

**PLEASANT PRAIRIE PLAN COMMISSION MEETING
VILLAGE HALL AUDITORIUM
9915 39th AVENUE
PLEASANT PRAIRIE, WISCONSIN
5:30 P.M.
April 16, 2018**

AGENDA

1. Call to Order.
2. Roll Call.
3. Correspondence.
4. Citizen Comments.
5. Unfinished Business.
 - A. **TABLED PUBLIC HEARING AND CONSIDERATION OF A PLAN COMMISSION RESOLUTION #18-08 FOR A COMPREHENSIVE PLAN AMENDMENT** for the request of Dan Szczap, agent, on behalf of Main Street Development, LLC to amend the 2035 Comprehensive Land Use Plan Map 9.9 to remove the Urban Reserve land use designation from the vacant properties generally located at the northeast corner of STH 31 and STH 165 for the proposed Main Street Market commercial development and to update Appendix 10-3 of the Village of Pleasant Prairie Wisconsin, 2035 Comprehensive Plan to include said amendments.
 - B. **TABLED PUBLIC HEARING AND CONSIDERATION OF ZONING MAP AND TEXT AMENDMENTS** for the request of Dan Szczap, agent on behalf of Main Street Development, LLC related to the proposed Main Street Market commercial development to be located at the northeast corner of STH 31 and STH 165. The properties are proposed to be rezoned from the B-2 (AGO), Community Business District with a General Agricultural Overlay District into the B-2 (PUD), Community Business District with a Planned Unit Development Overlay District. In addition, for a Zoning Text Amendment to create the specific PUD ordinance for said development.
 - C. Consider the tabled request of Dan Szczap on behalf of Main Street Development, LLC for approval of a **Certified Survey Map and Development Agreement and related documents** for Main Street Market related to the proposed Main Street Market commercial development to be located at the northeast corner of STH 31 and STH 165.
8. New Business.
 - D. Consider **Plan Commission Resolution #18-11** for Thomas Terwall and his 23 years of service as Chairman of the Plan Commission.
7. Adjourn.

It is possible that a quorum of members of other governmental bodies of the municipality may be in attendance in the above stated meeting to gather information; no action will be taken by any other governmental body except the governing body noticed above. **The Village Hall is handicapped accessible. If you have other special needs, please contact the Village Clerk, 9915 39th Avenue, Pleasant Prairie, WI (262) 694-1400.**

**THESE ITEMS ARE RELATED AND WILL BE DISCUSSED AT THE SAME TIME
HOWEVER, SEPARATE ACTION IS REQUIRED.**

- A. **TABLED PUBLIC HEARING AND CONSIDERATION OF A PLAN COMMISSION RESOLUTION #18-08 FOR A COMPREHENSIVE PLAN AMENDMENT** for the request of Dan Szczap, agent, on behalf of Main Street Development, LLC to amend the 2035 Comprehensive Land Use Plan Map 9.9 to remove the Urban Reserve land use designation from the vacant properties generally located at the northeast corner of STH 31 and STH 165 for the proposed Main Street Market commercial development and to update Appendix 10-3 of the Village of Pleasant Prairie Wisconsin, 2035 Comprehensive Plan to include said amendments.

Recommendation: Village staff recommends that the Plan Commission approve Plan Commission Resolution #18-08 and recommend that the Village Board approve the Comprehensive Plan amendment as presented.

- B. **TABLED PUBLIC HEARING AND CONSIDERATION OF ZONING MAP AND TEXT AMENDMENTS** for the request of Dan Szczap, agent on behalf of Main Street Development, LLC related to the proposed Main Street Market commercial development to be located at the northeast corner of STH 31 and STH 165. The properties are proposed to be rezoned from the B-2 (AGO), Community Business District with a General Agricultural Overlay District into the B-2 (PUD), Community Business District with a Planned Unit Development Overlay District. In addition, for a Zoning Text Amendment to create the specific PUD ordinance for said development.

Recommendation: Village staff recommends that the Plan Commission send a favorable recommendation to the Village Board to approve the Zoning Map and Text Amendments as presented.

- C. Consider the tabled request of Dan Szczap on behalf of Main Street Development, LLC for approval of a **Certified Survey Map and Development Agreement and related documents** for Main Street Market related to the proposed Main Street Market commercial development to be located at the northeast corner of STH 31 and STH 165.

Recommendation: Village staff recommends that the Plan Commission send a favorable recommendation to the Village Board to approve the Certified Survey Map and Development Agreement and related documents as presented.

VILLAGE STAFF REPORT OF APRIL 16, 2018

CONSIDERATION OF A PLAN COMMISSION RESOLUTION #18-08 FOR A COMPREHENSIVE PLAN AMENDMENT

for the request of Dan Szczap, agent, on behalf of Main Street Development, LLC to amend the 2035 Comprehensive Land Use Plan Map 9.9 to remove the Urban Reserve land use designation from the vacant properties generally located at the northeast corner of STH 31 and STH 165 for the proposed Main Street Market commercial development and to update Appendix 10-3 of the Village of Pleasant Prairie Wisconsin, 2035 Comprehensive Plan to include said amendments.

CONSIDERATION OF ZONING MAP AND TEXT AMENDMENTS for the request of Dan Szczap, agent on behalf of Main Street Development, LLC related to the proposed Main Street Market commercial development to be located at the northeast corner of STH 31 and STH 165. The properties are proposed to be rezoned from the B-2 (AGO), Community Business District with a General Agricultural Overlay District into the B-2 (PUD), Community Business District with a Planned Unit Development Overlay District. In addition, for a Zoning Text Amendment to create the specific PUD ordinance for said development.

Consider the request of Dan Szczap on behalf of Main Street Development, LLC for approval of a **Certified Survey Map and Development Agreement and related documents** for Main Street Market related to the proposed Main Street Market commercial development to be located at the northeast corner of STH 31 and STH 165.

THESE ITEMS ARE RELATED AND WILL BE DISCUSSED AT THE SAME TIME HOWEVER, SEPARATE ACTION IS REQUIRED.

The developer is requesting several approvals for the development of the Main Street Market commercial development to be located at the northeast corner of STH 31 (Green Bay Road) and STH 165 (104th Street). The items being considered at tonight's meeting are: Comprehensive Plan Amendment, Zoning Map and Text Amendments, Certified Survey Map and Development Agreement. [Note: On March 26, 2018 the Plan Commission tabled these items until tonight's meeting.]

Previous Approvals: On December 4, 2018 the Village Board conditionally approved a **Master Conceptual Plan** for the proposed Main Street Market development. The Main Street Market development includes:

- Building A: Commercial Building (2,350 square feet)
- Building B: Commercial Building (13,800 square feet)
- Building C: Froedtert South Medical Office Building (12,300 square feet foot print with 50,000 square foot total building area)
- Building D: Multi-tenant Building (26,000 square feet)
- Building E: Retail Building (6,000 square feet)
- Building F: Retail Building (8,000 square feet)
- Building G: Grocery Store (50,875 square feet)
- Building H: Retail Building (6,000 square feet)
- Building I: Gasoline Station and C-Store (5,000 square feet)

This Master Conceptual Plan was a refinement of the **Neighborhood Plan Amendment** (Ord. #17-48) conditionally approved by the Village Board on October 2, 2017 for a portion of the Highpoint Neighborhood Plan for the commercial development. On February 5, 2018 the Village Board of Trustees approved the **Project Plan for TID #6**. The Development Agreement and related documents being discussed tonight further the implementation of the lands within the TID #6 boundaries.

Traffic Impact Analysis (TIA): As required by WI DOT, the Main Street Market Developer has prepared an updated TIA based upon the proposed Main Street Market land uses. All required Old Green Bay Road, STH 165 and STH 31 roadway and intersection improvements impacted as a result of this development as well as the timing for the construction of the transportation improvements were analyzed by Traffic Analysis and Design (TADI). The TIA was submitted to the Village and the WI DOT for traffic forecasting review and approval and again by TADI, the Village and WI DOT for Scenario One and Two Modifications to the adjacent roadway system. Due to some area road closures when the traffic counts were performed by the WI DOT in 2015, the WI DOT conducted new traffic counts the first week in April.

Based upon staff and Developer discussions at a March 13, 2018 meeting with the WI DOT, the analysis being provided by the WI DOT and TADI's review, the final TIA approval letter is anticipated to be completed by the WI DOT by the end of April. The WI DOT will require that the Village enter into a Memorandum of Understanding Agreement (MOU) with them, which provides the WI DOT with assurances as to the completion of the phased TIA off-site and on-site proposed public/private improvements. A Development Agreement has been prepared and shall be entered into between Main Street Market, LLC, MSM Development Inc. and the Village, which guarantees the Developer's obligation to construct the required TIA identified public/private improvements.

The TIA confirmed and the WI DOT concurred that there should be no direct private driveway access to the properties from the development to STH 31, between STH 165 and the north property line. The WI DOT has agreed that the existing access from STH 165 to Lot 3 is intended to be removed with a transfer of access rights as a public street connection (Main Street), which will be located on STH 31. Main Street is proposed to extend between STH 31 and Old Green Bay Road. There are four (4) private driveways proposed to Old Green Bay Road—Gas Driveway, North Driveway, Center Driveway (at 102nd Street) and South Driveway and a public road connection at Main Street.

The Scenario Modifications being prepared by WI DOT/TADI identify the Main Street Market Modifications for Phase One and the Main Street Market Full Buildout Modifications. It is likely that the Developer's construction timing of Main Street may be shifted from a Phase One to a Full Build Out time frame). The 90' right-of-way for Main Street shall be dedicated to the Village by the next Certified Survey Map (within 60 days) prior to the further land division of Lot 1.

Detailed engineering plans for the widening of Green Bay Road and STH 165 and the STH 165/Old Green Bay Road intersection and Main Street shall be finalized and provided to the Village and WI DOT for review and approval—all of which are outlined and discussed in the Development Agreement. The acquisition of additional right-of-way from adjacent landowners on the south side of STH 165 and the east side of Old Green Bay Road will need to be acquired and dedicated to the Village/DOT prior to construction of the public improvements.

Old Green Bay Road will be required to be re-constructed with an urban cross section with curb and gutter and public sidewalks/pedestrian way. A new future signalized intersection will be created at Old Green Bay Road and STH 165 and at Green Bay Road at future Main Street. Roadway cross section requirements have been defined which include bicycle and pedestrian accommodations.

The MOU for the Main Street Market development several off-site improvements are required to be made by the Developer as a condition of Froedtert's development will be required. The WI DOT did agree and Village staff recommends however, to allow the Froedtert South clinic project work to begin subject to the Developer executing a Development Agreement with the Village and recording of a Certified Survey Map for the

Main Street Market development and the Village entering into a MOU with the WI DOT for the off-site improvements. The off-site Phase 1 TIA improvements to be defined by WI DOT and as referenced in the TID # 6 documents and Village approved engineering plans must be completed by November 1, 2019. The timing of the completion of all of the off-site improvements is not anticipated to hinder the Froedtert South Clinic occupancy. However, the revised TIA WI DOT approval letter will be forthcoming by May 1, 2018 which will determine what improvements relate specifically to the Froedtert project that will need to be completed prior to occupancy.

Certified Survey Map: The first CSM (presented this evening) creates 4 lots:

Lot 1 is 14.63 acres and is the remainder or balance of the site to be retained by the developer for new development and the storm water retention basin areas. During the initial phase of construction, a first retention basin will be constructed at the southwest corner of the site to service the first three lots being created. Lot 1 is intended to be further subdivided as additional development is proposed pursuant to the Master Conceptual Plan and in conformance with the Development Agreement.

Lot 2 is 4.01 acres with frontage on Old Green Bay Road is proposed to be developed with the Froedtert South Medical Office Building. Froedtert South intends to purchase this lot and begin mass grading, underground utilities and early footing and foundation this spring.

Lot 3 is 0.85 acre with frontage on STH 165 and is proposed to have access through cross access easements through Lots 2 and 4. The existing access to STH 165 will be removed and access rights to be transferred to allow for a Public Road (Main Street) access point on STH 31 that will align with Jelly Belly Lane and will connect STH 31 and Old Green Bay Road pursuant to the TIA. There will be no access driveways to the north/south to/from Main Street. There is no identified user for this lot at this time, however the Master Conceptual Plan indicates at 2,350 square foot commercial building.

Lot 4 is 1.68 acres at the northwest corner of STH 165 and Old Green Bay Road. There is no identified user for this lot at this time however the Master Conceptual Plan indicates at 13,800 square foot building. Access to this property will be through cross access easements through Lot 2.

A second or subsequent CSM shall be forthcoming for the Development within 60 days which defines and creates an Outlot for the large retention basin, the dedication of the right of way for Main Street and additional dedication of right-of-way for Old Green Bay Road.

Site access to each of these lots will be through common shared access points onto Old Green Bay Road. There will be an access across from 102nd Street along the north side of Lot 2 and a second shared access directly south of Lot 2 to service all three lots. There will be no other access to STH 165 or STH 31 to service Lots 2, 3 and 4.

The CSM identifies the dedicated public easements for the private sanitary sewer, water and storm sewer improvements required to be installed to service Lots 2, 3 and 4.

The Declarations specifically set forth the obligations for cross access, parking and maintenance between the Lots within the Development. A note has been placed on the CSM regarding the cross access and parking requirements for Lot 2. Additional, Cross-Access and Parking, Access and Maintenance Easements shall be dedicated for the shared access between other lots as they develop either on subsequent CSM's or by separate recordable documents.

Development Agreement and related documents: The *attached* Development Agreement specifies the obligations of the Developer and the Village related to TID #6 including the required public/private improvements for the development and other requirements. The Developer has also prepared Declaration of Development Standards and Protective Covenants and By-Laws for the Development. Addendums or modifications to the Development Agreement may be required to clarify or modify changes to the full build out improvements as development continues over the next several years.

Comprehensive Plan Amendment: The Village's 2035 Land Use Plan Map 9.9 is proposed to be amended to remove the Urban Reserve land use designation on the properties while the underlying community commercial land use designation (Commercial) remains on the properties. In addition, Appendix 10-3 of the Village of Pleasant Prairie Wisconsin, 2035 Comprehensive Plan to include said amendments.

Zoning Map and Text Amendments: The properties are proposed to be rezoned from the B-2 (AGO), Community Business District with a General Agricultural Overlay District to the B-2 (PUD) Community Business District with a Planned Unit Development Overlay District. In addition, a Zoning Text Amendment is proposed to create the Planned Unit Development (PUD) ordinance. The PUD Ordinance may be amended from time to time as development with Main Street Market is proposed subject to the Village's approval process. The Main Street Market Declarations shall set forth specific details, which reflect that the project will develop as a uniform business development site. Community benefits shall be reflected in using similar site architectural design, building materials/building colors, landscaping, signage, parking lot light poles and other features including fully fire-sprinklered buildings regardless of their size and DSIS camera systems within the development.

At this time the PUD includes the following dimensional variations of the Zoning Ordinance:

- To decrease the 2-acre minimum lot size to 0.8 acre for Lot 3 and 1.5 acres for Lot 4.
- To require the maximum open space for the entire development to be 30% rather than 30% per lot.
- To decrease the minimum floor area of the building on Lot 3 from a minimum of 4,000 square feet to 2,350 square feet.
- To increase the maximum 25,000 square feet floor area for the Froedtert medical office building and a proposed future grocery store up to 55,000 square.
- To increase the maximum height of a medical office building from 35 feet to 60 feet.
- To decrease the setback of parking lots, maneuvering lanes and fire lanes from 20 feet to 15 feet to the exterior boundaries of the development.
- To allow for a 0 foot setback to all interior property lines to allow for shared cross access and parking access within the parking lots.
- To decrease the minimum building setback to all public streets from 65 feet to 30 feet.
- To allow up to four (4) non-residential entry monument signs within the development. These signs are intended to be located at STH 31 and STH 165, STH 31 and Main Street, STH 165 and Old Green Bay Road and 102nd Street and Old Green Bay Road. These signs would include the name of the Development "Main Street Market" and could include the names of businesses within the Development. These signs would be limited to 10 feet in height with a maximum area of 160

square feet. Furthermore, electronic message boards or scrolling messages would not be allowed on the two signs adjacent to STH 31.

- To require one (1) primary monument sign per property and allow for a shared primary monument signs for Lots 3 and 4. These signs would also be limited to 6 feet in height and 130 square feet.

Detailed Site and Operational Plans that include site plans, drainage and grading plans, building plans, landscape plans, signage plans and all other required plans and documents pursuant to the Site and Operational Plan requirement of the Village Zoning Ordinance (Article IX of Chapter 420 of the Village Municipal Code) shall be submitted for each individual site. As sites are developed the Conceptual Master Plan(s) shall be updated to incorporate the detailed plans and shown as part of the Site and Operational Plan set. As sites are developed and the detailed plans are provided, the PUD may be amended from time to time with Village prior approval.

In addition, a Digital Security Imaging System (DSIS) shall be required to be installed by each proposed use pursuant to the security requirements of Chapter 410 of the Village Municipal Code. A DSIS Agreement and recorded DSIS Access Easement will be required to be executed prior to the issuance of the site building permits, unless approved by the Village and separate arrangements are being made for the sharing of the DSIS system between users.

Recommendation:

Village staff recommends that the Plan Commission approve **Plan Commission Resolution #18-08** and recommend that the Village Board approve the Comprehensive Plan amendment as presented.

Village staff recommends that the Plan Commission send a favorable recommendation to the Village Board to approve the **Zoning Map and Text Amendments** as presented.

Village staff recommends that the Plan Commission send a favorable recommendation to the Village Board to conditionally approve the **Certified Survey Map, Development Agreement and related documents** subject to the above comments and the following conditions (and any minor modifications as may be presented at the meeting):

1. Any outstanding taxes or special assessments shall be paid prior to recording the CSM. Pursuant to the Village Finance Department there are not outstanding taxes or special assessments.
2. The following changes shall be made to the development plans (this is an exhibit to the Development Agreement):
 - a. See **attached** comments dated February 23, 2018 from the Village Engineering Department.
 - b. Clearly show the lots on the plans as depicted on the Certified Survey Map. It appears that the boundaries for Lot 2 are not the same as shown on the CSM.
 - c. All first phase required public roadway improvements shall be provided.
 - d. On Page C-2, add note to relocate hydrant on east side of road just south of 102nd Street.
 - e. On Page C-3, add note to relocate hydrant on east side of road just north of Main Street.
 - f. On Page C-3, proposed curb at Main Street and Old Green Bay Road is running directly through two sanitary manholes.

- g. On Page C-3, add note to relocated culvert crossing Old Green Bay Road just north of 102nd Street.
 - h. On Page C-6, show erosion control detail for drainage swale crossing STH 31. Temporary measures shall be installed until Detention pond is complete.
 - i. See **attached** comments dated February 27, 2018 from the Village Fire & Rescue Department.
 - j. Detailed plans shall be provided for public street lights, private parking lot lighting, pedestrian lighting, development signage, landscaping and other common elements for the development.
 - k. All exterior lighting to be 5000 k color temperature and dark sky compliant.
8. The **attached** Development Agreement shall be finalized and executed by all parties. The following shall be submitted to be incorporated as Exhibits or referenced in the Development Agreement:
- a. Recorded copy of the CSM. See comment above regarding required changes.
 - b. The TIA shall be approved by the WI DOT and a copy of the approval letter and the final TIA document shall be provided to the Village (paper copy and a pdf).
 - c. Executed and recorded copies of the Main Street Market Declaration of Development Standards and Protective Covenants and Bylaws. See comment above regarding corrections/changes.
 - d. All Exhibits shall be provided for the Development Agreement.
9. DNR and KWU approval is required prior to installation of the public water main extension in Old Green Bay Road.
10. All grading and other work impacting the adjacent State jurisdictional roadway (STH 31 and STH 165) shall be approved with permits granted by the Wisconsin Department of Transportation. Copies of State permits shall be provided to the Village prior to issuance of Village permits.
11. All grading impacting other work within Old Green Bay Road will require Work in the Right-of-way permits from the Village.
12. Development shall be in compliance with the Development Agreement, TID #6 Project Plan, WI DOT MOU, Village Land Division and Development Control Ordinance, the Village Municipal and Zoning Codes, the Village Construction Site Maintenance and Erosion Control Ordinance and the State of Wisconsin Statutes.

**VILLAGE OF PLEASANT PRAIRIE PLAN COMMISSION
RESOLUTION #18-08
TO AMEND THE VILLAGE OF PLEASANT PRAIRIE, WISCONSIN
2035 COMPREHENSIVE PLAN**

WHEREAS, on December 19, 2009 the Village Board adopted the *Village of Pleasant Prairie, Wisconsin 2035 Comprehensive Plan* (Comprehensive Plan); and

WHEREAS, the 2035 Comprehensive Land Use Plan Map 9.9 sets forth that the generalized land use designations of the Village shall be consistent with other components of the Comprehensive Plan including Neighborhood Plans and the Village Zoning Map; and

WHEREAS, the following amendments to the Village 2035 Land Use Plan Map 9.9 on the properties generally located at the northeast corner of STH 31 and STH 165 and further identified as Tax Parcel Numbers 92-4-122-223-0110 and 92-4-122-223-0202 for the Main Street Market development:

- 1) to remove the urban reserve land use designation for the properties; and
- 2) to update Appendix 10-3 of the Village of Pleasant Prairie Wisconsin, 2035 Comprehensive Plan to include said amendments to the Land Use Plan.

WHEREAS, on February 23, 2018 the required 30-day notice was published in the Kenosha News and notices were sent to property owners within 300 feet for the March 26, 2018 public hearing to be held by the Village Plan Commission; and

WHEREAS, on March 26, 2018 at the request of the petitioner the Plan Commission tabled and continued the public hearing until the April 16, 2018 Plan Commission meeting.

NOW THEREFORE, BE IT RESOLVED, that pursuant to Sections 62.23 (3) (b) and 66.1001 (4) (b) of the Wisconsin Statutes, the Village of Pleasant Prairie Plan Commission hereby recommends approval of the aforementioned amendments to the Village of Pleasant Prairie, Wisconsin 2035 Comprehensive Plan:

BE IT FURTHER RESOLVED that the Plan Commission does hereby recommend that the Village Board enact an Ordinance adopting said amendments, as referenced above, to the *Village of Pleasant Prairie 2035 Comprehensive Plan*.

Adopted this 16th day of April 2018.

VILLAGE OF PLEASANT PRAIRIE

ATTEST:

James Bandura
Secretary

Thomas W. Terwall
Plan Commission Chairman

Date Posted: _____
08-Comp Plan Amend- LU amend-Main Street Market
CODE1802-001

ORD. # 18-13

**ORDINANCE TO AMEND THE OFFICIAL ZONING MAP
OF THE VILLAGE OF PLEASANT PRAIRIE,
KENOSHA COUNTY, WISCONSIN
PURSUANT TO CHAPTER 420-13 OF THE VILLAGE ZONING ORDINANCE**

**BE IT ORDAINED by the Village of Pleasant Prairie Board of Trustees,
Kenosha County, Wisconsin, that the Official Village Zoning Map is hereby amended
as follows:**

The properties known as Lots 1, 2, 3 and 4 of CSM _____ located in U.S. Public Land Survey Section 22, Township 1 North, Range 21 East of the 4th Principal Meridian, in the Village of Pleasant Prairie, Kenosha County, Wisconsin are hereby rezoned from the B-2 (AGO), Community Business District with a General Agricultural Overlay District to B-2 (PUD), Community Business District with a Planned Unit Development Overlay District.

The Village Zoning Administrator is hereby directed to record this Zoning Map Amendment on the appropriate sheet of the Official Village Zoning Map and Appendix B in Chapter 420 of the Village Municipal Code shall be updated to include said amendment.

Adopted this 16th day of April 2018.

VILLAGE BOARD OF TRUSTEES

John P. Steinbrink
Village President

ATTEST:

Jane C. Snell
Village Clerk

Posted:_____

13-Main Street Market-PUD rezone
CODE1802-002

ORD. #18-14

**ORDINANCE TO CREATE
THE MAIN STREET MARKET
PLANNED UNIT DEVELOPMENT (PUD) ORDINANCE PURSUANT TO
CHAPTER 420-137 OF THE VILLAGE ZONING ORDINANCE
IN THE VILLAGE OF PLEASANT PRAIRIE, KENOSHA COUNTY, WISCONSIN**

BE IT ORDAINED by the Village Board of Trustees of the Village of Pleasant Prairie, Kenosha County, Wisconsin, to create the Main Street Market Planned Unit Development (PUD) pursuant to Chapter 420-137 of the Village Zoning Ordinance to read as follows:

MAIN STREET MARKET PLANNED UNIT DEVELOPMENT

- a. It is the intent that the Main Street Market Development (hereinafter referred to as the "DEVELOPMENT"), will provide for commercial structures, improvements and uses on the properties as legally described below in conformity with the adopted Village Comprehensive Plan and in compliance with the basic underlying B-2, Community Business Zoning District with the goal of facilitating development in a fashion that will not be contrary to the general health, safety, economic prosperity, and welfare of the Village, with the additional goal of proper maintenance on a regular basis for the structures, sanitary sewer, water, storm sewer and storm water basins, boulevards, landscaping, street trees and street terrace areas, sitting areas, parking areas, sidewalks/pedestrian walkways, security cameras, lighting, signage, garbage dumpster enclosures, and overall site so as to promote an attractive and harmonious commercial development area and work to achieve a commercial/business environment of sustained desirability and economic stability, which will operate as a uniform commercial development with the surrounding commercial properties located in the Village of Pleasant Prairie as well as avoids unreasonable adverse effects to the property values of the surrounding properties and the surrounding neighborhood.
- b. Legal Description: The property included is collectively known as Lots 1, 2, 3 and 4 of CSM _____ as recorded at the Kenosha County Register of Deeds Office in the Prairie Ridge Development located in U.S. Public Land Survey Section 22, Township 1 North, Range 22 East in the Village of Pleasant Prairie.
- c. Requirements within the DEVELOPMENT:
 - (i) The DEVELOPMENT shall be in compliance with all Federal, State, County and Village Ordinances and regulations, except as expressly modified by this PUD Ordinance.
 - (ii) The DEVELOPMENT shall be in compliance with the *Main Street Market Declaration of Development Standards and Protective Covenants*, as recorded at the Kenosha County Register of Deeds Office. Said Declarations, as requested by the owners and approved by the Village, may be amended from time to time.
 - (iii) The DEVELOPMENT will be incorporated into the Main Street Market Street Lighting District and is responsible for its payment of street lights/energy costs associated with the commercial district street lighting.
 - (iv) All private improvements for this DEVELOPMENT are required to be installed and maintained pursuant to the approved Development Agreement and any

Site and Operational Plan or Conditional Use Permit, which may be approved by the Village within the DEVELOPMENT on file with the Village.

- (v) The DEVELOPMENT, including but not limited to, the building, signage, fence(s), garbage dumpster enclosures, landscaping, irrigation, parking lot(s), exterior site lighting, public street trees, terrace areas and sidewalks etc., and the DEVELOPMENT as a whole, shall be maintained on a regular basis in a neat, presentable, aesthetically pleasing, structurally sound and non-hazardous condition. This maintenance shall also include the daily picking up and disposal of trash and debris which may accumulate on the sites within the DEVELOPMENT. Annually, or more frequent if necessary, compliance inspections will be performed to verify that the site, development, building, landscaping and signage are being maintained in compliance with the Village approved Site and Operational Plans and Village Ordinance requirements. Dead site landscaping and diseased street trees and plantings shall be removed and replaced each year per the approved Landscape Plans; site landscaping shall be watered, trimmed and maintained; signage and fencing shall be repaired and repainted as needed; street terrace areas shall be irrigated, weeded and mowed regularly; parking lot and building lighting and DSIS camera system for each lot in the DEVELOPMENT shall be operable and maintained; all structures, trim, and building architectural details shall be cleaned, repainted, fixed, and repaired on a regular basis; and the parking lots shall be surfaced and pedestrian/driveway pavement directional markings and parking lot striping shall be repainted on a regular basis.
- (vi) The owners of each lot within the DEVELOPMENT shall be in compliance with a Digital Security Imaging System Agreement (DSIS) and Access Easement as approved by the Village.
- (vii) The owners of the DEVELOPMENT shall be in compliance with the fire and rescue protection requirements as set forth Section 180 of the Municipal Code. In addition, the owners shall also have the obligation, as a condition precedent to occupancy for all buildings, regardless of size to install and have operational fire sprinklers, as reviewed and approved by the Village Fire & Rescue Department.
- (viii) All buildings and site alterations and modifications, including general building and site maintenance within the DEVELOPMENT, shall be made in accordance with the applicable Village Ordinances and Codes at the time the modification is proposed.
- (ix) All buildings/structures and all exterior additions, remodeling or alterations to the any buildings/structures within the DEVELOPMENT shall be constructed of the same or complimentary exterior materials, colors and architectural style to ensure a unified commercial development, including signage, lighting, outdoor furniture, etc.
- (x) The DEVELOPMENT shall be operated and maintained in a uniform manner, regardless of property ownership. If the DEVELOPMENT or any lot is sold to another entity(s), the DEVELOPMENT shall continue to operate as a unified commercial development PUD and shall continue to comply with this PUD and all other PUDs that may be applicable to the DEVELOPMENT, which may be amended from time to time. Specifically, but not limited to, the commercial buildings parking lots shall be utilized for vehicular and pedestrian cross-access in order to allow and facilitate the movement of vehicular traffic within the DEVELOPMENT.

- (xi) Delivery vehicles and trucks shall be temporarily parked inconspicuously on the sites. No trucks [e.g. semi cab, semi trailer, construction vehicles (except when permitted construction activities are taking place), step vans, delivery vans (except when goods and merchandise are being delivered), business-related vehicles with advertising displayed on the vehicles, catering vehicles, other commercial vehicles, etc.] shall be parked within the DEVELOPMENT.
 - (xii) There shall be no roof mounted or sidewalk displays of merchandise or any other items, including temporary or permanent signage that is not allowed by the Zoning Ordinance. Holiday decorations are allowed insofar as they are timely removed within 21 days after the holiday.
 - (xiii) Temporary or permanent storage containers (some having brand names such as P.O.D.S, S.A.M.S., etc.) and compactors are not allowed within the DEVELOPMENT. All merchandise, product, crate, pallet, etc., storage shall be stored inside a building.
 - (xiv) No flags, pennants, streamers, inflatable signage, plastic banner-type signage, spot lights, walking signs, shall be affixed to any building, person, landscaping, vehicle, roof-top, or the ground unless expressly permitted by the Zoning Ordinance.
 - (xv) No tenant advertising sign walkers – persons with costumes or signs strapped, hung, affixed or over their clothes shall walk the properties or public right-of-ways for the purposed of advertising the businesses, sales for special offers of the service or retail businesses.
 - (xvi) The DEVELOPMENT shall comply with the designated business hours of operation and hours of delivery times and garbage pick-up times for the B-2 District at all times during the year, even during the holiday seasons unless expressly approved in writing by the Village.
 - (xvii) The DEVELOPMENT shall be maintained in a neat, presentable, aesthetically pleasing, structurally sound and nonhazardous condition. The sites within the DEVELOPMENT shall be checked daily for litter and debris, which shall be promptly disposed.
 - (xviii) The DEVELOPMENT shall not be used for any outside overnight or daytime parking of junked, inoperable, dismantled or unlicensed vehicles. All junked, inoperable, dismantled or unlicensed vehicles that are parked outside will be issued citations. No extended overnight parking of passenger vehicles is allowed in the parking lots.
 - (xix) In the event that any tenant requests public transportation to service the DEVELOPMENT, it shall be the responsibility of the requesting party(ies), not the Village, to fund the cost of providing such public transportation to and from the DEVELOPMENT.
 - (xx) The DEVELOPMENT shall comply with all applicable performance standards set forth in Section 420-38 of the Village Zoning Ordinance.
- d. Specific modifications to the Village of Pleasant Prairie Zoning Ordinance for the DEVELOPMENT:
- (i) Section 420-119 I related to dimensional standards in the B-2 District are hereby amended to read as follows:
 - I. Dimensional standards. Except as otherwise specifically provided in the Chapter 420 of the Village Municipal Code, and without

limitation, all uses, sites, buildings and structures in the B-2 District shall comply with the following dimensional standards to the extent applicable:

- (1) Lot size: two acres minimum, except for Lot 3 of CSM [REDACTED] shall be a minimum of 0.8 acres and Lot 4 of CSM [REDACTED] shall be a minimum of 1.5 acres.
 - (2) Lot frontage on a public street: 150 feet minimum.
 - (3) Open space: 30% minimum within the DEVELOPMENT.
 - (4) Principal building standards:
 - (a) Minimum gross floor area: 4,000 square feet minimum, except for a commercial building on Lot 3 of CSM [REDACTED] shall be a minimum of 2,350 square feet.
 - (b) Maximum gross floor area: 25,000 square feet maximum, except for the following specific uses: a medical office building and a grocery store shall not exceed 55,000 square feet; a hotel shall not exceed 100,000 square feet.
 - (b) Height: 35 feet maximum, except for a office building or a hotel which shall not exceed 60 feet.
 - (c) Setbacks:
 - [1] Street setback: minimum of 30 feet from any public street.
 - [2] Side and rear setbacks: 30 feet minimum.
 - (5) Detached accessory building/trash enclosure standards: detached accessory buildings or trash enclosures are prohibited.
- (iv) Section 420-47 E related to setbacks for driveways are amended as follows:
- E. Setback. The shared access driveways within the DEVELOPMENT may cross common property line between Lots within the DEVELOPMENT.
- (v) Section 420-48 L related to setbacks for parking areas (which includes parking spaces, maneuvering lanes and fire lanes) shall be amended as follows:
- L. Parking areas (which includes parking spaces, maneuvering lanes and fire lanes) shall be a minimum of 15 feet from any property lines adjacent to a public street right-of-way; and no setback required from any interior property lines with the DEVELOPMENT pursuant to cross access easements recorded within said DEVELOPMENT.
- (vi) Section 420-76 R related to Nonresidential development identification signs shall be amended as follows:
- (1) Maximum number: two signs are permitted within the DEVELOPMENT adjacent to STH 31 and two signs are permitted

along Old Green Bay Road within designated Entry Monument Sign Easements. All signs shall be similar in design within the DEVELOPMENT.

