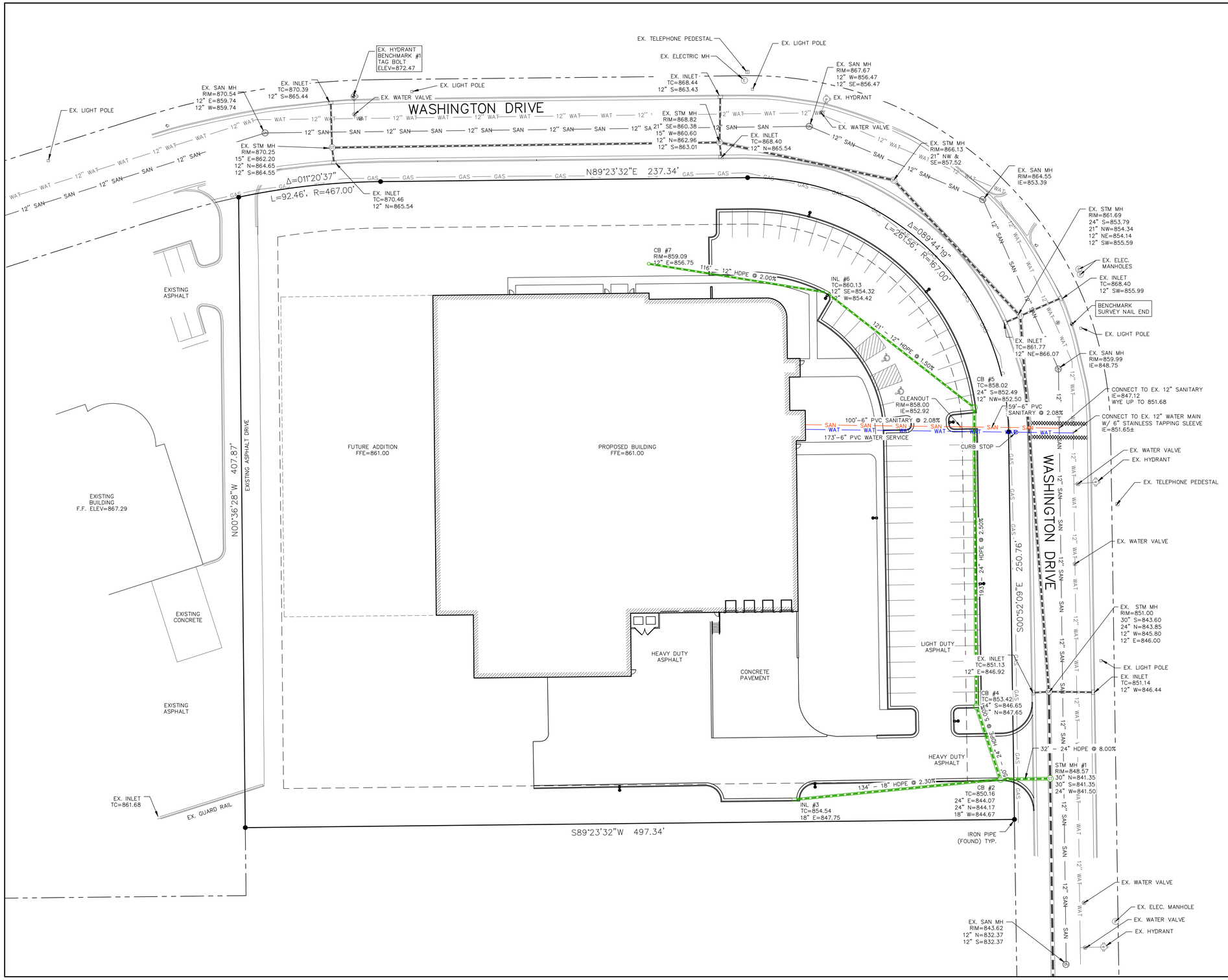
DRAWN BY: **JDR**
DESIGNED BY: **JDR**
CHECKED BY: **KJP**

PLAN DATE: **11-13-2023**

PROJECT NO: \AM-108-23\

PC SUBMITTAL

SHEET NO:
C1.04



STORM SEWER CASTINGS:

STRUCTURE	STRUCTURE DIAMETER	NEENAH CASTING OR EQUIVALENT
CB #2	4' DIA.	R-2561
INLET #3	2' X 3'	R-3067
CB #4	4' DIA.	R-2561
CB #5	4' DIA.	R-2561
INLET #6	2' X 3'	R-3067
CB #7	4' DIA.	R-2561

REVISIONS:

NO.	DATE	DESCRIPTION

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PROJECT TITLE:
MIDWEST PRODUCTS, LLC
WASHINGTON DRIVE
GERMANTOWN, WI 53022

PLAN TITLE:
UTILITY PLAN

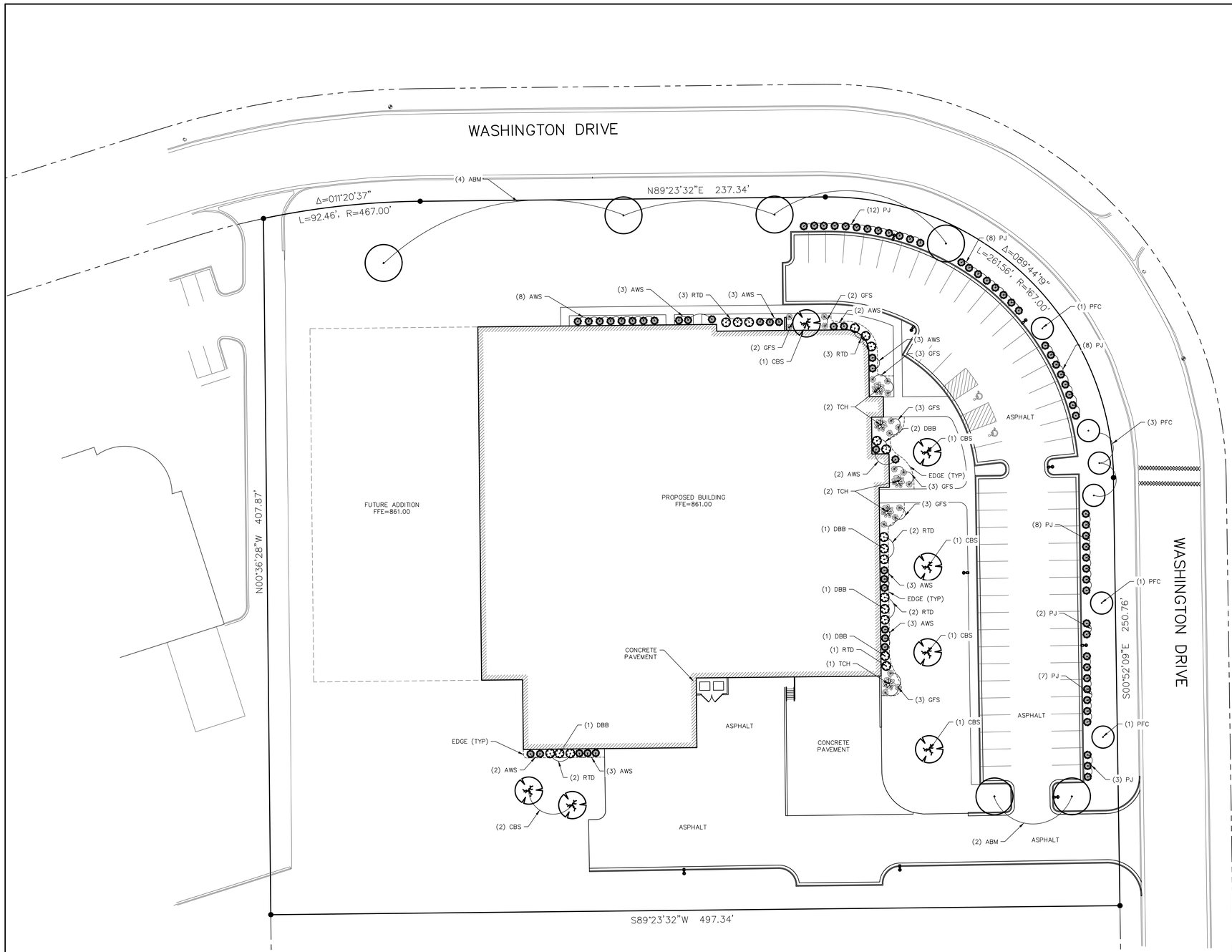
DRAWN BY: **JDR**
DESIGNED BY: **JDR**
CHECKED BY: **KJP**

PLAN DATE: **11-13-2023**

PROJECT NO: \AM-108-23\

PC SUBMITTAL

SHEET NO:
C1.05



PLANT LIST

KEY	QTY	SIZE	COMMON NAME	ROOT
	(6)		CANOPY TREES	
ABM	6	2"	AUTUMN BLAZE MAPLE	BB
	(10)		LOW ORNAMENTAL TREES	
PFC	5	1 ½"	PRAIRIE FIRE CRAB	BB
TCH	5	1 ½"	THORNLESS COCKSPUR HAWTHORN	BB
	(7)		EVERGREEN TREES	
CBS	7	4'	COLORADO BLUE SPRUCE	BB
	(70)		DECIDUOUS SHRUBS	
DBB	6	18"	DWARF BURNING BUSH	POT
GFS	19	24"	GOLD FLAME SPIREA	POT
AWS	32	24"	A W SPIREA	POT
RTD	13	24"	BAILEY'S RED TWIG DOGWOOD	POT
	(48)		UPRIGHT EVERGREEN SHRUBS	
PJ	48	24"	PFITZER JUNIPER	CON

NOTES:

1) DESIGNATED LAWN AREAS TO RECEIVE A MINIMUM OF 6? OF TOPSOIL, STARTER FERTILIZER, AND LOCALLY GROWN BLUEGRASS SOD.
2) PARKING LOT ISLANDS AND DESIGNATED PLANTING BEDS TO BE MULCHED WITH #2 WASHED STONE MULCH SPREAD TO A DEPTH OF 3? OVER WEED BARRIER FABRIC.
3) FOUNDATION PLANTING BEDS AND DESIGNATED PLANTING BEDS TO BE MULCHED WITH SHREDDED HARDWOOD BARK MULCH SPREAD TO A DEPTH OF 3?.
4) INDIVIDUAL TREES AND SHRUB GROUPINGS IN LAWN AREAS TO RECEIVE SHREDDED HARDWOOD BARK MULCH PLANT RINGS (4' DIAMETER) SPREAD TO A DEPTH OF 3?.
5) DESIGNATED PLANTING BEDS TO BE SEPARATED FROM LAWN AREAS WITH 5? BLACK VINYL EDGING.
6) OWNER WILL BE RESPONSIBLE FOR LANDSCAPE MAINTENANCE AFTER COMPLETION AND ACCEPTANCE OF THE PROJECT.

REVISIONS:

NO.	DATE	DESCRIPTION

PARISH SURVEY & ENGINEERING
122 Wisconsin Street, West Bend, WI 53095
262.346.7800
www.parishse.com

PROJECT TITLE:
PROPOSED BUILDING LOT 8
WASHINGTON DRIVE
GERMANTOWN, WI 53022

PLAN TITLE:
LANDSCAPE PLAN

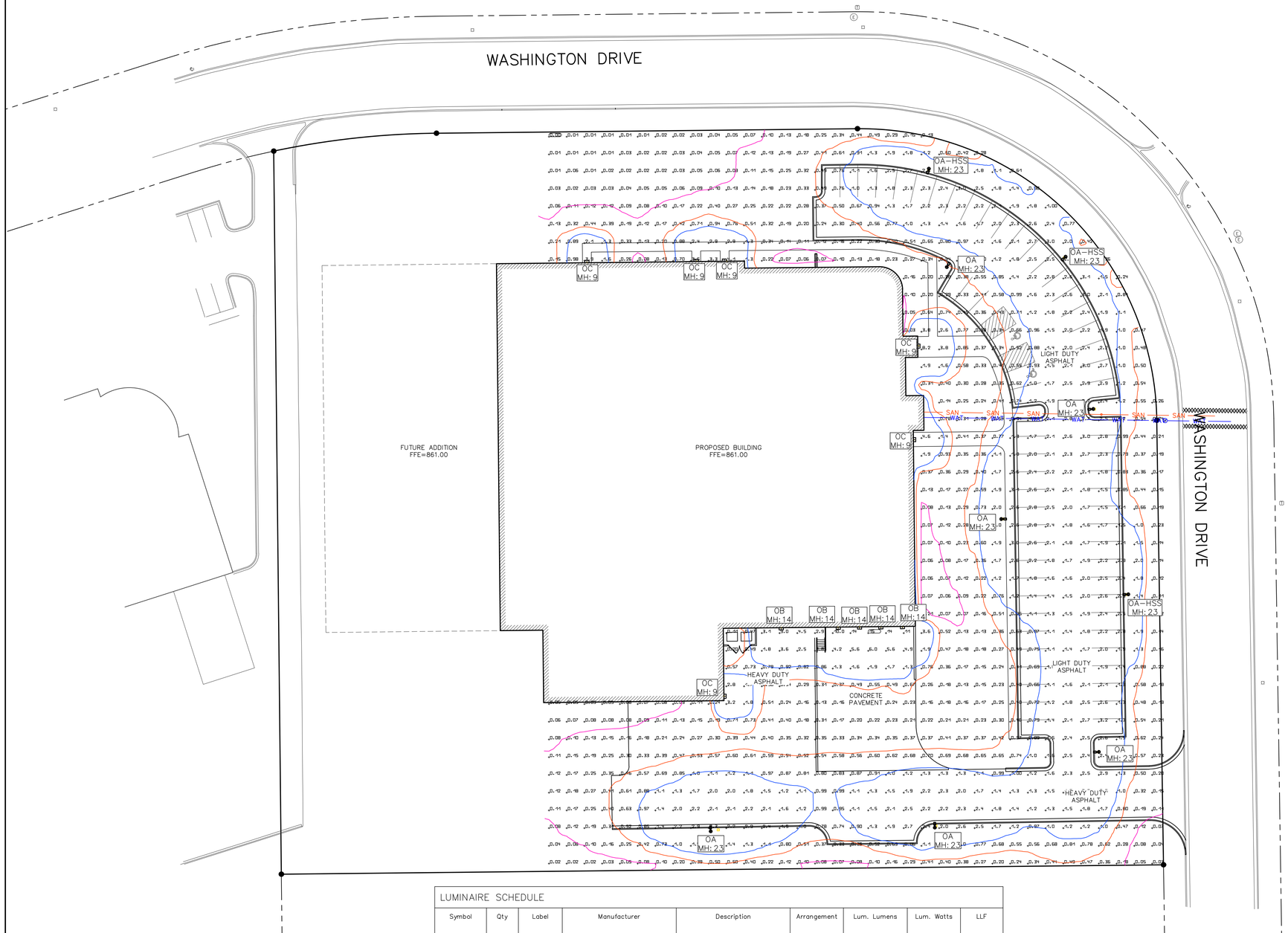
DRAWN BY: **JDR**
DESIGNED BY: **JDR**
CHECKED BY: **KJP**

PLAN DATE: **11-13-2023**

PROJECT NO: \AM-108-23\

PC SUBMITTAL

SHEET NO:
C1.06



NOTES:

1) STANDARD REFLECTANCE OF 80/50/20 UNLESS NOTED OTHERWISE
2) NOT A CONSTRUCTION DOCUMENT, FOR DESIGN PURPOSES ONLY
3) STANDARD INDOOR CALC POINTS @ 30 A.F.F. UNLESS NOTED OTHERWISE
4) STANDARD OUTDOOR CALC POINTS @ GRADE UNLESS NOTED OTHERWISE
5) MLAZGAR ASSOCIATES ASSUMES NO RESPONSIBILITY FOR INSTALLED LIGHT LEVELS DUE TO FIELD CONDITIONS, ETC.

LUMINAIRE SCHEDULE

Symbol	Qty	Label	Manufacturer	Description	Arrangement	Lum. Lumens	Lum. Watts	LLF
	4	OA	COOPER LIGHTING – LUMARK	PRV-C25-D-UNV-T3	SINGLE	13,184	96	0.900
	3	OA-HSS	COOPER LIGHTING – LUMARK	PRV-C25-D-UNV-T3-HSS	SINGLE	11,976	96	0.900
	5	OB	COOPER LIGHTING – LUMARK	XTOR4B-W	SINGLE	4,203	37.7	0.900
	6	OC	COOPER LIGHTING – LUMARK	AXCS1A	SINGLE	1,806	13.5	0.900

CALCULATION SUMMARY

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
PROJECT AREA	Illuminance	Fc	1.08	15.0	0.00	N.A.	N.A.

REVISIONS:

NO.	DATE	DESCRIPTION

PSE
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PROJECT TITLE:
MIDWEST PRODUCTS, LLC
WASHINGTON DRIVE
GERMANTOWN, WI 53022

PLAN TITLE:
LIGHTING PLAN

DRAWN BY: **JDR**
DESIGNED BY: **JDR**
CHECKED BY: **KJP**

PLAN DATE: **11-13-2023**

PROJECT NO: \AM-108-23\

PC SUBMITTAL

SHEET NO:
C1.07

GENERAL SPECIFICATIONS FOR CONSTRUCTION ACTIVITIES:

1. THE PROPOSED IMPROVEMENTS SHALL BE CONSTRUCTED ACCORDING TO THE WISCONSIN D.O.T. STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, LATEST EDITION, THE STANDARD SPECIFICATIONS FOR SEWER & WATER IN WISCONSIN, AND WISCONSIN ADMINISTRATIVE CODE, SPS 360 382–383, AND THE LOCAL ORDINANCES AND SPECIFICATIONS.
2. THE CONTRACTOR SHALL OBTAIN ALL PERMITS REQUIRED FOR EXECUTION OF THE WORK. THE CONTRACTOR SHALL CONDUCT HIS WORK ACCORDING TO THE REQUIREMENTS OF THE PERMITS.
3. THE CONTRACTOR SHALL NOTIFY THE OWNER AND THE MUNICIPALITY FORTY–EIGHT (48) HOURS PRIOR TO THE START OF CONSTRUCTION.
4. THE MUNICIPALITY SHALL HAVE THE RIGHT TO INSPECT, APPROVE, AND REJECT THE CONSTRUCTION OF THE PUBLIC PORTIONS OF THE WORK. THE OWNER SHALL HAVE THE RIGHT TO INSPECT, APPROVE, AND REJECT THE CONSTRUCTION OF ALL PRIVATE PORTIONS OF THE WORK.
5. THE CONTRACTOR SHALL INDEMNIFY THE OWNER, THE ENGINEER, AND THE MUNICIPALITY, THEIR AGENTS, ETC, FROM ALL LIABILITY INVOLVED WITH THE CONSTRUCTION, INSTALLATION, AND TESTING OF THE WORK ON THIS PROJECT.
6. SITE SAFETY SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
7. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL UTILITY INFORMATION SHOWN ON THE PLANS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL CALL DIGGERS HOTLINE AT 1–800–242–8511 TO NOTIFY THE UTILITIES OF HIS INTENTIONS, AND TO REQUEST FIELD STAKING OF EXISTING UTILITIES.
8. SILT FENCE AND OTHER EROSION CONTROL FACILITIES MUST BE INSTALLED PRIOR TO CONSTRUCTION OR ANY OTHER LAND DISTURBING ACTIVITY. FOLLOW THE SEQUENCE OF CONSTRUCTION ON THE EROSION CONTROL PLAN FOR MORE DETAILS. INSPECTIONS SHALL BE MADE WEEKLY OR AFTER EVERY RAINFALL OF 0.5" OR MORE. REPAIRS SHALL BE MADE IMMEDIATELY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL EROSION CONTROL FACILITIES ONCE THE THREAT OF EROSION HAS PASSED WITH THE APPROVAL OF THE GOVERNING AGENCY.
9. ANY ADJACENT PROPERTIES OR ROAD RIGHT–OF–WAYS WHICH ARE DAMAGED DURING CONSTRUCTION MUST BE RESTORED BY THE CONTRACTOR.
10. TRASH AND DEBRIS SHALL NOT BE ALLOWED TO ACCUMULATE ON THIS SITE AND THE SITE SHALL BE CLEAN UPON COMPLETION OF WORK.
11. THE OWNER SHALL HAVE THE RIGHT TO HAVE ALL MATERIALS USED IN CONSTRUCTION TESTED FOR COMPLIANCE WITH THESE SPECIFICATIONS.

SPECIFICATIONS FOR GRADING & EROSION CONTROL:

1. THE CONTRACTOR SHALL ASSUME SOLE RESPONSIBILITY FOR THE COMPUTATIONS OF ALL GRADING AND FOR ACTUAL LAND BALANCE, INCLUDING UTILITY TRENCH SPOIL. THE CONTRACTOR SHALL IMPORT OR EXPORT MATERIAL AS NECESSARY TO COMPLETE THE PROJECT. CONTRACTOR SHALL NOTIFY OWNER OF THE NEED TO IMPORT OR HAUL OFF SOIL. ON–SITE LOCATIONS SUITABLE FOR BORROW OR FILL MAY BE PRESENT. COORDINATE WITH OWNER.
2. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING SOIL CONDITIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION. A GEOTECHNICAL REPORT MAY BE AVAILABLE FROM THE OWNER.
3. SITE SHALL BE CLEARED TO THE LIMITS SHOWN ON THE PLANS. REMOVE VEGETATION FROM THE SITE BURNING IS NOT PERMITTED. PROTECT TREES AND OTHER FEATURES FROM DAMAGE WITH FENCING.
4. THE GEOTECHNICAL ENGINEER IS RESPONSIBLE FOR VERIFYING COMPACTION AND FILL PLACEMENT IN THE FIELD. THE GEOTECHNICAL ENGINEER MAY SUPERCEDE THESE SPECIFICATIONS IF THERE IS GOOD CAUSE TO DO SO. AN EXPLANATION MUST BE SUBMITTED TO THE ENGINEER IN WRITING BEFORE ANY DEVIATIONS ARE MADE.
5. IF NO GEOTECHNICAL RECOMMENDATION IS AVAILABLE, THEN THE FOLLOWING SPECIFICATIONS SHALL APPLY. ALL FILL SHALL BE CONSIDERED STRUCTURAL FILL AND SHALL BE PLACED IN ACCORDANCE WITH THE FOLLOWING: THE COMPACTED FILL SUBGRADE SHALL CONSIST OF AND SHALL BE UNDERLAIN BY SUITABLE BEARING MATERIALS, FREE OF ALL ORGANIC, FROZEN OR OTHER DELETERIOUS MATERIAL AND INSPECTED AND APPROVED BY THE RESIDENT GEOTECHNICAL ENGINEER.PREPARATION OF THE SUBGRADE, AFTER STRIPPING, SHALL CONSIST OF PROOF–ROLLING TO DETECT UNSTABLE AREAS THAT MIGHT BE UNDERCUT, AND COMPACTING THE SCARIFIED SURFACE TO THE SAME MINIMUM DENSITY INDICATED BELOW.THE COMPACTED FILL MATERIALS SHALL BE FREE OF ANY DELETERIOUS, ORGANIC OR FROZEN MATTER AND SHALL HAVE A MAXIMUM LIQUID LIMIT (ASTM–D–423) AND PLASTICITY INDEX (ASTM D–424) IF 30 AND 10 RESPECTFULLY, UNLESS SPECIFICALLY TESTED AND FOUND TO HAVE LOW EXPANSIVE PROPERTIES AND APPROVED BY AN EXPERIENCED SOILS ENGINEER. THE TOP TWELVE (12") INCHES OF COMPACTED FILL SHOULD HAVE A MAXIMUM THREE (3") INCH PARTICLE DIAMETER AND ALL UNDERLYING COMPACTED FILL A MAXIMUM SIX (6") INCH PARTICLE DIAMETER UNLESS SPECIFICALLY APPROVED BY AN EXPERIENCED SOILS ENGINEER. ALL FILL MATERIAL MUST BE TESTED AND APPROVED UNDER THE DIRECTION AND SUPERVISION OF AN EXPERIENCED SOILS ENGINEER PRIOR TO PLACEMENT, IF THE FILL IS TO PROVIDE NON–FROST SUSCEPTIBLE CHARACTERISTICS, IT MUST BE CLASSIFIED AS A CLEAN GW, GP, SW, OR SP PER UNITED SOIL CLASSIFICATION SYSTEM(ASTM D–2487). FOR STRUCTURAL FILL THE DENSITY OF THE STRUCTURAL COMPACTED FILL AND SCARIFIED SUBGRADE AND GRADES SHALL NOT BE LESS THAN 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR (ASTM D–698) WITH THE EXCEPTION TO THE TOP 12 INCHES OF PAVEMENT SUBGRADE WHICH SHALL A MINIMUM IN–SITU DENSITY OF 100 PERCENT OF THE MAXIMUM DRY DENSITY, OR 5 PERCENT HIGHER THAN UNDERLYING FILL MATERIALS.THE MOISTURE CONTENT OF COHESIVE SOIL SHALL NOT VARY BY MORE THAN –1 TO +3 PERCENT AND GRANULAR SOIL ±3 PERCENT OF OPTIMUM WHEN PLACED AND COMPACTED OR RECOMPACTED, UNLESS SPECIFICALLY APPROVED BY THE SOILS ENGINEER TAKING INTO CONSIDERATION THE TYPE OF MATERIALS AND COMPACTION EQUIPMENT BEING USED. THE COMPACTION EQUIPMENT SHOULD CONSIST OF SUITABLE MECHANICAL EQUIPMENT SPECIFICALLY DESIGNED FOR SOIL COMPACTION. BULLDOZERS OR SIMILAR TRACKED VEHICLES ARE TYPICALLY NOT SUITABLE FOR COMPACTION. MATERIAL THAT IS TOO WET TO PERMIT PROPER COMPACTION MAY BE SPREAD ON THE FILL AND PERMITTED TO DRY. DISCING,HARROWING OR PULVERIZING MAY BE NECESSARY TO REDUCE THE MOISTURE CONTENT TO A SATISFACTORY VALUE, AFTER WHICH IT SHALL BE COMPACTED. THE FINISHED SUBGRADE AREAS OF THE SITE SHALL BE COMPACTED TO 100 PERCENT OF THE STANDARD PROCTOR (ASTM D–398) MAXIMUM DENSITY.
6. NO FILL SHALL BE PLACED ON A WET OR SOFT SUBGRADE THE SUBGRADE SHALL BE PROOF–ROLLED AND INSPECTED BY THE GEOTECHNICAL ENGINEER BEFORE ANY MATERIAL IS PLACED.
7. SUBGRADE TOLERANCES ARE +/– 1" FOR LANDSCAPE AREAS AND +/– ½" FOR ALL PAVEMENT AND BUILDING AREAS.
8. TOPSOIL SHALL BE FREE OF DELETERIOUS MATERIALS, ROOTS, OLD VEGETATION, ROCKS OVER 2" DIAMETER AND SHALL NOT BE EXCESSIVELY CLAYEY IN NATURE. NO CLUMPS LARGER THAN 4" ARE ACCEPTABLE. TOPSOIL MAY BE AMENDED AS NEEDED WITH SAND OR COMPOST TO BE LOOSE WHEN SPREAD.
9. THE CONTRACTOR SHALL MAINTAIN SITE DRAINAGE THROUGHOUT CONSTRUCTION. THIS MAY INCLUDE THE EXCAVATION OF TEMPORARY DITCHED OR PUMPING TO ALLEVIATE WATER PONDING. ANY DEWATERING SHALL NOT GO DIRECTLY TO STREAMS, CREEKS, WETLANDS OR OTHER ENVIRONMENTALLY SENSITIVE AREAS WITHOUT BEING TREATED FIRST. A DIRT BAG OR OTHER DEWATERING TREATMENT DEVICE MAY BE USED TO CAPTURE SEDIMENT FROM THE PUMPED WATER.
10. THE STONE TRACKING PAD SHALL BE INSTALLED PRIOR TO ANY CONSTRUCTION. . THE TRACKING PAD IS TO BE MAINTAINED BY THE CONTRACTOR IN A CONDITION, WHICH WILL PREVENT THE TRACK OF MUD OR DRY SEDIMENT ONTO THE ADJACENT PUBLIC STREETS. SEDIMENT REACHING THE PUBLIC ROAD SHALL BE REMOVED BY STREET CLEANING (NOT HYDRAULIC FLUSHING) BEFORE THE END OF EACH WORKDAY.
11. SOIL STOCKPILES SHALL BE LOCATED A MINIMUM OF 75 FEET FROM LAKES, STREAMS, WETLANDS, DITCHES, DRAINAGE WAYS, CURBS AND GUTTERS OR OTHER STORMWATER CONVEYANCE SYSTEM, UNLESS OTHERWISE APPROVED BY THE ENGINEER. MEASURES SHALL BE TAKEN TO MINIMIZE EROSION AND RUNOFF FROM ANY SOIL STOCKPILES THAT WILL LIKELY REMAIN FOR MORE THAN FIVE WORKING DAYS. ANY STOCKPILE THAT REMAINS FOR MORE THAN 30 DAYS SHALL BE COVERED OR TREATED WITH STABILIZATION PRACTICES SUCH AS TEMPORARY OR PERMANENT SEEDING AND MULCHING.
12. EROSION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO GRADING OPERATIONS AND SHALL BE PROPERLY MAINTAINED FOR MAXIMUM EFFECTIVENESS UNTIL VEGETATION IS ESTABLISHED. ALL EROSION CONTROL MEASURES AND STRUCTURES SERVING THE SITE MUST BE INSPECTED AT LEAST WEEKLY OR WITHIN 24 HOURS OF A 0.5 INCH RAIN EVENT. ALL MAINTENANCE WILL FOLLOW AN INSPECTION WITHIN 24 HOURS.
13. CUT AND FILL SLOPES SHALL BE NO GREATER THAN 3:1.
14. EROSION CONTROL IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ACCEPTANCE OF THIS PROJECT. EROSION CONTROL MEASURES AS SHOWN SHALL BE THE MINIMUM PRECAUTIONS THAT WILL BE ALLOWED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECOGNIZING AND CORRECTING ALL EROSION CONTROL PROBLEMS THAT ARE A RESULT OF CONSTRUCTION ACTIVITIES. ADDITIONAL EROSION CONTROL MEASURES, AS REQUESTED IN WRITING BY THE STATE OR LOCAL INSPECTORS, OR THE DEVELOPER'S ENGINEER, SHALL BE INSTALLED WITHIN 24 HOURS.
15. ALL DISTURBED SLOPES OF 4:1 OR GREATER AND DRAINAGE SWALES SHALL BE STABILIZED WITH CURLEX EROSION CONTROL FABRIC (INSTALL PER MANUFACTURER'S SPECIFICATIONS).

SPECIFICATIONS FOR PRIVATE UTILITIES:

1. EXISTING UTILITIES ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY AND ARE NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE.BEFORE PROCEEDING WITH ANY UTILITY CONSTRUCTION SHALL EXCAVATE EACH EXISTING LATERAL OR POINT OF CONNECTION AND VERIFY THE LOCATION AND ELEVATION OF ALL UTILITIES. IF ANY EXISTING UTILITIES ARE NOT AS SHOWN ON THE DRAWINGS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY FOR POSSIBLE REDESIGN. CONTRACTOR SHALL CALL "DIGGERS HOTLINE" PRIOR TO ANY CONSTRUCTION.
2. ALL CONNECTIONS TO EXISTING PIPES AND MANHOLES SHALL BE CORED CONNECTIONS. CONNECTIONS TO WATER MAIN SHALL BE WET TAPPED WITH A STAINLESS STEEL TAPPING SLEEVE.
3. BUILDING LATERALS SHALL BE CONSTRUCTED IN ACCORDANCE WITH LOCAL AND STATE PLUMBING CODES AND IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION WISCONSIN, LATEST EDITION. PROPOSED SANITARY SEWER AND INTERNALLY CONNECTED STORM SEWER SHOWN IN THIS PLAN SHALL TERMINATE AT A POINT FIVE (5) FEET FROM THE EXTERIOR BUILDING WALL. THE EXACT LOCATION OF ALL DOWN SPOUT CONNECTIONS SHALL BE PER THE ARCHITECTURAL PLANS.
4. CONTRACTOR SHALL NOT SHUT OFF WATER OR PLUG SANITARY SEWER IN MUNICIPAL LINES WITHOUT PRIOR APPROVAL.
5. MATERIALS FOR STORM SEWER SHALL BE AS FOLLOWS: STORM SEWER PIPE 48" OR LESS SHALL BE HIGH DENSITY POLYETHYLENE (HDPE) CORRUGATED PIPE WITH AN INTEGRALLY FORMED SMOOTH WATERWAY SUCH AS ADS N–12. FOR PIPE 10" OR LESS IN DIAMETER, PVC, ASTM D–3034, SDR–26, MAY ALSO BE USED. WHERE SPECIFICALLY REQUIRED, REINFORCED CONCRETE PIPE (RCP), ASTM C–76, CLASS III OR HIGHER, MAY BE USED. TRENCH SECTION SHALL BE CLASS "B" FOR PVC AND HDPE AND CLASS "C" FOR CONCRETE (PER STANDARD SPECIFICATIONS). MANHOLES, INLETS AND CATCH BASINS SHALL BE PRE CAST REINFORCED CONCRETE, ASTM C–478. CASTINGS SHALL BE HEAVY DUTY CAST IRON. AREA DRAINS SHALL BE ADSNYLOPLAST OR EQUIVALENT AND SHALL BE A MINIMUM OF 24" IN DIAMETER. CONNECTIONS TO EXISTING PIPES SHALL BE MADE WITH INSERT A WYE OR EQUIVALENT. LAST (3) THREE JOINTS SHALL BE RESTRAINED WITH RODS. PIPE SHALL MEET THE REQUIREMENTS OF AASHTO M–294, TYPE S.
6. MATERIALS FOR SANITARY SEWER SHALL BE AS FOLLOWS: SANITARY SEWER SHALL BE PVC, ASTM D–3034, SDR–35 WITH RUBBER GASKETED JOINTS, CONFORMING TO ASTM D–3212. TRENCH SECTIONS SHALL BE CLASS "B" BEDDING (PER STANDARD SPECIFICATIONS). CRUSHED STONE CHIPS SHALL BE USED FOR BEDDING MATERIAL. CONNECTIONS SHALL BE MAD WITH A INSERT A WYE OR EQUIVALENT. A MINIMUM OF 6' OF COVER IS REQUIRED FOR ALL SANITARY SEWER.
7. MATERIALS FOR WATER SERVICES AND PRIVATE HYDRANTS SHALL BE AS FOLLOWS: WATER SERVICES SHALL BE PVC, HDPE, OR DI AS ALLOWED BY MUNICIPAL CODE, PVC SHALL BE AWWA C–900. DI SHALL BE AWWA C151, CLASS 52 (OR AS REQUIRED BY LOCAL CODE). TRENCH SECTIONS SHALL BE CLASS "B" BEDDING (PER STANDARD SPECIFICATIONS). CRUSHED STONE CHIPS SHALL BE USED FOR BEDDING MATERIAL. CONNECTION SHALL BE MADE WITH A WET TAP, CORPORATE STOP AND VALVE BOX PER MUNICIPAL STANDARDS. A MINIMUM OF 6' COVER IS REQUIRED FOR ALL WATER MAIN. VALVES SHALL BE NON RISING STEM, RESILIENT SEATED GATE VALVES COMPLYING WITH AWWA C509 WITH A THREE PIECE CAST IRON VALVE BOX. INSTALL THRUST BLOCKS AT ALL BENDS AND TEES. DISINFECT ALL NEW LINES AND OBTAIN SAFE WATER SAMPLE PRIOR TO USE.
8. EXTREME CAUTION MUST BE FOLLOWED REGARDING THE COMPACTION OF ALL UTILITY TRENCHES. MECHANICALLY COMPACTED GRANULAR BACKFILL IS REQUIRED UNDER & WITHIN 5 FEET OF ALL PAVEMENT INCLUDING SIDEWALKS. FLOODING OF BACKFILL MATERIAL IS NOT ALLOWED.
9. TRACER WIRE (NO.8 SINGLE STRAND COPPER) AND WARNING TAPE SHALL BE INSTALLED ON ALL UTILITIES IN ACCORDANCE WITH THE LOCAL AND STATE CODES. TRACER WIRE SHALL TERMINATE IN A VALVECO TERMINAL BOX AT EACH END IN ACCORDANCE WITH 182.0715(2R) OF STATE STATUTES.
10. MANDREL TESTING ON SANITARY LINES AND PRESSURE TESTING ON WATER MAIN MAY BE REQUIRED BY THE OWNER OR MUNICIPALITY.
11. UPON COMPLETION OF FINAL PAVING OPERATIONS, THE UTILITY CONTRACTOR SHALL ADJUST ALL MANHOLE AND INLET RIMS AND VALVE BOXES TO FINISHED GRADE.
12. ALL UTILITY CONSTRUCTION SHALL BE DONE IN COMPLIANCE WITH THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN (LATEST EDITION AND ADDENDUM) AND ALL STATE AND LOCAL CODES. IT IS THE CONTRACTORS RESPONSIBILITY TO DETERMINE WHICH SPECIFICATIONS APPLY, AND TO COORDINATE ALL CONSTRUCTION ACTIVITIES WITH THE APPROPRIATE LOCAL AND STATE AUTHORITIES.
13. ALL SANITARY SEWER, STORM SEWER AND WATER MAIN CONSTRUCTION SHALL BE IN COMPLIANCE WITH THE VILLAGE OF GERMANTOWN AND WISCONSIN DSPS STANDARDS.
14. THE LENGTHS OF ALL UTILITIES ARE TO CENTER OF STRUCTURES OR FITTINGS AND MAY VARY SLIGHTLY FROM THE PLAN. LENGTHS SHALL BE VERIFIED IN THE FIELD DURING CONSTRUCTION.
15. MAINTAIN AN 8 FOOT MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN PUBLIC SANITARY SEWER, WATER MAIN AND STORM SEWER. PROVIDE 18" MINIMUM VERTICAL SEPARATION WHERE SEWER CROSSES OVER WATER MAIN AND PROVIDE 6" MINIMUM VERTICAL SEPARATION WHERE WATER MAIN CROSSES OVER SEWER.
16. ANY UTILITIES WHICH ARE DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED TO THE OWNER'S SATISFACTION AT THE CONTRACTOR'S EXPENSE.
17. GENERAL CONTRACTOR SHALL COORDINATE WITH LOCAL GAS TELEPHONE, AND ELECTRICAL UTILITIES FOR EXACT LOCATION SIZE AND DEPTH OF NEW SERVICE.
18. ALL WORK WITHIN THE VILLAGE RIGHT–OF–WAY REQUIRES A PERMIT FROM THE VILLAGE OF GERMANTOWN PUBLIC WORKS DEPARTMENT.

SPECIFICATIONS FOR PAVING:

1. AGGREGATES USED IN THE CRUSHED STONE BASE SHALL CONFORM TO THE GRADATION REQUIREMENTS SECTIONS 301.2 AND 305.2.2 OF THE STANDARD SPECIFICATIONS. THICKNESS SHALL BE PER THE DETAIL ON THE PLANS. BASE SHALL BE 1–1/4" INCH DIAMETER LIMESTONE TRAFFIC BOND AGGREGATE BASE COURSE UNLESS NOTED OTHERWISE. SUBSTITUTION AND/OR RECYCLED MATERIALS MAY BE ALLOWED WITH APPROVAL FROM THE OWNER.
2. SUBGRADE SHALL BE PROOFROLLED AND APPROVED BY A GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF STONE BASE. EXCAVATE UNSUITABLE AREAS AND REPLACE WITH BREAKER RUN STONE AND RECOMPACT. REFER TO THE GEOTECHNICAL REPORT FOR ADDITIONAL SPECIFICATIONS.
3. EXISTING PAVEMENT SHALL BE SAWCUT IN NEAT STRAIGHT LINES TO FULL DEPTH AT ANY POINT WHERE EXISTING PAVEMENT IS REMOVED. CURB AND WALK SHALL BE REMOVED TO THE NEAREST JOINT. REMOVED PAVEMENT SHALL BE REPLACED WITH THE SAME SECTION AS EXISTING. MUNICIPAL STANDARDS MAY REQUIRE ADDITIONAL WORK.
4. ASPHALT FOR PARKING AREAS AND THE PRIVATE ROAD SHALL BE PER THE DETAILS MATERIALS AND PLACEMENT SHALL CONFORM TO THE DOT STANDARD SPECIFICATIONS, SECTION 450 AND 460 LT 58–28 S IS REQUIRED UNLESS NOTED OTHERWISE A COMMERCIAL GRADE MIX MAY BE SUBSTITUTED ONLY WITH APPROVAL FROM THE OWNER.
5. TACK COAT SHALL BE IN ACCORDANCE WITH THE SUBSECTION 455.2.5 OF THE STANDARD SPECIFICATIONS. THE RATE OF APPLICATION SHALL BE 0.05 GAL/SY.
6. CONCRETE FOR CURB, DRIVEWAYS, WALKS, AND NON–FLOOR SLABS SHALL CONFORM TO SECTION 415 OF THE STANDARD SPECIFICATIONS, GRADE A, ASTM C–94, 6 BAG MIX WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3,500 PSI. JOINTING SHALL BE PER SECTION 415.3.7 OF THE STANDARD SPECIFICATIONS WITH CONSTRUCTION JOINTS HAVING A MAXIMUM SPACING OF 10". EXPANSION JOINTS SHALL BE PROVIDED EVERY 50'. CONCRETE SHALL BE FINISHED PER SECTION 415.3.8 WITH A MEDIUM BROOM TEXTURE. A CURING MEMBRANE IN CONFORMANCE WITH SECTION 415.3.12 IS REQUIRED.
7. PAVEMENT MARKINGS SHALL BE PAINT IN ACCORDANCE WITH WISCONSIN DOT SECTION 646 OF THE STANDARD SPECIFICATIONS AND WITH LOCAL CODES. THE FOLLOWING ITEMS SHALL BE PAINTED WITH COLORS NOTED BELOW:

   PARKING STALLS: WHITE
   PEDESTRIAN CROSSWALKS: WHITE
   LANE STRIPING WHERE SEPARATING TRAFFIC IS MOVING IN OPPOSITE DIRECTIONS: YELLOW
   LANE STRIPING WHERE SEPARATING TRAFFIC IS MOVING IN SAME DIRECTIONS: WHITE
   ADA SYMBOLS; WHITE

RESTORATION NOTES:

1. ALL DISTURBED AREAS, EXCEPT STREET PAVEMENT AND SIDEWALK AREAS, SHALL RECEIVE A MINIMUM OF FOUR (4) INCHES OF TOPSOIL, FERTILIZER, SEED AND MULCH. RESTORATION WILL OCCUR AS SOON AFTER THE DISTURBANCE AS PRACTICAL. LAWN AREAS WITH SLOPES GREATER THAN 4:1 SHALL BE SEEDED WITH OLDS "NOMOW" MIX OR EQUAL. ALL OTHER DISTURBED AREAS SHALL BE SEEDED WITH MADISON PARKS MIX OR EQUAL. MIXTURES SHALL BE IN ACCORDANCE WITH SECTION 630 OF D.O.T. SPECIFICATIONS.
2. AN EQUAL AMOUNT OF ANNUAL RYEGRASS SHALL BE ADDED TO THE MIX. SEED MIXTURES SHALL BE APPLIED AT THE RATE OF FOUR (4) POUNDS PER 1,000 SQUARE FEET. FERTILIZER SHALL BE APPLIED AT THE RATE OF FOUR (4) POUNDS PER 1,000 SQUARE FEET. FERTILIZER SHALL MEET THE MINIMUM REQUIREMENTS THAT FOLLOW: NITROGEN, NOT LESS THAN 16%; PHOSPHORIC ACID, NOT LESS THAN 6%; POTASH, NOT LESS THAN 6%.
3. ALL FINISH GRADED AREAS SHALL BE SEEDED AND MULCHED BY SEPTEMBER 15TH. IF THE SITE DOES NOT HAVE FINISH GRADED AREAS COMPLETED BY OCTOBER 15TH, ALL DISTURBED AREAS SHALL BE RESTORED WITH TEMPORARY SEEDING (COVER CROP). AREAS NEEDING PROTECTION DURING PERIODS WHEN PERMANENT SEEDING IS NOT APPLIED SHALL BE SEEDED WITH ANNUAL SPECIES FOR TEMPORARY PROTECTION. SEE TABLE 1 OF THE WISCONSIN DNR CONSERVATION PRACTICE STANDARD 1059, FOR SEEDING RATES OF COMMONLY USED SPECIES. THE RESIDUE FROM THIS CROP MAY EITHER BE INCORPORATED INTO THE SOIL DURING SEEDBED PREPARATION AT THE NEXT PERMANENT SEEDING PERIOD OR LEFT ON THE SOIL SURFACE AND THE PLANTING MADE AS A NO–TILL SEEDING.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR A SATISFACTORY STAND OF GRASS ON ALL SEEDED AREAS FOR ONE YEAR AFTER THE PROJECT'S FINAL ACCEPTANCE.

REVISIONS:

NO.	DATE	DESCRIPTION

PSE
PARISH SURVEY & ENGINEERING
122 Wisconsin Street, West Bend, WI 53095
262.346.7800
www.parishse.com

PROJECT TITLE:
MIDWEST PRODUCTS, LLC
WASHINGTON DRIVE
GERMANTOWN, WI 53022

PLAN TITLE:
CONSTRUCTION SPECIFICATIONS AND NOTES

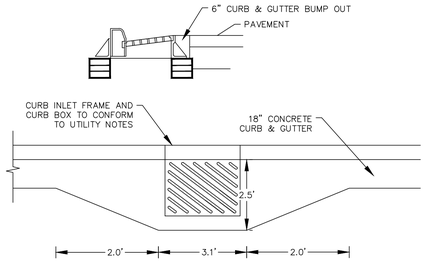
DRAWN BY: **JDR**
DESIGNED BY: **JDR**
CHECKED BY: **KJP**

PLAN DATE: **11-13-2023**

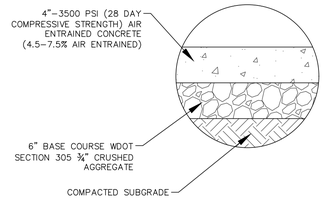
PROJECT NO: \AM-108-23\

PC SUBMITTAL

SHEET NO:
C2.01

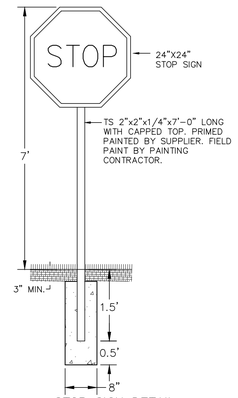


CURB INLET CONCRETE BUMP OUT DETAIL

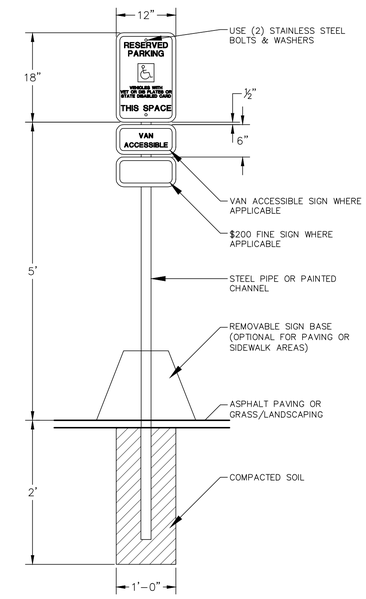


CONCRETE SIDEWALK SECTION

GENERAL NOTES:
-EXCAVATION BY CONCRETE CONTRACTOR
-POSTS SHALL BE SET BY CONCRETE CONTRACTOR & PROVIDED BY STEEL SUPPLIER.
-SIGN PROVIDED BY HARDWARE SUPPLIER & INSTALLED BY CARPENTER
-WIPE CLEAN EXCESS CONCRETE FROM POST BY CONCRETE CONTRACTOR
-CARPENTER TO DRILL HOLES IN STEEL POST FOR SIGN ATTACHMENT

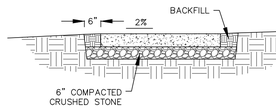


STOP SIGN DETAIL

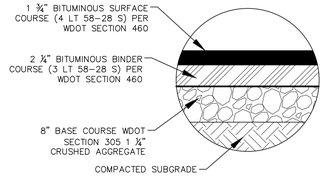


NOTE: SIGN SHALL COMPY WITH CURRENT STATE AND ADA GUIDELINES

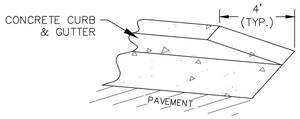
ADA COMPLIANT ACCESSIBLE SIGN DETAIL



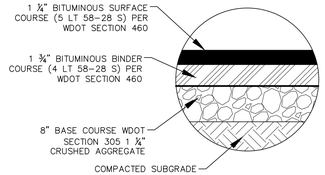
4" CONCRETE SIDEWALK



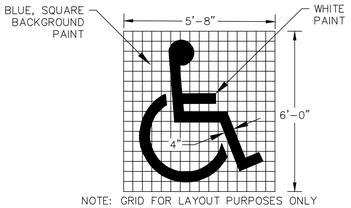
ASPHALT PAVEMENT SECTION (HEAVY DUTY)



CURB TAPER DETAIL

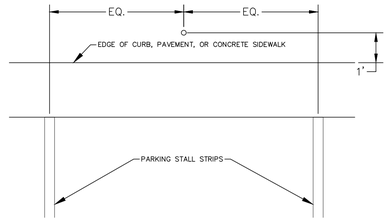


ASPHALT PAVEMENT SECTION (LIGHT DUTY)

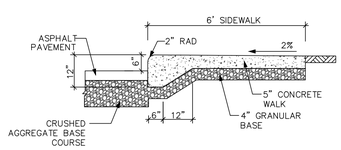


NOTE: GRID FOR LAYOUT PURPOSES ONLY

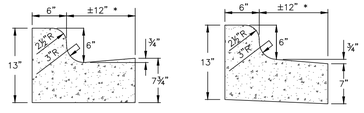
ADA COMPLIANT ACCESSIBLE STALL PAINTED SYMBOL
NOT TO SCALE



PARKING STALL
PLAN VIEW



RAISED SIDEWALK DETAIL



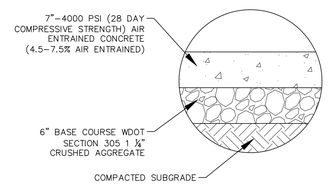
18" STANDARD CONCRETE CURB & GUTTER

18" REJECT CONCRETE CURB & GUTTER

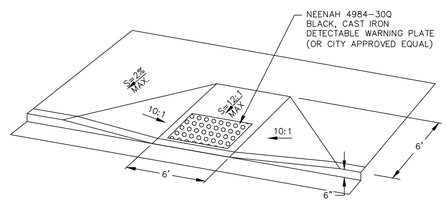
GENERAL NOTES:

1. LATERAL CONTRACTION JOINTS SHALL BE PLACED AT INTERVALS OF NOT MORE THAN 15' NOR LESS THAN 6' IN LENGTH. THE JOINTS SHALL BE A MINIMUM OF 3" IN DEPTH. EXPANSION JOINTS SHALL BE PLACED TRANSVERSLY AT RADIUS POINTS ON CURVES OF RADIUS 200' OR LESS, AND AT ANGLE POINTS, OR AS DIRECTED BY THE ENGINEER. THE EXPANSION JOINT SHALL BE A ONE PIECE ASPHALTIC MATERIAL HAVING THE SAME DIMENSIONS AS CURB & GUTTER AT THAT STATION AND BE 1/2" THICK. IN ALL CASES, CONCRETE CURB & GUTTER SHALL BE PLACED ON THOROUGHLY COMPACTED CRUSHED STONE.
2. * CURB APRON ±12" TO FIT STANDARD CURB MACHINE

18" CURB AND GUTTER DETAILS



CONCRETE PAVEMENT SECTION



ADA COMPLIANT ACCESSIBLE RAMP DETAIL

REVISIONS:

NO.	DATE	DESCRIPTION

PARISH SURVEY & ENGINEERING
122 Wisconsin Street, West Bend, WI 53095
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PROJECT TITLE:
MIDWEST PRODUCTS, LLC
WASHINGTON DRIVE
GERMANTOWN, WI 53022

PLAN TITLE:
SITE DETAILS

DRAWN BY:
JDR

DESIGNED BY:
JDR

CHECKED BY:
KJP

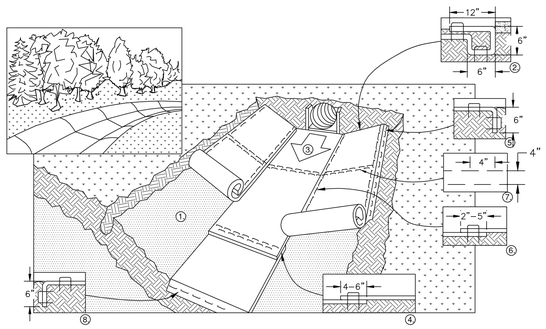
PLAN DATE:
11-13-2023

PROJECT NO:
\AM-108-23\

PC SUBMITTAL

SHEET NO:
C2.02

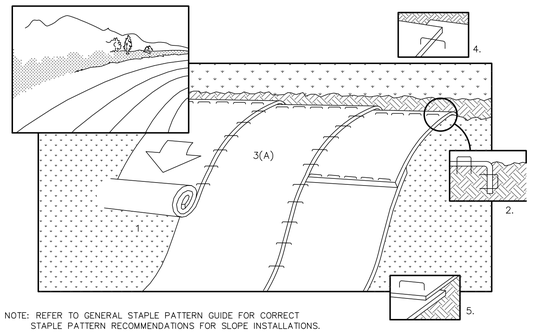
MAXIMUM PERIOD OF BARE SOIL FOR SLOPES > 20%		
SLOPE AREA DRAINS TO SEDIMENT BASIN OR SEDIMENT TRAP?	MAXIMUM PERIOD OF BARE SOIL EXPOSURE (CALENDAR DAYS)	
	LAND DISTURBANCE BETWEEN SEPTEMBER 16TH AND MAY 1ST	LAND DISTURBANCE BETWEEN MAY 2ND AND SEPTEMBER 15TH
YES	90	90
NO	60	30



1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING APPLICATION OF FERTILIZER AND SEED.
2. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE BLANKET
3. ROLL CENTER BLANKET IN DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO THE SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS RECOMMENDED BY THE MANUFACTURER.
4. PLACE CONSECUTIVE BLANKETS END OVER END (SHINGLE STYLE) WITH A 4-6" OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4" APART AND 4" ON CENTER TO SECURE BLANKETS.
5. FULL LENGTH EDGE OF BLANKETS AT TOP OF SIDE SLOPE MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
6. ADJACENT BLANKETS MUST BE OVERLAPPED APPROXIMATELY 4" AND STAPLED.
7. A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT INTERVALS. USE A DOUBLE ROW OF STAPLES STAGGERED 4" APART AND 4" ON CENTER OVER ENTIRE WIDTH OF THE CHANNEL.
8. THE TERMINAL END OF THE BLANKETS MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.

NOTE: ALL STAPLES MUST BE 6" OR GREATER IN LENGTH

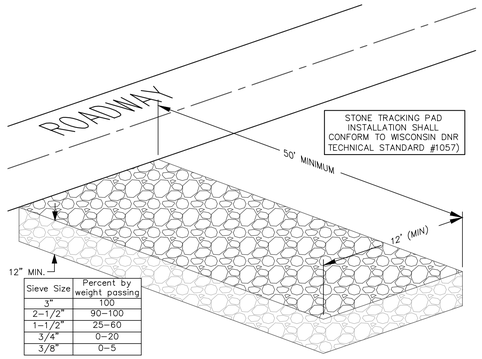
EROSION CONTROL MAT – CHANNEL INSTALLATION



NOTE: REFER TO GENERAL STAPLE PATTERN GUIDE FOR CORRECT STAPLE PATTERN RECOMMENDATIONS FOR SLOPE INSTALLATIONS.

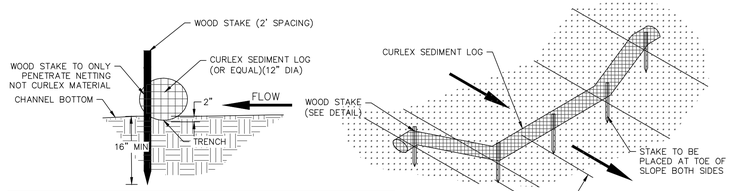
1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING APPLICATION OF FERTILIZER AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
3. ROLL THE BLANKETS (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2" OVERLAP.
5. WHEN BLANKETS MUST BE SPLICED DOWN THE SLOPE, PLACE BLANKETS END OVER END (SHINGLE STYLE) WITH APPROXIMATELY 4" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY
6. ALL BLANKETS MUST BE SECURELY FASTENED TO THE SLOPE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS RECOMMENDED BY THE MANUFACTURER.

EROSION CONTROL MAT – SLOPE INSTALLATION



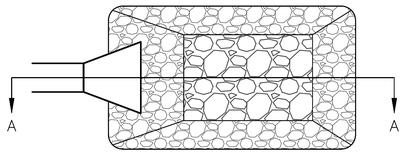
Sieve Size	Percent by weight passing
3"	100
2-1/2"	90-100
1-1/2"	25-60
3/4"	0-20
3/8"	0-5

STONE TRACKING PAD DETAIL

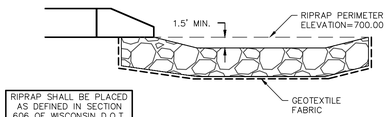


SPACING BETWEEN CURLEX SEDIMENT LOGS				
CHANNEL GRADIENT %	6"	9"	12"	20"
0.5	91.7	136.7	183.3	250.0
1.0	45.8	68.3	91.7	125.0
1.5	30.6	45.6	61.1	83.3
2	22.9	34.2	45.8	62.5

SEDIMENT LOG DETAIL



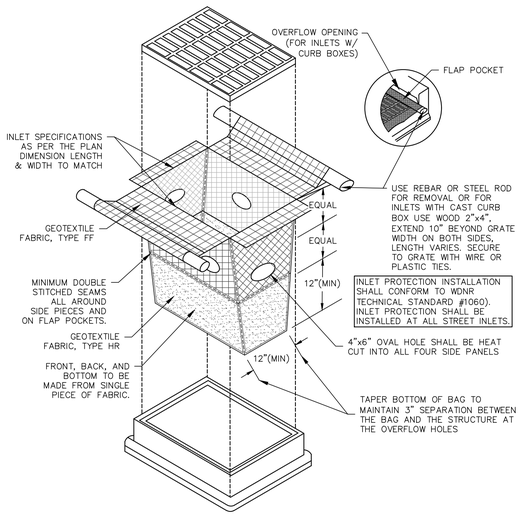
PLAN VIEW



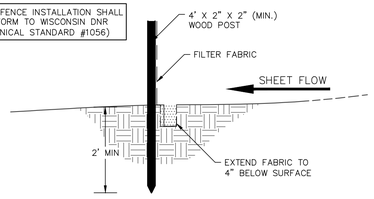
SECTION A – A

RIPRAP SHALL BE PLACED AS DEFINED IN SECTION 606 OF WISCONSIN D.O.T. SPECIFICATIONS. STONE SIZES SHALL BE WELL GRADED WITH A MINIMUM OF 6 INCH DIAMETER.

RIPRAP/STILLING BASIN DETAIL



TYPE D-HR INLET PROTECTION DETAIL



SILT FENCE CONSTRUCTION (SHEET FLOW)

REVISIONS:		
NO.	DATE	DESCRIPTION

PARISH SURVEY & ENGINEERING
122 Wisconsin Street, West Bend, WI 53095
262.346.7800
www.parishse.com

PROJECT TITLE:
MIDWEST PRODUCTS, LLC
WASHINGTON DRIVE
GERMANTOWN, WI 53022

PLAN TITLE:
EROSION CONTROL DETAILS

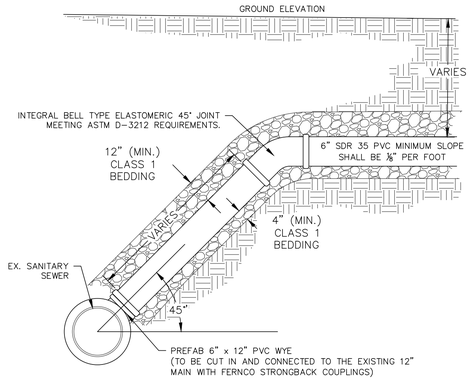
DRAWN BY: **JDR**
DESIGNED BY: **JDR**
CHECKED BY: **KJP**

PLAN DATE: **11-13-2023**

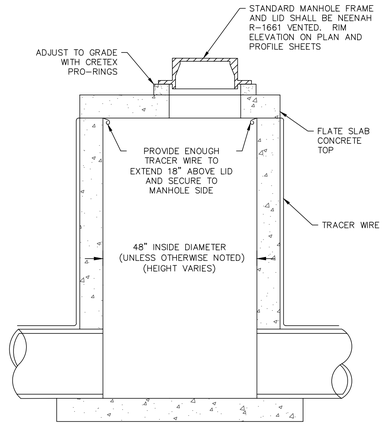
PROJECT NO: \AM-108-23\

PC SUBMITTAL

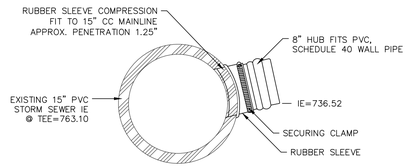
SHEET NO:
C2.03



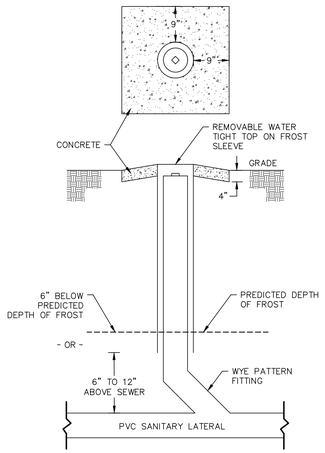
SANITARY LATERAL RISER DETAIL



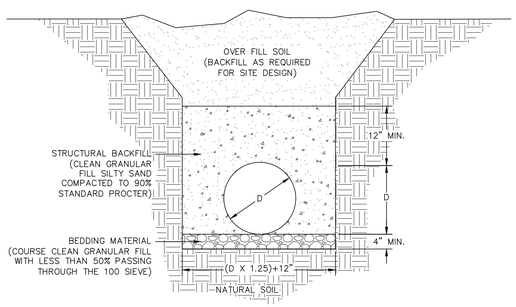
STORM MANHOLE DETAIL



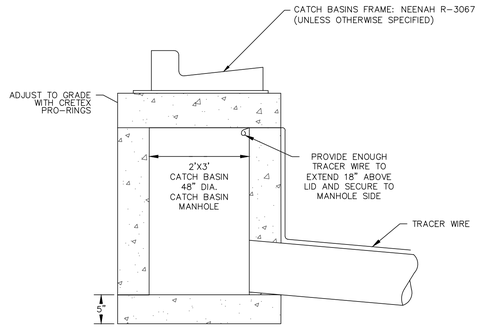
INSERTA TEE DETAIL



CLEAN OUT WITH FROST SLEEVE DETAIL



HDPE PIPE BEDDING DETAIL



INLET/CATCH BASIN DETAIL

REVISIONS:		
NO.	DATE	DESCRIPTION

PARISH SURVEY & ENGINEERING
122 Wisconsin Street, West Bend, WI 53095
262.346.7800
www.parishse.com

PROJECT TITLE:
MIDWEST PRODUCTS, LLC
WASHINGTON DRIVE
GERMANTOWN, WI 53022

PLAN TITLE:
UTILITY DETAILS

DRAWN BY:
JDR

DESIGNED BY:
JDR

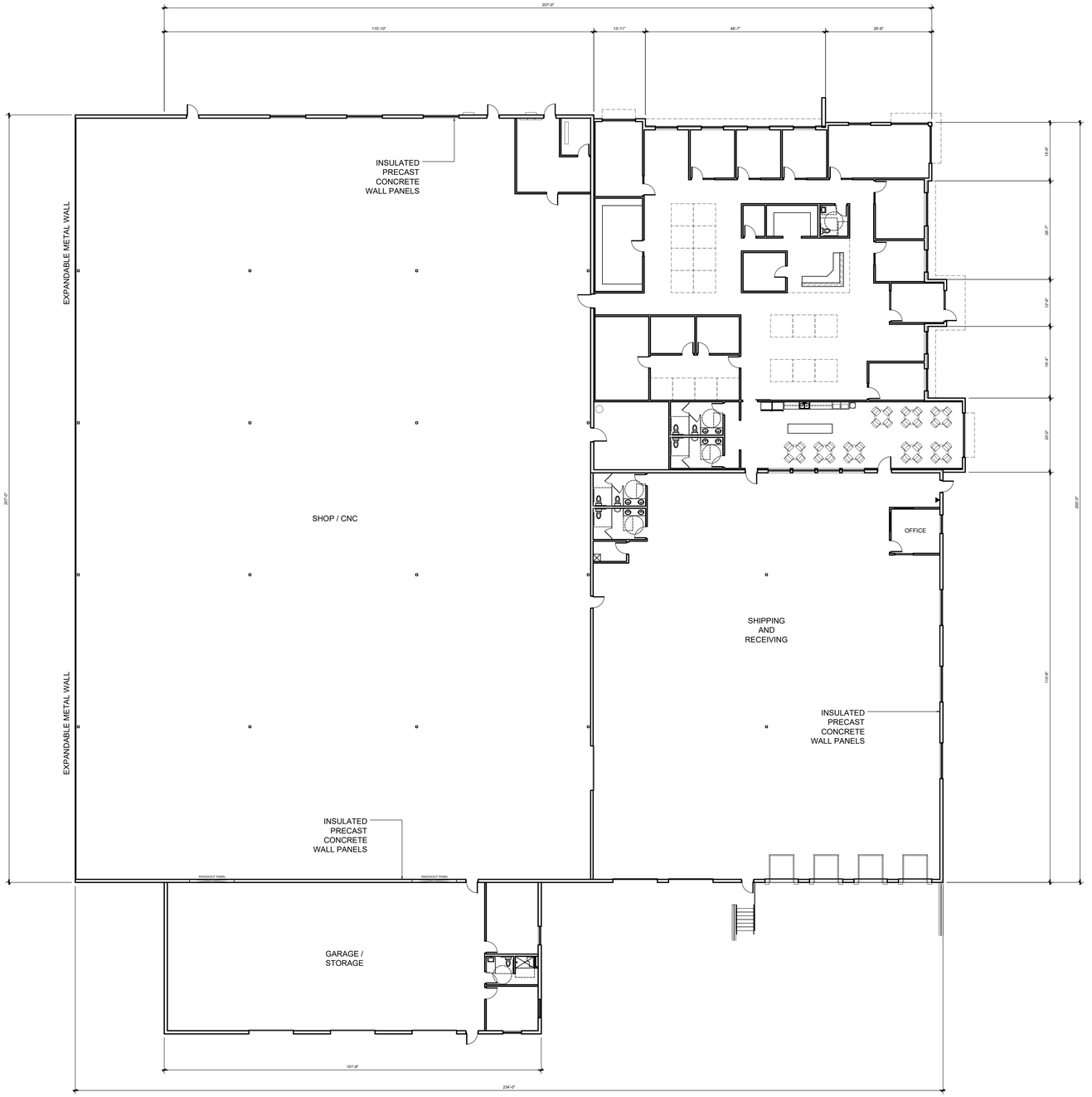
CHECKED BY:
KJP

PLAN DATE:
11-13-2023

PROJECT NO:
\AM-108-23\

PC SUBMITTAL

SHEET NO:
C2.04



FLOOR PLAN

NORTH

1/16" = 1'-0"

AMERICAN
ARCHITECTURAL GROUP, INC.
3350 SOUTH RIVER ROAD
WEST BEND, WI 53095-7884
(262) 334-3811 FAX: (262) 334-4990

AMERICAN
CONSTRUCTION SERVICES, INC.
3350 SOUTH RIVER ROAD
WEST BEND, WI 53095-7884
(262) 334-3811 FAX: (262) 334-4990

PROPOSED BUILDING

Midwest Products, Inc.