- (2) Minimum setback: 10 feet from any public street or highway right-of-way line.
- (3) Maximum height: 10 feet adjacent to STH 31.
- (4) Maximum area: 160 square feet per face.
- (5) Landscaping shall extend a minimum of five feet in every direction from the base or other support structure of the sign.
- (6) May be illuminated.
- (7) An electronic changing message sign or electronic scrolling sign may be allowed on the signs adjacent to Old Green Bay Road.

(vii) Section 420-76 T. related to Primary Monument Signs shall be amended as follows:

T. Primary Monument Signs

- (1) One sign is required for each property within the DEVELOPMENT except Lots 3 and 4 of CSM may share one sign located on Lot 4 adjacent to the shared access driveway at Old Green Bay Road.
- (2) A changeable copy sign, electronic changing message sign or electronic scrolling sign is permitted.
- (3) Maximum area: 130 square feet per face
- (4) Maximum height: 6 feet.
- (5) Minimum setback distance: 10 feet from any public street or highway right-of-way line and shall not be located within any easement wherein such sign is not expressly permitted.
- (6) Shall include the street address of the principal building(s) on the property, including the street number(s) and the name of the street, but such address may be placed on the base of the sign (where they will not count toward the maximum area of the sign display).
- (7) Landscaping shall extend a minimum of five feet in every direction from the base or other support structure of the sign.
- (8) May be illuminated.
- (9) Shall be placed on a solid-appearing decorative base which supports a minimum of 75% of the horizontal dimension of the sign display constructed or stone or brick to match the building.

- (10) The base of the sign shall be two feet height and shall not extend to either side of the sign display by a distance exceeding 1/2 of the horizontal dimension of the sign display, or extend above the level of the top of the sign display by a distance exceeding 1/2 of the vertical dimension of the sign display.
- (11) May be three-dimensional.

e. Amendments

- (i) The PUD regulations for the DEVELOPMENT may be amended pursuant to Chapter 420-137 of the Zoning Ordinance.
- (ii) The Zoning Administrator has the discretion to approve minor changes, adjustments and additions to this PUD ordinance document without the need for Village Plan Commission and Village Board review and approval.

Adopted this 16th day of April 2018.

VILLAGE OF PLEASANT PRAIRIE

John P. Steinbrink
Village President

ATTEST:

Jane C. Snell
Village Clerk

Posted: _____
14-main street market pud
CODE1802-002

DEVELOPMENT AGREEMENT
BETWEEN
THE VILLAGE OF PLEASANT PRAIRIE
AND
MAIN STREET DEVELOPMENT, LLC
and MSM DEVELOPMENT, INC.

_____, 2018

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List of Exhibits

- Exhibit A - Legal Description of the Property
- Exhibit B - Concept Site Plan Prepared by Pinnacle Engineering Group
- Exhibit C - First Certified Survey Map
- Exhibit D - First Lot Plans
- Exhibit E - Landscaping Installation and Maintenance Plan
- Exhibit F - Form of Developer Funded Roadway Project Letter of Credit
- Exhibit G - Village Financing Proforma
- Exhibit H - Form of MRO
- Exhibit I - Form of Memorandum of Agreement
- Exhibit J - Lighting Standard

DEVELOPMENT AGREEMENT

THIS DEVELOPMENT AGREEMENT (this "Development Agreement") is made and entered into effective as of the _____ day of _____, 2018 (the "Effective Date"), by and between **MAIN STREET DEVELOPMENT, LLC**, a Wisconsin limited liability company ("Current Owner") and **MSM DEVELOPMENT, INC.**, a Wisconsin corporation ("New Owner and, collectively with the Current Owner, the "Developer") and the **VILLAGE OF PLEASANT PRAIRIE**, a Wisconsin municipal corporation (the "Village").

RECITALS:

WHEREAS, the Current Owner owns the real estate located within the Village, more particularly described on **Exhibit A** attached hereto (the "Property"); and

WHEREAS, a depiction illustrating the approximate location of the Property is set forth on the conceptual site plan overview attached hereto as **Exhibit B** (the "Master Plan"); and

WHEREAS, on or after the date hereof, Current Owner intends to sell the First Lot (as hereinafter defined) to Froedtert South Inc. (the "Froedtert Transfer") to be developed as a medical clinic and to sell the remaining Property to the New Owner (the "Developer Transfer"); and

WHEREAS, the TIF Law (as hereinafter defined) provides the authority and establishes procedures by which the Village may exercise powers necessary and convenient to carry out the purposes of the TIF Law, cause project plans to be prepared, approve such plans, implement provisions and effectuate the purposes of such plans, and finance development through the use of tax incremental financing; and

WHEREAS, the Developer currently contemplates developing the Property into a mixed use project to be commonly referred to as the "Main Street Market Project" (the "Development Project") by constructing thereon commercial buildings (collectively, the "Buildings" and each, individually, a "Building") as initially proposed to be located as set forth on the Master Plan for the Development Project; and

WHEREAS, the Property is presently zoned B-2 Community Business District (AGO General Agricultural Overlay District) and the proposed zoning is B-2 Community Business District (PUD Planned Unit Development Overlay District), which zoning classification allows the mixed use development of Buildings for retail, service and office uses as more particularly described in the Village's Zoning Code; and

WHEREAS, the Developer has requested that the Village create a new Tax Incremental District No. 6 ("TID 6" or the "District") including the Property to pay for and to reimburse Developer for certain "project costs," as defined in the Tax Increment Law, incurred by the Village or the Developer in connection with the Development of the Property; and

WHEREAS, on February 5, 2018 the Village Board of Trustees (the "Village Board") adopted Resolution No. 18-03 which adopted the TID Project Plan (the "TID Project Plan") and created the District which includes the Property; and

WHEREAS, the TID Project Plan provides that the Development Project be accompanied by this Development Agreement between the Developer and the Village; and

WHEREAS, this Development Agreement is intended to provide for certain duties and responsibilities of the Developer relating to the development of the Property as described herein; and

WHEREAS, this Development Agreement is intended to serve as an Agreement for the construction of the public and private infrastructure improvements and obligations to complete the entire Development Project; this Development Agreement sets forth detailed requirements for the development of and infrastructure requirements for the First Lot (as hereinafter defined); the Developer agrees to execute an amendment to this Development Agreement, update the Master Conceptual Plan Application, submit (or have the prospective Lot owner submit) a Site and Operational Plan/Zoning Permit Application and submit the required updated Exhibits for the Village's review and approval, which address all of the Developer's obligations for the completion of the public and private infrastructure improvements for the Development Project in connection with the future subdivision of Lots and/or construction of Buildings subsequent to the development of the First Lot as set forth herein; and

WHEREAS, the Village intends to partially finance the construction by the Developer of the Roadway Projects (as hereinafter defined) that are needed for development of the Property, through the Village Financing (as hereinafter defined), the debt service payments under which are intended to be paid by the Tax Increment (as hereinafter defined) of TID 6, to provide an incentive to the Developer which the Village Board determines to be necessary to encourage the Developer to undertake the duties and responsibilities set forth herein; and

WHEREAS, the Village intends to reimburse the Developer up to a maximum amount out of the Tax Increment of TID 6 for certain Project Costs (as hereinafter defined) of TID 6 incurred by the Developer for the construction of the Developer Funded Roadway Projects (as hereinafter defined) that are needed for development of the Property, to provide an incentive to the Developer which the Village Board determines to be necessary to encourage the Developer to undertake the duties and responsibilities set forth herein; and

WHEREAS, the Village believes that unless the Village provides the incentives to the Developer described in this Development Agreement, the Developer will not undertake development of the Property; and

WHEREAS, the Village has determined that the development of the Property pursuant to this Development Agreement and the fulfillment generally of this

Development Agreement by the parties hereto are in the best interests of the Village and its residents; will create jobs benefitting the residents of the Village and the surrounding region; will increase the value of taxable property within the District; will enhance the value of other properties in the Village; will promote the orderly development of the Property in accordance with the Village's Comprehensive Plan for growth and development adopted by the Village; and are in accord with the public purposes and conditions of the applicable state and local laws and requirements under which the TID Project Plan has been undertaken and is being carried out;

AGREEMENT

NOW, THEREFORE, in consideration of the Recitals, the covenants and agreements set forth herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereby agree as follows:

SECTION I. DEFINITIONS AND RULES OF CONSTRUCTION

A. Definitions. In addition to the words and terms elsewhere defined in this Development Agreement, the following words and terms when used in this Development Agreement shall have the following meanings:

"Administrative Costs" means all costs reasonably paid or incurred by the Village for the administration of TID 6, including third-party and internal Village costs.

"Administrative Period" means each of the following periods: (a) the period starting on the date the Village Board approves creation of TID 6 and ending on the first December 31 after the creation of TID 6, and (b) each 12-month period thereafter, through and including the 12-month period during which the final auditing and/or other Administrative Costs required by the TIF Law are paid by the Village.

"Association" means the property owners association to be formed by Developer whose members shall be the owners of all of the Lots in the Property as set forth in the Declaration.

"Building" means a building constructed on the Property , as set forth in the Recitals.

"Debt Service Payments" means the principal and interest payments payable on the Village Financing.

"Declaration" shall mean the Declaration of Covenants, Conditions and Restrictions more particularly described and defined in Section IV.P. hereof.

"Developer Default Notice" shall have the meaning set forth in Section IX.B. hereof.

"Developer Funded Roadway Projects" means a Roadway Project funded from the MRO, and not funded from the Village Financing.

“Developer Funded Roadway Project Costs” means the costs of the construction of the Developer Funded Roadway Projects.

“Developer Funded Roadway Project Letters of Credit” shall have the meaning set forth in Section IV.R.1. hereof.

“Developer’s Payment Statement” means the statement provided by Developer to the Village to document the previous year’s expenditures of Roadway Project Costs as set forth in Section V.D. hereof.

“Development Project” means the “Main Street Market Project” to be developed on the Property as defined in the Recitals.

“Developer Work” means collectively the Site Work and Grading, Storm Water Work, Water Work, Sanitary Sewer Work, Roadway Projects, Onsite Driveway Work and Landscaping.

“Event of Default” shall have the meaning set forth in Section IX.A. hereof.

“Final Payment Date” means December 31, 2038 as provided in Section V.D. hereof.

“First CSM” means the certified survey map subdividing the Property to create the First Lot in the form attached hereto as **Exhibit C**.

“First Lot” means the first Lot proposed to be subdivided and sold by Developer to Froedtert South Inc. to be developed as a medical clinic. The Civil Engineering Plans for the development of the First Lot are attached hereto as **Exhibit D** (the “First Lot Plans”).

“First Lot Roadway Projects” means all Roadway Projects required by the MOU prior to or at the completion of the development of the First Lot.

“Issuance Date” shall have the meaning set forth in Section V.D. hereof.

“Joint Review Board” means the joint review board for TID 6.

“Landscaping” shall have the meaning set forth in Section IV.K. hereof.

“Lot” means any lot created by a subdivision of all or a portion of the Property.

“Master Plan” shall mean the conceptual site plan attached hereto as **Exhibit B** as set forth in the Recitals.

“Maximum Principal Amount” shall have the meaning set forth in the definition of “Village Financing” in this Section I.

“MOU” means that certain Memorandum of Understanding to be executed between the Village and WISDOT relating to the required Roadway Projects necessary

for the development of the Property based upon the results of the Traffic Impact Analysis for the Property prepared by Developer.

"MRO" shall mean the municipal revenue obligation to be issued by the Village to the Developer to provide the Developer reimbursement of the Developer Funded Roadway Project Costs as set forth in Section V.D. hereof.

"MRO Available Project Increment" means, on each December 31 during the term of TID 6, all Project Increment as of such December 31, less (a) the Debt Service Payments to be paid during the 12-month period starting on such December 31 and less (b) the payment to the Village of any and all outstanding Shortfall Advances previously made by the Village, until Developer has received the amount of principal and interest as set forth in Section V.D. hereof but in no event in excess of Four Million Nine Hundred Sixty-four Thousand Seven Hundred Fifty Dollars (\$4,964,750.00) plus accrued and unpaid interest added to the principal as provided in the MRO, after which payments will be made as provided in Section V.C.(v) hereof.

"Onsite Driveway Work" shall mean the private driveway work upon the Property as set forth in Section IV.K. hereof.

"Payment Date" shall have the meaning set forth in Section V.D. hereof.

"Project Costs" shall have the meaning set forth in Section 66.1105(2)(f) of the TIF Law.

"Project Increment" means, on each December 31, all TID Increment collected by the Village during the preceding 12 month period, less the Administrative Costs for such Administrative Period.

"Property" has the meaning set forth in the Recitals.

"Public Infrastructure Improvements" shall mean that portion of the Developer Work either constructed within a public right of way or easement or to be dedicated to the Village or another governmental entity as set forth in Section IV.Q. hereof including, but not limited to, the Roadway Projects, public portions of the Storm Water Work, public portions of the Sanitary Sewer Work, public portions of the Water Work, Public Street Trees, Public Street Lights and Public Street Signs.

"Public Street Lights" shall mean the lighting facilities and wiring illuminating public roadways located within or adjacent to the Development Project.

"Public Street Signs" shall mean the signage providing identification, directions and guidance of and regarding the public roadways located within or adjacent to the Development Project.

"Public Street Tree" means a tree located adjacent to a public roadway located within or adjacent to the Development Project.

“Review Period” means the period for the Village’s review of the Developer’s Payment Statement as provided in Section V.D. hereof.

“Roadway Projects” means all of those projects set forth in the MOU to be constructed by the Village, which may include, but not be limited to, the roadway improvements to Wisconsin State Highway 165 and its intersection with State Highway 31 including its east, west and south extensions, roadway modifications to Old Green Bay Road, roadway improvements to the east extension of 102nd Street and related traffic signaling and signage, construction of the roadway commonly referred to as “Main Street” at the northern end of the Property located directly across from Jelly Belly Lane between Wisconsin State Highway 31 and Old Green Bay Road, construction of the intersections of Main Street with State Highway 31 and Old Green Bay Road, land acquisition costs for property on the southwest corner of Wisconsin State Highway 165 and Old Green Bay Road and related traffic signaling and signage. For the avoidance of doubt, Roadway Projects shall include any land acquisition, grading, Sanitary Sewer Work, Water Work or Storm Water Work done in connection with, adjacent, or relating to any of the Roadway Projects.

“Roadway Project Costs” means the actual costs of the construction of the Roadway Projects paid to third party contractors, engineers and consultants.

“Sanitary Sewer Work” means the sanitary sewer work as more particularly defined and described in Section IV.I. hereof.

“Second CSM” means the next subdivision of Lots on the Property following the recording of the First CSM which will include the dedication of the roadway commonly referred to as “Main Street” located directly across from Jelly Belly Lane between Wisconsin State Highway 31 and Old Green Bay Road and the creation of the outlot to be located west of Lot 2 and Lot 3 of the First CSM to contain a storm water detention basin to service the Property which will be conveyed by the Developer to the Association.

“Shortfall” is defined in the definition of Shortfall Advances.

“Shortfall Advances” mean payments by the Village to the holders of the Village Financing to the extent there is a shortfall (“Shortfall”) between (i) the interest and principal amounts payable under the Village Financing during the 12-month period immediately following such December 31 and (ii) the Project Increment for the preceding calendar year, but only in the event such payments are appropriated by the Village Board. Any and all Shortfall Advances shall accrue interest from the date of such advance until the reimbursement of such advance to the Village at the rate of six percent (6%) compounded annually.

“Site Work and Grading” means the site work and grading of the Property more particularly defined and described in Section IV.F. hereof.

“Storm Water Work” means the storm water work as more particularly defined and described in Section IV.G. hereof.

“Tax Exempt Covenant” is defined in Section XV.U. below.

“Tax Increment” shall have the meaning set forth in Section 66.1105(2)(f) of the TIF Law.

“TID Increment” means all Tax Increment collected and retained by the Village from property taxes levied on all real property and all personal property within TID 6.

“TID Project Plan” means the TID Project Plan for TID 6 as set forth in the Recitals.

“TID 6 or the District” means the Village’s Tax Incremental District No. 6 as set forth in the Recitals.

“TIF Law” means Section 66.1105 of the Wisconsin Statutes, as amended and renumbered from time to time.

“Village Board” means the Village Board of Trustees of the Village as defined in the Recitals.

“Village Financing” means the bonds, notes, or other obligations issued by the Village to pay for Roadway Project Costs and other related and customary costs of financing the Roadway Project Costs, including, but not limited to, capitalized interest and issuance costs and expenses, the initial original principal amount of which will in no event exceed the principal amount which, at the interest rate at issuance of the Village Financing, could be fully amortized and paid, along with paying the estimated amount of all Administrative Costs for the Village Financing, over a 20 year period with an annual debt service payment of One Hundred Thirty Thousand Dollars (\$130,000.00) for 2019 and One Hundred Ninety Thousand Dollars (\$190,000.00) for the subsequent years during the term of the Village Financing (the “Maximum Principal Amount”). It is anticipated that the Village Financing will be issued as a General Obligation Promissory Note amortized over a term of 20 years, with a maturity date of no more than 10 years from the date of issuance. The original Village Financing is expected to include a balloon payment at the maturity date of the initial term which is expected to be refinanced by additional public debt (the “Refinanced Village Financing”) in an amount not to exceed the unamortized amount of the original debt plus the cost of the issuance of such refinancing amortized over 10 years at substantially level debt service through such term. Payments under the Village Financing and Refinanced Village Financing out of TID Increment will be superior to all payments under the MRO. The Village Financing shall be deemed to include the Refinanced Village Financing.

“Village Financing Proceeds” means the proceeds of the issuance of the Village Financing.

“Water Work” means the construction of all water lines and facilities as set forth in Section IV.H. hereof.

“WISDNR” means the State of Wisconsin Department of Natural Resources.

“WISDOT” means the State of Wisconsin Department of Transportation.

B. Rules of Construction. Unless the context clearly indicates to the contrary, the following rules shall apply to the construction of this Development Agreement:

(a) Words importing the singular number shall include the plural number and vice versa.

(b) The captions and headings herein are solely for convenience of reference only and shall not constitute a part of this Development Agreement nor shall they affect its meaning, construction, or effect.

(c) Words of the masculine gender shall be deemed and construed to include correlative words of the feminine and neuter genders, and words of the neuter gender shall be deemed and construed to include correlative words of the masculine and feminine genders.

SECTION II. CONDITIONS PRECEDENT TO VILLAGE OBLIGATIONS

In addition to all other conditions and requirements set forth in this Development Agreement, the obligations of the Village under this Development Agreement (including without limitation, the obligation of the Village to issue the Village Financing) are conditioned upon the satisfaction of each and every of the following conditions:

A. Authority. Prior to the execution of this Development Agreement, Developer shall provide the Village with evidence reasonably satisfactory to the Village that Developer is authorized to enter into this Development Agreement and that the persons signing this Development Agreement on behalf of Developer are authorized to so sign this Development Agreement.

B. Certificate of Status. Prior to the execution of this Development Agreement, Developer, at its cost, shall provide a certificate of status of Developer issued by the Wisconsin Department of Financial Institutions.

C. Title Evidence. At its cost, Developer shall provide to the Village updated title evidence showing record title to the Property to be vested in Developer or Froedtert South Inc. and in a condition reasonably satisfactory to the Village.

D. Environmental. Developer, at its cost, shall provide to the Village environmental assessment reports, showing the environmental condition of the Property to be in a condition reasonably satisfactory to the Village.

E. Traffic Impact Analysis. Developer will provide to the Village and WISDOT a traffic impact analysis for the Project on the Property, and request from WISDOT an analysis of the traffic impact analysis and WISDOT's recommendations regarding required improvements necessary to adjoining roadways in connection with the Development Project.

F. Certified Survey Maps. The Developer shall have recorded the CSM and the Second CSM.

G. No Defaults. No uncured Event of Default or event which with the giving of notice or lapse of time or both would be an Event of Default by Developer shall exist under this Development Agreement.

H. Dedications. Developer shall dedicate, pursuant to the Second CSM or otherwise, the land and easements required by the Village to provide utilities and access to the Property including, but not limited to, land to be dedicated by the Developer for the future construction of the roadway commonly referred to as "Main Street" to be located immediately across Green Bay Road from Jelly Belly Lane and the land to be dedicated for the further reconstruction of Old Green Bay Road.

I. Property Acquisitions. Prior to the issuance of the Village Financing, Developer shall acquire the properties located at 6901 104th Street and 10408 Old Green Bay Road for the Roadway Projects.

J. Tax Shortfall Agreement. Village shall have received the Tax Payment Shortfall Agreement executed by Froedtert South, Inc.

K. Memorandum of Understanding. Prior to the issuance of the Village Financing, the MOU shall be executed by the Village and WISDOT.

L. Other Governmental Approvals. Prior to the issuance of the Village Financing, the Developer shall have obtained all approvals and permits required from all governmental authorities for the development of the First Lot and the Roadway Projects required in connection with the development of the First Lot, including from WISDOT, WISDNR, the Southeastern Wisconsin Regional Planning Commission, the Kenosha Water Utility and any other governmental approvals.

M. Declaration. The Developer shall have recorded the Declaration meeting the requirements of Section IV.O. hereof.

N. Final Engineering Plans and Contracts. The Village shall have approved the final engineering plans for the construction of the First Lot Roadway Projects in a condition suitable for publicly bidding such work.

The conditions contained in this Article II shall be satisfied or waived in writing by the Village within 180 days of execution of this Agreement. In the event Developer fails to satisfy (or the Village waives) any condition within such timeframe, the Village, at its option, exercised in its sole discretion, may give written notice thereof to Developer, and if Developer fails to satisfy the condition within thirty (30) days thereafter, the Village shall have the right, in its sole discretion, to terminate this Development Agreement by written notice to Developer, in which event, none of the parties to this Development Agreement shall have any further liability or obligation to the other parties except for any claims by the Village relating to an Event of Default by Developer occurring prior to such termination.

All submissions given to the Village to satisfy the conditions contained in this Article II must be satisfactory in form and content to the Village, in its reasonable discretion, unless otherwise specifically stated.

SECTION III. REPRESENTATIONS AND WARRANTIES OF THE DEVELOPER

The Developer makes the following representations and warranties which the Village may rely upon in entering into this and all other agreements with Developer and upon which the Village may rely in granting all approvals, permits and licenses for the Development Project and in executing this Development Agreement and performing its obligations hereunder:

A. Organization. Developer is a duly organized and existing limited liability company or corporation in current status under the laws of the State of Wisconsin.

B. Authorization. The execution, delivery and performance of this Development Agreement and the consummation of the transactions contemplated hereby have been duly authorized and approved by the Developer, and no other or further acts or proceedings of the Developer are necessary to authorize and approve the execution, delivery and performance of this Development Agreement and the matters contemplated hereby. This Development Agreement, and the exhibits, documents and instruments associated herewith and made a part hereof, have been duly executed and delivered by the Developer and constitute the legal, valid and binding agreement and obligation of the Developer, enforceable against it in accordance with their respective terms, except as the enforceability thereof may be limited by applicable bankruptcy, insolvency, reorganization or similar laws affecting the enforcement of creditors' rights generally, and by general equitable principles.

C. Ownership of Property. As of the date hereof, the Developer is the sole fee simple absolute owner of the Property and is possessed of the Property.

D. Correctness of Documents. All copies of financial statements, documents, contracts and agreements which Developer has furnished or caused to be furnished to the Village are true and correct in all material respects.

E. Veracity of Statements. No statement of fact by Developer contained in this Development Agreement and no statement of fact furnished or to be furnished by Developer to the Village pursuant to this Development Agreement contains or will contain any untrue statement of a material fact or omits or will omit to state a material fact necessary in order to make the statements herein or therein contained not misleading at the time when made.

F. No Conflict. The execution, delivery, and performance of Developer's obligations pursuant to this Development Agreement will not violate or conflict with Developer's articles of organization or operating agreement, company organizational documents or any indenture, instrument or agreement by which Developer is bound, nor will the execution, delivery, or performance of Developer's obligations pursuant to this

Development Agreement violate or conflict with any law applicable to Developer or the Development Project.

G. No Litigation. There are no lawsuits filed or pending, or to the knowledge of Developer, threatened against Developer that may in any way jeopardize or materially and adversely affect the ability of the Developer to perform its obligations hereunder.

H. Sufficient Funds. The Developer has at this time, and will have so long as this Development Agreement continues in effect, sufficient available funds for the completion of the Developer's obligations under this Development Agreement.

I. Financing. The Developer is in compliance with Section VII.D. hereof.

J. No Defaults. To the best of Developer's knowledge, no uncured Event of Default, or event which with the giving of notice or lapse of time or both would be an Event of Default, exists under this Development Agreement, and Developer is not in default (beyond any applicable period of grace) of any of its obligations under any other agreement or instrument to which Developer is a party or an obligor.

SECTION IV. UNDERTAKINGS OF THE DEVELOPER

A. Obtain Approvals for Development and Occupancy. The Developer, the purchaser of the First Lot and/or the purchaser of any subsequent Lot, at its cost and expense, shall: (i) submit all information, drawings, elevations, plans, specifications and other documents and information and all other matters required by the Village for approval of all plans for any and all grading, site work, improvements, construction and development of the Property in accordance with the normal practices and procedures of the Village including, but not limited to, obtaining Village approval of a grading plan before commencing any work on the Property; and (ii) obtain all approvals necessary therefor within the earliest commercially reasonable time thereafter, and obtain all zoning, building and other permits and other approvals for construction of and enter into any other and further additional development agreements with the Village detailing the requirements for construction and development of the Property prior to the commencement of any construction activities thereon including, but not limited to, a zoning map and text amendment for a Planned Unit Development Overlay, all required Site and Operational Plans (as defined in Article IX of the Village's Zoning Ordinance) and all required plat and/or certified survey map approvals under the Village's Land Division and Development Control Ordinance. The Developer shall submit a proposed Second CSM to the Village for approval within sixty (60) days after execution of this Development Agreement and will record such Second CSM and convey the outlot created by the Second CSM prior to the issuance of the Village Financing. As part of any approval process, the Village may, in accordance with its normal permitting and zoning process, impose such restrictions, covenants and obligations on the Developer as the Village deems appropriate for the development, construction and use of the Property. The Developer or Lot owner agrees to pay all development, license, permit, legal and other fees required by the State of Wisconsin, the Village and all other

applicable governmental entities, and will not in any way seek reimbursement from the Village for the cost thereof. No site grading, Buildings or improvements shall be constructed on or in the Property until the plans and specifications for such Buildings and improvements have been reviewed and approved by Village staff and granted final approval by the Village Plan Commission and Village Board; all necessary zoning, building and other permits and approvals are obtained in accordance with the requirements of the Village and the Village ordinances; and the Village and the Developer or Lot owner have entered into such further development and other agreements, if any, as the Village deems necessary to detail the requirements for any and all construction on, and development of, the Property or a Lot therein, and the obligations of the Developer or Lot owner with respect to the development on the Property. No Buildings or improvements shall be occupied prior to the approval of a permit application for and the issuance by the Village of a certificate of occupancy pursuant to Chapter 370 of the Village Code of Ordinances.

B. Compliance with Codes, Plans and Specifications. The construction of the Developer Work, the Buildings and other improvements constructed on and in the Property by Developer or any successor Lot Owner, and their uses, shall be in compliance with all applicable zoning and other ordinances of the Village; all other applicable laws, ordinances, regulations and requirements of all other governmental and quasi-governmental entities having jurisdiction over the Property; and with the pertinent provisions of the plans and specifications which have been approved by the Village. The acceptance of this Development Agreement and granting of any and all approvals, zoning, licenses and permits by the Village, in and of itself, shall not obligate the Village to grant any variances, exceptions or conditional use grants, or approve any site grading, building or construction the Village determines not to be in compliance with the Village ordinances, or the requirements of any other applicable governmental authority.

C. Erosion Control. The Developer or Lot owners shall comply with all grading, zoning, erosion and soil control requirements affecting the Property in accordance with all applicable, federal, state, county and municipal regulations, guidelines, specifications, laws, ordinances and permits affecting the property or any portion thereof. Without limiting the foregoing, the Developer or Lot owners shall take such action and shall utilize such techniques and mechanisms necessary to implement any erosion control plan required by the Village and with the applicable provisions of the Village's Construction Site Maintenance and Erosion Control Ordinance, in order to prevent sediment from being deposited on adjacent properties or on any public street or into adjacent wetlands and floodplains and to prevent sediment from being washed into downstream drainage facilities. The Developer or Lot owner agrees to submit wetland delineations and archeological, historical and threatened species information to the WISDNR to obtain a Notice of Intent from the WISDNR prior to submitting its erosion control plan to the Village. No grading or other movement of soils shall be conducted by or for the Developer or Lot owner until an appropriate Erosion Control Permit has been issued for the Property by the Village. A \$2,000 cash payment shall be made by the Developer to the Village pursuant to this Development Agreement as a street sweeping security to guaranty to the Village that the roadways are kept clean throughout the construction. Following the Developer's completion of its obligations under this

Development Agreement to the satisfaction of the Village, the full amount of the deposit, less a six percent (6%) administrative processing fee, shall be returned to the Developer if it is not used for erosion control enforcement purposes, e.g., cleanup of mud tracking. After providing notice to the Developer, the Village may draw upon the \$2,000 deposit at any time and from time to time in order to pay the cost of street sweeping and other such costs incurred by the Village, and the Developer shall immediately make an additional cash deposit to restore the cash balance to \$2,000 with the Village.

D. Protected Areas. The Developer shall be responsible for undertaking all steps and precautions as are necessary to insure the preservation and protection of any wetlands and other protected interests on or in the Property, and shall be responsible for obtaining all necessary WISDNR and/or U.S. Army Corps of Engineers permits. All such protected areas disturbed in any way by construction activities on any portion of the Property or in connection with the development of the Property by or for the Developer, shall be restored by the Developer to its prior condition to the satisfaction of the Village.

E. Demolition. If applicable, the Developer shall, at its sole cost and expense, obtain any necessary razing permits and approvals from the Village. No debris or building materials shall be utilized as fill materials on this or any other site in the Village.

F. Site Work and Grading. The Developer, the purchaser of the First Lot and/or the purchaser of any subsequent Lot shall, at its sole cost and expense, obtain all necessary permits and approvals, perform the site work and grading and provide for the Village inspection of all site work and grading on the Property, or applicable portion thereof, in accordance with grading plans approved by the Village (the "Site Work and Grading"). Prior to the commencement of the Site Work and Grading, Developer shall submit and obtain approval of a grading plan pursuant to all Village requirements and submit all contracts for the design and construction of the Site Work and Grading to the Village for the Village's written approval of the contractors and contracts. The Site Work and Grading shall be performed by the Developer in accordance with the requirements and applicable ordinances of the Village. Upon completion of the Site Work and Grading, Developer shall submit a plan providing as-built grades to the Village for confirmation that such grades are in compliance with all Village requirements. In connection with the development of the First Lot, Developer expressly agrees to perform the Site Work and Grading for the First Lot pursuant to the Sheet C-4 Grading Plan of the First Lot Plans.

G. Storm Water System Public and Private Improvements. The Developer shall, at its sole cost and expense, design, locate, construct, install, provide for the Village inspection of, and use of all required storm sewer and drainage system improvements and facilities in the public streets for Public Infrastructure Improvements or otherwise in the private driveway areas and on the Property to the extent necessary to bring such stormwater sewer and drainage systems to a particular Lot within the Property and including all retention/detention areas (collectively, the "Storm Water Work") in a workmanlike manner and in accordance with the provisions of Chapter 405,

Design Standards and Construction Specifications, 2018 Edition; Chapter 395, the Land Division and Development Control Ordinance and the Village's Stormwater Management and Stormwater Drainage System Facilities, Stormwater Storage Facility and Construction Site Maintenance and Erosion Control Ordinance, and the Site and Operational Plans; all surface and storm water runoff, management, filtration and other such requirements of the Village for the Storm Water Work and all other applicable governmental entities and authorities as are applicable and in effect. In connection with the development of the First Lot, Developer expressly agrees to perform the Storm Water Work for the First Lot in accordance with the approved plans therefor. Prior to the commencement of any Storm Water Work, the Developer or a Lot owner shall submit all contracts for the construction of the Storm Water Work to the Village for the Village's written approval of the contractors. The Developer or any Lot owner shall not commence any construction or improvement on or in any part of the Property unless and until the Developer or the Lot owner has obtained all Site and Operational Plan approvals required for a storm water management plan and for the Storm Water Work from the Village, and from all other applicable government authorities. The Developer shall complete construction of the storm water detention basin to be created by the Second CSM and the storm sewer bypass piping water from the Property and certain property to the east of the Property into such detention basin prior to the Village's issuance of any verbal to occupy permissions or written occupancy permits for any Building on the First Lot and prior to the issuance of building permits for any additional Buildings in the Development Project. The Developer and Lot owners shall take whatever precautions are necessary to ensure that retention/detention basins located in the Project are not silted in any way during any stage of the grading, construction or landscaping provided for in this Agreement. Downstream drainage improvements shall be maintained throughout the construction process in order to avoid drainage problems for the abutting neighbors. Erosion control silt fence surrounding or otherwise protecting the basin shall be constructed prior to any grading or construction work being conducted on the Property. The erosion control silt fence shall be maintained throughout construction and until the area disturbed is vegetatively stable. The Developer shall upon the Village's inspection, after the initial completion of the Storm Water Work constituting a Public Infrastructure Improvement, and approximately one (1) year thereafter conduct cleaning and televising of the storm sewer mains and catch basins at the Developer's cost. Following the Village's acceptance of the Storm Water Work, the Developer shall promptly take such actions as are necessary to connect and otherwise render such improvements usable. All Storm Water Work not constituting a Public Infrastructure Improvement shall be granted an easement for the benefit of the Village providing for inspection by the Village and the right for the Village to maintain and repair the Storm Water Work in the event not properly maintained by the Association and/or the property owner and to bill and assess the property owner for any such maintenance performed by the Village. Any Storm Water Work constituting a Public Infrastructure Improvement will comply with all requirements set forth in this section and all of the requirements for Public Infrastructure Improvements set forth in Section IV.Q. hereof.