Washington Drive
Village of Germantown, Washington County

Issue Date:
11 / 13 / 2023
NOT FOR CONSTRUCTION

Revision:

Project Number:
23018

Sheet Title:
OVERALL PROPOSED
FLOOR PLAN

Sheet Number:
A-101

AMERICAN
ARCHITECTURAL GROUP, INC.
3350 SOUTH RIVER ROAD
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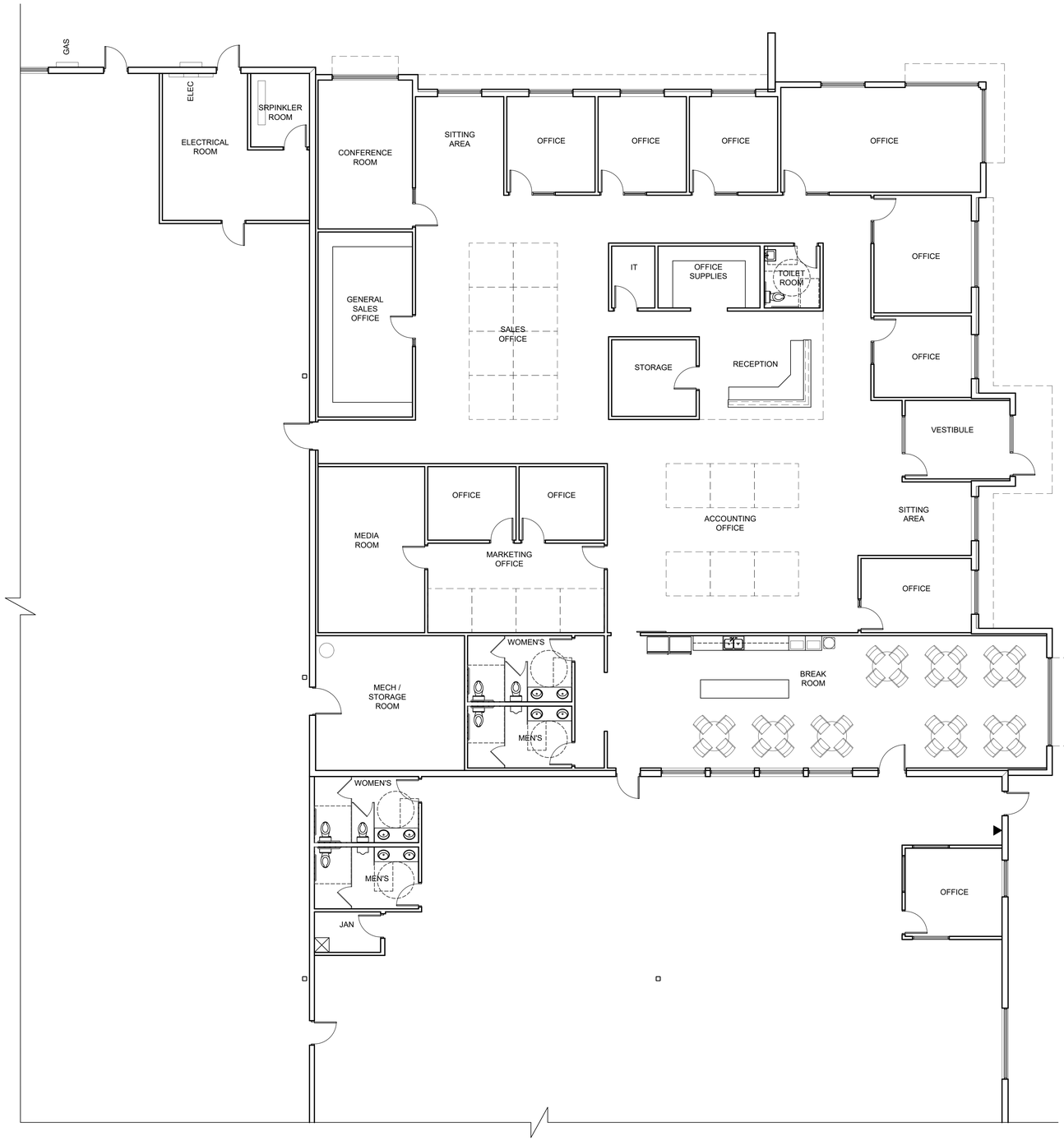
AMERICAN
CONSTRUCTION SERVICES, INC.
3350 SOUTH RIVER ROAD
WEST BEND, WI 53095-7884
(262) 334-3811 FAX: (262) 334-4990



FLOOR PLAN

NORTH

1/8" = 1'-0"

PROPOSED BUILDING
Midwest Products, Inc.
Washington Drive
Village of Germantown, Washington County

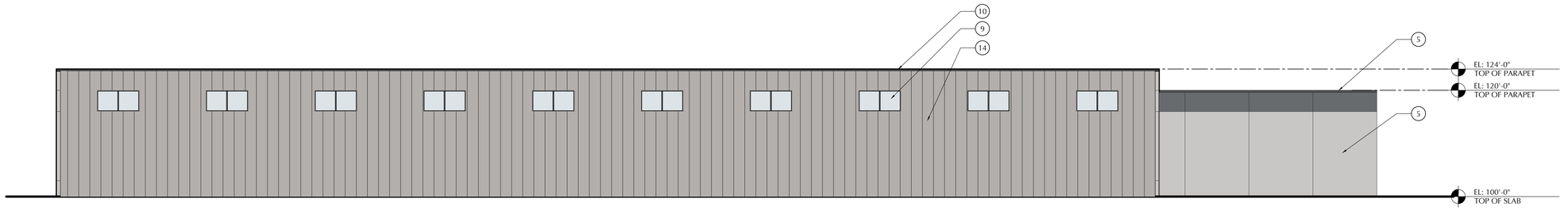
Issue Date:
11 / 13 / 2023
NOT FOR CONSTRUCTION

Revision:

Project Number:
23018

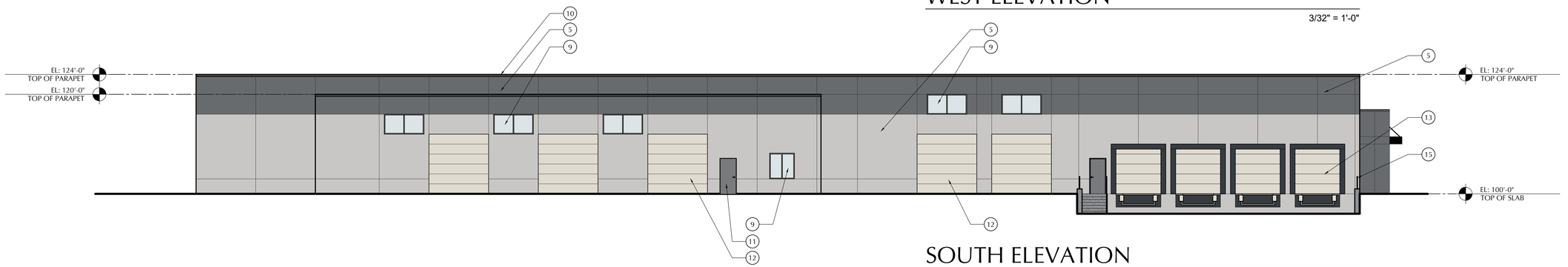
Sheet Title:
ENLARGED OFFICE FLOOR PLAN

Sheet Number:
A-102



WEST ELEVATION

3/32" = 1'-0"



SOUTH ELEVATION

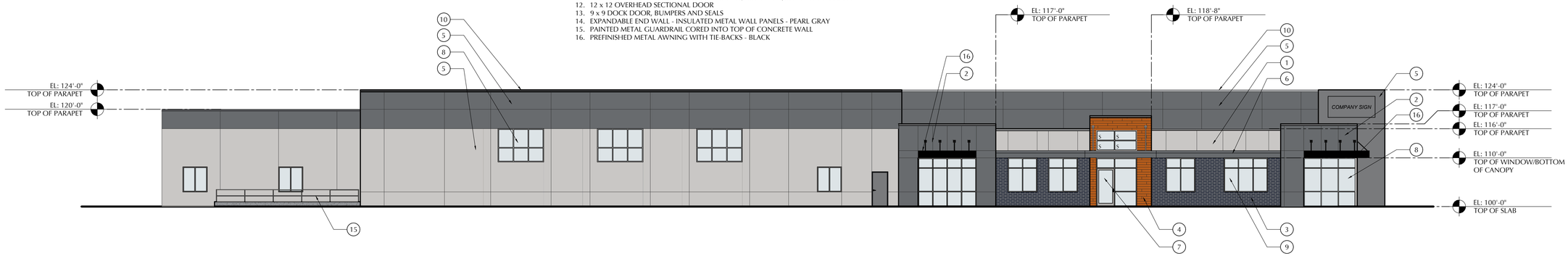
3/32" = 1'-0"

NORTH ELEVATION

3/32" = 1'-0"

KEYNOTES:

1. JAMES HARDIE OR LP SMARTSIDE PANEL SIDING - SMOOTH WITH TAMLYN XTREMETRIM 5/4" REVEAL SYSTEM - COLOR PEARL GRAY
2. JAMES HARDIE OR LP SMARTSIDE PANEL SIDING - SMOOTH WITH TAMLYN XTREMETRIM 5/4" REVEAL SYSTEM - COLOR NIGHT GRAY
3. UTILITY BRICK - OBSIDIAN BY INTERSTATE BRICK
4. LONGBOARD TONGUE AND GROOVE ALUMINUM SIDING - 4" GROOVE
5. INSULATED PRECAST CONCRETE PANEL - PAINTED, BOTTOM COLOR MATCH PEARL GRAY, TOP COLOR MATCH NIGHT GRAY
6. PRE-FINISHED METAL FASCIA AND SOFFIT CANOPIES - COLOR MATCH NIGHT GRAY
7. ANODIZED ALUMINUM STOREFRONT ENTRY SYSTEM
8. ANODIZED ALUMINUM STOREFRONT WINDOWS
9. ANODIZED ALUMINUM WINDOWS, "S" DENOTES SPANDREL GLAZING
10. PRE-FINISHED METAL COPING - COLOR GRAY
11. INSULATED HOLLOW METAL DOOR - PAINTED, MATCH ADJACENT WALL COLOR
12. 12 x 12 OVERHEAD SECTIONAL DOOR
13. 9 x 9 DOCK DOOR, BUMPERS AND SEALS
14. EXPANDABLE END WALL - INSULATED METAL WALL PANELS - PEARL GRAY
15. PAINTED METAL GUARDRAIL CORED INTO TOP OF CONCRETE WALL
16. PREFINISHED METAL AWNING WITH TIE-BACKS - BLACK



EAST ELEVATION

3/32" = 1'-0"

AMERICAN ARCHITECTURAL GROUP, INC.
3350 SOUTH RIVER ROAD
WEST BEND, WI 53095-7884
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AMERICAN CONSTRUCTION SERVICES, INC.
3350 SOUTH RIVER ROAD
WEST BEND, WI 53095-7884
(262) 334-3811 FAX: (262) 334-4990

PROPOSED BUILDING
Midwest Products, Inc.
Washington Drive
Village of Germantown, Washington County

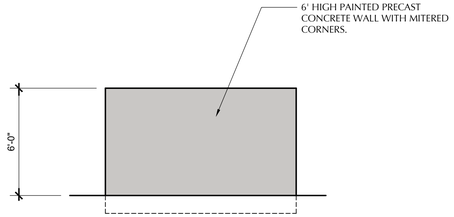
Issue Date:
11 / 13 / 2023
NOT FOR CONSTRUCTION

Revision:

Project Number:
23018

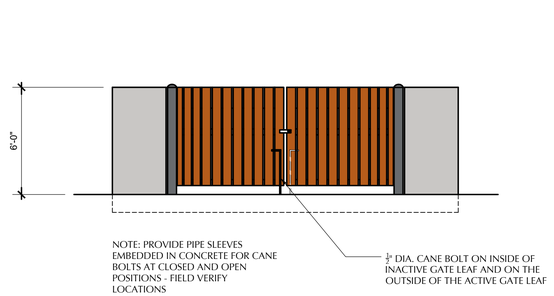
Sheet Title:
EXTERIOR ELEVATIONS

Sheet Number:
A-201



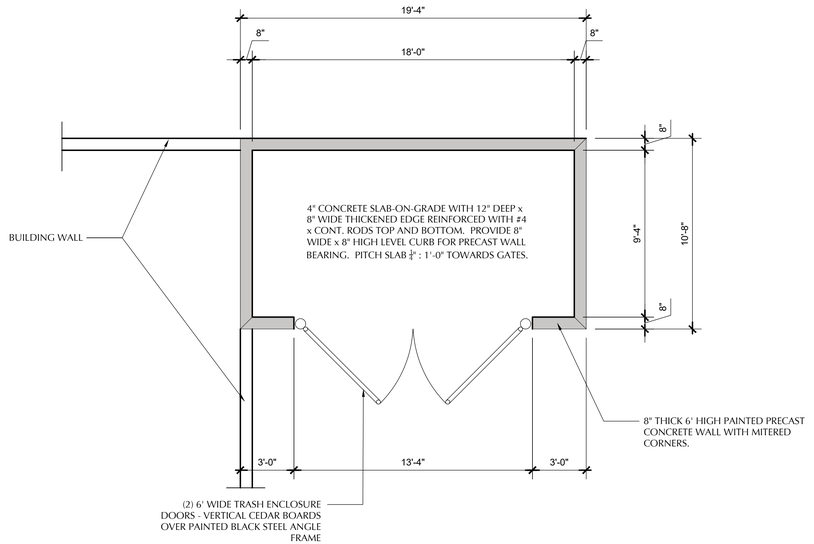
RIGHT SIDE ELEVATION

1/4" = 1'-0"



FRONT ELEVATION

1/4" = 1'-0"



TRASH ENCLOSURE PLAN

1/4" = 1'-0"

AMERICAN ARCHITECTURAL GROUP, INC.
3350 SOUTH RIVER ROAD
WEST BEND, WI 53095-7884
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AMERICAN CONSTRUCTION SERVICES, INC.
3350 SOUTH RIVER ROAD
WEST BEND, WI 53095-7884
(262) 334-3811 FAX: (262) 334-4990

PROPOSED BUILDING
Midwest Products, Inc.
Washington Drive
Village of Germantown, Washington County

Issue Date:
11 / 13 / 2023
NOT FOR CONSTRUCTION

Revision:

Project Number:
23018

Sheet Title:
TRASH ENCLOSURE

Sheet Number:
A-202

AMERICAN
ARCHITECTURAL GROUP, INC.

MIDWEST PRODUCTS

NIGHT GRAY
PRECAST CONCRETE
METAL CANOPY & COPING

PEARL GRAY
PRECAST CONCRETE

OBSIDIAN
INTERSTATE BRICK

DARK WALNUT
LONGBOARD SIDING

Project		**Catalog #**		**Type**	
Prepared by		**Notes**		**Date**	

Lumark

Prevail LED

Area / Site Luminaire

Product Features

LumenSafe Technology

BAA BUY AMERICAN ACT AVAILABLE

Interactive Menu

- Ordering Information page 2
- Mounting Details page 3, 4
- Optical Configurations page 5
- Product Specifications page 5
- Energy and Performance Data page 6, 7
- Control Options page 8

Product Certifications

ISO CERTIFIED · UL CERTIFIED · DLC LISTED [1] · DLC LISTED PREMIUM [1] · FC CLASS A CAN ICES-005 · RoHS COMPLIANT · IP66 · ida DARK SKY APPROVED [2] · 5 YEAR LIMITED WARRANTY

Quick Facts

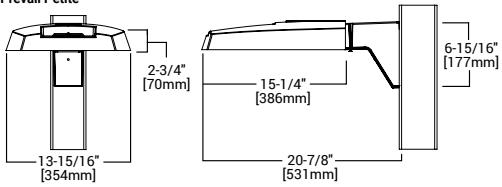
- Lumen packages range from 4,800 - 84,000 lumens (35W - 588W)
- Replaces 70W up to 1,000W HID equivalents
- Efficacies up to 160 lumens per watt
- Energy and maintenance savings up to 85% versus HID solutions
- Standard universal quick mount arm with universal drill pattern

Connected Systems

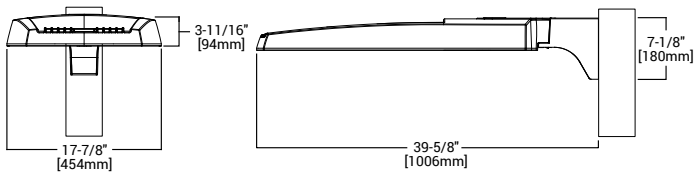
- WaveLinx

Dimensional Details

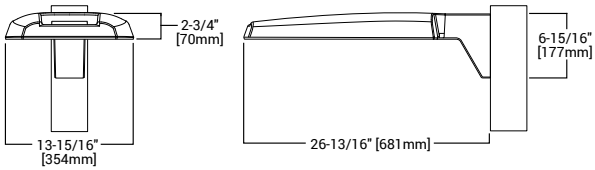
Prevail Petite



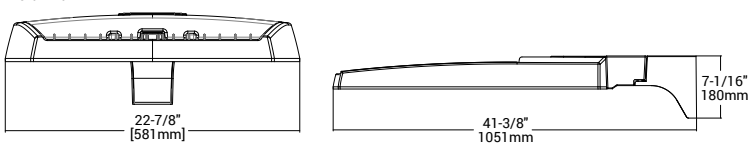
Prevail XL



Prevail



Prevail Maxx



NOTES:
1. Visit https://www.designlights.org/search/ to confirm qualification. Not all product variations are DLC qualified.
2. IDA Certified for 3000K CCT and warmer only.

Ordering Information

SAMPLE NUMBER: **PRV-XL-C75-D-UNV-T4-SA-BZ**

Product Family [1, 2]	Light Engine [4]	Color Temperature	Driver	Voltage	Distribution	Mounting	Color
PRV-P=Prevail Petite **BAA-PRV-P**=Prevail Petite BAA Compliant [3] **TAA-PRV-P**=Prevail Petite TAA Compliant [3]	**C10**=(1 LED) 4,900 Nominal Lumens **C15**=(1 LED) 6,900 Nominal Lumens **C20**=(1 LED) 9,800 Nominal Lumens **C25**=(1 LED) 11,800 Nominal Lumens	**740**=70CRI, 4000K **727**=70CRI, 2700K **730**=70CRI, 3000K **750**=70CRI, 5000K **8540**=85CRI, 4000K	**D**=Dimming (0-10V)	**UNV**=Universal (120-277V) **H**=High Voltage, 347-480V **8**=480V [5] **9**=347V **DV**=DuraVolt (277-480V) [5, 6]	**T2**=Type II **T3**=Type III **T4**=Type IV **T5**=Type V	**SA**=QM Standard Versatile Arm **MA**=QM Mast Arm **FMA**= Fixed Mast Arm [28] **WM**=QM Wall Mount Arm **ADJA-WM**=Adjustable Arm–Wall Mount [30] **ADJA**=Adjustable Arm–Pole Mount [30] **ADJS**=Adjustable Arm–Slipfitter, 3" vertical tenon [30] **SP2**=Adjustable Arm–Slipfitter, 2 3/8" vertical tenon [28, 30]	**BZ**=Bronze **AP**=Grey **BK**=Black **DP**=Dark Platinum **GM**=Graphite Metallic **WH**=White
PRV=Prevail **BAA-PRV**=Prevail BAA Compliant [3] **TAA-PRV**=Prevail TAA Compliant [3]	**C15**=(1 LED) 7,100 Nominal Lumens **C25**=(2 LEDs) 13,100 Nominal Lumens **C40**=(2 LEDs) 17,100 Nominal Lumens **C60**=(2 LEDs) 20,000 Nominal Lumens						
PRV-XL=Prevail XL **BAA-PRV-XL**=Prevail XL BAA Compliant [3] **TAA-PRV-XL**=Prevail XL TAA Compliant [3]	**C75**=(4 LED) 26,100 Nominal Lumens **C100**=(4 LED) 31,000 Nominal Lumens **C125**=(4 LED) 36,000 Nominal Lumens **C150**=(6 LED) 41,100 Nominal Lumens **C175**=(6 LED) 48,600 Nominal Lumens						
PRV-M=Prevail Maxx **BAA-PRV-M**=Prevail Maxx BAA Compliant[3] **TAA-PRV-M**=Prevail MaxxTAA Compliant [3]	**C200**=(9 LED) 48,000 Nominal Lumens **C225**=(9 LED) 56,000 Nominal Lumens **C250**=(9 LED) 65,000 Nominal Lumens **C275**=(9 LED) 73,000 Nominal Lumens						

Options (Add as Suffix)

7030=70 CRI / 3000K CCT [7]
7050=70 CRI / 5000K CCT [7]
CC=Coastal Construction finish [31]
HSS=House Side Shield [8]
L90=Optics Rotated 90° Left
R90=Optics Rotated 90° Right
10K=10kV/10kA UL 1449 Fused Surge Protective Device
20MSP=20kV MOV Surge Protective Device
20K=20kV UL 1449 Fused Surge Protective Device
HA=50°C High Ambient Temperature [9]
PR=NEMA 3-PIN Twistlock Photocontrol Receptacle [11]
PR7=NEMA 7-PIN Twistlock Photocontrol Receptacle [11]
MS/DIM-L08=Dimming Motion and Daylight Sensor, IR Remote Programmable, < 8' Mounting Height [12, 13, 22, 28]
MS/DIM-L20=Dimming Motion and Daylight Sensor, IR Remote Programmable, 8' - 20' Mounting Height [12, 22, 13]
MS/DIM-L40=Dimming Motion and Daylight Sensor, IR Remote Programmable, 21' - 40' Mounting [12, 13]
SPB1=Dimming Motion and Daylight Sensor, Bluetooth Programmable, < 8' Mounting Height [12, 14, 22]
SPB2=Dimming Motion and Daylight Sensor, Bluetooth Programmable, 8' - 20' Mounting Height [12, 14, 22]
SPB4=Dimming Motion and Daylight Sensor, Bluetooth Programmable, 21' - 40' Mounting Height [12, 14, 28, 29]
ZW=Wavelinx-enabled 4-PIN Twistlock Receptacle [12]
ZD= DALI-enabled 4-PIN Twistlock Receptacle [12]
ZW-SWPD4XX=WaveLinx Pro, Dimming Motion and Daylight, WAC Programmable, 7' - 15' Mounting [12, 15, 16, 17, 22]
ZW-SWPD5XX=WaveLinx Pro, Dimming Motion and Daylight, WAC Programmable, 15' - 40' Mounting [12, 15, 16, 17, 28, 29]
ZD-SWPD4XX= WaveLinx Pro, SR Driver, Dimming Motion and Daylight, WAC Programmable, 7' - 15' Mounting [12, 15, 16, 17, 22]
ZD-SWPD5XX=WaveLinx Pro, SR Driver, Dimming Motion and Daylight, WAC Programmable, 15' - 40' Mounting [12, 15, 16, 17, 28, 29]
(See Table Below)=LumenSafe Integrated Network Security Camera [18, 19]

Accessories (Order Separately) [20, 21]

PRVSA-XX=Standard Arm Mounting Kit [22]
PRVMA-XX=Mast Arm Mounting Kit [22]
PRVWM-XX=Wall Mount Kit [22]
PRV-ADJA-XX=Adjustable Arm - Pole Mount Kit [22]
PRV-ADJS-XX=Adjustable Arm - Slipfitter Kit [22]
PRV-ADJA-WM-XX=Adjustable Arm - Wall Mount Kit [22]
PRVXLSA-XX=Standard Arm Mounting Kit [29]
PRVXLMA-XX=Mast Arm Mounting Kit [29]
PRVXLWM-XX=Wall Mount Kit [29]
PRV-XL-ADJA-XX=Adjustable Arm - Pole Mount Kit [29]
PRV-XL-ADJS-XX=Adjustable Arm - Slipfitter Kit [29]
PRV-XL-ADJA-WM-XX=Adjustable Arm - Wall Mount Kit [29]
PRV-M-ADJA-XX=Adjustable Arm - Pole Mount Kit [28]
PRV-M-ADJS-XX=Adjustable Arm - Slipfitter Kit [28]
PRV-M-ADJA-WM-XX=Adjustable Arm - Wall Mount Kit [28]
MA1010-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon
MA1011-XX=2@180° Tenon Adapter for 3-1/2" O.D. Tenon
MA1017-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon
MA1018-XX=2@180° Tenon Adapter for 2-3/8" O.D. Tenon
SRA238=Tenon Adapter from 3" to 2-3/8"
PRV/COB-FDV=Full Drop Visor [23]
PRVXL/COB-FDV=Full Drop Visor [18]
HS/VERD=House Side Shield Kit [8, 24]
VGS-F/B= Vertical Glare Shield Kit, Front/Back [24]
VGS-SIDE=Vertical Glare Shield Kit, Side [24]
OA/RA1013=Photocontrol Shorting Cap
OA/RA1014=NEMA Photocontrol - 120V
OA/RA1016=NEMA Photocontrol - Multi-Tap 105-285V
OA/RA1201=NEMA Photocontrol - 347V
OA/RA1027=NEMA Photocontrol - 480V
FSIR-100=Wireless Configuration Tool for Occupancy Sensor [25]
WOLC-7P-10A=WaveLinx Outdoor Control Module (7-PIN) [27]
SWPD4-XX=WaveLinx Sensor, Dimming Motion and Daylight, WAC Programmable, 7' - 15' Mounting [15, 16, 17, 22, 26]
SWPD5-XX=WaveLinx Sensor, Dimming Motion and Daylight, WAC Programmable, 15' - 40' Mounting [15, 16, 17, 26, 28, 29]

NOTES:
1. DesignLights Consortium® Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.
2. Customer is responsible for engineering analysis to confirm pole and fixture compatibility for alll applications. Refer to installation instructions IB500002EN and pole white paper WP513001EN for additional support information.
3. Only product configurations with these designated prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or Trade Agreements Act of 1979 (TAA), respectively. Please refer to DOMESTIC PREFERENCES website for more information. Components shipped separately may be separately analyzed under domestic preference requirements.
4. Standard 4000K CCT and 70CRI.
5. 480V not to be used with ungrounded or impedance grounded systems.
6. DuraVolt drivers feature added protection from power quality issues such as loss of neutral, transients and voltage fluctuations. Visit www.signify.com/duravolt for more information.
7. Use dedicated IES files on product website for non-standard CCTs.
8. House Side Shield not suitable with T5 distribution. Not available with PRV-C60 lumen package.
9. Not available with PRV-C60 lumen package. Not available with PRV-P-C25 lumen package.
10. Coastal construction finish salt spray tested to over 5,000-hours per ASTM B117, with a scribe rating of 9 per ASTM D1654.
11. If DuraVolt (DV) is specified, use a photocontrol that matches the input voltage used.
12. Controls system is not available in combination with a photocontrol receptacle (PR & PER7) or another controls system (MS, SPB, ZD, or ZW). Option not available with DuraVolt (DV) voltage option.
13. Utilizes the Wattstopper sensor FSP-211. Sensor color white unless specified otherwise via PDR. To field-configure, order FSIR-100 accessory separately.
14. Utilizes the Wattstopper sensor FSP-3XX series. Sensor color determined by product finish. See Sensor Color Reference Table. Field-configures via mobile application. See Controls section for details.
15. Sensor passive infrared (PIR) may be overly sensitive when operating below -20°C (-4°F).
16. For the device to be field-configurable, requires WAC Gateway components WAC-PoE and WPOE-120 in appropriate quantities. Only compatible with WaveLinx system and software and requires system components to be installed for operation. See website for more Wavelinx application information.
17. Replace XX with sensor color (WH, BZ, or BK).
18. Only available in PRV-XL configurations C75, C100, C125, C150, or C175.
19. Not available with 347V, 480V, DV, or HA options. Consult LumenSafe system product pages for additional details and compatability information.
20. Replace XX with paint color.
21. For BAA or TAA requirements, Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information.
22. Not for use with PRV-XL or PRV-M configurations.
23. Only for use with PRV. Not applicable to PRV-M, PRV-XL, or PRV-P.
24. Must order one per optic/LED when ordering as a field-installable accessory (1, 2, 4, 6 or 9).
25. This tool enables adjustment to Motion Sensor (MS) parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative for more information.
26. Requires 4-PIN twistlock receptacle (ZD or ZW) option.
27. Requires 7-PIN NEMA twistlock photocontrol receptacle (PR & PER7) option. The WOLC-7 cannot be used in conjunction with other controls systems (MS, ZD, ZW or LWR). Operates on 120-347V input voltages.
28. Only for use with PRV-M configurations.
29. Only for use with PRV-XL configurations.
30. Fixed for PRV-M.

LumenSafe Integrated Network Security Camera Technology Options (Add as Suffix)

Product Family	Camera Type	Data Backhaul		
L=LumenSafe Technology	**H**=Dome Camera, High Res **Z**=Dome Camera, Remote PTZ	**C**=Cellular, Customer Installed SIM Card **A**=Cellular, Factory Installed AT&T SIM Card	**V**=Cellular, Factory Installed Verizon SIM Card **S**=Cellular, Factory Installed Sprint SIM Card	**E**=Ethernet Networking

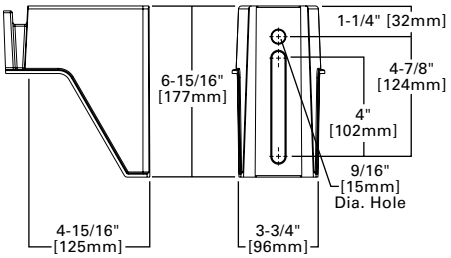
Stock Ordering Information

Product Family [1]	Light Engine	Voltage	Distribution
PRVS=Prevail	**C15**=(1 LED) 7,100 Nominal Lumens **C25**=(2 LEDs) 13,100 Nominal Lumens **C40**=(2 LEDs) 17,100 Nominal Lumens **C60**=(2 LEDs) 20,000 Nominal Lumens	**UNV**=Universal (120-277V) **347**=347V [2]	**T3**=Type III **T4**=Type IV
PRVS-XL=Prevail XL	**C75**=(4 LED) 26,100 Nominal Lumens **C100**=(4 LED) 31,000 Nominal Lumens **C125**=(4 LED) 36,000 Nominal Lumens **C150**=(6 LED) 41,100 Nominal Lumens **C175**=(6 LED) 48,600 Nominal Lumens		

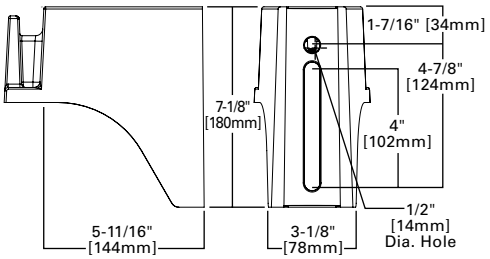
NOTES:
1. All stock configurations are standard 4000K/70CRI, bronze finish, and include the standard versatile mounting arm.
2. Only available in PRVS configurations C15, C25, C40 or C60.

Mounting Details

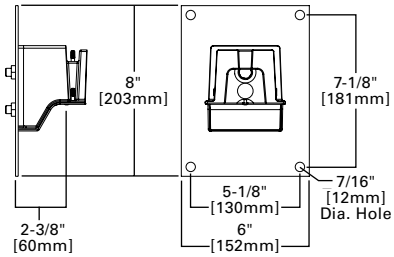
SA=QM Pole Mount Arm (PRV & PRV-P)



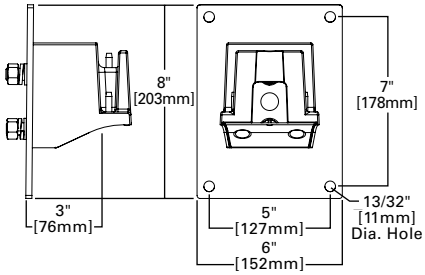
SA=QM Pole Mount Arm (PRV-XL)



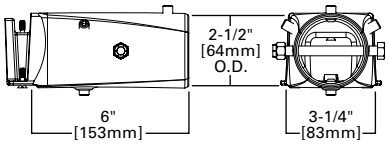
WM=QM Wall Mount Arm (PRV & PRV-P)



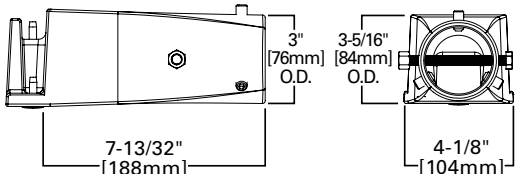
WM=QM Wall Mount Arm (PRV-XL)



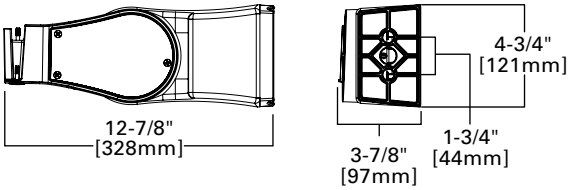
MA=QM Mast Arm (PRV & PRV-P)



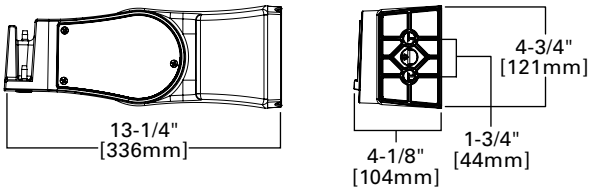
MA=QM Mast Arm (PRV-XL)



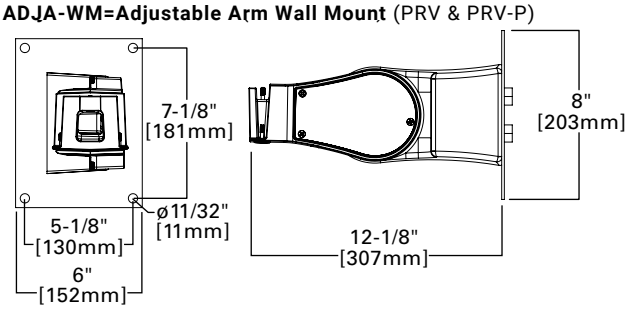
ADJA=Adjustable Arm Pole Mount (PRV & PRV-P)



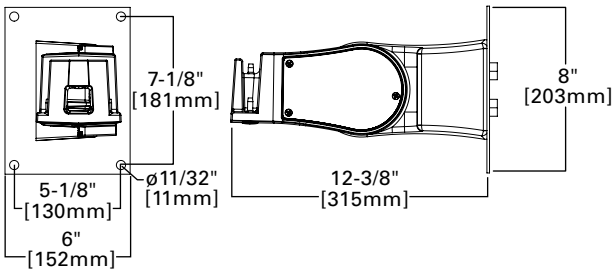
ADJA=Adjustable Arm Pole Mount (PRV-XL)



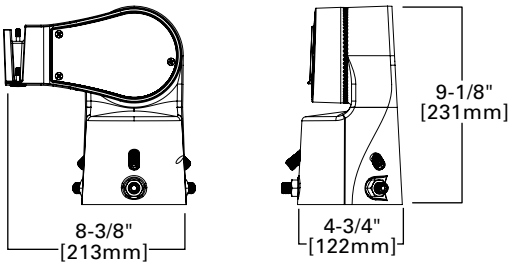
ADJA-WM=Adjustable Arm Wall Mount (PRV & PRV-P)



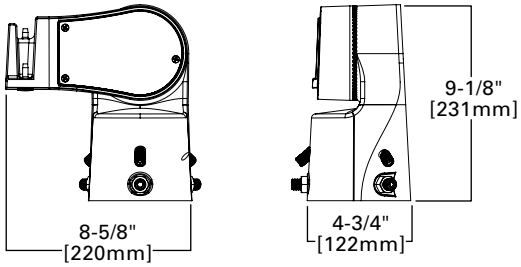
ADJA-WM=Adjustable Arm Wall Mount (PRV-XL)



ADJS=Adjustable Slipfitter 3 (PRV & PRV-P)

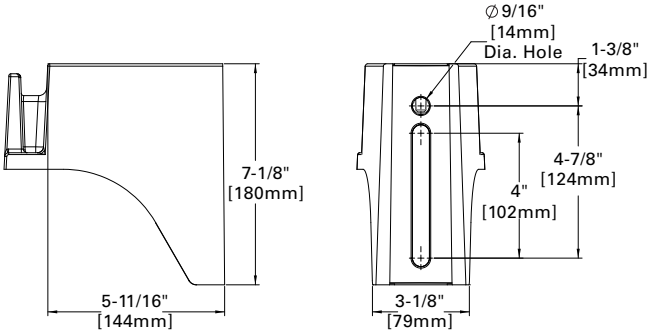


ADJS=Adjustable Slipfitter 3 (PRV-XL)

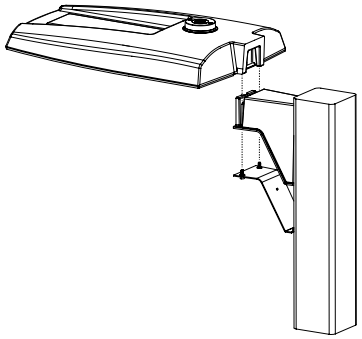


Mounting Details

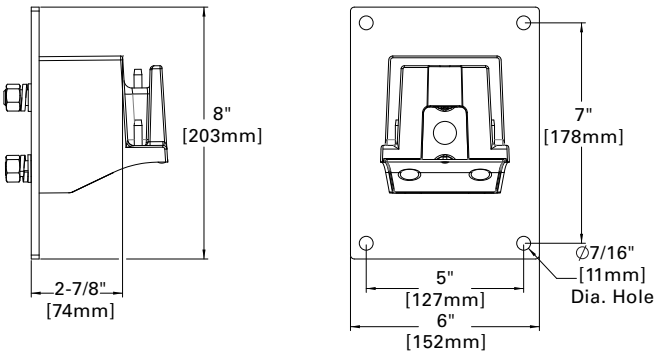
SA=QM Pole Mount Arm (PRV-M)



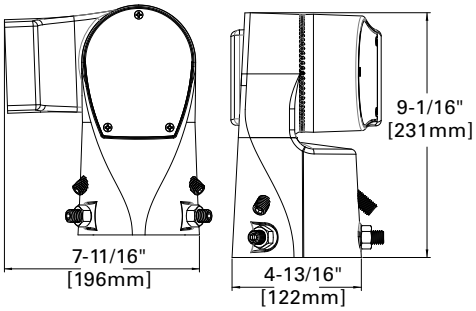
Versatile Mount System



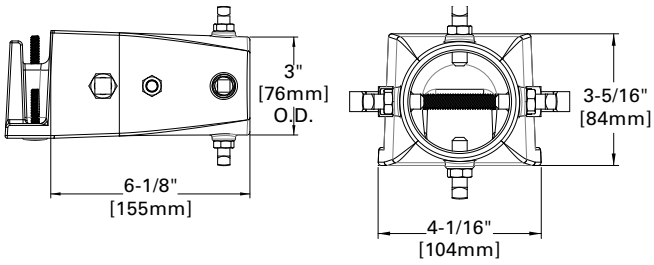
WM=QM Wall Mount Arm (PRV-M)



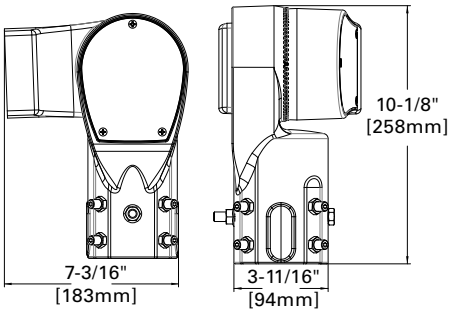
ADJS=Adjustable Slipfitter (PRV-M)



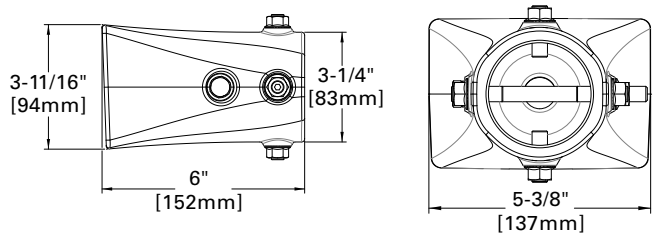
MA=QM Mast Arm (PRV-M)



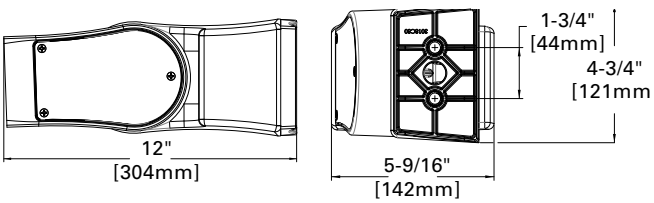
SP2=Adjustable Slipfitter 2-3/8" (PRV-M)



FMA=Fixed Mast Arm (PRV-M)



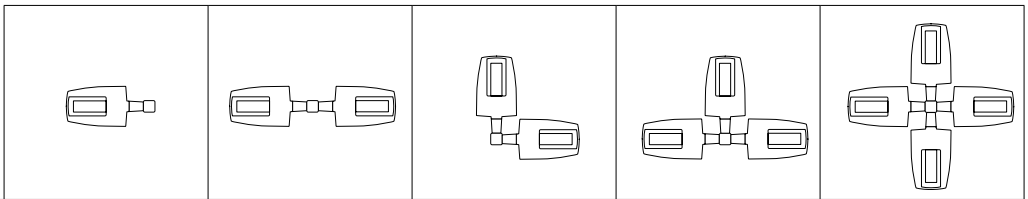
DM=Direct Pole Mount Arm (PRV-M)



Mounting Details

Mounting Configurations and EPAs

NOTE: For 2 PRV's mounted at 90°, requires minimum 3" square or 4" round pole for fixture clearance. For 2 PRV-XL's mounted at 90°, requires minimum 4" square or round pole for fixture clearance. Customer is responsible for engineering analysis to confirm pole and fixture compatibility for applications.

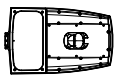


Housing Size	Tilt Angle (Degrees)	Arm Mount Single	Arm Mount 2 @ 180°	Arm Mount 2 @ 90°	Arm Mount 3 @ 90°	Arm Mount 4 @ 90°
Prevail Petite	0°	0.54	1.08	0.84	1.38	1.38
	60°	1.68	1.85	2.42	3.15	3.30
Prevail	0°	0.92	1.35	1.42	1.63	1.63
	60°	2.20	2.40	3.05	3.88	4.07
	60° + Full Drop Visor	2.20	2.40	3.25	4.28	4.47
Prevail XL	0°	1.12	2.25	2.13	2.52	2.52
	60°	3.99	4.30	5.26	6.51	6.79
	60° + Full Drop Visor	3.99	4.30	5.59	7.17	7.49
Prevail Maxx	0°	1.28	2.56	1.7	2.69	2.69
	60°	5.09	5.52	6.34	7.49	7.81

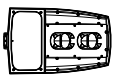
Optical Configurations

PRV-P-C10/C15/C20/C25
(4,900/6,900/9,800/11,800 Nominal Lumens)

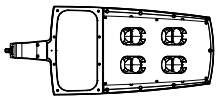
PRV-C15
(7,100 Nominal Lumens)



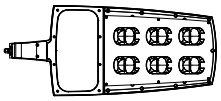
PRV-C25/C40/C60
(13,100/17,100/20,000 Nominal Lumens)



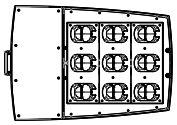
PRV-XL-C75/C100/C125
(26,100/31,000/36,300 Nominal Lumens)



PRV-XL-C150/C175
(41,100/48,600 Nominal Lumens)

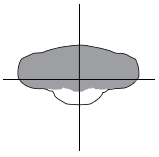


PRV-M-PA6X
(50,000/60,000/70,000/80,000 Nominal Lumens)

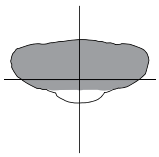


Optical Distributions

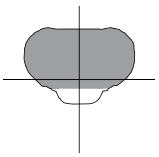
T2
(Type II)



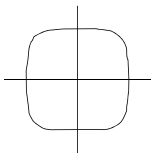
T3
(Type III)



T4
(Type IV)



T5
(Type V)



= Distribution with House Side Shield (HSS)

= Optical Distribution

Product Specifications

Construction

- Single-piece die-cast aluminum housing
- Tethered die-cast aluminum door

Optics

- Dark Sky Approved (3000K CCT and warmer only)
- Precision molded polycarbonate optics

Electrical

- -40°C minimum operating temperature
- 40°C maximum operating temperature
- >.9 power factor
- <20% total harmonic distortion
- Class 1 electronic drivers have expected life of 100,000 hours with <1% failure rate
- 0-10V dimming driver is standard with leads external to the fixture
- Standard MOV surge protective device designed to withstand 10kV of transient line surge

Mounting

- Versatile, patented, standard mount arm accommodates multiple drill patterns ranging from 1-1/2" to 4-7/8" (Type M drilling recommended for new installations)
- A knock-out on the standard mounting arm enables round pole mounting
- Adjustable pole and wall mount arms adjust in 5° increments from 0° to 60°; Downward facing orientation only (Type N drilling required for ADJA mount)
- Adjustable slipfitter arm adjusts in 5° increments from -5° to 85°; Downward facing orientation only
- Adjustable Arms: 1.5G vibration rated
- Prevail and Prevail Petite: 3G vibration rated
- Prevail XL Mast Arm: 3G vibration rated
- Prevail XL Standard Arm: 1.5G vibration rated

Typical Applications

- Parking lots, Walkways, Roadways and Building Areas

Finish

- Five-stage super TGIC polyester powder coat paint, 2.5 mil nominal thickness
- Finish is compliant to 3,000 hour salt spray standard (per ASTM B117)

Shipping Data

- Prevail Petite: 18 lbs. (7.94 kgs.)
- Prevail: 20 lbs. (9.09 kgs.)
- Prevail XL: 45 lbs. (20.41 kgs.)
- Prevail Maxx: 49 lbs. (22.23 kgs.)

Warranty

- Five year limited warranty, consult website for details. www.cooperlighting.com/legal

Energy and Performance Data

View PRV-P IES files | View PRV IES files | View PRV-XL IES files

Power and Lumens

Product Family		Prevail Petite				Prevail				Prevail XL					Prevail Maxx			
Light Engine		C10	C15	C20	C25	C15	C25	C40	C60	C75	C100	C125	C150	C175	C200	C225	C250	C275
Power (Watts)		35	49	73	94	52	96	131	153	176	217	264	285	346	346	418	487	588
Input Current @ 120V (A)		0.29	0.41	0.61	0.79	0.43	0.80	1.09	1.32	1.50	1.84	2.21	2.38	2.92	2.89	3.49	4.06	4.90
Input Current @ 277V (A)		0.13	0.18	0.27	0.35	0.19	0.35	0.48	0.57	0.66	0.82	0.97	1.04	1.25	1.26	1.51	1.72	2.06
Input Current @ 347V (A)		0.11	0.16	0.23	0.29	0.17	0.30	0.41	0.48	0.54	0.66	0.79	0.84	1.02	1.00	1.21	1.40	1.70
Input Current @ 480V (A)		0.08	0.12	0.17	0.22	0.12	0.22	0.30	0.35	0.40	0.48	0.57	0.62	0.74	0.73	0.88	1.00	1.21
Distribution [1]																		
Type II	4000K Lumens	4,775	6,717	9,542	11,521	7,123	13,205	17,172	20,083	26,263	31,231	36,503	41,349	48,876	50,349	59,444	68,447	79,322
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B5-U0-G5
	Lumens per Watt	138	137	131	122	137	138	131	131	149	144	138	145	141	146	142	141	135
	3000K Lumens [1]	4,869	6,595	9,369	11,312	6,994	12,965	16,860	19,718	25,786	30,664	35,840	40,598	47,989	49,437	58,368	67,208	77,886
Type III	4000K Lumens	4,782	6,727	9,556	11,538	7,111	13,183	17,144	20,050	26,120	31,061	36,304	41,124	48,610	50,162	59,223	68,193	79,027
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G3	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	138	137	131	123	137	137	131	131	148	143	138	144	140	145	142	140	135
	3000K Lumens [1]	4,695	6,605	9,383	11,329	6,982	12,944	16,832	19,686	25,646	30,497	35,645	40,377	47,727	49,254	58,151	66,958	77,596
Type IV	4000K Lumens	4,880	6,865	9,752	11,774	7,088	13,140	17,087	19,984	26,098	31,035	36,274	41,089	48,569	50,575	59,711	68,754	79,678
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G3	B1-U0-G3	B2-U0-G4	B2-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B5-U0-G5
	Lumens per Watt	141	140	134	125	136	137	130	131	148	143	137	144	140	146	143	141	136
	3000K Lumens [1]	4,792	6,740	9,575	11,561	6,959	12,901	16,777	19,621	25,624	30,471	35,615	40,343	47,687	49,659	58,630	67,510	78,235
Type V	4000K Lumens	5,067	7,128	10,126	12,226	7,576	14,045	18,264	21,360	28,129	33,450	39,097	44,287	52,349	53,531	63,201	72,773	84,335
	BUG Rating	B3-U0-G2	B3-U0-G2	B4-U0-G3	B4-U0-G3	B3-U0-G3	B4-U0-G3	B4-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	146	145	139	130	146	146	139	140	160	154	148	155	151	155	151	150	144
	3000K Lumens [1]	4,975	6,999	9,942	12,004	7,438	13,790	17,932	20,972	27,618	32,843	38,387	43,483	51,398	52,562	62,057	71,455	82,808

NOTES:
1. For 3000K, 5000K or HSS data, refer to published IES files.

Lumen Maintenance

Configuration	TM-21 Lumen Maintenance (50,000 Hours)	Theoretical L70 (Hours)
Prevail and Prevail Petite at 25°C	91.30%	> 194,000
Prevail and Prevail Petite at 40°C	87.59%	> 134,000
Prevail XL at 25°C	91.40%	> 204,000
Prevail XL at 40°C	89.41%	> 158,000
Prevail Maxx at 25°C	91.40%	> 204,000
Prevail Maxx at 40°C	89.41%	> 158,000

Sensor Color Reference Table (SPBx)

Housing Finish	Sensor Color
AP=Grey	Grey
BZ=Bronze	Bronze
BK=Black	Black
DP=Dark Platinum	Grey
GM=Graphite Metallic	Black
WH=White	White

Lumen Multiplier

Ambient Temperature	Lumen Multiplier
10°C	1.02
15°C	1.01
25°C	1.00
40°C	0.99

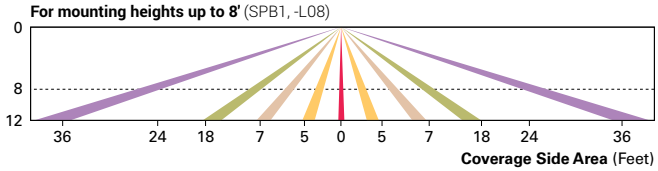
Control Options

0-10V This fixture provides 0-10V dimming wire leads for use with a lighting control panel or other control method.

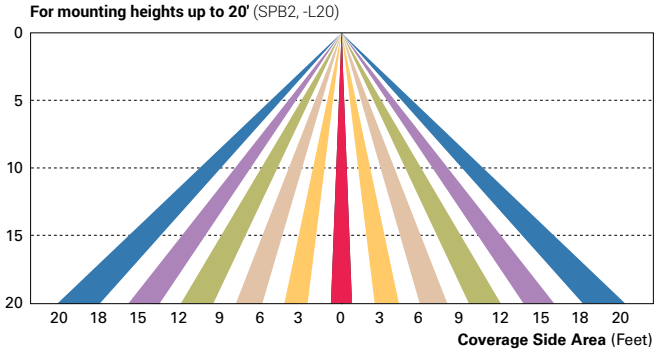
Photocontrol (PR and PR7) Photocontrol receptacles provide a flexible solution to enable "dusk-to-dawn" lighting by sensing light levels. Advanced control systems compatible with NEMA 7-PIN standards can be utilized with the PR7 receptacles.

Dimming Occupancy Sensor (SPB, MS/DIM-LXX) These sensors are factory installed in the luminaire housing. When the SPB or MS/DIM sensor options are selected, the luminaire will dim down after five minutes of no activity detected. When activity is detected, the luminaire returns to full light output. These occupancy sensors include an integral photocell for "dusk-to-dawn" control or "daylight harvesting." Factory default is enabled for the MS sensors and disabled for the SPB. SPB motion sensors require the Sensor Configuration mobile application by Wattstopper to change factory default dimming level, time delay, sensitivity and other parameters. Available for iOS and Android devices. The SPB sensor is factory preset to dim down to approximately 10% power with a time delay of five minutes.

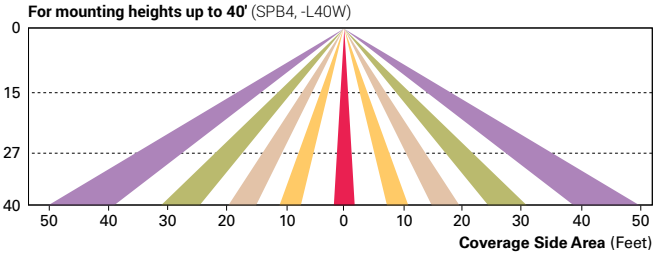
For mounting heights up to 8' (SPB1, -L08)



For mounting heights up to 20' (SPB2, -L20)



For mounting heights up to 40' (SPB4, -L40W)

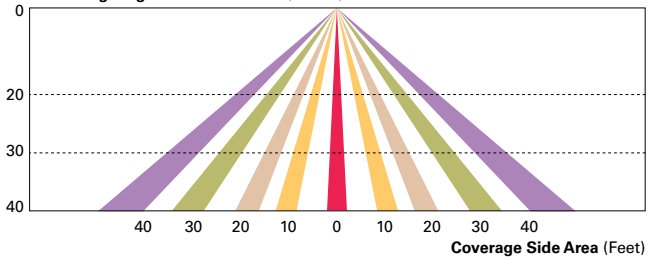


WaveLinx Wireless Control and Monitoring System Available in 7-PIN or 4-PIN configurations, the WaveLinx Outdoor control platform operates on a wireless mesh network based on IEEE 802.15.4 standards enabling wireless control of outdoor lighting. At least one Wireless Area Controller (WAC) is required for full functionality and remote communication (including adjustment of any factory pre-sets).

WaveLinx Outdoor Control Module (WOLC-7P-10A) A photocontrol that enables astronomic or time-based schedules to provide ON, OFF and dimming control of fixtures utilizing a 7-PIN receptacle. The out-of-box functionality is ON at dusk and OFF at dawn.

WaveLinx Wireless Sensor (SWPD4 and SWPD5) These outdoor sensors offer passive infrared (PIR) occupancy sensing and a photocell for closed-loop daylight sensing. These sensors can be factory installed or field-installed via simple, tool-less integration into luminaires equipped with the Zhaga Book 18 compliant 4-PIN receptacle (ZD or ZW). These sensors are factory preset to dim down to approximately 50 percent power after 15 minutes of no activity detected, and the photocell for "dusk-to-dawn" control is default enabled. A variety of sensor lenses are available to optimize the coverage pattern for mounting heights from 7'-40'.

For mounting heights from 16' to 40' (SWPD)



LumenSafe (LD) The LumenSafe integrated network camera is a streamlined, outdoor-ready camera that provides high definition video surveillance. This IP camera solution is optimally designed to integrate into virtually any video management system or security software platform of choice. No additional wiring is needed beyond providing line power to the luminaire. LumenSafe features factory-installed power and networking gear in a variety of networking options allowing security integrators to design the optimal solution for active surveillance.

Cooper Lighting Solutions
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Peachtree City, GA 30269
P: 770-486-4800
www.cooperlighting.com

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Specifications and dimensions
subject to change without notice.

Project		Catalog #		Type	
Prepared by		Notes		Date	

Lumark

Axcent

Wall Mount Luminaire

Product Features

Selectable lumens · DUSK-TO-DAWN · LumenSafe Technology · Light ARchitect™ · BAA

Product Certifications

ISO CERTIFIED · UL CERTIFIED · DLC LISTED · DLC LISTED PREMIUM · FC CLASS A CAN ICES-005 · ida DARK SKY APPROVED · IP66 · 3G VIB · RoHS COMPLIANT · 5 YEAR LIMITED WARRANTY · 2018 PROGRESS Report SELECTION

Interactive Menu

- Ordering Information page 2
- Mounting Details page 3
- Product Specifications page 4
- Energy and Performance Data page 4
- Control Options page 6

Quick Facts

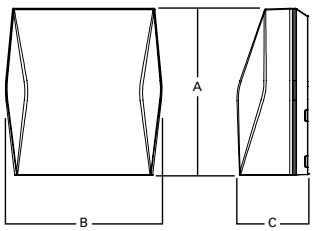
- Available in 14W - 123W (1,800 - 17,000 lumens) models
- Full cutoff and refractive lens models available
- Energy and maintenance savings up to 95% compared to HID
- Energy efficient illumination results in up to 144 LPW
- Replaces 70W up to 450W HID equivalents

Connected Systems

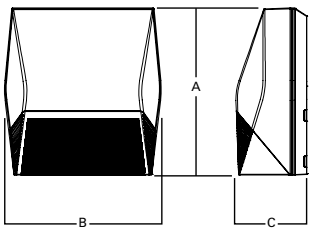
- WaveLinx Lite
- Enlighted

Dimensional Details

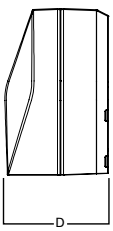
Full Cutoff



Refractive Lens



Deep Back Housing



Dimensional Data

	AXCS Small	AXCL Large
A	8" [202mm]	11-1/2" [292mm]
B	7-1/2" [190mm]	10-3/4" [273mm]
C	3-5/8" [94mm]	4-7/8" [124mm]
D	6-1/8" [155mm]	7-1/8" [181mm]

Ordering Information

SAMPLE NUMBER: **AXCS1A-AP-347V**

Domestic Preferences [28]	Model Series [1]	LED Color Temperature	Color	Options (Add as Suffix)
[Blank]=Standard **BAA**=Buy American Act **TAA**=Trade Agreements Act	**Full Cutoff** **AXCS1A**=14W **AXCS2A**=21W **AXCS3A**=27W **AXCS4A**=44W **AXCS5A**=52W **AXCL6A**=56W **AXCL8A**=72W **AXCL10A**=102W **AXCL12A**=123W **Refractive Lens** **AXCS1ARL**=14W **AXCS2ARL**=21W **AXCS3ARL**=27W **AXCS4ARL**=44W **AXCS5ARL**=52W **AXCL6ARL**=56W **AXCL8ARL**=72W **AXCL10ARL**=102W **AXCL12ARL**=123W	**[Blank]**=4000K, Neutral **C**=5000K, Cool **W**=3000K, Warm	**[Blank]**=Carbon Bronze (Standard) **WT**=Summit White **BK**=Black **AP**=Grey **GM**=Graphite Metallic **DP**=Dark Platinum	**347V**=347V [2] **480V**=480V [2] **PC1**=Photocontrol 120V [3, 4, 5] **PC2**=Photocontrol 208-277V, 347V, 480V [4, 5, 6] **PC**=Photocontrol 120-277V, 347V, 480V [4, 7, 8] **KKIT**=Knuckle Floodlight Mount [7] **TRNKIT**=Trunnion Floodlight Mount **SFKIT**=Slipfitter Floodlight Mount **PMAKIT**=Pole Mount Arm **ZW**=WaveLinx-enabled 4-PIN Twistlock Receptacle [4, 9] **ZW-SWPD4XX**=WaveLinx Wireless Sensor, 7' – 15' Mounting Height [4, 9, 10, 11] **ZW-SWPD5XX**=WaveLinx Wireless Sensor, 15' – 40' Mounting Height [4, 9, 10, 11] **LWR-LW**=Enlighted Wireless Sensor, Wide Lens for 8' - 16' Mounting Height [4, 9, 12] **LWR-LN**=Enlighted Wireless Sensor, Narrow Lens for 16' - 40' Mounting Height [4, 9, 12] **MSP/DIM-L12**=Integrated Sensor for Dimming Operation, 8' - 12' Mounting Height [4, 9, 13] **MSP/DIM-L30**=Integrated Sensor for Dimming Operation, 12' - 30' Mounting Height [4, 9, 13] **MSP-L12**=Integrated Sensor for ON/OFF Operation, 8' - 12' Mounting Height [4, 9, 13] **MSP-L30**=Integrated Sensor for ON/OFF Operation, 12' - 30' Mounting Height [4, 9, 13] **CBP**=Cold Weather Battery Pack [3, 14, 15, 16, 17, 18] **CBP-CEC**=Cold Weather Battery Pack, CEC compliant [3, 14, 15, 16, 17, 18] **10K**=10kV/10kA Surge Protection **HA**=50°C High Ambient [15, 19] **GRF**=Glare Reducing Lens [20] **AHD145**=After Hours Dim, 5 Hours [5, 21] **AHD245**=After Hours Dim, 6 Hours [5, 21] **AHD255**=After Hours Dim, 7 Hours [5, 21] **AHD355**=After Hours Dim, 8 Hours [5, 21]

Accessories (Order Separately) [22,29]

VS/AXCS-XX=Vandal Shield Axcent Small [7, 23]
VS/AXCS-MS=Vandal Shield Axcent Small (With Motion Sensor) [7, 23]
WG/AXCS=Wire Guard Axcent Small [7]
WG/AXCS-MS=Wire Guard Axcent Small (With Motion Sensor) [7]
VS/AXCL-XX=Vandal Shield Axcent Large [5, 23]
VS/AXCL-MS=Vandal Shield Axcent (With Motion Sensor) [5, 23]
WG/AXCL=Wire Guard Axcent Large [5]
WG/AXCL-MS=Wire Guard Axcent (With Motion Sensor) [5]
BB/AXC=Axcent Lumen Select Back Box, Carbon Bronze [24]
BB/AXC-PC=Axcent Lumen Select Back Box with PC, Carbon Bronze [24, 25]
BB/AXC-WT=Axcent Lumen Select Back Box, Summit White [24]
BB/AXC-WT-PC=Axcent Lumen Select Back Box with PC, Summit White [24, 25]

KKIT/AXCS-XX=Knuckle and Visor Floodlight Kit (For Axcent Small) [7]
SFKIT/AXCS-XX=Slipfitter Floodlight Kit (For Axcent Small) [7]
TRNKIT/AXCS-XX=Trunnion and Visor Floodlight Kit (For Axcent Small) [7]
TRNKIT-XX=Trunnion Floodlight Kit (For Axcent Large) [5]
SFKIT-XX=Slipfitter Floodlight Kit (For Axcent Large) [5]
PMAKIT-XX=Pole Mount Kit
ISHH-01=Integrated Sensor Programming Remote [26]
MA1010-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon
MA1011-XX=2@180° Tenon Adapter for 3-1/2" O.D. Tenon
MA1017-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon
MA1018-XX=2@180° Tenon Adapter for 2-3/8" O.D. Tenon
SWPD4-XX=WaveLinx Wireless Sensor, 7' – 15' Mounting Height [10, 11, 27]
SWPD5-XX=WaveLinx Wireless Sensor, 15' – 40' Mounting Height [10, 11, 27]

NOTES:

1. DesignLights Consortium® Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.
2. Transformer used only when ordered with motion sensor or AXCS1 through AXCS5 or AXCL6 fixture wattages.
3. Not available in 347 or 480 VAC.
4. Button photocontrol and any motion sensor (MSP, ZW, or LWR) not offered together.
5. Only available on AXCL6-AXCL12 models.
6. Used with 277, 347, and 480 VAC options.
7. Only available on AXCS1-AXCS5 models.
8. This configuration may contain materials that are not RoHS compliant. Contact your lighting representative for more information.
9. Uses deep back housing.
10. Sensor passive infrared (PIR) may be overly sensitive when operating below -20°C (-4°F). For the device to be field-configurable, requires WAC Gateway components WAC-PoE and WPOE-120 in appropriate quantities. Only compatible with WaveLinx system and software and requires system components to be installed for operation. See website for more Wavelinx application information.
11. Replace XX with sensor color (WH, BZ, or BK).
12. Enlighted wireless sensors are factory installed and require network components LWP-EM-1, LWP-GW-1, and LWP-PoE8 in appropriate quantities. See website for application information.
13. The ISHH-01 accessory is required to adjust parameters.
14. Ambient operating temperature -20°C to 25°C for AXCL6 through AXCL10. Ambient operating temperature -20°C to 30°C on AXCS4 models. Ambient operating temperature -20°C to 40°C on AXCS1 through AXCS3 models.
15. Not available with AXCS5 or AXCL12 models.
16. Uses deep back housing for AXCS1, AXCLS2, AXCS3, and AXCS4 models.
17. Not to be mounted in upwards / inverted orientation. Downlight wall mount only for AXCS1 through AXCS4.
18. CBP cannot be used with PC and motion sensor (MSP, ZW, or LWR). CBP can be used with PC or motion sensor (MSP, ZW, or LWR).
19. Can not be ordered with CBP or PC options.
20. Use dedicated IES files on product website for lumen values and distributions.
21. Requires the use of PC1 or PC2 button photocontrol. See After Hours Dim supplemental guide for additional information.
22. Replace XX with color designation.
23. For use with full cutoff lens configurations only.
24. Lumen Select functionality not available in conjunction with any motion sensor option (MSP, ZW, or LWR). Photocontrol back box not available with any photocontrol or motion sensor options (PC, MSP, ZW, or LWR).
25. Photocell only operates at 120-277V input voltages. Not for use with 347 or 480V systems.
26. This tool enables adjustment to parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult you lighting representative for more information.
27. Requires 4-PIN twistlock receptacle (ZW) option.
28. Only product configurations with these designated prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or Trade Agreements Act of 1979 (TAA), respectively. Please refer to DOMESTIC PREFERENCES website for more information. Components shipped separately may be seperately analyzed under domestic preference requirements.
29. Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information.

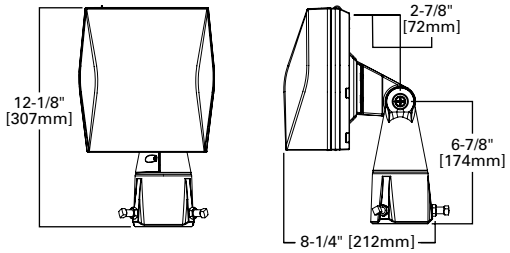
Stock Ordering Information

Model Series [1]			
Full Cutoff		Refractive Lens	
AXCS1A=14W	**AXCL10A**=102W	**AXCS1ARL**=14W	**AXCL10ARL**=102W
AXCS2A=21W	**AXCL12A**=123W	**AXCS2ARL**=21W	**AXCL12ARL**=123W
AXCS3A=27W	**AXCL6A-347V**=56W	**AXCS3ARL**=27W	**AXCL6ARL-347V**=56W
AXCS4A=44W	**AXCL8A-347V**=72W	**AXCS4ARL**=44W	**AXCL8ARL-347V**=72W
AXCS5A=52W	**AXCL10A-347V**=102W	**AXCS5ARL**=52W	**AXCL10ARL-347V**=102W
AXCL6A=56W	**AXCL12A-347V**=123W	**AXCL6ARL**=56W	**AXCL12ARL-347V**=123W
AXCL8A=72W		**AXCL8ARL**=72W	

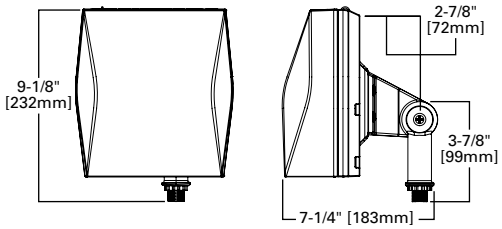
Note: All stock configurations are 4000K color temperatures, standard Carbon Bronze finish, and wall mount configuration.

Mounting Details

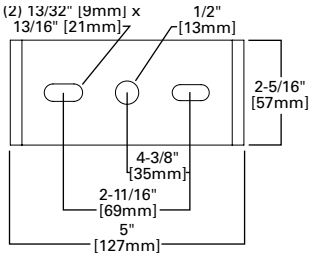
Slipfitter Mount (Small)
Tenon OD: 2-3/8" | **EPA:** 0.60



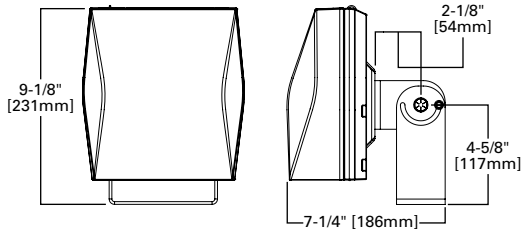
Knuckle Mount (Small)



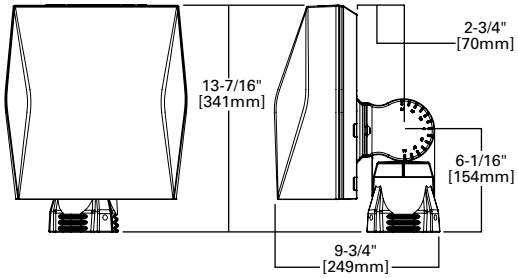
Trunnion Mount Detail



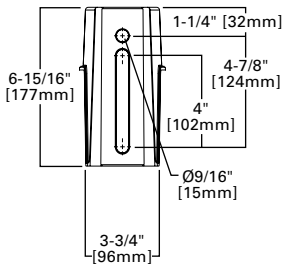
Trunnion Mount (Small)



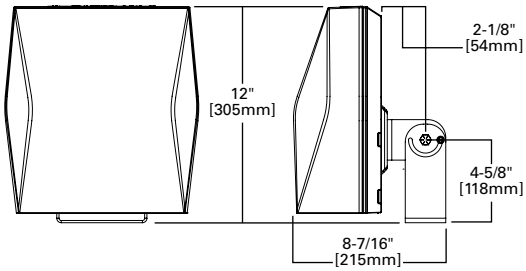
Slipfitter Mount (Large)
Tenon OD: 2-3/8" to 2-7/8" | **EPA:** 1.10



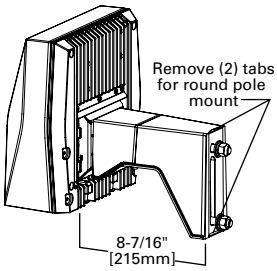
Pole Mount Arm Drill Pattern



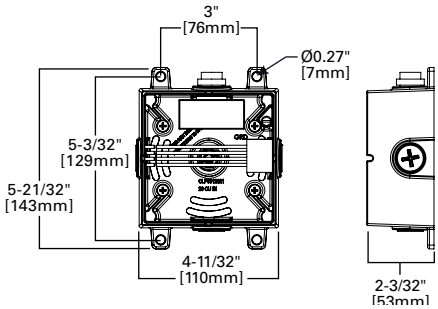
Trunnion Mount (Large)



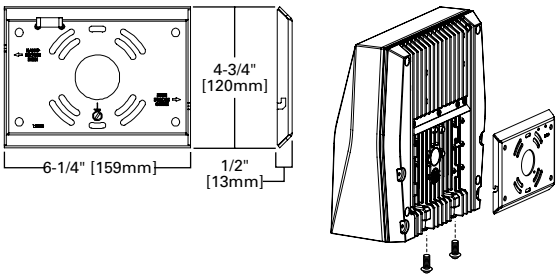
Pole Mount Arm (Large)
EPA: 1.10



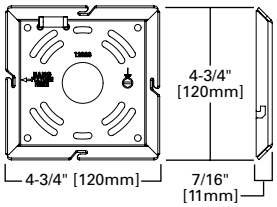
Lumen Select Back Box



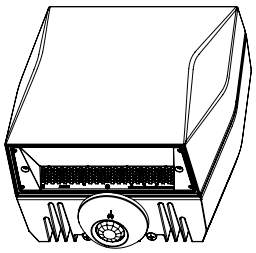
Wall Mount Plate Detail (Large)



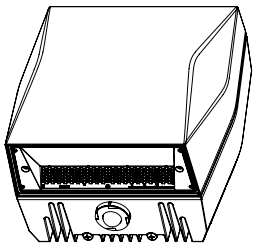
Wall Mount Plate Detail (Small)



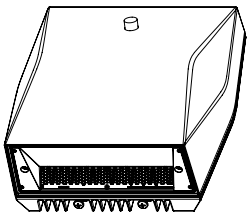
Enlighted Sensor



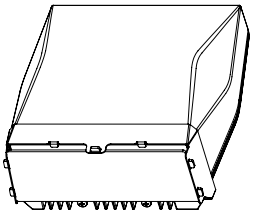
Occupancy Sensor



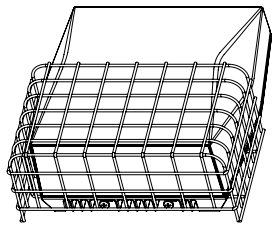
Button Photocontrol



Vandal Shield



Wire Guard



Product Specifications

Construction
- Die-cast aluminum housing
- External back fin design extracts heat from the surface to thermally optimize design for longer luminaire life

Optics
- Dark Sky Approved (Fixed mount, Full cutoff, and 3000K CCT only)
- Silicone-sealed optical LED chamber
- Acrylic refractive or full cutoff lens options for Type IV distributions

Electrical
- Standard universal voltage (120-277V, 50/60Hz)
- Driver incorporates 6kV surge protection
- -40°C minimum operating temperature
- 40°C maximum operating temperature
- <20% total harmonic distortion
- 0-10V dimming driver is standard with leads external to the fixture

Mounting
- Steel wedge mounting plate fits directly to 4" standard j-box or directly to wall with the "Hook-N-Lock" mechanism
- Stainless steel set screws
- Lumen Select Back Box accessory offers four 1/2" NPT conduit entry wire ways. Resistor Pack combinations allow field-dimming of 75% or 50% when connected to luminaire dimming leads
- Not suitable for indoor use when installed in inverted/uplight orientation

Emergency Egress
- Optional integral cold weather battery emergency egress includes emergency operation test switch, an AC-ON indicator light and a premium, maintenance-free battery pack
- The separate emergency lighting LEDs are wired to provide redundant emergency lighting. Listed to UL Standard 924, Emergency Lighting

Finish
- Five-stage super TGIC polyester powder coat paint, 2.5 mil nominal thickness

Shipping Data
- Small fixture=5 lbs. [2.36 kgs.]
- Small with sensor or CBP=10 lbs. [4.40 kgs.]
- Large fixture=12 lbs. [5.45 kgs.]
- Large with sensor or CBP=17 lbs. [7.73 kgs.]
- Large with sensor & CBP=21 lbs. [9.54 kgs.]

Energy and Performance Data

Power and Lumens (Axcent Small)

Light Engine		AXCS1A	AXCS2A	AXCS3A	AXCS4A	AXCS5A
Power (Watts)		14	21	27	44	52
Input Current @ 120V (A)		0.12	0.18	0.23	0.37	0.43
Input Current @ 240V (A)		0.06	0.09	0.11	0.18	0.22
Input Current @ 277V (A)		0.05	0.08	0.10	0.16	0.19
Input Current @ 347V (A)		0.04	0.06	0.08	0.13	0.15
Input Current @ 480V (A)		0.03	0.04	0.06	0.09	0.11
Configuration						
Full Cutoff	4000K/5000K Lumens	1,806	2,561	3,537	5,520	6,300
	3000K Lumens	1,526	2,164	2,989	4,665	5,324
	BUG Rating	B1-U0-G0	B1-U0-G0	B1-U0-G0	B2-U0-G1	B2-U0-G1
Refractive Lens	4000K/5000K Lumens	1,915	2,716	3,704	5,858	6,699
	3000K Lumens	1,618	2,295	3,130	4,950	5,661
	BUG Rating	B1-U3-G2	B1-U3-G2	B1-U3-G2	B1-U4-G3	B1-U4-G3

Power and Lumens (Axcent Large)

Light Engine		AXCL6A	AXCL8A	AXCL10A	AXCL12A
Power (Watts)		49.4	65.3	89.1	115.3
Input Current @ 120V (A)		0.41	0.54	0.74	0.96
Input Current @ 240V (A)		0.21	0.27	0.37	0.48
Input Current @ 277V (A)		0.18	0.24	0.32	0.42
Input Current @ 347V (A)		0.14	0.19	0.26	0.33
Input Current @ 480V (A)		0.10	0.14	0.19	0.24
Configuration					
Full Cutoff	4000K Lumens	7,594	9,716	12,719	16,302
	5000K Rating	7,501	9,598	12,564	16,103
	3000K Lumens	6,502	8,319	10,890	13,958
	BUG Rating	B2-U0-G1	B2-U0-G2	B3-U0-G2	B3-U0-G2
Refractive Lens	4000K Lumens	7,809	10,331	13,665	16,637
	5000K Rating	7,714	10,205	13,498	16,434
	3000K Lumens	6,686	8,845	11,700	14,244
	BUG Rating	B1-U4-G4	B2-U5-G5	B2-U5-G5	B2-U5-G5

Energy and Performance Data

Power and Lumens (Small + CBP)

Light Engine		AXCS1A	AXCS2A	AXCS3A	AXCS4A
Power (Watts)		18	25	31	48
Input Current @ 120V (A)		0.15	0.21	0.26	0.40
Input Current @ 240V (A)		0.08	0.11	0.13	0.20
Input Current @ 277V (A)		0.07	0.09	0.11	0.18
Configuration					
Full Cutoff	4000K/5000K Lumens	629	587	647	570
	3000K Lumens	531	496	547	482
Refractive Lens	4000K/5000K Lumens	667	623	686	605
	3000K Lumens	563	526	580	511

Note: Power and current based on full power consumption while CBP is charging. Lumen outputs are while operating in emergency mode only.

Power and Lumens (Large + CBP)

Light Engine		AXCL6A	AXCL8A	AXCL10A
Power (Watts)		60	76	106
Input Current @ 120V (A)		0.50	0.63	0.88
Input Current @ 240V (A)		0.25	0.32	0.44
Input Current @ 277V (A)		0.22	0.27	0.38
Configuration				
Full Cutoff	4000K/5000K Lumens	1,070		
	3000K Lumens	945		
Refractive Lens	4000K/5000K Lumens	1,098		
	3000K Lumens	973		

Note: Power and current based on full power consumption while CBP is charging. Lumen outputs are while operating in emergency mode only.

Power and Lumens Multipliers
(Lumen Select Back Box + Axcent Small)

Configuration		~75% Nominal Output	~50% Nominal Output
Catalog Number	**Material Number**	**Connect per Installation Instructions**	
AXCS1A*	13109741 or 13109939 or Other	74%	50%
AXCS2A*	13109698 or 13109938 or Other	74%	50%
AXCS3A*	13109697 or 13109937 or Other	74%	50%
AXCS4A*	13109695 or 13109936	75%	40%
AXCS4A*	13495299 or 13495470 or Other	72%	50%
AXCS5A*	13109652 or 13109935	75%	40%
AXCS5A*	13495471 or 13495472 or Other	72%	50%

Power and Lumens Multipliers
(Lumen Select Back Box + Axcent Large)

Configuration		~75% Nominal Output	~50% Nominal Output
Catalog Number	**Material Number**	**Connect per Installation Instructions**	
AXCL6A*	12963843 or 12964235	75%	40%
AXCL6A*	13495473 or 13495474 or Other	69%	47%
AXCL8A*	12963842 or 12964234	84%	48%
AXCL8A*	13495475 or 13495476 or Other	69%	47%
AXCL10A*	12963840 or 12964233	84%	48%
AXCL10A*	13495477 or 13495478 or Other	69%	47%
AXCL12A*	12902056 or 12902057	85%	50%
AXCL12A*	13495479 or 13495480 or Other	72%	49%

Lumen Maintenance (Axcent Small)

Ambient Temperature	TM-21 Lumen Maintenance (72,000 Hours)	Theoretical L70 (72,000 Hours)
Up to 3A		
25°C	90%	246,000
40°C	90%	225,000
50°C	89%	195,000
Up to 5A		
25°C	89%	240,000
40°C	88%	223,000
50°C	87%	186,000

Lumen Maintenance (Axcent Large)

Ambient Temperature	TM-21 Lumen Maintenance (72,000 Hours)	Theoretical L70 (72,000 Hours)
Up to 8A		
25°C	94%	556,000
40°C	94%	556,000
50°C	92%	340,000
Up to 10A		
25°C	94%	556,000
40°C	94%	478,000
50°C	87%	207,000
Up to 12A		
25°C	94%	151,000
40°C	81%	125,000

Lumen Multiplier

Ambient Temperature	Lumen Multiplier
10°C	1.02
15°C	1.01
25°C	1.00
40°C	0.97

Control Options

0-10V This fixture is offered standard with 0-10V dimming driver(s) for use with a lighting control panel or other control method.

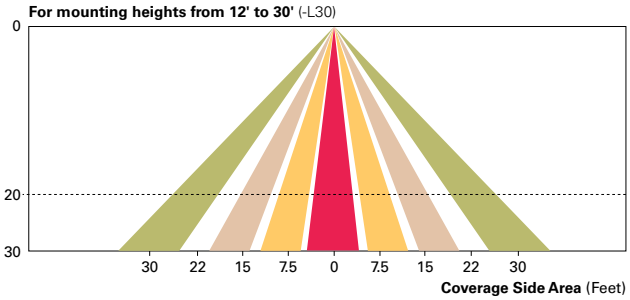
Photocontrol (PC1, PC2 and PC) Optional button-type photocontrol provides a flexible solution to enable "dusk-to-dawn" lighting by sensing light levels.

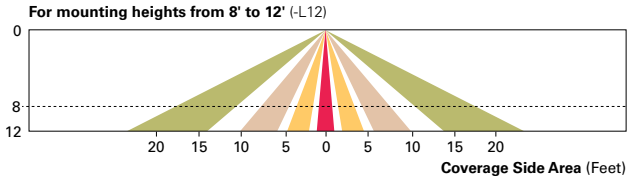
After Hours Dim (AHD) This feature allows photocontrol-enabled luminaires to achieve additional energy savings by dimming during scheduled portions of the night. The dimming profile will automatically take effect after a "dusk-to-dawn" period has been calculated from the photocontrol input. Specify the desired dimming profile for a simple, factory-shipped dimming solution requiring no external control wiring. Reference the After Hours Dim supplemental guide for additional information.

Dimming Occupancy Sensor (MSP/DIM-LXX and MSP-LXX) These sensors are factory installed in the luminaire housing. When the MSP/DIM-LXX sensor option is selected, the occupancy sensor is connected to a dimming driver and the entire luminaire dims when there is no activity detected. When activity is detected, the luminaire returns to full light output. The MSP/DIM sensor is factory preset to dim down to approximately 50 percent power with a time delay of ten minutes. The MSP-LXX sensor is factory preset to turn the luminaire off after five minutes of no activity.

These occupancy sensors includes an integrated photocell that can be activated with the ISHH-01 accessory for "dusk-to-dawn" control or daylight harvesting - the factory preset is ON. The ISHH-01 is a wireless tool utilized for changing the dimming level, time delay, sensitivity and other parameters.

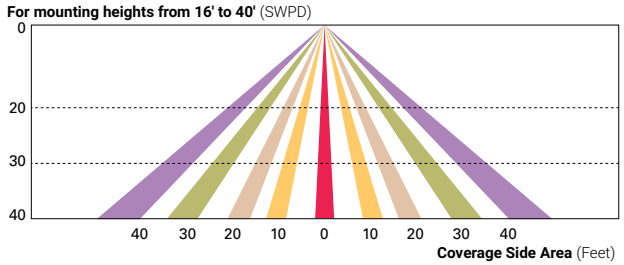
A variety of sensor lens are available to optimize the coverage pattern for mounting heights from 8'-30'.



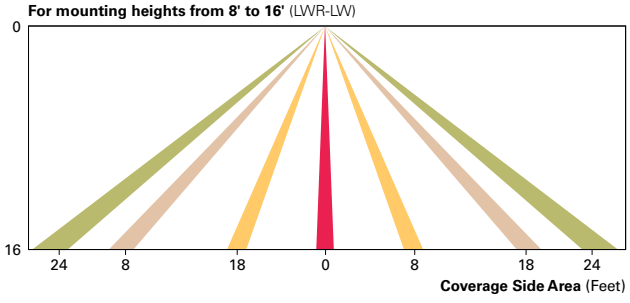


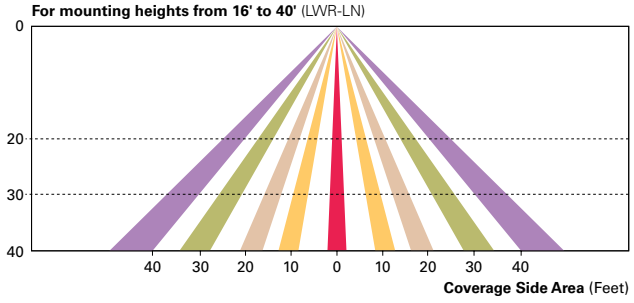
WaveLinx Wireless Control and Monitoring System The WaveLinx Outdoor control platform operates on a wireless mesh network based on IEEE 802.15.4 standards enabling wireless control of outdoor lighting. Use the WaveLinx Mobile application for set-up and configuration. At least one Wireless Area Controller (WAC) is required for full functionality and remote communication (including adjustment of any factory pre-sets).

WaveLinx Wireless Sensor (SWPD4 and SWPD5) These outdoor sensors offer passive infrared (PIR) occupancy and a photocell for closed loop daylight sensing. These sensors can be factory installed or field-installed via simple, tool-less integration into luminaires equipped with the Zhaga Book 18 compliant 4-PIN receptacle (ZW). These sensors are factory preset to dim down to approximately 50 percent power after 15 minutes of no activity detected. These occupancy sensors include an integral photocell for "dusk-to-dawn" control or daylight harvesting that is factory-enabled. A variety of sensor lenses are available to optimize the coverage pattern for mounting heights from 7'-40'.



Enlighted Wireless Control and Monitoring System (LWR-LW and LWR-LN) The Enlighted System is a connected lighting solution that combines LED luminaires with an integrated wireless sensor system. The sensor controls the lighting system in compliance with the latest energy codes and collects valuable data about building performance and use. Software applications turn the granular data into information through energy dashboards and specialized apps that make it simple and help optimize the use of other resources beyond lighting.





Cooper Lighting Solutions
1121 Highway 74 South
Peachtree City, GA 30269
P: 770-486-4800
www.cooperlighting.com

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Specifications and dimensions
subject to change without notice.

DESCRIPTION

The patented Lumark Crosstour™ LED Wall Pack Series of luminaries provides an architectural style with super bright, energy efficient LEDs. The low-profile, rugged die-cast aluminum construction, universal back box, stainless steel hardware along with a sealed and gasketed optical compartment make the Crosstour impervious to contaminants. The Crosstour wall luminaire is ideal for wall/surface, inverted mount for façade/canopy illumination, post/bollard, site lighting, floodlight and low level pathway illumination including stairs. Typical applications include building entrances, multi-use facilities, apartment buildings, institutions, schools, stairways and loading docks test.

Catalog #		**Type**	
Project			
Comments		**Date**	
Prepared by			

SPECIFICATION FEATURES

Construction

Slim, low-profile LED design with rugged one-piece, die-cast aluminum hinged removable door and back box. Matching housing styles incorporate both a small and medium design. The small housing is available in 12W, 18W and 26W. The medium housing is available in the 38W model. Patented secure lock hinge feature allows for safe and easy tool-less electrical connections with the supplied push-in connectors. Back box includes three half-inch, NPT threaded conduit entry points. The universal back box supports both the small and medium forms and mounts to standard 3-1/2" to 4" round and octagonal, 4" square, single gang and masonry junction boxes. Key hole gasket allows for adaptation to junction box or wall. External fin design extracts heat from the fixture surface. One-piece silicone gasket seals door and back box. Minimum 5" wide pole for site lighting application. Not recommended for car wash applications.

Optical

Silicone sealed optical LED chamber incorporates a custom engineered mirrored anodized reflector providing high-efficiency illumination. Optical assembly includes impact-resistant tempered glass and meets IESNA requirements for full cutoff compliance. Available in seven lumen packages; 5000K, 4000K and 3000K CCT.

Electrical

LED driver is mounted to the die-cast housing for optimal heat sinking. LED thermal management system incorporates both conduction and natural convection to transfer heat rapidly away from the LED source. 12W, 18W, 26W and 38W series operate in -40°C to 40°C [-40°F to 104°F]. High ambient 50°C models available. Crosstour luminaires maintain greater than 89% of initial light output after 72,000 hours of operation. Three half-inch NPT threaded conduit entry points allow for thru-branch wiring. Back box is an authorized electrical wiring compartment. Integral LED electronic driver is standard 0-10V dimming. 120-277V 50/60Hz or 347V 60Hz models.

Finish

Crosstour is protected with a Super durable TGIC carbon bronze or summit white polyester powder coat paint. Super durable TGIC powder coat paint finishes withstand extreme climate conditions while providing optimal color and gloss retention of the installed life. Options to meet Buy American and other domestic preference requirements.

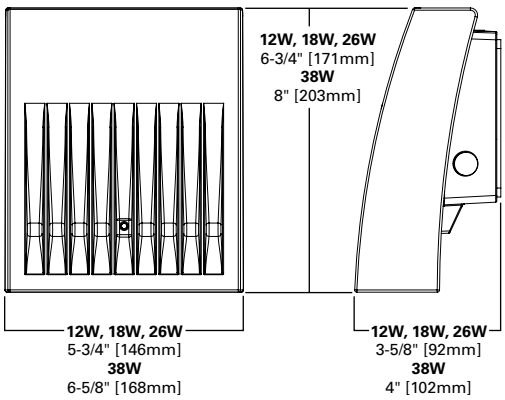
Warranty

Five-year warranty.

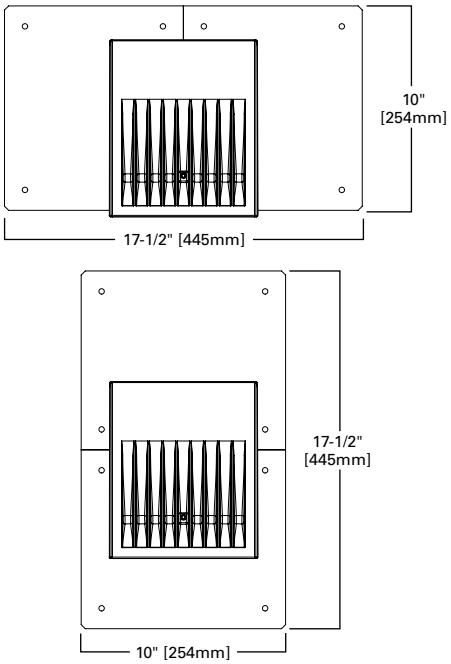
XTOR
CROSSTOUR LED

APPLICATIONS:
WALL / SURFACE
POST / BOLLARD
LOW LEVEL
FLOODLIGHT
INVERTED
SITE LIGHTING

DIMENSIONS



ESCUTCHEON PLATES



CERTIFICATION DATA

Dark Sky Approved (Fixed mount, Full cutoff, and 3000K CCT only)
UL/cUL Wet Location Listed
LM79 / LM80 Compliant
ROHS Compliant
ADA Compliant
NOM Compliant Models
IP66 Ingressed Protection Rated
Title 24 Compliant
DesignLights Consortium® Qualified*

TECHNICAL DATA

40°C Maximum Ambient Temperature
External Supply Wiring 90°C Minimum

EPA

Effective Projected Area (Sq. Ft.):
XTOR1B, XT0R2B, XT0R3B=0.34
XTOR4B=0.45

SHIPPING DATA:

Approximate Net Weight:
3.7 – 5.25 lbs. [1.7 – 2.4 kgs.]

*www.designlights.org

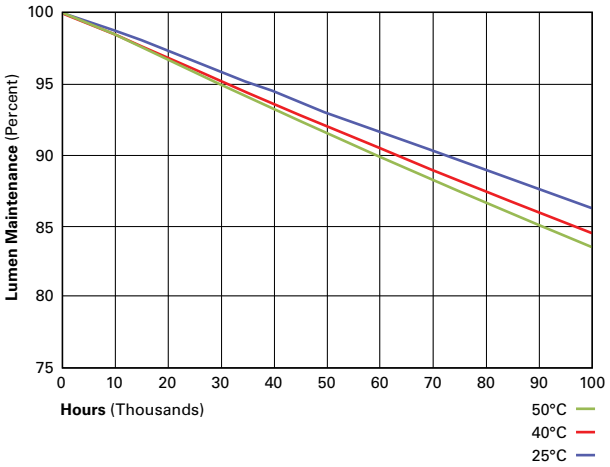
POWER AND LUMENS BY FIXTURE MODEL

LED Information	XTOR1B	XTOR1B-W	XTOR1B-Y	XTOR2B	XTOR2B-W	XTOR2B-Y	XTOR3B	XTOR3B-W	XTOR3B-Y	XTOR4B	XTOR4B-W	XTOR4B-Y
Delivered Lumens (Wall Mount)	1,418	1,396	1,327	2,135	2,103	1,997	2,751	2,710	2,575	4,269	4,205	3,995
Delivered Lumens (With Flood Accessory Kit) [1]	1,005	990	940	1,495	1,472	1,399	2,099	2,068	1,965	3,168	3,121	2,965
B.U.G. Rating [2]	B1-U0-G0	B1-U0-G0	B1-U0-G0	B1-U0-G0	B1-U0-G0	B1-U0-G0	B1-U0-G0	B1-U0-G0	B1-U0-G0	B2-U0-G0	B2-U0-G0	B2-U0-G0
CCT (Kelvin)	5,000	4,000	3,000	5,000	4,000	3,000	5,000	4,000	3,000	5,000	4,000	3,000
CRI (Color Rendering Index)	70	70	70	70	70	70	70	70	70	70	70	70
Power Consumption (Watts)	12W	12W	12W	18W	18W	18W	26W	26W	26W	38W	38W	38W

NOTES: 1 Includes shield and visor. **2** B.U.G. Rating does not apply to floodlighting.

LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance (72,000 Hours)	Theoretical L70 (Hours)
XTOR1B Model		
25°C	> 90%	255,000
40°C	> 89%	234,000
50°C	> 88%	215,000
XTOR2B Model		
25°C	> 89%	240,000
40°C	> 88%	212,000
50°C	> 87%	196,000
XTOR3B Model		
25°C	> 89%	240,000
40°C	> 88%	212,000
50°C	> 87%	196,000
XTOR4B Model		
25°C	> 89%	222,000
40°C	> 87%	198,000
50°C	> 87%	184,000



CURRENT DRAW

Voltage	Model Series			
	XTOR1B	XTOR2B	XTOR3B	XTOR4B
120V	0.103A	0.15A	0.22A	0.34A
208V	0.060A	0.09A	0.13A	0.17A
240V	0.053A	0.08A	0.11A	0.17A
277V	0.048A	0.07A	0.10A	0.15A
347V	0.039A	0.06A	0.082A	0.12A

ORDERING INFORMATION

Sample Number: XTOR2B-W-WT-PC1

Series [1]	**LED Kelvin Color**	**Housing Color**	**Options** (Add as Suffix)	**Accessories** (Order Separately) [8]
XTOR1B=Small Door, 12W **XTOR2B**=Small Door, 18W **XTOR3B**=Small Door, 26W **XTOR4B**=Medium Door, 38W **BAA-XTOR1B**=Small Door, 12W, Buy American Act Compliant [7] **TAA-XTOR1B**=Small Door, 12W Trade Agreements Act Compliant [7] **BAA-XTOR2B** =Small Door, 18W, Buy American Act Compliant [7] **TAA-XTOR2B**=Small Door, 18W, Trade Agreements Act Compliant [7] **BAA-XTOR3B**=Small Door, 26W, Buy American Act Compliant [7] **TAA-XTOR3B**=Small Door, 26W, Trade Agreements Act Compliant [7] **BAA-XTOR4B**= Medium Door, 38W, Buy American Act Compliant [7] **TAA-XTOR4B**= Medium Door, 38W, Trade Agreements Act Compliant [7]	**[Blank]**=Bright White (Standard), 5000K **W**=Neutral White, 4000K **Y**=Warm White, 3000K	**[Blank]**=Carbon Bronze (Standard) **WT**=Summit White **BK**=Black **BZ**=Bronze **AP**=Grey **GM**=Graphite Metallic **DP**=Dark Platinum	**PC1**=Photocontrol 120V [2] **PC2**=Photocontrol 208-277V [2,3] **347V**=347V [4] **HA**=50°C High Ambient [4]	**WG/XTOR**=Wire Guard [5] **XTORFLD-KNC**=Knuckle Floodlight Kit [6] **XTORFLD-TRN**=Trunnion Floodlight Kit [6] **XTORFLD-KNC-WT**=Knuckle Floodlight Kit, Summit White [6] **XTORFLD-TRN-WT**=Trunnion Floodlight Kit, Summit White [6] **EWP/XTOR**=Escutcheon Wall Plate, Carbon Bronze **EWP/XTOR-WT**=Escutcheon Wall Plate, Summit White

NOTES:

1. DesignLights Consortium® Qualified and classified for both DLC Standard and DLC Premium, refer to www.designlights.org for details.
2. Photocontrols are factory installed.
3. Order PC2 for 347V models.
4. Thru-branch wiring not available with HA option or with 347V. XTOR3B not available with HA and 347V or 120V combination.
5. Wire guard for wall/surface mount. Not for use with floodlight kit accessory.
6. Floodlight kit accessory supplied with knuckle (KNC) or trunnion (TRN) base, small and large top visors and small and large impact shields.
7. Only product configurations with these designated prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or Trade Agreements Act of 1979 (TAA), respectively. Please refer to DOMESTIC PREFERENCES website for more information. Components shipped separately may be separately analyzed under domestic preference requirements.
8. Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information.

STOCK ORDERING INFORMATION

Domestic Preferences [1]	**12W Series**	**18W Series**	**26W Series**	**38W Series**
[Blank]=Standard	**XTOR1B**=12W, 5000K, Carbon Bronze	**XTOR2B**=18W, 5000K, Carbon Bronze	**XTOR3B**=26W, 5000K, Carbon Bronze	**XTOR4B**=38W, 5000K, Carbon Bronze
BAA=Buy American Act	**XTOR1B-WT**=12W, 5000K, Summit White	**XTOR2B-W**=18W, 4000K, Carbon Bronze	**XTOR3B-W**=26W, 4000K, Carbon Bronze	**XTOR4B-W**=38W, 4000K, Carbon Bronze
TAA=Trade Agreements Act	**XTOR1B-PC1**=12W, 5000K, 120V PC, Carbon Bronze	**XTOR2B-WT**=18W, 5000K, Summit White	**XTOR3B-WT**=26W, 5000K, Summit White	**XTOR4B-WT**=38W, 5000K, Summit White
	XTOR1B-W=12W, 4000K, Carbon Bronze	**XTOR2B-PC1**=18W, 5000K, 120V PC, Carbon Bronze	**XTOR3B-PC1**=26W, 5000K, 120V PC, Carbon Bronze	**XTOR4B-PC1**=38W, 5000K, 120V PC, Carbon Bronze
		XTOR2B-W-PC1=18W, 4000K, 120V PC, Carbon Bronze	**XTOR3B-W-PC1**=26W, 4000K, 120V PC,Carbon Bronze	**XTOR4B-W-PC1**=38W, 4000K, 120V PC, Carbon Bronze
		XTOR2B-347V=18W, 5000K, Carbon Bronze, 347V	**XTOR3B-347V**=26W, 5000K, Carbon Bronze, 347V	**XTOR4B-347V**=38W, 5000K, Carbon Bronze, 347V
		XTOR2B-WT-PC1=18W, 5000K, 120V PC,Summit White	**XTOR3B-PC2**=26W, 5000K, 208-277V PC, Carbon Bronze	

NOTES:

1. Only product configurations with these designated prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or Trade Agreements Act of 1979 (TAA), respectively. Please refer to DOMESTIC PREFERENCES website for more information. Components shipped separately may be separately analyzed under domestic preference requirements.

COPY

815487
RECORDED
FEB. 23, 1999 AT 09:00AM
DOROTHY C. GONNERING
REGISTER OF DEEDS
WASHINGTON COUNTY, WI
FEE AMOUNT $58.00

DECLARATION OF RESTRICTIONS AND COVENANTS FOR GERMANTOWN BUSINESS PARK TIF #4

Return to: Village of Germantown
% Village Clerk
P O Box 337
Germantown WI 53022

for the following described parcel of land: GTNV 253-992 & 999, 254-993 & 994

All of the W ½ of the SE 1/4 and part of the E ½ of the SW 1/4 of Section 25, T9N, R20E, Village of Germantown, Washington County, Wisconsin, bounded and described as follows:

Commencing at the SW corner of the SW 1/4 of said Section 25; thence N88°08'32" E along the south line of said SW 1/4 of Section 25, 2442.145 feet to the point of beginning. Thence continuing N88°08'32" E 170.675 feet to a point, said point being the SE corner of the SW 1/4 of said Section 25 and the SW corner of the SE 1/4 of said Section 25; thence N88°01'20" E along the south line of said SE 1/4 of Section 25, 1314.55 feet; thence N02°10'17" W 2640.34 feet to a point, said point being the north 1/4 corner of said SE 1/4 of Section 25; thence S87°55'46" W along the north line of said SE 1/4 of Section 25, 1320.71 feet to a point, said point being the NW corner of said SE 1/4 of Section 25; and also the NE corner of said SW 1/4 of Section 25; thence S88°21'41" W along the north line of said SW 1/4 of Section 25, +/- 1316 feet to a point on the east right of way line of the Fox River Valley Railroad (formerly C & NW R.R.); thence southerly along said railroad right of way +/-1560 feet to a point, said point being the NW corner of CSM 3922; thence N88°08'32" E along the north line of CSM 3922, 1050 feet to a point, said point being the NE corner of CSM 3922; thence S04°06'08" W along the east line of CSM 3922, 1083.025 feet to the point of beginning. Said Parcel containing +/- 129 acres gross.

DOC# 1218277
815487

This Declaration of Covenants and Restrictions was approved by the Village of Germantown Plan Commission on January 11, 1999 and the Village Board on January 18, 1999.

IN WITNESS WHEREOF, the undersigned officials have hereto set their hands and seal o behalf of the Village of Germantown this 22nd day of February, 1999.

Charles J. Hargan, Village President

Jane A. Wilms, Village Clerk

Personally came before me this 22nd day of February, 1999, the above named Charles J. Hargan, President, and Jane A. Wilms, Clerk, of the Village of Germantown, to me known to be the persons who executed the foregoing instrument and acknowledge that they executed the foregoing instrument as such representatives of the owners of the deed of said property.

Christine M. Micka

Christine M. Micka, Notary Public
Washington County Wisconsin
My Commission Expires: Sept. 19, 1999

This Document Drafted By:
Sigurd Strautmanis, Planner
Village of Germantown
P O Box 337
Germantown WI 53022

DECLARATION OF COVENANTS AND RESTRICTIONS
-- GERMANTOWN BUSINESS PARK --

1. PLAN APPROVALS. No building or any improvements shall be erected, placed or altered on any building site in the Germantown Business Park until plans for such building or improvements, including site and building plans, have been first approved by the Developer and the Village. The Developer and Village shall approve, conditionally approve or deny such plans with respect to conformity with the restrictions contained herein and any other applicable enactments of the Village. If the Developer does not act on the plans within 60 days of submission, the plans shall be considered automatically approved. The Village shall act on such plans within 30 days of official submission.

2. DESIGN OBJECTIVE. The terrain of the Germantown Business Park is unique. A combination of open fields, wetlands, woods and riparian areas form the majority of the Park. In addition, much of the Park is highly visible from major thoroughfares, including Mequon Road (SH 167) and Fond du Lac Avenue (SH 145). The unique environmental attributes, along with the site's high profile in the Germantown community, requires careful consideration of how drives, buildings and parking areas are laid out. The design objective of the Germantown Business Park is to integrate development into the landscape in a coordinated, attractive and well-landscaped fashion.

3. SITE RESTRICTIONS.

   A. *Minimum Building Site.* No individual building site in the Park shall be less than two (2) buildable acres (net of any ROW, wetlands, floodplain or environmental corridor).

   B. *Minimum Building Size.* The initial construction on each site shall be a minimum of 5,000 square feet per buildable acre, or 10,000 square feet on the smallest available parcel.

   C. *Lot Coverage.* Lot coverage shall be calculated on net buildable acreage. Impervious surface coverage (building, parking, drives, concrete walks, etc.) may not exceed:

      - 70% for office (more than 40% of a building dedicated to office uses)
      - 75% for industrial
      - 75% for commercial

   D. *Building Setbacks.* No building, or part thereof (trash enclosures, overhangs, etc.) shall be located within the following distance of a property line:

- Front Yard (corner lots shall have two front yards)
  - Abutting Mequon Road ROW 200'
  - Abutting other primary ROW (Donges Bay Road, FDL Ave) 75'
  - Abutting internal street ROW 30'
- Side Yard 25'
- Rear Yard 25'
- From any wetland boundary 25'
- From any navigable waterway 75'

E. *Parking Setbacks.* No parking areas shall be permitted within the following setbacks:

- Abutting Mequon Road ROW 200'
- Abutting any other ROW 20'
- From any other property boundary 8'
- From any wetland boundary 25'
- From any navigable waterway 75'

4. ARCHITECTURAL CONTROLS. The Germantown Business Park is Germantown's premier office/industrial complex, with high-quality, long-lasting buildings that will maintain their value for years to come. To ensure compatibility among all buildings in the Park, the following controls have been established:

A. *Building Orientation.* Every side of a building will be visible by the public at some point, therefore all building elevations should be designed to be attractive and compatible with surrounding buildings. No building should have its back to any public street and a building's main entrance should be architecturally highlighted with glass, overhangs or other obvious surface articulation. The sides and back of a building should use the same design theme as the primary elevations, although less expensive materials may be used. The primary building material should "wrap" to the sides and/or back of a building, extending a minimum of 20 feet or to some natural dividing line agreed upon by the Developer and Village.

B. *Building Height.* The height of all structures, including chimneys, cooling towers and antennae, shall be governed by the Municipal Code of Germantown. ~~Generally, building height is limited to 45 feet in the M-1 zoning district, with architectural spires, cupola, etc. permitted above this height.~~

C. *Building Materials.* The overall design concept for Park is to create diversity through building design, rather than a plethora of building colors and materials. The emphasis is on low, horizontal forms that fit comfortably on the landscape. There should be no blank walls — the designer should use architectural devices such as pilasters, reveals and material changes to break up a building's mass. The preferred building material for the Germantown Business Park is masonry,

although glass, glass block, EIFS and other accent materials are encouraged to create diversity. Wood and vinyl, in any form, is generally unacceptable in the park. The following materials are appropriate for use in the Park:

- Brick
- Decorative concrete masonry units
- Pre-cast and poured-in-place concrete
- Cut stone or stone-faced concrete block
- Exterior Insulation and Finish Systems (EIFS) such as Dryvit, Sunalar, but should not exceed 30% of a building's wall area
- Architectural metal wall panels with no exposed fastners or corrugation, but should not exceed 30% of a building's wall area (corrugated wall systems may be considered for expansion walls, but must be approved)
- Metal banding and trim, but only as an accent
- Structural steel, when used as part of an exterior structural system
- Glass block, but only as an accent
- Glass spandrel panels
- Tile, but only as an accent
- Smooth-faced concrete block, but only as an accent
- Other materials, including materials not yet developed, may be considered as long as they are compatible with the park's design concept

D. *Building Colors.* The emphasis is on muted earthtones, so buildings recede, rather than stand out, on the landscape. Tans, beige, maroon, deep greens and other natural tints are encouraged. Bright whites and primary accent colors should be avoided. The Developer shall provide the Village with material and color samples as part of the approval process.

E. *Accessory Structures.* No accessory structures are permitted without special approval in the Park. Any accessory structures proposed to the Developer and Village should be designed with the same color and material pallette as the principal structure. They should be located behind buildings where possible. Pole buildings, metal or wood structures will not be permitted.

F. *Roof-mounted Equipment and Utility Structures.* All HVAC, electrical, waste handling and pollution control equipment shall be shown on the building plans at the time of site plan approval. All roof-mounted equipment shall be architecturally screened with a device of similar color and materials as used for the principal structure. All utility structures, including transformers, switching stations and utility meters shall be located underground or away from public view where possible. Under no circumstances shall a transformer or utility structure be located in a property's front yard. All such structures must be screened with an architectural wall or dense vegetation.

5. PARKING AND LOADING. Parking and loading are critical components of an efficient office or industrial facility. In the Germantown Business Park, parking and loading is located on the sides and rear of all buildings to create a visually pleasing street facade by minimizing the visual impact of cars and trucks.

   A. *Off-street Parking Requirements.* Parking ratios are dictated by the Municipal Code of Germantown. The Code requires one parking space (180 square feet) for every 500 square feet of Primary Floor Area. This excludes lobbies, lunchrooms, locker rooms, storage areas and floor area dedicated exclusively to warehousing. Each tenant of the Park is unique. Some will require more parking than others. Thus, each tenant of the Germantown Business Park is required to identify the number of employees expected and provide enough parking for the maximum number of employees on a given shift as well as generous visitor parking near the building's main entrance. The Developer and/or Village may require additional spaces based on past experience.

   B. *Location/Orientation.* Parking in front of buildings should be for visitors only. All employee parking should be located in the side and rear yards of the facility. Parking, generally, should be located to minimize its visibility from the street.

   C. *Loading Docks.* Loading and staging areas should be located behind buildings where possible. In some circumstances, loading docks may be permitted on the sides of buildings. Loading docks shall not be permitted on the street face except in those areas shaded on Exhibit R-1, and then only with prior approval of the Plan Commission. All loading and staging areas should be screened from public view with architectural walls or landscaping.

   D. *Drives and Walks.* All drives and lots must be surfaced with asphalt or cement. All walks shall be hard-surfaced with cement, cobbles or stamped concrete. All drives shall be set at least ten feet from any property boundary.

   E. *Snow storage.* Areas should be designated for stockpiling snow that will not eliminate parking stalls or damage landscaping.

   F. *No On-street Parking Permitted.* Parking by employees, visitors, company or commercial trucks will not be permitted on any Village streets in the Germantown Business Park.

6. LANDSCAPING. Generous landscaping is a hallmark of the Park. A more naturalized approach to landscape design is encouraged, using native species and informal groupings rather than manicured lawn and formal plantings. Afforestation, or replanting native woodlands, is also encouraged between buildings and parking areas, so as to build on the existing stands of trees that give TIF#4 its unique character. The following guidelines should be used in developing the landscape plan for new sites:

A. *Landscaping Required.* All new development must include an approved landscaping plan. The landscaping plan shall be developed simultaneously with the site and building plans and shall be subject to review by both the Developer and Village. All landscaping, including paving of drives and parking areas, shall be complete within 18 months of the start of construction.

B. *Landscaping Methods.* Landscaping is not limited to plant material alone. Landscaping may include decorative berms, fences, architectural walls, boulders, raised planting beds, reflective ponds, fountains and accent lighting. While compatibility among developments is critical, creativity is encouraged.

C. *Required Landscaping.* The following landscaping is required for all new development in the Germantown Business Park:

- Building entrance. A landscape feature is required at the primary building entrance to accentuate its location.
- Front yard. At least two significant groupings/features must be placed between the building and front ROW. The front yard should generally be mowed turf.
- Street trees. The individual property owner shall be responsible for planting at least one appropriate street tree every 25' along public streets.
- Building foundation. Landscaping is required along the foundation line of the most visible elevations. Care should be taken to choose species whose roots will not affect the foundation of the building.
- Driveways. All drives shall have salt-tolerant street trees planted 25 feet on center.
- Parking lot perimeters. Parking lots shall be landscaped to screen vehicles from public view. Emphasis will be placed on the front parking areas, although all parking areas will require some vegetative screening.
- Parking lot interiors. The interior of all parking lots shall be broken up with landscaped islands that must include grass or evergreen groundcover and salt tolerant trees.
- Remaining site. The remaining site should contain landscaping that will further screen the building and otherwise enhance the development. Landscaping closer to buildings and parking areas should be more manicured, then transition to a more natural, maintenance-free type that blends into, and extends the existing natural areas into each site.

D. *Recommended Species.* Exhibit R-2 contains recommended species for use in the Park. The list is derived from the *Street Tree Inventory and Strategic Plan for Germantown*, prepared in 1996 by Arbor Associates. The list is not comprehensive and alternative species will be considered provided they are appropriate for the climate and of an appropriate size. Species should be chosen based on their disease and insect resistance, hardiness to the area, their ability to create seasonal interest and ease of maintenance. Annuals, perennials, native grasses, wildflowers and other plant material are encouraged to add color and interest to the landscape of the Park.

The following matrix indicates minimum sizes and/or calipers for trees and shrubs at the time of planting.

Deciduous species		
Street trees	maples, ash, elms, beech, oaks	min. 3" caliper
Ornamental trees	flowering crabs, redbuds, hawthornes, cherry, ginkos	min. 3" caliper
Trees typically grouped	river birch, lilacs, sumac, dogwood	birch min. 12' others min. 3'
Coniferous species		
Pines, firs	Austrian /scotch pine, white fir	min. 6' tall
Spruce	blue, green, other	min. 8' tall
Occidentalis	techny, sunkist arborvitae	min. 6' tall

E. *Landscape Maintenance.* It shall be the responsibility of the owner to appropriately maintain all landscaping as approved. This includes replacing dead trees, shrubs and plant material in a timely manner. In addition, any changes or variations to the landscape plan must be approved by the Developer and Village. Regular maintenance shall include mowing, watering, trimming, pruning, fertilizing, repairing, transplanting, treating, burning and other maintenance activities required to keep the site's landscaping visually pleasing and in good health. At all times, sites must be kept free of trash and natural debris such as fallen branches, leaves, grass clippings and weeds. Village weed control ordinances shall apply to all property in the Park. The Developer shall notify the Village of non-compliance with any aspect of the ordinance.

7. LIGHTING. The Germantown Business Park has a coordinated lighting plan to ensure uniformity in design, light levels and color rendition throughout the development. The Developer and Village have pre-selected street lights, parking lot lighting and bollard

lighting. Cut sheets are available from the Developer and Village Planner.

A. *Lighting Plan Required.* A lighting plan must be submitted showing the location of pre-selected fixtures, as well as the location and purpose of other fixtures used for accent and safety lighting. All exterior lighting must adhere to the *Village Outdoor Lighting Guidelines*, included as Exhibit R-3 in this document.

B. *Required Lighting.* The following exterior lighting is required for all new development in the Park:

- Parking lots. All parking areas should be well lit using pre-selected pole mounted fixtures. Light levels should meet Village guidelines.
- Entrance drive. One pole mounted fixture shall be located near the main vehicular entrance of each site if no street light is located with 150'.
- Building entrances. The main entrance of the building should be lit for safety, as well as to accent architectural and landscape features.
- Service entrances/loading areas. All service areas should be well lit with full cut-off wall mounted fixtures. Light levels should meet Village guidelines.
- Sidewalks and pedestrian paths. All pedestrian paths should have low-level bollard lighting.

C. *Accent Lighting.* Lighting used to accent the building, landscaping or other features is encouraged. Only low levels of light are permitted for this purpose, however, and buildings should not be "washed" in bright light.

8. SIGNS. A coordinated signage program reinforces the high quality character of the Germantown Business Park. While limits are placed on the size and type of signs permitted, creativity is encouraged in designing individual signs.

A. *Review Required.* All signage must be approved by the Developer and Village before receiving a permit from the Building Inspector. Detailed plans for signs must be included in the site plan review package.

B. *Restrictions.* Each building shall be limited to one monument-style sign for every street face (corner lots may be allowed two signs). The total sign area may not exceed 32 square feet per side, for a total of 64 square feet. The methodology for measuring sign area is included as Exhibit R-4 in this document. No wall mounted signage is permitted in the Germantown Business Park.

C. *Materials.* Signs should be constructed in the same material and color pallette as the principal building. No wood signs are permitted.

D. *Illumination.* Signs may be lit with external lighting, provided they meet Village guidelines. If internal illumination is preferred, the sign shall contain white letters on a dark background.

E. *Landscaping Required.* All signs shall be landscaped with a combination of evergreen and other plant material to screen the sign's base.

9. OUTDOOR STORAGE. To maintain the high quality appearance of the Park, no outside storage of raw materials, finished or semi-finished products, containers or other articles is permitted. Waste and recycling containers must be contained within a decorative architectural wall and screened entirely from public view. Pallets and trailers may be stored on-site, but only if approved by the Developer and Village and screened within a suitable enclosure. The minimum height for any such enclosure shall be six feet and may not be located within 40' of a public street. Wire fence shall not be considered an acceptable enclosure for this purpose.

10. DRAINAGE. No land shall be developed and no use permitted that adversely impacts adjacent properties with flooding, erosion or runoff. All runoff shall be properly channeled into ditches and/or catch basins. All stormsewers will drain into a combined detention pond to be constructed and maintained by the Village. All catch basins shall be directed to a Village detention pond, however, all roof drains must sheet flow across grass before entering the stormsewer system.

11. PERFORMANCE STANDARDS. Determination of potential or actual noncompliance with the Village Performance Standards, included as Exhibit __ in this document, shall be made by the Developer and Village. In addition, all permitted manufacturing uses and conditional uses permitted in the M-1 Limited Industrial District shall give evidence of ability to comply with the standards before a building permit will be issued. Continued compliance shall be required during the operation of such uses and activities. Any use already established on the effective date of these restrictions shall not be modified as to conflict with the performance standards established.

12. INCINERATION. No rubbish or natural material may be burned without a burning permit issued by the Village fire Chief. Applicable restrictions in paragraph 11 (above) shall apply to incineration.

13. EASEMENTS. All owners and occupants of the Germantown Business Park shall cooperate with the Village and other owners and occupants in planning and granting all necessary and reasonable easement to accommodate gas, electric, telephone, sewer, water and other utilities, provided that such easements do not interfere with the present use of the land or unduly restrict future use or development.

14. TIMING. Upon acceptance of an offer to purchase land within the Germantown Business Park, the owner agrees to commence construction of proposed improvements within 18 months of the conveyance of the property to the purchaser.

15. NO FUTURE DIVISION WITHOUT APPROVAL. Lots purchased from the Developer may not be divided without approval from the Developer and the Village.

16. TERMS OF COVENANTS AND RESTRICTIONS: AMENDMENTS. Each lot shall be conveyed subject to this Declaration of Covenants and Restrictions, which shall run with the land and shall be binding on all parties owning or having an interest in lots in TIF#4, and all person claiming under them, for a period of twenty (20) years from the date on which the Declaration of Covenants and Restrictions is duly recorded in the public registry. Subsequent to such time, the Declaration shall automatically be extended for successive periods of ten (10) years each.

    The Declaration of Covenants and Restrictions may be modified and amended, in whole or in part, by the recording in the public registry of an instrument duly enacted and signed by a majority of owners in TIF #4, provided however, that any such modification or amendment must be approved the Developer, so long as the Developer is the owner of any lot in TIF#4, and by the Village.

17. APPROVALS BY DEVELOPER. Any approvals required by this Declaration of Covenant and Restrictions to be obtained from the Developer shall be applicable for so long as the Developer owns a lot in TIF #4, or continues to be obligated under the "Take-out Schedule" of the Developer Agreement by and between the Developer and the Village of Germantown.

18. ENFORCEMENT OF RESTRICTIONS. The enforcement of the rules and restrictions contained in the declaration of restrictions shall be by proceeding at law or in any equity against any person or persons violating or attempting to violate any covenants either to restrain violation or to recover damages. Such proceedings may be commenced by any owner or owners of property in the Germantown Business Park or by the Developer or the Village of Germantown.

19. VALIDITY OF RESTRICTIONS: NON-ABROGATION. Invalidation of any one of these covenants or restrictions contained in this document, by judgement or court order, shall in no way affect any of the other provisions thereof, which shall remain in full force and effect.

    The Covenants and Restrictions contained herein shall in no way impair or abrogate the application or the effect of any ordinance, administrative regulation or statute promulgated by any governmental authority having jurisdiction.

DOC# 1218277

Recorded
Apr. 23, 2009 AT 01:00PM
SHARON A MARTIN, REGISTER OF DEEDS
WASHINGTON COUNTY, WISCONSIN

Fee Amount: $71.00

91-31

Return to:
Attorney John L. DeStefanis
Germantown Village Attorney
W175 N11081 Stonewood Dr., Ste. 105
Germantown, WI 53022

AMENDMENT TO DECLARATION OF RESTRICTIONS AND COVENANTS FOR THE GERMANTOWN BUSINESS PARK TIF #4

For the following described parcel of land:

Being all of the West ½ of the Northeast ¼, the West ½ of the Southeast ¼, the East ½ of the Southwest ¼, the Northwest ¼ of the Southwest ¼, the East ½ of the Northwest ¼ and part of the Southwest ¼ of the Southwest ¼ of Section 25, Township 9 North, Range 20 East; all of the North ½ of the Northwest ¼ and part of the Northwest ¼ of the Northeast ¼ of Section 36, Township 9 North, Range 20 East, in the Village of Germantown, Washington County, Wisconsin, more particularly described as follows:

Commencing at the Southwest corner of Section 25, Township 9 North, Range 20 East, also being the point of beginning; thence North 02°43'15" West along the west line of the SW ¼ of said Section 25, 2648.50 feet to the West ¼ corner of said Section 25; thence North 88°21'41" East along the north line of the Southwest ¼ of said Section 25, 1316.09 feet to the northeast corner of the Northwest ¼ of the Southwest ¼ of said Section 25; thence North 02°29'15" West along the west line of the East ½ of the Northwest ¼ of said Section 25, 2649.17 feet to the northwest corner of the East ½ of the Northwest ¼ of said Section 25 and to a point on the centerline of Mequon Road; thence North 88°23'28" East along the north line of the Northwest ¼ of said Section 25 and

along the centerline of Mequon Road, 1322.70 feet to the North ¼ corner of said Section 25; thence North 88°11'21" East along the north line of the Northeast ¼ of said Section 25 and along the centerline of Mequon Road, 1327.42 feet to the northeast corner of the West ½ of the Northeast ¼ of said Section 25; thence South 02°12'00" East along the east line of said West ½, 2642.34 feet to the southeast corner of said West ½ and to the northeast corner of the West ½ of the Southeast ¼ of said Section 25; thence South 02°10'14" East along the east line of the West ½ of the Southeast ¼ of said Section 25, 2640.33 feet to the southeast corner of said West ½ and to a point on the centerline of Donges Bay Road; thence South 88°01'20" West along the south line of said Southeast ¼ and along the centerline of Donges Bay Road 390.06 feet to the northeast corner of Certified Survey Map No. 278 (recorded in Volume 2 on Page 58 as Document No. 314198); thence South 32°31'20" West (recorded as S. 32°43'44" W.) along the southeast line of said Certified Survey Map, 60.67 feet to the south right-of-way line of Donges Bay Road; thence South 35°58'20" West (recorded as S. 36°10'44" W.) along said southeast line, 502.75 feet to the east line of Lot 2 of Certified Survey Map No. 4324, (recorded in Volume 28 on Page 264 as Document No. 668027); thence South 35°36'02" West along said east line, 158.42 feet; thence South 30°59'19" West, 897.33 feet to the southeast corner of the North ½ of the Northwest ¼ of Section 36; thence South 88°11'44" West along the south line of said North ½, 2621.31 feet to the southwest corner of said North ½; thence North 01°26'22" West along the west line of said Northwest ¼, 1322.45 feet to the point of beginning.

Excepting those lands described in Volume 314 of Deeds on Page 368 as Document No. 241197. Said exception containing 5.50 acres of land.

Said parcel of land contains 487.09 acres of land.

TaxKey	Owner Name
GTNV251967	North Fork Adventures LLC
GTNV251968	Village Of Germantown
GTNV251969	Village Of Germantown
GTNV251970	Village Of Germantown
GTNV251972	BVD Properties LLC
GTNV251973	Aei-Wisconsin LLC
GTNV251976	Cojo Properties LLC
GTNV251978	Kmr Investment Co LLP
GTNV251979	Kmr Investment Co LLP
GTNV251980	Village Of Germantown
GTNV251981	Village Of Germantown
GTNV251988	Heather Lake LLC
GTNV252985	Village Of Germantown
GTNV252986	Village Of Germantown
GTNV252987	Village Of Germantown
GTNV253986	Waste Management Of Wisconsin Inc
GTNV253987	Waste Management Of Wisconsin Inc
GTNV253988	Alice C. Frenz
GTNV253989	Anton Frenz Trust
GTNV253990	Germantown Joint Sch
GTNV253991	Waste Management Of Wisconsin
GTNV253992	Bradley Corporation
GTNV253993	Anton Frenz Trust
GTNV253996	Village Of Germantown
GTNV253997	Village Of Germantown
GTNV254980	Kohl's Department Stores Inc
GTNV254981	W M Building LLC
GTNV254983	Village Of Germantown
GTNV254985	Warehouse Storage LLC
GTNV254986	Ubert Investments LLC
GTNV254987	Bradley Way Partners
GTNV254988	Cml Holdings Inc
GTNV254989	Cambridge Major Laboratories, Inc
GTNV361995	Dale H & Patricia F Schreiner Trust
GTNV361996	Superior Of Wisconsin Inc
GTNV362986	Skyline Development Corp
GTNV362987	Skyline Development Corp
GTNV362988	Skyline Development Corp
GTNV362989	Secure Mini Storage Limited
GTNV362992	Superior Services Inc
GTNV362993	Benz Oil Inc
GTNV362994	Bizzco LLP

Pursuant to Section 16 of the Declaration of Restrictions and Covenants of the Germantown Business Park TIF #4, a majority of all of the lot owners in the Germantown Business Park, having adopted the **Resolution of Property owners Amending Specified Provisions of the Declarations of Restrictions and Covenants of the Germantown Business Park TIF #4,** which is annexed hereto, by their respective **Consent and Affirmative Vote,** which are annexed hereto, the **Declarations of Restrictions and Covenants of the Germantown Business Park TIF #4,** which was originally approved by the Village Board of the Village of Germantown on January 18, 1999* and which is re-recorded herewith, is hereby amended in the form and substance appended hereto.