H. Water System Public and Private Improvements. The Developer shall, at its sole cost and expense, design, locate, provide, construct, install, provide for the Village inspection of, and use of all required water supply and distribution system

improvements in the public streets for Public Infrastructure Improvements or otherwise in private driveway areas located on the Property to the extent necessary to connect the existing Village water system lines to the Lots throughout the Property in a workmanlike manner and in accordance with the applicable provisions of Chapter 405, Design Standards and Construction Specifications, 2018 Edition; Chapter 395, the Land Division and Development Control Ordinance; and Chapter 181, the Construction Site Maintenance and Erosion Control Ordinance, including the water lines and facilities for the First Lot development in accordance with the approved plans therefor (the "Water Work"). The Developer shall complete and install the Water Work constituting a Public Infrastructure Improvement for the First Lot development prior to the Village's issuance of any verbal to occupy permissions or written occupancy permits for any Building on the First Lot and prior to the issuance of building permits for any additional Buildings in the Development Project unless such additional Building is to be serviced by a water system connection other than the waterline servicing the Building on the First Lot. The Developer shall upon the Village's inspection, and after the initial completion of the Water Work constituting a Public Infrastructure Improvement conduct flushing, cleaning and water sampling of the water mains, at the Developer's cost. Following the Village's acceptance of the Water Work improvements, the Developer shall promptly take such actions as are necessary to connect and otherwise render such improvements usable. The Developer shall secure, at its sole cost and expense, any necessary easements for the benefit of the Developer and/or the Village over adjoining properties for the Water Work or to connect to the Village's existing water system. The Developer or Lot Owner shall install water services from the shut-off valve to the Buildings, such that no portion of the Property shall be served by a private water system. The Developer or Lot owner shall obtain all requisite permits and approvals for such water system from all other applicable government authorities. All Water Work located on the Property not constituting a Public Infrastructure Improvement shall be granted an easement for the benefit of the Village providing for inspection by the Village and the right for the Village to maintain and repair the Water Work in the event not properly maintained by the Association and/or the property owner and to bill and assess the Association and/or the property owner for any such maintenance performed by the Village. All Water Work constituting a Public Infrastructure Improvement will comply with all requirements set forth in this section and all of the requirements for Public Infrastructure Improvements set forth in Section IV.Q. hereof.

I. Sanitary Sewerage System Public and Private Improvements. The Developer shall, at its sole cost and expense, design, locate, provide, construct, install, provide for the Village Inspection of, and use of all sanitary sewer lines, lift stations, temporary lift stations and other sanitary sewer facilities in the public streets for Public Infrastructure Improvements or otherwise in private driveway areas located on the Property to the extent necessary to connect the existing sanitary sewer lines to the Lots throughout the Property in a workmanlike manner and in accordance with the provisions of Chapter 405, Design Standards and Construction Specifications, 2018 Edition; Chapter 395, the Land Division and Development Control Ordinance; and Chapter 181, the Construction Site Maintenance and Erosion Control Ordinance, including the sanitary lines and facilities for the First Lot development in accordance with the approved plans therefor (the "Sanitary Sewer Work"). The Developer shall complete

and install the Sanitary Sewer Work constituting a Public Infrastructure Improvement for the First Lot development prior to the Village's issuance of any verbal to occupy permissions or written occupancy permits for any Building on the First Lot and prior to the issuance of building permits for any additional Buildings in the Development Project unless such additional Building is to be serviced by a sanitary sewer connection other than the sewer line servicing the Building on the First Lot. The Developer shall upon the Village's inspection, after the initial completion of the Sanitary Sewer Work constituting a Public Infrastructure Improvement conduct cleaning and televising of the sanitary sewer mains at the Developer's cost. Following the Village's acceptance of the Sanitary Sewer Work, the Developer shall promptly take such actions as are necessary to connect and otherwise render such improvements usable. The Developer or successor Lot owner shall install sanitary sewer service to the Buildings such that no portion of the Property shall be served by private septic or alternate means of treating sanitary sewer effluent. The Developer or successor Lot Owner shall obtain all requisite permits and approvals for such Sanitary Sewer Work from the Village and all other applicable government authorities. All Sanitary Sewer Work located on the Property and not constituting a Public Infrastructure Improvement shall be granted an easement for the benefit of the Village providing for inspection by the Village and the right for the Village to maintain and repair the Sanitary Sewer Work in the event not properly maintained by the property owner and to bill and assess the property owner for any such maintenance performed by the Village. All Sanitary Sewer Work constituting a Public Infrastructure Improvement will comply with all requirements set forth in this section and all of the requirements for Public Infrastructure Improvements set forth in Section IV.Q. hereof.

J. Roadway Improvements. The Developer acknowledges that its Development Project and its additional traffic flow will require the construction of modifications, additions and upgrades to the existing roadways, intersections and traffic signaling and signage surrounding the Property consisting of the Roadway Projects. The Developer shall obtain all requisite permits and approvals for the Roadway Projects from the Village, the WISDOT and other applicable governmental authorities. The Developer agrees to design, locate, grade, surface, provide for the Village inspection of, and otherwise provide, construct and install the Roadway Projects. The Developer agrees to complete all of the work required of the Village under the MOU (except Village's obligation to acquire the right of way along the east side of Old Green Bay Road necessary for a Roadway Project as set forth in Section VI below), whether or not such work is specifically set forth in this Development Agreement, to the specifications set forth in the MOU and on or before the dates and/or deadlines set forth in the MOU. The Developer may seek reimbursement for the Roadway Project Costs from the Village Financing Proceeds as provided in Section V.B. hereof until such Village Financing Proceeds have been fully expended. Once the Village Financing has been fully expended, the Developer may then seek reimbursement for the Roadway Project Costs from the MRO Available Project Increment as set forth in Section V.D. hereof. The Developer will comply with all the requirements set forth in Section IV.Q. for all of the Public Infrastructure Improvements included in the Roadway Projects.

K. Private Driveway Improvements. The Developer or a Lot owner shall, at its sole cost and expense, construct and provide for the Village inspection of, all private

driveways and improvements upon the Property to serve the entire Property and adjoining property as set forth on the Master Plan attached hereto as **Exhibit B** (the "Onsite Driveway Work"). The Developer shall obtain all requisite permits and approvals for such Onsite Driveway Work from the Village, the WISDOT, and other applicable government authorities. The Developer agrees to provide cross access and parking easements allowing all of the Lots to use all of the private driveways and parking areas upon the Property as required by the Village, which shall be granted by the Declaration or as otherwise required by the Village.

L. Landscaping. All of the grading, landscaping and planting described in this subparagraph will hereinafter be collectively referred to as the "Landscaping."

1. The Developer shall provide and plant one Public Street Tree from the Village's list of approved species, which is at least two and one-half inches in diameter and at a minimum height of six (6) feet off the ground, for a minimum of each 50 feet of frontage of the public roadways in or adjacent to the Development Project, in accordance with the proposed landscaping plans, specifications, and estimates (hereinafter collectively referred to as the "Landscaping Installation and Maintenance Plan") attached to this Agreement and referred to as **Exhibit E** and incorporated by reference, and the applicable provisions of Chapter 405, Design Standards and Construction Specifications, 2018 Edition; Chapter 395, the Land Division and Development Control Ordinance. Public Street Trees shall be planted seven (7) to nine (9) feet behind the curb line in the Village's rights-of-way. The street tree locations shall be staked by the Developer's contractor and have their location inspected by the Village prior to planting. After the initial installation of the Public Street Trees, all Public Street Trees and other rights-of-way or easement plantings shall be maintained, watered, weeded or trimmed by the Association or owner of the adjacent Lot abutting the right of way as set forth on the Landscaping Installation and Maintenance Plan. The Developer, the Lot owners or the Association (as designated on the Landscaping Installation and Maintenance Plan) shall maintain by watering, weeding, mulching, staking, trimming and by replacing any diseased or dying Public Street Trees. Any trees or plantings which may be damaged by accident, calamity or Act of God shall be promptly replaced within 60 days, weather permitting, by the Association or adjacent Lot owner as set forth on the Landscaping Installation and Maintenance Plan.

2. The private landscaping, berming and all other on-site land vegetation stabilization including sodding or seeding and downstream drainage improvements shall be completed by the Developer or the Lot owner. An as-planted letter on the landscaper's letterhead shall be provided which verifies that all plantings were completed in accordance with the Village approved Landscaping Installation and Maintenance Plan.

3. All disturbed areas shall be suitably prepared and seeded by appropriate measures by the Developer or the Lot owner and in a workmanlike manner in accordance with the provisions of Chapter 405, Design Standards and Construction Specifications, 2018 Edition; Chapter 395, the Land Division and Development Control Ordinance; and Chapter 181, the Construction Site Maintenance and Erosion Control

Ordinance, as soon as is physically practical after the disturbance of the ground surface and final grade is established. In the event that the initial seeding fails to produce a good cover of grass, the Developer or Lot owner shall promptly take such steps as are necessary such as hydro-seeding to produce a good cover of grass.

M. Utilities. The Developer, at the Developer's expense, shall contract with the appropriate utility companies to have the private utilities and related facilities designed, located, constructed, installed in the public streets or otherwise in private driveway areas located on the Property to the extent necessary to connect the utilities from the public street to the boundaries of the Lots within the Development Project, including electrical power (including street lights), gas, telephone and cable TV lines, (if available), in a workmanlike manner and in accordance with the easements depicted on the CSM and subsequent certified survey maps prepared for subsequent Lots and the applicable provisions of Chapter 405, Design Standards and Construction Specifications, 2018 Edition; Chapter 395, the Land Division and Development Control Ordinance; and Chapter 181, the Construction Site Maintenance and Erosion Control Ordinance. All such improvements and facilities shall be installed underground. The Developer shall contract with the appropriate utility companies for the dedication of utility easements, coordination, construction and installation of all such utility improvements to the boundaries of the Lots. The Developer or Lot owner shall be responsible for the restoration of all areas disturbed by the utility companies which are not otherwise restored. Said restoration shall occur within reasonable time and not to exceed 60 days.

N. Public Street Lights. The Developer shall work with We Energies and Night Aura to contract for the required Public Street Lights and related electrical distribution system for the Public Street Lights in and adjacent to the Development Project in accordance with the provisions of Chapter 405, Design Standards and Construction Specifications, 2018 Edition and Chapter 395, the Land Division and Development Control Ordinance. The Public Street Lights shall be installed per the Village's light standard requirements, which includes LED fixtures of the type set forth on **Exhibit J** attached hereto. Said Public Street Lights shall be located in accordance with an approved street lighting plan to be prepared by the Developer and approved by the Village. The Developer, the Association and Lot owners shall be responsible for the ongoing financial obligation for the We Energies facilities energy and facility maintenance costs for the Public Street Lights in the Development Project. The Developer, the Lot owners and the Association shall pay for all ongoing electric utility facility billing and monthly maintenance charges for the Public Street Lights. The Developer acknowledges that the Village will create a street lighting district regarding the maintenance, repair and electricity costs of the Public Street Lights whereby the Association or the Lot owners shall pay for the maintenance and repair and operation of the Public Street Lights.

O. Public Street Signs. The Developer shall work with their contractor and the Village public work's department to install the Public Street Signs in and adjacent to the Development Project in accordance with the provisions of Chapter 405, Design Standards and Construction Specifications, 2018 Edition and Chapter 395, the Land

Division and Development Control Ordinance. The Public Street Signs shall be located and installed in accordance with an approved public street signage plan. The Developer shall contract to have such Public Street Signs installed generally after the completion of the street's asphaltic pavement layer at the direction of the Village public work's director. (Note: the Village public work's department will be fabricating and installing the street name signage).

P. Covenants, Easements, Development Standards and Restrictions.

The Developer shall burden the Property with and convey such covenants, easements, development standards and restrictions on, in or affecting the Property to or as directed by the Village in connection with the Development Project, or otherwise, including, but not limited to, any temporary or permanent easements required to construct, maintain or use any roadways, storm water management systems, sanitary sewer systems or water mains or systems to be constructed within the Property, which covenants, easements, development standards and restrictions shall be recorded against and will run with the Property. Developer shall prepare and submit to the Village a proposed recordable Declaration of Covenants, Conditions and Restrictions (the "Declaration") providing such covenants, easements, development standards and restrictions for the Property and providing for a property owner's association to provide for the maintenance of common areas of the Property not included within individual lots and common amenities within the Development Project not maintained by Lot owners, in a form acceptable to the Village, prior to the issuance of the Village Financing for Village approval, and shall make any and all changes thereto requested by the Village as required for Village approval. Developer shall execute and record the approved Declaration within ten (10) days after approval by the Village.

Q. Requirements for Developer Work and Dedication.

1. All of the Developer Work shall be performed by the Developer to such standards as are generally specified by the Village for such work as if performed on behalf of the Village, and as specifically required by the Village. The Developer Work shall at all times be subject to Village inspection and approval, and the Village shall not be required to accept conveyance of any Public Infrastructure Improvements to be dedicated to the Village unless the Public Infrastructure Improvements have been constructed in a good workmanlike manner, in accordance with the Village approved plans for the Public Infrastructure Improvements, and otherwise in a condition reasonably acceptable to the Village.

2. The Developer shall comply with all public bidding requirements for the construction of the Public Infrastructure Improvements including those set forth in Section 66.0901 of the Wisconsin Statutes.

3. The Developer shall promptly and unconditionally dedicate, give, grant and convey to the Village the Public Infrastructure Improvements, upon installation and completion by the Developer, and inspection and approval by the Village, at no cost or expense to the Village, and all improvements shall be so dedicated free and clear of any liens or encumbrances. The Village shall preliminarily accept such dedications and

easements only in accordance with the applicable provisions of Chapter 395 of the Village Land Division Ordinance and Chapter 405, Design Standards and Construction Specifications, 2018 Edition regarding acceptance of dedications of public improvements and subject to the warranty period as provided in subsection five (5) below, and finally accept such dedications and easements upon the expiration of such warranty period. After accepting any such dedication, the Village shall have the duty and right to maintain the accepted improvements, except as set forth below, and shall have the right to connect to or to integrate with such improvements other facilities or improvements with no payment or award to the Developer and without the Developer's consent.

4. The form of the documents by which the Developer makes the dedications of property and easements provided for by this Agreement shall be subject to the approval of the Village Attorney. The Developer shall provide to the Village, prior to dedication and acceptance, a policy of title insurance to the Village, in the amount of the total estimated cost of the Public Infrastructure Improvements located upon the property being dedicated, issued by an insurer satisfactory to the Village, in a form satisfactory to the Village Attorney. The Developer shall provide to the Village, in connection with the dedication of each set of Public Infrastructure Improvements, duly signed lien waivers from all contractors, subcontractors, and other persons who have provided any labor or materials with respect to such Public Infrastructure Improvements, specifically detailing the work done, the materials supplied, and the dollar amounts of such waivers. The Developer represents and warrants to the Village that there will be no liens or encumbrances on or affecting any of the land or interests in land required to be dedicated to the Village by this Agreement at any of the times specified above, other than as provided for in this Development Agreement or as approved in writing by the Village. All such representations and warranties shall survive this Agreement, the dedication by the Developer of any land or interest in land provided for by this Agreement and the acceptance of such dedications by the Village. The Developer represents and warrants to the Village that all of the Public Infrastructure Improvements will be free and clear of any liens or encumbrances resulting from any act or omission of the Developer, at the time of any dedication of such public improvements to the Village, at the time of the Village's acceptance of any such dedications, and at the time of the recording of any instruments reflecting such dedications. All such representations and warranties shall survive this Agreement, the dedication to the Village of any public improvements and the acceptance by the Village of such dedications. The Developer represents and warrants to the best of its knowledge to the Village, its agents and consultants, that as of the date of this Development Agreement there is no hazardous substance, pollution or contamination on or in the Property or the groundwater within or beneath the property to be dedicated. Such representation and warranty shall survive this Development Agreement, the dedication by the Developer of any land or interest in land provided for by this Agreement and the acceptance by the Village of any such dedication. The Developer, upon written demand from the Village, shall promptly indemnify the Village, its agents and consultants for and hold the Village, its agents and consultants harmless against any and all claims, liability, damages and the costs of any litigation resulting from or arising out of the presence of any such pollution or contamination as a result of activities caused by the Developer, its agents, employees

representatives or contractors, including, without limitation, any actual attorneys' fees and expert witness fees.

5. The Developer shall provide to the Village from the Developer or Developer's contractors in connection with the construction and installation of the Public Infrastructure Improvements, a one-year warranty against defects in construction, materials and workmanship, in a form reasonably acceptable to the Village. The Developer shall also provide to the Village as-built construction records for the Developer Work in an electronic format acceptable to the Village. Developer shall assign all guaranties and warranties benefitting Developer in connection with the Public Infrastructure Improvements.

6. All Developer Work shall be performed by contractors and subcontractors who are licensed and qualified to do such work and are approved by the Village. The Developer shall secure payment and performance bonds for the benefit and in the name of the Village and provide certificates of insurance naming the Village as a named insured for the construction of all Public Infrastructure Improvements from all contractors of any Public Infrastructure Improvement, issued in the name of the Village and meeting the requirements of Section 779.14 of the Wisconsin Statutes, and shall provide the originals of such payment and performance bonds and certificates of insurance to the Village prior to the commencement of such construction. Developer shall be responsible for all staking, surveying and administrative services required in connection with the construction of the Public Infrastructure Improvements. The Developer agrees to pay for all inspection and construction related services provided by the Village in connection with the approval and acceptance of dedication of the Public Infrastructure Improvements. Without limiting the foregoing, the Developer shall at all times take all precautions necessary or advisable and at all times perform all work on or in the Property or in connection with the Development Project, in a manner that will safeguard and protect the water, sanitary sewer and other infrastructure that may be affected by the Development Project, and in compliance with the requirements of the Village's Construction Site Maintenance and Erosion Control Ordinance.

7. The Developer or Lot owners shall execute a Digital Security Imaging System (DSIS) Agreement and DSIS Access Agreement pursuant to Village ordinance regulations to assist in maintaining a safer environment for the Lot owners and tenants and for the protection of their personal property. The DSIS shall afford the opportunity for public safety departments to visually examine the Buildings, exterior parking areas and entrances and exits to the Lots and will provide emergency response personnel with a live visual assessment of an emergency situation in advance of arrival without placing an undue burden on the Village taxpayers as well as greatly aid law enforcement agencies in subsequent criminal investigations and prosecutions.

8. The Developer shall notify the Village of the commencement date of all Developer Work, or Building construction on, in, or related to the Property, and keep the Village informed of the Developer's construction schedule. The Developer shall promptly deliver to the Village when, and as, requested by the Village, all delivery

tickets for materials brought onto the Property for the construction of the Public Infrastructure Improvements.

9. For purposes of this Development Agreement, for Developer Work, the terms "completion" or "completed" shall mean the issuance by the Village of a final inspection approval for such Developer Work, provided that the Developer and the Village have entered into an agreement concerning any uncompleted landscaping or other uncompleted work reasonably required by the Village for full completion of such Developer Work in accordance with the usual practice and procedures of the Village.

10. The Village shall perform all construction field inspection services relating to the required Public Infrastructure Improvements, as required, and the Developer shall promptly pay to the Village Treasurer, upon demand, the costs of all such services, pursuant to the applicable provisions of Chapter 405, Design Standards and Construction Specifications, 2018 Edition; Chapter 395, the Land Division and Development Control Ordinance; and Chapter 181, the Construction Site Maintenance and Erosion Control Ordinance.

11. The Village shall have no obligation to connect, maintain or repair any public improvements referred to in this Agreement until after such time as the Village Board has adopted a Resolution specifically accepting the dedication of such improvements.

12. There will be no Village snowplowing efforts on the referenced public streets within the Development until the Public Infrastructure Improvements are completed and accepted by the Village. The Developer understands and agrees that all public sidewalks shall be installed, repaired as needed, maintained, and shoveled/deiced by the Developer as required by Village Ordinances.

13. Village officials and their designees shall have the right to enter upon the Property at all reasonable times, without notice, to inspect the status, progress and quality of the work on the Public Infrastructure Improvements and any related materials, goods or equipment.

R. Letters of Credit.

1. **Developer Funded MRO Roadway Project Letters of Credit.**
For any Developer Funded Roadway Project, Developer shall deliver to the Village an unconditional irrevocable standby letter of credit on original bank letterhead substantially in the form attached hereto as **Exhibit F**, but in form and content acceptable to the Village, issued by a financial institution acceptable to the Village, payable at sight upon presentment of the Village's draft (each a "Developer Funded Roadway Project Letter of Credit" and collectively the "Developer Funded Roadway Project Letters of Credit"), in the face amount of not less than the Developer Funded Roadway Project Amount (as hereinafter defined), prior to the approval of the engineering plans for such Developer Funded Roadway Project. The "Developer Funded Roadway Project Amount" for each Roadway Project funded by the MRO shall

equal the guaranteed maximum price set forth in the executed construction contract between Developer and the contractor constructing the Developer Funded Roadway Project, which shall be provided to the Village prior to the commencement of the Roadway Project, plus ten percent (10%).

2. **Letter of Credit Provisions.** The following provisions shall apply to the Developer Funded Roadway Project Letters of Credit. Each Developer Funded Roadway Project Letter of Credit shall be for a term of not less than one (1) year from and after the date of the issuance of the Developer Funded Roadway Project Letter of Credit. The Village may draw under a Developer Funded Roadway Project Letter of Credit to pay for or reimburse the Village for the cost to complete any uncompleted Developer Funded Roadway Project, to remedy any Event of Default by Developer hereunder or in the event that Developer fails to provide a replacement Developer Funded Roadway Project Letter of Credit as required below. The Village may draw upon a Developer Funded Roadway Project Letter of Credit by providing a sight draft in the requested amount along with the affidavit referenced in the form attached hereto as **Exhibit F**. The Developer shall deliver to the Village no later than thirty (30) days prior to the expiration of a Developer Funded Roadway Project Letter of Credit, a replacement Developer Funded Roadway Project Letter of Credit in the same form as the applicable Developer Funded Roadway Project Letter of Credit, which shall expire no less than one (1) year after the effective date of such replacement Developer Funded Roadway Project Letter of Credit. Each replacement Developer Funded Roadway Project Letter of Credit shall be replaced with a subsequent, identical replacement Developer Funded Roadway Project Letter of Credit no later than thirty (30) days prior to the expiration of the then current Developer Funded Roadway Project Letter of Credit, until the Developer Funded Roadway Project has been Substantially Completed. The Developer shall have the right at any time and from time to time, with the prior written consent of the Village, which shall not be unreasonably withheld, to replace the Developer Funded Roadway Project Letter of Credit with a substitute Developer Funded Roadway Project Letter of Credit, provided that such substitute Developer Funded Roadway Project Letter of Credit: (i) is issued by a financial institution having a credit rating equal to that of the issuer of the existing Developer Funded Roadway Project Letter of Credit; (ii) is in an amount equal to the then outstanding balance of the existing Developer Funded Roadway Project Letter of Credit; (iii) has a term not less than the remaining term of the existing Developer Funded Roadway Project Letter of Credit; and (iv) is otherwise on the same terms as the existing Developer Funded Roadway Project Letter of Credit. For purposes of this Development Agreement, all references to a "Developer Funded Roadway Project Letter of Credit" shall be deemed to include any amended Developer Funded Roadway Project Letter of Credit, amendment to a Developer Funded Roadway Project Letter of Credit, substitute Developer Funded Roadway Project Letter of Credit and/or any replacement Developer Funded Roadway Project Letter of Credit. Each Developer Funded Roadway Project Letter of Credit shall be reduced pursuant to the procedure and requirements set forth in Section 395-17D. of the Village's Land Division and Developmental Control Ordinance.

**SECTION V. FUNDING OF ROADWAY PROJECT COSTS OUT OF
VILLAGE FINANCING AND FUNDING OF DEVELOPER FUNDED
ROADWAY PROJECT COSTS OUT OF TID 6**

A. Issuance of Village Financing. Subject to satisfaction (or waiver by Village) of all of the contingencies and conditions set forth in Section II hereof, and there being purchasers willing to purchase the notes or bonds evidencing the initial Village Financing at then current market interest rates for such Village Financing and as structured substantially in accordance with the proforma attached hereto as **Exhibit G**, the Village shall issue the initial Village Financing.

B. Payment of Roadway Project Costs from Village Financing. The Village may reimburse itself for the costs of the acquisition of the right of way along the east side of Green Bay Road necessary for a Roadway Project out of the Village Financing to the extent of such undisbursed funds; in the event such Village Financing proceeds are not available, the Developer shall reimburse such costs to the Village within ten (10) days after the receipt of a written request for such reimbursement from the Village, whereupon such costs shall be added to the Developer Funded Roadway Project Costs available for disbursement to Developer under Section V.D. below. Developer shall construct the Roadway Projects as a contractor for the Village. Whenever the Developer desires to obtain an advance of the Village Financing Proceeds for a Roadway Project, the Developer shall submit to the Village an application for payment signed by Developer, and in form and detail satisfactory to the Village, including an itemized list of the type of work, original estimated cost to complete such work, the amount previously disbursed for such work, if any, the amount requested to be disbursed under the draw request and the estimated cost of completing such work. Such request shall be accompanied by a completed AIA Document G702 (Application and Certificate for Payment) and G703 (Continuation Sheet) signed by the general contractor of the Roadway Project and certified by the engineer of the Roadway Project. Each application for payment from the Village Financing Proceeds shall certify the percentage of completion of each component of the Roadway Project (e.g. if a payment request reflects that the Roadway Project is 20% complete, then the request shall be for no more than 20% of the total cost of such Roadway Project applicable thereto, and the request shall include a written certification of the general contractor and engineer of the Roadway Project that the Roadway Project is at least 20% complete). Each application for payment shall be accompanied by waivers of construction liens from all the contractors for the Roadway Project covering claims for all work done and materials supplied and covered by all draw requests up to and including the current application for advance. Village agrees to fund such payment (minus any required retainage) to Developer from Village Financing proceeds within 30 days after receipt of a complete application for payment accordance with this Section V.B.

C. Application of Project Increment From TID 6. All Project Increment from TID 6 will be applied or deposited, on an annual cash-flow basis, on or before each December 31 during the term of TID 6 in the following order until all of the succeeding items have been paid in full: (i) first, to TID 6 Administrative Costs; (ii) second, to the payment of the Debt Service Payments payable during the 12 month period immediately

following such December 31; (iii) third, to payment to the Village of any Shortfall Advances previously made by the Village until all of such Shortfall Advances have been paid back to the Village; (iv) fourth, to payments under the MRO as set forth in Section V.D. hereof; (v) fifth, to the Village to place in a Village account for the payment of future TID 6 Administrative Costs, future Project Costs of TID 6, prepayment of the Village Financing or for payment of other Project Costs of the Village.

D. Municipal Revenue Obligation. On or before October 1, 2018 (“Initial MRO Submission Date”) and on or before each consecutive October 1 through and including October 1, 2026, after the Initial MRO Submission Date (each an “MRO Submission Date”), Developer shall provide the Village with a statement of the actual expenditures made by Developer of Developer Funded Roadway Project Costs since the prior MRO Submission Date (provided, that the Initial MRO Submission Date, may, at Developer’s option, be on or before October 1, 2019, and in such case shall include all Developer Funded Roadway Project Costs incurred since the date of this Agreement) including all contracts, invoices, lien waivers and other documentation relating to such paid Developer Funded Roadway Project Costs that are reasonably necessary to document the cost and payment of the Developer Funded Roadway Project Costs (“Developer’s Payment Statement”). In the event Developer has finally completed all of the Roadway Projects and all of the Developer Funded Roadway Project Costs have been reimbursed to Developer under the MRO, the Developer may include actual grading costs for the Property within Developer’s Payment Statement and, if approved by the Village, such costs shall increase the principal amount of the MRO. Following submission of each Developer’s Payment Statement, the Village shall have until November 1 (the “Review Period”) to confirm the amount of expenditures made by the Developer of Developer Funded Roadway Project Costs in accordance with this Agreement. On the January 1st after the Initial MRO Submission Date, the Village agrees to issue (the “Issuance Date”) a municipal revenue obligation bearing interest at the rate of six percent (6%) per annum on the principal balance from time to time compounding annually (the “MRO”) to the Developer in substantially the form attached hereto as **Exhibit H**. The initial principal amount of the MRO shall be the actual amount of Developer’s expenditures as of the Issuance Date to pay for Developer Funded Roadway Project Costs. On January 1 of each year thereafter until January 1, 2027, the principal amount of the MRO shall be increased (subject to Village Board appropriation) to the extent of any increase in the Developer Funded Roadway Project Costs paid by Developer in the preceding year, provided, however in no event shall the principal balance of the MRO less principal amounts previously paid to Developer, exceed Four Million Nine Hundred Sixty-four Thousand Seven Hundred Fifty and no/100 Dollars (\$4,964,750.00), plus accrued and unpaid interest added to the principal amount as provided in the MRO. The Village shall make payments on the MRO to Developer in the amount of the MRO Available Project Increment in each year appropriated by the Village Board until the Final Payment Date (defined below). The Village shall, subject to annual appropriation of such payment by the Village Board, pay the MRO Available Project Increment due to the Developer in one annual payment applied first to interest and then to principal, on or before September 15 of each year commencing in the year of the Issuance Date, and continuing to (and including) September 15, 2038 (each, a “Payment Date”). To the extent that on any Payment

Date the Village is unable to make all or part of a payment of principal or interest due on the MRO from such MRO Available Project Increment due to an absence of adequate MRO Available Project Increment or failure of the Village Board to appropriate MRO Available Project Increment to payment of the MRO, such failure to make a payment on the MRO shall not constitute a default under the MRO. The amount of any such deficiency shall be deferred with interest. The deferred principal and interest shall be due on the next Payment Date on which the Village has MRO Available Project Increment. If the MRO has not been paid in full by the Final Payment Date (as hereinafter defined), then the Village shall have no obligation to make further payments on the MRO. The term of the MRO and the Village's obligation to make payments thereunder shall not extend beyond September 15, 2038 ("Final Payment Date"). Upon the Final Payment Date, the MRO shall terminate and the Village's obligation to make any payments under the MRO shall be discharged, and the Village shall have no obligation and incur no liability to make any payments hereunder or under the MRO, after such date. The MRO shall not be payable from or constitute a charge upon any funds of the Village, and the Village shall not be subject to any liability thereon or be deemed to have obligated itself to pay thereon from any funds except the MRO Available Project Increment which has been appropriated for that purpose, and then only to the extent and in the manner herein specified. The MRO is a special, limited revenue obligation of the Village and shall not constitute a general obligation of the Village. Village staff will include the MRO Available Project Increment for payment of the MRO in the budget submitted to the Village Board for approval, until the earliest of the Final Payment Date, the termination of this Agreement or the MRO, or the payment in full of the MRO as provided herein. If MRO Available Project Increment is received by the Village earlier than the first Payment Date, such increment shall be retained by the Village and applied to the first payment, subject to annual appropriation of such payment by the Village Board. Developer shall have the right to collaterally assign the MRO in connection with the financing of the Developer Funded Roadway Projects and the Village shall cooperate with Developer and Developer's lender to execute an acknowledgement of the same in form reasonably acceptable to the Village. The Village shall have the option to call the MRO at par, plus accrued interest to the date of such redemption with thirty (30) days notice, after the completion of the Developer Funded Roadway Projects and the payment to Developer of all Developer Funded Roadway Project Costs. Notwithstanding anything to the contrary provided herein, the Village shall have no obligation to make any payments under the MRO during an Event of Default under this Development Agreement.

E. Village Requirements. The Village shall use commercially reasonable efforts to:

1. Execute the MOU within ninety (90) days of the date of this Development Agreement.
2. Acquire such right of way along the east side of Old Green Bay Road as may be required by the MOU and the completion of the Roadway Projects by Developer within the time frames required by the MOU and this Development

Agreement, the costs of which shall be reimbursed to the Village as provided in Section V.B. hereof.

SECTION VI. MISCELLANEOUS REQUIREMENTS

The Developer shall do each and all of the following at its cost and expense:

A. Manner of Performance. Cause all construction obligations of the Developer referred to in this Development Agreement to be carried out and performed in a good and workmanlike manner, consistent with construction standards in the Village;

B. Survey Monuments. Properly install metal stakes or pipes marking the corners of all lots that are being resurveyed and recreated pursuant to the terms of any plat of survey submitted to, and approved by, the Village. The Developer shall place and install in the Development all survey monuments required by the applicable provisions of Chapter 405, Design Standards and Construction Specifications, 2018 Edition and Chapter 395, the Land Division and Development Control Ordinance of the Village Land Division Ordinance and the Wisconsin Statutes. The installation of such monuments shall be completed, to the satisfaction of the Village prior to obtaining any further building permits for the Development;

C. Utilities. Install all electrical, telephone, cable, fiber optic and gas utilities underground to the boundaries of the Property in accordance with all ordinances of the Village. It shall be each Lot owner's responsibility to contract to have installed and pay for all costs associated with bringing such private utilities within the boundaries of such Lot as required by the Village;

D. Permits. Submit to the Village, valid copies of any and all governmental agency permits relating to the construction of the Development Project. No occupancy permits shall be issued for the occupancy of any Building or portion thereof on the Property until such time as final inspections are completed and passed by the building, fire and rescue and zoning inspectors;

E. Performance Standards. Comply with the performance standards set forth in Section 420-38 and elsewhere in the Village Code of Ordinances;

F. Debris. Keep the Property free from litter and debris during all phases of grading and construction. The Developer shall promptly remove and lawfully dispose of all tree trunks, limbs, brush and other rubbish and debris from the Development Project. Tree trunks and other organic matters shall not be backfilled on the Property. Offsite sediment deposition occurring as a result of a storm event shall be cleaned up by the end of the next work day following the occurrence. All other offsite sediment deposition on public rights of way occurring as a result of construction activities shall be cleaned up at the end of the work day. Developer shall maintain sediment deposition on the Property during construction in compliance with applicable erosion control permits and Notice of Intent with WISDNR;

G. Stop Work Orders. The Developer shall promptly comply with any stop work orders issued pursuant to applicable provisions of the Village Land Division and Development Control Ordinance or the Village Zoning Ordinance because the design, location, materials, workmanship or other performance are not in accordance with the provisions of this Development Agreement, a Site and Operational Plan, the Land Division and Development Control Ordinance, or the Erosion Control and Construction Site Maintenance Ordinance or any other Village Ordinances;

H. Inspection. The Village shall have the right at any time and from time to time to enter upon the Property to perform any inspections deemed necessary or appropriate by the Village;

I. Financial Information. the Developer shall, from time to time upon request of the Village, provide financial information and statements of the Developer to the Village, and certify that such information and statements are true and correct in all respects; and

J. Occupancy Certificates. The Developer or the respective Lot owner or tenant shall apply for and obtain certificates of occupancy for all Buildings on the Property prior to occupancy and comply with the terms of such certificates of occupancy.