* and recorded as Document No. 815487

IN WITNESS WHEREOF, the undersigned officer of the Village of Germantown has hereunto set his hand and seal this 22 day of April, 2009.

John L. DeStefanis
Village Attorney

State of Wisconsin)
) SS
Washington County)

Personally came before me this 22 day of April, 2009, the above named John L. DeStefanis, Village Attorney and an Officer of the Village of Germantown, Wisconsin, to me known to be the person who executed the foregoing instrument and acknowledged the same in his official capacity.

Nicholas J. DeStefanis
Notary Public, State of Wisconsin
My commission is permanent.

NICHOLAS J. DESTEFANIS NOTARY PUBLIC STATE OF WISCONSIN

This Document drafted by:
John L. DeStefanis, Germantown Village Attorney
W175 N11081 Stonewood Drive, Suite 105
Germantown, WI 53022

GERMANTOWN BUSINESS PARK TIF #4

RESOLUTION OF PROPERTY OWNERS AMENDING SPECIFIED PROVISIONS OF THE DECLARATION OF RESTRICTIONS AND COVENANTS OF THE GERMANTOWN BUSINESS PARK TIF #4

BE IT RESOLVED by the property owners of the Germantown Business Park TIF #4 that the Declaration of Restrictions and Covenants be and are hereby amended pursuant to Section 16 of said Declaration, in the following respects only:

3. SITE RESTRICTIONS.

B. *Minimum Building Size.* The initial construction on each site shall be a minimum of ~~5,000~~3,500 square feet per buildable acre, or 10,000 square feet on the smallest available parcel.

C. *Building Setbacks.* No building, or part thereof, (trash enclosures, overhangs, etc.) shall be located within the following distances of a property line:

- Front Yard (corner lots shall have two front yards)
  - Abutting Mequon Road ~~200'~~ 50' or the southerly edge of the berm lying along Mequon Road, whichever is greater

E. *Parking Setbacks.* No parking areas shall be permitted within the following setbacks:

- Abutting Mequon Road ROW 50' ~~200'~~
- From any wetland boundary ~~25'~~As provided in the Shoreland Wetland zoning ordinance of the Village of Germantown.
- From any navigable waterway ~~75'~~As provided in the Shoreland Wetland zoning ordinance of the Village of Germantown.

4. ARCHITECTURAL CONTROLS.

B. *Building Height.* The height of all principal buildings and accessory structures, including chimneys, cooling towers and antennae, shall be ~~governed~~ as provided by the Municipal Zoning Code of Germantown for the M-1 zoning district. ~~Generally, building height is limited to 45 feet in the M-1 zoning district, with architectural spires, cupola, etc. permitted above this height.~~

6. LANDSCAPING.

C. *Required Landscaping.* The following landscaping is required for all new development in the Germantown Business Park:

- Street Trees. The individual property owner shall be responsible for planting at least one appropriate street tree for each ~~every~~ 25' of frontage along any abutting public streets, which shall be planted in attractive groupings or clusters.

All remaining provisions of the Declaration of Restrictions and Covenants for the Germantown Business Park TIF #4 shall remain in full force and effect unless and until amended or repealed pursuant to Section 16 of said Declaration.

1341456

RECORDED
July 11, 2013 1:58 PM
SHARON A MARTIN, REGISTER OF DEEDS
WASHINGTON COUNTY, WISCONSIN

Fee Amount: 130.00

15

AMENDMENT NO. 2 TO DECLARATION OF RESTRICTIONS AND COVENANTS FOR GERMANTOWN BUSINESS PARK TIF #4

Parcel Id Numbers:

GTNV251965, GTNV251966, GTNV251967, GTNV251968, GTNV251969, GTNV251970, GTNV251972, GTNV251973, GTNV251976, GTNV251978, GTNV251979, GTNV251988, GTNV252980, GTNV253985, GTNV253986, GTNV253987, GTNV253988, GTNV253989, GTNV253990, GTNV253991, GTNV253993, GTNV253996, GTNV253997, GTNV254273, GTNV254974, GTNV254975, GTNV254980, GTNV254981, GTNV254986, GTNV254987, GTNV362986, GTNV362987, GTNV362988, GTNV362989 and GTNV362993

Instrument Drafted by & Return To:

Brian C. Sajdak, Village Attorney
Wesolowski, Reidenbach & Sajdak
11402 W. Church St.
Franklin, WI 53132

For the following described land:

Being all of the West ½ of the Northeast ¼, the West ½ of the Southeast ¼, the East ½ of the Southwest ¼, the Northwest ¼ of the Southwest ¼, the East ½ of the Northwest ¼ and part of the Southwest ¼ of the Southwest ¼ of Section 25, Township 9 North, Range 20 East; all of the North ½ of the Northwest ¼ and part of the Northwest ¼ of the Northeast ¼ of Section 36, Township 9 North, Range 20 East, in the Village of Germantown, Washington County, Wisconsin more particularly described as follows:

Commencing at the Southwest corner of Section 25, Township 9 North, Range 20 East, also being the point of beginning; thence North 02°43'15" West along the west line of the SW ¼ of said Section 25, 2648.50 feet to the West ¼ corner of said Section 25; thence North 88°21'41" East along the north line of the Southwest ¼ of said section 25, 1316.09 feet to the northeast corner of the Northwest ¼ of the Southwest ¼ of said Section 25; thence North 02°29'15" West along the west line of the East ½ of the Northwest ¼ of said Section 25, 2649.17 feet to the northwest corner of the East ½ of the Northwest ¼ of said Section 25 and to a point on the centerline of Mequon Road; thence North 88°23'28" East along the north line of the Northwest ¼ of said Section 25 and along the centerline of Mequon Road, 1322.70 feet to the North ¼ corner of said Section 25; thence North 88°11'21" East along the north line of the Northeast ¼ of said Section 25 and along the centerline of Mequon Road, 1327.42 feet to the northeast corner of the West ½ of the Northeast ¼ of said Section 25; thence South 02°12'00" East along the east line of said West ½, 2642.34 feet to the southeast corner of said West ½ and to the northeast corner of the West ½ of the Southeast ¼ of said Section 25; thence South 02°10'14" East along the east line of the West ½ of the Southeast ¼ of said Section 25, 2640.33 feet to the southeast corner of said West ½ and to a point on the centerline of Donges Bay Road; thence South 88°01'20" West along the south line of said Southeast ¼ and along the centerline of Donges Bay Road 390.06 feet to the northeast corner of Certified Survey Map No. 278 (recorded in Volume 2 on Page 58 as Document No. 314198); thence South 32°31'20" West (recorded as S. 32°43'44" W.) along the southeast line of said Certified Survey Map, 60.67 feet to the south right-of-way

line of Donges Bay Road; thence South 35°58'20" West (recorded as S. 36°10'44 W.) along said southeast line, 502.75 feet to the east line of Lot 2 of Certified Map No. 4324 (recorded in Volume 28 on Page 264 as Document No. 668027); thence South 35°36'02" West along said east line, 158.42 feet; thence South 30°59'19" West, 897.33 feet to the southeast corner of the North ½ of the Northwest ¼ of Section 36; thence South 88°11'44" West along the south line of said North ½, 2621.31 feet to the southwest corner of said North ½; thence North 01°26'22" West along the west line of said Northwest ¼, 1322.45 feet to the point of beginning.

Excepting those lands described in Volume 314 of Deeds on Page 368 as Document No. 241197. Said exception containing 5.50 acres of land.

Said parcel containing 47.09 acres of land.

AMENDMENT

WHEREAS, the Declaration of Restrictions and Covenants for Germantown Business Park TIF #4 was recorded in the Office of Register of Deeds for Washington County on February 23, 1999 as Document No. 815487; and,

WHEREAS, such Declaration of Restrictions was previously amended in part by an Amendment to Declaration of Restrictions and Covenants for the Germantown Business Park TIF #4 which was recorded in the Office of Register of Deeds for Washington County on April 23, 2009 as Document No. 1218277; and,

WHEREAS, Section 16 of the Declaration of Restrictions and Covenants allows for amendments to the same upon approval of the majority of the lot owners within the Business Park and also by the Village of Germantown;

NOW, THEREFORE, Pursuant to Section 16 of the Declaration of Restrictions and Covenants for Germantown Business Park TIF #4, the undersigned, being a majority of all lot owners in the Germantown Business Park and as representatives of the Village of Germantown, do hereby amend Section 14 of the Declaration of Restrictions and Covenants for Germantown Business Park TIF #4 to read as follows:

14. Timing. Upon acceptance of an offer to purchase land within the Germantown Business Park, the owner agrees to commence construction of proposed improvements within 36 months of the conveyance of the property to the purchaser.

All remaining provisions of the Declaration of Restrictions and Covenants for Germantown Business Park TIF #4 shall remain in full force and effect unless and until amended or repealed pursuant to Section 16 of said Declaration.

IN WITNESS WHEREOF, the undersigned have hereunto set their hand as of the dates specified below.

[SIGNATURE PAGES FOLLOW]

1385207

RECORDED
July 01, 2015 2:30 PM
SHARON A MARTIN
REGISTER OF DEEDS
WASHINGTON COUNTY, WI
Recording Fee Paid: $30.00

AMENDMENT NO. 3 TO DECLARATION OF RESTRICTIONS AND COVENANTS FOR GERMANTOWN BUSINESS PARK TIF #4

Parcel Id Numbers:

GTNV251961, GTNV251967, GTNV251968, GTNV251959, GTNV251972, GTNV251973, GTNV251976, GTNV251978, GTNV251979, GTNV251988, GTNV252963, GTNV252973, GTNV252974, GTNV252980, GTNV252984, GTNV253982, GTNV253983, GTNV253984, GTNV253985, GTNV254273, GTNV254280, GTNV254281, GTNV254974, GTNV254975, GTNV254980, GTNV254981, GTNV254986, and GTNV254987

Instrument Drafted by & Return To:

Brian C. Sajdak, Village Attorney
Wesolowski, Reidenbach & Sajdak
11402 W. Church St.
Franklin, WI 53132

For the following described land:

All that part of the East ½ of the Northwest and Southwest ¼ and all that part of the West ½ of the Northeast and Southeast ¼ of Section 25, Township 9 North, Range 20 East of the Fourth Principle Meridian, located in the Village of Germantown, Washington County, Wisconsin, bounded and described as follows:

Commencing at a concrete monument with brass cap marking the South ¼ corner of said Section 25; thence South 89°28'21" West along the south line of the Southwest ¼ of Section 25, 170.68 feet; thence North 02°46'27" West, 60.05 feet to the southeast corner of Lot 1 of Certified Survey Map No. 3922 and the point of beginning of the lands to be described.

Thence North 02°46'18" West along the west line of Grant Drive, 1022.55 feet to the northeast corner of said Lot 1; thence South 89°29'34" West (South 88°08'32" West, 1050.00 record) along the north line of said Lot 1, 1049.54 feet to the northwest corner of said Lot 1 and the easterly right of way line for the Fox Valley and Western Limited railroad right of way; thence North 02°42'30" West along said east right of way line also being the west line of Lot 14 or Certified Survey Map No. 5805, 601.29 feet; thence North 02°42'43" West along said east right of way line also being the west line of Lot 37 of Certified Survey Map No. 6408, 666.15 feet to the point of curvature to the left; thence continuing northwesterly along the arc of said curve, 249.57 feet, having a radius of 1960.08 feet and a chord which bears North 06°21'35" West, 249.40 feet to the point of tangency and the west line of the East ½ of the Southwest ¼ ; thence North 01°04'40" West along said west line and the west line of said Lot 37, 46.43 feet to the southwest corner of the Southeast ¼ of the Northwest ¼ of said Section 25; thence North 01°09'25" West along the west line of the of the East ½ of the Northwest ¼ of said Section 25, 2569.33 feet to the northwest corner of Lot 24 of Certified Survey Map No. 6318 and the south line of State Trunk Highway 167 (Mequon Road); thence North 89°43'31" East, along said south right of way line, 284.31 feet; thence South 73°34'32" East, along said south right of way line, 104.40 feet; thence North 89°43'31" East along said south right of way line, 789.45 feet; thence South 75°58'59" East along said south right of

way line, 107.88 feet to the west right of way line of Eisenhower Drive; thence North 88°59'12" East, 90.00 feet to the east right of way line of Eisenhower Drive; thence North 01°00'48" West along said east right of way line 55.64 feet to the south right of way line of State Trunk Highway 167 (Mequon Road); thence North 89°31'18" East along said south right of way line and the north line of Lot 44 of Certified Survey Map No. 6552, 617.15 feet; thence South 79°10'06" East along said south right of way line and the north line of said Lot 44, 101.98 feet; thence North 89° 31'18" East along said south right of way line and the north line of Lot 45 of Certified Survey Map No. 6552, 200.00 feet; thence North 78°12" 42" East along said south right of way line and the north line of said Lot 45, 203.96 feet; thence North 89°31'18" East along said south right of way line and the north line of said Lot 45, 165.12 feet and the northeast corner of said Lot 45 and the East line of the West ½ of the Northeast ¼ of said Section 25; thence South 00°52'09" East along said East line of the West ½, 2582.40 feet to the southeast corner of the Southwest ¼ of the Northeast ¼ of said Section 25; thence South 00°50'36" East (South 02°10'15" East record) along the east line of the West ½ of the Southeast ¼ of said Section 25 and the east line of Lot 26 of Certified Survey Map No. 6275, 2580.48 feet to the southeast corner of said Lot 26 and the north right of way line of Donges Bay Road; thence South 89°21'16" West along said north right of way line, 553.70 feet to the east right of way line of Washington Drive; thence continuing South 89°21'16" West, 66.00 feet to the west right of way line of Washington Drive; thence continuing South 89°21'16" West along said north right of way line, 688.56 feet to the intersection of the north right of way line and the West line of the Southeast ¼ of said Section 25; thence South 89°28'28" West along said north right of way line, 113.00 feet to the east right of way line of Grant Drive; thence continuing South 89°27'41" West, 66.05 feet to the point of beginning.

Said Parcel containing 12,335,198 square feet (283.1772 acres gross)

AMENDMENT

WHEREAS, the Declaration of Restrictions and Covenants for Germantown Business Park TIF #4 was recorded in the Office of Register of Deeds for Washington County on February 23, 1999 as Document No. 815487; and,

WHEREAS, such Declaration of Restrictions was previously amended in part by an Amendment to Declaration of Restrictions and Covenants for the Germantown Business Park TIF #4 which was recorded in the Office of Register of Deeds for Washington County on April 23, 2009 as Document No. 1218277; and,

WHEREAS, such Declaration of Restrictions was previously amended in part by Amendment No. 2 to Declaration of Restrictions and Covenants for the Germantown Business Park TIF #4 which was recorded in the Office of Register of Deeds for Washington County on July 11, 2017 as Document No. 1341456; and

WHEREAS, Section 16 of the Declaration of Restrictions and Covenants allows for amendments to the same upon approval of the majority of the lot owners within the Business Park and also by the Village of Germantown;

NOW, THEREFORE, Pursuant to Section 16 of the Declaration of Restrictions and Covenants for Germantown Business Park TIF #4, the undersigned, being a majority of all lot owners in the Germantown Business Park and as representatives of the Village of Germantown, do hereby amend the Declaration of Restrictions and Covenants for Germantown Business Park TIF #4 to create section 9.5 which shall read as follows:

9.5 **SECURITY WALLS AND FENCES.** To maintain a consistent and high quality appearance of developed properties in the Business Park, the installation of security walls or fences is discouraged. When and where perimeter security is necessary, a security fence may be installed provided it is designed in such a manner as to create an attractive appearance to the public and compliment the architecture of the principal building(s) on

the subject property and does not detract from or compromise the overall appearance of the Business Park.

The type, style, design, dimensions, color and material composition, location, landscaping, method of installation, and other details of any proposed security fence shall require review and approval by the Village of Germantown Plan Commission in accordance with the Village's site plan review and approval procedures.

At a minimum, a proposed security fence shall meet the following requirements:

A. *Design, Dimensions, Materials.*

1. The height of a security fence shall not be less than four (4) feet and not more than ten (10) feet measured from the finished grade to the top of the highest horizontal rail or top of the pickets (whichever is higher). Vertical support rails or pillars may extend a maximum of six (6) inches above the height of the fence.
2. Security fences shall be constructed from a combination of: (1) solid pillars (vertical) or short solid wall segments (horizontal) comprised of stone, brick, decorative block or other masonry material; and (2) wrought iron, steel or other solid or tubular metal rails and pickets *(see photo examples attached).*
3. Solid wall sections (horizontal) shall not exceed a height of three (3) feet above the natural finished grade.
4. Support pillars (vertical) shall be a minimum of sixteen (16) inches wide and should not be spaced less than twelve (12) feet and no more than twenty-four (24) feet apart.
5. Long expanses of fence should be avoided where possible or offset and architecturally designed to prevent monotony.
6. Posts and rails must be placed on the inside of the fence so that they are not facing a street.
7. The use of wood, vinyl, plastic, galvanized metal, cable, wire, wire woven or other mesh fabric (e.g. "chain link") fence material is prohibited.
8. Security fences shall not be topped with or otherwise include barbed wire, razor wire, barbed tape concertina wire, electrified wire, or other similar material.
9. Access gates for pedestrian and vehicle ingress/egress shall be provided and integrated into the design of a security fence where deemed necessary by the Village to allow reasonable and adequate access by police, fire and emergency medical personnel, vehicles and equipment. Said personnel shall be provided the necessary keys, pass codes or other means necessary to gain free and unencumbered access at their discretion in the event of an emergency.
10. Vehicle access gates shall be design and located in a manner that will not result in vehicles standing, parking or loading from the adjacent public right-of-way.

B. *Landscaping.* Landscaping comprised of a mix of deciduous and evergreen trees and shrubs should be provided adjacent to the street-facing (out) side of the fence along public right-of-ways and all yards. Landscaping shall be installed adjacent to a security fence in either a continuous swath (not less than 6 feet in width) or intermittent "pockets" (not less than 15 sqft in area) of landscaping located and spaced in attractive groupings at intervals not less than twenty-four (24) feet apart along and adjacent to the security fence.

C. *Setback and Location.*

1. Where possible, security fences should be considered before and integrated into the design and layout of the principal buildings, parking areas, and access driveways.
2. Except for the provision in Section 3. below, the installation and location of security fences shall meet all applicable building setbacks for the subject property as set forth in Section 3.D. herein. *[Note: the minimum building setbacks in Section 3.D. are as follows:*
   (1) *Street/Front Yard:*
   Mequon Road ROW: *50' or edge of berm (whichever is closer)*
   Other Primary ROW: *75'* *(Donges Bay Road, FDL Avenue)*
   Internal roads: *30'*
   (2) *Side Yard:* *25'*
   (3) *Rear Yard:* *25'*
   (4) *Wetlands:* *as specified in Shoreland-Wetland Zoning Code*
   (5) *Navigable Water:* *as specified in Shoreland-Wetland Zoning Code]*
3. In the event a minimum setback set forth herein cannot be met, a reduction in the setback may be granted by the Village Board with a special use permit (i.e. conditional use permit) upon receiving a recommendation from the Plan Commission.
4. When and where a building is placed at the minimum building setback line, a security fence should be attached to or otherwise integrated into the building façade starting at the building corners in order to reduce the amount of fence required and provide the type of security required.

D. *Maintenance.* Property owners are responsible for maintaining all security fences in an attractive, neat, clean and safe condition and appearance, particularly the outward or street-facing side(s) of any security fence. Maintenance shall include (but not limited to): landscape maintenance as set forth herein; maintain proper drainage along, around and through such fencing; prohibiting the accumulation of trash or other similar items; maintain the appearance and structural integrity of all fence materials in good condition, free of rust, broken components, etc.

All remaining provisions of the Declaration of Restrictions and Covenants for Germantown Business Park TIF #4 shall remain in full force and effect unless and until amended or repealed pursuant to Section 16 of said Declaration.

IN WITNESS WHEREOF, the undersigned have hereunto set their hand as of the dates specified below.

[SIGNATURE PAGES FOLLOW]

COPY

1388683

RECORDED
August 19, 2015 10:40 AM
SHARON A MARTIN
REGISTER OF DEEDS
WASHINGTON COUNTY, WI
Recording Fee Paid: $30.00

AMENDMENT NO. 4 TO DECLARATION OF RESTRICTIONS AND COVENANTS FOR GERMANTOWN BUSINESS PARK TIF #4

Parcel Id Numbers:

GTNV251959, GTNV251960, GTNV251961, GTNV251967, GTNV251968, GTNV251972, GTNV251973, GTNV251976, GTNV251978, GTNV251979, GTNV251988, GTNV252963, GTNV252973, GTNV252974, GTNV252980, GTNV252984, GTNV253977, GTNV253978, GTNV253980, GTNV253981, GTNV253982, GTNV253983, GTNV253984, GTNV253985, GTNV253993, GTNV254273, GTNV254280, GTNV254281, GTNV254974, GTNV254975, GTNV254980, GTNV254981, GTNV254986, GTNV254987, GTNV361995, GTNV361996, GTNV362983, GTNV362986, GTNV362988, GTNV362989, GTNV362992, GTNV362993, and GTNV362994

17

Instrument Drafted by & Return To:
Village of Germantown
~~Brian C. Sajdak, Village Attorney~~
~~Wesolowski, Reidenbach & Sajdak~~
~~11402 W. Church St.~~ PO Box 337
~~Franklin, WI 53132~~ Germantown, WI
53022

For the following described land:

Being all of the West ½ of the Northeast ¼, of the West ½ of the Southeast ¼, the East ½ of the Southwest ¼, the Northwest ¼ of the Southwest ¼, the East ½ of the Northwest ¼ and part of the Southwest ¼ of the Southwest ¼ of Section 25, Township 9 North, Range 20 East; all of the North ½ of the Northwest ¼ and part of the Northwest ¼ of the Northeast ¼ of Section 36, Township 9 North, Range 20 East, in the Village of Germantown, Washington County, Wisconsin, more particularly described as follows:

Commencing at the Southwest corner of Section 25, Township 9 North, Range 20 East, also being the point of beginning; thence North 02°43'15" West along the west line of the SW ¼ of said Section 25, 2,648.50 feet to the West ¼ corner of said Section 25; thence North 88°21'41" East along the north line of the Southwest ¼ of said Section 25, 1,316.09 feet to the northeast corner of the Northwest ¼ of the Southwest ¼ of said Section 25; thence North 02°29'15" West along the west line of the East ½ of the Northwest ¼ of said Section 25, 2,649.17 feet to the northwest corner of the East ½ of the Northwest ¼ of said Section 25 and to a point on the centerline of Mequon Road; thence North 88°23'28" East along the north line of the Northwest ¼ of said Section 25 and along the centerline of Mequon Road, 1,322.70 feet to the North ¼ corner of said Section 25; thence North 88°11'21" East along the north line of the Northeast ¼ of said Section 25 and along the centerline of Mequon Road, 1,327.42 feet to the northeast corner of the West ½ of the Northeast ¼ of said Section 25; thence South 02°12'00" East along the east line of said West ½, 2,642.34 feet to the southeast corner of said West ½ and to the northeast corner of the West ½ of the Southeast ¼ of said Section 25; thence South 02°10'14" East along the east line of the West ½ of the Southeast ¼ of said Section 25, 2,640.33 feet to the southeast corner of said West ½ and to a point on the centerline of Donges Bay Road; thence South 88°01'20" West along the south line of said Southeast ¼ and along the centerline of Donges Bay Road 390.06 feet to the northeast corner of Certified Survey Map No. 278 (recorded in Volume 2 on Page 58 as Document No. 314198); thence South 32°31'20" West (recorded as S. 32°43'44" W.) along the

southeast line of said Certified Survey Map, 60.67 feet to the south right-of-way line of Donges Bay Road; thence South 35°58'20" West (recorded as S. 36°10'44" W.) along the southeast line, 502.75 feet to the east line of Lot 2 of Certified Survey Map No. 4324, (recorded in Volume 28 on Page 264 as Document No. 668027); thence South 35°36'02" West along said east line, 158.42 feet; thence South 30°59'19" West, 897.33 feet to the southeast corner of the North ½ of the Northwest ¼ of Section 36; thence South 88°11'44" West along the south line of said North ½, 2,621.31 feet to the southwest corner of said North ½; thence North 01°26'22" West along the west line of said Northwest ¼, 1,322.45 feet to the point of beginning.

Excepting those lands described in Volume 314 of Deeds on Page 368 as Document No. 241197. Said exception containing 5.50 acres of land.

Said parcel of land contains 487.0902 acres of land.

AMENDMENT

WHEREAS, the Declaration of Restrictions and Covenants for Germantown Business Park TIF #4 was recorded in the Office of Register of Deeds for Washington County on February 23, 1999 as Document No. 815487; and,

WHEREAS, such Declaration of Restrictions was previously amended in part by an Amendment to Declaration of Restrictions and Covenants for the Germantown Business Park TIF #4 which was recorded in the Office of Register of Deeds for Washington County on April 23, 2009 as Document No. 1218277; and,

WHEREAS, such Declaration of Restrictions was previously amended in part by Amendment No. 2 to Declaration of Restrictions and Covenants for the Germantown Business Park TIF #4 which was recorded in the Office of Register of Deeds for Washington County on July 11, 2013 as Document No. 1341456; and

WHEREAS, such Declaration of Restrictions was previously amended in part by Amendment No. 3 to Declaration of Restrictions and Covenants for the Germantown Business Park TIF #4, which applies only to lands within the Business Park, and which was recorded in the Office of the Register of Deeds for Washington County on July 1, 2015 as Document No. 1385207; and

WHEREAS, Section 16 of the Declaration of Restrictions and Covenants allows for amendments to the same upon approval of the majority of the lot owners within the Business Park and also by the Village of Germantown; and

WHEREAS, the Wisconsin Department of Transportation's planned reconstruction of Fond du Lac Avenue to consist of a roundabout at the intersection of Fond du Lac and Donges Bay and accompanying shift of the Fond du Lac ROW to the east which will negatively impact lands in TID 4 which abut the same;

NOW, THEREFORE, Pursuant to Section 16 of the Declaration of Restrictions and Covenants for Germantown Business Park TIF #4, the undersigned, being a majority of all lot owners in the Germantown Business Park and as representatives of the Village of Germantown, do hereby amend section 3.D. the Declaration of Restrictions and Covenants for Germantown Business Park TIF #4 to read as follows (NOTE: Additions are Underlined; Deleted text is ~~Struek-through~~):

3. **SITE RESTRICTIONS.**

D. *Building Setbacks.* No building, or part thereof (trash enclosures, overhangs, etc.) shall be located within the following distance of a property line:

- Front Yard (corner lots shall have two front yards)
  - Abutting Mequon Road ROW: 50' or the southerly edge of the berm lying along Mequon Road, whichever is greater
  - ~~Abutting other primary ROW (Donges Bay Rd, FDL Ave)~~ ~~75'~~
  - Abutting Donges Bay Rd 50'
  - Abutting ~~internal~~ all other street ROW 30'
- Side Yard 25'
- Rear Yard 25'
- From any wetland boundary 25'
- From any navigable waterway 75'

All remaining provisions of the Declaration of Restrictions and Covenants for Germantown Business Park TIF #4 shall remain in full force and effect unless and until amended or repealed pursuant to Section 16 of said Declaration.

IN WITNESS WHEREOF, the undersigned have hereunto set their hand as of the dates specified below.

[SIGNATURE PAGES FOLLOW]

STREET TREE
SPECIES RECOMMENDATIONS

This list is provided as a guide to some of the most appropiate trees for urban settings in USDA Hardiness Zone 5. There is no single perfect tree. These species have been selected for use in Germantown's demanding street tree situations. There is a much larger group of plants that would grow very well in Germantown and should be considered for other landscape uses. Before selecting any particular species or variety, each site should be evaluated as to: rooting space, soil texture, soil pH, drainage, exposure, overhead wires, and surrounding buildings. The most important thing to remember is to plant the right tree in the right place.

SMALL TREES(Under 30')

Suitable for tree lawns 3 feet wide, under wires, and/or box-outs.

COMMON NAME	GENUS & SPECIES	VARIETY
Crabapples	Malus sp.	Adams
		Indian Summer
		Prairie fire
		Proffessor Springer
		Profusion
		Red Barron
		Red Jewel
		Spring Snow
		Sugar Tyme
Hawthorn; Cockspur	Crataegus crus-galli	Inermis
" Washington	" phaenopyrum	
Lilac: Japanese Tree	Syringa reticulata	Ivory Silk
Magnolia	Magnolia Sp.	Dr. Merril
		Kobus
Maple; Amur	Acer ginnala	
" Tatarian	Acer tataricum	
Ironwood	Ostrya virginiana	

MEDIUM TREES(30' - 45')

Suitable for tree lawns 3 to 5 feet wide.

COMMON NAME	GENUS SPECIES	VARIETY
Alder; Black	Alnus ader	
Cherry; Sargent	Prunus sargentii	Accolade
		Columnar
Corktree; Amur	Phellodendron amurense	Macho
		Shademaster
Honeylocust; Imperial	Gleditsia triancanthos	Imperial
Horsechestnut; Ruby Red	Aesculus x carnea	Briotii
		O'Neill
" White	" hippocastanum	Baumanii
Maple; Hedge	Acer campestre	
Norway	" platanoides	Olmstead
Shantung	" truncatum	Norwegian
		Sunset
		Pacific Sunset
Pear; Callery	Pyrus calleryana	Aristocrat
		Autumn Blaze
		Bradford
		Chanticleer
		Redspire
		Whitehouse

TALL TREES(45'+)

Suitable for tree lawns at least 6 feet wide.

COMMON NAME	GENUS SPECIES	VARIETY
Ash; Green	Fraxinus pennsylvanica	Marshall
		Seedless
		Patmore
		Summit
" White	" americana	Autumn
		applause
		Autumn
		purple
		Skline
Baldcypress	Taxodium distichum	

Tall Trees (cont.)

COMMON NAME	GENUS SPECIES	VARIETY
Coffeetree; Kentucky	Gymnocladus dioicus	
Cucumbertree	Magnolia acuminata	
Elms	Ulmus sp.	Frontier
		Homestead
		Regal
		Sapporo Autumn Gold
		Urban
Ginkgo	Ginkgo biloba	Autumn Gold
		Lakeview
		Princeton Sentry
Hackberry	Celtis occidentalis	Prairie Pride
Honeylocust	Gleditsia triacanthos	Halka
		Moraine
		Shademaster
		Skyline
Katsura Tree	Cercdiphyllum japonicum	
Linden; American	Tilia americana	Redmond
" Littleleaf	" cordata	Chancellor
		Corinthian
		Fairview
		Glenleven
		Greenspire
" Silver	" tomentosa	Green Mountain
		Sterling
Maple; Freeman	Acer x freemanii	Armstrong
		Autumn Blaze
		Celebration
		Scarlet Sentinal
" Norway	" platanoides	Cleveland
		Columnar
		Deborah
		Emerald Lustre
		Emerald Queen
		Parkway

Tall Trees (cont.)

COMMON NAME	GENUS SPECIES	VARIETY
Maple Norway	Acer platanoides	Schwedler
		Summershade
		Super form
Oak; English	Quercus robur	Attention
		Fastigiate
		Skymaster
		Skyrocket
Planetree; London	Platanus x acerifolia	Bloodgood
Redwood; Dawn	Metasequoia glyptostroboide	
Zelkova; Japanese	Zelkova serrata	

UNDESIRABLE STREET TREES

Species	Comments
Beech-Fagus	too large
Birch, paper-Betula papyrifera	intolerant of stress
Catalpa-Catalpa speciosa	messy fruit
Cottonwood-Populus deltoides	Weak, messy cotton, too large
Elm; American-Ulmus americana	Disease
Siberian-Ulmus pumila	Weak wood
Fir-Abies sp.	Clearance problems
Horsechestnut-Aesculus sp.	Messy fruit
Locust-Black-Robinia pseudoacacia	Insects, borers on poor sites
Maple; Silver-Acer saccharinum	Weak wood, weak limb attachment
Sugar-Acer saccharum	Very untolerant of road salt
Box Elder-Acer negundo	Weak wook, weak limb attachment
Mulberry-Morus alba	Messy fruit
Pines-Pinus sp.	Clearance problems
Poplar-Lombardy & any variety	Weak wood, short lived
Russian Olive-Elaeagnus angustifolia	disease problems, weak wood
Sycamore-Platanus sp.	Too large, messy, disease prob.
Tree-of-Heaven-Ailanthus altissima	Weak wood
Spruce-Picea sp.	Clearance problems
Willow-Salix sp.	Too large, messy

RECOMMENDED PARK TREES

All trees from the Recommended Street Trees list can be used in the parks. This list is in addition to them.

DECIDUOUS TREES

Name/Species	Comments
Sugar Maple - Acer saccharum	needs a good site
Horsechestnut - Aesculus hippocastanum	accent plant, best in mulched bed due to messy fruit
Beech - Fagus sp.	site properly, large
Poplar sp. - Poplar sp.	use carefully and needs regular mtn., weak wooded
White Oak - Quercus alba	good site, chlorosis problem
Swamp White Oak - Quercus bicolor	site properly
Burr Oak - Quercus macrocarpa	hard to transplant

CONIFERS

Name/Species	Comments
*White Fir - Abies concolor	good replacement for blue spruce, site properly
*Juniper - Juniperus chinensis	upright form, good screen
-Iowa Juniper	
-Mountbatten Juniper	
Redcedar - Juniperus virginiana	upright form, good screen
-Silver Redcedar	
-Canaert Redcedar	
-Hill Dundee Juniper	
*Larch - Larix sp.	deciduous conifer, unique
-European - L. decidua	
-Japanese - L. kaempferi	
-Tamarack - L. laricina	native, not as dense
*Norway Spruce - Picea abies	good for massing, use instead of blue spruce

Conifers continued:	
*Black Hills Spruce - Picea glauca var. densata	good variety of white spruce
Bristlecone Pine - Pinus aristata	low slow grower, specimen plant
Austrian Pine - Pinus nigra	use sparingly (over used), problems in older plants
Macedonian Pine - Pinus puece	like white pine but slower growth
White Pine - Pinus strobus	site properly
Scots Pine - Pinus sylvestris	nice bark when older
Douglasfir - Pseudotsuga menziesii	well drained sites
*Arborvitae - Thuja occidentalis	good screen & accents
-Hetz Wintergreen	good central leader
-Holmstrup	
-Dark Green 'Nigra'	
-Emerald 'Smaragd'	good central leader
-Sudworth	
-Sunkist	gold color
-Techny	
* -Trautman	good central leader & color
* -Siberian 'Wareana'	

UNDESIRABLE PARK TREES

Name/Species	Comments
Balsam Fir - Abies balsamea	intolerant of city conditions
Boxelder - Acer negundo	weak wood, poor form
Silver maple - Acer saccharinum	weak wood & limb attachment
White Spruce - Picea glauca	poor form & problems, use Black Hills Spruce
Blue Spruce - Picea pungens	disease problems when older, some new varieties OK
Cottonwood - Populus deltoides	messy cotton, weak wood
Hemlock - Tsuga canadensis	needs protected sites
Red Oak - Quercus rubra	disease problem (oak wilt)
Willow - Salix sp.	messy, weak wood, short lived

815487

Village of Germantown ...Willkommen

Planning Department
Sigurd Strautmanis, Village Planner
N112 W17001 Mequon Road P.O. Box 337
Germantown, WI 53022-0337
(414) 250-4735 *direct line*
(414) 253-8255 *fax*

OUTDOOR LIGHTING GUIDELINES

To be used in preparing lighting plans as part of the Site Plan Review process.

As Germantown continues to grow, the proper design and maintenance of outdoor lighting is increasingly important. Continued residential, commercial and industrial growth has increased evening activity that requires nighttime illumination: residential traffic has increased, offices remain open later, industrial facilities have second and third shifts and services such as gas stations, grocery stores and ATM's remain open 24 hours a day. Well planned lighting can help prevent accidents, deter crime and maintain an attractive community environment. Poorly designed lighting can cause accidents and be a detriment to a community's image. Germantown desires to balance the need for increased lighting while maintaining the semi-rural character of the Village.

These guidelines provide the necessary guidance to meet Village goals. Rather than being overly prescriptive, they are performance-based, giving the designer maximum flexibility in developing acceptable lighting solutions.

PURPOSE

These guidelines serve as a benchmark for reviewing lighting plans submitted to the Plan Commission. The goal of these guidelines is to:

- Reinforce a positive community identity by promoting continuity within the Village's commercial and industrial districts;
- Ensure the provision of adequate lighting to protect the public from criminal activity;
- Facilitate safe movement by providing adequate levels of illumination for drivers and pedestrians;
- Eliminate excessive and potentially dangerous glare caused by unshielded or poorly aimed light sources.

APPLICABILITY

These guidelines shall apply to all new construction in Germantown's commercial, industrial, institutional and multi-family zoning districts. Additions and/or upgrades to existing lighting schemes (more than two fixtures) shall require Plan Commission review and shall be required to comply with these guidelines. Minor upgrades of 25% or less may be approved through the Building Inspector or Village Planner. Glare control shall apply to all zoning districts.

Holiday lighting between the months of November and February shall be exempt from these guidelines, although holiday decorations should not interfere with the safe operation of motor vehicles (block visibility at intersections, cause excessive glare to passing motorists, etc.).

Site Plan Review? All lighting plans must be approved by the Plan Commission. For a detailed checklist of submission requirements and for more information on applying to the Plan Commission for site plan approval, see the **SITE PLAN REVIEW** information packet or contact the Village Planner.

GENERAL GUIDELINES FOR ALL LIGHTING DESIGNS

A. *Control of Nuisance/Disabling Glare*

No lighting scheme shall cause unnecessary or disabling glare to motorists or pedestrians and all reasonable means shall be taken to prevent the projection of light onto neighboring properties.

- Glare control should be accomplished primarily through the design and selection of appropriate lighting equipment. Only after technical means are exhausted, may a developer substitute vegetative screening, fencing or other indirect means to reduce glare and light trespass;
- No fixture with an output of more than 2,000 lumens (approximately equivalent to a 150-watt incandescent bulb) shall be unshielded;
- Luminaires with adjustable heads must be installed with fixtures perpendicular to the ground plane (0° tilt).

B. *Color*

Color rendition, or the effect of a light source on the appearance of objects compared to their appearance under normal daylight conditions, is greatly affected by the type of lamp used. The Village promotes natural color rendition, or "white" light from artificial light sources.

- Generally, metal halide lamps are the most energy efficient of the white light sources, and thus the most desirable.

C. *Hours of Operation*

- Outdoor lights should be used only when necessary.
- Hours of operation shall be limited to the hours of darkness between 6:00 AM and 11:00 PM, except under the following conditions:
  - Commercial and industrial uses which remain open after 11:00 PM are permitted to keep outdoor lighting on up to ½ hour after employees leave;
  - Approved security lighting may remain on after 11:00 PM;
  - Recreational activities that continue past 11:00 PM may remain lit ½ hour past the conclusion of the event. Ballfield lights should be turned off within 15 minutes of the last game;
  - On premise advertising signs may remain on after 11:00 PM if only if open for business.
- The Plan Commission may require that lighting be controlled by a timing device or photo-electric control if concerns regarding compliance arise.

D. *Installation*

All outdoor lighting must meet applicable Village Codes and should be permanently installed. In addition, the following criteria should be met:

- Electrical feeds to lighting standards should run underground, not overhead;

- Lighting standards set in the perimeter of parking areas should be placed a minimum of five feet outside paved lot areas or five feet behind tire-stops;

- Lighting standards in the middle of parking areas should be mounted on concrete pedestals at least 30" high, or protected by other acceptable means;

E. Maintenance

All exterior lighting shall be properly maintained and remain in good working order so as to meet the objectives of these guidelines.

GUIDELINES FOR SPECIFIC LIGHTING APPLICATIONS

To promote design innovation and creativity, the Plan Commission may consider designs/lighting schemes not outlined in these guidelines, provided they do not compromise the intent presented herein (higher poles, historic fixtures, etc.).

A. Open Parking Lot Lighting

Performance Guidelines: Parking lots should be designed to provide the minimum lighting necessary to facilitate the safe movement of pedestrians and vehicles within parking areas and prevent vandalism, auto theft and personal crime. Lots should be uniformly lit to prevent "dark spots," shadows or excessive contrast.

Illumination Levels: Parking lots should be lit to meet current standards issued by the Illuminating Engineering Society of North America (IESNA). The following general guidelines should be used:

	Highest Activity Levels	Medium Activity Levels	Low Activity Levels
Typical activities	fast food restaurants gas stations convenience stores cultural/institutional facilities	community shopping centers hospital parking areas educational facilities banks, other services	local merchants industrial employee parking multi-family parking lots
Average maintained illumination levels	2.0 - 3.0 footcandles	1.0 - 2.0 footcandles	0.5 - 1.0 footcandles
Uniformity ratios	3:1 average/minimum (.66 f.c. minimum) 12:1 maximum/minimum (8.0 f.c. maximum)	3:1 average/minimum (.33 f.c. minimum) 12:1 maximum/minimum (4.0 f.c. maximum)	4:1 average/minimum (.125 f.c. minimum) 15:1 maximum/minimum (2.5 f.c. maximum)
Maximum light at property boundaries	0.5 footcandles	0.5 footcandles	0.5 footcandles

Luminaire Design: Pole fixtures may not exceed the height of the principal structure, or 25', whichever is less. Generally, "cobra head" fixtures are undesirable, although some designs with fully shielded bulbs may be acceptable. All fixtures should be of a full cut-off design, including wall mounted units.

B. Security Lighting

Performance Guidelines: Security lighting shall be designed to facilitate detection of intruders and risks to personal safety. Security lighting designed to create a sense of occupancy in buildings shall use the minimum light necessary to accomplish the task.

- To the extent that a designated area is illuminated by lighting for other purposes, independent security lighting shall be discouraged.
- Where security lighting is intended to light a perimeter such as a fence line, motion sensors should be used.

Illumination Levels: Security lighting should meet current standards issued by the Illuminating Engineering Society of North America (IESNA). The following general guidelines should be used:

Application	Light Level Needed
Active building entrances	5.0 footcandles max.
Infrequently used entrances	0.5 - 1.0 footcandles
Building grounds	0.5 - 1.0 footcandles
Industrial storage yards	0.5 - 1.0 footcandles
ATM	10 footcandles within 5' of ATM, then 2.0 f.c. for 50' surrounding machine, including parking area.

Luminaire Design: Full cut-off fixtures shall be used. Fixtures shall be shielded and aimed so that light is directed only to designated areas. Bare bulb flood lights shall not be used for security lighting.

C. *Building/Landscape Accent Lighting*

Performance Guidelines: Accent lighting can be used to highlight significant architectural or landscape features where approved by the Plan Commission. "Washing" a building in light should be avoided. All fixtures should be carefully aimed to direct light only where needed.

Illumination Levels: The maximum illumination on any vertical wall surface or angular roof surface shall not exceed 2.5 footcandles. Light levels shall be limited to 0.1 footcandle at the roofline and exterior corners, so as to prevent light trespass and "skyglow."

Luminaire Design: Full cut-off fixtures shall be used. Where practical, lights should be mounted to shine downward, rather than up onto buildings and landscape features. Where fixtures are used to "uplight" trees and other landscape features, they should be fully shielded.

D. *Sign Lighting*

Performance Guidelines: External lighting of signs is preferred, however, internally lit signs are allowed. Internally lit signs should not become major sources of light in their own right. To this end, light letters and logos on dark backgrounds is preferred.

Illumination Levels: The average illumination on the surface of a sign shall not exceed 3.0 footcandles.

Luminaire Design: Fully shielded lights should be used and should shine downward on the sign where possible. The light source of any sign shall not be directly visible from the street or any adjacent properties (no bare bulbs). Flourescent tubes used for internal lighting should be at least 4 inches from the translucent surface material and should be spaced to provide a maximum uniformity ratio of 2:1.

DEFINITIONS/EXAMPLES

Definitions

candela: a unit of luminous intensity.

cutoff: the point at which all light rays emitted from a light source are completely eliminated at a specific angle above the ground.

cutoff fixture: a lighting assembly with shields, reflectors or refractor panels that direct and cut off light at angles less than 90 degrees.

efficacy: the ability of a lighting system to produce a desired result.

fixture: the assembly that holds the lamp in a lighting system. It includes the housing, reflectors, ballast and attachment parts.

footcandle: a unit of illumination produced on a surface, all points of which are one foot from a uniform point source of one candela.

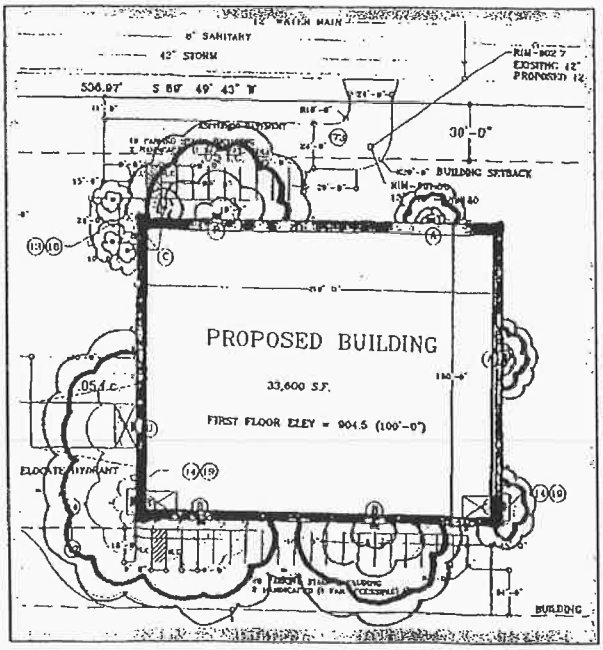
glare: light emitting from a luminaire at an intensity great enough to reduce a viewers' ability to see, and in extreme cases, causing momentary blindness.

light trespass: light falling where it is not desired, e.g. beyond property boundaries, toward the sky, etc.; light spillover.

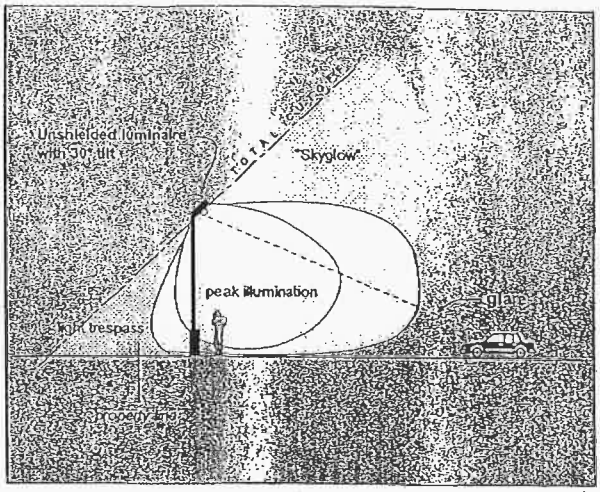
luminaire: the complete lighting unit, including lamp and fixture.

skyglow: a phenomenon caused by artificial light shining into the atmosphere, resulting in a brightening of the night sky.

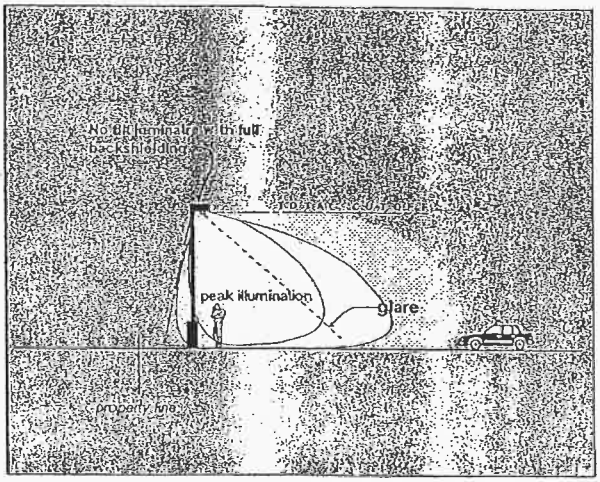
Lighting Plan Example



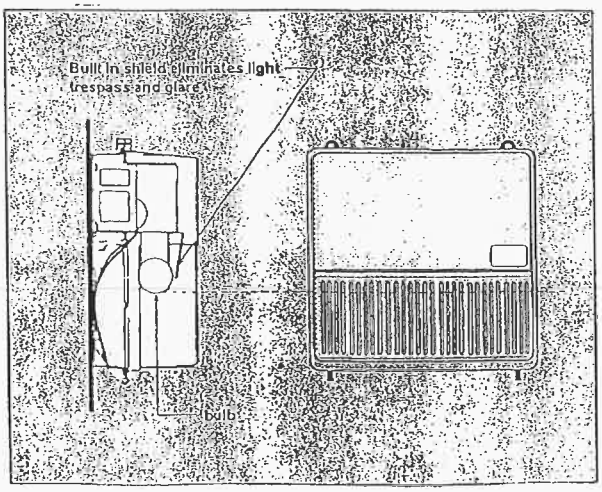
Unshielded Luminaire Causing Glare



Full Cutoff Luminaire



Wall Mounted Full Cutoff Luminaire



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ORDINANCE NO. 3-98

Creating Section 17.46 (14) of the Municipal Code of Ordinances, Village of Germantown, Wisconsin, Methodology for Measuring Sign Area

THE VILLAGE BOARD OF THE VILLAGE OF GERMANTOWN, WASHINGTON COUNTY, WISCONSIN, ORDAINS AS FOLLOWS:

SECTION 1. The following Section of the Village Code of Ordinances of the Village of Germantown is hereby created to provide as follows:

SECTION 17.46 SIGNS.

(14) METHODOLOGY FOR MEASURING SIGN AREA. The area of a sign shall be determined as follows:

(a) The height multiplied by the width of any sign cabinet, fixture or placard used to convey any words, letters, figures, numerals, phrases, sentences, emblems or logos to the public.

(b) Where more than one cabinet, fixture or placard is used, the areas shall be measured by drawing a rectangle enclosing the entire perimeter of all cabinets and/or fixtures.

(c) Where no cabinet or fixture is used (e.g., individual three-dimensional letters or symbols attached directly to a wall), the area shall be measured by drawing a single rectangular box around the extreme limits of the advertising message.

(d) Decoration, framing and other non-structural embellishments shall not be included in the sign area, provided that no advertising copy or graphics are contained on such embellishments. The total area of the sign structure, including any embellishments, may not exceed twice the area of the sign or 160 square feet, whichever is greater.

(e) The permit fee shall be based on the area of the entire sign structure.

SECTION 2. This ordinance shall take effect and be in full force from and after its adoption and publication.

Introduced by: Trustee James Brzezinski

Adopted: February 2, 1998

Vote: Ayes: Brzezinski, Ewert, Johnson, Kempinski, Lalk, Stauffacher, Stone, Vento, Hargan

Nays: None

Ayes: 9 Nays: 0

Charles J. Hargan, Village President

APPROVED AS TO LEGALITY:

John Fuchs, Attorney

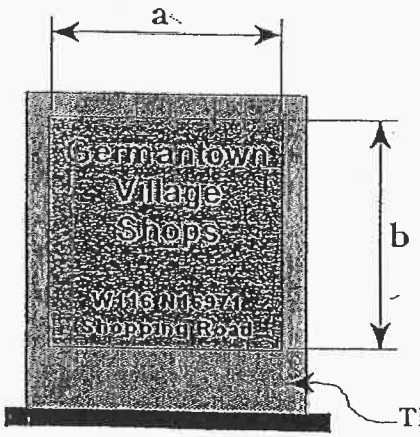
Published: DeSciscio
February 12, 1998

ATTEST:

Jane A. Wilms, CMC/AAE; Village Clerk

DISCUSSION

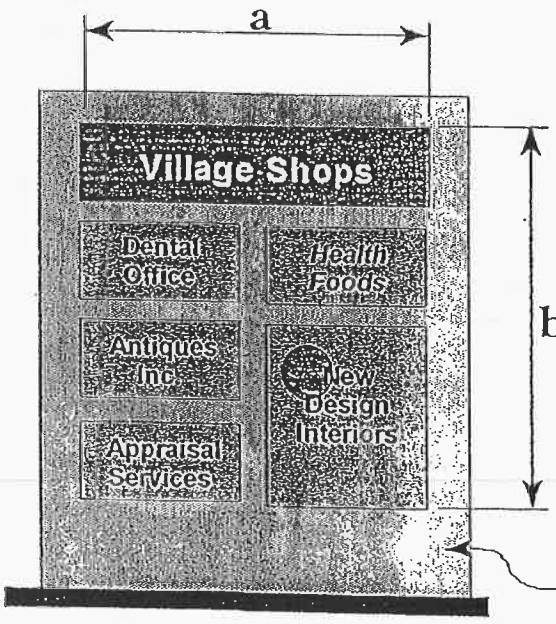
The way a sign would be measured with this methodology is as follows:



Sign Area = (a) x (b)

The total area of the sign structure may not exceed 2 times the sign area.

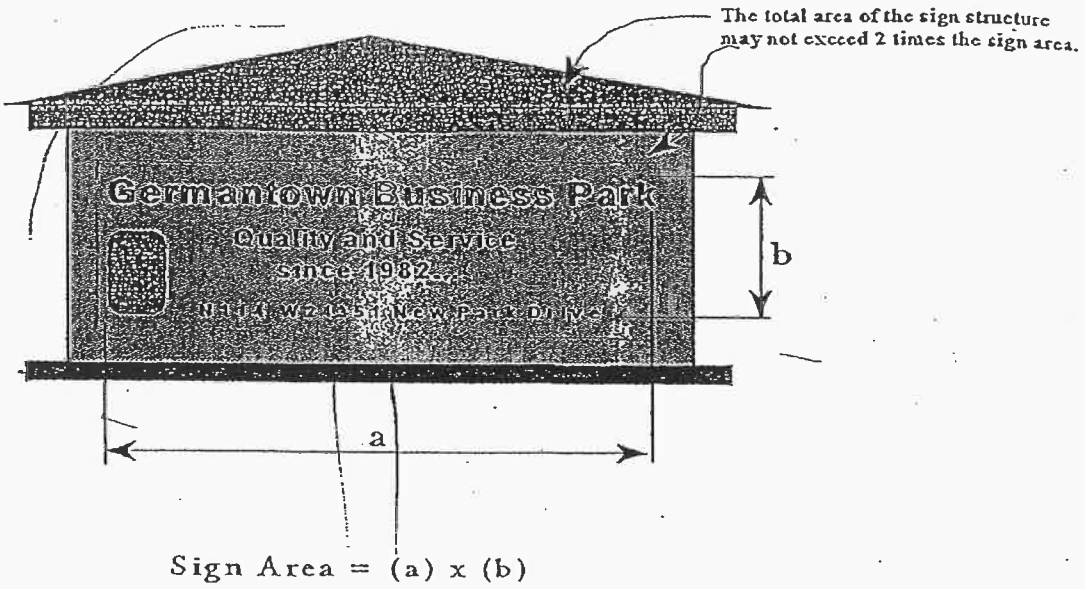
In the event that a sign contains more than one cabinet or panel, the area would be measured by drawing a box around the perimeter of all cabinets and fixtures.



Sign Area = (a) x (b)

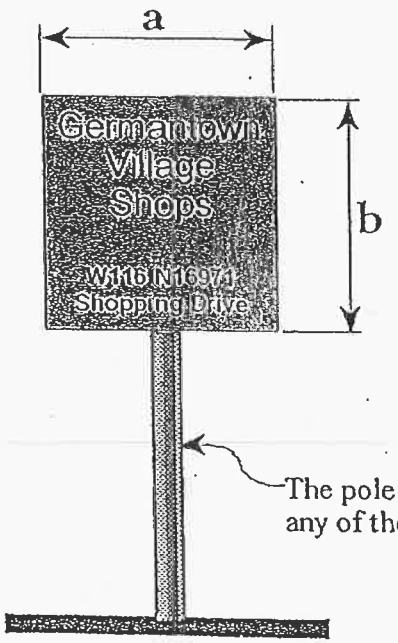
The total area of the sign structure may not exceed 2 times the sign area.

If the sign does not have an obvious or defined cabinet that can be easily measured, then the sign area is measured by drawing a box around the extreme limits of the words or logo of the sign:



Sign Area = (a) x (b)

Any structural elements used to elevate a sign are not included in the calculations. The total height is dictated by Code.



Sign Area = (a) x (b)

SITE PLAN REVIEW

1/8/24 Plan Commission Meeting

Bethlehem Evangelical Lutheran Church

Village Staff Report & Recommendation **Germantown, Wisconsin**

Summary

Excel Engineering, and Mike Christensen, agents for Bethlehem Evangelical Lutheran Church, property owner, are requesting approval of site development & building plans for a 23,471 sqft building addition to and parking lot expansion for the existing church and school facility located at N108 W14290 Bel Aire Lane.

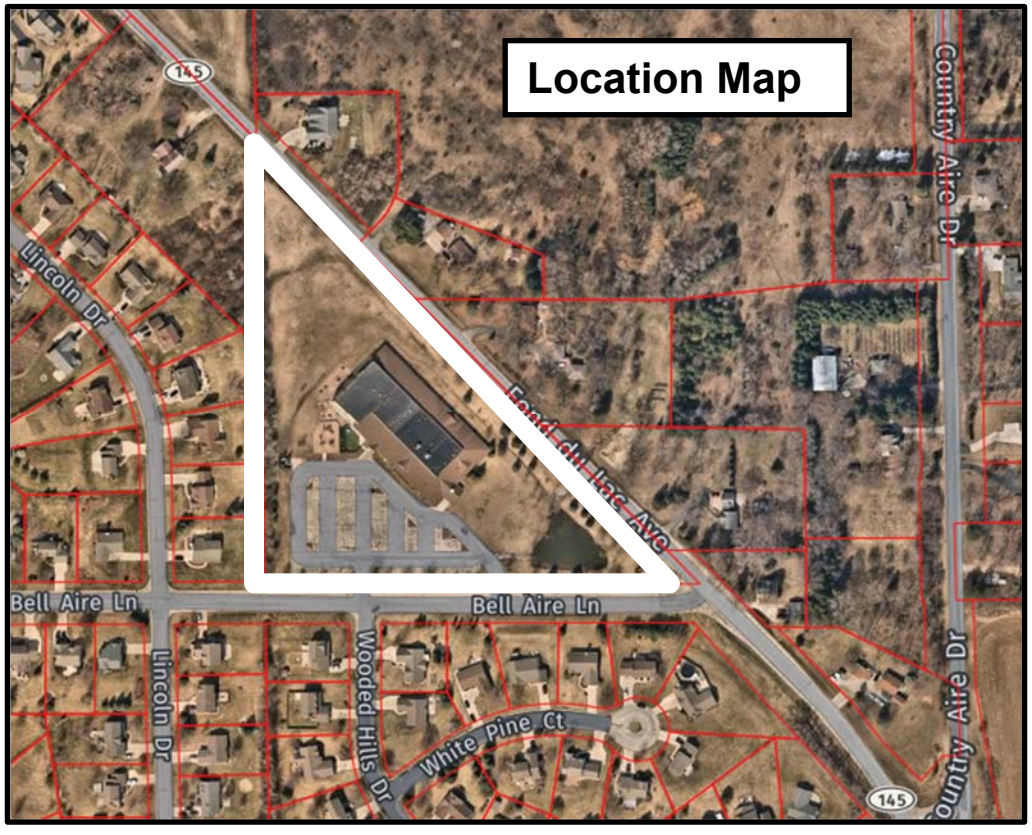
Property Location: N108 W14290 Bel Aire Lane

Agent/
Property Owner:

Tom Schermerhorn	Mike Christensen
Excel Engineering	Bethlehem Lutheran Church
100 Camelot Drive	N84 W15252 Menomonee Ave
Fond du Lac, WI	Menomonee Falls, WI

Current Zoning: I: Institutional

Adjacent Land Uses		Zoning
North	Residential	Rs-3/Rs-4
South	Residential	Rs-5
East	Residential	Rs-3
West	Residential	Rs-5



Proposal

Excel Engineering, and Mike Christensen, agents for Bethlehem Evangelical Lutheran Church, property owner, are requesting approval of site development & building plans for a 23,471 sqft building addition to and parking lot expansion for the existing church and school facility located at N108 W14290 Bel Aire Lane.

As indicated in the November 13 project narrative, the proposed project includes an addition to the existing church and school building along with additional parking and site enhancements to the 7.09-acre site with the following features:

- 23,471 sqft building addition
  - New sanctuary & worship area
  - Administrative offices
  - Fellowship, meeting and bathrooms
  - Outdoor patio (additional 1,289 sqft)
  - New drive-under entrance canopy (additional 1,334 sqft)
- Exterior materials include:
  - Natural full veneer stone (color TBD)
  - Engineered LP SmartSide 6” lap siding
  - EIFS outsulation system panel (color TBD)
  - Cast stone sills
  - EPDM rubber roofing
  - Aluminum-framed clear anodized storefront windows & door systems
- Driveway relocation on Bel Aire Lane (easternmost driveway moved to west)
- Expanded parking areas & drive isles for on-site maneuvering & vehicle storage (during pick-up/drop-off periods of school)
- New paved curb & gutter parking areas w/ net increase of 44 parking stalls (6 ADA compliant)
- Expanded playground area northwest side of building
- Expanded on-site storm basin in southeast corner of site

Parking, Access & Traffic Circulation

Access will continue to be provided via two (2) driveways on Bel Aire Lane serving the existing and expanded parking areas. A net increase of forty-four (44) additional parking stalls will be provided (for a total of 167 stalls) by reconfiguring a portion of the existing parking lot near the new building entrance with additional stalls installed in two separate expanded parking areas along the west side of the property (167 parking stalls are recommended under the Village’s parking guidelines).

Storm Water Management.

Total area of disturbance for the project is 3.47 acres with an increase in impervious area from 106,861 sqft (2.45 acres) to a total of 143,466 sqft (3.3 acres) of impervious surfaces are proposed as part of development or 46.4% of the total 7.09-acre site leaving 53.6% in open/green space. Stormwater facilities include on-site storm sewer, swales, and ditching to convey run-off from the building expansion and new parking areas across the site to an expanded storm basin located in the southeast corner of the site and eventually to storm sewer in Fond du Lac Avenue.

Landscaping & Buffering.
A significant number of existing and mature trees and plantings will be removed to make way for the additional parking lot along the west property line and for expanded storm water swales across the north and east sides of the site and for the expanded storm basin in the southeast corner of the site. New landscaping is proposed around the perimeter of the new parking area along the west property line, along Fond du Lac Ave, and foundation plantings along the north, east and south sides of the building. Plantings include a variety of deciduous and evergreen trees, deciduous and evergreen shrubs (see Sheet C1.4).

Lighting. Exterior lighting of the site and building includes the following new lighting:

- (4) 70W LED 4000K "neutral white color, cut-off style pole-mounted fixtures w/ houseside shields mounted at 23' on poles around the perimeter of the new parking lot on the west side (3) and at the relocated driveway entrance (1).

Signage. The site plan indicates that an existing non-conforming wood post & panel sign along Fond du Lac Ave will be removed. No new signage is proposed.

Staff Comments

Community Development: Planning & Zoning
As shown on the site plans, the building location has been revised to meet the 35' building setback along Bel Aire Lane since the consultation discussion in June 2023. Although slightly revised since the June discussion, the architecture and materials are generally the same. As previously discussed, the proposed 40' steeple height can exceed the maximum 35' height allowance for the I: Institutional District through Section 17.50(1)(b) that allows the Plan Commission to exempt "architectural projections such as spires, steeples, belfries, parapet walls, cupolas…" from the maximum 35' building height (that is met by all other building roof components).

Section 17.45(1)(b) of the Zoning Code requires parking lots for churches to be setback a minimum of 20 feet from a property line if an adjoining property is in a residential zoning district. In this case, the land to the west of the church property is zoned Rs-5: Single-Family Residential. Sheet C1.1 of the plan set indicates that the southwest corner of the new parking area along the west property line is setback 19.41 feet (and tapers to a setback >20 feet somewhere along the edge as it moves northerly). The plan will need to be revised to meet the 20' setback.

Staff is concerned that the landscape plan is insufficient as proposed. First, Sheet C1.0 (Demolition Plan) indicates that the limit of disturbance extends to the west property line and that all of the existing trees along the west property line in the vicinity of the new parking lot will be removed. The existing tree line contains a significant amount of mature deciduous and evergreen trees along both sides of the west property line and the limit of disturbance runs right through the middle of the tree line. Section 17.45(1)(b) indicates that berming with landscaping may be required by the Plan Commission in situations where commercial parking lots abut a residential district. The existing tree line is quite substantial with mature (>15' height and >10'-15' spread) deciduous and evergreen trees placed in such a way that there is an existing visual screen between the

residential lots and the proposed parking lot. The new parking lot will also include exterior lighting into the area (three pole-mounted fixtures at a mounted height of 23') where currently there is no lighting on the church property. The proposed landscape plan is to install only four (4) 6' high evergreen trees along the west property line where the existing tree line will be removed. This is inadequate even though some of the existing trees appear to be located on the residential lots west of the property line.

Second, the demolition plan also indicates that a significant number (over 40) existing and mature deciduous and evergreen trees will be removed along Fond du Lac Ave and Bel Aire Lane to make way for expanded storm water swales and the expanded storm basin (see also Village Forester comments below). Many of these trees currently meet the street tree requirement and will have to be compensated for with new street trees (at a minimum). However, the landscape plan shows only 12 new trees being installed along Fond du Lac Ave and Bel Aire Lane, including 10 Black Hills Spruce evergreen trees (that do not meet the Village's street tree requirements). Staff recommends that at a minimum additional street tree meeting the 1 tree per 50 feet of road frontage requirement be installed along the entire frontage for Fond du Lac Ave and along Bel Aire Lane east of the relocated driveway, in addition to other deciduous and evergreen trees in an amount to that replaces the trees being removed at a 1:1 ratio.

Given the above, Staff recommends that additional street trees (deciduous vs. evergreen) and additional plantings be installed along the west property line around the new parking lot perimeter (or install a 6' high wood privacy fence along the property line for a distance beyond the length of the new parking lot and also along Fond du Lac Ave. A revised landscape plan (including a revised plant list with installation sizes meeting the minimum requirements) shall be prepared and submitted for review and approval by Village Staff prior to issuance of a building permit.

Finally, the existing non-conforming wood post & panel sign along Fond du Lac Ave that is being removed cannot be reinstalled in its current form and will have to revised to be code compliant prior to re-installation (if reinstallation is proposed). Under the current sign regulations, one additional monument/ground sign may be installed along Fond du Lac Ave which will have to be installed on a new monument-style masonry base (vs. the existing wood support posts). A separate sign permit application is required for any exterior signage.

<u>Village</u> <u>Forester</u>
With respect to the landscaping plan, the Village Forester has the following comments and recommendations:

1. More detail is required regarding the proposed tree removals across the site, e.g. identify the name/species, size, location, and conditions of proposed removals. It appears there are a minimum of 47 proposed tree removals (not counting what isn't detailed along the west property line). However, the landscape plan identifies only 23 replacement trees to be installed. Without knowing more detail about the trees being removed, this is not an equitable replacement given the number of trees being removed.

2. The proposed tree removals along the west property line are also concerning if all the trees in the shaded area on Sheet C1.0 along the west property line are being removed (vs. just cleaning this area up by removing the low-value dense undergrowth).
3. With respect to the tree planting detail specification, please revise to require the top of the root ball to be planted at grade with root flare exposed and not buried in soil/moss/mulch.
4. The color renderings show a densely planted landscape surrounding the expanded storm water pond southeast of the new church addition. This does not align with the proposed landscape plan. Please explain and revise the landscape plan accordingly.

Community Development: Inspection Services
State agency (DSPS) approved plans and a $20,000 occupancy bond are required by Inspection Services at the time of building permit application. The Village of Germantown is an authorized delegated agent of DSPS to provide all commercial plan review and inspection services through SAFEBuilt of WI and the Village of Germantown.

Fire & Police Departments
No comment. Previous concerns have been incorporated into the latest plans.

Public Works/ Village Engineer/Village Surveyor
The Village Engineer, Public Works Department and Utility staff have identified several technical issues and plan revisions that need to be resolved or otherwise addressed by the Developer prior to commencing construction activities and issuance of building permits. Nonetheless, Staff is recommending conditional approval of the site development and building plans subject to all the outstanding items and issues identified in the following review memos being resolved and reflected in additional information and/or revised plans submitted to Staff for further review, comment and approval prior to commencing any site construction or issuance of building permits (excluding early start site preparation and footing and foundation installation):

- January 2, 2024, memo from Kevin Driscoll, Village Engineer

VILLAGE STAFF RECOMMENDATIONS

APPROVE the site development & building plans for a 23,471 sqft building addition to and parking lot expansion for the existing church and school facility located at N108 W14290 Bel Aire Lane subject to the following conditions:

1. This approval is for the various plan sheets that comprise the site plan set as noted below and is subject to compliance with all the conditions and requirements set forth herein and subsequently adopted and/or revised by the Plan Commission. Approval is granted for the following unless superseded by subsequent plan sheets approved by Village Staff pursuant to revisions

required herein and/or by the Plan Commission:

a. Architectural plans dated December 8, 2023;
b. Civil Engineering plans dated December 8, 2023;
c. Landscaping plans dated December 8, 2023;
d. Lighting plans (photometric plan) dated December 8, 2023;

If revised plan sheets are necessary, each revised sheet shall contain the date of said revision clearly stamped in the lower right corner.

2. All landscaping, screening, grading, and paving improvements shown on the approved site plans shall be installed as proposed prior to issuance of an occupancy permit unless a cash bond or letter of credit in an amount equal to 120 percent of the estimated installation and material costs reviewed and approved by the Village is submitted to the Village as necessary to ensure that installation of the proposed features and improvements will be completed within one (1) year after issuance of the occupancy permit for the shell building.

3. All exterior doors (except primary entrance) shall be clearly marked with reflective 5” or larger letters/numbers to aid emergency personnel access as required by the Police Department.

4. All outstanding items and issues identified by Village Staff in the following review memos shall be resolved and reflected in additional information and/or revised plans submitted to Staff for further review, comment, and approval prior to commencing construction or issuance of building permits (excluding “early start” site clearing and footing/foundation work approved by the Village and/or WI DSPS):
   a. January 2, 2024 memo from Kevin Driscoll, PE, Village Engineer

5. State agency (DSPS) approved plans and a $20,000 occupancy bond are required by Inspection Services at the time of building permit application. The Village of Germantown is an authorized delegated agent of DSPS to provide all commercial plan review and inspection services through SAFEBuilt of WI and the Village of Germantown.

6. The proposed parking lot along the west property line shall be moved to meet the minimum 20’ setback requirement. Sheet C1.1 of the plan set indicates that the southwest corner of the new parking area along the west property line is setback 19.41 feet (and tapers to a setback >20 feet somewhere along the edge as it moves northerly).

7. Additional deciduous and evergreen trees and shrubs shall be installed along the west property line around the new parking lot perimeter in an amount and type necessary to provide screening from the residential lots to the west. As an alternative, install a minimum 6’ high wood privacy fence along the property line for a 15’ distance north and south beyond the ends of the new parking lot.

8. Additional street trees meeting the Village's street tree requirements and additional plantings shall be installed along the Fond du Lac Ave frontage and Bel Aire Lane (east of the relocated driveway). At a minimum, additional street trees in an amount equal to 1 tree per 50 feet of road frontage shall be installed along the frontage for Fond du Lac Ave and along Bel Aire Lane east of the relocated driveway in addition to other deciduous and evergreen trees in an amount that will replace the trees being removed at a 1:1 ratio.

9. A revised landscape plan including a revised plant list with installation sizes meeting minimum requirements and addressing all Village Staff comments and recommendations presented in the Staff Report & Recommendation (dated 1/8/24) shall be prepared and submitted for review and approval by Village Staff prior to issuance of a building permit. Said plan to include the requirements of Conditions #8 and #9 above.

10. The existing non-conforming wood post & panel sign along Fond du Lac Ave that is being removed shall not be reinstalled in its current form and will have to revised to be code compliant if re-installed along Fond du Lac Ave. Under the current sign regulations, one additional monument/ground sign may be installed along Fond du Lac Ave which will have to be installed on a new monument-style masonry base (vs. the existing wood support posts). A separate sign permit application is required for any exterior signage.

11. Right-of-way permits are required for any/all construction conducted in the public right-of-way for Bel Aire Lane. Contact the Public Works Department/Highway Superintendent for permit applications and submittal requirements.

Engineering Department Memorandum

To: **Jeff Retzlaff**

From: **Kevin Driscoll, P.E.**

Date: **January 2, 2023**

Re: **Planning Commission Item Review – Bethlehem Church**

In response to Planning Commission Projects for Engineering Staff review were received week ending 11/17, and revised plans dated 12/08/2023, responses are provided below for Bethlehem Lutheran Church, N1089 W14290 Bel Aire Lane – Site Plan Review for a 23,471 square foot addition.

Items Reviewed:

1. Civil Plan Set Dated: 11-13-2023
2. Civil Plan Set Dated: 12-08-2023

General Comments:

1. Please respond to each item below. **A written response addressing each item shall be included in your submittal**.
2. The submitted plans have been reviewed for general conformance with State and Village design guidelines. Additional comments could arise as a result of the plan completion and modifications. The items listed below will need to be fully resolved before the Engineering Dept. can recommend a formal approval of the plans and permit for construction.
3. If this project disturbs over one area it will require a WRAPP/NOI from the DNR. Please submit a copy of the approved permit prior to final approval.
4. As-builts prepared to Village standards shall be prepared and provided to the Village post-construction (for all applicable items).
5. A professional engineer's original seal is to be affixed, signed and dated on the final set of construction plans.
6. Utility permits and permits for work within the ROW are required. Contact the Village engineering department to obtain permits.
7. As a guide to the review response: Items in *italics* are resolved or acknowledged, items in regular font are to be addressed yet, items in **Bold** are additional feedback to remaining original comment.

Water Utility Comments

1. Question and clarification for the Bethlehem Lutheran Site plan. It shows on the Civil Utility plan sheet C1.3 that per 2000 design by Anderson Ashton, Inc. below the water service location has a branch hydrant connected to it. Does the Church have historical information on this private hydrant? The utility tracks private hydrants and does not have record of this one until now.

C0.1 Civil Site Plan

1. Village of Germantown Erosion Control Permit required. File Village Erosion Control Permit.

C1.1 Civil Site Plan

1. Plan notes an ADA ramp near the existing building entrance. It's not clear how the detail provided for the ADA ramp will be installed in the location noted. Show the ramp and truncated domes on the site plan.
2. Show the ADA route from the ADA parking to the building.

Erosion Control

1. Sheet C1.2 - Silt Fence identified for installation along Fond du Lac Ave. Install inlet protection for each of the curb inlets and install silt fence along the limits of disturbance adjacent to Bel Aire Lane.

Sanitary

1. Sheet C1.3 Sanitary Building Sewer Lateral is greater than 100 feet from building to sanitary manhole. Install clean-out for proposed external connection to existing sanitary building sewer lateral, as required per SPS 382.35.
2. Provide a revised NOI.
3. Provide a detailed plumbing and utility plan for kitchen and DFU counts for bathrooms.

Stormwater Management Comments

1. Add existing topo for the adjacent areas to the drainage exhibits, specifically west of the site and south of the site. Include any offsite areas that drain to the basin in the calcs.
2. Model Type D soils as clayey in SLAMM per WDNR guidance.
3. Sheet C1.3 – contours show storm pond outlet control structure at 897 contour. With an orifice at 890 and 893 appear to be buried. Revise detail. Reflect outlet invert elevation 889.85 to match sheet C2.1
4. Sheet C2.1 - Outlet Structure Rim 896.50, 1ft freeboard; invert elevation 889.85. Show existing elevation and existing ditchline elevation to match into existing culvert 889.47.

Village of Germantown ...Willkommen

Fee must accompany application

- ☐ $700 Minor Addition
- ☐ $1,240 Construction <10,000 SF
- ☒ $2,095 Construction 10,000 SF to 50,000
- ☐ $3,460 Industrial Construction >50,000 SF
- ☐ $3,460 Commercial Construction >50,000
- ☐ $200 Plan Commission Consultation
- ☐ $125 Fire Department Plan Review

PAID_____ DATE_____

SITE PLAN REVIEW APPLICATION

Pursuant to Section 17.43 of the Municipal Code

Please read and complete this application carefully. **All applications must be signed and dated.**

1 APPLICANT OR AGENT

Excel Engineering, Inc.
Tom Schermerhorn - Principal
100 Camelot Dr
Fond du Lac, WI 54935

Phone (920) 926-9800
E-Mail tom.schermerhorn@excelengineer.com

PROPERTY OWNER

Bethlehem Lutheran Church
c/o Paul Koester & Mike Christensen
N108 W14290 Bel Aire Lane
Germantown, WI 53022

Phone (262) 251-3555
E-Mail churchoffice@bethlehem-wels.org

2 PROPERTY ADDRESS

Bethlehem Lutheran Church
N108 W14290 Bel Aire Lane
Germantown, WI 53022

3 NEIGHBORING USES – Specify name and type of use, e.g. Enviro Tech – Industrial, Smith – Residential, etc.

North	South	East	West
Multiple 1-family res. Gohr, Kalsow, Schuster, Nenning	Multiple 1-family res. Bruce, Ratzmann, Rabuck, Robillard, Schaefer, Plichta	Multiple 1-family res. Gohr, Kalsow, Schuster, Nenning	Multiple 1-family res. Larson, Maas, Harrer, Egelseer, Klaty

4 READ AND INITIAL THE FOLLOWING:

MC I am aware of the Village of Germantown ordinance requiring fire sprinklers in most new construction.

MC I understand that all new development is subject to Impact and/or Connection Fees that must be paid before building permits will be issued.

MC I understand that an incomplete application will be withdrawn from the Plan Commission agenda and that all resubmissions to the Plan Commission are subject to a new application fee.

5 SIGNATURES – ALL APPLICATION MUST BE SIGNED BY OWNER!

Tom Schermerhorn 11/13/23
Applicant Date

Mike Christensen 11-13-2023
Owner Date

SITE PLAN REVIEW CHECKLIST

Pursuant to Section 17.43 of the Municipal Code

This checklist provides a summary of requirements found in the Municipal Code. It is intended purely as a guide for developers and should not substitute for a full review of the Code and applicable regulations. (Revised 1/02)

GENERAL INFORMATION

- [X] Provide Completed Checklist with submittal
- [X] Names and addresses of owner/developer/designer
- [X] Graphic scale, north arrow
- [X] Location sketch
- [X] Size of site (gross and net acreage)
- [X] Existing zoning
- [X] Adjacent zoning and uses
- N/A Number of residents (subdivisions)
- N/A Number of employees

EXISTING SITE INFORMATION

- [X] Dimensions of site and lot lines (pipes found, pipes set, monuments)
- [X] Existing grades (2' contours minimum)
- [X] Adjacent property grades (within 10' minimum of property lines)
- [X] Adjacent structures (within 20' minimum of property lines)
- [X] Drainage systems and structures
- [X] Natural features (woods, streams, lakes, ponds, outcroppings)
- N/A Wetland boundaries (provide date of staking)
- N/A Floodplain elevation and boundaries
- N/A Environmental concerns (underground tanks, etc)
- [X] Roads, curbs, parking lots, pavement areas
- [X] Structures (location, size)
- [X] Rights-of-Way (existing/ultimate)
- [X] Easements (drainage, utility)
- [X] Existing utilities (sanitary, water, electric, gas, telephone)
- [X] Benchmark locations and elevations
- [X] Location of fences, wells, borings, etc.

ARCHITECTURAL PLANS

- [X] Existing building location
- [X] Existing building elevations/materials
- [X] Proposed use (use list from Section 17.45)
- [X] Statement of design intent (narrative)
- [X] Proposed floor plans (dimension)
- [X] Square footage (total and individual rooms/stores)
- [X] Proposed elevations (dimension)
- [X] Proposed building height
- [X] Proposed materials and colors (material sample board required for new construction)
- [X] Proposed signage (elevations, color, square footage, height, construction material, lighting)
- [X] Details of any special features

PROPOSED SITE PLAN

- [X] Grading and spot elevations
- [X] Erosion control measures (silt fencing, hay bales, rip-rap, tracking mat, stockpile locations)
- [X] Stormwater management
  - -- stormwater management design report
  - -- general drainage pattern
  - -- swales w/ arrows for direction of flow
  - -- pond design with outfalls
  - -- culverts (location/size)
- [X] Utilities (size, invert elevations, length, slope, etc.)
  - -- sanitary
  - -- water
  - -- stormsewer
- [X] Building location (dimension)
- [X] Building elevation (finished grade)
- [X] Location of proposed signage
- [X] Details of outside storage (including trash receptacles)
- [X] Setbacks (clearly marked and dimensioned)
- [X] Vehicular entrances (dimension to centerline of nearest intersection)
- [X] Streets (dimension and direction for one-ways)
- [X] Curve radii
- [X] Sidewalks (dimension)
- [X] Parking areas (show striping/spot elevations)
- [X] Parking setback from property line
- [X] Loading areas (dimension)
- [X] Lot coverage
  - -- Square footage total
  - -- Impervious surfaces total (%)
  - -- Green space total (%)
  - -- Percent permitted (over/under %)
- [X] Municipal utility connections
  - -- Sanitary sewer (pipe size/elevations)
  - -- Water (size, valve location, elevations)
  - -- Location of hydrants
- N/A Easement for public water mains

LIGHTING PLAN

- [X] Major improvements for context
- [X] Location/nature of existing fixtures
- [X] Location of proposed fixtures
- [X] Photometric report (to scale on plan)
- [X] Manufacturers cut-sheets of all fixtures
- [X] Lighting schedule
  - key to plan
  - number/type of fixtures
  - output (wattage)
- [X] Installation details as appropriate

LANDSCAPING PLAN

- [X] Major improvements for context (building, drives, walks)
- [X] Proposed outdoor amenities (benches, paths, etc.)
- [X] Existing vegetation
  - Species
  - Size
  - Approximate canopy in plan
- [X] Vegetation to be destroyed
  - List and show location
- [X] Proposed method of saving existing vegetation during construction

- [X] Proposed landscape features (berms, fountains)
- [X] Existing/proposed lighting
- [X] Irrigation/watering systems (locate outlets)
- [X] Plant lists or schedules
  - Keyed to plan
  - Number of each species
  - Size when planted (caliper)
- [X] Installation details/staking

MODEL SUBMITTAL INCLUDES THE FOLLOWING PLANS:

1. Cover / Title Page
2. Existing Conditions Survey
3. General Site Plan
4. Grading, Paving & Erosion Control Plan
5. Utility Plan
6. Site Details (curbing, catch basins, detention ponds, pavement, erosion control and sign details)
7. Landscape Plan
8. Landscape details (planting schedule, berming cross-sections, method of installation)
9. Lighting Plan
10. Floor Plan
11. Exterior Building Elevations
12. Building Material Sample Board

In addition to the items on this list, Village Staff and/or the Plan Commission may require additional drawings and data to be submitted for approval.

If any public improvements or work is to be done in the Public Right-of-Way, the Village will require that a Developer's Agreement be submitted and approved by the Village Board.

December 8, 2023

Lori Johnson
N112 W17001 Mequon Road
Germantown, WI 53022

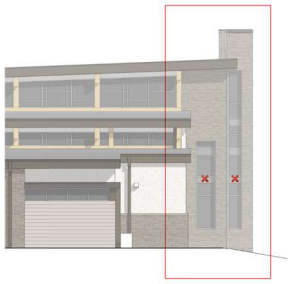
Dear Ms. Johnson,

Throughout the design process, a few changes have been incorporated into the Bethlehem Lutheran project proposal.

The chancel depth was reduced to create more area for the pond and a maintenance walk space next to the building. The vertical windows on either side of the chancel were removed to increase security of the worship space and avoid added glare from the sun. In the lower clerestory, the bay of windows furthest to the east was removed due to the walls of the altar guild and sacristy concealing this window bay from the interior. In the evening, this window bay would have been the only bay unlit due to lack of exposure to the interior lighting of the worship space. Additionally, on the civil plans a sidewalk connection to the door southeast of the main entrance was added to meet building code.

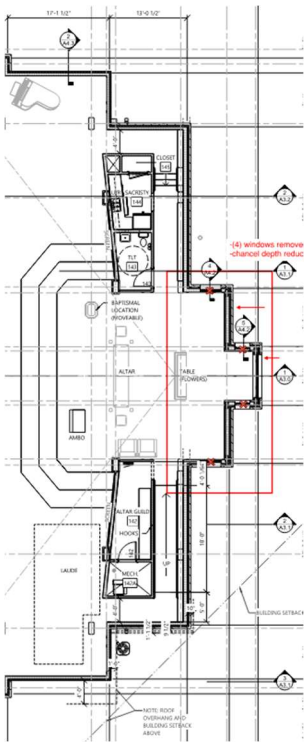
Sincerely,

Tom Schermerhorn

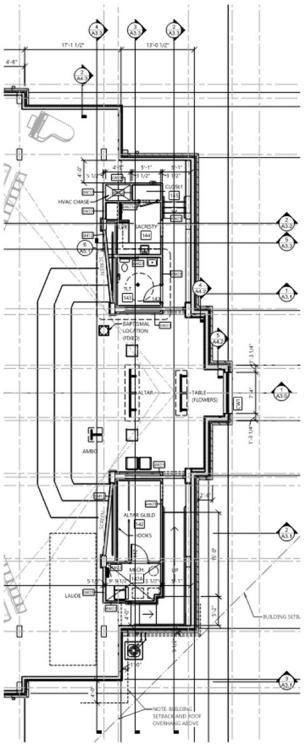


Original Design Proposal

Updated Design Proposal



Original Design Proposal



Updated Design Proposal

November 13, 2023

Project Narrative

Project: Bethlehem Evangelical Lutheran Church & School – Church Addition
N108 W14290 Bel Aire Lane
Germantown, WI

Bethlehem Evangelical Lutheran Church and School is requesting site plan review and approval for a new building addition to their existing Church and School facility located on an institutional lot on the corner of Fond du Lac Avenue/Highway 145 and Bel Aire Lane, addressed as N108W14290 Bel Aire Lane (Tax Parcel # GTNV-261991). The site is zoned I (Institutional); existing development on the parcel includes a School [serving K3 through fourth (4^{th}) grade] with a gymnasium that is also used for worship as well as associated parking on the south/southwestern end of the subject property and a stormwater management pond to the southeast.

Bethlehem Evangelical Lutheran Church and School proposes to develop the existing lawn area on the south-eastern portion of the site, near the existing storm pond, with a new building addition consisting of new administrative offices, meeting and fellowship rooms, bathrooms, patio area (proposed at approximately 1,289 square feet), and a new sanctuary/worship area. The proposed building addition totals 23,471 square feet of total development (not including an approximate 1,334 square foot canopy) and is permitted in the I (Institutional) zoning district. In conjunction with the proposed building addition, the existing southeastern driveway is proposed to be shifted further west to allow for safe and adequate access to the site, and the existing surface parking and vehicle maneuvering area on the southwestern portion of the site is proposed to be expanded north to provide the required parking spaces and vehicle maneuvering for patrons [ultimately increasing the parking lot from 123 parking stalls to 167 stalls with six (6) of the stalls being ADA compliant; a 44 parking stall increase]. The existing western playground area is proposed to be expanded and the existing storm pond facility on the southeastern portion of the site is planned to be expanded and modified to meet the stormwater management standards of Chapter 27 in the Village of Germantown Codified Ordinances and Chapter 13 of the Milwaukee Metropolitan Sewerage District (MMSD). The existing landscape buffer of eight (8) feet will be maintained and extended around the western and southern perimeters of the site to meet the required parking lot green belt and screening standards of Section 17.45 (C) of the Zoning Code. Internal landscaping will be maintained as well to break up the parking lot as required by Section 17.45 (C) of the Zoning Code. The total development/redevelopment of the site is proposed to disturb approximately 2.22 acres (967,032.20 square feet).

With the subject development site currently being zoned I (Institutional), the proposed development will provide a residential-compatible, enhanced community amenity to the Village that will allow the Church and School to further their mission of serving the community.

SYMBOLS LEGEND

- 128 — SEE SHEET A5.3 FOR WALL TYPES
- FLOOR DRAIN
- H.B. — HOSE BIB
- EXIT SIGNAGE
- FIRE EXTINGUISHER -SEE A5 SHEETS
- FIRE EXTINGUISHER w/ CABINET -SEE A5 SHEETS
- A.F. — ALIGN FINISH
- EXISTING WALL TO REMAIN
- STUD WALL
- CONCRETE WALL
- MASONRY VENEER
- C.M.U. WALL
- (1) HOUR FIRE RATED
- (2) HOUR FIRE RATED

SEE PLAN FOR ALL WALL WIDTHS

- EXISTING DOOR TO REMAIN
- NEW DOOR

KEYED NOTES

1. MODERNFOLD FOLDING SLIDING GLASS WALLS
2. MODERNFOLD FIXED GLASS WALLS
3. GAS FIREPLACE -SEE DETAIL 1/---

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COLLABORATION

CATALYST CONSTRUCTION

PROJECT INFORMATION

PROPOSED WORSHIP FACILITY ADDITION FOR:
BETHLEHEM LUTHERAN CHURCH
N108W14290 BEL AIRE LN. • GERMANTOWN, WISCONSIN

PROFESSIONAL SEAL

PRELIMINARY DATES
JUNE 22, 2023
AUG. 15, 2023
AUG. 18, 2023
SEPT. 13, 2023
SEPT. 22, 2023
OCT. 5, 2023
NOV. 3, 2023
DEC. 1, 2023
DEC. 8, 2023

NOT FOR CONSTRUCTION

JOB NUMBER
2129100

SHEET NUMBER
A1.1

BUILDING ADDITION		WORSHIP SEATING		
FIRST FLOOR	23,515 S.F.			
CANOPY	1,348 S.F.	PEWS	(20" SPACES)	468
TOTAL	**24,863 S.F.**	CHAIRS	(18")	62
BASEMENT	3,952 S.F.	ADA SPACE		8
TOTAL ADDITION AREA	**28,815 S.F.**	**TOTAL**		**538**
INTERIOR REMODEL	2,508 S.F.	(+3 FOR AV BOOTH SEATING)		

TRUE NORTH / NORTH

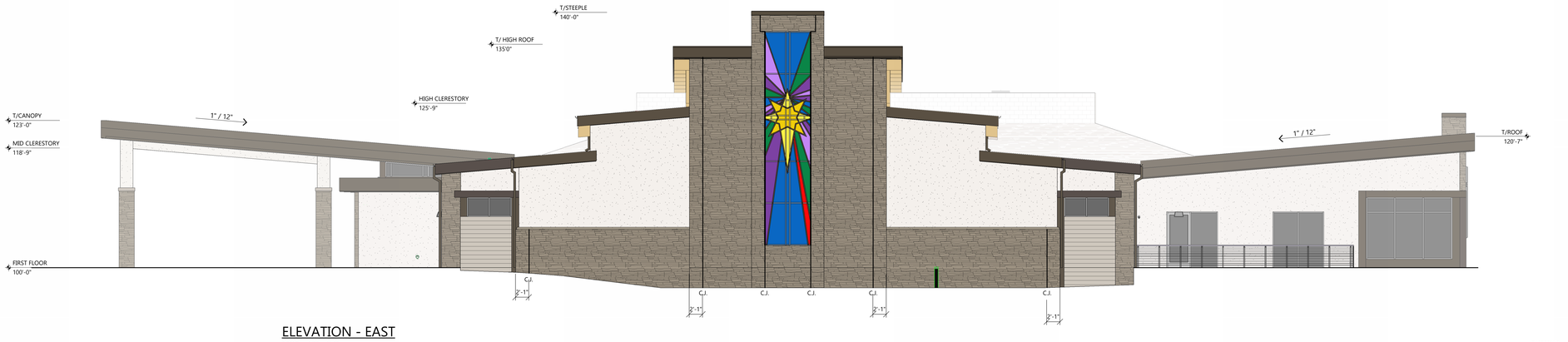
FIRST FLOOR PLAN
SCALE: 1/8" = 1'-0"
0' 8' 16'

ARCHITECTURAL FIRST FLOOR PLAN

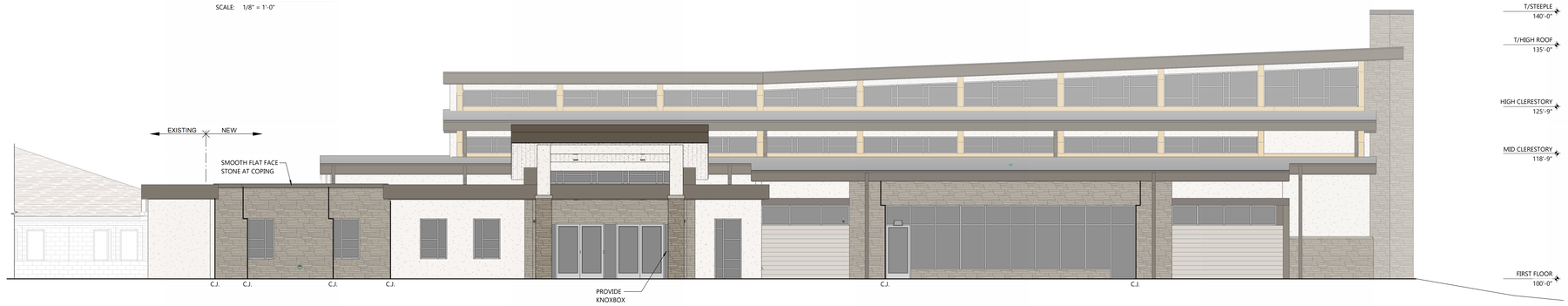
2021 © EXCEL ENGINEERING, INC.

C:\Revit local\21\2100_Arch_Central_V2023_alexea.rvt
12/8/2023 8:42:23 AM

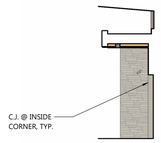
NOTES:
- ALL EXTERIOR SIGNAGE IS BY OWNER.
- PROVIDE MOCK UP OF BLOCK & METAL PANEL FOR OWNER TO CONFIRM.
- SEE ELEVATIONS FOR CONTROL JOINTS (CJ). COLOR TO MATCH BLOCK.
- C.J. = CONTORL JOINT.
- PROVIDE A CONTROL JOINT AT ALL STONE INSIDE CORNERS.
- SEE WALL SECTIONS FOR TRUSS BEARING HEIGHTS.



ELEVATION - EAST
SCALE: 1/8" = 1'-0"

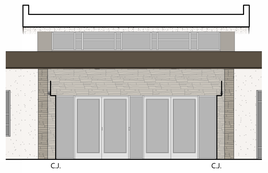


ELEVATION - SOUTH
SCALE: 1/8" = 1'-0"

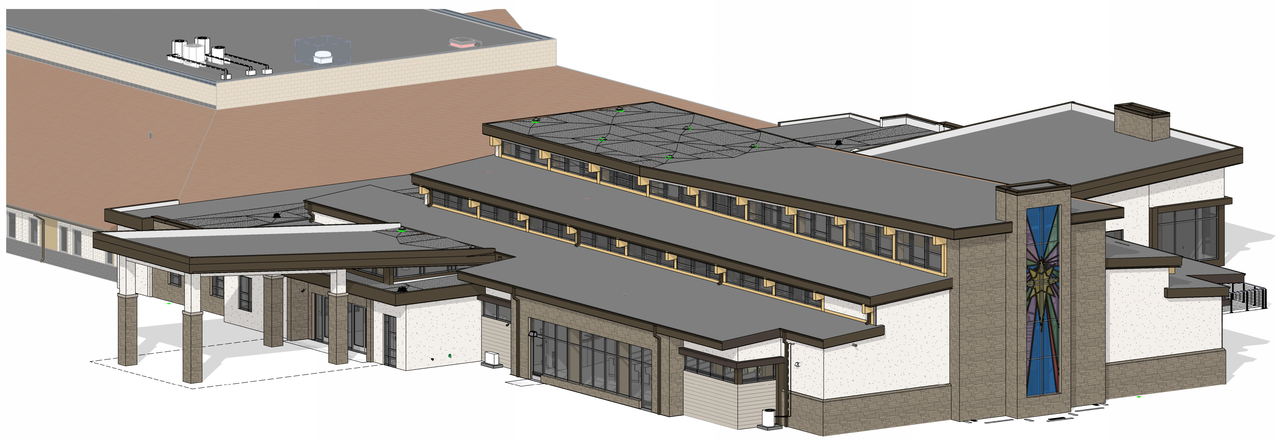


EAST ELEVATION - HIDDEN
SCALE: 1/8" = 1'-0"

EAST ELEVATION - HIDDEN
SCALE: 1/8" = 1'-0"



SOUTH ELEVATION - HIDDEN
SCALE: 1/8" = 1'-0"



ISOMETRIC VIEW FROM S/E

NOTE:
ISOMETRIC VIEW IS FOR GRAPHICAL REPRESENTATION ONLY

ENGINEERED WOOD SIDING SPECIFICATIONS:

MANUFACTURER:
- LP SMARTSIDE LAP SIDING OR EQUIVALENT

CONSTRUCTION:
- TREATED WOOD COMPOSITE SIDING MEETING THE PERFORMANCE STANDARDS SET IN ICC-ES-AC321
- CEDAR-TEXTURED LAP SIDING
- INSTALL PER ALL MANUFACTURER'S DETAILS AND SPECIFICATIONS FOR A 6" EXPOSURE
- FACTORY PRIMED WITH MILDEW RESISTANT PRIMER
- PRIME ALL FIELD CUT EDGES PER MANUFACTURER'S SPECIFICATIONS
- ALL SIDING SHALL BE INSTALLED USING THE BLIND NAILING METHOD OF INSTALLATION. PROVIDE ALL REQUIRED STARTER STRIPS AND ACCESSORIES REQUIRED FOR A COMPLETE INSTALLATION
- ALL JOINTS SHALL BE CAULKED PER MANUFACTURER'S SPECIFICATIONS WITH COLOR TO MATCH SIDING FINISH
- PREFINISH WITH (2) COATS HIGH-QUALITY ACRYLIC LATEX PAINT SPECIALLY FORMULATED FOR USE ON WOOD AND ENGINEERED WOOD SUBSTRATES
- COLOR BY OWNER (PROVIDE SAMPLE FOR APPROVAL)
- SEE A4 DETAILS FOR SIZES

WARRANTY:
- MATERIAL - 5 YEAR FULL REPLACEMENT (LABOR AND MATERIAL)
- SUBSTRATE - 50 YEAR
- FINISH - 25 YEAR FINISH, 15 YEAR LABOR

ENGINEERED WOOD TRIM SPECIFICATIONS:

MANUFACTURER:
- LP SMARTSIDE OR EQUIVALENT

CONSTRUCTION:
- TREATED EXTERIOR COMPOSITE TRIM
- 5/4" NOMINAL THICKNESS W/ TEXTURED FACE
- INSTALL PER ALL MANUFACTURER'S DETAILS AND SPECIFICATIONS
- FACTORY PRIMED WITH MILDEW RESISTANT PRIMER ALL (4) SIDES
- PRIME ALL FIELD CUT EDGES PER MANUFACTURER'S SPECIFICATIONS
- ALL JOINTS SHALL BE CAULKED PER MANUFACTURER'S SPECIFICATIONS WITH COLOR TO MATCH TRIM FINISH
- PREFINISH WITH (2) COAT HIGH-QUALITY ACRYLIC LATEX PAINT SPECIALLY FORMULATED FOR USE ON WOOD AND ENGINEERED WOOD SUBSTRATES
- COLOR BY OWNER (PROVIDE SAMPLE FOR APPROVAL)
- OUTSIDE CORNERS - 5/4 ENGINEERED WOOD ONE PIECE CORNER BOARD MANUF. BY WAUSAU SUPPLY COMPANY
- INSIDE CORNERS - 5/4 x 5/4 ENGINEERED WOOD TRIM BLOCK
- SEE A4 DETAILS FOR ADDITIONAL SIZES

WARRANTY:
- MATERIAL - 5 YEAR FULL REPLACEMENT (LABOR AND MATERIAL)
- SUBSTRATE - 50 YEAR
- FINISH - 25 YEAR FINISH, 15 YEAR LABOR

EXTERIOR MATERIAL KEY

1. **E.I.F.S. SYSTEM**
   DRYVIT OUTSULATION SYSTEM
   COLOR/TEXTURE: TBD
   PROVIDE SAMPLES FOR OWNERS & ARCHITECT APPROVAL
2. **ENGINEERED WOOD LAP SIDING**
   LP SMARTSIDE: 6" BOARDS
   COLOR: TBD *PROVIDE SAMPLES FOR OWNERS & ARCHITECT APPROVAL*
   FINISH :TBD
3. **NATURAL FULL VENEER STONE**
   MANUFACTURER: TBD
   COLOR: TBD
   PROVIDE SAMPLES FOR OWNER & ARCHITECT APPROVAL
4. **CAST STONE SILL**
   STONECAST
   COLOR: NATURAL (PROVIDE SAMPLES FOR APPROVAL)
5. **EPDM ROOFING**
   SEE ROOF PLAN
6. **ALUMINUM STOREFRONT & GLAZING**
   FRAME COLOR: CLEAR ANOZIDED
   GLAZING COLOR: CLEAR (MATCH EXISTING)
7. **PRE-FINISHED METAL TRIM**
   MANUFACTURER: TBD
   COLOR: TBD
8. **HOLLOW METAL DOOR**
   PAINTED TO MATCH ADAJACENT FINISH
9. **PRE-FINISHED METAL DOWNSPOUT**
   MANUFACTURER: TBD
   COLOR: TBD
10. **PRE-FINISHED METAL COPING**
    MANUFACTURER: TBD
    COLOR: TBD

DOUGLAS FIR GLULAM FRAMING

EXTERIOR STONE VENEER SPECIFICATIONS:

MANUFACTURER:
- BUECHEL STONE CORPORATION OR EQUAL

CONTACT:
- ERIK KRAL -920.375.6446

PRODUCT:
- FULL VENEER TO BE: FOND DU LAC CAMBRIAN BLEND (OWNER TO CONFIRM SELECTIONS)
- THIN VENEER DIMENSIONS: L 6" TO 42"; H 1/2" TO 8"; W 3" TO 5" (4" AVE)
- SEE STONE SPEC DETAILS FOR TYPICAL BLEND INFORMATION
- SEE STONE SPEC DETAILS FOR TYPICAL PIECE INFORMATION

JOINT:
- STANDARD MORTAR JOINT (OWNER TO SELECT DIMENSION)
- TYPE S -STANDARD GRAY COLOR
- MORTAR MIX TO BE APPROVED BY VENEER SUPPLIER (ASTM C270)
- ENSURE THAT WET MORTAR IS NOT SPLASHED ON STONE SURFACE

COURSING PATTERN:
- SEE STONE SPEC DETAILS FOR COURSING PATTERN
- -NOTE THAT THE PATTERN SHOWN ON THE BUILDING ELEVATIONS IS SYMBOLIC ONLY

WALL CONSTRUCTION:
- SEE WALL SECTIONS
- LAYOUT STONE IN ADVANCE AND DISTRIBUTE COLOR RANGE AND STONE UNIFORMITY OVER WORKAREA

NOTE:
- CAST STONE BLOCKS ARE REQUIRED AT ALL ELECTRICAL, PLUMBING, HVAC, SECURITY AND COMMUNICATION DEVICES.
- QUANTITY AND SIZE OF CAST STONE BLOCK IS TO BE VERIFIED WITH ASSOCIATED CONTRACTOR. USE OF THE CAST STONE PROVIDES FLUSH MOUNTING SURFACE FOR THESE DEVICES.
- *** PROVIDE 4'X4' MOCK UP FOR OWNER TO REVIEW AND APPROVE BEFORE CONTINUING W/ CONSTRUCTION

EXTERIOR WALL TYPE LEGEND

EW1
HORIZONTAL LAP SIDING OVER 6" WOOD STUD
- 3/4" HORIZONTAL LP SMARTSIDE SIDING
- 2 1/2" (R-12) ZIP SYSTEM R-SHEATHING (1/2" AIR MOISTURE BARRIER SHEATHING) (2" CONT. INSULATION)
- 2x6 WOOD STUD (16" O.C.) w/ FIBERGLASS BATT INSUL. (R-21)
- VAPOR RETARDER
- 5/8" GYP. BOARD

EW2
EIFS OVER 6" WOOD STUD
- EIFS FINISH
- 2" EPS RIGID CONT. WALL INSULATION (R-7.6) OVER DRAINAGE PLANE. (ABUSE RESISTANT TO 8'-0" ABOVE GRADE)
- 1/2" ZIP AIR & MOISTURE BARRIER SHEATHING (NOM.) SEE SPEC.
- 2x6 WOOD STUD (16" O.C.) w/ FIBERGLASS BATT INSUL. (R-21)
- VAPOR RETARDER
- 5/8" GYP. BOARD

EW2.1 (NEW TO EXISTING BUILDING CONNECTION)
EIFS OVER 6" WOOD STUD (1 HR RATING)
- EIFS FINISH
- 2" EPS RIGID CONT. WALL INSULATION (R-7.6) OVER DRAINAGE PLANE. (ABUSE RESISTANT TO 8'-0" ABOVE GRADE)
- 1/2" ZIP AIR & MOISTURE BARRIER SHEATHING (NOM.) SEE SPEC.
- (1) LAYERS OF 5/8" TYPE 'X' GYP. BOARD
- 2x6 WOOD STUD (16" O.C.) w/ FIBERGLASS BATT INSUL. (R-21)
- VAPOR RETARDER
- (1) LAYERS OF 5/8" TYPE 'X' GYP. BOARD

VIEW REF ~~FOR RATED ASS~~EMBLY INFORMATION

EW2-6 (NEW TO EXISTING BUILDING CONNECTION)
EIFS OVER 6" WOOD STUD
- EIFS FINISH
- 2" EPS RIGID CONT. WALL INSULATION (R-7.6) OVER DRAINAGE PLANE. (ABUSE RESISTANT TO 8'-0" ABOVE GRADE)
- 1/2" ZIP AIR & MOISTURE BARRIER SHEATHING (NOM.) SEE SPEC.
- (1) LAYERS OF 5/8" PLYWOOD
- 2x6 WOOD STUD (16" O.C.) w/ FIBERGLASS BATT INSUL. (R-21)
- VAPOR RETARDER

EW2-8 (CHANCEL WALL ABOVE MASONRY HALF WALL)
EIFS OVER 8" WOOD STUD
- EIFS FINISH
- 2" EPS RIGID CONT. WALL INSULATION (R-7.6) OVER DRAINAGE PLANE. (ABUSE RESISTANT TO 8'-0" ABOVE GRADE)
- 1/2" ZIP AIR & MOISTURE BARRIER SHEATHING (NOM.) SEE SPEC.
- 2x8 WOOD STUD (16" O.C.) w/ FIBERGLASS BATT INSUL. (R-21)
- VAPOR RETARDER
- 5/8" GYP. BOARD

EW- (BASEMENT WALL)
CONCRETE WALL w/ INSULATION
- 2" FOUNDATION DRAINAGE PANEL (R-10) (SEE SPEC)
- WATERPROOFING (SEE SPEC)
- CONCRETE FOUNDATION WALL -SEE STRUCTURAL

EW- (BASEMENT WALL)
CONCRETE WALL w/ EIFS
- EIFS FINISH
- 2" EPS RIGID CONT. WALL INSULATION (R7.6) OVER DRAINAGE PLANE.
- WATERPROOFING (SEE SPEC)
- CONCRETE FOUNDATION WALL -SEE STRUCTURAL

EW2-10 (WEST EXTERIOR FACE OF NARTHEX)
EIFS OVER 10" WOOD STUD
- EIFS FINISH
- 2" EPS RIGID CONT. WALL INSULATION (R-7.6) OVER DRAINAGE PLANE
- 1/2" ZIP AIR & MOISTURE BARRIER SHEATHING (NOM.) SEE SPEC.
- 2x10 WOOD STUD (16" O.C.) w/ FIBERGLASS BATT INSUL. (R-21)
- VAPOR RETARDER
- 5/8" GYP. BOARD

EW3 (TYPICAL)
FULL STONE VENEER OVER 6" WOOD STUD
- STONE VENEER (4" NOM.)
- AIR SPACE **(2" MIN.)**
- 2" XPS RIGID CONT. WALL INSULATION (R-10)
- 1/2" ZIP AIR & MOISTURE BARRIER SHEATHING (NOM.)
- 2x6 WOOD STUD w/ FIBERGLASS BATT INSUL. (R-21)
- VAPOR RETARDER
- 5/8" GYP. BOARD

EW3.1 (NEW TO EXISTING BUILDING CONNECTION)
FULL STONE VENEER OVER 6" WOOD STUD - (1 HR RATING)
- STONE VENEER (4" NOM.)
- AIR SPACE **(1 3/8" MIN.)**(TO ALIGN w/ EW3 @ FACE OF WALL)
- 2" XPS RIGID CONT. WALL INSULATION (R-10)
- 1/2" ZIP AIR & MOISTURE BARRIER SHEATHING (NOM.)
- (1) LAYERS OF TYPE 'X' 5/8" GYP. BOARD
- 2x6 WOOD STUD w/ FIBERGLASS BATT INSUL. (R-21)
- VAPOR RETARDER
- (1) LAYERS OF TYPE 'X' 5/8" GYP. BOARD

VIEW REF ~~FOR RATED ASS~~EMBLY INFORMATION

EW3-8 (CHANCEL WALLS)
FULL STONE VENEER OVER 8" WOOD STUD
- STONE VENEER (4" NOM.)
- AIR SPACE **(2" MIN.)**(TO ALIGN w/ EDGE OF FND WALL)
- 2" XPS RIGID CONT. WALL INSULATION (R-10)
- 1/2" ZIP AIR & MOISTURE BARRIER SHEATHING (NOM.)
- 2x8 WOOD STUD w/ FIBERGLASS BATT INSUL. (R-21)
- VAPOR RETARDER
- 5/8" GYP. BOARD

EW4
DARK BROWN ACM PANEL OVER 6" WOOD STUD
- DARK BROWN ACM PANEL
- 2 1/2" (R-12) ZIP SYSTEM R-SHEATHING (AIR MOISTURE BARRIER SHEATHING)
- 2x6 WOOD STUD w/ FIBERGLASS BATT INSUL. (R-21)
- VAPOR RETARDER
- 5/8" GYP. BOARD

EW5 (ROOF SIDE OF STEEPLES)
THIN STONE VENEER OVER 6" WOOD STUD
- THINSTONE VENEER (1 1/4" +-)
- 5/8" SCRATCH COAT + METAL LATH + BONDING MORTAR
- 2 1/2" (R-12) ZIP SYSTEM R-SHEATHING (AIR MOISTURE BARRIER SHEATHING)
- RAINSCREEN BACKER
- 2x6 WOOD STUD w/ FIBERGLASS BATT INSUL. (R-21)
- VAPOR RETARDER
- (1) LAYER OF 5/8" GYP. BOARD

*NOTE: SEE WALL SECTIONS FOR FULL VERTICAL WALL CONDITION

ARCHITECTURAL EXTERIOR ELEVATIONS

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Fond Du Lac, WI 54935
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COLLABORATION
CATALYST CONSTRUCTION

PROJECT INFORMATION

PROPOSED WORSHIP FACILITY ADDITION FOR:
BETHLEHEM LUTHERAN CHURCH
N108W14290 BEL AIRE LN. ● GERMANTOWN, WISCONSIN

PROFESSIONAL SEAL

PRELIMINARY DATES
MAY 17, 2021
MAY 20, 2021
MAY 26, 2021
MAR. 29, 2022
MAY 18, 2023
MAY 23, 2023
SEPT. 22, 2023
OCT. 5, 2023
NOV. 3, 2023
DEC. 1, 2023
DEC. 8, 2023

NOT FOR CONSTRUCTION

JOB NUMBER
2129100

SHEET NUMBER
A2.0

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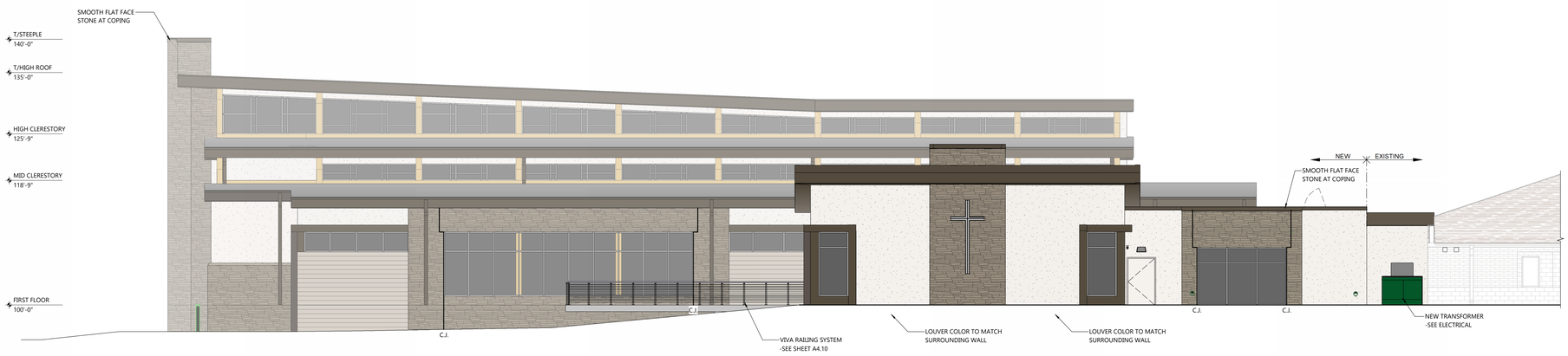
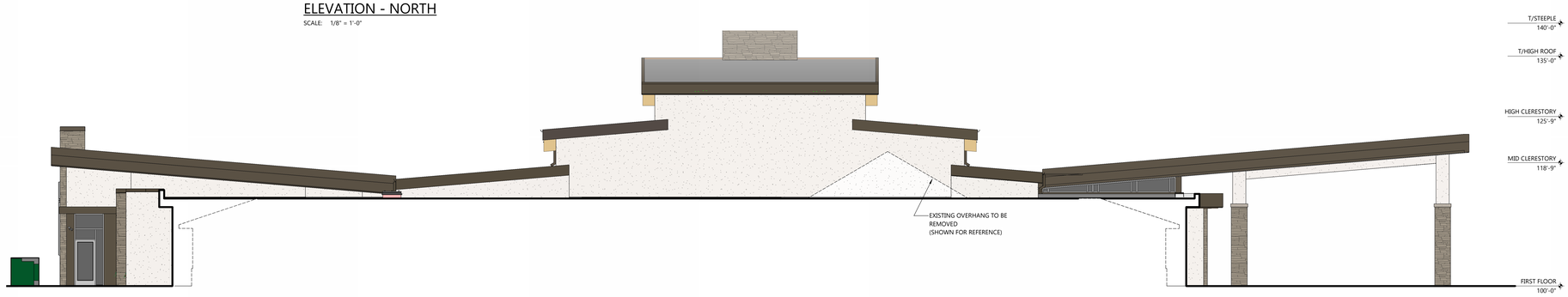


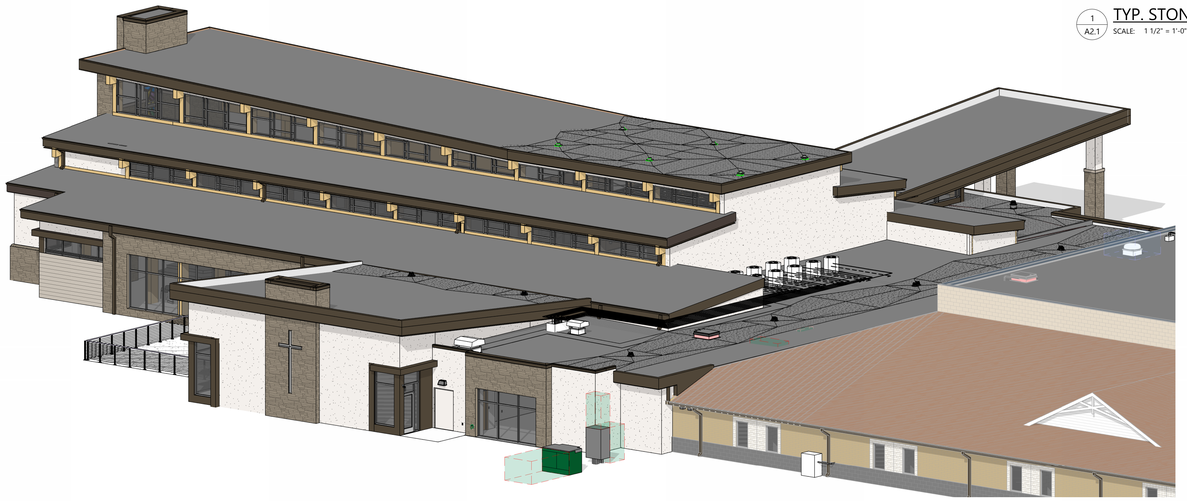
ELEVATION - NORTH

SCALE: 1/8" = 1'-0"



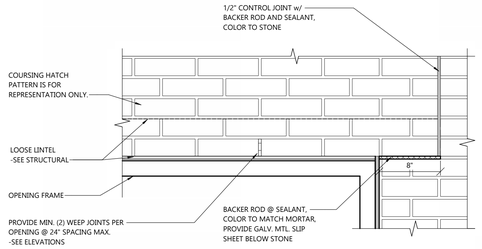
WEST ELEVATION

SCALE: 1/8" = 1'-0"



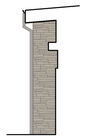
ISOMETRIC VIEW FROM N/W

NOTE:
ISOMETRIC VIEW IS FOR GRAPHICAL REPRESENTATION ONLY



1 A2.1 TYP. STONE CONTROL JOINT OVER OPENING

SCALE: 1 1/2" = 1'-0"



WEST ELEVATION - HIDDEN

SCALE: 1/8" = 1'-0"

WEST ELEVATION - HIDDEN

SCALE: 1/8" = 1'-0"

NOTES:
- ALL EXTERIOR SIGNAGE IS BY OWNER.
- PROVIDE MOCK UP OF BLOCK & METAL PANEL FOR OWNER TO CONFIRM.
- SEE ELEVATIONS FOR CONTROL JOINTS (CJ). COLOR TO MATCH BLOCK.
- C.J. = CONTORL JOINT
- PROVIDE A CONTROL JOINT AT ALL STONE INSIDE CORNERS.
- SEE WALL SECTIONS FOR TRUSS BEARING HEIGHTS.

EXTERIOR MATERIAL KEY

1. **E.I.F.S. SYSTEM**
   DRYVIT OUTSULATION SYSTEM
   COLOR/TEXTURE: TBD
   PROVIDE SAMPLES FOR OWNERS & ARCHITECT APPROVAL
2. **ENGINEERED WOOD LAP SIDING**
   LP SMARTSIDE: 6" BOARDS
   COLOR: TBD *PROVIDE SAMPLES FOR OWNERS & ARCHITECT APPROVAL*
   FINISH :TBD
3. **NATURAL FULL VENEER STONE**
   MANUFACTURER: TBD
   COLOR: TBD
   PROVIDE SAMPLES FOR OWNER & ARCHITECT APPROVAL
4. **CAST STONE SILL**
   STONECAST
   COLOR: NATURAL (PROVIDE SAMPLES FOR APPROVAL)
5. **EPDM ROOFING**
   SEE ROOF PLAN
6. **ALUMINUM STOREFRONT & GLAZING**
   FRAME COLOR: CLEAR ANOZIDED
   GLAZING COLOR: CLEAR (MATCH EXISTING)
7. **PRE-FINISHED METAL TRIM**
   MANUFACTURER: TBD
   COLOR: TBD
8. **HOLLOW METAL DOOR**
   PAINTED TO MATCH ADAJACENT FINISH
9. **PRE-FINISHED METAL DOWNSPOUT**
   MANUFACTURER: TBD
   COLOR: TBD
10. **PRE-FINISHED METAL COPING**
    MANUFACTURER: TBD
    COLOR: TBD

DOUGLAS FIR GLULAM FRAMING

EXTERIOR WALL TYPE LEGEND

EW1
HORIZONTAL LAP SIDING OVER 6" WOOD STUD
- 3/4" HORIZONTAL LP SMARTSIDE SIDING
- 2 1/2" (R-12) ZIP SYSTEM R-SHEATHING (1/2" AIR MOISTURE BARRIER SHEATHING) (2" CONT. INSULATION)
- 2x6 WOOD STUD (16" O.C.) w/ FIBERGLASS BATT INSUL. (R-21)
- VAPOR RETARDER
- 5/8" GYP. BOARD

EW2
EIFS OVER 6" WOOD STUD
- EIFS FINISH
- 2" EPS RIGID CONT. WALL INSULATION (R-7.6) OVER DRAINAGE PLANE. (ABUSE RESISTANT TO 8'-0" ABOVE GRADE)
- 1/2" ZIP AIR & MOISTURE BARRIER SHEATHING (NOM.) SEE SPEC.
- 2x6 WOOD STUD (16" O.C.) w/ FIBERGLASS BATT INSUL. (R-21)
- VAPOR RETARDER
- 5/8" GYP. BOARD

EW2.1 (NEW TO EXISTING BUILDING CONNECTION)
EIFS OVER 6" WOOD STUD (1 HR RATING)
- EIFS FINISH
- 2" EPS RIGID CONT. WALL INSULATION (R-7.6) OVER DRAINAGE PLANE. (ABUSE RESISTANT TO 8'-0" ABOVE GRADE)
- 1/2" ZIP AIR & MOISTURE BARRIER SHEATHING (NOM.) SEE SPEC.
- (1) LAYERS OF 5/8" TYPE 'X' GYP. BOARD
- 2x6 WOOD STUD (16" O.C.) w/ FIBERGLASS BATT INSUL. (R-21)
- VAPOR RETARDER
- (1) LAYERS OF 5/8" TYPE 'X' GYP. BOARD

VIEW REF ~~FOR RATED ASSEMBLY~~ INFORMATION

EW2-6 (NEW TO EXISTING BUILDING CONNECTION)
EIFS OVER 6" WOOD STUD
- EIFS FINISH
- 2" EPS RIGID CONT. WALL INSULATION (R-7.6) OVER DRAINAGE PLANE. (ABUSE RESISTANT TO 8'-0" ABOVE GRADE)
- 1/2" ZIP AIR & MOISTURE BARRIER SHEATHING (NOM.) SEE SPEC.
- (1) LAYERS OF 5/8" PLYWOOD
- 2x6 WOOD STUD (16" O.C.) w/ FIBERGLASS BATT INSUL. (R-21)
- VAPOR RETARDER

EW2-8 (CHANCEL WALL ABOVE MASONRY HALF WALL)
EIFS OVER 8" WOOD STUD
- EIFS FINISH
- 2" EPS RIGID CONT. WALL INSULATION (R-7.6) OVER DRAINAGE PLANE. (ABUSE RESISTANT TO 8'-0"ABOVE GRADE)
- 1/2" ZIP AIR & MOISTURE BARRIER SHEATHING (NOM.) SEE SPEC.
- 2x8 WOOD STUD (16" O.C.) w/ FIBERGLASS BATT INSUL. (R-21)
- VAPOR RETARDER
- 5/8" GYP. BOARD

EW- (BASEMENT WALL)
CONCRETE WALL w/ INSULATION
- 2" FOUNDATION DRAINAGE PANEL (R-10) (SEE SPEC)
- WATERPROOFING (SEE SPEC)
- CONCRETE FOUNDATION WALL -SEE STRUCTURAL

EW- (BASEMENT WALL)
CONCRETE WALL w/ EIFS
- EIFS FINISH
- 2" EPS RIGID OCNT. WALL INSULATION (R7.6) OVER DRAINAGE PLANE.
- WATERPROOFING (SEE SPEC)
- CONCRETE FOUNDATION WALL -SEE STRUCTURAL

EW2-10 (WEST EXTERIOR FACE OF NARTHEX)
EIFS OVER 10" WOOD STUD
- EIFS FINISH
- 2" EPS RIGID CONT. WALL INSULATION (R-7.6) OVER DRAINAGE PLANE
- 1/2" ZIP AIR & MOISTURE BARRIER SHEATHING (NOM.) SEE SPEC.
- 2x10 WOOD STUD (16" O.C.) w/ FIBERGLASS BATT INSUL. (R-21)
- VAPOR RETARDER
- 5/8" GYP. BOARD

EW3 (TYPICAL)
FULL STONE VENEER OVER 6" WOOD STUD
- STONE VENEER (4" NOM.)
- AIR SPACE **(2" MIN.)**
- 2" XPS RIGID CONT. WALL INSULATION (R-10)
- 1/2" ZIP AIR & MOISTURE BARRIER SHEATHING (NOM.)
- 2x6 WOOD STUD w/ FIBERGLASS BATT INSUL. (R-21)
- VAPOR RETARDER
- 5/8" GYP. BOARD

EW3.1 (NEW TO EXISTING BUILDING CONNECTION)
FULL STONE VENEER OVER 6" WOOD STUD - (1 HR RATING)
- STONE VENEER (4" NOM.)
- AIR SPACE **(1 3/8" MIN.)**TO ALIGN w/ EW3 @ FACE OF WALL)
- 2" XPS RIGID CONT. WALL INSULATION (R-10)
- 1/2" ZIP AIR & MOISTURE BARRIER SHEATHING (NOM.)
- (1) LAYERS OF TYPE 'X' 5/8" GYP. BOARD
- 2x6 WOOD STUD w/ FIBERGLASS BATT INSUL. (R-21)
- VAPOR RETARDER
- (1) LAYERS OF TYPE 'X' 5/8" GYP. BOARD

VIEW REF ~~FOR RATED ASSEMBLY~~ INFORMATION

EW3-8 (CHANCEL WALLS)
FULL STONE VENEER OVER 8" WOOD STUD
- STONE VENEER (4" NOM.)
- AIR SPACE **(2" MIN.)**TO ALIGN w/ EDGE OF FND WALL)
- 2" XPS RIGID CONT. WALL INSULATION (R-10)
- 1/2" ZIP AIR & MOISTURE BARRIER SHEATHING (NOM.)
- 2x8 WOOD STUD w/ FIBERGLASS BATT INSUL. (R-21)
- VAPOR RETARDER
- 5/8" GYP. BOARD

EW4
DARK BROWN ACM PANEL OVER 6" WOOD STUD
- DARK BROWN ACM PANEL
- 2 1/2" (R-12) ZIP SYSTEM R-SHEATHING (AIR MOISTURE BARRIER SHEATHING)
- 2x6 WOOD STUD w/ FIBERGLASS BATT INSUL. (R-21)
- VAPOR RETARDER
- 5/8" GYP. BOARD

EWS (ROOF SIDE OF STEEPLES)
THIN STONE VENEER OVER 6" WOOD STUD
- THINSTONE VENEER (1 1/4" +-)
- 5/8" SCRATCH COAT + METAL LATH + BONDING MORTAR
- 2 1/2" (R-12) ZIP SYSTEM R-SHEATHING (AIR MOISTURE BARRIER SHEATHING)
- RAINSCREEN BACKER
- 2x6 WOOD STUD w/ FIBERGLASS BATT INSUL. (R-21)
- VAPOR RETARDER
- (1) LAYER OF 5/8" GYP. BOARD

*NOTE: SEE WALL SECTIONS FOR FULL VERTICAL WALL CONDITION

ARCHITECTURAL EXTERIOR ELEVATIONS

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COLLABORATION

CATALYST CONSTRUCTION

PROJECT INFORMATION

PROPOSED WORSHIP FACILITY ADDITION FOR:
BETHLEHEM LUTHERAN CHURCH
N108W14290 BEL AIRE LN. • GERMANTOWN, WISCONSIN

PROFESSIONAL SEAL

PRELIMINARY DATES
DEC. 1, 2023
DEC. 8, 2023

NOT FOR CONSTRUCTION

JOB NUMBER
2129100

SHEET NUMBER
A2.1

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PROPOSED WORSHIP FACILITY FOR:

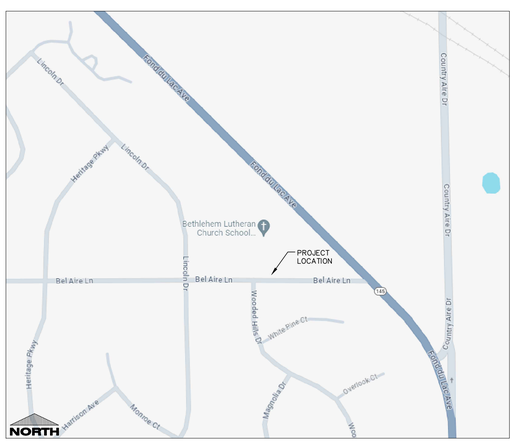
BETHLEHEM LUTHERAN CHURCH

GERMANTOWN, WISCONSIN

LEGEND

- PROPOSED SPOT ELEVATIONS (FLOW LINE OF CURB UNLESS OTHERWISE SPECIFIED)
- EXISTING GRADE SPOT ELEVATIONS
- PROPOSED SPOT ELEVATIONS (REFERENCE R—WALL DETAIL)
- PROPOSED SURFACE GRADE AT BACK OF WALL
- FG—FINISHED SURFACE GRADE AT FRONT OF WALL
- PROPOSED SPOT ELEVATIONS (TOP OF CURB, FLOWLINE OF CURB)
- PROPOSED SPOT ELEVATIONS (TOP OF WALK, BOTTOM OF WALK @ FLOWLINE)
- EXISTING WATER VALVE IN BOX
- PROPOSED WATER VALVE IN BOX
- EXISTING WATER VALVE IN MANHOLE
- EXISTING WATER SERVICE VALVE
- EXISTING TELEPHONE MANHOLE
- EXISTING STORM CATCH BASIN
- PROPOSED STORM CATCH BASIN — ST CB
- PROPOSED STORM FIELD INLET — ST FI
- EXISTING SQUARE CATCH BASIN
- EXISTING STORM CURB INLET
- PROPOSED STORM CURB INLET — ST CI
- EXISTING UTILITY POLE
- EXISTING UTILITY POLE WITH GUY WIRE
- EXISTING STREET LIGHT
- EXISTING TELEPHONE PEDESTAL
- EXISTING ELECTRIC PEDESTAL
- EXISTING ELECTRIC BOX
- EXISTING CABLE TV PEDESTAL
- PROPOSED DRAINAGE FLOW
- 1—1/4" REBAR SET WEIGHING 4.30 LB./FT.
- 3/4" REBAR SET WEIGHING 1.50 LB./FT.
- 1—1/4" REBAR FOUND
- 3/4" REBAR FOUND
- 2" IRON PIPE FOUND
- 1" IRON PIPE FOUND
- EXISTING FLOOD LIGHT
- SECTION CORNER
- PROPOSED APRON END SECTION
- EXISTING MARSH AREA
- EXISTING DECIDUOUS TREE WITH TRUNK DIAMETER
- EROSION MATTING
- PROPOSED INLET PROTECTION

- EXISTING CONIFEROUS TREE
- EXISTING SHRUB
- EXISTING STUMP
- SOIL BORING
- EXISTING WELL
- PROPOSED WELL
- PROPOSED LIGHT POLE
- EXISTING LIGHT POLE
- PROPOSED SIGN
- EXISTING SIGN
- CENTER LINE
- EXISTING HANDICAP PARKING STALL
- PROPOSED HANDICAP PARKING STALL
- EXISTING GAS VALVE
- EXISTING WOODED AREA
- EXISTING HEDGE
- EXISTING CHAINLINK FENCE
- EXISTING WOOD FENCE
- EXISTING BARBED WIRE FENCE
- PROPOSED PROPERTY LINE
- EXISTING GUARD RAIL
- EXISTING STORM SEWER AND MANHOLE
- PROPOSED STORM SEWER AND MANHOLE — ST MH
- EXISTING SANITARY SEWER AND MANHOLE
- PROPOSED SANITARY SEWER AND MANHOLE — SAN MH
- EXISTING WATER LINE AND HYDRANT
- PROPOSED WATER LINE AND HYDRANT
- EXISTING OVERHEAD UTILITY LINE
- EXISTING UNDERGROUND FIBER OPTIC LINE
- EXISTING UNDERGROUND ELECTRIC CABLE
- EXISTING UNDERGROUND TELEPHONE CABLE
- EXISTING UNDERGROUND GAS LINE
- PROPOSED CURB AND GUTTER
- EXISTING CURB AND GUTTER
- GRADING/SEEDING LIMITS
- RIGHT—OF—WAY LINE
- INTERIOR PROPERTY LINE
- RAILROAD TRACKS
- EXISTING GROUND CONTOUR
- PROPOSED GROUND CONTOUR
- EXISTING POLISH SEWER AND MANHOLE
- PROPOSED POLISH SEWER AND MANHOLE
- EXISTING PROCESS SEWER AND MANHOLE
- PROPOSED PROCESS SEWER AND MANHOLE
- EXISTING CLEAR WATER LINE
- PROPOSED CLEAR WATER LINE



PROJECT LOCATION MAP

DIVISION 31 EARTH WORK

31 10 00 SITE CLEARING (DEMOLITION)

A. CONTRACTOR SHALL CALL DIGGER'S HOT LINE AND CONDUCT A PRIVATE UTILITY LOCATE AS REQUIRED TO ENSURE THAT ALL UTILITIES HAVE BEEN LOCATED BEFORE STARTING SITE DEMOLITION. DESIGN ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES BETWEEN PLAN AND FIELD CONDITIONS PRIOR TO CONSTRUCTION.
B. CONTRACTOR TO FIELD TELEVISE ALL EXISTING SANITARY AND STORM LATERALS THAT ARE SCHEDULED TO BE RE-USED AND/OR CONNECTED TO ON SITE AT TIME OF DEMOLITION. THE TELEVISING SHALL BE COMPLETED TO ENSURE THE EXISTING LATERAL(S) ARE FREE OF OBSTRUCTIONS AND IN SOUND STRUCTURAL CONDITION. TELEVISING OF THESE LATERAL(S) SHOULD BE COMPLETED AT BEGINNING OF CONSTRUCTION AND DESIGN ENGINEER SHALL BE NOTIFIED OF ANY PIPE OBSTRUCTIONS AND/OR STRUCTURAL DEFICIENCIES IMMEDIATELY AFTER COMPLETION OF FIELD TELEVISING.
C. DEMOLITION PLAN IS AN OVERVIEW OF DEMOLITION TO TAKE PLACE ON SITE. CONTRACTOR TO FIELD VERIFY EXISTING SITE CONDITIONS PRIOR TO BIDDING. CONTRACTOR SHALL REMOVE, REPLACE, OR DEMOLISH ALL ITEMS AS NEEDED DURING CONSTRUCTION.
D. CONTRACTOR TO PROTECT EXISTING IMPROVEMENTS THAT ARE SCHEDULED TO REMAIN. ANY DAMAGE TO EXISTING FACILITIES SHALL BE REPLACED AT CONTRACTORS EXPENSE.
E. ALL CONCRETE NOTED TO BE REMOVED SHALL BE REMOVED TO THE NEAREST CONTROL JOINT.