K. Commercial Sprinklers. All Buildings on the Property must be constructed utilizing commercial sprinklers for the entire Building regardless of Building size and irrespective of any State of Wisconsin requirements.

SECTION VII. CONDITIONS OF ALL OBLIGATIONS OF THE VILLAGE UNDER THIS DEVELOPMENT AGREEMENT

As a condition to each and all of the covenants, agreements and other obligations of the Village under this Development Agreement, all of the following shall occur, in addition to all other requirements and conditions set forth in this Development Agreement:

A. Representations Correct. All representations and warranties of the Developer set forth in this Development Agreement and in all agreements expressly referred to herein shall at all times be true, complete and correct;

B. Covenants Performed. All covenants and obligations of the Developer under this Development Agreement are duly and substantially performed, observed, satisfied and paid, when and as required herein;

C. No Default. No Event of Default has occurred, or with the giving of notice or lapse of time would occur;

D. Financing. Prior to the commencement of any work on the Property by the Developer, the Developer shall provide the Village evidence that the Developer has sufficient funds or obtained financing for the cost of developing the Property, or portion

thereof, and thereafter the Developer shall fully comply with the terms and conditions of any and all mortgage loan documents affecting the Property, or portion thereof; and

E. No Material Change. There is no material adverse change in the financial condition of the Developer which might impair its ability to perform its obligations under this Development Agreement.

SECTION VIII. INDEMNIFICATIONS

The Developer or Lot owner, as applicable, will indemnify and hold harmless the Village, its governing body members, officers, agents, including the independent contractors, consultants and legal counsel, servants and employees thereof (hereinafter, for purposes of this paragraph collectively referred to as the "Indemnified Parties") against any loss or damage to property or any injury to or death of any person occurring at or about the Property or resulting from any breach of any warranty, covenant or agreement of the Developer or Lot owner under this Development Agreement, or the development of the Property, or a particular Lot therein, as applicable; provided that the foregoing indemnification shall not be effective for any willful acts of the Indemnified Parties or as against the Developer or Lot owner for portions of the Property not owned by Developer or such Lot owner. Except for any willful misrepresentation or any willful misconduct of the Indemnified Parties, the Developer or Lot owner, as applicable, will protect and defend the Indemnified Parties from any claim, demand, suit, action or other proceeding whatsoever by any person or entity whatsoever arising or purportedly arising from the action or inaction of the Developer or Lot owner (or other persons acting on its behalf or under its direction or control) under this Development Agreement, or the transactions contemplated hereby or the acquisition, construction, installation, ownership and operation of the Property, or the portion thereof owned by Developer or such Lot owner. All covenants, stipulations, promises, agreements and obligations of the Village contained herein shall be deemed to be covenants, stipulations, promises, agreements and obligations of the Village and not of any governing body, member, officer, agent, servant or employee or the Village.

SECTION IX. DEFAULT/REMEDIES

A. Events of Default. An event of default ("Event of Default") is any of the following:

1. A failure by the Developer to cause substantial completion of the Developer Work or any part thereof to occur pursuant to the terms, conditions and limitations of this Development Agreement, a failure of the Developer to perform or observe any and all covenants, conditions, obligations or agreements on its part to be observed or performed when and as required under this Development Agreement or a failure by the Developer to pay any amount when and as due to the Village, and after the notice and cure period provided in Section IX.B. below; or

2. The Developer becomes insolvent or is the subject of bankruptcy, receivership or insolvency proceedings of any kind; or

3. The dissolution or liquidation of the Developer, or the commencement of any proceedings therefor.

[Notwithstanding anything contained herein to the contrary, if and to the extent that Developer transfers a Lot in accordance with the terms of this Agreement, except with respect to any default in connection with Developer's obligations with respect to the Public Infrastructure Improvements under this Agreement, no default by the successor owner of the Lot shall be deemed an Event of Default by Developer hereunder. **OPEN**].

B. Notice of Event of Default.

1. Except for Sections IX.A.2. and IX.A.3. above, in the event of an Event of Default, the Village shall notify the Developer in writing (the "Developer Default Notice") of the specific nature of the Event of Default. If the Village believes that an alleged failure of performance by the Developer poses an imminent threat to the public health or safety, the Developer Default Notice shall so state.

2. The delivery by the Village of a Developer Default Notice to the Developer shall not be a condition precedent to the issuance by the Village of a stop work order pursuant to the applicable provisions of the Village's Land Division and Development Control Ordinance, or to any legal action taken pursuant to this Development Agreement to enforce such ordinance or other applicable ordinance.

3. The Developer shall have fifteen (15) days after receipt of a Developer Default Notice to cure an alleged monetary default and shall have thirty (30) days after receipt of a Developer Default Notice to cure any other alleged failure to perform under this Development Agreement; provided, however, that if the failure is reasonably incapable of cure within said thirty (30) day period, the Developer has commenced such cure within said thirty (30) day period, and is diligently pursuing such cure, then the time for such cure shall be extended for a reasonable additional period of time under the circumstances as reasonably determined by the Village to allow the Developer to complete its curative activity.

4. Whenever an alleged failure of performance under this Development Agreement is believed by the Village to pose an imminent threat to public health or safety, the parties shall immediately confer in good faith as to how such threat can be most effectively and expeditiously eliminated.

5. Notwithstanding anything to the contrary in this Development Agreement, if the Village believes in good faith that the commencement of a legal action, the making of a draw upon a Developer Funded Roadway Project Letter of Credit, or the performance of its own work with respect to curing a perceived failure prior to the commencement or completion of the Developer's curative action is urgently required to protect the public health or safety, the Village may proceed to do so, giving such prior notice to the Developer and offering the Developer such opportunity to cure as is practical under the circumstances.

C. Village Remedies on Default. Whenever an Event of Default occurs and is continuing, the Village may take any one or more of the following actions without waiving any rights or remedies available to it:

1. Immediately suspend its performance under this Development Agreement and under the MRO from the time any Developer Default Notice is given until it receives assurances from the Developer deemed adequate by the Village that the Developer will cure its default and continue its due and punctual performance under this Development Agreement;

2. Commence legal or administrative action, in law or in equity, which may appear necessary or desirable to enforce performance and observance of any obligation, agreement or covenant of the Developer under this Development Agreement;

3. Perform or have performed all necessary work, and have supplied all necessary equipment, goods, materials, or services, to complete all or any part of the Developer Work in satisfactory form, and

4. Draw under Developer Funded Roadway Project Letters of Credit provided by the Developer pursuant to this Development Agreement.

D. No Remedy Exclusive. No remedy or right conferred upon or reserved to the Village in this Development Agreement is intended to be exclusive of any other remedy or remedies, but each and every such right and remedy shall be cumulative and shall be in addition to every other right and remedy given under this Development Agreement now or hereafter existing at law or in equity. No delay or omission to exercise any right or power accruing upon any default shall impair any such right or power or shall be construed to be a waiver thereof, but any such right and power may be exercised from time to time and as often as may be deemed expedient.

E. Developer Remedies. In the event that Developer believes the Village has failed to perform its obligations under this Development Agreement, Developer shall notify the Village in writing of the specific nature of the alleged failure in writing (the "Village Default Notice"). In the event the Village has not cured such alleged failure to perform under this Development Agreement within thirty (30) days after the Village Default Notice, the Developer may proceed with any remedy available under the laws of the State of Wisconsin for the breach of a contract.

F. No Implied Waiver. In the event any warranty, covenant or agreement contained in this Development Agreement should be breached by a party and thereafter waived by the other party, such waiver shall be limited to the particular breach so waived and shall not be deemed to waive any other concurrent, previous or subsequent breach hereunder.

G. Agreement to Pay Attorneys' Fees and Expenses. Whenever any Event of Default occurs under this Development Agreement and the aggrieved party incurs attorneys fees, court costs and other such expenses for the collection of

payments due or to become due or for the enforcement or performance or observance of any obligation or agreement on the part of the defaulting party herein contained, the party in default shall pay the reasonable attorneys fees, court costs and other such expenses incurred by the other party.

SECTION X. PERMITTED DELAYS

Whenever performance is required of any party hereunder, such party shall use all due diligence to perform and take all necessary measures in good faith to perform; provided, however that if completion of performance shall be delayed at any time by reason of acts of God, war, civil commotion, riots, work stoppages arising out of collective bargaining strikes, unavailability of materials or damage to work in progress by reason of fire or other casualty or causes beyond the reasonable control of a party (other than financial reasons), then the time for performance as herein specified shall be appropriately extended by the time of the delay actually caused and a reasonable time thereafter acceptable to the Village to remobilize. However, in order for a party to be entitled to make a claim for any such delays, such party must give the other party written notice of the conditions or events giving rise to the delay and the number of days claimed to be due to such conditions or events within thirty (30) days from the date of the occurrence of the condition or event giving rise to the delay. The provisions of this Section shall not operate to excuse the Developer from the prompt payment of any and all monies the Developer is required to pay under this Development Agreement.

SECTION XI. FEES

A. Miscellaneous Fees. The Developer shall pay to the Village Treasurer in cash or by check upon execution of this Development Agreement, all fees which have not already been paid by the Developer, if any, and the Developer shall pay to the Village Treasurer when they have become due and payable all other fees prescribed by the Village Land Division and Development Control Ordinance which are or may become due and payable.

B. Engineering and Zoning Related Review Fees. In addition to the Village's Consulting Engineer's review and Inspection services, the Developer shall reimburse the Village for all fees incurred by it for the Village Engineer's and Public Work Department's inspections, the Village Community Development Department staff review and inspection services, legal fees and any other expert or administrative services in connection with its inspections and approvals of the Developer Work and other items associated with the Development Project requiring the Village's review, inspection or approval as provided in the Pre-Development Agreement executed by Developer and on file with the Village. The Village's invoice shall provide an itemization specifying the work done, by whom it was done and the charge for such work.

SECTION XII. ASSIGNMENT

The Developer shall not transfer, sell or assign this Development Agreement or its obligations under this Development Agreement, without the prior written consent of

the Village, which consent may be withheld, conditioned or delayed for any reason. [Except for the Developer Transfer or the Froedtert transfer, Developer shall not transfer, sell, convey or assign the Property, or any portion thereof, until Developer has fully complied with all of its obligations under this Development Agreement, without the prior written consent of the Village, which consent shall not be unreasonably withheld; provided, however, that Developer (x) may sell a completed Building without the Village's consent, so long as (i) no Event of Default has occurred and is continuing hereunder, (ii) all of the approvals and permits have been obtained for such Building as provided in Section IV hereof, (iii) the Building is in compliance with all applicable zoning and other applicable laws, ordinances, regulations and requirements as set forth in Section IV hereof, and (iv) a certificate of occupancy has been issued for such Building and (y) may convey all or a portion of the Property to an entity controlled by Developer (a "Controlled Assignee") without the Village's consent so long as (i) no Event of Default has occurred or is continuing hereunder, (ii) the Controlled Assignee assumes the obligations of Developer hereunder by an assumption document acceptable to the Village and (iii) Developer will not be released and will remain liable for all of its obligations under this Agreement. **OPEN]**

[The Developer shall not assign or be released of its obligations hereunder to construct the Public Infrastructure Improvements (the "Public Infrastructure Obligations") without the prior written consent of the Village. Once the Public Infrastructure Obligations, or any portion thereof applicable to a particular Lot, are complete, Developer shall have the right to request that the Village acknowledge satisfaction of such Public Infrastructure Obligations and release Developer from the Public Infrastructure Obligation requirements of this Agreement with respect to said Lot. In the event that the Village so determines that all of the Public Infrastructure Obligations hereunder have been so met, the Village shall execute a recordable release of Developer. **OPEN]**

SECTION XIII. BINDING

The covenants and agreements contained in this Development Agreement shall be deemed to be covenants running with the land and shall be binding upon and inure to the benefit of the Developer and all successive owners of the Property, and any portion thereof, and their respective heirs, representatives, successors and assigns, [it being the intent that the successor Owner of any portion of the Property only be bound by the covenants and agreements contained herein with respect to such portion of the Property and not the obligations of Developer with respect to the entire Development Parcel unless otherwise agreed to between Developer and such successor owner. **OPEN]**

SECTION XIV. AMENDMENTS

This Development Agreement may only be modified or amended by written agreement, duly authorized and signed by the Village and the Developer, their permitted successors or assigns.

SECTION XV. ADDITIONAL PROVISIONS

A. Conflicts of Interest. No member of any governing body or other official of the Village ("Village Official") shall have any financial interest, direct or indirect, in this Development Agreement, the Property or the Development Project, or any contract, agreement or other transaction contemplated to occur or be undertaken thereunder or with respect thereto, unless such financial interest is disclosed to the Village and the Village Official fully complies with all conflict of interest requirements of the Village. No Village Official shall participate in any decision relating to this Development Agreement which affects his or her personal financial interest or the financial interests of any corporation, partnership or association in which he or she has a direct or indirect financial interest. No member, official or employee of the Village shall be personally liable to the Village for any event of default or breach by the Developer of any obligations under the terms of this Development Agreement.

B. Incorporation by Reference. All exhibits and other documents attached hereto or referred to herein are hereby incorporated in and shall become a part of this Development Agreement.

C. No Implied Approvals. Nothing herein shall be construed or interpreted in any way to waive any obligation or requirement of the Developer to obtain all necessary approvals, licenses and permits from the Village in accordance with its usual practices and procedures, nor limit or affect in any way the right and authority of the Village to approve or disapprove any and all plans and specifications, or any part thereof, or to impose any limitations, restrictions and requirements on the development, construction and/or use of the Development Project as a condition of any such approval, license or permit; including, without limitation, requiring any and all other development and similar agreements.

D. Time of the Essence. Time is deemed to be of the essence with regard to all dates and time periods set forth herein or incorporated herein.

E. Headings. Descriptive headings are for convenience only and shall not control or affect the meaning or construction of any provision of this Development Agreement.

F. Notices. Any notice required hereunder shall be given in writing, signed by the party giving notice, personally delivered, mailed by certified or registered mail, return receipt requested, or sent via a nationally-recognized overnight delivery service (such as Federal Express), to the parties' respective addresses as follows:

To the Village: Village of Pleasant Prairie, Wisconsin
9915 39th Avenue
Pleasant Prairie, WI 53158
Attn: Village Administrator

With a copy to: Village of Pleasant Prairie, Wisconsin
9915 39th Avenue
Pleasant Prairie, WI 53158
Attn: Jean M. Werbie-Harris,
Community Development Director

With a further
copy to: Brian G. Lanser and
Scott L. Langlois
Quarles & Brady LLP
411 East Wisconsin Avenue #2350
Milwaukee, WI 53202

To the Developer: Main Street Development, LLC
c/o Bear Development, LLC
4011 – 80th Street
Kenosha, WI 53142
Attn: S. R. Mills

With a copy to: Katherine R. Rist
Foley & Lardner LLP
150 East Gilman Street
Madison, WI 53703

or to such other address as a party may designate for itself by notice given to the other parties from time to time in accordance with the provisions hereof.

Notice shall be deemed delivered (i) in the case of personal delivery, on the date when personally delivered; (ii) in the case of certified or registered mail, on the third business day after the date when deposited in the United States mail with sufficient postage to effect such delivery, or (iii) in the case of notice sent via a nationally-recognized overnight delivery service, on the day such delivery service attempts delivery at the notice address.

G. Entire Agreement. This document and all other documents and agreements expressly referred to herein contain the entire agreement between the Developer and the Village with respect to the matters set forth herein.

H. Governing Law. This Development Agreement shall be construed in accordance with the internal laws of the State of Wisconsin.

I. Further Assurances. The Developer will at any time, and from time to time at the written request of the Village, sign and deliver such other documents and instruments requested by the Village as may be reasonably necessary or appropriate to give full effect to the terms and conditions of this Development Agreement.

J. Counterparts. This Development Agreement may be executed in any number of counterparts, each of which shall be deemed to be an original.

K. No Third Party Beneficiaries. This Development Agreement is not intended to benefit or to be enforceable by any person other than the Village, the Developer, and their respective successors and permitted assigns, which shall not include, for purposes of this subsection, any person who has not assumed all of the benefits and obligations of this Development Agreement in accordance with the terms of this Development Agreement.

L. Applicability of Land Division and Development Control Ordinance and Zoning Ordinance. The provisions of the Village Land Division and Development Control Ordinance and Zoning Ordinance are applicable to the subject matter of this Development Agreement whether or not such provisions are referred to expressly herein. In the event of inconsistency between the provisions of said ordinances and the provisions of this Development Agreement, the provisions that are most stringent against the Developer or most favorable to the Village shall control.

M. Amendment of Ordinances. In the event that the Village Land Division and Development Control Ordinance or Zoning Ordinance is amended or recreated after this Development Agreement is entered into, and before all of the obligations of the Developer under this Development Agreement have been satisfied, then any such amendment shall apply to this Development Agreement and Developer shall comply with any such amendment.

N. Severability. In the event that any part of this Development Agreement is determined to be invalid by a court of competent jurisdiction, such part shall be severed from the Agreement, and the balance of this Development Agreement shall survive.

O. No Threat to Public Health or Safety. Notwithstanding any language in this Development Agreement to the contrary, the Developer shall not do nor permit any other person to do anything in connection with the performance of the Developer's obligations under this Development Agreement which poses a threat to the public health or safety.

P. Good Faith and Fair Dealing. The parties shall deal with one another fairly and in good faith. If this Development Agreement provides that an approving party may grant or withhold its approval or consent in its sole and absolute judgment or discretion, such approval or consent may be unreasonably withheld or conditioned and the approving party shall not be obligated to state the reasons for withholding its approval. If this Development Agreement does not expressly provide that an approving or consenting party may grant or withhold its approval in its sole and absolute judgment or discretion, the approving party shall not unreasonably withhold, condition or delay its approval.

Q. No Rule of Construction Against Drafter. The language used in this Development Agreement shall be deemed to be the language chosen by the parties to express their mutual intent and no rule of construction shall be applied against either party as the drafter of this Development Agreement.

R. Incorporation of Recitals. The Recital paragraphs set forth at the beginning of this Development Agreement are incorporated as part of this Development Agreement as though fully set forth herein.

S. Recording. The parties hereto agree that the Village may require the Developer to record this Development Agreement or a Memorandum of this Development Agreement on the record title to the Property or any portion thereof at the cost and expense of the Developer. The Developer shall, upon request of the Village, execute and deliver the Memorandum of Development Agreement substantially in the form attached hereto as **Exhibit I**, or other similar document, in connection with such recording.

T. Tax-Exempt Covenant. Developer will not sell, lease, assign or otherwise transfer or convey any interest in the Property to a person or entity exempt from general property taxation or in a manner which would cause all or any portion of the Property to be exempt from general property taxation (the "Tax-Exempt Covenant") unless the transferee executes an agreement in writing, prior to the date of such conveyance, to make a payment in lieu of taxes to the Village equal to the amount of taxes that would have been payable if such owner was non tax-exempt. This Tax-Exempt Covenant shall be in effect during the term of TID 6 or any successor tax increment district including the Property. This Tax-Exempt Covenant runs with the Property and binds all owners in title to the Property during the term of the Tax-Exempt Covenant. In the event a court finds the Tax-Exempt Covenant is not valid or enforceable or if for any reason the Tax-Exempt Covenant is terminated, then Developer and its successors and assigns shall, and shall cause Developer and its successors and assigns to, make a payment in lieu of taxes to the Village as required from time to time by the Village.

U. Survival of Representations and Warranties. All representations and warranties made by the Developer in this Development Agreement shall survive for a period of one (1) year after substantial completion of the last Building constructed on the Property by the Developer; provided, however, that Developer agrees to assign to the Village its rights under its design contracts for the Public Infrastructure Improvements prior to the expiration of such representations and warranties.

V. Costs. Developer shall pay all fees, costs and expenses incurred by the Village, including attorneys fees, in connection with the negotiation, preparation, administration and enforcement of this Development Agreement, the MRO, and all documents and agreements executed in connection therewith, and the declaration or enforcement of the Village's rights under this Development Agreement, including without limitation the declaration or enforcement of such rights in any litigation or arbitration proceeding involving the Village in any court or before any arbitrator or in any bankruptcy, reorganization or insolvency proceeding involving Developer or any of its members. Any and all such fees, costs and expenses unpaid by the Developer or incurred by the Village shall be indebtedness of Developer to the Village hereunder and shall be paid to the Village within thirty (30) days of the receipt of an invoice therefor.

W. Tax Assessment. During the existence of TID 6 or any successor tax increment financing district encumbering the Property, neither Developer nor any Lot owner shall contest or consent to any other party contesting the ad valorem tax assessed value for the Property or any portion thereof using as evidence of its value the sales of properties with abandoned or vacated buildings, and the ad valorem tax assessed value of the Property or any portion thereof shall be determined using the same method used for other like properties and under no circumstances will a vacant building method be used to determine such ad valorem tax assessed value.

[SIGNATURES CONTINUED ON NEXT PAGES]

DATED as of the day, month and year first above written.

THE DEVELOPER:

MAIN STREET DEVELOPMENT, LLC
a Wisconsin limited liability company

By: _____
Name: _____
Title: _____

STATE OF WISCONSIN)
)
COUNTY OF _____) ss.

Personally came before me this ____ day of _____, 2018 the above-named _____, the _____ of Main Street Development, LLC, and to me known to be the person who executed the foregoing instrument and acknowledged the same on behalf of the aforesaid limited liability company.

Notary Public,
_____ County, _____
Commission: _____

MSM DEVELOPMENT, INC.
a Wisconsin corporation

By: _____
Name: _____
Title: _____

STATE OF WISCONSIN)
)
COUNTY OF _____) ss.

Personally came before me this ____ day of _____, 2018 the above-named _____, the _____ of MSM Development, Inc., and to me known to be the person who executed the foregoing instrument and acknowledged the same on behalf of the aforesaid corporation.

Notary Public,
_____, County, _____
Commission: _____

VILLAGE:

VILLAGE OF PLEASANT PRAIRIE,
a Wisconsin municipal corporation

By: _____
Name: John P. Steinbrink
Title: Village President

By: _____
Name: Jane C. Snell
Title: Village Clerk

STATE OF WISCONSIN)
)
COUNTY OF KENOSHA) ss.

Personally came before me this ____ day of _____, 2018 the above-named John P. Steinbrink and Jane C. Snell to me known to be the Village President and Village Clerk of the Village of Pleasant Prairie, Wisconsin, respectively, who executed the foregoing instrument and acknowledged the same on behalf of said municipal corporation.

Jean M. Werbie-Harris, Notary Public,
Kenosha County, Wisconsin
My Commission Expires _____

EXHIBIT A

LEGAL DESCRIPTION OF PROPERTY

PARCEL 1:

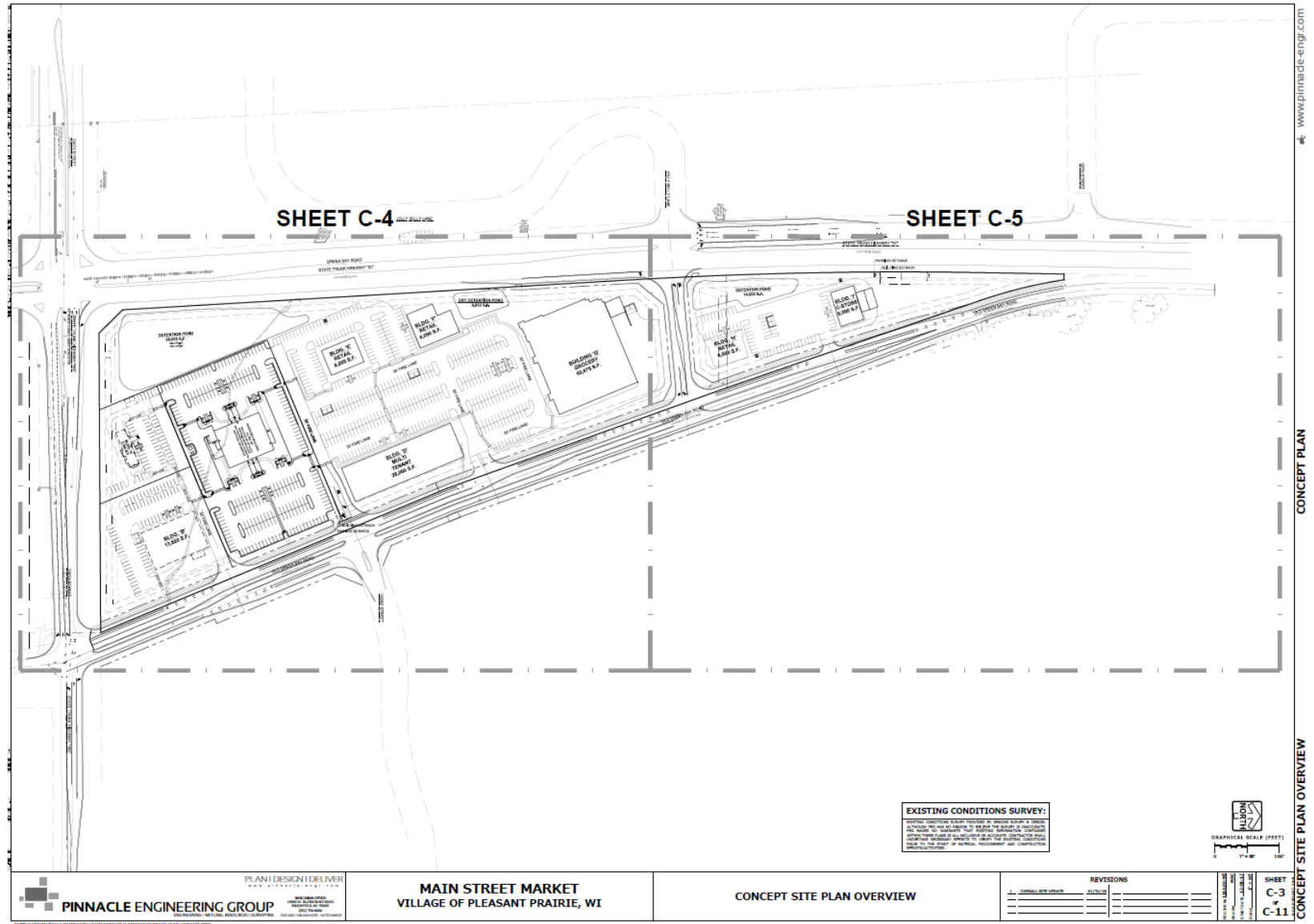
That part of the North 61.50 acres of the Southwest 1/4 of Section 22, Town 1 North, Range 22 East of the Fourth Principal Meridian, lying between the East line of relocated Highway "31" and the West line of Old Highway "31". Except the North 190 feet; and lying and being in the Village of Pleasant Prairie, Kenosha County, Wisconsin.

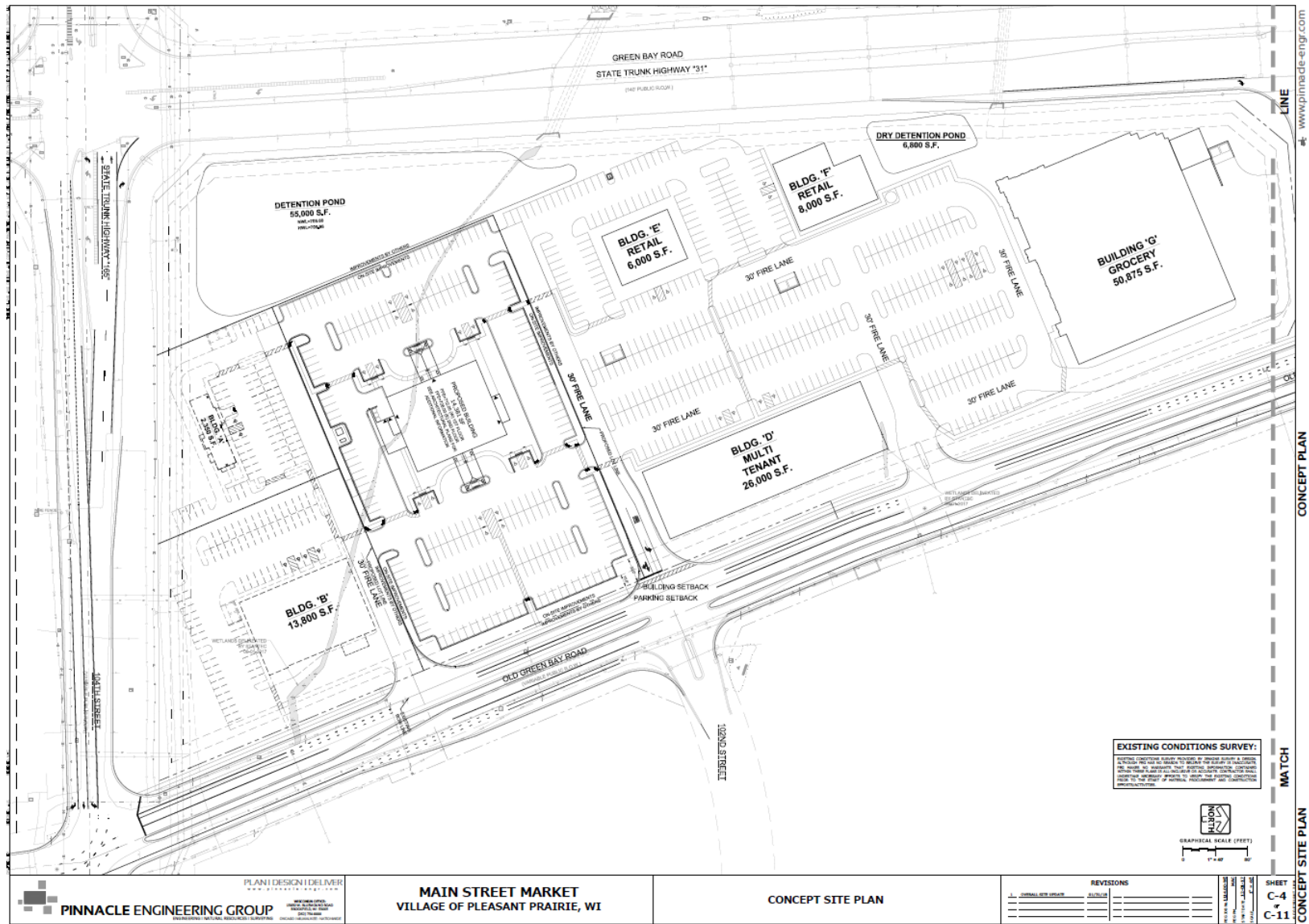
PARCEL 2: The South 98.50 acres of the Southwest 1/4 of Section 22, Township 1 North, Range 22 East of the Fourth Principal Meridian, except that part of the said South 98.50 acres which lies East of Old State Trunk Highway 31; Also excepting that parcel described as: Commencing at a point in the center of Highway 31, 570 feet North of a point 1119.5 feet East of the Southwest corner of said 1/4 Section; thence East 140.9 feet, North 182 feet, West 189.1 feet to the center line of highway, Southeasterly along the center line of said highway 142.5 feet to place of beginning; said land lying and being in the Village of Page 14 Village of Pleasant Prairie Tax Increment District No. 6 Pleasant Prairie, Kenosha County, Wisconsin. Excepting therefrom: All that part of the Southwest 1/4 of Section 22, Township 1 North, Range 22 East in the Village of Pleasant Prairie, Kenosha County, Wisconsin, described as follows: Commencing at the Southwest corner of said Section 22, thence North 02°41'03" West and along the West line of said Section 22, 87.07 feet to a point in the new North line of State Trunk Highway 165 and the point of beginning of the following description: Thence continuing North 02°41'03" West and along the West line of said Section 22, 1563.08 feet, more or less, to the North line of the Donald Kleinschmidt property and the North line of the South 98.5 acres of the Southwest 1/4 of said Section 22, as indicated on the Wisconsin Department of Transportation right of way plat dated March 1, 1990 and revised October 30, 1990; thence North 89°53'33" East along said North line, 312.54 feet, more or less, to a point in the West line of the relocated State Trunk Highway 31 and a point in a curve, as indicated on said right of way plat, said point indicated as Station 155+66.57; thence Southerly 245.11 feet along the West line of said relocated highway and the arc of said curve to the left, whose radius is 11,529.16 feet and whose chord bears South 02°46'11" East, 245.11 feet, more or less, to a point of tangency; thence South 03°22'44" East and along the West line of said relocated highway, 1265.43 feet, more or less; thence South 42°04'39" West, 70.45 feet, more or less, to a point in the new North line of State Trunk Highway 165, said point lies 87.00 feet North of, as measured normal to, the South line of the Southwest 1/4 of said Section 22; thence South 89°40'10" West and along the new North line of said highway, 278.58 feet, more or less to the place of beginning. Further excepting therefrom: Begin at the Southwest corner of the Southwest 1/4; thence North 2°41'03" West along the West line of the Southwest 1/4 87.07 feet; thence North 89°40'10" East, parallel with the South line of the Southwest 1/4 278.58 feet; thence North 42°04'39" East 70.43 feet; thence North 3°22'44" West 1265.46 feet to a point of curve (from said point the long chord bears

North 2°46'12" West 245.10 feet and the radius bears North 86°37'16" East 11,529.16 feet); thence Northerly along the arc of a curve to the right 245.10 feet to the North property line of the owner; thence North 89°53'33" East along said line 140.09 feet to a point of curve (from said point the long chord bears South 2°46'57" East 237.10 feet and the radius bears North 87°48'50" East 1,389.16 feet); thence Southerly along the arc of a curve to the left 237.10 feet; thence South 03°22'44" East 1265.46 feet; thence South 44°28'33" East 82.85 feet; thence North 89°40'10" East 776.14 feet to the centerline of the existing S.T.H. 31; thence South 22°36'06" East along said line 94.01 feet to the South line of the Southwest 1/4; thence South 89°40'10" West along said line 1331.77 feet to the point of beginning.

EXHIBIT B

CONCEPTUAL SITE PLAN





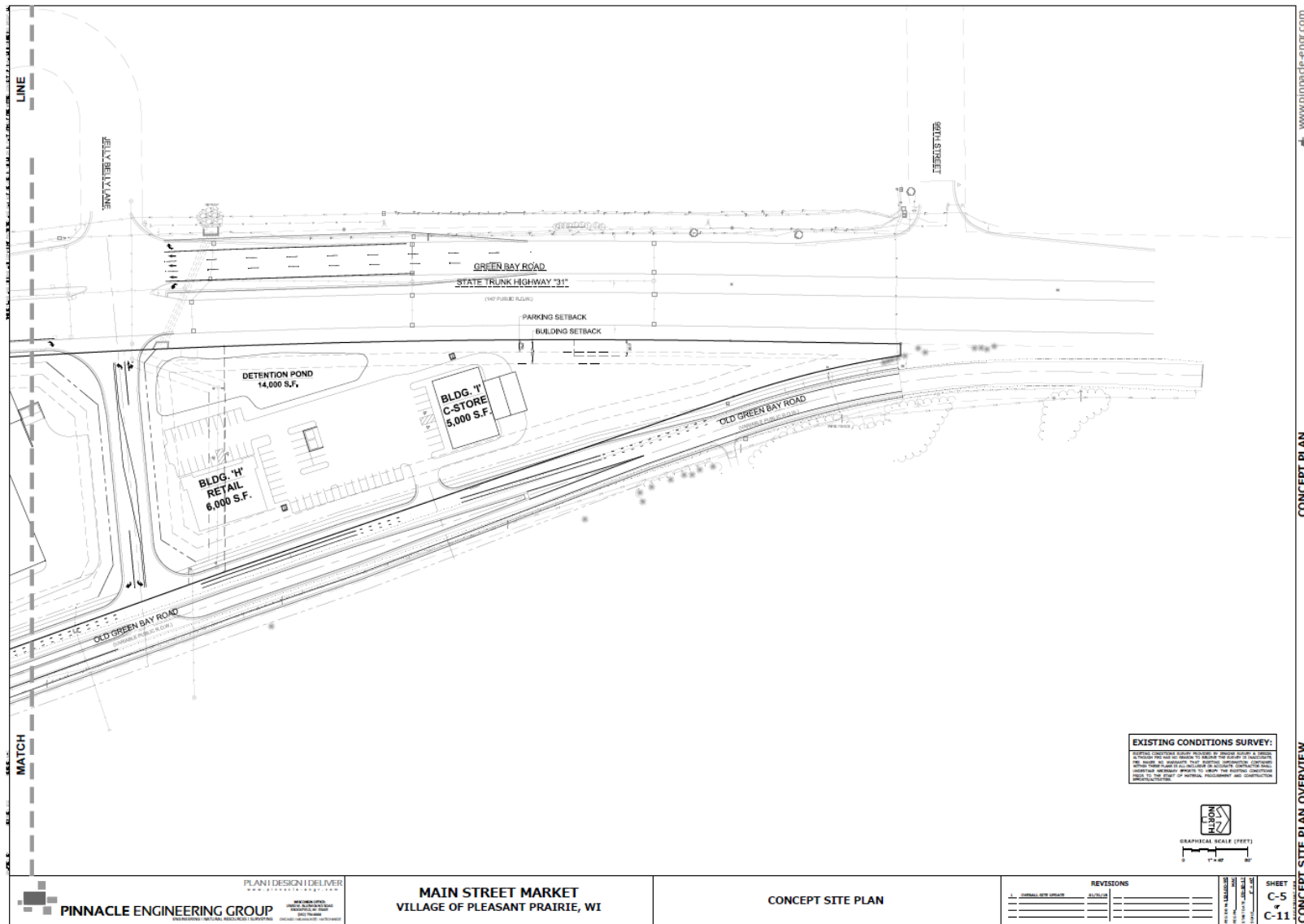


EXHIBIT C

FIRST CERTIFIED SURVEY MAP

EXHIBIT D

FIRST LOT PLANS

EXHIBIT E

LANDSCAPING INSTALLATION AND MAINTENANCE PLAN

EXHIBIT F

FORM OF DEVELOPER FUNDED ROADWAY PROJECT LETTER OF CREDIT

This letter of credit must appear on official bank letterhead.

IRREVOCABLE LETTER OF CREDIT NO. _____ Draft _____
_____, 20__

BENEFICIARY:

Village of Pleasant Prairie
9915 39th Avenue
Pleasant Prairie, WI 53158
Attention: _____

CUSTOMER:

EXPIRATION DATE:

_____, 20__ (minimum of _____ years)

Gentlemen:

We hereby establish and open our Irrevocable Letter of Credit No. _____ in favor of the Village of Pleasant Prairie, Wisconsin (the "Village"), for the account of _____ (the "Customer"), which is available at sight upon presentment of the Village's draft(s), up to the total amount of

_____/100 Dollars (\$ _____), drawn upon _____ and bearing the clause "Drawn Under Irrevocable Letter of Credit No. _____, Dated _____, 200__." Partial drawings are allowed under this Letter of Credit.

Each draft of the Village under this Letter of Credit shall be accompanied by the following documents:

- (1) A copy of this Letter of Credit and any subsequent amendments; and
- (2) An affidavit of the Village President or Village Administrator, duly signed and sworn to before a notary public and attested by the Village Clerk, stating that the Village Board of Trustees, at a meeting duly held on a specified date, duly approved a draft upon this Letter of Credit in the specified amount. The acceptable form of such an affidavit is attached as Exhibit 1 and is incorporated herein by reference.

This Letter of Credit shall expire on _____, 20__. Any remaining balance of this Letter of Credit shall no longer be available for draft after such date. Any request by the Village for the cancellation of this Letter of Credit shall be made in writing and shall be accompanied by the following documents:

- (1) The original of this Letter of Credit and any subsequent amendments; and
- (2) An affidavit of the Village President or Village Administrator, duly signed and sworn to before a notary public and attested by the Village Clerk, stating that the Village Board of Trustees, at a meeting duly held on a specified date, duly approved the reduction of this Letter of Credit.

The acceptable form of such an affidavit is attached as Exhibit 2 and is incorporated herein by reference.

Each draft of the Village and any request of the Village for cancellation of this Letter of Credit shall be presented, with the required accompanying documents, at our offices at _____, Attention: _____, or at any successor office.

This Letter of Credit sets forth in full our undertaking. Such undertaking shall not in any way be modified, amplified, limited or interpreted by reference to any other document, instrument or agreement. Except so far as otherwise expressly stated herein, this Letter of Credit is subject to the International Standby Practices 1998, International Chamber of Commerce Publication No. 590.

Very truly yours,

By: _____
Signature of Authorized Officer
Name: _____
Office: _____

ATTEST:

Signature of Attesting Officer
Name: _____
Office: _____

Draft_____

CERTIFICATE FOR REDUCTION TO THE LETTER OF CREDIT

DATE: _____

TO: _____

RE: Reduction Certificate No. __ to Letter of Credit
Applicant: _____

_____, being first duly sworn on oath, deposes and says as follows:

1. I am the Village Clerk of the Village of Pleasant Prairie, Wisconsin (the "Village").
2. The Village Board of Trustees, at a meeting duly held on the __ day of _____, _____, duly approved an irrevocable reduction to the Maximum Amount of this Letter of Credit, by the amount of USD _____.

Village of Pleasant Prairie

Signature of the Village Clerk

Subscribed and sworn to before me,
this day __ of _____, _____.

Notary Public, State of Wisconsin
My Commission expires: _____

n:\cd\planner\develop\ltrcred
1/1/2000
rev. 1/1/06
rev. 2/15/10

EXHIBIT G

VILLAGE FINANCING PROFORMA

Phase 1 Tax-Exempt Village Debt			
Assumes Estimated All-Inclusive Interest Rate of 3.31%			
Date Prepared: 3/7/18			
	Projected	\$1.205M	
For	\$2.25M	Refinanced	
Collection	G.O. Debt	Balloon	
Year	11/01/18	Debt	
2018			
2019	(66,433)		
2020	(126,433)		
2021	(180,377)		
2022	(183,100)		
2023	(185,424)		
2024	(182,337)		
2025	(183,999)		
2026	(180,255)		
2027	(181,290)		
2028	(1,352,051)		
2029	-	(190,000)	
2030	-	(190,000)	
2031	-	(190,000)	
2032	-	(190,000)	
2033	-	(190,000)	
2034	-	(190,000)	
2035	-	(190,000)	
2036	-	(190,000)	
2037	-	(190,000)	
2038	-	(190,000)	
	(2,821,699)	(1,900,000)	

EXHIBIT H

FORM OF MRO

UNITED STATES OF AMERICA
STATE OF WISCONSIN
COUNTY OF KENOSHA
VILLAGE OF PLEASANT PRAIRIE

TAXABLE TAX INCREMENT PROJECT MUNICIPAL REVENUE OBLIGATION (“**MRO**”)

<u>Number</u>	<u>Date of Original Issuance</u>	<u>Amount</u>
1	January 1, 20__ (the “Issuance Date”)	Principal Amount as defined herein

FOR VALUE RECEIVED, the Village of Pleasant Prairie, Kenosha County, Wisconsin (the “**Village**”), promises to pay to Main Street Development, LLC (the “**Developer**”), or registered assigns, but only in the manner, at the times, from the source of revenue and to the extent hereinafter provided.

This MRO has been issued to finance a project within the Village’s Tax Incremental District No. 6 (“TID No. 6”), pursuant to Article XI, Section 3 of the Wisconsin Constitution and Section 66.0621, Wisconsin Statutes and acts supplementary thereto, and is payable only from the income and revenues herein described. The “**Principal Amount**” of this MRO shall be a principal amount equal to the ACTUAL AMOUNT OF Developer’s previous expenditures as of each January 1 during the term of this MRO to pay for the Developer Funded Roadway Project Costs minus principal amounts previously paid to Developer under this MRO as set forth in Section V.D. of that certain Development Agreement dated as of _____, 2018, between the Village and Developer (the “**Development Agreement**”) but not to exceed \$4,964,750.00. The Principal Amount shall be determined initially as of the date of issuance of this MRO based on the actual expenditures of the Developer Funded Roadway Project Costs paid by the Developer as of that date, and shall be redetermined as of January 1 of each subsequent year, pursuant to the procedure set forth in Section V.D. of the Development Agreement. A final determination of the Principal Amount of the MRO shall be made as of January 1, 2027, as provided in Section V.D. of the Development Agreement. For each Interest Year (defined below), interest shall accrue only on the outstanding Principal Amount of the MRO determined as of the first day of that Interest Year. The outstanding Principal Amount of the MRO as of any date shall be reduced by the amount of any principal payments previously made on the MRO. For purposes of this MRO, “**Interest Year**” shall mean the one year period commencing on each January 1 and ending on the following December 31. This MRO is issued pursuant to the terms and conditions of the Development Agreement. This MRO does not constitute an indebtedness of the Village within the meaning of any constitutional or statutory limitation or provision. This MRO shall be payable solely from MRO Available Project Increment (as defined in the Development Agreement) generated by TID No. 6 and appropriated by the Village Board to the payment of this MRO (the “**Revenues**”). This MRO shall bear interest from the Date of Original Issuance at a rate of six percent (6%) per annum compounded annually. This MRO shall be payable as hereinafter provided in payments equal to the amount of the MRO Available Project Increment in each year

appropriated by the Village Board until this MRO is paid in full. Reference is hereby made to the Development Agreement for a more complete statement of the Revenues from which and conditions and limitations under which this MRO is payable and the general covenants and provisions pursuant to which this MRO has been issued. The Development Agreement is incorporated herein by this reference. All capitalized terms not defined in this MRO shall have the meanings provided in the Development Agreement.

The Village shall, subject to annual appropriation of such payment by the Village Board, pay the MRO Available Project Increment to the Developer in one annual payment applied first to interest and then to principal, on or before September 15 of each year commencing in the year of the Issuance Date, and continuing to (and including) September 15, 2038 (each, a "Payment Date"). To the extent that on any Payment Date the Village is unable to make all or part of a payment of principal or interest due on this MRO from such MRO Available Project Increment due to an absence of adequate MRO Available Project Increment or a failure of the Village Board to appropriate MRO Available Project Increment to payment of the MRO, such failure to make a payment on the MRO shall not constitute a default under this MRO. The amount of any such deficiency shall be deferred with interest. The deferred principal and interest shall be due on the next Payment Date on which the Village has MRO Available Project Increment. If this MRO has not been paid in full by the Final Payment Date (as hereinafter defined), then the Village shall have no obligation to make further payments on this MRO. The term of this MRO and the Village's obligation to make payments hereunder shall not extend beyond September 15, 2038 ("Final Payment Date"). Upon the Final Payment Date, this MRO shall terminate and the Village's obligation to make any payments under this MRO shall be discharged, and the Village shall have no obligation and incur no liability to make any payments hereunder or under this MRO, after such date. This MRO shall not be payable from or constitute a charge upon any funds of the Village, and the Village shall not be subject to any liability thereon or be deemed to have obligated itself to pay thereon from any funds except the MRO Available Project Increment which has been appropriated for that purpose, and then only to the extent and in the manner herein specified. This MRO is a special, limited revenue obligation of the Village and shall not constitute a general obligation of the Village. Village staff will include the MRO Available Project Increment for the MRO in the budget submitted to the Village Board for approval, until the earliest of the Final Payment Date, the termination of the Development Agreement or this MRO, or the payment in full of this MRO as provided herein. If MRO Available Project Increment is received by the Village earlier than the first Payment Date, such increment shall be retained by the Village and applied to the first payment subject to appropriation by the Village Board. At the option of the Village, this MRO is subject to prepayment in whole or in part at any time.

THE VILLAGE MAKES NO REPRESENTATION OR COVENANT, EXPRESS OR IMPLIED, THAT THE MRO AVAILABLE PROJECT INCREMENT OR OTHER REVENUES WILL BE SUFFICIENT TO PAY, IN WHOLE OR IN PART, THE AMOUNTS WHICH ARE OR MAY BECOME DUE AND PAYABLE HEREUNDER.

THE VILLAGE'S PAYMENT OBLIGATIONS HEREUNDER ARE SUBJECT TO MRO AVAILABLE PROJECT INCREMENT (AS DEFINED IN THE DEVELOPMENT AGREEMENT) BEING AVAILABLE AND APPROPRIATED BY THE VILLAGE BOARD TO MAKE PAYMENTS DUE ON THIS MRO. In addition, as provided in Section V of the Development Agreement, the total amount of principal to be paid shall in no event exceed \$4,964,750.00. When that amount of Revenue has been appropriated

and applied to payment of principal of this MRO, this MRO shall be deemed to be paid in full and discharged, and the Village shall have no further obligation with respect hereto. Further, as provided in Section V of the Development Agreement, the Village shall have no obligation to make payments on this MRO while the Developer is in default under any of the terms and conditions of the Development Agreement. The Village shall have the option to call the MRO at par, plus accrued interest to the date of such redemption with thirty (30) days notice, after the completion of the Developer Funded Roadway Projects and the payment to Developer of all Developer Funded Roadway Project Costs.

THIS MRO IS A SPECIAL, LIMITED REVENUE OBLIGATION AND NOT A GENERAL OBLIGATION OF THE VILLAGE AND IS PAYABLE BY THE VILLAGE ONLY FROM THE SOURCES AND SUBJECT TO THE QUALIFICATIONS STATED OR REFERENCED HEREIN. THIS MRO IS NOT A GENERAL OBLIGATION OF THE VILLAGE, AND NEITHER THE FULL FAITH AND CREDIT NOR THE TAXING POWERS OF THE VILLAGE ARE PLEDGED TO THE PAYMENT OF THE PRINCIPAL OR INTEREST OF THIS MRO. FURTHER, NO PROPERTY OR OTHER ASSET OF THE VILLAGE, EXCEPT THE ABOVE-REFERENCED REVENUES, IS OR SHALL BE A SOURCE OF PAYMENT OF THE VILLAGE'S OBLIGATIONS HEREUNDER.

This MRO is issued by the Village pursuant to, and in full conformity with, the Constitution and laws of the State of Wisconsin.

This MRO may be transferred or assigned, in whole or in part, only with the consent of the Village. Interests in this MRO may not be split, divided or apportioned. In order to transfer or assign the MRO, the transferee or assignee shall surrender the same to the Village either in exchange for a new, fully-registered municipal revenue obligation or for transfer of this MRO on the registration records for the MRO maintained by the Village. Each permitted transferee or assignee shall take this MRO subject to the foregoing conditions and subject to all provisions stated or referenced herein.

It is hereby certified and recited that all conditions, things and acts required by law to exist or to be done prior to and in connection with the issuance of this MRO have been done, have existed and have been performed in due form and time.

IN WITNESS WHEREOF, the Village Board of the Village of Pleasant Prairie has caused this MRO to be signed on behalf of the Village by its duly qualified and acting President and Village Clerk, all as of the date of original issue specified above.

VILLAGE OF PLEASANT PRAIRIE

By: _____
John P. Steinbrink, Village President

Attest: _____
Jane C. Snell, Village Clerk

EXHIBIT I

FORM OF MEMORANDUM OF DEVELOPMENT AGREEMENT

[See attached]

MEMORANDUM OF DEVELOPMENT
AGREEMENT

Document Number

Document Title

**MEMORANDUM OF DEVELOPMENT
AGREEMENT BETWEEN THE VILLAGE
OF PLEASANT PRAIRIE AND MAIN
STREET DEVELOPMENT, LLC and MSM
DEVELOPMENT, INC.**

**THIS MEMORANDUM OF DEVELOPMENT
AGREEMENT** ("Memorandum") is made by the
Village of Pleasant Prairie, (the "Village"), a
Wisconsin municipal corporation with offices located
at 9915 39th Avenue, Pleasant Prairie, Wisconsin
53158 and **Main Street Development, LLC**, a
Wisconsin limited liability company and **MSM
Development, Inc.**, a Wisconsin corporation
(collectively, the "Developer"), with a business
address of c/o Bear Development, 4011 – 80th Street,
Kenosha, Wisconsin 53142, for the purposes set
forth in the Development Agreement dated
_____, 2018 between the **Village of
Pleasant Prairie** and **Main Street Development,
LLC**, a Wisconsin limited liability Company, and **MSM
Development, Inc.**, a Wisconsin corporation,
("Development Agreement") on file with the Village.

Recording Area

Name and Return Address

Village Of Pleasant Prairie
9915 39th Avenue
Pleasant Prairie, WI 53158

Parcel Identification Number (PIN)

WITNESSETH:

1. The Developer and the Village have entered into the Development Agreement regarding the development of buildings (the "Main Street Market Development") on certain real property located within the Village, the legal description which is attached hereto as **Exhibit A** and incorporated herein by reference (the "Property"). A copy of the Development Agreement which details certain required construction activities, responsibilities and obligations of all parties for the development of the Property is on file with the Village Clerk and can be viewed at the Village Municipal Building at the address stated above, as can copies of the approved construction plans, profiles and specifications relating to such construction, all of which are a part of or provided for in the Development Agreement.

2. The Development Agreement has provided, among other things, the following:

a. The Developer has undertaken certain obligations under the Development Agreement to perform the Developer Work (as such term is defined in the Development Agreement) as required by the Development Agreement.

b. The Developer has agreed to provide Irrevocable Letters of Credit to the Village, which includes amounts for the Developer Work, as financial security for the Developer's obligations thereunder.

c. The Developer has made various representations, warranties and indemnities in the Development Agreement regarding, among other things, the condition of the Property and the state of title of the Property.

d. The Developer has agreed to construct certain improvements and the Developer Work on the Property within the timelines provided in the Development Agreement.

e. The Development Agreement includes a restriction upon conveying any portion of the Property to a tax exempt entity as provided therein and a requirement that the assessed value of any portion of the Property be determined using the same method used for like properties and under no circumstances can a vacant property method be used to determine such tax assessed value.

3. The Development Agreement, as referenced herein, is not intended to benefit or to be enforceable by any person(s) other than the Village and the Developer, and their respective successors and assigns as to the Development Agreement.

4. The Development Agreement is enforceable against Developer and its successors and assigns, including, but not limited to, successor owners of the Property.

5. This Memorandum is intended for notice purposes only and is not a complete summary of the Development Agreement. The provisions of this Memorandum shall not be used in interpreting the Development Agreement. In the event of any conflict between this Memorandum and the Development Agreement, the Development Agreement shall control.

IN WITNESS WHEREOF, the Developer and the Village have caused this Memorandum of Development Agreement to be signed and dated as of this ____ day of _____, 2018.

[SIGNATURES CONTINUED ON NEXT PAGES]

VILLAGE OF PLEASANT PRAIRIE,

a Wisconsin municipal corporation

By:_____

Name: John P. Steinbrink

Title: Village President

ATTEST:

By:_____

Name: Jane C. Snell

Title: Village Clerk

STATE OF WISCONSIN)

)

ss.

COUNTY OF KENOSHA)

This Memorandum was acknowledged before me this ____ day of _____, 2018 by John P. Steinbrink, Village President, and Jane C. Snell, Village Clerk, of the Village of Pleasant Prairie.

Jean M. Werbie-Harris, Notary Public,

Kenosha County, Wisconsin

My Commission Expires_____

MAIN STREET DEVLEOPMENT, LLC
a Wisconsin limited liability company

By: _____
Name: _____
Title: _____

STATE OF WISCONSIN)
)
COUNTY OF _____) ss.

Personally came before me this ____ day of _____, 2018 the above-named _____, the _____ of Main Street Development, LLC, and to me known to be the person who executed the foregoing instrument and acknowledged the same on behalf of the aforesaid limited liability company.

Notary Public,
_____ County, _____
Commission: _____

MSM DEVELOPMENT, INC.
a Wisconsin corporation

By: _____
Name: _____
Title: _____

STATE OF WISCONSIN)
)
COUNTY OF _____) ss.

Personally came before me this ____ day of _____, 2018 the above-named _____, the _____ of MSM Development, Inc., and to me known to be the person who executed the foregoing instrument and acknowledged the same on behalf of the aforesaid corporation.

Notary Public,
_____ County, _____
Commission: _____

This Memorandum Agreement Drafted by:

Scott L. Langlois
Quarles & Brady LLP
411 East Wisconsin Avenue
Milwaukee, WI 53202

EXHIBIT A
LEGAL DESCRIPTION

EXHIBIT J
LIGHTING STANDARD

**Main Street Market
Declaration of Development Standards
and Protective Covenants**

Recording Area

Name and Return Address

BEAR DEVELOPMENT, LLC
4011 80TH STREET
KENOSHA, WI 53142

92-4-122-223-0110 and
92-4-122-223-0202

(Parcel Identification Number)

MAIN SREET MARKET
Declaration of Development Standards and Protective Covenants

THIS DECLARATION is made as of the ____ day of _____, 2018, by Main Street Development, LLC, a Wisconsin limited liability company, with its principal place of business located at 4011 80th Street, Kenosha, WI 53142 (the "Developer").

RECITALS

WHEREAS, the Developer is the owner of the real property located in the Village of Pleasant Prairie (the "Village"), County of Kenosha, State of Wisconsin known as Main Street Market consisting of approximately 21.64 acres, legally described on the attached Exhibit A which is made a part hereof (the "Premises");

WHEREAS, it is the Developer's intent to develop the Premises in a manner depicted on the Certified Survey Map attached hereto as Exhibit B (hereinafter the "CSM") and to further develop the Premises by the creation of future Lots through the recording (following approval by the Village) of subsequent certified survey maps or the recording of future plat(s) (hereinafter "Future Land Divisions") which is made a part hereof, for business, commercial, retail and other approved purposes of various uses, to be known as Main Street Market (the "Premises"); and

WHEREAS, the Developer desires that development of Main Street Market and the Premises accomplish the following purposes:

- (a) To provide for development and use which is structurally, architecturally and aesthetically acceptable to the Developer and the Village;
- (b) To ensure that any Buildings or Improvements are constructed of materials acceptable to the Developer and the Village in energy efficiency, appearance, quality and design;
- (c) To provide for adequate off-street parking and loading facilities, proper spacing between driveways, sign controls, landscaping, surface drainage, lighting, pedestrian connections, sewer, water utilities, communication and utility facilities and property maintenance on individual Building Sites; and
- (d) To provide for development and maintenance that will preserve and enhance the value of Main Street Market and the Premises, and generally benefit the Developer, Owners, and the Village; and
- (e) To ensure that the Village ordinance, rules, regulations, and other such laws and or procedures and other requirements are adhered to with respect to the Premises and Main Street Market.;

WHEREAS, to accomplish these purposes, it is the Developer's intent to subject the Premises to conditions, covenants, restrictions, easements, liens, charges and other such obligations set forth in this Declaration of Development Standards and Protective Covenants (hereinafter referred to as "Declaration" or "Covenants") which is executed for the benefit of such Premises, for each Owner thereof and shall run with the ownership of land comprising the Premises and each and every parcel or portion thereof and shall apply to and bind successors in interest and any Owner thereof; the Developer and the Village further intend to retain the right (but not the obligation) to enforce the Covenants with respect to any existing or future use of Main Street Market and the Premises or any part thereof upon Owners their heirs, assigns, lessees, licensees, invitees, successors in interest and personal representatives;

WHEREAS, Developer has caused to be created the Main Street Market Commercial Owners' Association, Inc. for the purposes of the enforcement of these Covenants and for the orderly operation and maintenance of the Development as required hereunder and by the Village;

NOW THEREFORE, the Developer hereby declares that the Premises shall be held, sold, conveyed, occupied, developed, expanded/enlarged and maintained in accordance with the Covenants set forth herein, and these Covenants shall run with the land and shall be binding upon any party having any right, title or interest in or to any part or parcel of the Premises, their heirs, assigns, lessees, licensees, invitees, successors in interest, and personal representatives until these Covenants are terminated in accordance with the provisions hereof.

ARTICLE I Definitions

Unless the context otherwise requires, the terms used herein have the following meanings:

1.1 Affiliate. The term "Affiliate" shall mean a parent, sister or subsidiary of Developer or an Owner, or an entity in which ownership of more than fifty percent (50%) of the voting stock or membership interests in the Developer or an Owner, as the case may be, is owned by the same individual(s) or entity.

1.2 Ancillary Structure. The term "Ancillary Structure" shall mean any building or structure adjacent to and used in conjunction with the primary use or the main portion of any Building located on any Lot within the Development.

1.3 Architect. The term "Architect" shall mean a person duly licensed as an architect under the laws of Wisconsin or any other state acceptable to the Developer.

1.4 Association. The term "Association" shall mean Main Street Market Commercial Owners' Association, Inc., a non-stock, Wisconsin Corporation whose membership consists of Owners of Lots in the Premises and the Developer.

1.5 Building. The term "Building" shall include both the main portion of any building or buildings on the Premises, as previously approved by the Developer, and all projections and extensions thereof, including but not limited to platforms, docks, eaves, canopies, walls and screens.

1.6 Building Site. The term "Building Site" or "Site" shall mean any Lot or contiguous Lots or portion(s) thereof within the Premises upon which Building(s) may be erected and used in conformance with these Covenants and the statutes, regulations, codes and ordinances of the State of Wisconsin, County of Kenosha and the Village.

1.7 Common Elements. The term "Common Elements" shall mean all real property, easements, fixtures, structures and improvements conveyed by the Developer (as determined by the Developer) to the Association and all such areas contained within each Lot that are intended for the common use, benefit and enjoyment of the Association and its Owners, including but not limited to all detention and retention areas, the Outlots, parking areas, access and egress drives, service drives, sidewalks, pedestrian walkways, perimeter landscaping areas, monument signs, lighting and non-dedicated streets or drives. Common Elements shall not include drive up or drive through areas and facilities, loading areas or patio areas, if any.

1.8 Developer. The term "Developer" shall mean Main Street Development, LLC or any Affiliate of Developer which shall be assigned the right to enforce these Covenants as set forth herein. "Developer" shall also mean the "Architectural Control Committee" with respect to any required approvals under the Declaration.

1.9 Main Street Market Master Grading and Drainage Plan. The term "Grading Plans" shall mean the last set of plans approved by the Village and adopted by the Developer describing the grading and drainage pattern and system of Main Street Market and the Premises together with any future revisions to said plans, which plans and revisions shall be available for review at the office of the Developer.

1.10 Engineer. The term "Engineer" shall mean a person duly licensed as a professional engineer under the laws of Wisconsin or any other State acceptable to the Developer.

1.11 Detention/Retention Basins. The term "Storm Water Retention Areas" shall mean areas of open water or areas designated to hold water, whether permanent or seasonal, natural or man-made, forming part of Main Street Market's drainage system as described and designated as such on the Grading Plans.

1.12 Improvements. The term "Improvements" shall mean any man-made changes in the natural condition of the Premises or any Lot or Building Site including, but not limited to, Buildings, structures, or other construction of any kind, (whether above grade, below grade, or on the land surface), fences, walls, signs, additions, alterations, screen enclosures, sewer mains, water mains, storm sewers, drains, disposals, waterways, roads, paving, sidewalks, utilities, grading, landscaping and exterior illumination, and shall expressly include any changes in existing Improvements.

1.13 Lot. The term "Lot" shall mean a fractional part of the Premises which has been designated as a separate parcel by, the CSM, or a future plat or subsequent certified survey map or by other means. All future Lots to be created hereafter, whether created by plat or subsequent certified survey map shall be approved by the Village prior to recording.

1.14 Municipality. The term "Municipality" shall mean the Village of Pleasant Prairie.

1.15 Occupancy. The term "Occupancy" shall mean the legal right of any person or organization, whether Developer, Owner, lessee, tenant, licensee or such person's heirs, assigns, successors in interest or personal representatives, to possess and/or use any Lot, Site, Building or Improvement within the Premises as determined by the issuance of an occupancy permit by the Village, whether or not such right is exercised. "Occupancy" shall occur when the Improvements are sufficiently completed such that they are in compliance with the applicable Village ordinance and state law and can be used for the purposes intended and are also approved by the Developer for such "Occupancy".

1.16 Outlot. The term "Outlot" shall mean a lot within the Premises, created by a Future Land Division, which is set aside by the Developer for purposes other than a Building Site, which upon creation is to be considered a Common Element and shall be conveyed to the Association by the Developer.

1.17 Owner. (a) The term "Owner" shall mean one or more partners, persons, trusts, Developers, or other entities holding record title to the fee simple interest to a Lot (or Building or Structure on such Lot or portion thereof) with any Improvement built thereon, if any, and shall include land contract purchasers (but not land contract vendors) and secured parties if in possession, their heirs, assigns, successors in interest or personal representatives. An Owner may, upon written notice to the Developer and its approval, assign all or part of its rights hereunder to said Owner's tenant or lessee. However, an Owner may not assign its duties and obligations hereunder. "Owner" shall mean "Member" with respect to rights and obligations of such Owners under the Association.

(b) With respect to assessments as set forth in Article XIII, the term "Owner" shall include the Developer only to the extent as set forth in 13.5(e) below for Lots not yet sold or developed by the Developer. The Developer shall be responsible for the entire amount of the assessments as set forth in Article XIII below with respect to Lots which have been developed by the Developer.

(c) The Term "Original Owner" shall mean the first purchaser of each Lot from the Developer.

1.18 Village Plan Commission. The term "Plan Commission" shall mean the Village's Plan Commission authorized to review and make recommendations regarding development, land use and zoning related decisions.

1.19 Village Board of Trustees. The term "Board" shall mean the Village Board of Trustees authorized to make final determinations on land use planning and zoning decisions.

1.20 Site Plan. The term "Site Plan" shall mean a complete, comprehensive Site and Operational Plan and written narrative describing the development of a Building and Building Site as described in Section 4.1.

1.21 Structure. The term "Structure" shall mean an above-ground Improvement.

ARTICLE II

General Purposes, Conditions and Permitted Uses

2.1 General Purpose. The Premises are subject to the Covenants to insure the best use and the most appropriate development and improvement; to protect the Owners against such improper use of the Premises as will depreciate the value thereof; to preserve, so far as practicable, the natural beauty of the Premises; to provide for entrances to the Premises; to guard against erection of poorly designed or proportioned structures and structures built of improper or unsuitable materials; to obtain harmonious color schemes; to insure the highest and best development of the Premises; to encourage and secure the erection of attractive Buildings with appropriate locations on Building Sites; to prevent haphazard and inharmonious improvement of Building Sites; to secure and maintain proper setbacks from streets and adequate free space between Structures; to encourage, secure and maintain attractive and harmonious landscaping of Lots, Building Sites and open areas within such Lots or Building Sites; and in general to provide adequately for a high type and quality of improvement on the Premises and thereby to enhance the value of investments made by Owners.

2.2 Land Use and Building Type. No Lot shall be used in any other manner other than as expressly approved by the Developer and the Village.

2.3 Architectural Control. No building, fence, wall, driveway, deck, sidewalk, outdoor seating, landscaping, signage, lighting or any other Structure, Building or Improvement of any type (including but not limited to antennae of any size or shape, whether freestanding or attached to another structure) shall be commenced, erected or maintained upon any Building or Building Site, nor shall any exterior addition or improvement to or change or alteration on any Building or Building Site (including without limitation repainting or landscaping changes on existing Buildings or Building Sites for which plans have previously been approved) be made until the plans, specifications and building plans showing the nature, kind, shape, height, materials, color and location of the same and the landscape layout described herein shall have been submitted to and approved in writing as to quality, materials, harmony of exterior design and location in relation to other structures and which shall encompass or portray an "Urban Prairie" conceptual design, topography and compliance with the provisions of this Declaration, by the Board of Directors of the Association, or by the Architectural Control Committee ("ACC") composed of three (3) representatives appointed by the Board of Directors (in either case hereinafter called the "Architectural Control Committee"). *Notwithstanding anything in this Declaration to the contrary, as long as the Developer owns at least one Lot within the Premises, the Developer reserves the right to carry out the functions of the Architectural Control Committee (the "ACC"). Such right shall commence prior to the creation of the Association.* No Owner shall request or obtain a building permit for a Lot from the Village, without first obtaining the approval

of the plans and specifications from the ACC. The ACC, upon prior approval from the Village, shall have the right to waive infractions or deviations from these Covenants. The provision of this Declaration are minimum requirements and the Developer, or ACC, may in its discretion require stricter standards, or conversely, may relax standards, on a case by case basis if it reasonably determines that such modified standards are required for the benefit of the entire Premises. Further the Developer may require reasonable alterations to be made to any of the plans to be submitted under this Declaration and said recommendations of the Developer shall be binding upon each and every Owner.