31 20 00 EARTH MOVING

A. CONTRACTOR SHALL CALL DIGGER'S HOT LINE AND CONDUCT A PRIVATE UTILITY LOCATE AS REQUIRED TO ENSURE THAT ALL UTILITIES HAVE BEEN LOCATED BEFORE STARTING EXCAVATION. DESIGN ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES BETWEEN PLAN AND FIELD CONDITIONS PRIOR TO CONSTRUCTION.
B. PROVIDE ALL LABOR, MATERIALS AND EQUIPMENT FOR ALL EXCAVATION, GRADING, FILL AND BACKFILL WORK AS REQUIRED TO COMPLETE THE GENERAL CONSTRUCTION WORK. ALL EXCAVATION AND BACKFILL FOR ELECTRICALS AND MECHANICALS ARE THE RESPONSIBILITY OF THE RESPECTIVE CONTRACTOR UNLESS OTHERWISE SPECIFIED IN THE BID DOCUMENTS.
C. ALL ORGANIC TOPSOIL INSIDE THE BUILDING AREA, UNDER PAVED AREAS, AND AT SITE FILL AREAS SHALL BE REMOVED. PROOF ROLL SUBGRADES BEFORE PLACING FILL WITH HEAVY PNEUMATIC-TIRED EQUIPMENT, SUCH AS A FULLY-LOADED TANDEM AXLE DUMP TRUCK, TO IDENTIFY SOFT POCKETS AND AREAS OF EXCESS YIELDING. CONTRACTOR SHALL STRIP TOPSOIL DEPTHS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REVIEW AND FOLLOW THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT AND ACCOUNT FOR EXISTING CONDITIONS PRIOR TO SUBMITTING BID FOR THE PROJECT. EXCESS MATERIALS SHALL BE REMOVED FROM THE SITE UNLESS OTHERWISE DIRECTED IN THE PLANS OR BY LOCAL ZONING REQUIREMENTS.
D. PLACE AND COMPACT FILL MATERIAL IN LAYERS TO REQUIRED ELEVATIONS. UNIFORMLY MOISTEN OR AERATE SUBGRADE AND EACH SUBSEQUENT FILL OR BACKFILL LAYER BEFORE COMPACTION AS RECOMMENDED TO ACHIEVE SPECIFIED DRY DENSITY. REMOVE AND REPLACE, OR SCARIFY AND AIR DRY, OTHERWISE SATISFACTORY SOIL MATERIAL THAT IS TOO WET TO COMPACT TO SPECIFIED DRY DENSITY.
E. PLACE BACKFILL AND FILL MATERIALS IN LAYERS NOT MORE THAN 8" IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HEAVY COMPACTION EQUIPMENT, AND NOT MORE THAN 4" IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HAND-OPERATED TAMPERS.
F. COMPACT THE SOIL TO NOT LESS THAN THE FOLLOWING PERCENTAGES OF MAXIMUM DRY DENSITY ACCORDING TO ASTM D 698, STANDARD PROCTOR TEST. FILL MAY NOT BE PLACED ON FROZEN GROUND AND NO FROZEN MATERIALS MAY BE USED FOR BACK FILL. APPLY THE MORE STRINGENT REQUIREMENTS WHEN COMPARING BETWEEN THE FOLLOWING AND THE GEOTECHNICAL REPORT.
   1. UNDER FOUNDATIONS - SUBGRADE, AND EACH LAYER OF BACKFILL OR FILL MATERIAL TO NOT LESS THAN 98 PERCENT.
   2. UNDER INTERIOR SLAB-ON-GRADE WHERE GROUNDWATER IS MORE THAN 3 FEET BELOW THE SLAB - PLACE A DRAINAGE COURSE LAYER OF 3/4" CRUSHED STONE, WITH 5% TO 12% FINES, PER THICKNESS INDICATED ON FOUNDATION PLANS ON PREPARED SUBGRADE. COMPACT THE SUBGRADE AND DRAINAGE COURSE TO NOT LESS THAN 95 PERCENT.
   3. UNDER INTERIOR SLAB-ON-GRADE WHERE GROUNDWATER IS WITHIN 3 FEET OF THE SLAB SURFACE: PLACE A DRAINAGE COURSE LAYER OF CLEAN 3/4" CRUSHED STONE, WITH NO MORE THAN 5% FINES, PER THICKNESS INDICATED ON FOUNDATION PLANS ON PREPARED SUBGRADE. COMPACT THE SUBGRADE AND DRAINAGE COURSE TO NOT LESS THAN 95 PERCENT.
   4. UNDER EXTERIOR CONCRETE AND ASPHALT PAVEMENTS - COMPACT THE SUBGRADE AND EACH LAYER OF BACKFILL OR FILL MATERIAL TO NOT LESS THAN 95 PERCENT.
   5. UNDER WALKWAYS - COMPACT SUBGRADE AND EACH LAYER OF BACKFILL OR FILL MATERIAL TO NOT LESS THAN 95 PERCENT.
   6. UNDER LAWN OR UNPAVED AREAS - COMPACT SUBGRADE AND EACH LAYER OF BACKFILL OR FILL MATERIAL, TO NOT LESS THAN 85 PERCENT.
G. CONTRACTOR SHALL ENGAGE A QUALIFIED INDEPENDENT TESTING AND INSPECTING AGENCY TO PERFORM FIELD TESTS AND INSPECTIONS. CONTRACTOR SHALL PROVIDE DOCUMENTATION OF PASSING DENSITY TESTING AND PROOF-ROLLING TO ENGINEER UPON COMPLETION. IT IS SUGGESTED THAT THE GEOTECHNICAL FIRM USED TO PERFORM THE SUBSURFACE SOIL INVESTIGATION BE ENGAGED FOR THE FIELD QUALITY CONTROL TESTS. THE GEOTECHNICAL REPORT WAS PERFORMED BY GILES ENGINEERING ASSOCIATES, INC.
H. ALLOW FOR THE TESTING AGENCY TO TEST AND INSPECT SUBGRADES AND EACH FILL OR BACKFILL LAYER. PROCEED WITH SUBSEQUENT EARTHWORK ONLY AFTER TEST RESULTS FOR PREVIOUSLY COMPLETED WORK COMPLY WITH REQUIREMENTS. PROVIDE ONE TEST FOR EVERY 2000 SQUARE FEET OF PAVED AREA OR BUILDING SLAB, ONE TEST FOR EACH SPREAD FOOTING, AND ONE TEST FOR EVERY 50 LINEAR FEET OF WALL STRIP FOOTING.
I. WHEN THE TESTING AGENCY REPORTS THAT SUBGRADES, FILLS, OR BACKFILLS HAVE NOT ACHIEVED DEGREE OF COMPACTION SPECIFIED, SCARIFY AND MOISTEN OR AERATE, OR REMOVE AND REPLACE SOIL TO DEPTH REQUIRED; RECOMPACT AND RETEST UNTIL SPECIFIED COMPACTION IS OBTAINED.
J. THE BUILDING SITE SHALL BE GRADED TO PROVIDE DRAINAGE AWAY FROM THE BUILDING AS INDICATED ON THE PLANS. SITE EARTHWORK SHALL BE GRADED TO WITHIN 0.10' OF REQUIRED EARTHWORK ELEVATIONS ASSUMING POSITIVE DRAINAGE IS MAINTAINED IN ACCORDANCE WITH THE GRADING PLAN.

31 30 00 EROSION CONTROL/STORMWATER MANAGEMENT

A. THE DESIGN ENGINEER SHALL PREPARE A SITE SPECIFIC EROSION CONTROL AND A STORMWATER MANAGEMENT PLAN PURSUANT TO NR 216.46 AND NR 216.47. THE DESIGN ENGINEER SHALL ALSO FILE A CONSTRUCTION NOTICE OF INTENT WITH THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES PURSUANT TO NR 216.43 OR TO AN AUTHORIZED LOCAL PROGRAM PURSUANT TO NR 216.415 TO OBTAIN COVERAGE UNDER THE GENERAL WPDES STORM WATER PERMIT.
B. THE CONTRACTOR SHALL KEEP THE NOTICE OF INTENT PERMIT, APPROVED EROSION CONTROL AND STORMWATER MANAGEMENT PLANS, AND PLAN AMENDMENTS ON THE CONSTRUCTION SITE AT ALL TIMES PURSUANT TO NR 216.455 UNTIL PERMIT COVERAGE IS TERMINATED.
C. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL LOCAL EROSION CONTROL PERMITS.
D. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING THE MONITORING, MAINTENANCE, AND REPORTING REQUIREMENTS OF NR 216.48. INSPECTIONS OF IMPLEMENTED EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES MUST AT A MINIMUM BE INSPECTED EVERY 7 DAYS AND WITHIN 24 HOURS AFTER A PRECIPITATION EVENT OF 0.5" OR MORE. A PRECIPITATION EVENT MAY BE CONSIDERED TO BE THE TOTAL AMOUNT OF PRECIPITATION RECORDED IN ANY CONTINUOUS 24-HOUR PERIOD. THE CONTRACTOR SHALL REPAIR OR REPLACE EROSION AND SEDIMENT CONTROL AS NECESSARY WITHIN 24 HOURS OF AN INSPECTION OR AFTER A DEPARTMENT NOTIFICATION WHERE REPAIR OR REPLACEMENT IS REQUESTED.
E. THE CONTRACTOR SHALL MAINTAIN, AT THE CONSTRUCTION SITE OR AVAILABLE VIA AN INTERNET WEBSITE, WEEKLY WRITTEN REPORTS OF ALL INSPECTIONS CONDUCTED. WISCONSIN DNR CONSTRUCTION SITE INSPECTION REPORT FORM 3400-187 SHALL BE USED. WEEKLY INSPECTION REPORTS SHALL INCLUDE ALL OF THE FOLLOWING:
   1. THE DATE, TIME, AND LOCATION OF THE CONSTRUCTION SITE INSPECTION.
   2. THE NAME OF THE INDIVIDUAL WHO PERFORMED THE INSPECTION.
   3. AN ASSESSMENT OF THE CONDITION OF THE EROSION AND SEDIMENT CONTROLS.
   4. A DESCRIPTION OF ANY EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICE IMPLEMENTATION AND MAINTENANCE PERFORMED.
   5. A DESCRIPTION OF THE PRESENT PHASE OF LAND DISTURBING CONSTRUCTION ACTIVITY AT THE CONSTRUCTION SITE.
F. EROSION AND SEDIMENT CONTROL IMPLEMENTED DURING CONSTRUCTION SHALL STRICTLY COMPLY WITH THE GUIDELINES AND REQUIREMENTS SET FORTH IN WISCONSIN ADMINISTRATIVE CODE (W.A.C.) NR 151, THE STATE OF WISCONSIN DEPARTMENT OF NATURAL RESOURCES RUNOFF MANAGEMENT PERFORMANCE STANDARDS. TECHNICAL STANDARDS PUBLISHED BY THE WISCONSIN DNR SHALL ALSO BE UTILIZED TO IMPLEMENT THE REQUIRED PERFORMANCE STANDARDS. THE METHODS AND TYPES OF EROSION CONTROL WILL BE DEPENDENT ON THE LOCATION AND TYPE OF WORK INVOLVED. ALL SEDIMENT CONTROL MEASURES SHALL BE ADJUSTED TO MEET FIELD CONDITIONS AT THE TIME OF CONSTRUCTION, AND INSTALLED PRIOR TO ANY GRADING OR DISTURBANCE OF EXISTING SURFACE MATERIAL BELOW IS A LIST OF EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES TO ACHIEVE THE PERFORMANCE STANDARDS REQUIRED.
   1. SILT FENCE SHALL BE PLACED ON SITE AT LOCATIONS SHOWN ON THE EROSION CONTROL PLAN. SILT FENCE SHALL ALSO BE PROVIDED AROUND THE PERIMETER OF ALL SOIL STOCKPILES THAT WILL EXIST FOR MORE THAN 7 DAYS. FOLLOW PROCEDURES FOUND IN WISCONSIN DNR TECHNICAL STANDARD 1056 (CURRENT EDITION).
   2. DITCH CHECKS SHALL BE PROVIDED TO REDUCE THE VELOCITY OF WATER FLOWING IN DITCH BOTTOMS. PLACE AT LOCATIONS SHOWN ON THE EROSION CONTROL PLAN. FOLLOW PROCEDURES FOUND IN WISCONSIN DNR TECHNICAL STANDARD 1062 (CURRENT EDITION).
   3. STONE TRACKING PADS AND TRACKING CONTROL PRACTICES SHALL BE PLACED AT ALL CONSTRUCTION SITE ENTRANCES AND SHALL BE INSTALLED PRIOR TO ANY TRAFFIC LEAVING THE CONSTRUCTION SITE. SEE THE EROSION CONTROL PLAN FOR LOCATIONS. THE AGGREGATE USED FOR THE STONE TRACKING PAD SHALL BE 3/8" TO 3 INCH CLEAR OR WASHED STONE AND SHALL BE PLACED IN A LAYER AT LEAST 12 INCHES THICK. THE STONE SHALL BE UNDERLAIN WITH A WISDOT TYPE R GEOTEXTILE FABRIC AS NEEDED. THE TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT (12' MIN WIDTH) AND SHALL BE A MINIMUM OF 50 FEET LONG. SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. OTHER TRACKOUT CONTROL PRACTICES INCLUDING STABILIZED WORK SURFACES, MANUFACTURED TRACKOUT CONTROL DEVICES, TIRE WASHING, AND STREET/PAVEMENT CLEANING SHALL BE IMPLEMENTED AS NECESSARY TO MITIGATE THE TRACKOUT OF SEDIMENT OFFSITE. FOLLOW PROCEDURES FOUND IN WISCONSIN DNR TECHNICAL STANDARD 1057 (CURRENT EDITION).
   4. STORM DRAIN INLET PROTECTION SHALL BE PROVIDED FOR ALL NEW AND DOWNSTREAM STORM CATCH BASINS AND CURB INLETS. TYPE B OR C PROTECTION SHOULD BE PROVIDED AND SHALL BE IN CONFORMANCE WITH WISCONSIN DNR TECHNICAL STANDARD 1060 (CURRENT EDITION).
   5. DUST CONTROL MEASURES SHALL BE PROVIDED TO REDUCE OR PREVENT THE SURFACE AND AIR TRANSPORT OF DUST DURING CONSTRUCTION. CONTROL MEASURES INCLUDE APPLYING MULCH AND ESTABLISHING VEGETATION, WATER SPRAYING, SURFACE ROUGHENING, APPLYING POLYMERS, SPRAY-ON TACKIFIERS, CHLORIDES, AND BARRIERS. SOME SITES MAY REQUIRE AN APPROACH THAT UTILIZES A COMBINATION OF MEASURES FOR DUST CONTROL. FOLLOW PROCEDURES FOUND IN WISCONSIN DNR TECHNICAL STANDARD 1068 (CURRENT EDITION).

CONSTRUCTION STAKING SERVICES

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

GENERAL PROJECT NOTES

1. ALL DRIVEWAYS AND CURB CUTS TO BE CONSTRUCTED ACCORDING TO LOCAL ORDINANCES. CONTRACTOR TO OBTAIN ALL NECESSARY PERMITS.
2. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL WORK IN ROW PERMITS.
3. CONTRACTOR TO CONTACT EXCEL ENGINEERING TO COMPLETE AS—BUILT SURVEY OF STORMWATER POND FOLLOWING COMPLETION OF THE POND.

STORMWATER POND ASBUILT NOTE

CONTRACTOR TO CONTACT EXCEL ENGINEERING TO COMPLETE AN AS—BUILT SURVEY FOLLOWING COMPLETION OF THE CONSTRUCTION OF THE STORMWATER POND. THE SURVEY SHALL BE COMPLETED PRIOR TO THE POND FILLING WITH WATER. CONTRACTOR SHALL GIVE EXCEL ENGINEERING A MINIMUM OF A 3 DAY NOTICE. PLEASE NOTE THAT THE HORIZONTAL TOLERANCE FOR POND CONSTRUCTION IS 0.50' AND THE VERTICAL TOLERANCE FOR POND, OUTLET, AND SPILLWAY CONSTRUCTION IS 0.10'. ANY ADDITIONAL WORK REQUIRED TO SURVEY A POND FULL OF WATER OR FOR SURVEYING FOLLOWING REWORK SHALL BE AT THE CONTRACTOR'S EXPENSE.

PLAN SPECIFICATIONS (BASED ON CSI FORMAT)

6. THE USE, STORAGE, AND DISPOSAL OF CHEMICALS, CEMENT, AND OTHER COMPOUNDS AND MATERIALS USED ON SITE SHALL BE MANAGED DURING THE CONSTRUCTION PERIOD TO PREVENT THEIR TRANSPORT BY RUNOFF INTO WATERS OF THE STATE.
7. CONTRACTOR SHALL PROVIDE AN OPEN AGGREGATE CONCRETE TRUCK WASHOUT AREA ON SITE. CONTRACTOR TO ENSURE THAT CONCRETE WASHOUT SHALL BE CONTAINED TO THIS DESIGNATED AREA AND NOT BE ALLOWED TO RUN INTO STORM INLETS OR INTO THE OVERLAND STORMWATER DRAINAGE SYSTEM. WASHOUT AREA SHALL BE REMOVED UPON COMPLETION OF CONSTRUCTION.
8. TEMPORARY SITE RESTORATION SHALL TAKE PLACE IN DISTURBED AREAS THAT WILL NOT BE BROUGHT TO FINAL GRADE OR ON WHICH LAND DISTURBING ACTIVITIES WILL NOT BE PERFORMED FOR A PERIOD GREATER THAN 14 DAYS AND REQUIRES VEGETATIVE COVER FOR LESS THAN ONE YEAR. THIS TEMPORARY SITE RESTORATION REQUIREMENT ALSO APPLIES TO SOIL STOCKPILES THAT EXIST FOR MORE THAN 7 DAYS. PERMANENT RESTORATION APPLIES TO AREAS WHERE PERENNIAL VEGETATIVE COVER IS NEEDED TO PERMANENTLY STABILIZE AREAS OF EXPOSED SOIL. PERMANENT STABILIZATION SHALL OCCUR WITHIN 3 WORKING DAYS OF FINAL GRADING. TOPSOIL, SEED, AND MULCH SHALL BE IN GENERAL CONFORMANCE WITH TECHNICAL STANDARDS 1058 AND 1059 AND SHALL MEET THE SPECIFICATIONS FOUND IN THE LANDSCAPING AND SITE STABILIZATION SECTION OF THIS CONSTRUCTION DOCUMENT. ANY SOIL EROSION THAT OCCURS AFTER FINAL GRADING AND/OR FINAL STABILIZATION MUST BE REPAIRED AND THE STABILIZATION WORK REDONE.
9. IF SITE DEWATERING IS REQUIRED FOR PROPOSED CONSTRUCTION ACTIVITIES, ALL SEDIMENT LADEN WATER GENERATED DURING THE DEWATERING PROCESS SHALL BE TREATED TO REMOVE SEDIMENT PRIOR TO DISCHARGING OFF-SITE OR TO WATERS OF THE STATE. FOLLOW ALL PROCEDURES FOUND IN TECHNICAL STANDARD 1061.
10. ALL OFF-SITE SEDIMENT DEPOSITS OCCURRING AS A RESULT OF CONSTRUCTION WORK OR A STORM EVENT SHALL BE CLEANED UP BY THE END OF EACH WORKING DAY. DUST CONTROL REQUIREMENTS SHALL BE FOLLOWED PER WI DNR TECHNICAL STANDARD 1068 (CURRENT EDITION). FLUSHING SHALL NOT BE ALLOWED.

G. EROSION CONTROL MEASURES SHALL NOT BE REMOVED UNTIL THE AREA(S) SERVED HAVE ESTABLISHED VEGETATIVE COVER.
H. ONCE THE CONSTRUCTION SITE HAS BEEN FULLY STABILIZED AND TEMPORARY EROSION CONTROL BEST MANAGEMENT PRACTICES HAVE BEEN REMOVED, THE CONTRACTOR SHALL FILE A CONSTRUCTION NOTICE OF TERMINATION WITH THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES IN ACCORDANCE WITH NR 216.55.
I. AT THE COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL GIVE THE OWNER COPIES OF THE EROSION CONTROL AND STORM WATER MANAGEMENT PLANS, AMENDMENTS TO PLANS, SUPPORTING PLAN DATA, AND CONSTRUCTION SITE EROSION CONTROL INSPECTION REPORTS. THE OWNER SHALL RETAIN THESE FOR A PERIOD OF 3 YEARS FROM THE DATE OF TERMINATING COVERAGE UNDER WPDES GENERAL PERMIT.
J. ALL POST CONSTRUCTION STORMWATER MANAGEMENT BEST MANAGEMENT PRACTICES SHALL BE CONSTRUCTED BEFORE THE SITE HAS UNDERGONE FINAL STABILIZATION.

DIVISION 32 EXTERIOR IMPROVEMENTS

32 10 00 TEMPORARY GRAVEL AREAS

A. CONTRACTOR TO PROVIDE COMPACTED GRAVEL WHERE INDICATED ON THE PLANS. ALL AGGREGATE PROVIDED MUST COMPLY WITH SECTION 305 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION. CONTRACTOR TO PROVIDE AGGREGATE TYPES AND DEPTHS AS INDICATED BELOW:
   8" OF 3/4" CRUSHED AGGREGATE
   8" OF 3" CRUSHED AGGREGATE
B. CONTRACTOR TO COMPACT THE AGGREGATE TO AN AVERAGE DENSITY PER WISCONSIN STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION. ALL GRAVEL AREAS SHALL BE GRADED TO WITHIN 0.10' OF DESIGN SURFACE GRADES WITH POSITIVE DRAINAGE BEING MAINTAINED IN ACCORDANCE WITH DESIGN PLANS. A MINIMUM OF 1% SLOPE SHALL BE MAINTAINED IN ALL GRAVEL AREAS.

32 10 00 AGGREGATE BASE & ASPHALT PAVEMENT

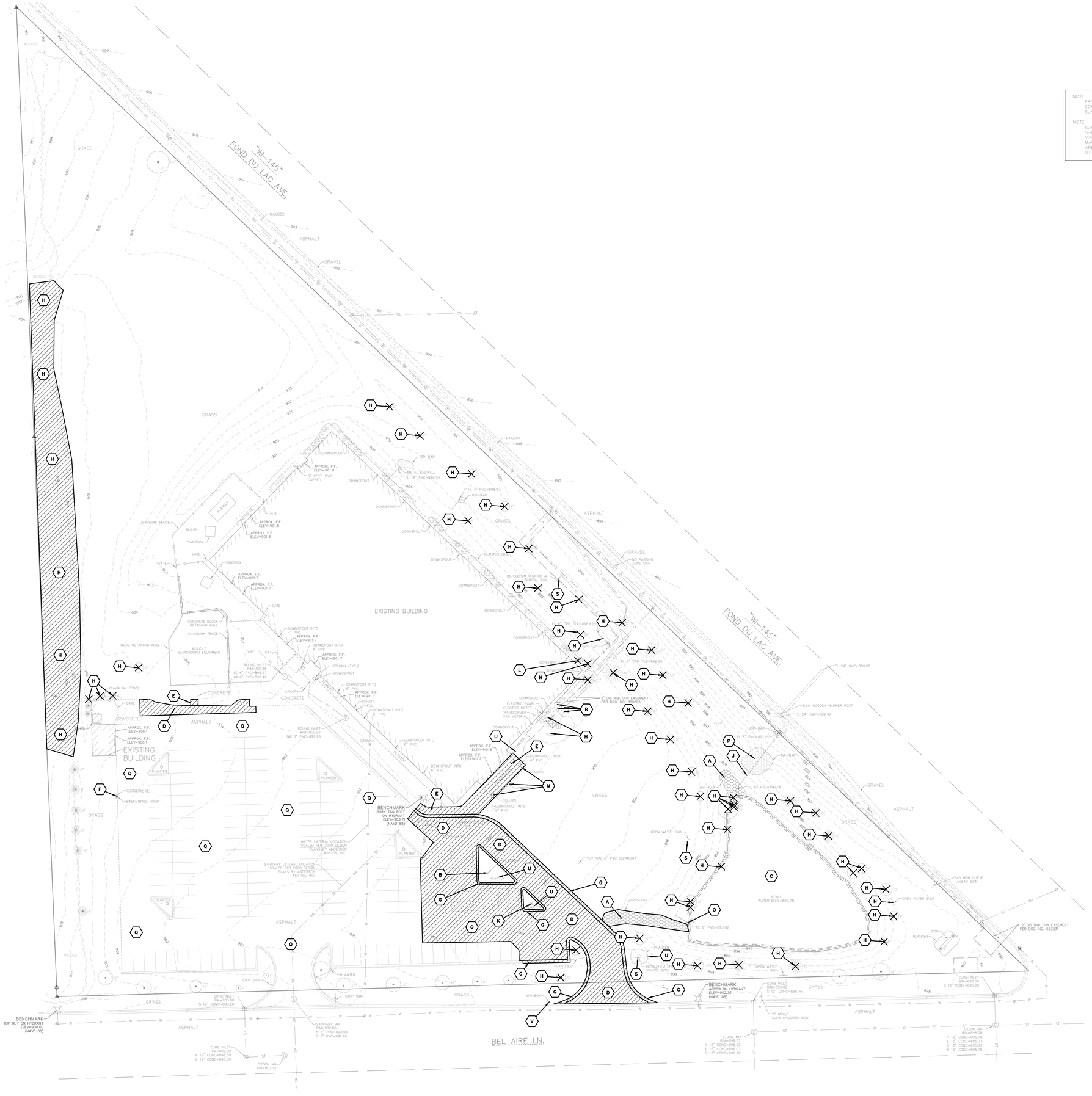
A. CONTRACTOR TO PROVIDE COMPACTED AGGREGATE BASE AND HOT MIX ASPHALT PAVEMENT WHERE INDICATED ON THE PLANS. ALL AGGREGATE PROVIDED MUST COMPLY WITH SECTION 305 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION. PROVIDE HOT MIX ASPHALT MIXTURE TYPES PER SECTION 460 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION. CONTRACTOR SHALL OBTAIN AND REVIEW SOILS REPORT FOR RECOMMENDATIONS FOR GEO-GRID / GEOTEXTILE BELOW CRUSHED AGGREGATE (IF APPLICABLE). CONTRACTOR TO PROVIDE ASPHALT PAVEMENT TYPES AND DEPTHS AS INDICATED BELOW:

STANDARD ASPHALT PAVING SECTION	HEAVY ASPHALT PAVING SECTION
1-1/2" SURFACE COURSE (5 LT 58-28S)	1-1/2" SURFACE COURSE (5 LT 58-28S)
(WISDOT 455.2.5 TACK COAT (STAGED PAVING)	WISDOT 455.2.5 TACK COAT (STAGED PAVING)
2" BINDER COURSE (4 LT 58-28S)	2-1/2" BINDER COURSE (4 LT 58-28S)
10" OF 1-1/4" CRUSHED AGGREGATE	12" OF 1-1/4" CRUSHED AGGREGATE

B. CONTRACTOR TO COMPACT THE AGGREGATE BASE, ASPHALT BINDER COURSE, AND ASPHALT SURFACE COURSE TO AN AVERAGE DENSITY PER WISCONSIN STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION. ALL ASPHALT PAVEMENT AREAS SHALL BE PAVED TO WITHIN 0.05' OF DESIGN SURFACE GRADES WITH POSITIVE DRAINAGE BEING MAINTAINED IN ACCORDANCE WITH DESIGN PLANS. A MINIMUM OF 1.5% SLOPE SHALL BE MAINTAINED IN ALL ASPHALT PAVEMENT AREA.
C. HOT MIX ASPHALT CONSTRUCTION TO BE PROVIDED PER MORE STRINGENT REQUIREMENTS OF GEOTECHNICAL REPORT OR CONSTRUCTION DOCUMENTS.
D. CONTRACTOR TO PROVIDE 4" WIDE WHITE PAINTED STRIPING FOR PARKING STALLS, TRAFFIC LANES, AND NO PARKING AREAS. WHITE PAINT MARKINGS SHALL ALSO BE PROVIDED FOR H.C. ACCESSIBLE SYMBOLS, TRAFFIC ARROWS, AND TRAFFIC MESSAGES.

32 20 00 CONCRETE AND AGGREGATE BASE

A. CONTRACTOR TO PROVIDE CRUSHED AGGREGATE BASE AND CONCRETE WHERE INDICATED ON THE PLANS.
B. ALL AGGREGATE PROVIDED MUST COMPLY WITH SECTION 305 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION. ALL AGGREGATE PLACED MUST BE COMPACTED TO AN AVERAGE DENSITY PER WISCONSIN STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.
C. DESIGN AND CONSTRUCTION OF ALL CAST-IN-PLACE EXTERIOR CONCRETE FLAT WORK SHALL CONFORM TO ACI 330R-08 & ACI 318-08.
D. EXTERIOR CONCRETE FLAT WORK CONSTRUCTION TO BE PROVIDED PER MORE STRINGENT REQUIREMENTS OF THE GEOTECHNICAL REPORT OR THIS SPECIFICATION. CONCRETE FLAT WORK CONSTRUCTION IS AS FOLLOWS:
   1. SIDEWALK CONCRETE - 4" OF CONCRETE OVER 4" OF 3/4" CRUSHED AGGREGATE BASE. CONTRACTION JOINTS SHALL CONSIST OF 1/8" WIDE BY 1" DEEP TOOLED JOINT WHERE INDICATED ON THE PLANS.
   2. HEAVY DUTY CONCRETE (TRUCK TRAFFIC) - 6" OF CONCRETE OVER 6" OF 3/4" CRUSHED AGGREGATE. CONCRETE SHALL BE REINFORCED WITH #3 REBARS ON CHAIRS AT 3' O.C. REBAR SHALL BE PLACED PLACED IN THE UPPER 1/3 TO ½ OF THE SLAB. CONTRACTION JOINTS SHALL BE SAWCUT 1.5" IN DEPTH AND BE SPACED A MAXIMUM OF 15' ON CENTER.
E. DESIGN MIXES SHALL BE IN ACCORDANCE WITH ASTM C94
   1. STRENGTH TO BE MINIMUM OF 4,500 PSI AT 28 DAYS FOR EXTERIOR CONCRETE.
   2. MAXIMUM WATER/CEMENT RATIO SHALL BE 0.45.
   3. SLUMP SHALL NOT EXCEED 4" FOR EXTERIOR CONCRETE FLAT WORK
   4. SLUMP SHALL BE 2.5" OR LESS FOR SLIP-FORMED CURB AND GUTTER
   5. SLUMP SHALL BE BETWEEN 1.5" TO 3" FOR NON SLIP-FORMED CURB AND GUTTER.
   6. ALL EXTERIOR CONCRETE SHALL BE AIR ENTRAINED WITH 4% TO 7% AIR CONTENT. NO OTHER ADMIXTURES SHALL BE USED WITHOUT APPROVAL OF EXCEL ENGINEERING, INC. CALCIUM CHLORIDE SHALL NOT BE USED.
   7. MAXIMUM AGGREGATE SIZE FOR ALL EXTERIOR CONCRETE SHALL BE 0.75 INCHES.
F. VERIFY EQUIPMENT CONCRETE PAD SIZES WITH CONTRACTOR REQUIRING PAD. PADS SHALL HAVE FIBERMESH 300 FIBERS AT A RATE OF 1.5 LBS/CU. YD. OR 6 X 6-W1.4 X W1.4 WELDED WIRE MESH WITH MINIMUM 1 INCH COVER. EQUIPMENT PADS SHALL BE 5.5 INCHES THICK WITH 1 INCH CHAMFER UNLESS SPECIFIED OTHERWISE. COORDINATE ADDITIONAL PAD REQUIREMENTS WITH RESPECTIVE CONTRACTOR.
G. ALL CONCRETE FLAT WORK SURFACES AND CONCRETE CURB FLOWLINES SHALL BE CONSTRUCTED TO WITHIN 0.05' OF DESIGN SURFACE AND FLOWLINE GRADES ASSUMING POSITIVE DRAINAGE IS MAINTAINED IN ACCORDANCE WITH THE DESIGN PLANS.
H. CONCRETE FLAT WORK SHALL HAVE CONSTRUCTION JOINTS OR SAW CUT JOINTS PLACED AS INDICATED ON THE PLANS OR PER THIS SPECIFICATION. SAWCUTS SHALL BE DONE AS SOON AS POSSIBLE, BUT NO LATER THAN 24 HOURS AFTER CONCRETE IS PLACED. CONCRETE CURB AND GUTTER JOINTING SHALL BE PLACED EVERY 10' OR CLOSER (6' MIN.). IF CONCRETE PAVEMENT IS ADJACENT T



SPECIFICATION NOTE:
SEE SHEET C0.1 FOR PLAN SPECIFICATIONS AND REQUIREMENTS

NOTE:
PROPERTY LINES AND EASEMENTS SHOWN ON THIS SURVEY WERE DRAFTED FROM INFORMATION CONTAINED IN TITLE COMMITMENT FILE NO. 2214143, BY KNIGHT BARRY TITLE GROUP, DATED MAY 23, 2023. AN UPDATED PLAT OF SURVEY, CERTIFIED SURVEY MAP OR ALTA SURVEY HAS NOT BEEN AUTHORIZED.

NOTE:
SURFACE INDICATIONS OF UTILITIES ALONG WITH DIGGER'S HOTLINE MARKINGS PER TICKET NO. 20231926598 HAVE BEEN SHOWN. SIZES AND ELEVATION OF UNDERGROUND UTILITIES SHOWN HEREON ARE BASED ON FIELD MEASUREMENTS OF VISIBLE STRUCTURES IN COMBINATION WITH AVAILABLE DATA PROVIDED TO EXCEL ENGINEERING. EXCEL ENGINEERING MAKES NO GUARANTEE THAT ALL THE EXISTING UTILITIES IN THE SURVEYED AREA HAVE BEEN SHOWN NOR THAT THEY ARE IN THE EXACT LOCATION INDICATED. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.

DEMOLITION PLAN KEYNOTES

A	REMOVE RIP RAP
B	REMOVE FLAG POLE
C	DRAIN EXISTING POND AND REGRADE. SEE C1.2.
D	SAWCUT (AS NECESSARY) AND REMOVE ASPHALT
E	SAWCUT (AS NECESSARY) AND REMOVE CONCRETE
F	REMOVE BASKETBALL HOOP AND ASSOCIATED CONCRETE
G	REMOVE CURB AND GUTTER. SAWCUT (AS NECESSARY)
H	REMOVE TREE
J	REMOVE STORM PIPING
K	REMOVE LIGHT POLE
L	REMOVE SHRUB
M	REMOVE CANOPY, COLUMNS, AND DOWNSPOUTS
N	REMOVE 6" CPP PIPE AND RIP-RAP
O	REMOVE 6" PVC. CONTRACTOR TO FIELD VERIFY PIPE EXTENTS AND ENSURE COMPLETE REMOVAL WITH PROPOSED PROJECT IS FEASIBLE.
P	REMOVE AND REPLACE RIP RAP AS NECESSARY FOR STORM PIPE REMOVAL. SEE SHEET C1.2 AND C2.0 FOR PROPOSED SPILLWAY GRADING.
Q	PULVERIZE, GRADE, AND REPAVE EXISTING ASPHALT. RESTRIPE PARKING STALLS.
R	REMOVE AND RELOCATE ELECTRIC, GAS, TELEPHONE, AND TV SERVICES. REMOVE TRANSFORMER, PANELS, AND METERS. DISTRIBUTION EASEMENT TO BE TERMINATED AND NEW EASEMENT MADE FOR NEW DISTRIBUTION. CONTRACTOR TO COORDINATE REMOVAL AND RELOCATION WITH UTILITY COMPANIES. CONTRACTOR TO COORDINATE WITH UTILITY COMPANIES TO DIG UTILITIES DEEPER AS NECESSARY TO ENSURE ADEQUATE COVER OVER EXISTING LINES WITH PROPOSED GRADING ON SHEET C1.2.
S	REMOVE AND RELOCATE SIGN. CONTRACTOR TO COORDINATE RELOCATION WITH OWNER.
U	REMOVE PLANTERS
V	REMOVE AND RELOCATE MAILBOX

NORTH
1"= 30' SCALE 30' 0 30' 60' FEET

CIVIL EXISTING SITE AND DEMOLITION PLAN

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PROJECT INFORMATION

PROPOSED WORSHIP FACILITY ADDITION FOR:
BETHLEHEM LUTHERAN CHURCH
N108W14290 BEL AIRE LN • GERMANTOWN, WI 53022

PROFESSIONAL SEAL

PRELIMINARY DATES
OCT. 18, 2023
NOV. 3, 2023
NOV. 13, 2023
DEC. 1, 2023
DEC. 8, 2023

NOT FOR CONSTRUCTION

JOB NUMBER
2129100

SHEET NUMBER
C1.0

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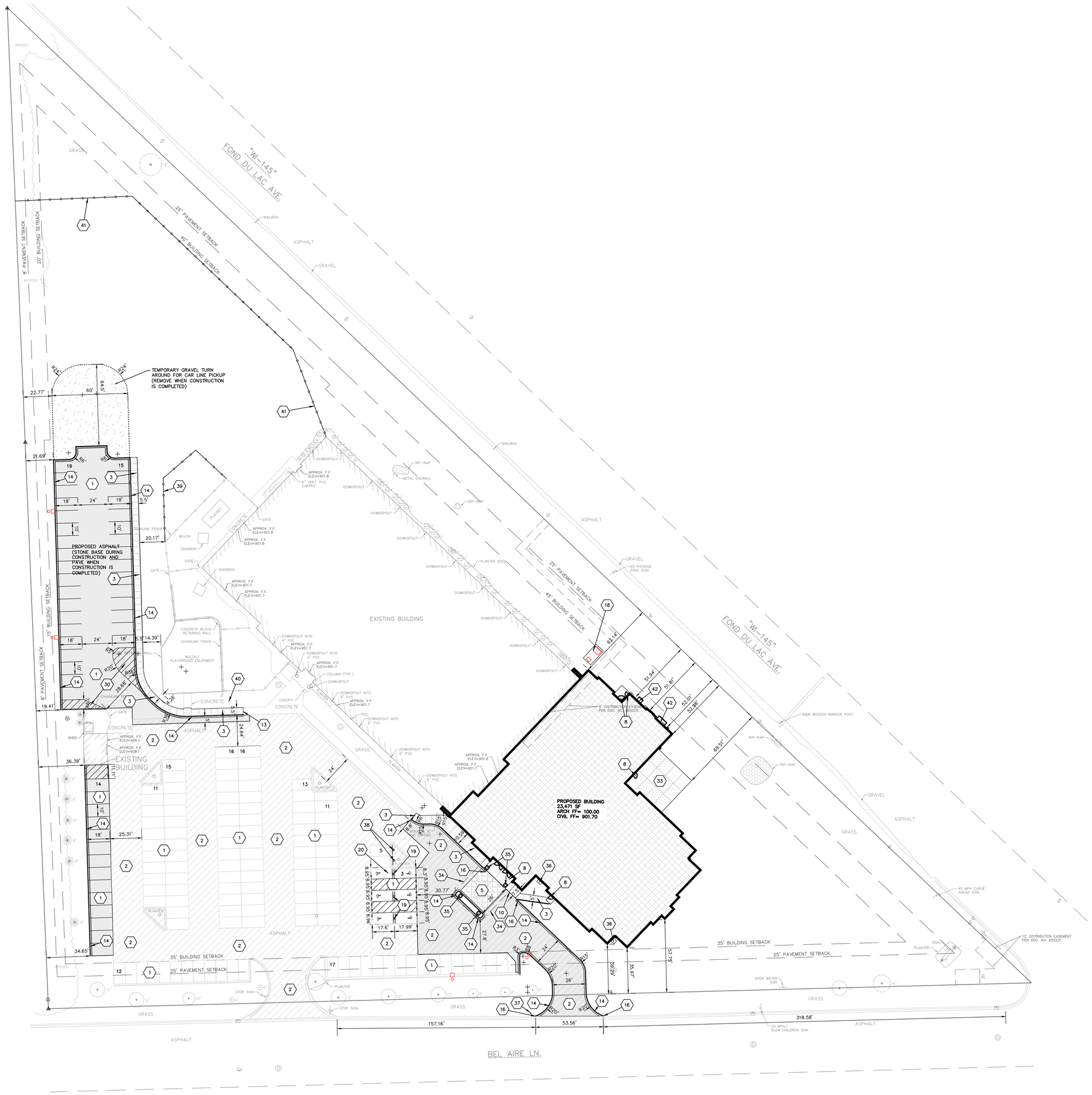

SPECIFICATION NOTE:
SEE SHEET C0.1 FOR PLAN SPECIFICATIONS AND REQUIREMENTS

SITE INFORMATION:

PROPERTY AREA: 308,893 S.F. (7.09 ACRES).

EXISTING ZONING: I – INSTITUTIONAL

PROPOSED ZONING: I – INSTITUTIONAL

ADJACENT ZONING:

NORTHWEST: RS-3, RS-4, RS-5
WEST: RS-3, RS-5
SOUTH: RS-5

PROPOSED USE: BETHLEHEM CHURCH AND SCHOOL FACILITY BUILDING ADDITION

AREA OF SITE DISTURBANCE: 3.47 ACRES

SETBACKS: BUILDING: FOND DU LAC AVE = VARIES (40'-45')
BEL AIRE LN = 35'
SIDE (W) = VARIES (15'-20')

PAVEMENT: FOND DU LAC AVE = 25'
BEL AIRE LN = 25'
SIDE (W) = 8'

PROPOSED BUILDING HEIGHT: 45' (MAX. HEIGHT ALLOWED: 35')
STEEPLE PROVISION 17.50 (I)(B) ALLOWS PLAN COMMISSION TO APPROVE

PARKING REQUIRED: MINIMUM 1 PARKING SPACE/3 SEATS (167 SPACES REQ.)

PARKING PROVIDED: 167 SPACES (6 H.C. ACCESSIBLE)

HANDICAP STALLS REQUIRED: 6, HANDICAP STALLS PROVIDED: 6

MAX GROSS BUILDING FLOOR AREA RATIO: 70%

EXISTING SITE DATA

	AREA (AC)	AREA (SF)	RATIO
PROJECT SITE	7.09	308,893	
BUILDING FLOOR AREA	0.95	41,316	13.4%
PAVEMENT (ASP. & CONC.)	1.50	65,545	21.2%
TOTAL IMPERVIOUS	2.45	106,861	34.6%
LANDSCAPE/ OPEN SPACE	4.64	202,032	65.4%

PROPOSED SITE DATA

	AREA (AC)	AREA (SF)	RATIO
PROJECT SITE	7.09	308,893	
BUILDING FLOOR AREA	1.47	64,116	20.8%
PAVEMENT (ASP. & CONC.)	1.82	79,350	25.7%
TOTAL IMPERVIOUS	3.29	143,466	46.4%
LANDSCAPE/ OPEN SPACE	3.80	165,427	53.6%

SITE PLAN KEYNOTES

1	STANDARD ASPHALT SECTION (TYP.)
2	HEAVY DUTY ASPHALT SECTION (TYP.)
3	CONCRETE SIDEWALK (TYP.)
5	HEAVY DUTY CONCRETE (TYP.)
8	CONCRETE STOOP (TYP.) SEE ARCH. PLANS FOR DETAILS.
10	FLUSH WALK (TYP.)
13	ADA SIDEWALK RAMP (TYP.)
14	18" CURB & GUTTER (TYP.)
16	CURB TAPER (TYP.)
18	CONCRETE TRANSFORMER PAD BY UTILITY SUPPLIER (CONTRACTOR TO VERIFY FINAL LOCATION & DESIGN PRIOR TO CONSTRUCTION)
19	HANDICAP SIGN (TYP.)
20	HANDICAP STALL & STRIPING PER STATE CODES.
30	PAINT STRIPING (TYP). COLOR TO MATCH PARKING STALL STRIPING.
33	PATIO. SEE ARCH PLANS.
34	CANOPY. SEE ARCH PLANS.
35	COLUMN. SEE ARCH PLANS.
36	CONCRETE HVAC PAD. SEE HVAC PLANS. (CONTRACTOR TO VERIFY FINAL LOCATION & DESIGN PRIOR TO CONSTRUCTION)
37	RELOCATED MAILBOX
38	VISITOR AND SENIOR PARKING SIGN (TYP.)
39	EXPANDED PLAY AREA BY OWNER (TYP.)
40	PROPOSED SHADE SAIL STRUCTURE BY OWNER (TYP.)
41	TEMPORARY FENCE DURING CONSTRUCTION. CONTRACTOR TO COORDINATE WITH OWNER. (TYP.)
42	AREA WELL WITH HVAC LOUVER. SEE HVAC AND STRUCTURAL PLANS (TYP.)

PAVEMENT HATCH KEY:

- PROPOSED AND MODIFIED GRADING ASPHALT
- HEAVY DUTY ASPHALT
- SIDEWALK CONCRETE
- HEAVY DUTY CONCRETE

NORTH

1"= 30' SCALE 30' 0 30' 60' FEET

CIVIL SITE PLAN

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PROJECT INFORMATION

PROPOSED WORSHIP FACILITY ADDITION FOR:

BETHLEHEM LUTHERAN CHURCH

N108W14290 BEL AIRE LN • GERMANTOWN, WI 53022

PROFESSIONAL SEAL

PRELIMINARY DATES
JULY 10, 2023
SEPT. 22, 2023
OCT. 18, 2023
NOV. 3, 2023
NOV. 13, 2023
DEC. 1, 2023
DEC. 8, 2023

NOT FOR CONSTRUCTION

JOB NUMBER
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SHEET NUMBER
C1.1

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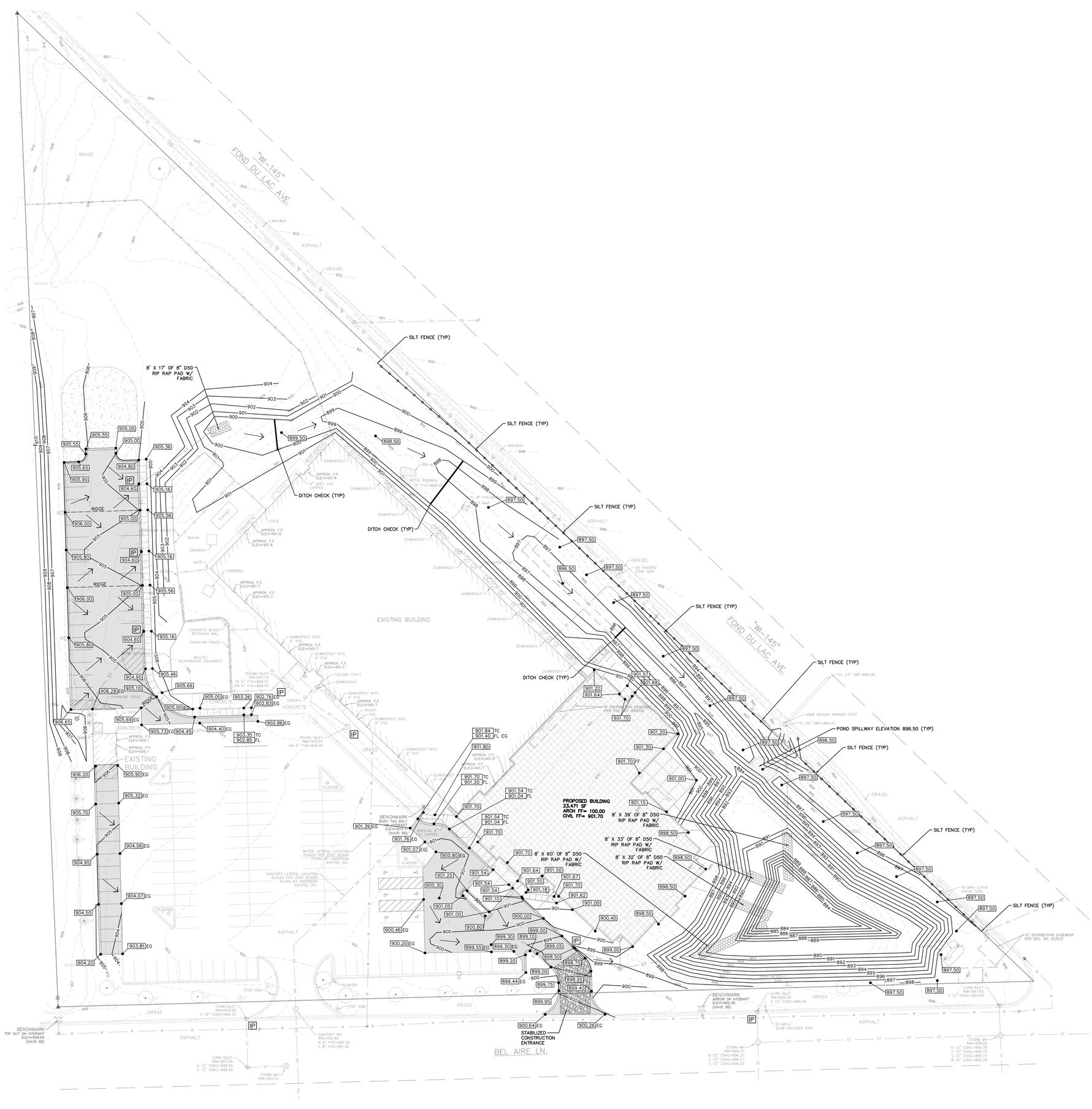

SPECIFICATION NOTE:
SEE SHEET C0.1 FOR PLAN SPECIFICATIONS AND REQUIREMENTS

NOTES:

1. HANDICAP STALL AND ACCESS AISLES SHALL NOT EXCEED A SLOPE OF 1.50% IN ANY DIRECTION. HANDICAP STALL & ACCESS AISLES SHALL CONFORM TO ADA REQUIREMENTS (CURRENT EDITION)
2. ALL SIDEWALKS SHALL NOT EXCEED A MAXIMUM CROSS SLOPE OF 1.50% AND RUNNING SLOPE OF 4.50% UNLESS OTHERWISE SPECIFIED.

IP INLET PROTECTION NOTE:

CONTRACTOR SHALL PROVIDE TEMPORARY INLET PROTECTION FOR ALL CURB INLETS & CATCH BASINS ONSITE & OFFSITE IMMEDIATELY DOWNSTREAM OF THE PROJECT SITE PER LOCAL CODE.

STABILIZED CONSTRUCTION ENTRANCE NOTE:

CONTRACTOR SHALL PROVIDE STABILIZED CONSTRUCTION ENTRANCE AT CONSTRUCTION ENTRANCE FOR PROPOSED IMPROVEMENTS AS REQUIRED PER CODE.

CONCRETE WASHOUT NOTE:

CONTRACTOR SHALL PROVIDE CONCRETE WASHOUT AS REQUIRED PER CODE. FINAL LOCATION TBD BY CONTRACTOR.

CIVIL GRADING AND EROSION CONTROL PLAN

NORTH
1" = 30' SCALE
30' 0 30' 60' FEET

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PROJECT INFORMATION

PROPOSED WORSHIP FACILITY ADDITION FOR:
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SHEET NUMBER
C1.2

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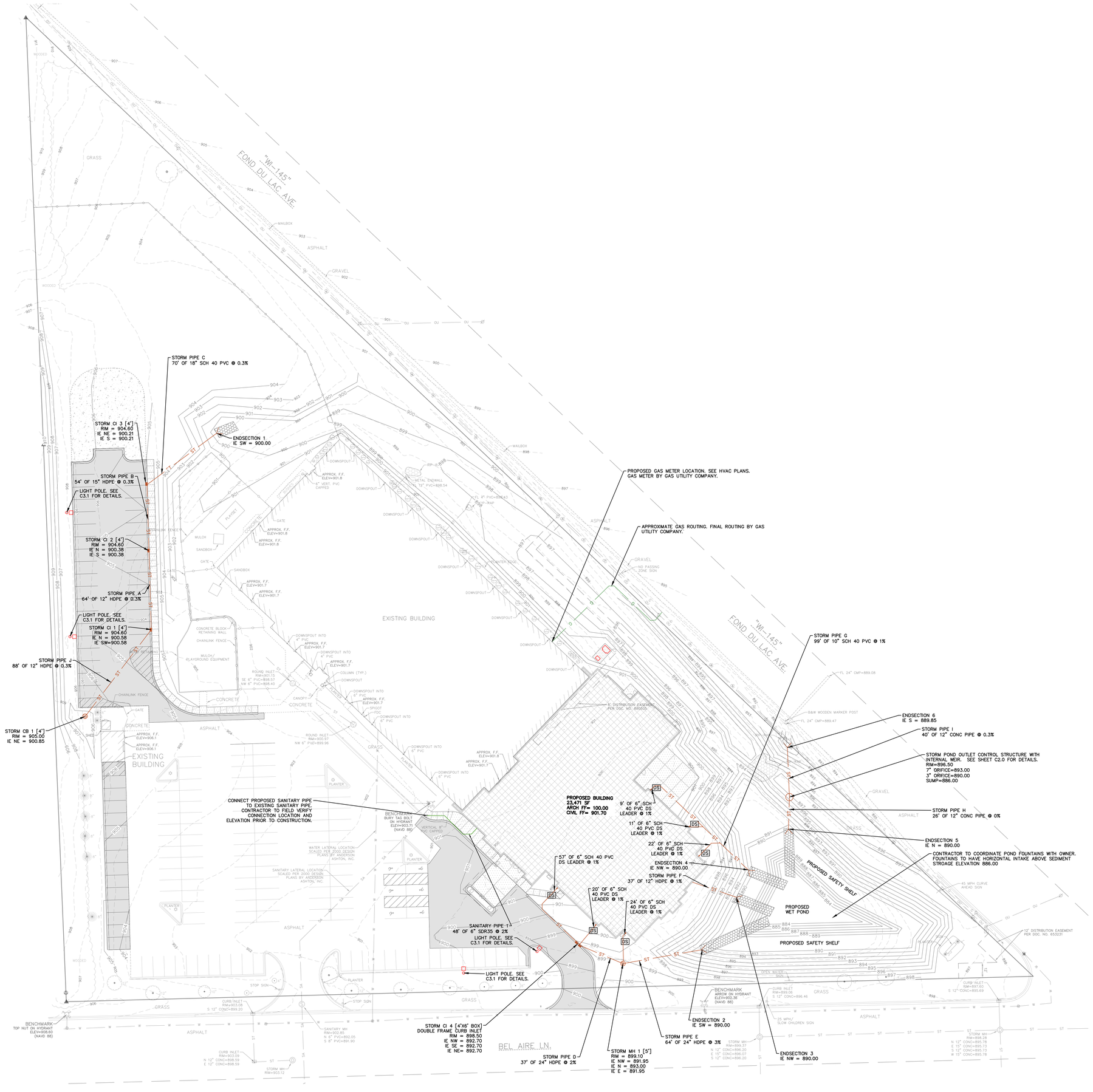

SPECIFICATION NOTE:
SEE SHEET C0.1 FOR PLAN SPECIFICATIONS AND REQUIREMENTS

DOWNSPOUT NOTE:
DS = DENOTES DOWNSPOUT TO GRADE LOCATIONS. PROVIDE SPLASH BLOCKS AT ALL DS TO GRADE LOCATIONS. SEE ARCH PLANS FOR FINAL LOCATIONS.

CLEANOUT NOTE:
CO = DENOTES LOCATIONS WHERE CONTRACTOR SHALL INSTALL CLEANOUTS, SEE C0.1 FOR SPECIFICATION.

WATER NOTE:
WATER SERVICE FOR PROPOSED BUILDING ADDITION TO BE CONNECTED TO EXISTING WATER LINES IN EXISTING BUILDING. SEE PLUMBING PLANS.