No Building shall be placed or permitted to remain on any Building Site other than Buildings newly constructed on the Building Site; no previously constructed dwelling or structures shall be relocated to or situated upon any Lot or Building Site without the written approval of the ACC.

2.4 Compliance with Zoning/PUD. All Building Sites within the Premises shall be developed in conformance with the Village ordinances, including but not limited to the Planned Unit Development Overlay Ordinance, which may be from time to time amended, ("PUD") for the Premises and/or other federal and state laws, rules and regulations (hereinafter collectively referred to as "Laws") in effect as of the date of application for all required approvals. Owners shall be responsible for ascertaining the zoning classification applicable to their Building Sites, and shall comply with all Laws applicable to such classification. An Owner intending to apply for a conditional use permit or variance (as may be permitted by Village ordinance) for its Building Site, shall first submit such application to the Developer for review and approval and only upon approval from the Developer shall then submit such application, together with all applicable Village and other governmental agency fees, to the Village for its approval. (Note: Disapproval by the Developer shall be final notwithstanding later favorable action by the Plan Commission or Board.) The Developer shall also be responsible for all costs associated with a land division required for the conveyance of a Lot. The Owner shall be completely responsible for all costs, including without limitation pre-development or application fees, impact fees and plan preparation and other required information costs related to a zoning map amendment, conditional use permit, variance, site and operational plan and other approvals ("Approvals") required for the commencement of construction and operation of the Building, except as otherwise agreed to in an executed Purchase Agreement between the Developer and Original Owner. The Owner shall also be responsible for attendance at all required Plan Commission, Village Board and other such meetings associated with the above-mentioned Approvals.

2.5 Nuisances. No noxious or offensive trade or activity, whether or not permitted by applicable zoning, shall be carried on within the Premises, nor shall anything be done which is or may become an annoyance or nuisance to adjacent Owners within Main Street Market or the Premises, or which is inconsistent with these Covenants or other governmental or private restrictions applicable to Main Street Market and or the Premises. Violation of these Covenants shall constitute a nuisance under this section and this Declaration.

2.6 Graffiti Deemed Nuisance. Whenever the Village, or the Association, determines that graffiti exists on any Building, structure or other improvement within the Premises, the Village or Association may cause a notice to be issued to the Owner thereof to abate such nuisance. The Owner of the Lot affected by said nuisance and the notice provided hereunder shall promptly abate such

nuisance within two (2) business days from the receipt of said notice. Such notice shall be provided by personal service to the Building constructed on the Lot affected by such notice or by registered or certified mail addressed to the Owner at the address listed on the most recent tax bill for said Lot. If the Owner fails to timely abate such nuisance, the Association, or the Village may abate such nuisance and recover any costs associated with such abatement as more particularly described in Section 12.2 (d) of this Declaration.

2.7 Hazardous Waste. Notwithstanding anything to the contrary in these Covenants and/or applicable zoning, no storage of hazardous or toxic waste, or discharge of such waste into the sanitary system or surface drainage system, shall be permitted within Main Street Market. Any party violating this provision, whether intentionally or negligently, hereby agrees to indemnify the. Developer, its Affiliates, the Village, the Association, and each and every other Owner against any and all liability and costs arising from such violation, including reasonable attorney's fees.

2.8 Acceptance of Dedications, Restrictive Covenants and Declarations. The Association hereby accepts the dedications and agrees to be bound by the restrictive covenants running with the land, both as contained on the CSM. The Association further accepts the obligations imposed by this Declaration.

2.9 Initial Construction of Certain Common Elements. Notwithstanding anything contained herein to the contrary, the Developer shall be responsible for the initial construction, installation and landscaping of the Storm Water Retention Areas, related landscaping and offsite improvements as required by the Village pursuant to a Development Agreement for the Development, monument signs and their related landscaping and lighting elements, landscaping elements, and construction and installation of the public sidewalks and public street trees (all as described below). Nothing contained herein shall constitute a waiver by the Developer to subsequently assess the costs of all, or portion thereof, of the above-mentioned construction, installation and landscaping to the Owners pursuant to separate agreements with such parties.

ARTICLE III

Site Specifications and Requirements

3.1 No Subdivision of Lot. After a Lot has been purchased, such Lot shall not be further subdivided without the written consent of the Developer and the Village. No Owner may sell, less than the whole of a Lot without the written consent of the Developer. The Developer may, in granting its consent, attach any conditions it deems appropriate.

3.2 Limit on Development. The percentage of any Building Site which may be covered with Buildings or other Improvements impervious to surface water and absorption and percentages which must remain as open space shall be determined by the Developer or the ACC. Notwithstanding the foregoing, the Developer acknowledges that the aggregate lands within the Premises which must remain as open space shall be established for the overall Premises under and pursuant to the PUD; and shall, in any case, consist of not less than 30 percent of the entire Premises.

3.3 Duty to Landscape. All areas of a Building Site not designated on a Site Plan (as hereinafter defined) as approved by the Developer for Buildings, Structures, or other Improvements shall be fine graded, seeded and/or sodded, landscaped as approved or required by the Developer, watered and maintained in an attractive condition in accordance with the landscaping plans required in Article VII.

3.4 Setbacks and Building Heights. All Buildings, Improvements and/or Structures constructed on a Lot shall comply with the Village requirements as set forth in the approved PUD, including but not limited to the following minimum setbacks from any public right of way:

- (a) Building setbacks on side or rear yard shall be not less than 30 feet from any such public right of way.
- (b) Parking lots or areas shall be set back not less than 15 feet from any public right of way.

3.5 Easements, Dedications and Restrictive Covenants. The minimum front or street setback, shore yard, side yard, rear yard, wetland yard and other setback areas ("Setback Areas") are and shall be reserved for the use of non-exclusive easements for utilities serving, in whole or in part, Main Street Market and or the Premises or any Lot located therein. By accepting title to a Lot, each Owner hereby agrees that such Setback Areas may be subjected to easements for utility lines for electricity, sewer, water, gas, telephone, cable television, or other similar utilities. If not delineated on the CSM or shown on any Future Land Division, within fifteen (15) days of written request therefor by the Developer, or, after creation of the Association as provided herein, each Owner, if necessary and if not previously obtained, shall grant specific easements (and cause their lenders to agree to non-disturbance of such easements) upon such terms as may be reasonably requested. No Improvements may be constructed in the Setback Areas except landscaping in accordance with approved landscaping plans or as otherwise specifically permitted by Article VII and Section 8.6 hereof and subject to any additional restrictions as set forth in the CSM or shown on any Future Land Division.

Further, certain easements, dedications and restrictive covenants which affect Main Street Market are recorded on the CSM for Main Street Market in the Office of the Register of Deeds of Kenosha County, Wisconsin and more particularly described as follows:

3.5.1 The fee interest in the areas shown as **Dedicated Public Street** on the CSM and Future Land Divisions were/are being dedicated, given, granted and conveyed to the Village for the local dedicated street rights-of-way and/or to the Wisconsin Department of Transportation (referred to as the "WI DOT") for the State dedicated street rights-of-way for the construction, installation, repair, alteration, replacement, planting and maintenance of public roadway improvements, uses and purposes, including, without limitation, roadway pavement, curbs and gutters, multi-use trails and sidewalks, street signs, street lights, street trees, street signalization and pavement markings, sanitary sewerage system improvements, water system improvements, roadway improvements, storm sewer and drainage system improvements, utility and communications facilities, and for all related ingress and egress. Such fee interest is subject to the following: nonexclusive easements, which are hereby reserved in the street

rights-of-way by the Village and/or the WI DOT as shown on the CSM and Future Land Divisions for the Developer, the Association and the Owners whose Lots are adjacent to the public street areas for the required planting, seeding, mowing, watering and maintenance and cutting of grass within the terrace areas; for the maintenance and replanting of street trees within the terrace areas; and the removing of snow and ice from the driveways, multi-use trails and sidewalks within the terrace areas. In the event of any conflict between the rights of the Village and the WI DOT under the existing fee interests in the Dedicated Public Street areas shown on the CSM and Future Land Divisions and the rights of the Developer, the Association or the Owners pursuant to the rights retained herein, the rights of the Village or the WI DOT shall be deemed to be superior.

The Developer shall be responsible for all costs associated with the initial construction, installation, repair, alteration, replacement, snow/ ice removal, grading, planting, and maintenance throughout the warranty period, for all public roadway improvements, curbs and gutters, multi-use trails and sidewalks, street signs, street lights, street trees, street signalization and pavement markings, sanitary sewerage system improvements, water system improvements, storm sewer and drainage system improvements, and utility and communications facilities, as defined in the executed Development Agreement between the Developer and the Village on file with the Village Clerk.

The Association shall be responsible, following the warranty period, for all costs associated with the ongoing maintenance and mowing of the street terrace areas and replacement, pruning, watering, mulching, and staking of street trees and landscaping within the Premises, Common Elements or Outlots; maintenance, repair, and replacement of any monument signage, along with the maintenance of its lighting and landscaping; payment of the public street lights energy and facility maintenance costs installed for the Development; installation and maintenance of utility and communications facilities within the Development's common areas or future Outlots; maintenance, repair and replacement of the private parking lots and private sidewalks and public multi-use trails and public sidewalks, along with the snow/ice removal; maintenance, repair and replacement of the private sanitary sewer system improvements; maintenance, repair and replacement of the private water system improvements; and the maintenance, repair and replacement of the private storm water sewer and drainage system improvements and basins used to handle storm water from the Development in accordance with the terms and conditions of the Village Municipal Code and the specific requirements set forth in these Covenants.

The Owners shall be responsible for all costs associated with the their Lot maintenance including the mowing of the street terrace areas and replacement, pruning, watering, mulching, and staking of street trees and landscaping on and abutting their Lot; installation

and maintenance of mailboxes; and installation and maintenance of private utility and communications facilities; and all of their site, signage and building improvements in accordance with the terms and conditions of the Village Municipal Code and the specific requirements set forth in these Covenants.

3.5.2 Perpetual nonexclusive utility easements coextensive with the **Dedicated General Utility Easement** areas granted by the Developer to WE Energies (f/k/a W.E.P.CO.), AT & T (f/k/a Wisconsin Bell), Spectrum (f/k/a Time Warner Cable Inc.) or other utilities and their respective successors and assigns (collectively referred to as the "Utility and Communications Grantees"), for the purposes of constructing, installing, operating, repairing, altering, replacing and maintaining utility and communication lines and other related facilities to serve the Lots and for any related ingress and egress. The General Utility Easements shall also include the right to trim or cut down trees, bushes, branches, and roots as may be reasonably required, that are interfering with the Utility and Communication Grantees use of the easement areas. To the extent possible, all such utility and communications lines and facilities shall be installed underground. Upon the installation of the utility lines, utility cables and related appurtenances, the elevation of the existing ground surface within the General Utility Easement areas shall only be altered in accordance with a separate agreement between Utility and Communications Grantees and Owners and as may be approved by the Village. Upon the installation of the required utilities, the Owners shall be responsible to restore or cause to be restored, all such land, as nearly as is reasonably possible, to the conditions existing prior to installation of such utilities within the General Utility Easement areas, on which such easements are located on their Lots as does not interfere with the purposes of the utility and communications easements and the use of such easements by the Utility and Communications Grantees. Unless there is a separate agreement entered into between the Owners and Grantees regarding the transfer of the restoration and maintenance responsibilities to the Utility and Communications Grantees, the Easement Grantor shall be responsible for all restoration maintenance. No buildings, fences, or structures of any kind shall be placed within the General Utility Easement areas without the written approval of the Utility and Communication Grantees.

The Village generally allows private utilities, including but not limited to electric and communications facilities, to be installed in the Village public street rights-of-way areas with prior written approval from the Village, subject to the requirements of applicable Village ordinances and the requirements of such public uses and purposes of the Village. Further, each individual private utility, electric or communications company shall be responsible for promptly restoring the public street areas to their pre-existing condition, at its own cost, after any use of such areas. In the event the private utility or communication companies do not restore the public street areas to a vegetatively stabilized condition, the individual Lot Owners shall be responsible for the costs of such restoration and may pursue its remedies against the respective utility company(ies). Under no circumstances shall any private utility, electric or communications company conduct any open cutting of the public streets without prior written approval of the Village and/or the WIDOT, depending on jurisdiction. Any such private utility or communications facilities shall be promptly relocated, at the cost of the individual utility, electric or communications company, upon written request of the Village, to serve the public functions and purposes of the Village in the public street area. In the event of any conflict

between the rights of the Village or the WI DOT and the rights of the private utility, electric or communications company in such public street areas, the Village's or the WI DOT's rights shall be deemed to be superior.

3.5.3 A perpetual nonexclusive easement coextensive with the areas shown as **Dedicated Private Water Mains, Access and Maintenance Easement and Dedicated Private Sanitary Sewer Mains, Access and Maintenance Easement** areas on the CSM and Future Land Divisions are hereby dedicated, given, granted and conveyed by the Developer to the Village for private water system and private sanitary sewer system improvements, uses and purposes, construction, installation, repair, alteration, replacement and maintenance activities and for all related ingress and egress. The Easements granted to the Village shall be exclusive, except for: the Association's and Owner's responsibilities for the construction, installation, repair, alteration and replacement and maintenance of the private water main and private sanitary sewer main and related appurtenances and the use, cleaning, televising and sampling and parking lot maintenance of the Easement land areas. After proper notification, if the Association or Lot Owners fail to undertake regular maintenance on the private water and/or sanitary sewer systems in the Development, the Village shall have the right but not the obligation to exercise its rights under these Easements to undertake such maintenance at the Association's and Owner's cost. In the event of any conflicts between the rights of the Village pursuant to these Easements and the rights of any other persons or entities with respect to these Easements, the Village's rights under these Easements shall be deemed to be superior.

3.5.4 A perpetual nonexclusive easement coextensive with the area shown as a **Dedicated Public Sanitary Sewer, Water Main, Access and Maintenance Easement** on the CSM and Future Land Divisions was dedicated, given, granted and conveyed by the former landowner and recorded as Document #867926 at the Kenosha County Register of Deeds Office and a **20' Dedicated Sanitary Sewer, Access and Maintenance Easement** on this CSM was dedicated, given, granted and conveyed by the former landowner and recorded as Documents #81237594 and #1237596 at the Kenosha County Register of Deeds Office to the Village for public sanitary sewerage and public water system improvements, uses and purposes, construction, installation, repair, alteration, replacement and maintenance activities and for all related ingress and egress. The Easements shall be exclusive, except for: (1) the Owners' use, planting and irrigating, care and maintenance of the Easement land areas, as it will not interfere with the improvements, maintenance, uses and purposes of the Village or the respective utilities within the Easements. In the event of any conflicts between the rights of the Village pursuant to these Easements and the rights of any other persons or entities with respect to these Easements, the Village's rights under these Easements shall be deemed to be superior.

3.5.5 Nonexclusive easement(s) co-extensive with the areas shown as **Dedicated Monument Sign, Access and Maintenance Easement** on this CSM and Future Land Divisions have been or are dedicated, given, granted and conveyed by the Developer to the Association, the Village and to the Owners for the construction, installation, grading, planting, lighting, irrigation, related maintenance and for all related ingress and egress to the

monument signage benefitting the commercial businesses within the Development. These Easements shall be exclusive, except for: (1) other such easements as may be dedicated and conveyed herein with respect to the same area or any portion thereof; (2) such above-ground Easements for the signage repair and replacement; lighting and irrigation installation; grading, planting, mowing and maintenance responsibilities and related ingress and egress in the Easement areas, which shall be required of the Association and Lot Owners and (3) such above-ground Easements for the signage, lighting and irrigation installation and grading, planting, mowing and maintenance responsibilities; and related ingress and egress in the Easement areas as granted to the Village. Unless the Village exercises the Easement rights granted to it hereunder with respect to the Easements, the Village shall have no obligation to do anything pursuant to its rights under these Easements. In the event of any conflict between the rights of the Developer, Association, Owners and the rights of the Village or of other entities with respect to the Easement, the Village's rights under the Easement shall be deemed to be superior.

3.5.6 A perpetual easement coextensive the areas shown as a **Dedicated Storm Water Drainage, Retention Basin, Access and Maintenance Easement and Dedicated Storm Water Drainage, Access and Maintenance Easement** areas shown on the CSM and Future Land Divisions are hereby dedicated, given granted and conveyed by the Developer to the Association, the Village and to the Owners for the purposes of storm water drainage, storm sewer and retention basin(s) grading, construction, installation, planting, lighting, irrigation, related maintenance and for all related ingress and egress of the drainage areas benefitting the commercial businesses within the Development. These Easements shall be exclusive, except for: (1) other such easements as may be dedicated and conveyed herein with respect to the same area or any portion thereof; (2) such above-ground use for the retention basin and storm sewer installation; grading, planting, mowing and maintenance responsibilities and related ingress and egress in the Easement areas, which shall be required of the Association and Lot Owners and (3) such above-ground Easements for the drainage, storm sewer and retention basin installation; grading, planting, mowing and maintenance responsibilities; and related ingress and egress in the Easement areas as granted to the Village. Unless the Village exercises the Easement rights granted to it hereunder with respect to the Easements, the Village shall have no obligation to do anything pursuant to its rights under these Easements. In the event of any conflict between the rights of the Developer, Association, Owners and the rights of the Village or of other entities with respect to the Easements, the Village's rights under the Easements shall be deemed to be superior.

3.5.7 Perpetual easements coextensive with the areas shown as a **Dedicated Landscaped, Access and Maintenance Easement** on the CSM and Future Land Divisions are hereby dedicated, given, granted and conveyed by the Developer to the Association, the Village and to the Owners for the purposes of installation, replacement and maintenance of landscape materials, signage, lighting and irrigation and related maintenance and all related ingress and egress benefitting the commercial businesses within the Development. These Easements shall be exclusive, except for: (1) other such easements as may be dedicated and conveyed herein with respect to the same area or any portion thereof; (2) such above-ground use; landscape planting, signage, irrigating, and lighting installation and maintenance

responsibilities; and ingress and egress in the Easement areas which shall be required of the Association and Owners and (3) such above-ground use; landscape planting, signage, irrigating, and lighting installation and maintenance responsibilities; and ingress and egress in the Easement areas granted to the Village. Unless the Village exercises the Easement rights granted to it hereunder with respect to the Easements, the Village shall have no obligation to do anything pursuant to its rights under these Easements. In the event of any conflict between the rights of the Developer, Association, Owners and the rights of the Village or of other entities with respect to the Easements, the Village's rights under the Easements shall be deemed to be superior.

3.5.8 Nonexclusive easements coextensive with the areas shown as a **Dedicated Vision Triangle Easement** on the CSM and Future Land Divisions are hereby dedicated, given, granted by the Developer to the Village and WI DOT in order to maintain a clear sight line of vision at Old Green Bay Road with the future private driveways, future Main Street and the State Trunk Highway (STH) 165 intersections and STH 31 and future Main Street intersection. There shall be no obstructions, such as but not limited to structures, signage, fences, vehicular parking, landscaping, retention basins, or shelters that are permitted within the Easement areas between the heights of two (2) feet and 10 feet unless approved in writing by the Village for local rights-of-way and the WI DOT for state rights-of-way. This restriction is for the benefit of the traveling public and shall be enforceable by the Village and/or WI DOT.

3.5.9 The Developer hereby covenants that the Association, the Village and the Owners shall have the obligation of replanting, maintaining and replacing the public street trees and maintaining the street terrace areas located within the **Dedicated Public Street** rights-of-way areas abutting the Owner's property as shown on the CSM and Future Land Divisions. Such street tree replanting and street terrace mowing and maintenance shall include without limitation and as needed: planting, staking, mulching, weeding, pruning, watering, replanting, mowing and removing of trash, debris, leaves and brush around the trees in order to prevent a nuisance condition. No driveways, signage, mail boxes, parking areas, structures or fences shall be erected within the rights-of-way areas, which might damage the street trees or might interfere with the Village's rights or the WI DOT's rights pursuant to maintaining the public street improvements.

The Developer hereby covenants that the Association and Owners shall also be responsible for all costs associated with the reconstruction, repair, replacement and snow and ice removal of the public multi-use paths and public sidewalks and the payment of public street lights energy and facility maintenance costs within the Dedicated Public Streets abutting this Development, including the costs of the street lighting district created by the Village for the Premises.

These Covenants shall run with the land, shall be binding upon the Association, Owners, their successors, successors and assigns and successors-in-title of the land, in their capacity as Owners, and shall benefit and be enforceable by the Village and/or the WI DOT. Such street

public trees planting, public street terrace areas and public multi-use paths and public sidewalks maintenance shall be performed regularly by the Association or abutting the Owners, without compensation, and to the satisfaction of the Village.

To the extent that the Village performs any such public street tree, public street terrace, public multi-use paths and public sidewalks related maintenance activities or is not reimbursed for the public street lights energy and facility maintenance costs, the Association and the respective Owners not having maintained the areas or reimbursed the Village, shall be liable for any costs which may be incurred by the Village, which the Village may recover from such Owners as special assessments or special charges under Section 66.0627 (or successors or similar provisions) of the Wisconsin Statutes or otherwise according to law.

3.5.10 The Developer hereby covenants that the Association, the Village and the Owners shall have the obligation of replanting, maintaining and replacing the private landscape plantings, irrigation and signage installed within the private **Dedicated Landscape, Access and Maintenance Easement** areas as shown on the CSM and Future Land Divisions. Such replanting and maintenance shall include without limitation and as needed planting, staking, mulching, weeding, pruning, watering, replanting, and removing of trash, debris, leaves and brush around the trees in order to prevent a nuisance condition. No driveways, signage, mail boxes, parking areas, structures or fences shall be erected within landscape areas, which might damage the landscaping or might interfere with any easements granted to the Village, WI DOT or the Utility and Communication Grantees. This covenant shall run with the land, shall be binding upon the Association and Owners, its successors, successors and assigns and successors-in-title of the land, in their capacity as the Owners, and shall benefit and be enforceable by the Village. Such private Development landscaping maintenance shall be performed regularly, without compensation, and to the satisfaction of the Village.

To the extent that the Village performs any such private landscaping related maintenance activities, the respective Association and Owners shall be liable for any costs which may be incurred by the Village, which the Village may recover from such Owners as special assessments or special charges under Section 66.0627 (or successors or similar provisions) of the Wisconsin Statutes or otherwise according to law. Unless the Village exercises the rights granted to it in the Dedication and Easement Provisions on the CSM, the Village shall have no obligation to do anything pursuant to its rights under this paragraph.

3.5.11 The Developer hereby covenants that the Association, the Village and the Owners shall have the obligation of maintaining and replacing the private **Dedicated Storm Water Drainage, Retention Basin, Access and Maintenance Easement** areas and **Dedicated Storm Water Drainage, Access and Maintenance Easement** areas shown on the CSM and Future Land Divisions in a functional, neat and nuisance-free condition to handle storm water in the Development. Such maintenance shall include, without limitation and as needed, seeding or sodding, maintaining erosion control methods to protect the drainage ways; ditching to re-establish design capacity; installing, repairing and replacing the aerator/fountain, removing of trash and debris leaves, and brush; clearing and repairing basin structures; and mowing and weeding to prevent nuisance conditions. No driveways, patios,

fences, signage or structures shall be erected within the storm water drainage and retention basin easement areas which blocks, diverts or re-routes the storm water drainage flow or which might interfere with the Village's rights, unless express written approval is granted by the Village and subject to any such conditions as the Village may impose. This covenant shall run with the land, shall be binding upon the Developer, Association and Owners, their successors, assigns and successor-in-title of the Lots, in their capacity as the Owners and shall benefit and be enforceable by the Village. Such storm water drainage, storm sewer and retention basin maintenance shall be performed regularly, without public compensation, and to the satisfaction of the Village.

To the extent that the Village performs any such storm water drainage, storm sewer or retention basin related maintenance activities, the Association and Owners shall be liable for any costs which may be incurred by the Village, which the Village may recover from such Owners as special assessments or special charges under Section 66.0627 (or successors or similar provisions) of the Wisconsin Statutes or otherwise according to law. Unless the Village exercises the rights granted to it in the Dedication and Easement Provisions on the CSM, the Village shall have no obligation to do anything pursuant to its rights under this paragraph.

3.5.12 The Developer hereby covenants that the Association, the Village and the Owners shall have the obligation of maintaining and replacing the **Dedicated Private Water and Private Sanitary Sewer, Access and Maintenance Easement** areas shown on the CSM and Future Land Divisions in a functional, maintenance-free condition to handle private water and private sanitary sewer in the Development. Such private water main system and appurtenances maintenance shall include, without limitation: fire hydrant and water main flushing, water sampling, exercising the water main valves, and inspecting, repairing, replacing and maintaining the private water system pursuant to a regular maintenance schedule as prescribed by the Village. Such private sanitary sewer main system and appurtenances maintenance shall include, without limitation: sanitary sewer main cleaning and televising, and inspecting, repairing and replacing and maintaining the sanitary sewer system pursuant to a regular maintenance schedule as prescribed by the Village. No driveways, patios, fences, signage or structures shall be erected over the private water and sanitary sewer mains. An annual report shall be provided to the Village Public Works Department regarding the regular maintenance undertaken for the private sanitary sewer and water system improvements. This covenant shall run with the land, shall be binding upon the Association and Owners, their successors, assigns and successor-in-title of the Lots, in their capacity as the Owners and shall benefit and be enforceable by the Village. Such water main and sanitary sewer main system improvements maintenance shall be performed regularly, without compensation, and to the satisfaction of the Village.

To the extent that the Village performs any such private water or sanitary sewer system related maintenance activities, the Association and Owners shall be liable for any costs which may be incurred by the Village, which the Village may recover from such Lot Owners as special assessments or special charges under Section 66.0627 (or successors or similar provisions) of the Wisconsin Statutes or otherwise according to law. Unless the Village

exercises the rights granted to it in the Dedication and Easement Provisions on the CSM, the Village shall have no obligation to do anything pursuant to its rights under this paragraph.

3.5.13 The Developer hereby covenants that the **Dedicated Public Sanitary Sewer Main, Water Main, Access and Maintenance Easement** and the **Dedicated 20' Public Sanitary Sewer Main, Access and Maintenance Easement** areas shown on the CSM and Future Land Divisions hereby places restrictions on the referenced land areas because of the locations of the public easements which were given, granted and conveyed by the previous land owner to the Village for public sanitary sewer and public water main system improvements and maintenance. There shall be no buildings, structures, fences, or signage installed or berms created within these easements that would impact or hinder the Village's ability to maintain said public sanitary sewer and public water main systems, unless express written approval is granted by the Village.

3.5.14 The Developer hereby covenants that the **Dedicated Vision Triangle Easements** shown on the CSM and Future Land Divisions hereby places restrictions on the Lots because of the locations of these Easements which were given, granted and conveyed by the Developer to the Village and/or WI DOT to maintain a clear sight line of vision at the intersections of Old Green Bay Road with the private driveways, future Main Street and the State Trunk Highway (STH) 165 and the intersection of STH 31 and future Main Street intersection. There shall be no obstructions, such as but not limited to: structures, signage, fences, vehicular parking, landscaping, retention basins, or shelters permitted within the Easement areas between the heights of two (2) feet and 10 feet unless express written approval is granted by the Village for the local roads and the WI DOT for the State roads. This restriction is for the benefit of the traveling public and shall be enforceable by the Village and/or WI DOT.

3.5.15 As shown on the CSM and pursuant to the WI DOT Right-of-Way Plat Project no. 3330-01-20, there is a **10' WISDOT Permanent Limited Easement, a 20' WI DOT Permanent Limited Easement, and a 20' x 20' WISDOT Permanent Limited Easement** within the Development and recorded as Document #906397 at the Kenosha County Register of Deeds Office.

3.5.16 As shown on the CSM, there are **WI DOT Access Restrictions and Permissions** for STH 31 and STH 165 within the Development and recorded at the Kenosha County Register of Deeds Office as Document #857692, which may be modified or adjusted, but only with the express written permission of the WI DOT.

Each Lot shall be subject to any such easement, dedications, restrictive covenant and any other restrictions granted as shown on the CSM or hereafter to be granted through any subsequent plats by the Developer or its successors or assigns to the Village or public or semi-public utility companies, for the erection, construction and maintenance of all poles, wires, pipes and conduits for the transmission of electricity, telephone, access and maintenance purposes and for other purposes, and for sewer mains, water mains, storm water improvements, gas mains, water pipes and mains and similar services, for

performing any public or quasi-public utility function or other function that Developer or its successors and assigns may deem fit and proper for the improvement and benefit of the Main Street Market and for any other purpose as set forth in the dedications and restrictive covenants on the CSM. The Owner of any Lot on which such easement area(s) are located may use such areas together with the area between the roadway and their Lot for grass, plantings, driveways and other such uses as are described on the CSM and shall otherwise care for and maintain such area provided such uses shall not interfere with the improvements, their uses and purposes, and the uses and purposes of the Village; nor shall any Building or Improvement be placed within such areas without the prior written consent of the Developer, Village and/or any other party having an interest in the respective easement area.

3.6 Use of Excavated Materials. The Developer shall at its option have the right to the use of any soil, sand, gravel, rock or other material excavated from any Building Site or Lot if such material is not used upon the Site or Lot from which it was excavated. The Owner of the Site or Lot shall provide the Developer with notice of such excess material and shall deposit, as directed by the Developer, any such excess material at whatever location within Main Street Market and/or the Premises that the Developer shall request. No excavated material shall be removed from Main Street Market and or the Premises without the prior consent of the Developer. Prior to any excavation or land disturbance activities occurring on Site, an Erosion Control Permit is required from the Village.

ARTICLE IV Site Plans/Development

4.1 Site Plan. No Improvements, Buildings, Structures or modifications of any kind or degree to existing Improvements, Buildings, Structures shall be made or constructed upon a Building Site or other Lot until a detailed site plan ("Site Plan") of the entire Building Site or Lot, with a common scale not smaller than 1"=40', is reviewed and approved, in writing, by the Developer, ACC, or designated representative. Improvements, Buildings, Structures shown on such Site Plan shall include, but not be limited to:

- (a) All finished grade levels;
- (b) All Buildings and other Structures, showing the setbacks required by Section 3.4;
- (c) Sidewalks, pedestrian connections and driveways (including types of materials);
- (d) Parking areas (including types of materials);
- (e) Loading areas (including types of materials);
- (f) Utility and storage areas (including types of materials);
- (g) Lawns and landscape areas (including types of materials);
- (h) Storm water areas;

- (i) Fences (including heights and types of materials);
- (j) Building and Parking area lights (including types);
- (k) Areas of fill or cut (Lot grading and drainage plans must indicate the existing and proposed finished grades and other grades upon the Lot);
- (l) Storm water drainage plans, drainage basin map and drainage calculations and facilities;
- (m) On-Site sewer, water and other utility and communication facility locations, sizes and easement locations;
- (n) Location and type of attached refuse collection facilities which shall consist of brick or block with caps and panelized doors;
- (o) All Site and parking lot lighting, together with exterior signs and all other signs visible from the exterior of Buildings and Structures;
- (p) Artist rendering (with 4-sided elevations) of the Building and Building Site together with other applicable illustrations; and
- (q) Any other information as required by the Developer, including but not limited to plans evidencing compliance with all Village fire suppression (sprinkling) requirements and the Village Digital Security, Imaging, Storage Device (DSIS) requirements of Chapter 410 of the Village ordinances.

ARTICLE V

Architectural Building Plan Review

5.1 Building Plan. No Building or other Structure, or other Improvements, shall be constructed or placed on any Building Site or other Lot, nor shall any Building or Structure be remodeled, enlarged, relocated or altered, until detailed plans and specifications for such Building, Structure, Improvement or remodeling, alteration or addition thereto, have been reviewed and approved, in writing, by the Developer or the ACC, which approval may be granted or withheld in the sole discretion of the Developer.

Building plans ("Building Plans") shall comply with the following minimum requirements:

- (a) Plans shall be prepared by a Wisconsin Registered and Licensed Architect or Engineer, or as otherwise approved by the Developer or the ACC, in at least 1/8" = 1' scale;
- (b) Plans shall show Building location(s) within the Building Site; all building sites shall provide for curb and gutter and external storm sewers pursuant to Village requirements;

- (c) Floor plans and building elevations shall show all features and information required by the State of Wisconsin in addition to those required by the Developer;
- (d) Plans shall identify all materials used in the construction of the Building; samples and color charts of all such materials shall be provided to the Developer for approval prior to construction;
- (e) Plans shall show all public and/or private utility connections and storm water drainage systems.
- (f) Any other information as required by the Developer.

5.2 Building Standards. Buildings, Structures and Improvements shall comply with the following minimum standards and shall be approved by the Developer in its sole discretion:

(a) The Building, Structures and Improvements shall be designed by a professional Architect or Engineer. No side, elevation or facade of a building or structure is exempt from public view; consequently, all sides, elevations, or facades of all buildings and structures shall be visually pleasing and architecturally and aesthetically compatible with the surrounding environment.

(b) The majority of exterior and externally visible opaque surfaces shall be constructed of not more than three of the following types of materials in percentages of not less than the required percent of the exterior building wall area as shown below, or as otherwise approved by the Developer; provided, however, that such list shall not be deemed to exclude the use of other accent or exterior trim materials:

- (i) Brick (of not less than 50% of the exterior building(s) wall area; excluding windows);
- (ii) Decorative concrete block (for no more than 50% of the exterior building wall area);
- (iii) Cut stone;
- (iv) Exterior insulation and finish systems such as "Dryvit" or "Stucco"; provided however that the same is not utilized as the primary material; and shall only be used as a minor accent on any Building;
- (v) Wood;
- (vi) Other building materials being developed, and to be developed, by the construction industry. The use of such materials will be reviewed by the Developer on a case-by-case basis.

Building materials must be selected for their ability to present a visual statement of a Building as well as providing for structural strength, attractiveness and permanence. The building materials

used shall be harmonious with the natural environment and with the general character of other buildings and structures in Main Street Market as determined by the Developer in its sole discretion.

(c) Metal trim materials may be used when keeping with the architectural and aesthetic character of the Project, as determined by the Developer. Notwithstanding the foregoing, no metal roofs shall be permitted.

(d) All mechanical, electrical, pollution control or waste handling equipment and other such areas, whether roof, pedestal or ground mounted, and any outside solid waste, raw material, inventory, finished product, equipment, fuel storage facility or other storage of any kind, shall be architecturally screened from view using materials identical to and structurally and visibly compatible with, the main Buildings or Structures on the Building Site, or shall be landscape screened in accordance with Article VII. No outdoor storage facilities shall be permitted. All storage areas shall be screened in accordance with Article VII. All storage areas shall be screened as provided above and shall be hard surfaced with either concrete or asphalt materials within ninety (90) days from the date of Occupancy, or as soon thereafter as weather will permit if such period occurs during winter months.

(e) All Buildings to be constructed on a Building Site which are to be heated or cooled shall be designed and constructed in an energy efficient manner consistent with sound and prudent design and construction techniques.

(f) All exterior doors that allow access to the interior of all Buildings to be constructed on a Building Site shall be numbered in a sequential order starting with the main entrance of each such Building; which shall be labeled as "1". Subsequent doors shall be numbered in sequential order in a clockwise manner. The size, location and materials utilized for such numerals shall be consistent throughout the Premises, shall be visible from the street or closest driveway and be contrasting from their background so as to maintain visibility.

5.3 Ancillary Structures. Ancillary Structures will be approved by the Developer only if such Structures are necessary to the principal use of the Building Site, are in architectural and aesthetic conformance with other Building(s) or Structure(s) on the Site and within Main Street Market and or the Premises, are properly screened, meet all requirements of the Declaration and are otherwise satisfactory to the Developer in its sole discretion. No Building or Structure of a temporary nature may be constructed on any Building Site except temporary construction sheds and/or trailers in use during construction. Any such sheds and trailers shall be promptly removed upon completion of construction and shall in no event remain on the Site for longer than thirty (30) days after completion of said construction.

5.4 Utilities. All utilities serving a Building Site shall be installed underground.

5.5 Temporary Devices/Signage. No temporary construction devices, cone, barricades, temporary parking or directional signs, or similar uses shall be permitted other than during construction or substantial repairs to a Building or any Site.

ARTICLE VI

Drainage

6.1 Drainage Plan. Prior to constructing any Improvements upon a Building Site or other Lot, the Owner shall submit to and obtain written approval from the Developer for said Sites proposed plans describing all drainage facilities upon the Site. The grading of a Lot and the location of all roof drain and sump pump discharges on a Lot must be approved by the Developer, ACC and Village and must conform to the Grading Plans. Further, such plans shall provide that all Buildings storm water drainage, including runoff from the Building's roof shall be interconnected to the underground storm system.

6.2 Conformance with Grading Plan. Each Owner shall be responsible for insuring that drainage from its Building Site adheres to the existing drainage patterns as set forth in the Grading Plans and that the Owners construction and other building activity does not interfere with or disrupt the existing or planned drainage patterns. The existing drainage pattern on a Site shall not be modified and no change to the drainage pattern on other lands within Main Street Market and or the Premises shall be caused by an Owner which varies from the Grading Plan as that plan is amended, subject to Village approval, by the Developer from time to time.

6.3 Storm Drainage. Storm drainage outfall from a completely developed Site shall not exceed the physical abilities of the streams, drainageways or storm sewers immediately adjacent to and downstream from the Site to accommodate such outfall pursuant to Village ordinances. Such drainage shall be in compliance with the Grading Plan and with all Wisconsin Department of Natural Resources rules and regulations.

6.4 Erosion Control. Each Owner shall take whatever steps are deemed reasonably necessary by the Developer and the Village to prevent erosion during the construction of any Improvements. Each Owner shall submit an Erosion Control plan to the Developer prior to commencing with any construction efforts and shall also apply for an Erosion Control Permit from the Village prior to any land disturbance.

6.5 Dedications, Easements and Covenants for Storm Water Retention Areas. Certain Easements and other Common Elements as shown on the CSM or shown on Future Land Divisions have been dedicated, given, granted and conveyed by the Developer to the Association and such Common Elements shall be subject to the easements, dedications and to the restrictive covenants imposed by the CSM or otherwise imposed by Future Land Divisions. Notwithstanding such easements and dedications, the Village shall have no obligations to exercise its rights with respect to the above-mentioned Lots. The Association shall be responsible for completing all related construction, installation, necessary repairs, alterations, landscaping and all required maintenance to these Common Elements and all such other areas designated on the CSM or shown on Future Land Divisions as Restricted Storm Water Detention Areas. All Restricted Storm Water Detention Areas as shown on the CSM or Future Land Divisions shall be preserved, protected and maintained as a storm water detention basin. No filling or other activity or condition detrimental to their function as a storm water detention basin shall occur or exist within such areas or on the surrounding lands without the written approval of the Developer and Village. From time to time in the Village's discretion, the

Village shall have the right to inspect such areas. The obligations contained within this section and as imposed by the CSM or shown on Future Land Divisions shall run with the land, shall be binding upon the Developer, its successors, assigns and successors-in-title, in their capacity as Owners of Lots and shall benefit and be enforceable by the Village, the Developer and the Association. The Developer, its successors, assigns and successors in title thereof shall be relieved of any preservation, protection or maintenance obligations they may have as Owners of Lots only to the extent that the Association performs the required preservation, protection and maintenance functions to the satisfaction of the Village. The Association and its Members shall be bound by the above- mentioned Covenants and such similar covenants as are contained on the CSM or shown on Future Land Divisions, forever.

ARTICLE VII

Landscaping

7.1 Landscaping Plan. The landscaping upon any Building Site or Lot shall be carried out in accordance with a detailed landscaping plan, which has been reviewed and approved in writing, by the Developer, and in accordance with the Master Landscape Plan approved by the Village for the Premises as more particularly described and depicted on the attached Exhibit C. ("Landscaping Standards"). The landscape plan shall include, but not be limited to on site irrigation, plant location, common and botanical names of plant material, planting size, root condition, and quantity of all plant material. The plan shall also show all ground cover, including size and caliper of plant materials, mulch areas, landscape, construction materials and construction details.

7.2 Landscaping Methods. Landscaping may include grading, earth berms, seeding, sodding, raised planters, architectural decorative walls or fencing, trees and shrubs, ground cover and other landscape materials including permanent irrigation systems, foundations, storm run-off retention basins (subject to the restrictions set forth above), reflective ponds, and landscape lighting.

7.3 Plant Material. Selected plant material should be indigenous to the State of Wisconsin and provide for a variety of shade trees, evergreen trees and shrubs, ornamental trees and shrubs and ground covers. Plant material selection shall take into consideration the following:

- (a) Disease and insect resistance.
- (b) Hardiness to the area.
- (c) The ability to provide seasonal interest.
- (d) Future maintenance considerations.
- (e) Shrubs shall consist of a minimum size at planting of 2-3 gallons and trees shall be consist of a minimum diameter of 2-1/2" to 3" at planting.

7.4 Time for Completion. All landscaping shall be completed prior to Occupancy, or as soon thereafter as weather will allow if such period occurs within winter months. A landscaping bond or letter of credit satisfactory to the Village shall be furnished to the Village in an amount not less than 110% of the estimated cost of the materials necessary to guarantee enforcement of this section and

which bond shall be released at such time that the Village determines that the obligations contained herein with respect to landscaping, have been satisfied.

7.5 Maintenance. The Owner shall be responsible for maintaining (which maintenance shall include, whether due to natural causes or by accident or other such loss, without limitation watering, mowing grass, weeding removing trash and debris, trimming trees and shrubs and replacing dead or dying plant materials) all landscaping within the Site in accordance with the requirements of this Article VII, together with street trees/plantings in the area between the roadway and the Site; provided that if such street trees or other planting in the area between the roadway and the Site require removal and replanting (and not as a result of any action or omission of the Owner), the Association shall be responsible for the costs of the same. The Owners shall be relieved of any maintenance obligations they may have as Owners of Lots with respect to the street trees adjacent to or contained within their Lot(s) only to the extent that the Association performs the required maintenance functions to the street trees to the satisfaction of the Village. Any variation or changes to the landscape plan must be reviewed and approved in writing by the Developer and the Village. Landscaped areas, materials, fixtures, and Improvements shall be maintained by the Owner of the Building Site, or by such Owner's long-term lessee(s) in good condition at all times. Building Sites shall at all times be kept free of weeds, grass clippings, leaves, branches, and other natural debris as well as paper, cans, empty storage drums, crates, pallets, boxes, tires, and other trash or debris.

7.6 Screening. Landscape materials planted, located and oriented for the primary purpose of screening an Ancillary Structure, loading or parking area shall be of sufficient size to immediately screen a minimum of fifty percent (50%) of such Structure or area and be of a plant type that will provide full screening within three (3) years from time of planting.

7.7 Open water. Any liability concerning the maintenance of open water, detention/retention/holding basins and ponds not shown on the Grading Plans, on a Building Site or Lot shall be that of the Owner, and any disposal or diversion of such water from the Site shall be carried out only with written permission of the Developer, in accordance with the Grading Plans and, if affecting lands outside Main Street Market, the permission of the Village.

7.8 Preservation. Landscaping shall be designed to preserve the existing natural habitat to the extent reasonably as required and determined by the Developer.

7.9 Planting and Landscape Areas: An easement coextensive with the areas shown as Restricted Planting, Landscape and Vehicular Non-Access Easement Areas within the Premises, whether shown on the CSM or by Future Land Divisions has been dedicated, given, granted, and conveyed to the Association for purpose of access to and maintenance of such areas which are to be used for the planting and installing of trees, shrubs and other landscape materials and all related ingress and egress, grading, replacement, alteration and maintenance activities. These easements shall be exclusive except for the coextensive easements granted on the CSM or shown by Future Land Divisions) and other future, roadway, street, driveway or other such use as approved by the Village. These areas shall be landscaped by the Owner of a Lot on which such area is located in accordance with the Master Landscaping Plan, and in accordance with the Landscape Standards. Each and every Owner of a Lot/Building Site on which such Restricted Planting, Landscape and Vehicular Non-

Access Easement area is located (or any portion of any such Lot on which such an area is located) shall be responsible for the costs of installing the required landscaping, in accordance with the Master Landscaping Plan and/or Landscaping Standard at no cost to the Developer or Association and in conjunction with the construction of the Building on the Building Site. The failure of any such Owner to do so shall not relieve any Owner from such obligations as are set forth herein and as contained on the CSM or shown by Future Land Divisions. After the trees, shrubs and other landscaping materials have been planted and installed in such areas, the Owners of each such Lot or portion thereof shall maintain the planting and landscaped areas (which maintenance shall include without limitation watering, mowing grass, weeding removing trash and debris, trimming trees and shrubs and replacing dead or dying plant materials) in accordance with the Master Landscaping Plan and/or Landscape Standards, as applicable, as an aesthetically pleasing landscaped screening area. The Association and its Members shall be bound by the above-mentioned Covenants and the easements, dedications and restrictive covenants as are contained in the CSM or Future Land Divisions, forever. Notwithstanding such easements and dedications, the Village shall have no obligations to exercise its rights with respect to the above-mentioned areas. The obligations contained within this section and as imposed by the CSM or to be imposed by Future Land Divisions shall run with the land, shall be binding upon the Developer, its successors, assigns and successors in title, in its capacity as Owners of any of the Lots and shall benefit and be enforceable by the Village and the Association. The Developer, its successors, assigns and successors-in-title thereof shall be relieved of any maintenance obligations they may have as Owners of any such Lot or portion thereof only to the extent that the Association performs the required maintenance functions to the satisfaction of the Village.

ARTICLE VIII

Off-Street Parking, Loading and Storage

8.1 Parking and Loading Areas. Off-street parking and loading areas shall be provided on each Building Site and shall be of sufficient size to accommodate all planned or anticipated parking and loading needs of all Site occupants and visitors and shall comply with all relevant Village Laws. Loading areas shall be separate from parking areas on any Site where possible and as determined by the Developer in its sole discretion. No front or street yard parking shall be allowed unless the same maintains Village setbacks and is adequately screened, as determined by the Developer and Village.

8.2 No On-Street/Overnight Parking. No recreational vehicle, motor home, construction trailer or trailer may be parked on any driveway or parking area street within the Premises or on adjacent public right of way. All parking shall comply with the requirements contained herein and in accordance with the Village ordinances. No overnight parking of any kind shall be permitted within the Premises.

8.3 Hard surfacing. All parking, loading dock areas and driveway areas must be hard surfaced with either concrete or asphalt materials in accordance with the Village ordinances and such improvements must be completed prior to the issuance of an occupancy permit. Parking areas shall also be constructed with curb and gutter and underground storm sewer.

8.4 Drainage. All parking, loading, docking and driveway areas shall be properly sloped and graded to insure positive drainage to common, private drainage facilities, if any, within Main

Street Market and or the Premises or to on-site impoundments, if any, and must also adhere to the Grading Plans. The perimeter of all hard-surfaced areas on the Site shall be edged with a permanent vertical-faced concrete curbing to facilitate such drainage. Curbing shall be constructed to transition with curbs within the public or private right-of-way.

8.5 Parking Ratios. The number and location of parking stalls on any particular Lot or Building Site shall be determined by the Developer or the ACC. Notwithstanding the foregoing, the Developer acknowledges that the total number of parking stalls available within the Premises, in aggregate, shall comply with the overall parking ratios and other parking regulations established by the PUD for the Premises.

8.6 Landscaping. The visual effect of all parking, loading, storage and driveway areas shall be "softened", in accordance with Article VII and as otherwise required by the Developer, by use of landscaping so as to minimize the visibility of hard surfaced areas, vehicles and equipment to motorists and people working or living in Main Street Market. Such effect shall in part be created through the use of landscaped parking islands as required by the Developer and the Village.

8.7 Location of Loading Areas. Truck and truck-trailer loading, receiving and parking areas shall be located away from the street side(s) of any Building wherever possible, and shall be designed and located so as to confine all truck maneuvering to the Building Site: In addition, all such loading areas shall be given priority with respect to landscape screening.

8.8 Storage of Trailers and Vehicles. There shall be no storage of trailers or construction vehicles on any Building Site beyond Building occupancy.

8.9 Rules and Regulations. Each Lot and Building Site shall be subject to the easements for Cross-Access and Parking as described in Section 11.6 hereof and such Rules and Regulations related to parking as may be established from time to time by the Association.

ARTICLE IX Signage and Lighting

9.1 Sign Approval. The Developer recognizes the need for signs advertising the identity of Owners and occupants and the businesses they conduct on the Premises and also recognizes that acceptable standards for such signs may change from time to time. All requests for signs on any Building Site or other Lot within the Premises shall be submitted to the Developer and Village for approval and shall contain detail as to size, location, materials, location of Building address on such sign, color and lighting together with a full color rendering. The Developer may approve or disapprove the request, in writing, or may require that the proposal be altered to fulfill the intent of the Declaration. If the Developer does not act upon a sign proposal within thirty (30) days after submission, the proposal shall be deemed approved. All decisions regarding signs shall be approved within the sole discretion of the Developer and shall also be subject to applicable Village approval requirements and restrictions.

9.2 Sign Standards. Any sign located within the Premises shall meet the following minimum standards:

(a) Signs may only advertise the name(s) of the Building occupants and/or the Owner(s) of the Building Site.

(b) Each Building Site may contain only one major free-standing project sign, which shall be affixed to the ground and illuminated by ground and/or internal methods. All free-standing signs must have a minimum of two feet of brick base and the total height shall not exceed 6 feet unless otherwise approved by the Developer. Portable signs are prohibited.

(c) Building signs shall be permanently affixed to the face of the Building and shall not flash, pulsate, rotate, or be affixed with moving appurtenances. Roof-top signs are prohibited. Only individual letter signage shall be allowed with internal illumination. The Maximum letter height shall be 30" unless otherwise approved by the Developer

(d) Smaller signs adjacent to individual tenant entrances and identifying individual tenants or directing traffic may also be allowed at the sole discretion of the Developer.

(e) All signs must be architecturally compatible to other Improvements.

9.3 Monument Signs. The Developer, or the Association, as the case may be, shall install certain monument signs throughout the Premises according to the Main Street Market Monument Sign Plan attached hereto as Exhibit D. The location, size, purpose and materials to be utilized for each such sign shall be as more particularly described on said Exhibit D.

9.4 Lighting Standards. Lighting on individual Building Sites shall be approved by the Developer and shall adhere to applicable governmental lighting codes and ordinances, as well as the following requirements:

(a) All exterior lighting shall be energy efficient and shall be located, oriented, and of an intensity to illuminate only the Building Site or Lot where located without detrimentally affecting activity on adjacent Sites or Lot or traffic on streets and highways.

(b) Lighting shall not be located on the roofs of Buildings. Any lights affixed to a Building shall be oriented downward at no more than a 45-degree angle from the vertical so as to light only areas of the Site.

(c) Lights may neither flash, pulsate, nor be so bright as to impair or hinder vision on public streets or adjacent Building Sites; or otherwise constitute a nuisance in the judgment of the Developer. Under soffit neon banding shall be prohibited.

(d) Mixing of lighting types (i.e. sodium vapor, incandescent, mercury vapor, metal halide) should be avoided.

(e) Integration of similar lighting fixtures is required.

(f) All parking lot lighting and other such lighting not attached to a Building or Structure shall conform to the standards determined by the Developer, shall be uniform and consistent in nature throughout the Premises in accordance with the Main Street Market Lighting Requirements attached hereto as Exhibit E. All such parking lot lighting shall utilize LED lights, and shall not exceed 25' in height.

(g) Photometric plans for all lighting must be submitted to the Developer for approval.

ARTICLE X

Other Improvements and Maintenance

10.1 Improvements Not Specifically Addressed. The construction and placement of Improvements including but not limited to special utilities, antennae, receiving dishes, towers, incidental storage buildings, and other facilities not specifically addressed elsewhere within the Declaration shall require the written approval of the Developer and the Village.

10.2 Maintenance and Repair. All Improvements, Buildings, or Structures on Building Sites shall be kept, maintained and repaired in good condition at all times. Regular maintenance routines shall be followed by Owners such that the Improvements, Buildings, or Structures continue to be maintained, at all times, as nearly as possible, in the condition set forth in the Site and Operational Plans approved by the Village and the Building Plans (as described in Section 5.1 hereof) approved by the Developer. Any damage resulting from casualty loss to any Improvements, Buildings, or Structures shall be immediately replaced or repaired by Owner to their original condition, as nearly as possible.

10.3 Address Signs and Mailboxes. The location and design of all mailboxes and address signs shall be submitted to the Developer or the ACC, as the case may be for approval and shall be of consistent color, height, style and design throughout the Development.

ARTICLE XI

Area-Wide Benefits

11.1 Right to Enter and Maintain. The Developer and Association are hereby granted an easement and consequently shall have the right to enter upon any Lot and/or Building Site, at reasonable notice to the Owner, for the purpose of repairing, maintaining, renewing, or reconstructing any utilities, facilities, retention/detentions areas, drainage systems, sewer and water systems, monument signage, landscaping, parking lot lighting, sidewalks, impoundments or other Improvements which benefit other Lots and/or Main Street Market as a whole, in addition to benefiting such Lot. If such Lot and/or Building Site contain public utilities or facilities having an area-wide benefit, which are maintained by the Village, the Village, following prior written notification to the

Developer, may, if necessary to maintain such facilities in good working order and appearance, enter upon any Lot and/or Building Site in order to repair, renew, reconstruct, or maintain such facilities or utilities and may assess the cost, if such cost is not traditionally assumed by the Village and/or prior to acceptance of such public improvements, to the Owners. No prior written notification shall be required for emergency repairs.

11.2 Right to Assess. The cost of such maintenance, renewal or reconstruction whether by the Developer or the Village may be assessed against Owners of all Lots within the Premises, on a pro rata basis, based on the acreage of real estate owned by said Owner in relation to the total acreage contained in the last legal description of record for Main Street Market on the date such calculation is made. Any assessment imposed hereunder shall be a lien against the real property subject to the assessment. Such lien shall be in the nature of a mortgage and enforceable pursuant to the procedures for foreclosure of a mortgage.

11.3 Control of Noise, Vibrations, Dust, Etc. It is difficult, if not impossible, to set minimum or maximum standards for control of noise, vibration, dirt, dust, smoke, odor, glare, and waste. Therefore, to protect the Developer's interest in Main Street Market and the Premises, and to facilitate the orderly development of Main Street Market and the Premises, the plans required under Articles IV and V shall contain sufficient engineering data to enable the Developer to determine whether or not the proposed Improvement will operate within limits acceptable to the Developer with respect to noise, vibration, dirt, dust, smoke, odor, glare, and waste.

11.4 Operations. Owner shall operate all improvements and conduct all of its activities on the Premises in accordance with the limits established herein.

11.5 Pedestrian Walkway. Any walk or walkway consisting of paved areas for pedestrians; whether identified on the CSM, any Future Land Division or hereafter constructed on any Lot ("Pedestrian Walkways") located within the Premises shall be the property of the Owner(s) of such Lot where said Pedestrian Walkways are located and shall be subject to an easement granted to the Village together with each Owner and their respective guests and invitees. The Association shall be responsible for the maintenance of such Pedestrian Walkways, including but not limited to snow and ice removal. However, the Owner of each such Lot where said Pedestrian Walkways are located shall only be relieved of any maintenance obligations they may have as Owners of any Lot or portion thereof only to the extent that the Association performs the required maintenance of such Pedestrian Walkways to the satisfaction of the Village.

11.6 Cross Access and Parking Easements. The common driveways located within the Premises and all parking areas as shown on the CSM or shown on any Future Land Division for Main Street Market, together with any and all parking areas and common driveways now or hereafter constructed within the Premises, shall be the Property of the Owner of such Lot where said driveways and parking areas are located and shall be subject to an easement granted to the Village, together with a perpetual non-exclusive easement in favor of both the Association and all Owners and their respective guests and invitees for the parking of motor vehicles, for the free use of and access to the facilities installed for the benefit of such guests and invitees by the businesses and occupants of the Building Sites and for reciprocal access, ingress and egress for purposes of access to and from the

respective Lots within the Premises and to publicly dedicated roads adjacent to said Premises. Absent an express Rule adopted by the Association under section 8.9 to the contrary, no Owner shall have the right to exclude, restrict or prohibit the free use of any parking areas on a particular Lot or within the Premises by the remaining Owners or their respective guests and invitees. No temporary signage related to parking rules, restrictions or enforcement of any kind shall be posted upon any Building or Lot by any Owner without the express written permission of the Association. Further, no Owner shall do anything to interfere with the use of the easements granted hereunder by the Association, all Owners and the respective guests and invitees. No curbs, barriers, fences, dividers or other obstructions of any kind shall be constructed on or across any driveway or parking area to prevent, prohibit or discourage the free and uninterrupted flow of vehicular and pedestrian traffic over such areas within the Premises absent the express written permission from the Village and the Developer or Association, as the case may be. The Owner of any Lot where such parking areas and common driveways are located (or to be located hereafter) shall be responsible for constructing and paving all such areas, including Pedestrian Walkways. All such construction shall be in accordance with the Site Plan submitted hereunder and shall comply with all Village ordinances and requirements. The Association shall be responsible for the maintenance of all such driveways, parking areas and all other areas deemed Common Elements hereunder; including but not limited to paving, sealing and striping and the responsibility to keep all such areas plowed and generally free of ice and snow. However, the Owner of each such Lot where said Common Elements are located shall only be relieved of any maintenance obligations they may have as Owners of any Lot or portion thereof only to the extent that the Association performs the required maintenance of such driveways to the satisfaction of the Village.

ARTICLE XII

Enforcement, Termination, Modification

12.1 Right to Enforce. This Declaration and the Covenants contained herein are enforceable only by the Developer, the Association and/or the Village (for purposes of this Article XII Section 12.1-12.6, 12.8 and 12.10 only, both the Developer and the Association shall be referred to collectively as the "Developer"), or such person or organization specifically designated by the Developer, in a document recorded in the office of the Kenosha County Register of Deeds, as its assignee for the purpose thereof.

12.2 Manner of Enforcement. This Declaration and the Covenants contained herein shall be enforceable by the Developer and its assigns and/or the Village in any manner provided by law or equity, including but not limited to one or more of the following:

- (a) Injunctive relief;
- (b) Action for specific performance;
- (c) Action for money damages;
- (d) Performance of these Covenants by the Developer and/or the Village on behalf of any party in default thereof for more than thirty (30) days, after receipt by such party of notice from the Developer or the Village describing such default. In such event the defaulting Owner shall be liable to the Developer or the Village for the actual costs

(plus 15% for overhead) related to or in connection with performing these Covenants; and;

- (e) The manner provided for in Section 12.10 below.

12.3 Reimbursement. Any amounts expended by the Developer and/or the Village in enforcing these Covenants, including reasonable attorney fees, and any amounts expended in curing a default on behalf of any Owner or other party, shall constitute a lien against the subject real property until such amounts are reimbursed to the Developer and/or the Village, with such lien to be in the nature of a mortgage and enforceable pursuant to the procedures for foreclosure of a mortgage.

12.4 Failure to Enforce Not a Waiver. Failure of the Developer or assigns and/or the Village to enforce any provision contained herein shall not be deemed a waiver of the right to enforce these Covenants in the event of a subsequent default.

12.5 Right to Enter. The Developer and/or the Village shall have the right to enter upon any Building Site or other Lot within the Premises for the purpose of ascertaining whether the Owner of said Site or Lot is complying with these Covenants, and if the Developer and/or the Village so elects under Section 12.2(d) for the purpose of performing obligations hereunder on behalf of a party in default hereof.

12.6 Right to Vary. The Developer may, in its sole discretion, grant variances from the strict application of these Covenants where strict application of any provision would result in exceptional or undue hardship to the Owner of any Building Site or Lot, or where otherwise deemed appropriate by the Developer provided such variance is not in conflict with the dedications and restrictive covenants running with the land as described on the CSM, or the obligations imposed by this Declaration on Owners or the requirements of the Village ordinances.

12.7 Right to Amend. The Developer may, in its sole discretion and with the approval of the Village, amend this Declaration by written declaration, executed in such manner as to be recordable, setting forth such annulment, waiver, change, modification or amendment executed: (a) solely by the Developer until such time as Developer conveys all Lots within the Premises to other Owners (other than Affiliates of Developer), and thereafter (b) by Owners of seventy five (75%) percent of the Lots (such Owners and percentage to be determined as provided in Article XIII), provided the written consent of the Developer or its Affiliates, successors and assigns is first obtained so long as the Developer or its Affiliates, successors and assigns shall own any acreage within Main Street Market and so long as the written consent of the Village is obtained regardless of whether the Developer owns any acreage. Such written declaration shall become effective upon recording in the Office of the Register of Deeds of Kenosha County, Wisconsin. All amendments shall be consistent with the general plan of development embodied in this Declaration. Such amendments shall apply to Building Sites and Lot owned by the Developer and Owners and to any alterations to existing Improvements or new Improvements on all Sites and Lot. Such amendments shall take effect upon recording.

12.8 Duration. The Declaration and its Covenants shall run with the land forever and be binding upon Owners and shall continue and inure to the benefit of the Developer and its assigns for a

period of one hundred (100) years from the date of recording. At the end of one hundred (100) years, these Covenants shall continue in effect for subsequent renewing 50-year periods and shall not be terminated without the consent of the Village.

12.9 Additional Enforcement. In addition to the enforcement provisions set forth in Section 12.2 and together with the charges and procedures set forth in Article XIII, upon the occurrence of a violation of the Covenants set forth in this Declaration, the Developer shall give the Owner written notice of the violation and if such violation is not remedied within five days after notice, or if a second occurrence of such violation shall occur within six months of the original notice of such violation, the Association or Developer may levy a fine in the amount of \$500.00 and an additional fine of \$100.00 for each day thereafter for which the violation continues. All fines levied shall constitute a special assessment and a lien on the Lot or Building Site of the Owner who caused the violation and if a fine is not paid within 15 days after written notice of such fine, the amount due shall accrue interest at the rate of 12% annually. Enforcement of these Covenants shall be by any proceeding at law or in equity against any Owner, person or persons violating or attempting to violate any covenant or restriction, either to restrain violation or recover damages, and against the land to enforce any lien created by these covenants. Failure to enforce any covenant or restriction herein contained shall in no event be deemed a waiver of the right to do so thereafter.

12.10 Village Authority. In the event the Covenants contained herein and as contained in the CSM are not being performed to the satisfaction of the Village, the Village shall have the right, but not the obligation, in addition to its enforcement authority under Section 12.2, to perform such function and may assess any charges incurred in the performance of such Covenants against the Association and/or the Owners. Any amounts expended by the Village in enforcing these Covenants, including reasonable attorney fees, and any amounts expended in curing a default on behalf of any Owner or other party, shall be paid by Owner. In the event such amounts are not paid, the charges may be levied as a special assessment by the Village in accordance with Wisconsin Statutes.

ARTICLE XIII OWNERS' ASSOCIATION

13.1 Owners' Association. The Developer shall form an Owner's Association for the purpose of enforcing these Covenants. The Developer and Village may also enforce these Covenants.

13.2 Creation of Owners' Association. The Developer shall authorize the creation of the Association, by the filing of Articles of Incorporation with the Wisconsin Department of Financial Institutions. The Developer will give notice of the creation of the Owners' Association to all Owners who have notified the Developer of their name and address for notice purposes hereunder. All Owners shall be entitled and required to be members of the Association. The Association shall be known as Main Street Market Commercial Owners' Association, Inc. The Association shall be incorporated as a non-stock Corporation under the laws of the State of Wisconsin. The Articles of Incorporation and the By-Laws for the Association, which will become effective when the Developer authorizes the creation of the Association, and shall be prepared by the Developer in its sole discretion, consistent

with the provisions hereof. The Association's existence shall be perpetual and shall not be dissolved by the Owners without the express consent of the Village.

13.3 General Purpose of the Association. The Association, when formed, shall be responsible for implementing and insuring adherence to these Covenants.

13.4 Membership. Each Owner shall be a Member of the Association. Such Membership shall be appurtenant to and may not be separated from ownership of a Lot. Votes shall be allocated to Members of Lots based on the amount of acreage in the Premises owned by each Member. Each Member shall be allocated one vote for up to one acre owned, and one additional vote for each additional full acre owned, up to a maximum of five votes per Member. For purposes of determining the number of votes allocated to an Owner, all Lots owned by an Owner shall be aggregated. When more than one person or entity holds an interest in a Lot, the vote shall be exercised as they themselves shall determine. For purposes of determining the Developer's votes, every acre which it owns within the Premises shall constitute one vote and the Developer shall not be limited as to the number of votes it may possess for acreage within the Premises which it continues to own. So long as the Developer, or its successors and assigns, shall own one (1) or more Lot(s) within the Premises, the authority and functions of the Board of Directors, whose duties and functions are set forth in the Bylaws of the Association, and the Architectural Control Committee shall remain in and be exercised solely by Developer (by individuals selected by the Developer) or its successors and assigns. When Developer, or its successors and assigns, no longer owns one (1) Lot within the Premises, or at the end of fifty (50) years from the date of sale of the first Lot sold by the Developer, whichever occurs last, Developer shall promptly select three Owners (or their officers, directors, or employees) to serve on the Board of Directors of the Association until the next annual meeting of Members or until their successors have been duly elected, unless earlier appointed by the Developer in its sole discretion. The Board of Directors, thereafter consisting of three members, shall be elected by the Members at each annual meeting of Members. Members of such elected Board of Directors shall serve for one year or until their successors have been duly elected. The members of the Board of Directors shall not be entitled to any compensation for their services as such members. Any Member who is delinquent in the payment of charges, assessments and special assessments charged to or levied against such Member's Lot shall not be entitled to vote until all of such charges and assessments have been paid. Members shall vote in person or by proxy executed in writing by the Member. No proxy shall be valid after six months from the date of its execution. The Board of Directors shall further elect officers of the Association consisting of a President, Vice President, Secretary and Treasurer who shall also be Owners (or their officers, directors or employees). Their duties shall consist of activities required for the daily administration of the Association, as set forth in the Bylaws, and other such duties authorized by the Board of Directors. The Board of Directors and Officers shall not be liable, responsible or accountable in damages or otherwise to the Association or to any Owner for any acts performed or omitted by them in good faith except for willful misconduct. They shall be indemnified and held harmless by the Association against obligations and liabilities arising or resulting from or incidental to management of the Association's affairs provided that no party shall be entitled to indemnification hereunder for acts or omissions constituting willful misconduct.

13.5 Charges. Assessments and Special Assessments. According to the following procedures, the Association, when formed or at such other time as otherwise determined by the

Developer, shall levy such charges and assessments as may be necessary to carry out its stated purposes:

(a) General Annual Assessment. All Lots and the Owners thereof shall be subject to a general annual assessment, determined and levied by the Board of Directors of the Association, for the purpose of defraying the costs and expenses of the Association in performing its stated purposes and functions, including but not limited to the maintenance and operation of the Common Elements and the enforcement of the Covenants. By December 15th of each year the Board of Directors shall determine a general annual assessment based thereon which shall be sufficient to meet the estimated costs and expenses of the Association for the ensuing year. The annual budget shall be considered and approved at the annual meeting by the members of the Association. The general annual assessment shall be allocated and assessed against Owners of all Lots within the Premises, on a pro rata basis, based on the acreage of real estate owned in proportion to the total acreage in the last legal description of record for Main Street Market on the date such calculation is made, and shall be paid at the time and in the manner determined by the Board of Directors of the Association, which time shall not be sooner than thirty (30) days after the date of the annual membership meeting.