NORTH
1"= 30' SCALE 30' 0 30' 60' FEET

CIVIL UTILITY PLAN

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PROJECT INFORMATION

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SHEET NUMBER
C1.3

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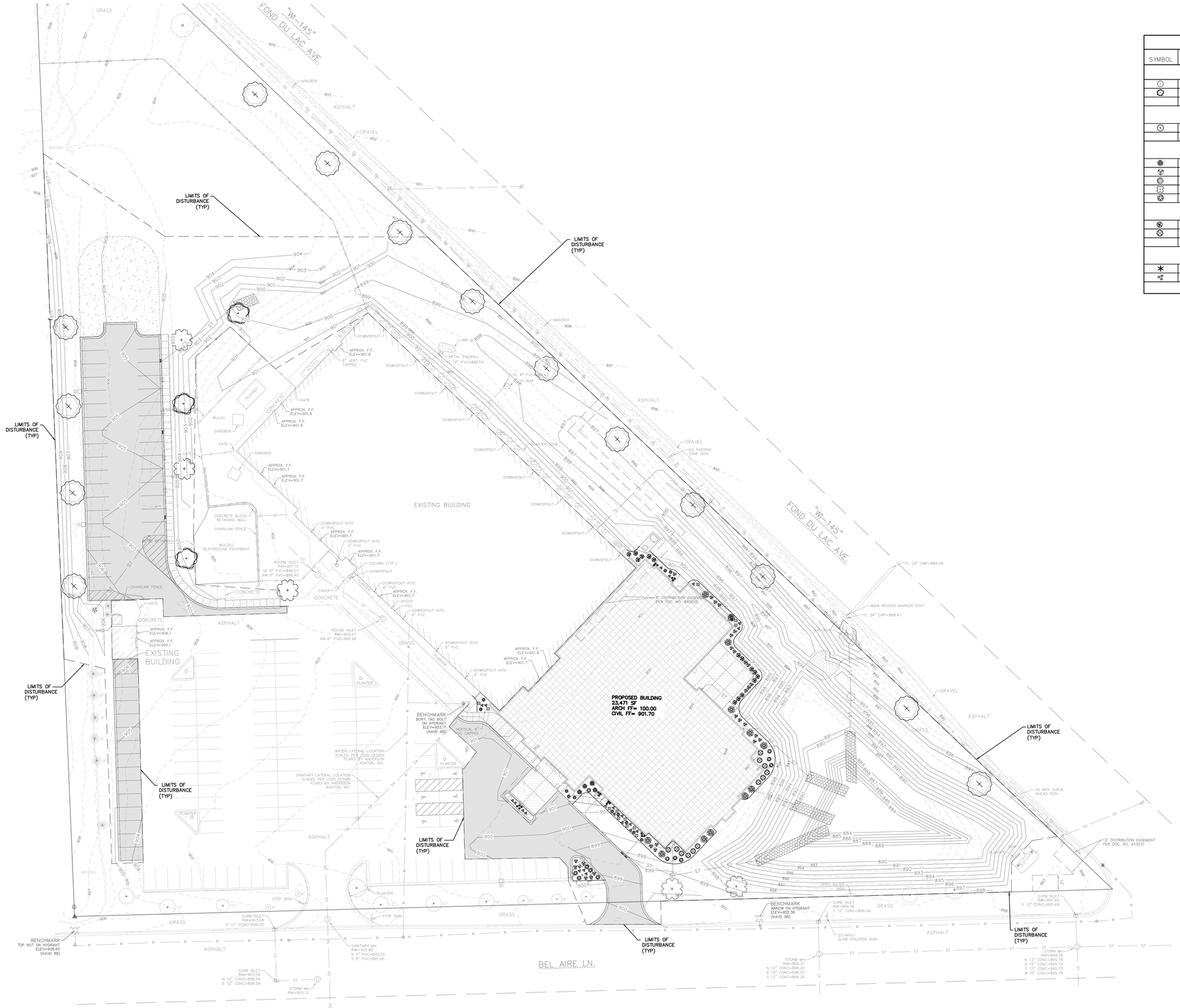
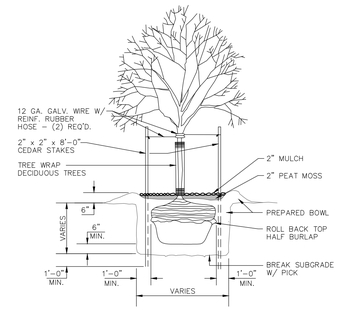


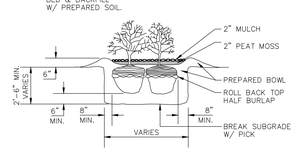
LANDSCAPING PLANTING SCHEDULE

SYMBOL	COMMON NAME	BOTANICAL NAME	PLANTED SIZE	QUANTITY
	DECIDUOUS TREES			
	Sugar Maple	Acer saccharum	3"	6
	Redmond Linden	Tilia americana	2"	3
	EVERGREEN TREES			
	Black Hills Spruce	Picea glauca	6'	14
	DECIDUOUS SHRUBS			
	Burning Bush	Evonymus alatus 'Compactus'	30"-36"	16
	Goldmound Spirea	Spiraea x bumalda 'Goldmound'	15"-18"	28
	Barberry Concorde	Berberis thunbergii concorde	24"	12
	Anthony Waterer Spirea	Spiraea x bumalda 'Anthony Water'	15"-18"	13
	Weigela Carnaval	Weigela Florida 'courtalor'	24"	12
	EVERGREEN SHRUBS			
	Wintergreen Boxwood	Buxus sinica var Insularis 'Wintergreen'	18"	15
	Techny Arborvitae	Thuja occidentalis	42"-48"	12
	PERENNIALS			
	Karl Foerster Reed Grass	Clamagrostis x acutiflora 'Karl Foerster'	1 gal pot	19
	Daylilies 'Stella de Oro'	Hemerocallis 'Stella de Oro'	1 gal pot	24



TREE PLANTING DETAIL
NO SCALE

NOTE:
FOR MASS PLANTINGS EXCAVATE ENTIRE BED & BACKFILL W/ PREPARED SOIL.



SHRUB PLANTING DETAIL
NO SCALE

NORTH
1"= 30'
30' 0 30' 60'
SCALE FEET

CIVIL LANDSCAPE AND RESTORATION PLAN

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PROJECT INFORMATION

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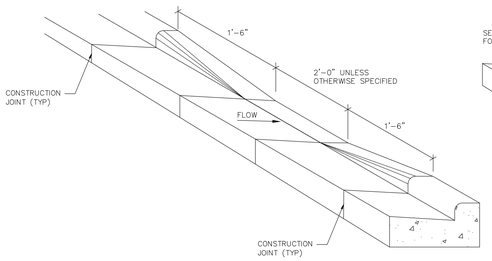

CURB CUT DETAIL
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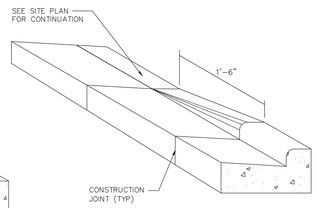

CURB TAPER DETAIL
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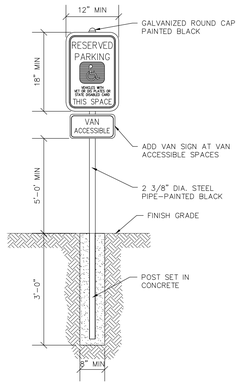


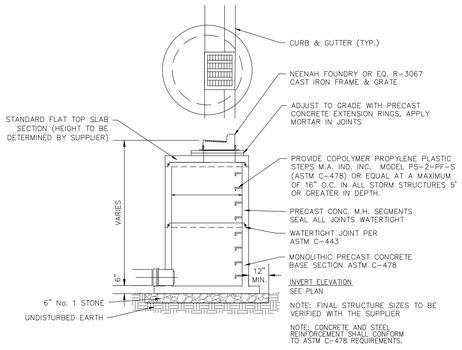
HANDICAP SIGNAGE WITH CONCRETE BASE DETAIL
NO SCALE

SPECIFICATION NOTE:
SEE SHEET C0.1 FOR PLAN SPECIFICATIONS AND REQUIREMENTS

CONSTRUCTION SEQUENCE

PHASE	TYPE OF ACTION
1. PRE-CONSTRUCTION ACTION	1. CONTRACTOR TO CALL DIGGERS HOTLINE AT A MINIMUM OF 3 DAYS PRIOR TO CONSTRUCTION.
	2. PLACE ALL SILT FENCE.
	3. CONSTRUCT TRACKING STONE ENTRANCES AND ANY TEMPORARY CONSTRUCTION ROADWAYS AS NEEDED.
	4. CONSTRUCT PERMANENT RETENTION/DETENTION PONDS AND PERMANENT STORMWATER CONVEYANCE SYSTEMS.
	5. CONSTRUCT TEMPORARY SEDIMENT TRAPS, SEDIMENT BASINS, AND ANY TEMPORARY STORMWATER CONVEYANCE SYSTEMS AS NEEDED.
	6. STABILIZE ALL TEMPORARY AND PERMANENT EROSION CONTROL AND STORMWATER CONVEYANCE SYSTEMS BEFORE TOPSOIL CAN BE STRIPPED.
2. CONSTRUCTION ACTION	1. SITE DEMOLITION AS REQUIRED.
	2. STRIP AND RELOCATE TOPSOIL TO THE DESIGNATED TOPSOIL STOCKPILE. FINAL LOCATION BY CONTRACTOR (VERIFY W/ OWNER). PROVIDE PERIMETER SILT FENCE UNTIL STABLIZED.
	3. BEGIN MASS EARTH WORK FOR THE BUILDING PAD AND PAVEMENT AREAS.
	4. CONSTRUCT ANY REMAINING STORMWATER CONVEYANCE SYSTEMS, AND INSTALL ALL OTHER UTILITIES ON SITE.
	5. DIG AND POUR ALL BUILDING FOOTINGS.
	6. PLACE GRAVEL FOR ALL PROPOSED PAVEMENT AREAS, INCLUDING FIRE LANES.
	7. TOPSOIL, SEED, AND MULCH ALL DISTURBED AREAS OUTSIDE THE BUILDING AND PROPOSED PAVEMENT AREAS.
	8. CONSTRUCT BUILDING.
	9. PAVE DRIVEWAYS AND PARKING AREAS.
	10. TOPSOIL, SEED, AND MULCH ALL OTHER DISTURBED AREAS. PLACE EROSION MATTING AND RIP RAP.
	11. ONCE SITE IS STABILIZED, CONSTRUCT INFILTRATION BASIN.
3. POST CONSTRUCTION ACTION	1. CONTRACTOR TO REMOVE TEMPORARY EROSION CONTROL MEASURES UPON SITE STABILIZATION.
	2. SEE THE POST CONSTRUCTION MAINTENANCE PLAN FOR PERMANENT STORMWATER MANAGEMENT SYSTEMS.

CONTRACTOR TO FOLLOW THE EROSION CONTROL SPECIFICATIONS FOR CONSTRUCTION EROSION CONTROL INSPECTION AND MAINTENANCE.



STORM CURB INLET W/ ROUND STRUCTURE DETAIL
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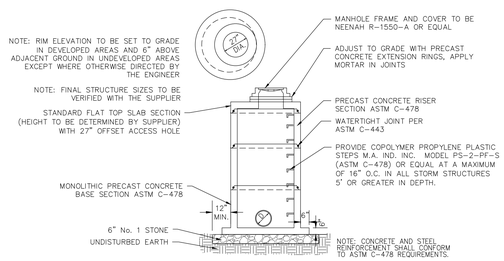
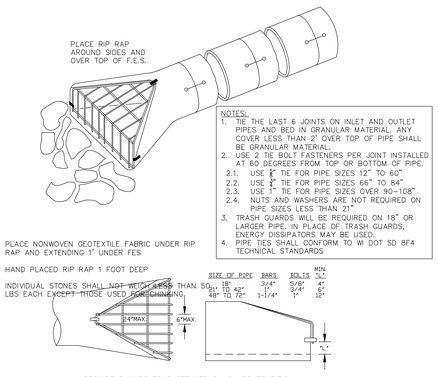


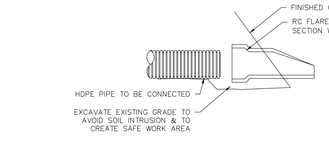
STORM MANHOLE DETAIL
NO SCALE



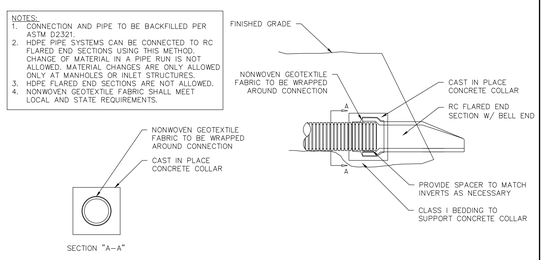
NOTES:
1. TIE THE LAST 6 JOINTS ON INLET AND OUTLET PIPES AND BED IN GRANULAR MATERIAL. ANY COVER LESS THAN 2' OVER TOP OF PIPE SHALL BE GRANULAR MATERIAL.
2. USE 2 TIE BOLT FASTENERS PER JOINT INSTALLED AT 60 DEGREES FROM TOP OR BOTTOM OF PIPE.
   2.1. USE 3/4" TIE FOR PIPE SIZES 12" TO 60"
   2.2. USE 3/4" TIE FOR PIPE SIZES 66" TO 84"
   2.3. USE 1" TIE FOR PIPE SIZES OVER 90-108"
   2.4. NUTS AND WASHERS ARE NOT REQUIRED ON PIPE SIZES LESS THAN 21"
3. TRASH GUARDS WILL BE REQUIRED ON 18" OR LARGER PIPE, IN PLACE OF TRASH GUARDS, ENERGY DISSIPATORS MAY BE USED.
4. PIPE TIES SHALL CONFORM TO WI DOT SD 8F4 TECHNICAL STANDARDS

SIZE OF PIPE	BARS	BOLTS	MIN %
18" TO 42"	3/4"	5/8"	4"
48" TO 72"	1"	3/4"	5"
	1-1/4"	1"	12"

CONCRETE END SECTION DETAIL
NO SCALE



NOTES:
1. CONNECTION AND PIPE TO BE BACKFILLED PER ASTM D2321.
2. HDPE PIPE SYSTEMS CAN BE CONNECTED TO RC FLARED END SECTIONS USING THIS METHOD. CHANGE OF MATERIAL IN A PIPE RUN IS NOT ALLOWED. MATERIAL CHANGES ARE ONLY ALLOWED ONLY AT MANHOLES OR INLET STRUCTURES.
3. HDPE FLARED END SECTIONS ARE NOT ALLOWED.
4. NONWOVEN GEOTEXTILE FABRIC SHALL MEET LOCAL AND STATE REQUIREMENTS.



CONNECTION DETAIL FOR HDPE PIPE TO RC FLARED END SECTION BELL END
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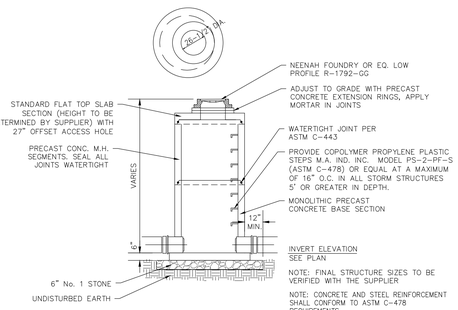

STORM CATCH BASIN DETAIL
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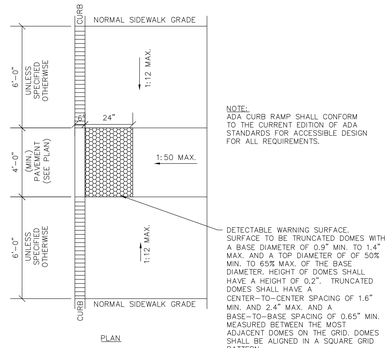
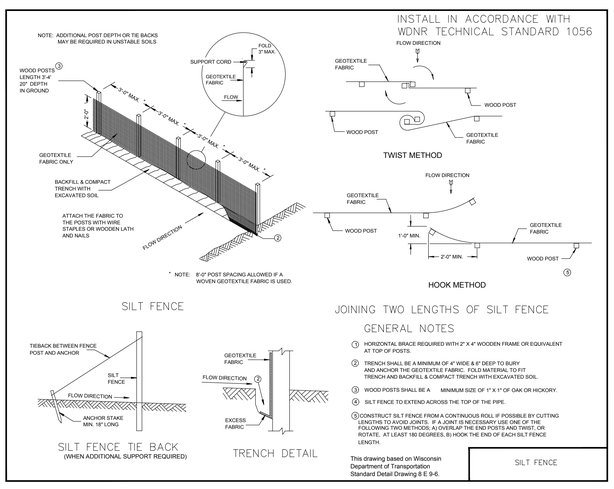


NOTE:
ADA CURB RAMP SHALL CONFORM TO THE CURRENT EDITION OF ADA STANDARDS FOR ACCESSIBLE DESIGN FOR ALL REQUIREMENTS.

ADA SIDEWALK RAMP DETAIL
NO SCALE



SILT FENCE – INSTALLATION DETAIL
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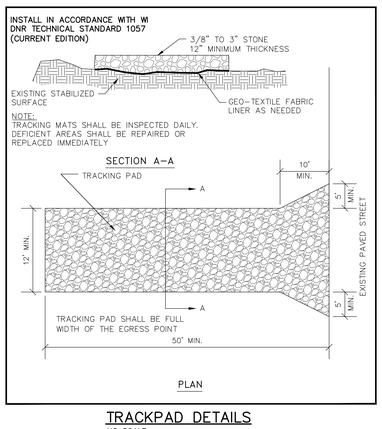

TRACKPAD DETAILS
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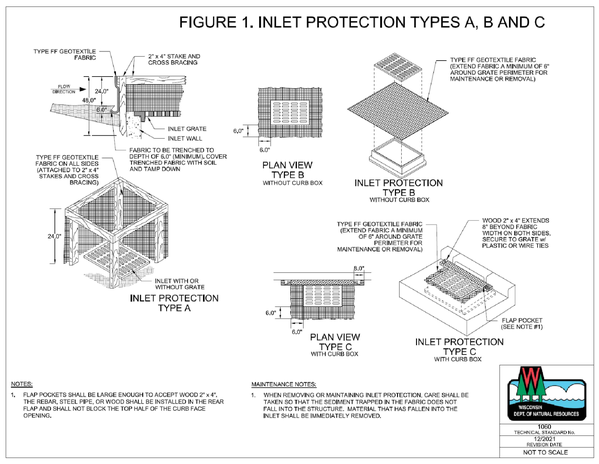


NOTES:
1. FLAP POCKETS SHALL BE LARGE ENOUGH TO ADDEPT WOOD 2"x 4", THE REBAR, STEEL PIPE, OR WOOD SHALL BE INSTALLED IN THE REAR FLAP AND SHALL NOT BLOCK THE TOP HALF OF THE CURB FACE OPENING.

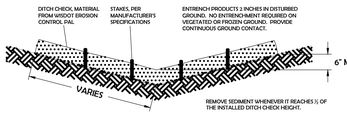
MAINTENANCE NOTES:
1. WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED IN THE FABRIC DOES NOT FALL INTO THE STRUCTURE. MATERIAL THAT HAS FALLEN INTO THE INLET SHALL BE IMMEDIATELY REMOVED.

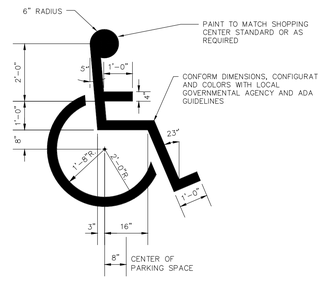
WISCONSIN DEPT. OF NATURAL RESOURCES
1060
TECHNICAL STANDARD NO.
12/2021
REVISION DATE
NOT TO SCALE

INLET PROTECTION DETAIL
NO SCALE

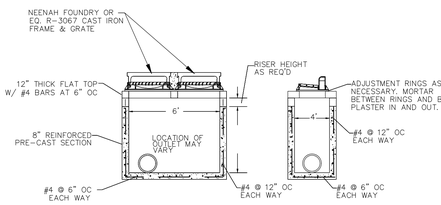
DITCH CHECK DETAIL

LOG-TYPE DITCH CHECK





HANDICAP STALL SYMBOL
NO SCALE



DOUBLE FRAME CURB INLET
NO SCALE

CIVIL DETAILS

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PROJECT INFORMATION

PROPOSED WORSHIP FACILITY ADDITION FOR:
BETHLEHEM LUTHERAN CHURCH
N108W14290 BEL AIRE LN • GERMANTOWN, WI 53022

PROFESSIONAL SEAL

PRELIMINARY DATES
OCT. 18, 2023
NOV. 13, 2023
DEC. 1, 2023
DEC. 8, 2023

NOT FOR CONSTRUCTION

JOB NUMBER
2129100

SHEET NUMBER
C2.0

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SPECIFICATION NOTE:
SEE SHEET C0.1 FOR PLAN SPECIFICATIONS AND REQUIREMENTS

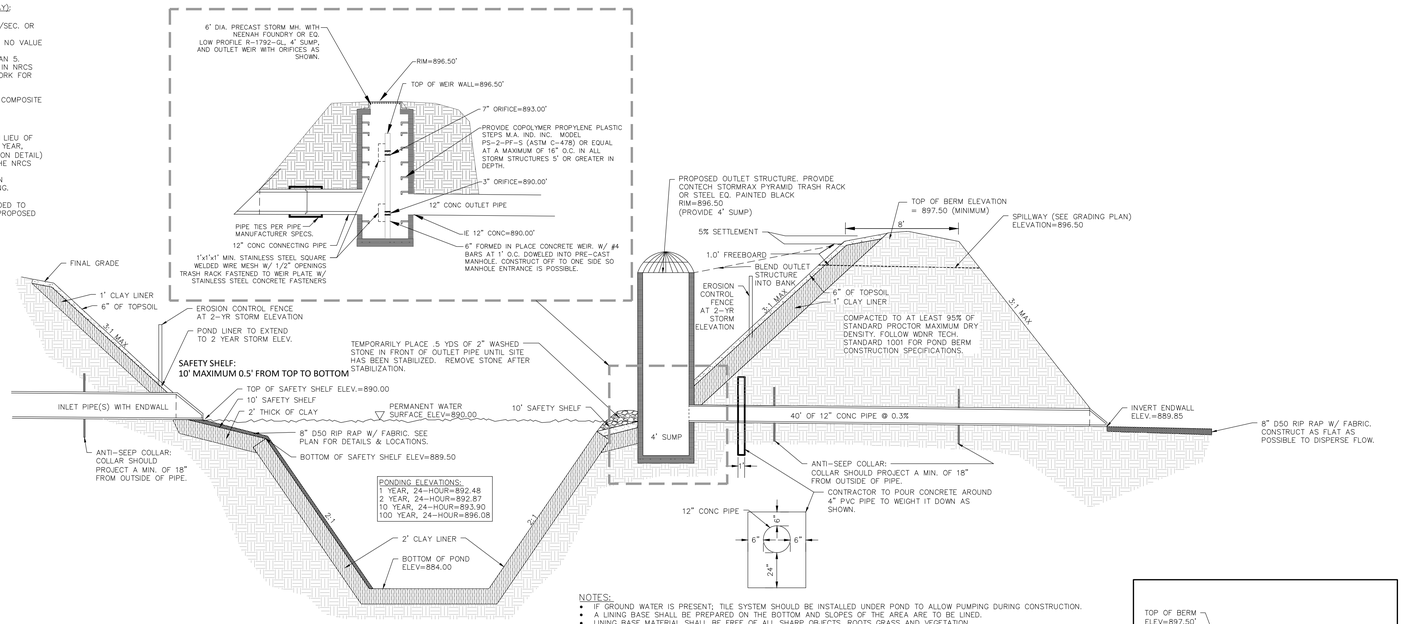
POND LINER CRITERIA FOR SAFETY SHELF AND BELOW (CLAY):

- 50% FINES (200 SIEVE) OR MORE.
- AN IN-PLACE HYDRAULIC CONDUCTIVITY OF $1x10^{-6}$ CM./SEC. OR LESS.
- AVERAGE LIQUID LIMIT VALUE OF 16 OR GREATER, WITH NO VALUE LESS THAN 14.
- AVERAGE PI OF 7 OR MORE WITH NO VALUES LESS THAN 5.
- CLAY COMPACTION AND DOCUMENTATION AS SPECIFIED IN NRCS WISCONSIN CONSTRUCTION SPECIFICATION 204, EARTHWORK FOR WASTE STORAGE FACILITIES.
- MINIMUM THICKNESS OF TWO FEET.
- SPECIFY METHOD FOR KEEPING POOL FULL OR USE OF COMPOSITE SOILS BELOW LINER.

POND LINER ALTERNATE:

- CONTRACTOR TO PROVIDE 40 MIL/HDPE POND LINER IN LIEU OF CLAY LINER TO LINE ENTIRE POND AREA UP TO THE 2 YEAR, 24-HOUR WATER PONDING ELEVATION (SEE ELEVATION ON DETAIL)
- DESIGN ACCORDING TO THE CRITERIA IN TABLE 3 OF THE NRCS 313, WASTE STORAGE FACILITY TECHNICAL STANDARD
- INSTALL ACCORDING TO NRCS WISCONSIN CONSTRUCTION SPECIFICATION 202, POLYETHYLENE GEOMEMBRANE LINING.

4-6" ROUND STONE OVER FILTER FABRIC SHALL BE PROVIDED TO COVER THE ENTIRE LINER. TOP OF STONE SHALL MATCH PROPOSED POND ELEVATIONS.



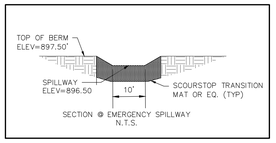
WET RETENTION POND
NO SCALE

NOTES:

- IF GROUND WATER IS PRESENT; TILE SYSTEM SHOULD BE INSTALLED UNDER POND TO ALLOW PUMPING DURING CONSTRUCTION.
- A LINING BASE SHALL BE PREPARED ON THE BOTTOM AND SLOPES OF THE AREA ARE TO BE LINED.
- LINING BASE MATERIAL SHALL BE FREE OF ALL SHARP OBJECTS, ROOTS GRASS AND VEGETATION.
- THE BASE MATERIAL SHALL BE NATIVE MATERIALS OR MATERIALS OBTAINED FROM A BORROW SOURCE COMPACTED TO A MIN. OF 95% COMPACTING OR AN APPROVED CONSTRUCTION FABRIC.
- THE SUBGRADE SHALL BE PREPARED IMMEDIATELY PRIOR TO THE PLACING OF THE LINER. THE SURFACE ON WHICH THE LINER IS TO BE PLACED IS TO BE FIRM, CLEAN, DRY AND SMOOTH.
- AT END OF SITE CONSTRUCTION, POND DEPTH SHALL BE CHECKED FOR SEDIMENTATION AND DREDGED, IF NECESSARY, TO THE DESIGN DEPTH ORIGINALLY PROPOSED.
- CONTRACTOR SHALL PROVIDE EROSION MATTING AS REQUIRED PER SPECIFICATIONS NOTED ON C0.1.

- CONTRACTOR TO CONTACT EXCEL ENGINEERING TO COMPLETE AN AS-BUILT SURVEY FOLLOWING COMPLETION OF THE CONSTRUCTION OF THE STORMWATER POND. THE SURVEY SHALL BE COMPLETED PRIOR TO THE POND FILLING WITH WATER. CONTRACTOR SHALL GIVE EXCEL ENGINEERING A MINIMUM OF A 3 DAY NOTICE. PLEASE NOTE THAT THE HORIZONTAL TOLERANCE FOR POND CONSTRUCTION IS 0.50' AND THE VERTICAL TOLERANCE FOR POND, OUTLET, AND SPILLWAY CONSTRUCTION IS 0.10'. ANY ADDITIONAL WORK REQUIRED TO SURVEY A POND FULL OF WATER OR FOR SURVEYING FOLLOWING REWORK SHALL BE AT THE CONTRACTOR'S EXPENSE.

OVERALL STORMWATER FACILITY DETAIL
NO SCALE



EMERGENCY SPILLWAY DETAIL
NO SCALE

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PROJECT INFORMATION

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PROFESSIONAL SEAL

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NOT FOR CONSTRUCTION

JOB NUMBER
2129100

SHEET NUMBER
C2.1

CIVIL DETAILS

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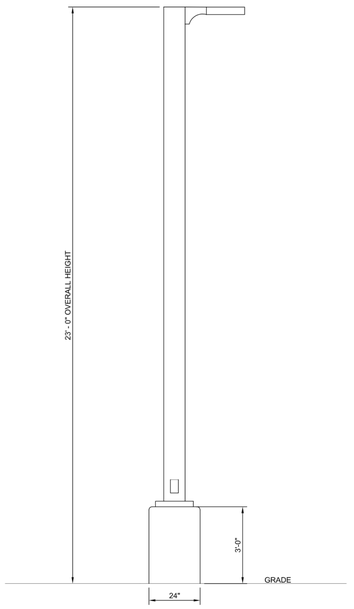
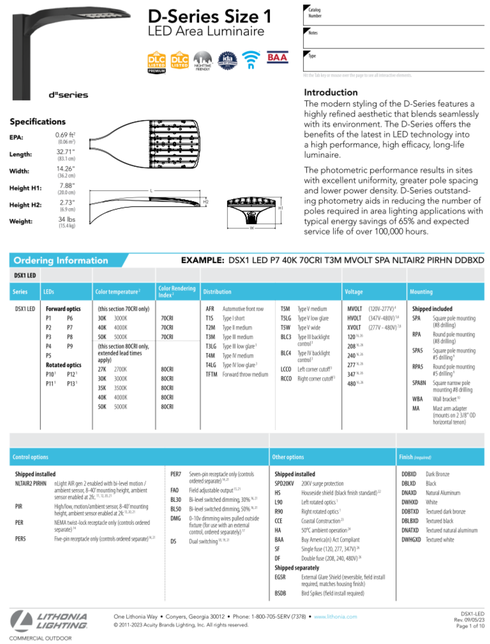


LIGHT POLE DETAIL

NO SCALE



Schedule

Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Number Lamps	Lumens Per Lamp	Light Loss Factor	Wattage
	L14H	3	Lithonia Lighting	DSX1 LED P2 40K 80CRI TFTM HS	D-Series Size 1 Area Luminaire P2 Performance Package 4000K CCT 80 CRI Forward Throw Houseside Shield	1	7677	0.9	67.7927
	EXIST	5	EXISTING	EXISTING		1	9154	0.9	135.58
	L13	1	Lithonia Lighting	DSX1 LED P2 40K 80CRI T3M	D-Series Size 1 Area Luminaire P2 Performance Package 4000K CCT 80 CRI Type 3 Medium	1	8958	0.9	67.79

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone #1	+	0.4 fc	3.9 fc	0.0 fc	N/A	N/A
PARKING LOT	X	1.2 fc	3.9 fc	0.4 fc	9.8:1	3.0:1

NORTH

1"= 30' SCALE 30' 0 30' 60' FEET

CIVIL SITE PHOTOMETRIC PLAN & DETAILS

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PROJECT INFORMATION

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BETHLEHEM LUTHERAN CHURCH

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PROFESSIONAL SEAL

PRELIMINARY DATES
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JOB NUMBER
2129100

SHEET NUMBER
C3.1

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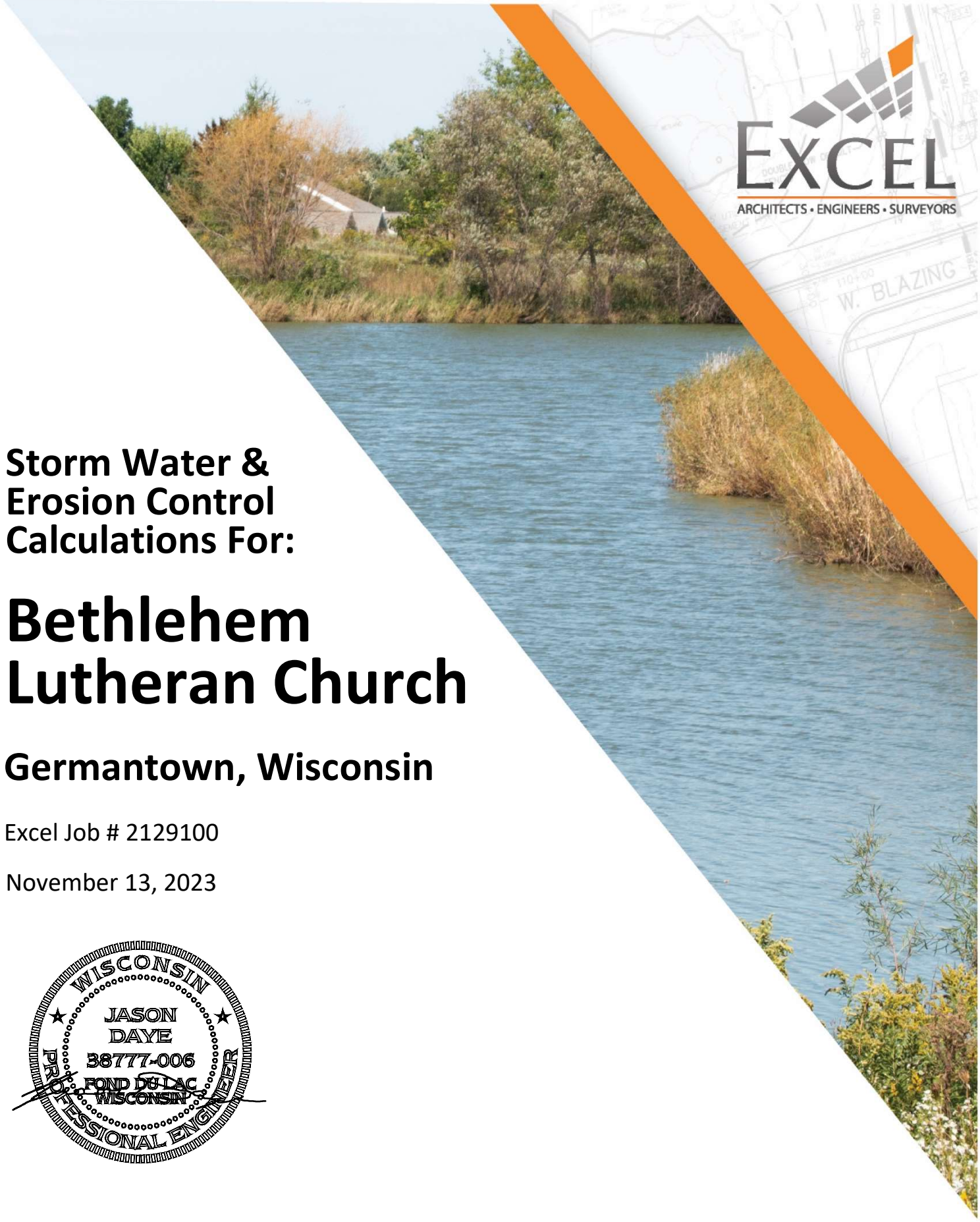
WELS
Bethlehem
Ev. Lutheran Church & School

MENARD



EXCEL
ARCHITECTS • ENGINEERS • SURVEYORS

Storm Water & Erosion Control Calculations For:

Bethlehem Lutheran Church

Germantown, Wisconsin

Excel Job # 2129100

November 13, 2023

WISCONSIN
JASON DAYE
38777-006
FOND DU LAC WISCONSIN
PROFESSIONAL ENGINEER

Prepared by Jason Daye
100 Camelot Drive • Fond du Lac, WI 54935
920-926-9800 • www.excelengineer.com

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Appendix B: Post Development Basin Area(s)
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Appendix E: Geotechnical Report & Stormwater Soil Evaluation
Appendix F: Storm Sewer Basin Map
Appendix G: Storm Sewer TR-55 Calculations
Appendix H: Storm Sewer Manning's Spreadsheet
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Appendix K: Post Construction Operation and Maintenance Plan

0.0 Introduction

0.1 Existing Conditions

The proposed development is located on the north side of Bel Aire Ln in the village of Germantown, Wisconsin. The project site is bound by Fond du Lav Ave "WI-145" to the north and east, residential properties to the west, and Bel Aire Ln to the south. The existing site currently contains a building, pond, and parking lot. The site currently drains to the southeast to an existing wet pond with a 6" discharge to Fond du Lac Ave/ WI-145 ROW. The existing site can be seen in Appendix A.

- Property Area: 7.09 acres

0.2 Proposed Project Overview

The proposed project will include a proposed building addition to the southeast with parking addition located to the north and west. The proposed development will drain via overland flow southeast to the modified wet pond. The modified stormwater management pond will reduce peak flows and treat stormwater to meet local and state requirements. The project will be exempt from infiltration requirements due to the existing soils. The proposed site can be seen in Appendix B. The proposed post-development map and stormwater calculations include future building and pavement areas, specifically 23,000 sf of future building addition and 16,833 sf of future pavement area.

- Disturbed Area: 3.48 acres

1.0 Design Criteria

1.1 Soils

Soil characteristics were determined using the web soil survey. See Table 1 for a summary of the soils and hydrologic ratings indicated by the web soil survey and Appendix D for web soil survey map.

Table 1: Web Soil Survey

MAP SYMBOL	SOIL TYPE	HYDROLOGIC RATING
HmB2	Hochheim loam	D
OuB2	Ozaukee silt loam	C
OUC2	Ozaukee silt loam	C

Twelve (12) soil borings were completed for the project site. The complete geotechnical investigation with boring logs can be seen in Appendix E.

1.2 Rainfall Data

NOAA Atlas 14 rainfall depths with a MSE 3 distribution was used for stormwater calculations.

Table 2: NOAA Atlas 14 24-hour Rainfall Depth

DESIGN STORM	RAINFALL DEPTH (INCHES)
1-YEAR	2.35
2-YEAR	2.65
10-YEAR	3.80
25-YEAR	4.68
50-YEAR	5.46
100-YEAR	6.32

2.0 Stormwater Management Requirements

2.1 Peak Discharge

MMSD Requirements – Unit Release Rate: The maximum runoff release rate is 0.15 cubic feet per second per acre for the 2-year 24-hour storm and 0.5 cubic feet per second per acre for the 100-year 24-hour storm for the post-development runoff condition.

MMSD Requirements (based on acres of development):

2-year Allowable release rate = 7.09 acres x 0.15 cfs/acre = 1.06 cfs

100-year Allowable release rate = 7.09 acres x 0.50 cfs/acre = 3.55 cfs

Village of Germantown- Defers to MMSD

Wisconsin DNR- Maintain or reduce the 1-yr and 2-yr, 24 hour post development peak runoff discharge rates to the 1-yr and 2-yr, 24 hour predevelopment peak runoff discharge rates respectively.

A wet pond will be used to reduce peak flows to predevelopment flows.

Table 3: MMSD Unit Release Rate Summary Table

STORM	TOTAL POST DEVELOPMENT RELEASE (CFS)	MMSD REQ. (CFS)	DIFFERENCE (CFS)
2YR-24HR	0.73	1.06	-0.33
100YR-24HR	2.83	3.55	-0.72

Table 4: Runoff Summary

	PREDEVELOPMENT	POST DEVELOPMENT			
DESIGN STORM	Peak Discharge (cfs)	To Pond (cfs)	Offsite (cfs)	Pond discharge (cfs)	Peak Discharge (cfs)
1YR-24 HR	**4.26**	10.18	0.43	0.36	0.59
2YR-24 HR	**5.48**	12.02	0.55	0.39	0.73
10YR-24HR	**10.64**	19.13	1.04	1.47	1.50
25YR-24HR	**14.89**	24.56	1.43	2.03	2.09
50YR-24HR	**18.77**	29.36	1.79	2.40	2.48
100YR-24HR	**23.11**	34.62	2.19	2.73	2.83

Table 5: Pond Summary

DESIGN STORM	POND RELEASE RATE (CFS)	STORAGE VOLUME (C.F.)	MAXIMUM ELEVATION (FT)
1YR-24 HR	0.36	27,488	892.48
2YR-24 HR	0.39	33,102	892.87
10YR-24 HR	1.47	49,364	893.90
25YR-24 HR	2.03	63,214	894.69
50YR-24 HR	2.40	76,346	895.38
100YR-24HR	2.73	91,381	896.08

Table 6: 100yr-24hr storm pond summary

EMERGENCY SPILLWAY ELEVATION (FT)	CALCULATED POND ELEVATION (FT)	POND DISCHARGE IN (CFS)	DISCHARGE EXIT POINT
896.50	896.08	2.73	Ditch

Table 7: Peak Discharge Release Summary

DESIGN STORM	PREDEVELOPMENT (CFS)	POST DEVELOPMENT (CFS)
1 YR- 24 HR	4.26	0.59
2 YR- 24 HR	5.48	0.73
10 YR- 24 HR	10.64	1.50
25YR- 24 HR	14.89	2.09
50YR- 24 HR	18.77	2.48
100 YR- 24 HR	23.11	2.83

Table 7 shows that post development release rates will be less than predevelopment release rates for all design storms. See sheet C1.3 and C2.0 of the construction plans for pond design and Appendix C for peak discharge calculations.

Therefore, peak discharge requirements are met.

2.2 Stormwater Quality

Village of Germantown- Defers to NR151

Wisconsin DNR- The site is considered a new development project and will be required to remove 80% of total suspended solids (TSS) from site runoff.

The site will treat stormwater using a wet pond. SLAMM analysis was used to determine the quantity of suspended solids that will be removed by the proposed wet pond. The proposed site will create 2,007 lbs of TSS and the proposed wet pond will reduce TSS to 372 lbs, which results in a 81.46% reduction in TSS release.

The proposed wet pond removes 81.46% of suspended solids which is greater than the required 80%.

Therefore, stormwater quality requirements have been met.

2.3 Infiltration

Wisconsin DNR and Village of Germantown - The proposed site is exempt from infiltration requirements NR 151.124(4)(c)2

- 151.124(4)(c)2 Borings completed for the project indicate that the soils onsite are a type of clay soil.

Therefore, Infiltration requirements are met.

3.0 Storm Sewer Design

All proposed storm sewer has been designed to convey the 100-year 24-hour post development storm.

See Appendix F, Appendix G, and Appendix H for pipe drainage areas and pipe sizing calculations.

3.1 Emergency Overflow Route

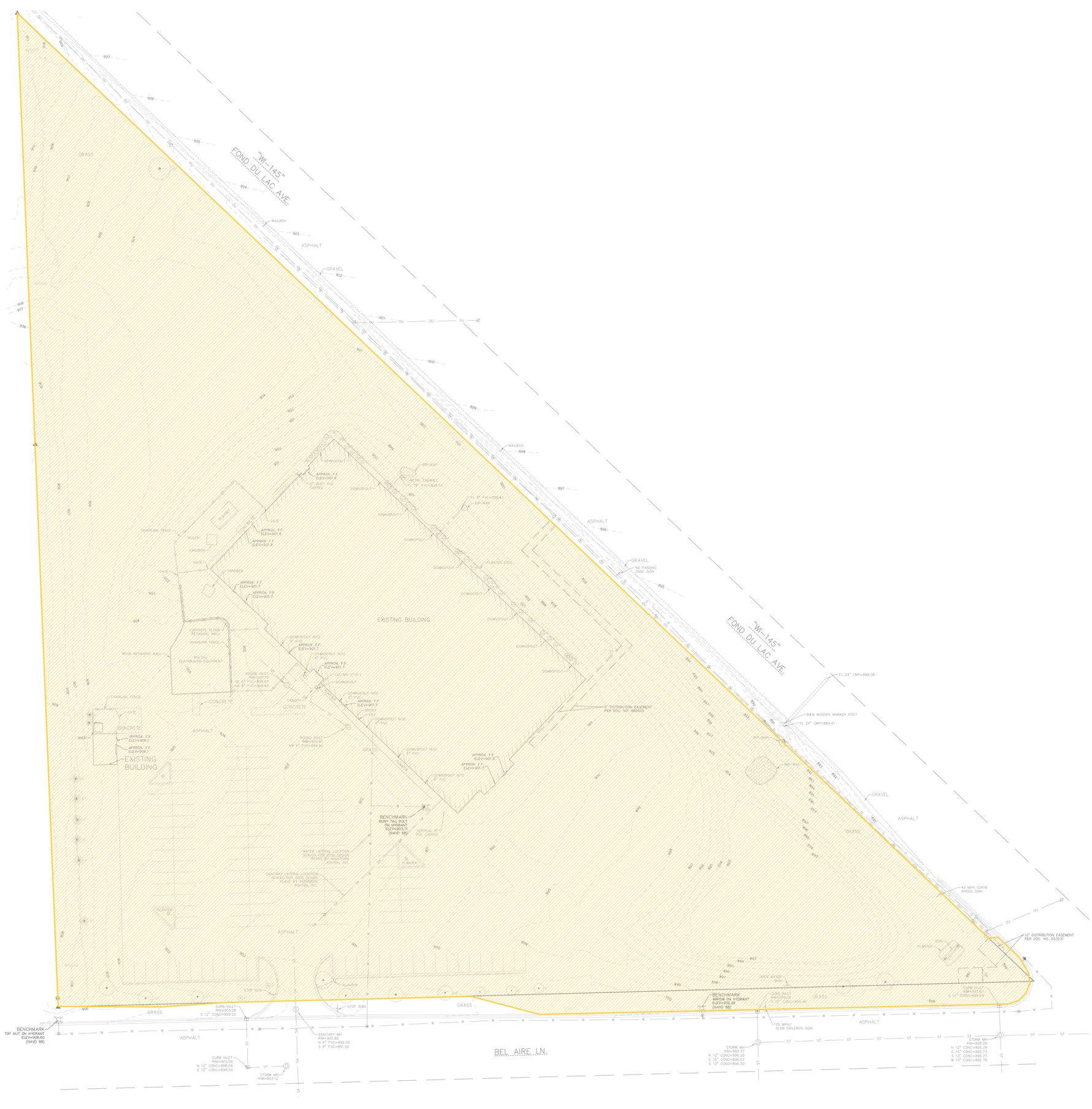
The emergency overflow route is to the south, over the curb and gutter. Maximum ponding onsite will be 9” in drive aisles and parking stalls.

4.0 Erosion Control

The erosion control specifications, construction sequence, site stabilization notes, seeding notes, dewatering notes, and post construction and maintenance plan will be included on sheet C0.1 of the construction plan set.

Appendix A: Pre-Development Basin Area(s)

SPECIFICATION NOTE:
SEE SHEET C0.1 FOR PLAN SPECIFICATIONS AND REQUIREMENTS


"WI-145"
FOND DU LAC AVE
EXISTING BUILDING
EXISTING BUILDING
BEL AIRE LN.
ASPHALT
GRAVEL
GRASS
CONCRETE
MAILBOX
STOP SIGN
NO PASSING ZONE SIGN
25 MPH/ SLOW CHILDREN SIGN
45 MPH CURVE AHEAD SIGN
BENCHMARK
TOP NUT ON HYDRANT
ELEV=908.60
(NAVD 88)
BENCHMARK
BURY TAG BOLT
ON HYDRANT
ELEV=953.71
(NAVD 88)
BENCHMARK
ARROW ON HYDRANT
ELEV=902.36
(NAVD 88)
8" DISTRIBUTION EASEMENT
PER DOC. NO. 880552
12' DISTRIBUTION EASEMENT
PER DOC. NO. 653231
FL 24" CMP=889.08
B&W WOODEN MARKER POST
FL 24" CMP=889.47
SANITARY MH
RIM=902.85
N 8" PVC=892.05
S 8" PVC=891.90
STORM MH
RIM=899.37
N 12" CONC=896.20
E 12" CONC=896.07
S 12" CONC=896.20
STORM MH
RIM=898.28
N 12" CONC=895.78
E 15" CONC=895.73
S 12" CONC=895.73
W 15" CONC=895.78
CURB INLET
RIM=903.08
S 12" CONC=899.20
CURB INLET
RIM=903.09
N 12" CONC=898.59
E 12" CONC=898.59
STORM MH
RIM=903.12
CURB INLET
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S 12" CONC=890.68
CURB INLET
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SCALED FROM DRAWING
FLARE BY ANDERSON
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WATER LATERAL LOCATION
SCALED FROM DRAWING
FLARE BY ANDERSON
RIM=906.40
SIGN
SIGN
SIGN

Appendix B: Post Development Basin Area(s)

POST BASIN	TOTAL (SF)	TOTAL (AC)	BLDG (SF)	BLDG (AC)	PAVEMENT (SF)	PAVEMENT (AC)	OPEN (SF)	OPEN (AC)
A	302,980	6.96	87,786	2.02	96,183	2.21	119,011	2.73
B	13,388	0.31	0	0.00	0	0.00	13,388	0.31

CIVIL POST-DEVELOPMENT BASIN AREAS

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PROFESSIONAL SEAL

PRELIMINARY DATES

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SHEET NUMBER
POST

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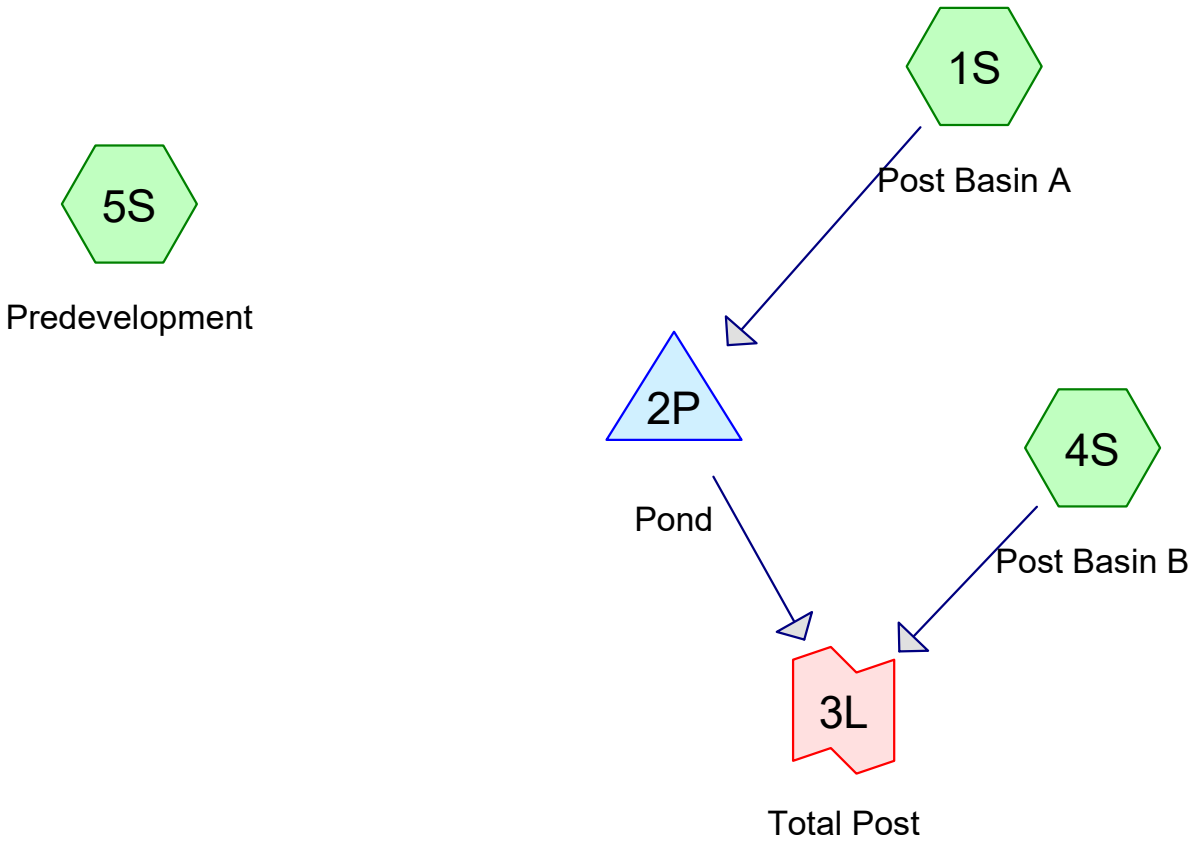
Appendix C: Peak Discharge Calculations



Subcat Reach Pond Link

Routing Diagram for 2129100 hydro
Prepared by Excel Engineering, Printed 11/13/2023
HydroCAD® 10.20-3c s/n 01178 © 2023 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	2.35	2
2	2 year	MSE 24-hr	3	Default	24.00	1	2.65	2
3	10	MSE 24-hr	3	Default	24.00	1	3.80	2
4	25	MSE 24-hr	3	Default	24.00	1	4.68	2
5	50	MSE 24-hr	3	Default	24.00	1	5.46	2
6	100 year	MSE 24-hr	3	Default	24.00	1	6.32	2

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
4.223	98	(1S)
7.570	80	(4S, 5S)
2.732	80	>75% Grass cover, Good, HSG D (1S)
14.526	**85**	**TOTAL AREA**

Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
2.732	HSG D	1S
11.794	Other	1S, 4S, 5S
14.526		**TOTAL AREA**

Ground Covers (selected nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	0.000	11.794	11.794		1S, 4S, 5S
0.000	0.000	0.000	2.732	0.000	2.732	>75% Grass cover, Good	1S
0.000	**0.000**	**0.000**	**2.732**	**11.794**	**14.526**	**TOTAL AREA**	

Time span=1.00-60.00 hrs, dt=0.05 hrs, 1181 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 1S: Post Basin A Runoff Area=302,980 sf 60.72% Impervious Runoff Depth=1.47"
Flow Length=600' Tc=24.8 min CN=91 Runoff=10.18 cfs 0.855 af

Subcatchment 4S: Post Basin B Runoff Area=13,388 sf 0.00% Impervious Runoff Depth=0.79"
Tc=6.0 min CN=80 Runoff=0.43 cfs 0.020 af

Subcatchment 5S: Predevelopment Runoff Area=316,368 sf 0.00% Impervious Runoff Depth=0.79"
Flow Length=600' Slope=0.0100 '/' Tc=37.5 min CN=80 Runoff=4.26 cfs 0.476 af

Pond 2P: Pond Peak Elev=892.48' Storage=27,488 cf Inflow=10.18 cfs 0.855 af
Outflow=0.36 cfs 0.837 af

Link 3L: Total Post Inflow=0.59 cfs 0.857 af
Primary=0.59 cfs 0.857 af

Total Runoff Area = 14.526 ac Runoff Volume = 1.351 af Average Runoff Depth = 1.12"
70.92% Pervious = 10.302 ac 29.08% Impervious = 4.223 ac

Summary for Subcatchment 1S: Post Basin A

Runoff = 10.18 cfs @ 12.36 hrs, Volume= 0.855 af, Depth= 1.47"
Routed to Pond 2P : Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 1 year Rainfall=2.35"

	Area (sf)	CN	Description
*	87,786	98	
*	96,183	98	
	119,011	80	>75% Grass cover, Good, HSG D
	302,980	91	Weighted Average
	119,011		39.28% Pervious Area
	183,969		60.72% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.5	300	0.0320	0.23		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.65"
3.3	300	0.0100	1.50		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
24.8	600	Total			

Summary for Subcatchment 4S: Post Basin B

Runoff = 0.43 cfs @ 12.14 hrs, Volume= 0.020 af, Depth= 0.79"
Routed to Link 3L : Total Post

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 1 year Rainfall=2.35"

	Area (sf)	CN	Description
*	13,388	80	
	13,388		100.00% Pervious Area

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

Summary for Subcatchment 5S: Predevelopment

Runoff = 4.26 cfs @ 12.56 hrs, Volume= 0.476 af, Depth= 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 1 year Rainfall=2.35"

	Area (sf)	CN	Description
*	316,368	80	
	316,368		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
34.2	300	0.0100	0.15		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.65"
3.3	300	0.0100	1.50		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
37.5	600	Total			

Summary for Pond 2P: Pond

Inflow Area = 6.955 ac, 60.72% Impervious, Inflow Depth = 1.47" for 1 year event
Inflow = 10.18 cfs @ 12.36 hrs, Volume= 0.855 af
Outflow = 0.36 cfs @ 15.40 hrs, Volume= 0.837 af, Atten= 96%, Lag= 182.7 min
Primary = 0.36 cfs @ 15.40 hrs, Volume= 0.837 af
Routed to Link 3L : Total Post

Routing by Stor-Ind method, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Peak Elev= 892.48' @ 15.40 hrs Surf.Area= 13,963 sf Storage= 27,488 cf

Plug-Flow detention time= 900.4 min calculated for 0.837 af (98% of inflow)
Center-of-Mass det. time= 888.5 min (1,700.4 - 811.9)

Volume	Invert	Avail.Storage	Storage Description
#1	890.00'	127,750 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
890.00	9,000	0	0
891.00	10,000	9,500	9,500
892.00	13,000	11,500	21,000
893.00	15,000	14,000	35,000
894.00	17,000	16,000	51,000
895.00	19,000	18,000	69,000
896.00	22,000	20,500	89,500
896.50	24,000	11,500	101,000
897.00	27,000	12,750	113,750
897.50	29,000	14,000	127,750

Device	Routing	Invert	Outlet Devices
#1	Primary	890.00'	**12.0" Round Culvert** L= 40.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 890.00' / 889.85' S= 0.0037 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.79 sf
#2	Primary	896.50'	**15.0' long x 15.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#3	Device 1	890.00'	**3.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Device 1	893.00'	**7.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#5	Device 1	896.50'	**6.0' long x 1.00' rise Sharp-Crested Rectangular Weir** 2 End Contraction(s) 1.0' Crest Height

Primary OutFlow Max=0.36 cfs @ 15.40 hrs HW=892.48' (Free Discharge)
- **1=Culvert** (Passes 0.36 cfs of 4.20 cfs potential flow)
  - **3=Orifice/Grate** (Orifice Controls 0.36 cfs @ 7.39 fps)
  - **4=Orifice/Grate** (Controls 0.00 cfs)
  - **5=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)
- **2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Link 3L: Total Post

Inflow Area = 7.263 ac, 58.15% Impervious, Inflow Depth > 1.42" for 1 year event
Inflow = 0.59 cfs @ 12.14 hrs, Volume= 0.857 af
Primary = 0.59 cfs @ 12.14 hrs, Volume= 0.857 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs

Time span=1.00-60.00 hrs, dt=0.05 hrs, 1181 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 1S: Post Basin A Runoff Area=302,980 sf 60.72% Impervious Runoff Depth=1.75"
Flow Length=600' Tc=24.8 min CN=91 Runoff=12.02 cfs 1.013 af

Subcatchment 4S: Post Basin B Runoff Area=13,388 sf 0.00% Impervious Runoff Depth=0.99"
Tc=6.0 min CN=80 Runoff=0.55 cfs 0.025 af

Subcatchment 5S: Predevelopment Runoff Area=316,368 sf 0.00% Impervious Runoff Depth=0.99"
Flow Length=600' Slope=0.0100 '/' Tc=37.5 min CN=80 Runoff=5.48 cfs 0.602 af

Pond 2P: Pond Peak Elev=892.87' Storage=33,102 cf Inflow=12.02 cfs 1.013 af
Outflow=0.39 cfs 0.987 af

Link 3L: Total Post Inflow=0.73 cfs 1.012 af
Primary=0.73 cfs 1.012 af

Total Runoff Area = 14.526 ac Runoff Volume = 1.640 af Average Runoff Depth = 1.35"
70.92% Pervious = 10.302 ac 29.08% Impervious = 4.223 ac

Summary for Subcatchment 1S: Post Basin A

Runoff = 12.02 cfs @ 12.36 hrs, Volume= 1.013 af, Depth= 1.75"
Routed to Pond 2P : Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2 year Rainfall=2.65"

	Area (sf)	CN	Description
*	87,786	98	
*	96,183	98	
	119,011	80	>75% Grass cover, Good, HSG D
	302,980	91	Weighted Average
	119,011		39.28% Pervious Area
	183,969		60.72% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.5	300	0.0320	0.23		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.65"
3.3	300	0.0100	1.50		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
24.8	600	Total			

Summary for Subcatchment 4S: Post Basin B

Runoff = 0.55 cfs @ 12.14 hrs, Volume= 0.025 af, Depth= 0.99"
Routed to Link 3L : Total Post

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2 year Rainfall=2.65"

	Area (sf)	CN	Description
*	13,388	80	
	13,388		100.00% Pervious Area

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

Summary for Subcatchment 5S: Predevelopment

Runoff = 5.48 cfs @ 12.55 hrs, Volume= 0.602 af, Depth= 0.99"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2 year Rainfall=2.65"

	Area (sf)	CN	Description
*	316,368	80	
	316,368		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
34.2	300	0.0100	0.15		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.65"
3.3	300	0.0100	1.50		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
37.5	600	Total			

Summary for Pond 2P: Pond

Inflow Area = 6.955 ac, 60.72% Impervious, Inflow Depth = 1.75" for 2 year event
Inflow = 12.02 cfs @ 12.36 hrs, Volume= 1.013 af
Outflow = 0.39 cfs @ 15.47 hrs, Volume= 0.987 af, Atten= 97%, Lag= 186.6 min
Primary = 0.39 cfs @ 15.47 hrs, Volume= 0.987 af
Routed to Link 3L : Total Post

Routing by Stor-Ind method, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Peak Elev= 892.87' @ 15.47 hrs Surf.Area= 14,745 sf Storage= 33,102 cf

Plug-Flow detention time= 981.1 min calculated for 0.986 af (97% of inflow)
Center-of-Mass det. time= 967.9 min (1,776.4 - 808.5)

Volume	Invert	Avail.Storage	Storage Description
#1	890.00'	127,750 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
890.00	9,000	0	0
891.00	10,000	9,500	9,500
892.00	13,000	11,500	21,000
893.00	15,000	14,000	35,000
894.00	17,000	16,000	51,000
895.00	19,000	18,000	69,000
896.00	22,000	20,500	89,500
896.50	24,000	11,500	101,000
897.00	27,000	12,750	113,750
897.50	29,000	14,000	127,750

Device	Routing	Invert	Outlet Devices
#1	Primary	890.00'	**12.0" Round Culvert** L= 40.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 890.00' / 889.85' S= 0.0037 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.79 sf
#2	Primary	896.50'	**15.0' long x 15.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#3	Device 1	890.00'	**3.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Device 1	893.00'	**7.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#5	Device 1	896.50'	**6.0' long x 1.00' rise Sharp-Crested Rectangular Weir** 2 End Contraction(s) 1.0' Crest Height

Primary OutFlow Max=0.39 cfs @ 15.47 hrs HW=892.87' (Free Discharge)
- **1=Culvert** (Passes 0.39 cfs of 4.60 cfs potential flow)
  - **3=Orifice/Grate** (Orifice Controls 0.39 cfs @ 7.98 fps)
  - **4=Orifice/Grate** (Controls 0.00 cfs)
  - **5=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)
- **2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Link 3L: Total Post

Inflow Area = 7.263 ac, 58.15% Impervious, Inflow Depth > 1.67" for 2 year event
Inflow = 0.73 cfs @ 12.14 hrs, Volume= 1.012 af
Primary = 0.73 cfs @ 12.14 hrs, Volume= 1.012 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs

Time span=1.00-60.00 hrs, dt=0.05 hrs, 1181 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 1S: Post Basin A Runoff Area=302,980 sf 60.72% Impervious Runoff Depth=2.83"
Flow Length=600' Tc=24.8 min CN=91 Runoff=19.13 cfs 1.638 af

Subcatchment 4S: Post Basin B Runoff Area=13,388 sf 0.00% Impervious Runoff Depth=1.88"
Tc=6.0 min CN=80 Runoff=1.04 cfs 0.048 af

Subcatchment 5S: Predevelopment Runoff Area=316,368 sf 0.00% Impervious Runoff Depth=1.88"
Flow Length=600' Slope=0.0100 '/' Tc=37.5 min CN=80 Runoff=10.64 cfs 1.136 af

Pond 2P: Pond Peak Elev=893.90' Storage=49,364 cf Inflow=19.13 cfs 1.638 af
Outflow=1.47 cfs 1.591 af

Link 3L: Total Post Inflow=1.50 cfs 1.639 af
Primary=1.50 cfs 1.639 af

Total Runoff Area = 14.526 ac Runoff Volume = 2.823 af Average Runoff Depth = 2.33"
70.92% Pervious = 10.302 ac 29.08% Impervious = 4.223 ac

Summary for Subcatchment 1S: Post Basin A

Runoff = 19.13 cfs @ 12.35 hrs, Volume= 1.638 af, Depth= 2.83"
Routed to Pond 2P : Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10 Rainfall=3.80"

	Area (sf)	CN	Description
*	87,786	98	
*	96,183	98	
	119,011	80	>75% Grass cover, Good, HSG D
	302,980	91	Weighted Average
	119,011		39.28% Pervious Area
	183,969		60.72% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.5	300	0.0320	0.23		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.65"
3.3	300	0.0100	1.50		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
24.8	600	Total			

Summary for Subcatchment 4S: Post Basin B

Runoff = 1.04 cfs @ 12.13 hrs, Volume= 0.048 af, Depth= 1.88"
Routed to Link 3L : Total Post

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10 Rainfall=3.80"

	Area (sf)	CN	Description
*	13,388	80	
	13,388		100.00% Pervious Area

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

Summary for Subcatchment 5S: Predevelopment

Runoff = 10.64 cfs @ 12.54 hrs, Volume= 1.136 af, Depth= 1.88"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10 Rainfall=3.80"

	Area (sf)	CN	Description
*	316,368	80	
	316,368		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
34.2	300	0.0100	0.15		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.65"
3.3	300	0.0100	1.50		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
37.5	600	Total			

Summary for Pond 2P: Pond

Inflow Area = 6.955 ac, 60.72% Impervious, Inflow Depth = 2.83" for 10 event
Inflow = 19.13 cfs @ 12.35 hrs, Volume= 1.638 af
Outflow = 1.47 cfs @ 13.78 hrs, Volume= 1.591 af, Atten= 92%, Lag= 85.9 min
Primary = 1.47 cfs @ 13.78 hrs, Volume= 1.591 af
Routed to Link 3L : Total Post

Routing by Stor-Ind method, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Peak Elev= 893.90' @ 13.78 hrs Surf.Area= 16,806 sf Storage= 49,364 cf

Plug-Flow detention time= 821.3 min calculated for 1.591 af (97% of inflow)
Center-of-Mass det. time= 805.6 min (1,604.6 - 798.9)

Volume	Invert	Avail.Storage	Storage Description
#1	890.00'	127,750 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
890.00	9,000	0	0
891.00	10,000	9,500	9,500
892.00	13,000	11,500	21,000
893.00	15,000	14,000	35,000
894.00	17,000	16,000	51,000
895.00	19,000	18,000	69,000
896.00	22,000	20,500	89,500
896.50	24,000	11,500	101,000
897.00	27,000	12,750	113,750
897.50	29,000	14,000	127,750

Device	Routing	Invert	Outlet Devices
#1	Primary	890.00'	**12.0" Round Culvert** L= 40.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 890.00' / 889.85' S= 0.0037 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.79 sf
#2	Primary	896.50'	**15.0' long x 15.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#3	Device 1	890.00'	**3.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Device 1	893.00'	**7.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#5	Device 1	896.50'	**6.0' long x 1.00' rise Sharp-Crested Rectangular Weir** 2 End Contraction(s) 1.0' Crest Height

Primary OutFlow Max=1.47 cfs @ 13.78 hrs HW=893.90' (Free Discharge)
- **1=Culvert** (Passes 1.47 cfs of 5.51 cfs potential flow)
  - **3=Orifice/Grate** (Orifice Controls 0.46 cfs @ 9.36 fps)
  - **4=Orifice/Grate** (Orifice Controls 1.01 cfs @ 3.76 fps)
  - **5=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)
- **2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Link 3L: Total Post

Inflow Area = 7.263 ac, 58.15% Impervious, Inflow Depth > 2.71" for 10 event
Inflow = 1.50 cfs @ 13.54 hrs, Volume= 1.639 af
Primary = 1.50 cfs @ 13.54 hrs, Volume= 1.639 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs

Time span=1.00-60.00 hrs, dt=0.05 hrs, 1181 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 1S: Post Basin A Runoff Area=302,980 sf 60.72% Impervious Runoff Depth=3.67"
Flow Length=600' Tc=24.8 min CN=91 Runoff=24.56 cfs 2.128 af

Subcatchment 4S: Post Basin B Runoff Area=13,388 sf 0.00% Impervious Runoff Depth=2.62"
Tc=6.0 min CN=80 Runoff=1.43 cfs 0.067 af

Subcatchment 5S: Predevelopment Runoff Area=316,368 sf 0.00% Impervious Runoff Depth=2.62"
Flow Length=600' Slope=0.0100 '/' Tc=37.5 min CN=80 Runoff=14.89 cfs 1.583 af

Pond 2P: Pond Peak Elev=894.69' Storage=63,214 cf Inflow=24.56 cfs 2.128 af
Outflow=2.03 cfs 2.072 af

Link 3L: Total Post Inflow=2.09 cfs 2.139 af
Primary=2.09 cfs 2.139 af

Total Runoff Area = 14.526 ac Runoff Volume = 3.778 af Average Runoff Depth = 3.12"
70.92% Pervious = 10.302 ac 29.08% Impervious = 4.223 ac

Summary for Subcatchment 1S: Post Basin A

Runoff = 24.56 cfs @ 12.35 hrs, Volume= 2.128 af, Depth= 3.67"
Routed to Pond 2P : Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 25 Rainfall=4.68"

	Area (sf)	CN	Description
*	87,786	98	
*	96,183	98	
	119,011	80	>75% Grass cover, Good, HSG D
	302,980	91	Weighted Average
	119,011		39.28% Pervious Area
	183,969		60.72% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.5	300	0.0320	0.23		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.65"
3.3	300	0.0100	1.50		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
24.8	600	Total			

Summary for Subcatchment 4S: Post Basin B

Runoff = 1.43 cfs @ 12.13 hrs, Volume= 0.067 af, Depth= 2.62"
Routed to Link 3L : Total Post

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 25 Rainfall=4.68"

	Area (sf)	CN	Description
*	13,388	80	
	13,388		100.00% Pervious Area

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

Summary for Subcatchment 5S: Predevelopment

Runoff = 14.89 cfs @ 12.53 hrs, Volume= 1.583 af, Depth= 2.62"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 25 Rainfall=4.68"

	Area (sf)	CN	Description
*	316,368	80	
	316,368		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
34.2	300	0.0100	0.15		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.65"
3.3	300	0.0100	1.50		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
37.5	600	Total			

Summary for Pond 2P: Pond

Inflow Area = 6.955 ac, 60.72% Impervious, Inflow Depth = 3.67" for 25 event
Inflow = 24.56 cfs @ 12.35 hrs, Volume= 2.128 af
Outflow = 2.03 cfs @ 13.72 hrs, Volume= 2.072 af, Atten= 92%, Lag= 82.3 min
Primary = 2.03 cfs @ 13.72 hrs, Volume= 2.072 af
Routed to Link 3L : Total Post

Routing by Stor-Ind method, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Peak Elev= 894.69' @ 13.72 hrs Surf.Area= 18,381 sf Storage= 63,214 cf

Plug-Flow detention time= 713.3 min calculated for 2.071 af (97% of inflow)
Center-of-Mass det. time= 700.0 min (1,493.8 - 793.8)

Volume	Invert	Avail.Storage	Storage Description
#1	890.00'	127,750 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
890.00	9,000	0	0
891.00	10,000	9,500	9,500
892.00	13,000	11,500	21,000
893.00	15,000	14,000	35,000
894.00	17,000	16,000	51,000
895.00	19,000	18,000	69,000
896.00	22,000	20,500	89,500
896.50	24,000	11,500	101,000
897.00	27,000	12,750	113,750
897.50	29,000	14,000	127,750

Device	Routing	Invert	Outlet Devices
#1	Primary	890.00'	**12.0" Round Culvert** L= 40.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 890.00' / 889.85' S= 0.0037 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.79 sf
#2	Primary	896.50'	**15.0' long x 15.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#3	Device 1	890.00'	**3.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Device 1	893.00'	**7.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#5	Device 1	896.50'	**6.0' long x 1.00' rise Sharp-Crested Rectangular Weir** 2 End Contraction(s) 1.0' Crest Height

Primary OutFlow Max=2.03 cfs @ 13.72 hrs HW=894.69' (Free Discharge)
- **1=Culvert** (Passes 2.03 cfs of 6.11 cfs potential flow)
  - **3=Orifice/Grate** (Orifice Controls 0.51 cfs @ 10.29 fps)
  - **4=Orifice/Grate** (Orifice Controls 1.52 cfs @ 5.69 fps)
  - **5=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)
- **2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Link 3L: Total Post

Inflow Area = 7.263 ac, 58.15% Impervious, Inflow Depth > 3.53" for 25 event
Inflow = 2.09 cfs @ 13.45 hrs, Volume= 2.139 af
Primary = 2.09 cfs @ 13.45 hrs, Volume= 2.139 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs

Time span=1.00-60.00 hrs, dt=0.05 hrs, 1181 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 1S: Post Basin A Runoff Area=302,980 sf 60.72% Impervious Runoff Depth=4.43"
Flow Length=600' Tc=24.8 min CN=91 Runoff=29.36 cfs 2.568 af

Subcatchment 4S: Post Basin B Runoff Area=13,388 sf 0.00% Impervious Runoff Depth=3.30"
Tc=6.0 min CN=80 Runoff=1.79 cfs 0.084 af

Subcatchment 5S: Predevelopment Runoff Area=316,368 sf 0.00% Impervious Runoff Depth=3.30"
Flow Length=600' Slope=0.0100 '/' Tc=37.5 min CN=80 Runoff=18.77 cfs 1.996 af

Pond 2P: Pond Peak Elev=895.38' Storage=76,346 cf Inflow=29.36 cfs 2.568 af
Outflow=2.40 cfs 2.502 af

Link 3L: Total Post Inflow=2.48 cfs 2.587 af
Primary=2.48 cfs 2.587 af

Total Runoff Area = 14.526 ac Runoff Volume = 4.648 af Average Runoff Depth = 3.84"
70.92% Pervious = 10.302 ac 29.08% Impervious = 4.223 ac

Summary for Subcatchment 1S: Post Basin A

Runoff = 29.36 cfs @ 12.35 hrs, Volume= 2.568 af, Depth= 4.43"
Routed to Pond 2P : Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 50 Rainfall=5.46"

	Area (sf)	CN	Description
*	87,786	98	
*	96,183	98	
	119,011	80	>75% Grass cover, Good, HSG D
	302,980	91	Weighted Average
	119,011		39.28% Pervious Area
	183,969		60.72% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.5	300	0.0320	0.23		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.65"
3.3	300	0.0100	1.50		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
24.8	600	Total			

Summary for Subcatchment 4S: Post Basin B

Runoff = 1.79 cfs @ 12.13 hrs, Volume= 0.084 af, Depth= 3.30"
Routed to Link 3L : Total Post

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 50 Rainfall=5.46"

	Area (sf)	CN	Description
*	13,388	80	
	13,388		100.00% Pervious Area

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

Summary for Subcatchment 5S: Predevelopment

Runoff = 18.77 cfs @ 12.53 hrs, Volume= 1.996 af, Depth= 3.30"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 50 Rainfall=5.46"

	Area (sf)	CN	Description
*	316,368	80	
	316,368		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
34.2	300	0.0100	0.15		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.65"
3.3	300	0.0100	1.50		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
37.5	600	Total			

Summary for Pond 2P: Pond

Inflow Area = 6.955 ac, 60.72% Impervious, Inflow Depth = 4.43" for 50 event
Inflow = 29.36 cfs @ 12.35 hrs, Volume= 2.568 af
Outflow = 2.40 cfs @ 13.72 hrs, Volume= 2.502 af, Atten= 92%, Lag= 82.2 min
Primary = 2.40 cfs @ 13.72 hrs, Volume= 2.502 af
Routed to Link 3L : Total Post

Routing by Stor-Ind method, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Peak Elev= 895.38' @ 13.72 hrs Surf.Area= 20,127 sf Storage= 76,346 cf

Plug-Flow detention time= 662.8 min calculated for 2.500 af (97% of inflow)
Center-of-Mass det. time= 650.0 min (1,440.1 - 790.1)

Volume	Invert	Avail.Storage	Storage Description
#1	890.00'	127,750 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
890.00	9,000	0	0
891.00	10,000	9,500	9,500
892.00	13,000	11,500	21,000
893.00	15,000	14,000	35,000
894.00	17,000	16,000	51,000
895.00	19,000	18,000	69,000
896.00	22,000	20,500	89,500
896.50	24,000	11,500	101,000
897.00	27,000	12,750	113,750
897.50	29,000	14,000	127,750

Device	Routing	Invert	Outlet Devices
#1	Primary	890.00'	**12.0" Round Culvert** L= 40.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 890.00' / 889.85' S= 0.0037 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.79 sf
#2	Primary	896.50'	**15.0' long x 15.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#3	Device 1	890.00'	**3.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Device 1	893.00'	**7.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#5	Device 1	896.50'	**6.0' long x 1.00' rise Sharp-Crested Rectangular Weir** 2 End Contraction(s) 1.0' Crest Height

Primary OutFlow Max=2.40 cfs @ 13.72 hrs HW=895.38' (Free Discharge)
- **1=Culvert** (Passes 2.40 cfs of 6.59 cfs potential flow)
  - **3=Orifice/Grate** (Orifice Controls 0.54 cfs @ 11.03 fps)
  - **4=Orifice/Grate** (Orifice Controls 1.86 cfs @ 6.95 fps)
  - **5=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)
- **2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Link 3L: Total Post

Inflow Area = 7.263 ac, 58.15% Impervious, Inflow Depth > 4.27" for 50 event
Inflow = 2.48 cfs @ 13.36 hrs, Volume= 2.587 af
Primary = 2.48 cfs @ 13.36 hrs, Volume= 2.587 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs

Time span=1.00-60.00 hrs, dt=0.05 hrs, 1181 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 1S: Post Basin A Runoff Area=302,980 sf 60.72% Impervious Runoff Depth=5.27"
Flow Length=600' Tc=24.8 min CN=91 Runoff=34.62 cfs 3.055 af

Subcatchment 4S: Post Basin B Runoff Area=13,388 sf 0.00% Impervious Runoff Depth=4.07"
Tc=6.0 min CN=80 Runoff=2.19 cfs 0.104 af

Subcatchment 5S: Predevelopment Runoff Area=316,368 sf 0.00% Impervious Runoff Depth=4.07"
Flow Length=600' Slope=0.0100 '/' Tc=37.5 min CN=80 Runoff=23.11 cfs 2.464 af

Pond 2P: Pond Peak Elev=896.08' Storage=91,381 cf Inflow=34.62 cfs 3.055 af
Outflow=2.73 cfs 2.978 af

Link 3L: Total Post Inflow=2.83 cfs 3.082 af
Primary=2.83 cfs 3.082 af

Total Runoff Area = 14.526 ac Runoff Volume = 5.623 af Average Runoff Depth = 4.65"
70.92% Pervious = 10.302 ac 29.08% Impervious = 4.223 ac

Summary for Subcatchment 1S: Post Basin A

Runoff = 34.62 cfs @ 12.35 hrs, Volume= 3.055 af, Depth= 5.27"
Routed to Pond 2P : Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100 year Rainfall=6.32"

	Area (sf)	CN	Description
*	87,786	98	
*	96,183	98	
	119,011	80	>75% Grass cover, Good, HSG D
	302,980	91	Weighted Average
	119,011		39.28% Pervious Area
	183,969		60.72% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.5	300	0.0320	0.23		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.65"
3.3	300	0.0100	1.50		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
24.8	600	Total			

Summary for Subcatchment 4S: Post Basin B

Runoff = 2.19 cfs @ 12.13 hrs, Volume= 0.104 af, Depth= 4.07"
Routed to Link 3L : Total Post

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100 year Rainfall=6.32"

	Area (sf)	CN	Description
*	13,388	80	
	13,388		100.00% Pervious Area

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

Summary for Subcatchment 5S: Predevelopment

Runoff = 23.11 cfs @ 12.52 hrs, Volume= 2.464 af, Depth= 4.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100 year Rainfall=6.32"

	Area (sf)	CN	Description
*	316,368	80	
	316,368		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
34.2	300	0.0100	0.15		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.65"
3.3	300	0.0100	1.50		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
37.5	600	Total			

Summary for Pond 2P: Pond

Inflow Area = 6.955 ac, 60.72% Impervious, Inflow Depth = 5.27" for 100 year event
Inflow = 34.62 cfs @ 12.35 hrs, Volume= 3.055 af
Outflow = 2.73 cfs @ 13.73 hrs, Volume= 2.978 af, Atten= 92%, Lag= 83.3 min
Primary = 2.73 cfs @ 13.73 hrs, Volume= 2.978 af
Routed to Link 3L : Total Post

Routing by Stor-Ind method, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
Peak Elev= 896.08' @ 13.73 hrs Surf.Area= 22,339 sf Storage= 91,381 cf

Plug-Flow detention time= 635.7 min calculated for 2.978 af (97% of inflow)
Center-of-Mass det. time= 621.4 min (1,408.2 - 786.8)

Volume	Invert	Avail.Storage	Storage Description
#1	890.00'	127,750 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
890.00	9,000	0	0
891.00	10,000	9,500	9,500
892.00	13,000	11,500	21,000
893.00	15,000	14,000	35,000
894.00	17,000	16,000	51,000
895.00	19,000	18,000	69,000
896.00	22,000	20,500	89,500
896.50	24,000	11,500	101,000
897.00	27,000	12,750	113,750
897.50	29,000	14,000	127,750

Device	Routing	Invert	Outlet Devices
#1	Primary	890.00'	**12.0" Round Culvert** L= 40.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 890.00' / 889.85' S= 0.0037 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.79 sf
#2	Primary	896.50'	**15.0' long x 15.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63
#3	Device 1	890.00'	**3.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Device 1	893.00'	**7.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#5	Device 1	896.50'	**6.0' long x 1.00' rise Sharp-Crested Rectangular Weir** 2 End Contraction(s) 1.0' Crest Height

Primary OutFlow Max=2.73 cfs @ 13.73 hrs HW=896.08' (Free Discharge)
- **1=Culvert** (Passes 2.73 cfs of 7.06 cfs potential flow)
  - **3=Orifice/Grate** (Orifice Controls 0.58 cfs @ 11.75 fps)
  - **4=Orifice/Grate** (Orifice Controls 2.15 cfs @ 8.05 fps)
  - **5=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)
- **2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Link 3L: Total Post

Inflow Area = 7.263 ac, 58.15% Impervious, Inflow Depth > 5.09" for 100 year event
Inflow = 2.83 cfs @ 13.25 hrs, Volume= 3.082 af
Primary = 2.83 cfs @ 13.25 hrs, Volume= 3.082 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs

Appendix D: Web Soil Survey Map

Appendix E: Geotechnical Report & Stormwater Soil Evaluation

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Washington County, Wisconsin

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Map Scale: 1:1,910 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 25 50 100 150

Feet
0 50 100 200 300

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

MAP LEGEND

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

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

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

Water Features
- Streams and Canals

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

Background
- Aerial Photography

MAP INFORMATION

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

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: Washington County, Wisconsin
Survey Area Data: Version 22, Sep 6, 2022

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

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

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
HmB2	Hochheim loam, 2 to 6 percent slopes, eroded	0.8	13.3%
OuB2	Ozaukee silt loam, high carbonate substratum, 2 to 6 percent slopes, eroded	5.5	86.6%
OuC2	Ozaukee silt loam, high carbonate substratum, 6 to 12 percent slopes, eroded	0.0	0.1%
Totals for Area of Interest		**6.4**	**100.0%**

Map Unit Descriptions

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

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

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

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate

pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

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

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

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

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

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

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

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

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

Washington County, Wisconsin

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

Map Unit Setting

National map unit symbol: 2t03w
Elevation: 820 to 1,330 feet
Mean annual precipitation: 29 to 36 inches
Mean annual air temperature: 43 to 46 degrees F
Frost-free period: 135 to 175 days
Farmland classification: All areas are prime farmland

Map Unit Composition

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

Description of Hochheim, Eroded

Setting

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

Typical profile

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

Properties and qualities

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

Interpretive groups

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

Minor Components

Theresa, eroded

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

Lamartine

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

OuB2—Ozaukee silt loam, high carbonate substratum, 2 to 6 percent slopes, eroded

Map Unit Setting

National map unit symbol: 2sn0c
Elevation: 650 to 1,010 feet
Mean annual precipitation: 31 to 39 inches
Mean annual air temperature: 44 to 49 degrees F
Frost-free period: 125 to 185 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Ozaukee, high carbonate substratum, eroded, and similar soils: 96 percent
Minor components: 4 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ozaukee, High Carbonate Substratum, Eroded

Setting

Landform: Ground moraines, end moraines
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Thin mantle of loess over silty and clayey till

Typical profile

Ap - 0 to 7 inches: silt loam

Bt1 - 7 to 11 inches: silty clay loam
2Bt2 - 11 to 22 inches: silty clay
2Bt3 - 22 to 27 inches: silty clay loam
2Cd - 27 to 60 inches: silty clay loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: 22 to 40 inches to densic material
Drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 24 to 42 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 60 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Ecological site: F110XY012IL - Moist Glacial Drift Upland Forest
Forage suitability group: Mod AWC, adequately drained with limitations (G095BY006WI)
Other vegetative classification: Mod AWC, adequately drained with limitations (G095BY006WI)
Hydric soil rating: No

Minor Components

Ashkum, drained

Percent of map unit: 2 percent
Landform: End moraines, ground moraines
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: R110XY024IL - Ponded Depressional Sedge Meadow
Hydric soil rating: Yes

Orthents, clayey

Percent of map unit: 1 percent
Landform: Ground moraines
Landform position (two-dimensional): Summit, backslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: F095XB010WI - Loamy and Clayey Upland
Hydric soil rating: No

Urban land

Percent of map unit: 1 percent
Landform: Ground moraines
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve

Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

OuC2—Ozaukee silt loam, high carbonate substratum, 6 to 12 percent slopes, eroded

Map Unit Setting

National map unit symbol: 2sn0h
Elevation: 670 to 1,020 feet
Mean annual precipitation: 31 to 39 inches
Mean annual air temperature: 44 to 49 degrees F
Frost-free period: 125 to 185 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Ozaukee, high carbonate substratum, eroded, and similar soils: 94 percent
Minor components: 6 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ozaukee, High Carbonate Substratum, Eroded

Setting

Landform: Ground moraines, end moraines
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Thin mantle of loess over silty and clayey till

Typical profile

Ap - 0 to 7 inches: silt loam
Bt1 - 7 to 11 inches: silty clay loam
2Bt2 - 11 to 22 inches: silty clay
2Bt3 - 22 to 27 inches: silty clay loam
2Cd - 27 to 60 inches: silty clay loam

Properties and qualities

Slope: 6 to 12 percent
Depth to restrictive feature: 22 to 39 inches to densic material
Drainage class: Moderately well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 24 to 42 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 60 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: F110XY012IL - Moist Glacial Drift Upland Forest
Forage suitability group: Mod AWC, adequately drained with limitations (G095BY006WI)
Other vegetative classification: Mod AWC, adequately drained with limitations (G095BY006WI)
Hydric soil rating: No

Minor Components

Ozaukee, severely eroded

Percent of map unit: 2 percent
Landform: Ground moraines, end moraines
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F110XY012IL - Moist Glacial Drift Upland Forest
Hydric soil rating: No

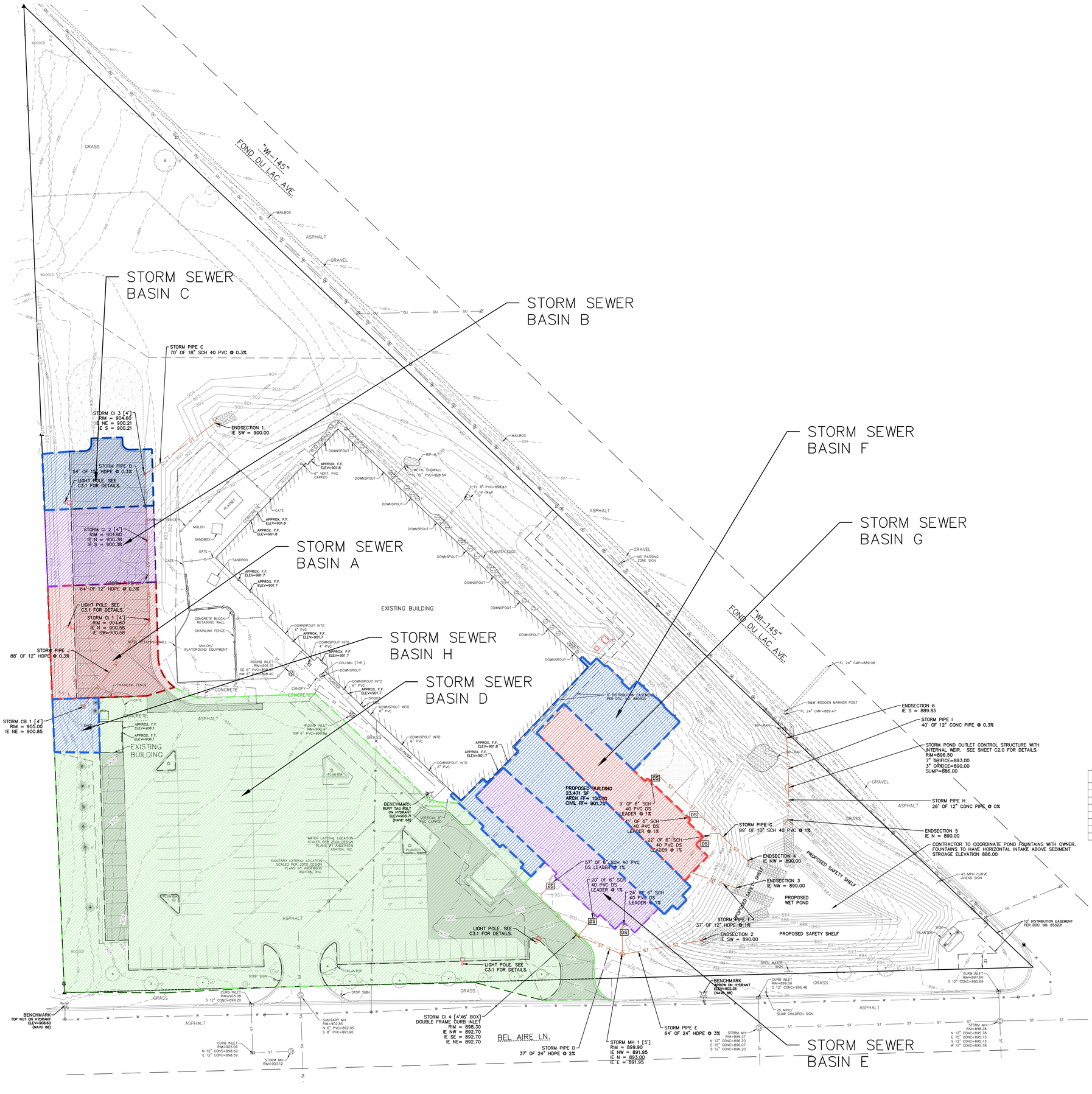
Urban land

Percent of map unit: 2 percent
Landform: Ground moraines
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Mequon

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

Appendix F: Storm Sewer Basin Map



PIPE BASIN	TOTAL (SF)	TOTAL (AC)	BLDG (SF)	BLDG (AC)	PAVEMENT (SF)	PAVEMENT (AC)	OPEN (SF)	OPEN (AC)
A	7,961	0.18	0	0.00	6,155	0.14	1,806	0.04
B	5,360	0.12	0	0.00	4,095	0.09	1,265	0.03
C	4,294	0.10	0	0.00	3,314	0.08	980	0.02
D	78,501	1.80	464	0.01	63,271	1.45	14,766	0.34
E	5,312	0.12	5,312	0.12	0	0.00	0	0.00
F	12,045	0.28	12,045	0.28	0	0.00	0	0.00
G	6,114	0.14	6,114	0.14	0	0.00	0	0.00
H	1,590	0.04	0	0.00	0	0.00	1,590	0.04

CIVIL STORM SEWER BASIN MAP

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

PROJECT INFORMATION

PROPOSED WORSHIP FACILITY ADDITION FOR:
BETHLEHEM LUTHERAN CHURCH
N108W14290 BEL AIRE LN • GERMANTOWN, WI 53022

PROFESSIONAL SEAL

PRELIMINARY DATES

NOT FOR CONSTRUCTION

JOB NUMBER
2129100

SHEET NUMBER
SSBM

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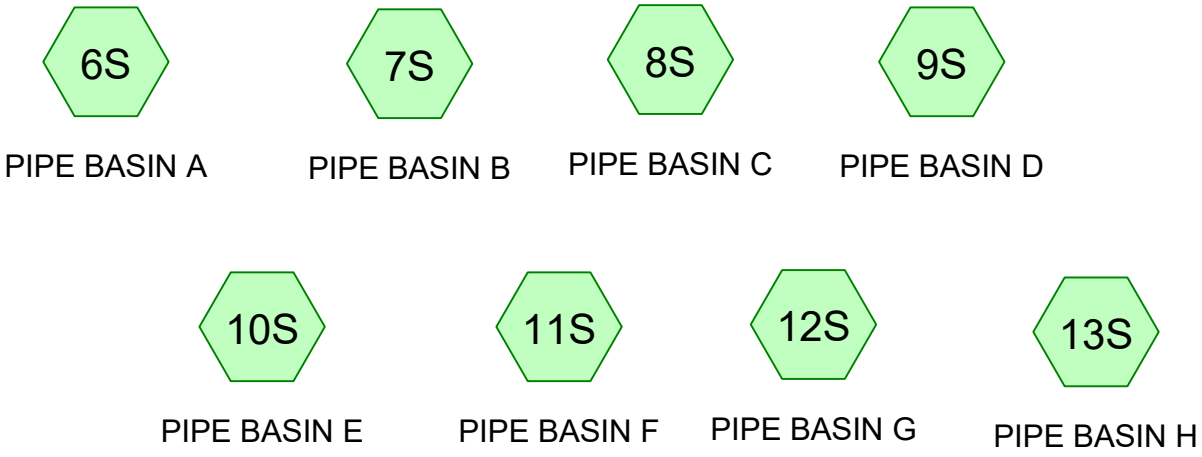
Appendix G: Storm Sewer TR-55 Calculations



Subcat Reach Pond Link

Routing Diagram for 2129100 hydro
Prepared by Excel Engineering, Printed 11/13/2023
HydroCAD® 10.20-3c s/n 01178 © 2023 HydroCAD Software Solutions LLC

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	100 year	MSE 24-hr	3	Default	24.00	1	6.32	2

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
2.313	98	(6S, 7S, 8S, 9S, 10S, 11S, 12S)
0.468	80	(6S, 7S, 8S, 9S, 13S)
2.782	**95**	**TOTAL AREA**

Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
2.782	Other	6S, 7S, 8S, 9S, 10S, 11S, 12S, 13S
2.782		**TOTAL AREA**

Ground Covers (selected nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	0.000	2.782	2.782		6S, 7S, 8S, 9S, 10S, 11S, 12S, 13S
0.000	**0.000**	**0.000**	**0.000**	**2.782**	**2.782**	**TOTAL AREA**	

Time span=1.00-60.00 hrs, dt=0.05 hrs, 1181 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 6S: PIPE BASIN A Runoff Area=7,961 sf 77.31% Impervious Runoff Depth=5.61"
Tc=6.0 min CN=94 Runoff=1.62 cfs 0.085 af

Subcatchment 7S: PIPE BASIN B Runoff Area=5,360 sf 76.40% Impervious Runoff Depth=5.61"
Tc=6.0 min CN=94 Runoff=1.09 cfs 0.058 af

Subcatchment 8S: PIPE BASIN C Runoff Area=4,294 sf 77.18% Impervious Runoff Depth=5.61"
Tc=6.0 min CN=94 Runoff=0.87 cfs 0.046 af

Subcatchment 9S: PIPE BASIN D Runoff Area=78,501 sf 81.19% Impervious Runoff Depth=5.73"
Tc=6.0 min CN=95 Runoff=16.11 cfs 0.860 af

Subcatchment 10S: PIPE BASIN E Runoff Area=5,312 sf 100.00% Impervious Runoff Depth=6.08"
Tc=6.0 min CN=98 Runoff=1.11 cfs 0.062 af

Subcatchment 11S: PIPE BASIN F Runoff Area=12,045 sf 100.00% Impervious Runoff Depth=6.08"
Tc=6.0 min CN=98 Runoff=2.51 cfs 0.140 af

Subcatchment 12S: PIPE BASIN G Runoff Area=6,114 sf 100.00% Impervious Runoff Depth=6.08"
Tc=6.0 min CN=98 Runoff=1.28 cfs 0.071 af

Subcatchment 13S: PIPE BASIN H Runoff Area=1,590 sf 0.00% Impervious Runoff Depth=4.07"
Tc=6.0 min CN=80 Runoff=0.26 cfs 0.012 af

Total Runoff Area = 2.782 ac Runoff Volume = 1.335 af Average Runoff Depth = 5.76"
16.84% Pervious = 0.468 ac 83.16% Impervious = 2.313 ac

Summary for Subcatchment 6S: PIPE BASIN A

Runoff = 1.62 cfs @ 12.13 hrs, Volume= 0.085 af, Depth= 5.61"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100 year Rainfall=6.32"

	Area (sf)	CN	Description
*	6,155	98	
*	1,806	80	
	7,961	94	Weighted Average
	1,806		22.69% Pervious Area
	6,155		77.31% Impervious Area

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

Summary for Subcatchment 7S: PIPE BASIN B

Runoff = 1.09 cfs @ 12.13 hrs, Volume= 0.058 af, Depth= 5.61"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100 year Rainfall=6.32"

	Area (sf)	CN	Description
*	4,095	98	
*	1,265	80	
	5,360	94	Weighted Average
	1,265		23.60% Pervious Area
	4,095		76.40% Impervious Area

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

Summary for Subcatchment 8S: PIPE BASIN C

Runoff = 0.87 cfs @ 12.13 hrs, Volume= 0.046 af, Depth= 5.61"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100 year Rainfall=6.32"

	Area (sf)	CN	Description
*	3,314	98	
*	980	80	
	4,294	94	Weighted Average
	980		22.82% Pervious Area
	3,314		77.18% Impervious Area

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

Summary for Subcatchment 9S: PIPE BASIN D

Runoff = 16.11 cfs @ 12.13 hrs, Volume= 0.860 af, Depth= 5.73"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100 year Rainfall=6.32"

	Area (sf)	CN	Description
*	464	98	
*	63,271	98	
*	14,766	80	
	78,501	95	Weighted Average
	14,766		18.81% Pervious Area
	63,735		81.19% Impervious Area

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

Summary for Subcatchment 10S: PIPE BASIN E

Runoff = 1.11 cfs @ 12.13 hrs, Volume= 0.062 af, Depth= 6.08"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100 year Rainfall=6.32"

	Area (sf)	CN	Description
*	5,312	98	
	5,312		100.00% Impervious Area

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

Summary for Subcatchment 11S: PIPE BASIN F

Runoff = 2.51 cfs @ 12.13 hrs, Volume= 0.140 af, Depth= 6.08"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100 year Rainfall=6.32"

	Area (sf)	CN	Description
*	12,045	98	
	12,045		100.00% Impervious Area

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

Summary for Subcatchment 12S: PIPE BASIN G

Runoff = 1.28 cfs @ 12.13 hrs, Volume= 0.071 af, Depth= 6.08"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100 year Rainfall=6.32"

	Area (sf)	CN	Description
*	6,114	98	
	6,114		100.00% Impervious Area

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

Summary for Subcatchment 13S: PIPE BASIN H

Runoff = 0.26 cfs @ 12.13 hrs, Volume= 0.012 af, Depth= 4.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-60.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100 year Rainfall=6.32"

	Area (sf)	CN	Description
*	1,590	80	
	1,590		100.00% Pervious Area

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

Appendix H: Storm Sewer Manning's Spreadsheet

Excel Engineering Project No. 2129100 Project Name Bethlehem Lutheran Church

Pipe Data				Pipe Capacity (100-yr)				
Pipe ID	Diameter (FT)	Slope (FT/FT)	Manning's n	Basin No.	Total Flow (cfs)	Total Flow (gpm)	Full Flow Capacity (cfs)	Full Flow Capacity (gpm)
A	1	0.003	0.012	A,H	1.88	844	2.12	951
B	1.25	0.003	0.012	A,B,H	2.97	1333	3.84	1725
C	1.5	0.003	0.012	A,B,C,H	3.84	1723	6.25	2805
D	2	0.020	0.012	D,E	17.22	7728	34.75	15597
E	2	0.030	0.012	D,E	17.22	7728	42.56	19102
F	1	0.010	0.012	F	2.51	1126	3.87	1737
G	0.83	0.010	0.012	G	1.28	574	2.38	1068
H	1	0.003	0.012	H	0.26	117	2.12	951

Full Flow Capacity based off Manning's Equation $Q = \frac{1.49}{n} R^{2/3} S^{1/2} a$

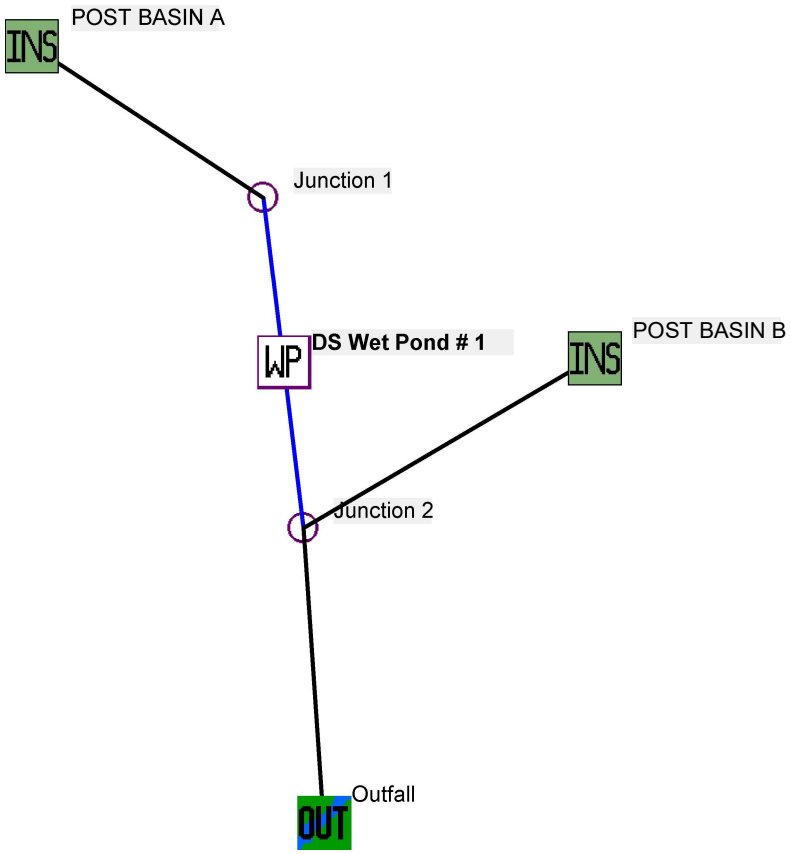
Where:
Q = Full Flow Capacity of Pipe (cfs)
n = manning's roughness coefficient
R = hydraulic radius (ft) (D/4)
s = hydraulic gradient, slope (ft/ft)
a = flow area (sq. ft.)

Typical Manning's n

HDPE	0.012
PVC	0.012
Concrete	0.013
CMP	0.024

*Total Flow calculated via TR-55 hydrologic calculations. Reference Storm Pipe Basin Map & TR-55 Calculations

Appendix I: SLAMM Input/ Output Information


POST BASIN A
INS
Junction 1
WP
DS Wet Pond # 1
POST BASIN B
INS
Junction 2
Outfall
OUT

Data file name: F:\Job Files\2129100 Catalyst Bethlehem Lutheran Church Menomonee Falls\2129104 Civil\storm water report and calculations\2023-11-13 Village Submittal\calcs\slamm_21291002.mdb
WinSLAMM Version 10.4.1
Rain file name: J:\Programs\civil\WinSLAMM\v10.4.1\Parameter Files\WisReg - Milwaukee 1969.ran
Particulate Solids Concentration file name:
J:\Programs\civil\WinSLAMM\v10.4.1\Parameter Files\v10.1 WI_AVG01.pscx
Runoff Coefficient file name: J:\Programs\civil\WinSLAMM\v10.4.1\Parameter Files\WI_SL06 Dec06.rsvx
Residential Street Delivery file name: J:\Programs\civil\WinSLAMM\v10.4.1\Parameter Files\WI_Res and Other Urban Dec06.std
Institutional Street Delivery file name:
J:\Programs\civil\WinSLAMM\v10.4.1\Parameter Files\WI_Com Inst Indust Dec06.std
Commercial Street Delivery file name: J:\Programs\civil\WinSLAMM\v10.4.1\Parameter Files\WI_Com Inst Indust Dec06.std
Industrial Street Delivery file name: J:\Programs\civil\WinSLAMM\v10.4.1\Parameter Files\WI_Com Inst Indust Dec06.std
Other Urban Street Delivery file name: J:\Programs\civil\WinSLAMM\v10.4.1\Parameter Files\WI_Res and Other Urban Dec06.std
Freeway Street Delivery file name: J:\Programs\civil\WinSLAMM\v10.4.1\Parameter Files\Freeway Dec06.std
Apply Street Delivery Files to Adjust the After Event Load Street Dirt Mass Balance: False
Pollutant Relative Concentration file name:
J:\Programs\civil\WinSLAMM\v10.4.1\Parameter Files\WI_GEO03.ppdx
Source Area PSD and Peak to Average Flow Ratio File:
J:\Programs\civil\WinSLAMM\v10.4.1\Parameter 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: 11-10-2023 Time: 10:55:04
Site information:

LU# 1 - Institutional: POST BASIN A Total area (ac): 6.960
  1 - Roofs 1: 2.020 ac. Pitched Connected Source Area PSD File:
C:\WinSLAMM Files\NURP.cpz
  13 - Paved Parking 1: 2.210 ac. Connected Source Area PSD File:
C:\WinSLAMM Files\NURP.cpz
  45 - Large Landscaped Areas 1: 2.730 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 2 - Institutional: POST BASIN B Total area (ac): 0.310
  45 - Large Landscaped Areas 1: 0.310 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

Control Practice 1: Wet Detention Pond CP# 1 (DS) - DS Wet Pond # 1
Particle Size Distribution file name: Not needed - calculated by program
Initial stage elevation (ft): 6
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): 0.25
2. Number of orifices: 1
3. Invert elevation above datum (ft): 6
Outlet type: Orifice 2
1. Orifice diameter (ft): 0.58
2. Number of orifices: 1
3. Invert elevation above datum (ft): 9
Outlet type: Broad Crested Weir
1. Weir crest length (ft): 15
2. Weir crest width (ft): 15
3. Height from datum to bottom of weir opening: 12.5
Pond stage and surface area

Entry Number	Stage (ft)	Pond Area (acres)	Natural Seepage (in/hr)	Other Outflow (cfs)
0	0.00	0.0000	0.00	0.00
1	0.01	0.0400	0.00	0.00
2	1.00	0.0500	0.00	0.00
3	2.00	0.0600	0.00	0.00
4	3.00	0.0700	0.00	0.00
5	4.00	0.0900	0.00	0.00
6	5.00	0.0900	0.00	0.00
7	6.00	0.2100	0.00	0.00
8	7.00	0.2300	0.00	0.00
9	8.00	0.3000	0.00	0.00
10	9.00	0.3400	0.00	0.00
11	10.00	0.3900	0.00	0.00
12	11.00	0.4400	0.00	0.00
13	12.00	0.5100	0.00	0.00

	14	13.00	0.6200	0.00
0.00				
	15	14.00	0.6700	0.00
0.00				

SLAMM for Windows Version 10.4.1
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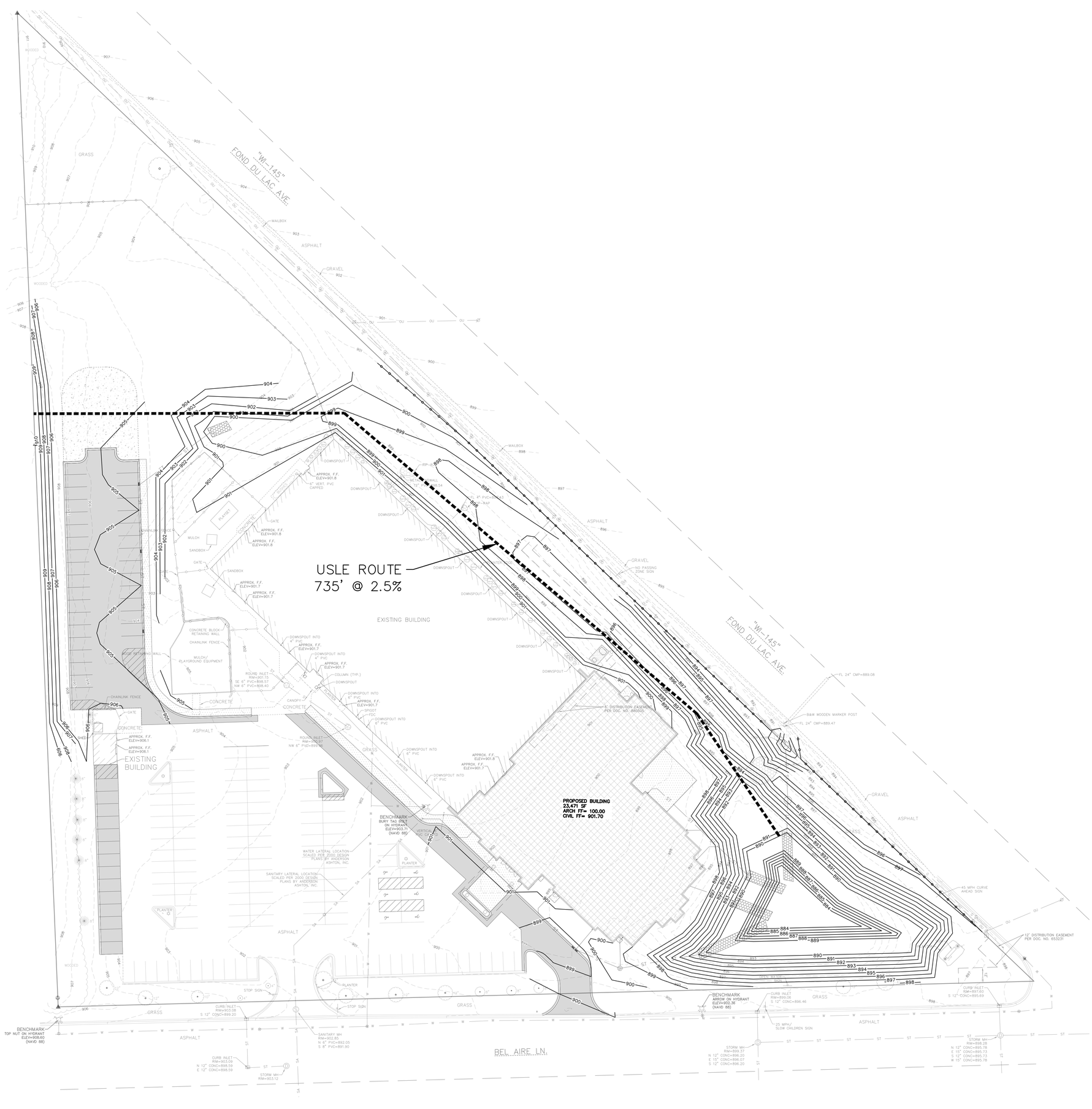
Data file name: F:\Job Files\2129100 Catalyst Bethlehem Lutheran Church Menomonee Falls\2129104 Civil\storm water report and calculations\2023-11-13 Village Submittal\calcs\slamm_21291002.mdb
Data file description:
Rain file name: J:\Programs\civil\WinSLAMM\v10.4.1\Parameter Files\WisReg - Milwaukee 1969.ran
Particulate Solids Concentration file name: J:\Programs\civil\WinSLAMM\v10.4.1\Parameter Files\v10.1 WI_AVG01.pscx
Runoff Coefficient file name: J:\Programs\civil\WinSLAMM\v10.4.1\Parameter Files\WI_SL06 Dec06.rsvx
Pollutant Relative Concentration file name: J:\Programs\civil\WinSLAMM\v10.4.1\Parameter Files\WI_GEO03.ppdx
Residential Street Delivery file name: J:\Programs\civil\WinSLAMM\v10.4.1\Parameter Files\WI_Res and Other Urban Dec06.std
Institutional Street Delivery file name: J:\Programs\civil\WinSLAMM\v10.4.1\Parameter Files\WI_Com Inst Indust Dec06.std
Commercial Street Delivery file name: J:\Programs\civil\WinSLAMM\v10.4.1\Parameter Files\WI_Com Inst Indust Dec06.std
Industrial Street Delivery file name: J:\Programs\civil\WinSLAMM\v10.4.1\Parameter Files\WI_Com Inst Indust Dec06.std
Other Urban Street Delivery file name: J:\Programs\civil\WinSLAMM\v10.4.1\Parameter Files\WI_Res and Other Urban Dec06.std
Freeway Street Delivery file name: J:\Programs\civil\WinSLAMM\v10.4.1\Parameter 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: J:\Programs\civil\WinSLAMM\v10.4.1\Parameter Files\NURP Source Area PSD Files.csv
Cost Data file name:
If Other De Off-site Pollutant Loads are Removed from Pollutant Load % Reduction calculations
Seed for random number generator: -42
Start of Winter Season: 12/06 End of Winter Season: 03/28
Model Run Start Date: 01/05/69 Model Run End Date: 12/31/69
Date of run: 11-10-2023 Time of run: 11:00:30
Total Area Modeled (acres): 7.270
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	381418	-	84.29	2007	-
Outfall Total with Con	381810	-0.10%	15.61	372	81.46%
Annualized Total After	387113			377.1	

Appendix J: USLE Map and Calculations



CIVIL USLE

EXCEL

Always a Better Plan

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

PROJECT INFORMATION

PROPOSED WORSHIP FACILITY ADDITION FOR:

BETHLEHEM LUTHERAN CHURCH

N108W14290 BEL AIRE LN • GERMANTOWN, WI 53022

PROFESSIONAL SEAL

PRELIMINARY DATES

NOT FOR CONSTRUCTION

JOB NUMBER

2129100

SHEET NUMBER

USLE

2022 © EXCEL ENGINEERING, INC.

Soil Loss & Sediment Discharge Calculation Tool

for use on Construction Sites in the State of Wisconsin

WDNR Version 2.0 (06-29-2017)

WISCONSIN DEPT. OF NATURAL RESOURCES

YEAR 1

Developer:

Project: 2129100 Bethlehem Lutheran Church

Date: 11/13/23

County: Washington

Version 1.0

Activity (1)	Begin Date (2)	End Date (3)	Period % R (4)	Annual R Factor (5)	Sub Soil Texture (6)	Soil Erodibility K Factor (7)	Slope (%) (8)	Slope Length (ft) (9)	LS Factor (10)	Land Cover C Factor (11)	Soil loss A (tons/acre) (12)	SDF (13)	Sediment Control Practice (14)	Sediment Discharge (t/ac) (15)
Bare Ground	03/31/24	06/01/24	16.6%	120	Silt Loam	0.43	2.5%	735	0.44	1.00	3.8	1.207	Ditch Check Sedi	3.2
Seed with Mulch or Er	06/01/24	02/28/25	81.4%	120	Silt Loam	0.43	2.5%	735	0.44	0.10	1.9	1.207	Ditch Check Sed	1.6
End	02/28/25	-----	-----	-----	-------	-----	2.5%	735	0.44	------	-----	0.000		0.0
		-----	-----	-----	-------	-----	2.5%	735	0.44	-----	-----	0.000		0.0
		-----	-----	-----	-------	-----	2.5%	0	-----	-----	-----	0.000		0.0
		-----	-----	-----	-------	-----	0.0%	0	-----	-----	-----	0.000		0.0
										TOTAL	**5.6**		**TOTAL**	**4.7**
													% Reduction Required	**NONE**

Notes:

See Help Page for further descriptions of variables and items in drop-down boxes.
The last land disturbing activity on each sheet must be 'End'. This is either 12 months from the start of construction or final stabilization.
For periods of construction that exceed 12 months, please demonstrate that 5 tons/acre/year is not exceeded in any given 12 month period.

NOTE: THIS TOOL ONLY ADDRESSED SOIL EROSION DUE TO SHEET FLOW. MEASURES TO CONTROL CHANNEL EROSION MAY ALSO BE REQUIRED TO MEET SEDIMENT DISCHARGE REQUIREMENTS.

Recommended Permanent Seeding Dates:

4/15-6/1	and	8/1-8/21	Turf, introduced grasses and legumes
Thaw-6/30			Native Grasses, forbs, and legumes

Designed By:	
Date	

Appendix K: Post Construction Operation and Maintenance Plan

The owner of the property affected shall inspect and maintain the following stormwater management systems frequently, especially after heavy rainfalls, but at least on an annual basis unless otherwise specified.	
STORMWATER FACILITY	**TYPE OF ACTION**
1. Lawn and Landscaped Areas	All lawn areas shall be kept clear of any materials that block the flow of stormwater. Rills and small gullies shall immediately be filled and seeded or have sod placed in them. The lawn shall be kept mowed, tree seedlings shall be removed, and litter shall be removed from landscaped areas.
2. Swales	All grassed swales showing signs of erosion, scour, or channelization shall be repaired, reinforced, and revegetated immediately. All swales shall be repaired to the original plan requirements. Mowing shall take place no less than twice per year at a height of no less than three inches. Grasses shall not be allowed to grow to a height that permits branching or bending. Mowing shall only take place when the ground is dry and able to support machinery.
3. Rip Rap	All rip rap showing signs of erosion or scour shall be repaired, reinforced, and revegetated immediately. Rip rap should be kept clean of vegetation and sediment. All rip rap shall be repaired to the construction plan requirements.
4. Catch Basin/Curb Inlet Grates	The grate openings to these structures must be cleared of any clogging or the blocking of stormwater flow from getting into the stormwater conveyance system of any kind.
5. Retention/Detention Basins	Trash racks, standpipes, outlet structures, inlet and outlet pipes, and anti vortex devices shall be kept clear of debris. Non-structurally sound devices shall be replaced. Floating litter and algae shall be removed monthly. All grassed areas, embankments, and flow control devices showing signs of erosion shall be repaired, reinforced, and revegetated immediately to the original plan requirements. Dry basins shall be mowed no less than twice per year at a height of no less than 3 inches. Grasses shall not be allowed to grow to a height that permits branching or bending. Mowing shall only take place when the ground is dry and able to support machinery. Every 5 years, the elevations of the pond bottom shall be surveyed to determine the permanent pool depth and sediment depth in the pond. When silt has accumulated three feet from the original design depth elevation of the pond, the pond shall be cleaned out and restored back to the original design depth of a minimum of 5’ from the normal water elevation. Cleaning, removal, and deposit of silt from the detention pond shall be done by means and methods acceptable to the Wisconsin Department of Natural Resources.

6. Record of Maintenance	The operation and maintenance plan shall remain onsite and be available for inspection when requested by WDNR. When requested, the owner shall make available for inspection all maintenance records to the department or agent for the life of the system.

SIGN REVIEW

1/8/24 Plan Commission Meeting

Countryaire Kennels Inc.

Planning & Zoning Report **Germantown, Wisconsin**

Summary

FastSigns, agent for Frank & Mary Ann Waldron, property owners, and Countryaire Kennels is requesting approval for a replacement monument ground sign for the existing pet boarding and grooming operation located at W140 N11445 Country Aire Drive.

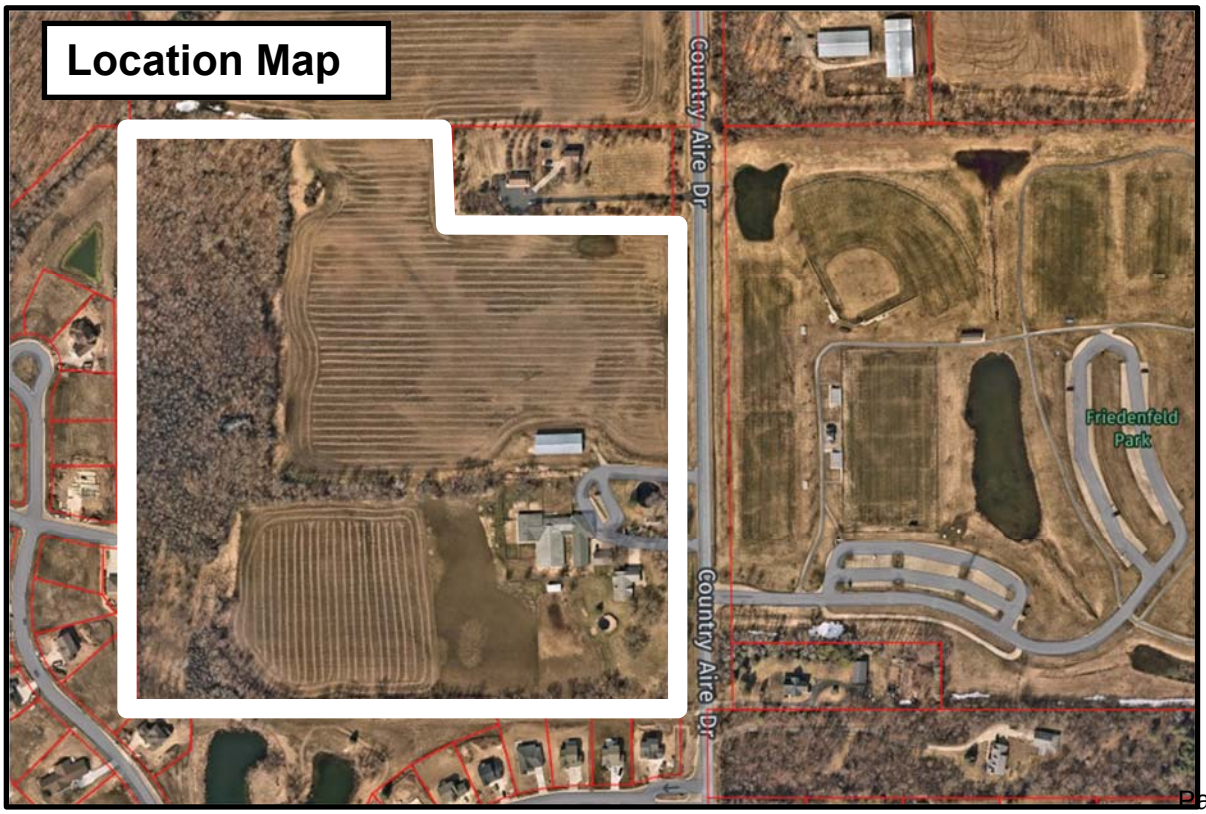
Location: W140 N11445 Country Aire Drive

Agent/
Property Owners:

Danielle Spitza	Frank & Mary Ann Waldron
FastSigns	Jill Kennicker, Operator
W173 N9170 Francis Dr	W140 N11445 Country Aire Dr
Menomonee Falls, WI	Germantown, WI

Zoning: A-2: Agricultural

Adjacent Land Uses		Zoning
North	Agricultural	A-1
South	Residential	Rs-5 PDD
East	Institutional	I
West	Residential	Rs-5 PDD



Background/Proposal

FastSigns, agent for Frank & Mary Ann Waldron, property owners, and Countryaire Kennels is requesting approval for a replacement monument ground sign for the existing pet boarding and grooming operation located at W140 N11445 Country Aire Drive.

Monument Sign

- 4'7" x 3'5" (15.7 sqft sign area per side and a maximum height of 5 feet
- Double-sided synthetic stucco painted panel w/ address coordinates (not illuminated)
- 18" masonry base with support columns
- Landscaping area 36" around sign base
- 5' setback from property line

Staff Comments

The proposed monument sign will replace an existing post & panel sign with a new sign panel and masonry base consistent with the sign regulations. Except for the address coordinates shown on the sign panel (required to be mounted on the sign base), all other components of the proposal meet the Village's sign regulations.

Village Staff Recommendation

APPROVE the proposed monument ground sign for the Countryaire Kennels Inc. facility located at W140 N11445 Country Aire Drive subject to the following conditions:

1. Address coordinates shall be mounted on the sign base with a minimum 5" letter/number height.

Village of Germantown ...Willkommen

Fee must accompany application

$275 Sign Review Fee

$ 75 Sign Face Replacement

Paid $ ____ Date 10/19/23

SIGN REVIEW APPLICATION

Pursuant to Section 17.46 of the Municipal Code

Please read and complete this application carefully. **All applications must be signed and dated.**

1 APPLICANT OR AGENT

FASTSIGNS of Menomonee Falls
W173N9170 St. Francis Dr. Suite 1
Menomonee Falls, WI 53051
Phone (262) 253-0799
Fax ( )
E-Mail danielle.spitza@fastsigns.com

PROPERTY OWNER

Countryaire Kennels
W140N11445 Country Aire Dr
Germantown, WI 53022
Phone (262) 242-3154
jillkennicker@yahoo.com

2 PROPERTY ADDRESS OR GENERAL LOCATION

W140N11445 Country Aire Dr (Replacing current monument sign)

3 SIGN INFORMATION

Sign Dimensions 66" height x 91.5" width (Single) Multi Tenant (circle one)
Number of Sides 2 Building Frontage SF ____
Total Square Footage of Sign (include all sides) 41.94
Total height of the Sign 66"
Is the Sign to be illuminated ____ yes x no
Type of Sign Construction Materials Echo Ridge Country Ledgestone and Sythenic Stucco Sign Panel
Distance to Closest Property Line 20' outside property line according to Washington County GIS (120' ROW)

Are there any existing signs on the property Yes
If yes, what is the total Square Footage of existing signs Approximately 15 sq ft

What are the intentions for the existing signs: Take down x Remain ____

4 SIGNATURES -- ALL APPLICATIONS MUST BE SIGNED BY OWNER!

Danielle Spitza 10-13-23
Applicant Date

Jill Kennicker Oct 13, 2023
Jill Kennicker (Oct 13, 2023 14:10 CDT)
Owner Date

EXISTING SIGN

72″ H x 58″ W

PROPOSED NEW SIGN

Double-Sided

Stone Sign Base/Pillars:
12" wide x 12" deep x 60" tall
Echo Ridge Country Ledgestone

Sign Face:
55" wide x 41" tall x 6" deep
Double-Sided Custom Painted Synthetic Stucco

Landscaping: mulched flower bed 36" around all sides of sign with boxwood bushes, ornamental grasses and flowers.

FASTSIGNS
More than fast. More than signs.®
W173N9170 St. Francis Drive, Suite 1, Menomonee Falls, WI 53051
t: 262-253-0799 | f: 262-253-0797 | e: 452@fastsigns.com | www.fastsigns.com/452

SALES DEVELOPMENT · SIGNS & GRAPHICS · INSTALLATION · PROJECT MANAGEMENT · GRAPHIC DESIGN · BRAND INTEGRITY · CONSULTING

SIGN LOCATION

★ Existing sign location appears to be inside of ROW on Washington County GIS.

★ New sign will be located 5’ inside property line.

Sign will be moved 25’ west

FASTSIGNS
More than fast. More than signs.®
W173N9170 St. Francis Drive, Suite 1, Menomonee Falls, WI 53051
t: 262-253-0799 | f: 262-253-0797 | e: 452@fastsigns.com | www.fastsigns.com/452

CUP #05 – 93B Document No.	CONDITIONAL USE PERMIT Document Title

VILLAGE OF GERMANTOWN, WASHINGTON COUNTY, WISCONSIN
CONDITIONAL USE ZONING PERMIT

DOC# 11 82299

Recorded
Feb. 07, 2008 AT 09:30AM
SHARON A MARTIN, REGISTER OF DEEDS
WASHINGTON COUNTY, WISCONSIN

Fee Amount: $15.00

15-3

Whereas the Property Owners/Applicants:
Frank Waldron, Mary Ann Waldron, and Jillaine Waldron

agree to comply with applicable Codes and Ordinances of the Village of Germantown, Wisconsin, and further agree that all work done pursuant to the permission granted herewith will conform with the applications and drawings filed with and approvals granted by officials of the Village for the purpose of obtaining this permit.

Now, therefore, this permit is re-issued to the Owners/Applicants and updated to reflect previous approvals and allow for:

1. a dog kennel for boarding of up to fifty (50) dogs and twenty (20) cats and pet grooming salon in accordance with Section 17.12(2)(b) of the Municipal Code.

Name & Return Address:
Village of Germantown
P.O. Box 337
Germantown, WI 53022

Parcel Identification No:
GTNV 234-992

On the following described property located in the Village of Germantown, Washington County, Wisconsin:

Lot 2 of Certified Survey Map (CSM) #3251, Being a part of the NE ¼ of the SE ¼ of Section 23, Township 9 North, Range 20 East, in the Village of Germantown, Washington County, Wisconsin.
Street Address: W140 N11445 Country Aire Drive

Pursuant to the following condition(s):

1. Site Plan: site, architectural, lighting and landscaping plans shall be approved by the Plan Commission prior to any building permits being issued. The building addition shall have all new kennels and runs constructed in a manner in which they are completely enclosed within the building.
2. Allowable uses include the following:
   a. A dog kennel for up to fifty (50) dogs at any one time. The total number of runs shall be 50, with 25 of the runs allowing two dogs.
   b. A cat kennel for up to twenty (20) cats at any one time.
   c. Retail sale of pet supplies, pet food and miscellaneous pet care products in an area not to exceed 270 sqft.
   d. A pet grooming salon within the existing building.
3. Maintenance of the existing approved sanitary system to accept waste generated on the site. The system shall be approved by Washington County prior to any

construction of new buildings or expansion of the existing buildings.

4. Noise shall be controlled as may be necessary with regard to Chapter 10 of the Municipal Code relating to public nuisances.
5. Any dumpster or trash receptacle shall remain shielded from the road or adjacent properties with an acceptable enclosure.
6. No additional signage shall be permitted. The existing signage shall not be modified without Village Plan Commission approval.
7. All parking and driveway areas shall be paved.
8. Windows of the building addition shall not be open while the dogs are inside the kennels.

The provisions of this permit shall be binding upon the property owners/applicants unless and until amended by the Village of Germantown.

Granted by the Village Board of the Village of Germantown, Washington County, Wisconsin on the 17th day of December, 2007.

Thomas Kempinski
Village President

ATTEST:

Elizabeth Knaack
Village Clerk

STATE OF WISCONSIN)
)SS
WASHINGTON COUNTY)

Personally came before me this 31st day of January, 2008, the above named Thomas Kempinski, Village President, and Elizabeth Knaack, Village Clerk, to me known to be the persons who executed the foregoing instrument and acknowledged the same.

Christine M. Micka
Christine M. Micka, Notary
My Commission Expires: 8-14, 2012

NOTARY PUBLIC CHRISTINE M. MICKA STATE OF WISCONSIN

ACCEPTANCE OF TERMS AND CONDITIONS BY PERMITTEE

I, Frank Waldron, Applicant, representing self, hereby accept the terms and conditions set forth in this Permit, and realize that non-adherence to the terms and conditions as stated hereon may result in the revocation of this Permit by the Village of Germantown.

Dated this 29 day of Jan., 2008

Property Owner(s):

Frank Waldron

Frank Waldron

Mary Ann Waldron

Mary Ann Waldron

Jillaine Waldron

STATE OF WISCONSIN)
)SS
Washington COUNTY)

Personally came before me this 29 day of Jan, 2008 the above named _____, (title) to me known to be the person who executed the foregoing instrument and acknowledged the same.

Donna Kurth

Print Name of Notary:

Donna Kurth

Notary Public, State of Wisconsin

My Commission Expires: 3-28-10

DONNA KURTH NOTARY PUBLIC STATE OF WISCONSIN

This instrument was drafted by:
Jeffrey W. Retzlaff, AICP
Village Planner/Zoning
Administrator
Village of Germantown, Wisconsin