(b) Special Assessments. Each Lot and the Owners thereof shall be subject to any special assessment determined necessary by the Board of Directors of the Association to cover all or any part of any extraordinary expenses incurred by the Association but not included in the annual budget. Such special assessments shall be assessed against one or more Owners deemed responsible for the extraordinary expenses (in the discretion of the Board of Directors), or against Owners of all Lots within the Premises, on a pro rata basis, based on the acreage of real estate owned in proportion to the total acreage in the last legal description of record for Main Street Market on the date such calculation is made. Special assessments shall be due and payable sixty (60) days after the affirmative vote declaring such special assessments by the Board of Directors of the Association.

(c) Collection and Enforcement. The right to collect or enforce the collection of charges, assessments and special assessments is hereby delegated exclusively to the Association. The Owners of Lots shall be personally obligated to pay such charges, assessments and special assessments upon the Lot owned by them, and such charges, assessments and special assessments shall also be and constitute a maintenance lien, until paid, against the Lot to which charged. All charges, assessments and special assessments levied by the Association which are unpaid when due shall bear interest from such due date at the rate of twelve percent (12%) per annum until paid in full, and such interest, together with the underlying assessment, shall from such time become and remain a part of the lien upon such Lot until paid. Such amounts are in addition to other charges set forth herein.

The Association and Developer shall have the exclusive and sole right and power to collect or enforce the collection of charges, annual assessments and special assessments, and to bring any and all actions and proceedings for the collection thereof and for the foreclosure of liens therefor. The Association, acting through the Board of Directors, and as representative of all members, may bring action at law against any Owner personally obligated for payment of unpaid assessments, or may foreclose the lien against any Lot. If the assessment levied against any Lot remains unpaid for a period of 60 days from the date of levy, then the Board may, in its discretion, file a claim for maintenance lien against such Lot in the office of the Clerk of Circuit Court for Kenosha County within six months

from the date of levy. Such claim for lien shall contain a reference to the resolution authorizing such levy and date thereof, the name of the claimant or assignee, the name of the person against whom the assessment is levied, a description of the Lot and a statement of the amount claimed and shall otherwise comply in form with the provisions of Wisconsin Statutes Section 779.70. Foreclosure of such lien shall be in the manner provided for foreclosure of maintenance liens in said statute or any successor statute and the Owner of the Lot subject to such lien shall be responsible for the costs of such action, together with reasonable attorneys' fees. Note: the rate for any of the above-mentioned assessments shall not be limited by the amounts set forth in Wisconsin Statutes, Section 779.70 and the Owner's hereby consent to such provision.

(d) **Liability for Payment of Charges and Assessments.** No Owner may exempt such Owner's Lot from liability for contribution for charges and assessments levied by the Association by waiver of use of any of the Common Elements, or by the abandonment of the Lot; no conveyance shall relieve the seller or Lot of such liability, and such Owner shall be jointly and severally liable along with the purchaser in any such conveyance for the charges and assessments incurred until the date of sale, until all charges and assessments against the Lot have been paid. Any interested person shall be entitled to a statement of unpaid assessments with respect to any Lot upon written request to the secretary of the Association.

(e) Notwithstanding any other provision in this Declaration to the contrary, the Developer shall not be liable to the Association for the above-mentioned assessments for undeveloped acreage owned by the Developer on which it has not constructed any Building or Structures. Every purchaser of such acreage from the Developer shall be subject to the entire amount of assessment due under this section and shall pay the same, to the Association. In the event the assessments collected under this Article 13 are insufficient to cover the costs of performing the obligations as are contained within this Declaration and as imposed by the CSM, and the Developer continues to own undeveloped acreage as set forth under this Article XIII, the Developer shall be responsible for 100% of the assessments on such acreage to the extent necessary to cover the deficiency.

(f) Notwithstanding anything contained herein to the contrary, the Developer and/or Association shall not have the power to discontinue the collection of assessments and charges or reduce such assessments or charges to a level which, in the opinion of the Village would impair the ability of the Developer, Association or the Owner to perform the functions as set forth in the herein and in the CSM. Any proposed elimination or material reduction in the assessments or charges against Owners shall meet with the approval of the Village.

13.6 Developer's Conveyance to Association. Within ninety (90) days of the Association's incorporation, the Developer will convey to the Association by quit claim deed any and all fixtures, structures, improvements, real property and real property interests which the Developer in its sole judgment may deem to be Common Elements as of the date of such conveyance. The following shall apply with respect to the Common Elements:

a) Subject to the provisions herein, every Owner shall have a right and easement of benefit and/or enjoyment in and to any Common Elements, but subject to the Covenants contained herein and the easements, covenants and restriction contained on the CSM or to be shown on Future Land

Divisions , acquired by the Association which shall be appurtenant to and shall pass with the title to every Lot.

b) It is understood that entry monuments or other similar structures may be, in the discretion of the Developer, located on easements within the Preservation Areas and said structures shall be for the benefit of the Association and shall be maintained, operated and administered by the Association.

c) The rights and easements of benefit and/or enjoyment created hereby shall be subject to the following:

(i) The right of the Developer and/or Association, but subject to the prior written approval of the Village, to dedicate or transfer all or any part of any Common Elements and or Preservation Areas to any public agency, authority or utility for such purposes and subject to such conditions as may be agreed to by the Board of Directors, Association and Developer;

(ii) The right of the Association, but subject to the prior written approval of the Village, to mortgage any or all of the Common Elements and or Preservation Areas and facilities constructed on the Common Elements and or Preservation Areas for the purposes of constructing or maintaining improvements or repair to such areas or facilities pursuant to approval by the Board of Directors;

d) In the event any Common Element and or Preservation Areas or any portion of the storm water drainage, water and/or sanitary sewer systems servicing the Property are damaged or destroyed by an Owner or any of his guests, tenants, licensees, agents or members of his family, such Owner does hereby authorize the Association and/or Developer or the Village to repair said damaged area in compliance with Village ordinances; the Association and/or the Village shall repair said damaged area in a good workmanlike manner in conformance with the original plans and specifications of the area involved, or as the area may have been modified or altered subsequently by the Association in the discretion of the Association. The amount necessary for such repairs, plus 15% for the Association's or Developer's overhead, shall be a special assessment upon the Lot of said Owner and shall accrue interest at the annual rate of 18% unless paid in full within 15 days after notice to pay.

e) Disclaimer. Developer shall convey the Common Elements to the Association "as is" and without warranty, express or implied, of condition, quality of construction, fitness for a particular use or otherwise. The Association shall be responsible for obtaining adequate liability and other required insurance for the Common Elements. Developer shall have no liability for damage or injury to any persons or property arising from the existence or use of the Common Elements. The Association shall indemnify and hold the Developer harmless against any and all claims, relating to the Common Elements.

ARTICLE XIV Specific Uses

14.1. Use Restrictions. No Owner, other than the Owner of Lot 2 shall develop, use or operate on any portion of the Premises, a business which engages in any manner in the rendering of healthcare

services that would compete with a hospital, as that term is defined at Section HFS 124.02(6) of the Wisconsin Administrative Code, or a business which engages in any manner in the rendering of healthcare services that would compete with the Lot 2 Owner's intended use as a Medical Clinic, including but not limited to any imaging services, any surgical services, any laboratory services, any physical therapy services, any walk-in physician services (including walk-in services provided by mid-level providers) and other physician services provided by doctors of medicine, doctors of osteopathy, doctors of podiatry and doctors of chiropractic. Notwithstanding the foregoing, this restriction shall not in any manner prohibit the development, use or operation on any portion of the Premises of any of the following:

- (a) Doctors of dental surgery and/or doctors of dental medicine;
- (b) Doctors of ophthalmology; and
- (c) Use as a pharmacy, drug store or any other similar retail facility engaged in the sale of pharmaceuticals. However, walk-in physician services (including walk-in services provided by mid-level providers) are expressly restricted within a pharmacy, drug store or any other similar retail facility engaged in the sale of pharmaceuticals, as described within this Article 14.1.

14.2. Other Uses. The Developer intends to construct and/or sell to other purchasers the property and rights to construct facilities, Buildings, Improvements, and Structures within Main Street Market as allowed under the B-2, Community Business District Village zoning classifications and any other zoning as allowed by the Village.

14.3. Prohibited Uses. The following uses shall be expressly prohibited within the Premises:

- (a) car lots;
- (b) flea markets;
- (c) motels;
- (d) pawn shops;
- (e) adult-oriented retail uses (including but not limited to adult video or bookstores), adult cabaret, adult club, adult theatre or viewing facility of any kind; and
- (f) any convenient cash business or trade.

ARTICLE XV Miscellaneous

15.1 Submission of Plans. Whenever an Owner is required by these Covenants to submit plans of any kind to the Developer, such plans, in addition to the required number of plans to be submitted to the Village, shall be submitted in duplicate to the Developer. After the plans have been reviewed, one set shall be returned to the Owner with the Developer's approval and/or comments.

15.2 Time for Approval. Unless otherwise specifically provided herein, whenever the Developer's approval is required hereunder, the Developer shall take action within thirty (30) days after receipt of the request for approval, together with all plans, specifications, or other documents required for evaluation of such request (unless a longer time is specifically provided for herein). If the Developer determines that additional material or information is necessary, this time period shall not begin until after such additional material or information is provided. If the Developer elects not to grant approval, it shall provide specific written objections within the thirty (30) day time period provided herein, otherwise the request shall be deemed to have been approved.

15.3 Developer not Liable. The Developer, the members, officers, directors, employees and affiliates of Developer, the ACC, Board of Directors and Officers of the Association and any other individual or entity responsible for enforcement of these Covenants shall not be liable for any damage, loss, or prejudice suffered or claimed by any Owner on account of:

- (a) The approval or disapproval of any plans, drawings, and specifications, whether or not in any way defective;
- (b) The construction of any Improvement, Structure or Building or performance of any work, whether or not pursuant to approved plans, drawings, and specifications;
- (c) The development of any Building Site or other Lot within the Premises;
- (d) Waiver, variance, modification or termination of these Covenants; or
- (e) Any and all liability, damages, costs or expense arising from personal injury, death, or property damage occurring on any Owner's Lot, or in any way related to any Owner's use of or activity within the Premises, unless caused by the sole act or gross negligence of any of the foregoing parties.

15.4 Invalidity. Invalidation of any of the provisions of these Covenants, whether by court order or otherwise, shall in no way affect the validity or the remaining provisions which shall remain in full force and effect. Said invalid or illegal provision will be modified to reflect, as close as possible, the original intent of the former invalid or illegal provision but in such a manner so as to make said provision valid and legal.

15.5 Captions. The captions of articles and sections herein are for convenience only and are not intended to be part of the Covenants or in any way to define, limit or describe the scope and intent of the particular article or section to which they refer.

15.6 Recording. Any reference herein to recording a document shall mean recording in the office of the Register of Deeds for Kenosha County, Wisconsin.

15.7 Notices. Every Owner shall give written notice to the Developer of its name and address for notice purposes (identifying the Lot it has acquired) within ten (10) days of becoming an Owner.

Any notice required to be sent to any Member or Owner under the provisions of this Declaration shall be deemed to have been properly sent when mailed, postpaid, to the last known address of the person who appears as Member or Owner on the records of the Developer or Association at the time of such mailings.

15.8 Conflict & Failure to Mention. In the event of a conflict between the provision of this Declaration and the Village ordinances, and the Village ordinance is stricter than the provisions contained herein, the Village ordinances shall control. Failure to mention a requirement, with respect to any Lot, Outlot, Building, or Improvement, or other necessary approval in this Declaration shall not imply that no such requirement exists on behalf of the Village and shall not constitute a waiver of such Village requirement and/or approval. Each and every Owner shall be solely responsible to ensure that Village ordinances are adhered to and shall be subject to the appropriate Village approval process for construction of Building and Improvements within any Lot.

15.9 Dedications/Restrictive Covenants/Easements. Each and every Owner of a Lot and Outlot shall be subject to and bound by the easements, dedications and restrictive covenants as are set forth on the CSM or to be shown on Future Land Divisions.

[THE REMAINDER OF THIS PAGE HAS INTENTIONALLY BEEN LEFT BLANK]

IN WITNESS WHEREOF, The Developer has caused the presents to be executed the day and year first written above.

MAIN STREET DEVELOPMENT, LLC

Stephen R. Mills, Authorized Member

State of Wisconsin)
) ss.
Kenosha County)

The above named Stephen R. Mills, came before me this _____ day of _____, 2018, to me known to be the person and member who executed the foregoing instrument and acknowledge that he executed the same as the authorized member of Main Street Development, LLC, by its authority.

Name:
Notary Public, State of
My commission expires

This instrument drafted by
Bear Development, LLC
John E. Hotvedt, Director of Operations
4011 80th Street
Kenosha, WI 53142

EXHIBIT A
LEGAL DESCRIPTION

PARCEL 1:

That part of the North 61.50 acres of the Southwest 1/4 of Section 22, Town 1 North, Range 22 East of the Fourth Principal Meridian, lying between the East line of relocated Highway "31" and the West line of Old Highway "31". Except the North 190 feet; and lying and being in the Village of Pleasant Prairie, Kenosha County, Wisconsin.

PARCEL 2:

The South 98.50 acres of the Southwest 1/4 of Section 22, Township 1 North, Range 22 East of the Fourth Principal Meridian, except that part of the said South 98.50 acres which lies East of Old State Trunk Highway 31; Also excepting that parcel described as: Commencing at a point in the center of Highway 31, 570 feet North of a point 1119.5 feet East of the Southwest corner of said 1/4 Section; thence East 140.9 feet, North 182 feet, West 189.1 feet to the center line of highway, Southeasterly along the center line of said highway 142.5 feet to place of beginning; said land lying and being in the Village of Pleasant Prairie, Kenosha County, Wisconsin. Excepting therefrom: All that part of the Southwest 1/4 of Section 22, Township 1 North, Range 22 East in the Village of Pleasant Prairie, Kenosha County, Wisconsin, described as follows: Commencing at the Southwest corner of said Section 22, thence North 02°41'03" West and along the West line of said Section 22, 87.07 feet to a point in the new North line of State Trunk Highway 165 and the point of beginning of the following description: Thence continuing North 02°41'03" West and along the West line of said Section 22, 1563.08 feet, more or less, to the North line of the Donald Kleinschmidt property and the North line of the South 98.5 acres of the Southwest 1/4 of said Section 22, as indicated on the Wisconsin Department of Transportation right of way plat dated March 1, 1990 and revised October 30, 1990; thence North 89°53'33" East along said North line, 312.54 feet, more or less, to a point in the West line of the relocated State Trunk Highway 31 and a point in a curve, as indicated on said right of way plat, said point indicated as Station 155+66.57; thence Southerly 245.11 feet along the West line of said relocated highway and the arc of said curve to the left, whose radius is 11,529.16 feet and whose chord bears South 02°46'11" East, 245.11 feet, more or less, to a point of tangency; thence South 03°22'44" East and along the West line of said relocated highway, 1265.43 feet, more or less; thence South 42°04'39" West, 70.45 feet, more or less, to a point in the new North line of State Trunk Highway 165, said point lies 87.00 feet North of, as measured normal to, the South line of the Southwest 1/4 of said Section 22; thence South 89°40'10" West and along the new North line of said highway, 278.58 feet, more or less to the place of beginning. Further excepting therefrom: Begin at the Southwest corner of the Southwest 1/4; thence North 2°41'03" West along the West line of the Southwest 1/4 87.07 feet; thence North 89°40'10" East, parallel with the South line of the Southwest 1/4 278.58 feet; thence North 42°04'39" East 70.43 feet; thence North 3°22'44" West 1265.46 feet to a point of curve (from said point the long chord bears North 2°46'12" West 245.10 feet and the radius bears North 86°37'16" East 11,529.16 feet); thence Northerly along the arc of a curve to the right 245.10 feet to the North property line of the owner; thence North 89°53'33" East along said line 140.09 feet to a point of curve (from said point the long chord bears South 2°46'57" East 237.10 feet and the radius bears North 87°48'50" East 1,389.16 feet); thence Southerly along the arc of a curve to the left 237.10 feet; thence South 03°22'44" East 1265.46 feet; thence South 44°28'33" East 82.85 feet; thence North 89°40'10" East 776.14 feet to the centerline of the existing S.T.H. 31; thence South 22°36'06" East along said line 94.01 feet to the South line of the Southwest 1/4; thence South 89°40'10" West along said line 1331.77 feet to the point of beginning.

EXHIBIT B
THE CSM

EXHIBIT C
MAIN STREET MARKET LANDSCAPING STANDARDS

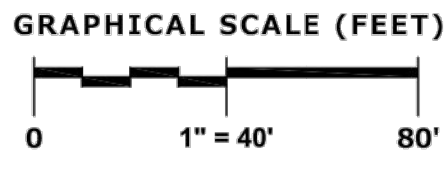
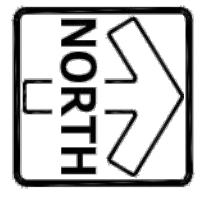
EXHIBIT D
MAIN STREET MARKET MONUMENT SIGN PLAN

EXHIBIT E
MAIN STREET MARKET LIGHTING STANDARDS

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EXISTING CONDITIONS SURVEY:
EXISTING CONDITIONS SURVEY PROVIDED BY JENKINS SURVEY & DESIGN. ALTHOUGH PEG HAS NO REASON TO BELIEVE THE SURVEY IS INACCURATE, PEG MAKES NO WARRANTIES THAT EXISTING INFORMATION CONTAINED WITHIN THESE PLANS IS ALL-INCLUSIVE OR ACCURATE. CONTRACTOR SHALL UNDERTAKE NECESSARY EFFORTS TO VERIFY THE EXISTING CONDITIONS PRIOR TO THE START OF MATERIAL PROCUREMENT AND CONSTRUCTION EFFORTS/ACTIVITIES.



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15850 W. BLUEMOUND ROAD
BROOKFIELD, WI 53005
(262) 754-8888

**MAIN STREET MARKET
VILLAGE OF PLEASANT PRAIRIE, WI**

CONCEPT SITE PLAN

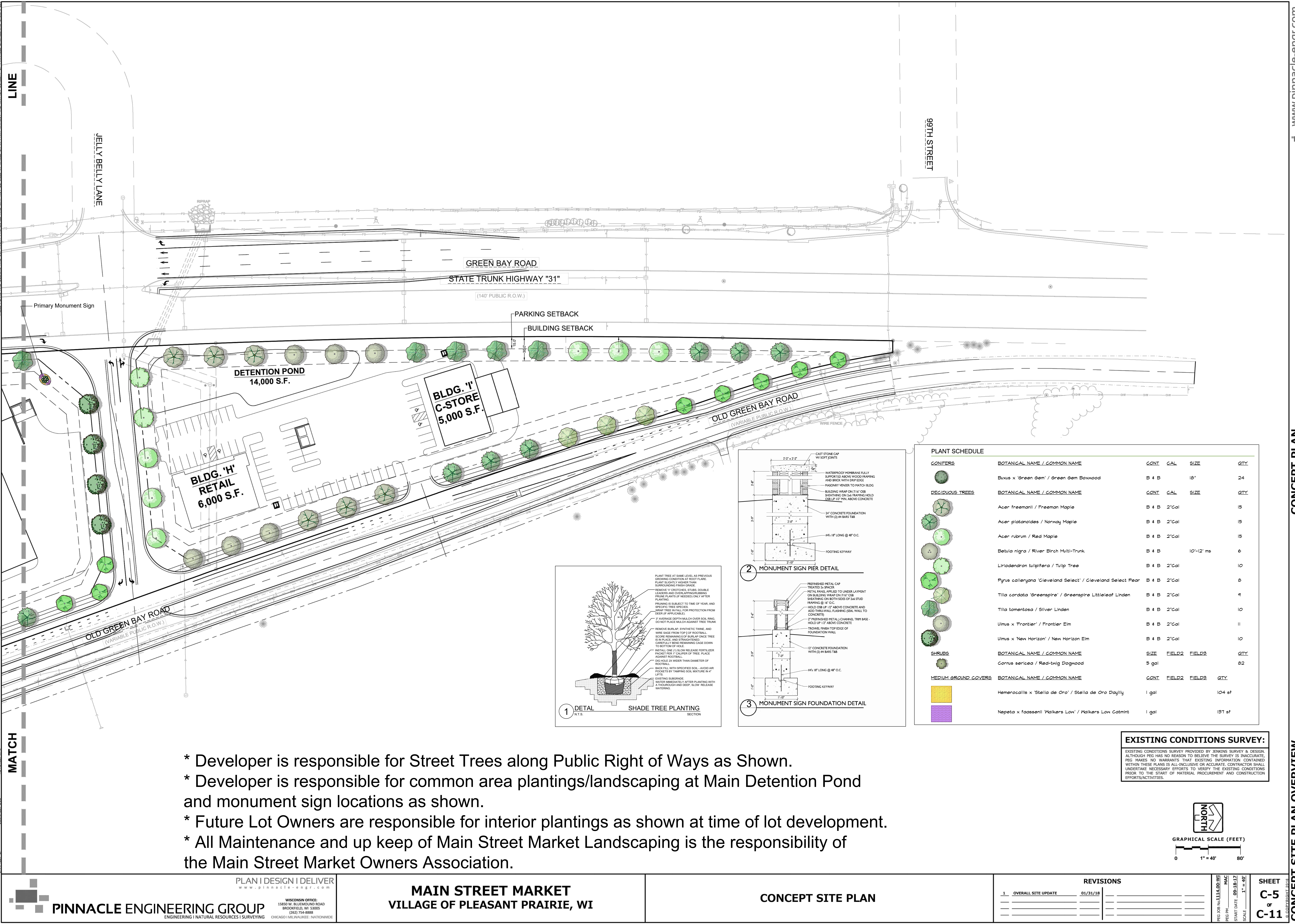
REVISIONS		
1	OVERALL SITE UPDATE	01/31/18

PEG JOB NO. 16-111-00-SM	MAC
START DATE: 12-01-17	SCALE: 1" = 40'

SHEET	C-4
OF	11
C-11	

CONCEPT SITE PLAN MATCH CONCEPT PLAN www.pinnacle-engr.com

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- * Developer is responsible for Street Trees along Public Right of Ways as Shown.
- * Developer is responsible for common area plantings/landscaping at Main Detention Pond and monument sign locations as shown.
- * Future Lot Owners are responsible for interior plantings as shown at time of lot development.
- * All Maintenance and up keep of Main Street Market Landscaping is the responsibility of the Main Street Market Owners Association.

Main Street Market Monument Signs

Main Street Market shall be permitted the following monument signs:

Primary Monument Signs

Location 1:

- Southeast corner of STH 31 and STH 165
- Located within a Signage Easement
- 16' Height
- 167' SF of sign face
- Double sided
- 7 individual Sign placeholders in addition to Main Street Market identification

Location 2:

- Southeast corner of STH 31 and Main Street (future)
- Located within Sign Easement (future)
- 16' Height
- 167' SF of sign face
- Double sided
- 7 individual Sign placeholders in addition to Main Street Market identification

Secondary Monument Signs

Location 1:

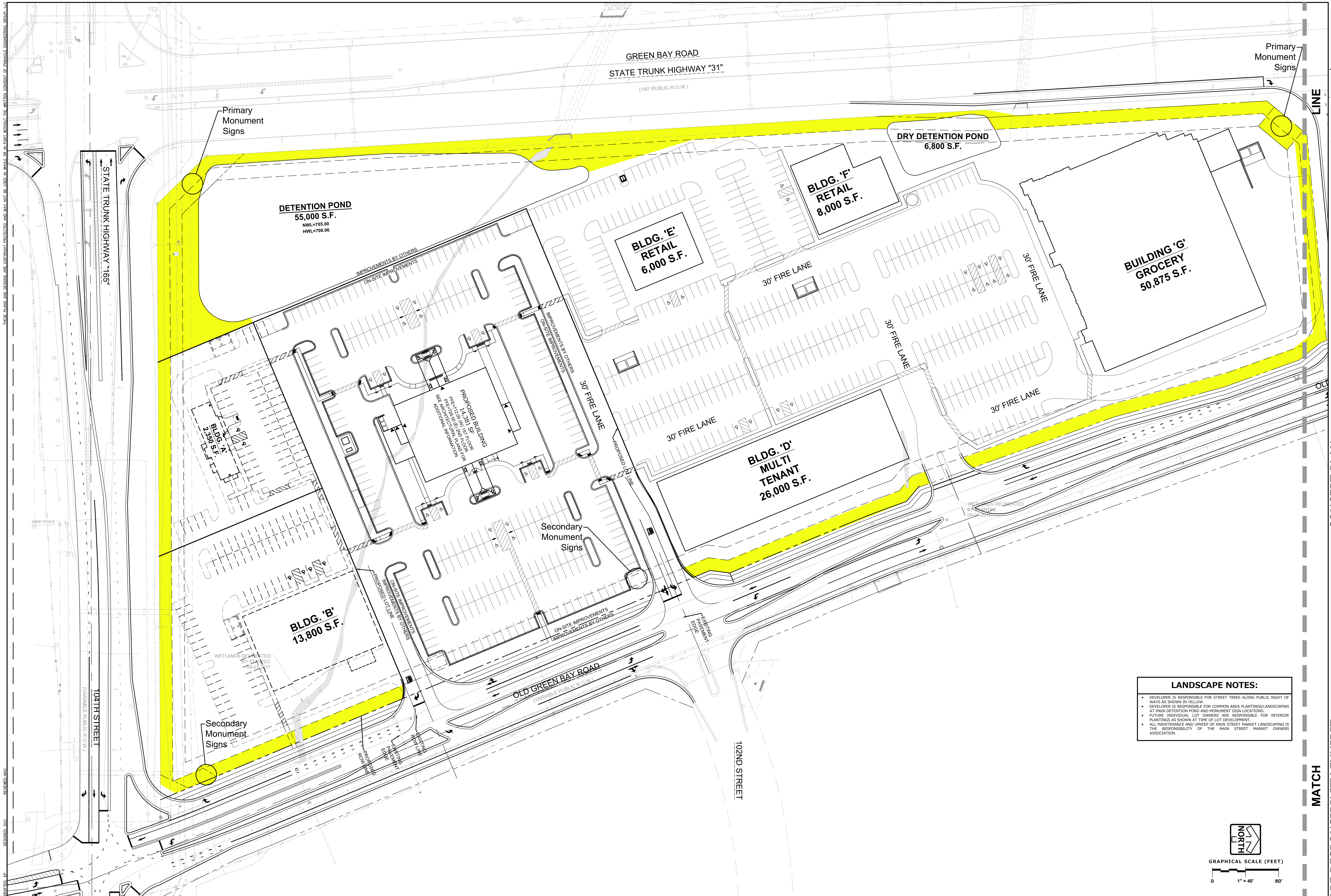
- Northwest corner of STH 165 and Old Green Bay Road (Pharmacy Outlot)
- 8' Height
- 160 SF of sign face
- May include limited electronic messaging

Location 2

- Southwest corner of Old Green Bay Road and 102nd Street
- 8' Height
- 160 SF of sign face
- Wayfinding Tenant sign
- Multiple Tenant Sign

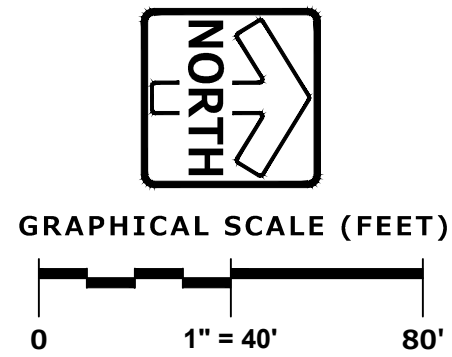
- May include limited electronic messaging

DESIGNED: EP
DRAWN: MAC
REVIEWED: MAC
DATE: 09-18-17
PROJECT: 2017-1114-10-WI-CAD/EXHIBITS/1114-10-WI LANDSCAPE RESPONSIBILITY EXHIBIT.DWG



LANDSCAPE NOTES:

- DEVELOPER IS RESPONSIBLE FOR STREET TREES ALONG PUBLIC RIGHT OF WAYS AS SHOWN IN YELLOW.
- DEVELOPER IS RESPONSIBLE FOR COMMON AREA PLANTINGS/LANDSCAPING AT MAIN DETENTION POND AND MONUMENT SIGN LOCATIONS.
- FUTURE INDIVIDUAL LOT OWNERS ARE RESPONSIBLE FOR INTERIOR PLANTINGS AS SHOWN AT TIME OF LOT DEVELOPMENT.
- ALL MAINTENANCE AND UPKEEP OF MAIN STREET MARKET LANDSCAPING IS THE RESPONSIBILITY OF THE MAIN STREET MARKET OWNERS ASSOCIATION.



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**MAIN STREET MARKET
VILLAGE OF PLEASANT PRAIRIE, WI**

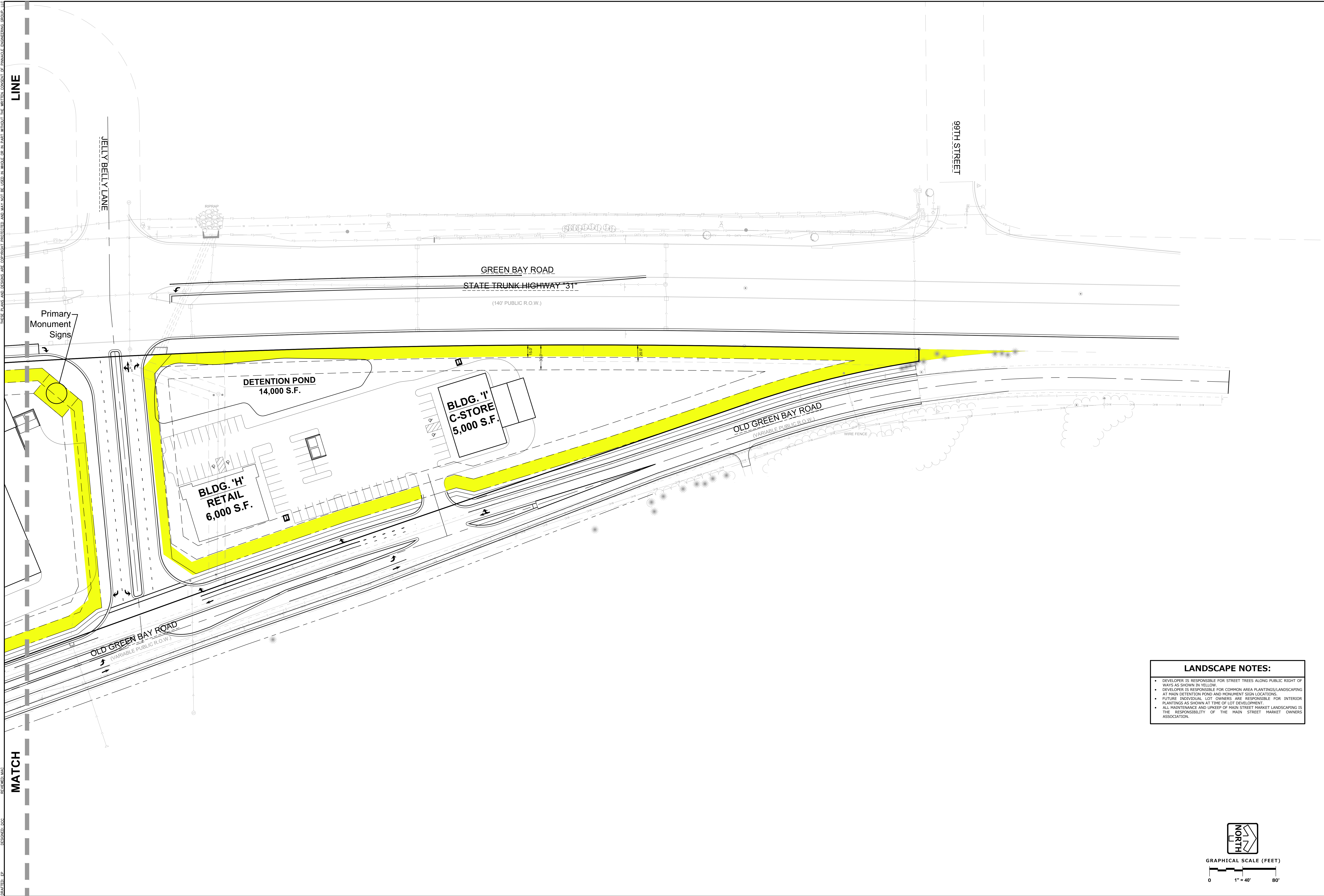
LANDSCAPE RESPONSIBILITY EXHIBIT

REVISIONS		SHEET
		C-1
		C-2

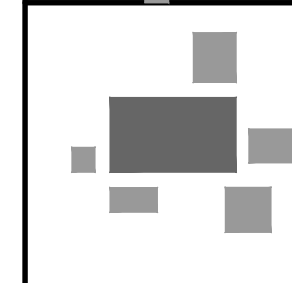
MAC
09-18-17
1" = 40'

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DESIGNED: EP
DRAWN: MAC
REVIEWED: MAC



- LANDSCAPE NOTES:**
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**MAIN STREET MARKET
VILLAGE OF PLEASANT PRAIRIE, WI**

LANDSCAPE RESPONSIBILITY EXHIBIT

REVISIONS		SHEET
		C-2
		C-2

PROJECT: 2017-1114-10-WI
SHEET: 8
DATE: 09-18-17
SCALE: 1" = 40'

MAC
START DATE: 09-18-17
SCALE: 1" = 40'

DESCRIPTION

The Ventus™ LED area luminaire provides uncompromising optical performance and outstanding versatility for a wide variety of area and roadway applications. Patent pending modular LightBAR™ technology delivers uniform and energy conscious illumination to walkways, parking lots, roadways, building areas and any security lighting application. UL/cUL Listed for wet locations.

Catalog #	VTS-E05-LED-E1-T4-BZ	Type
Project	Froedtert South Southwest Medical Office Bldg	P1
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Construction

Die-cast aluminum frame secures thermally conductive, extruded aluminum heat sink to independent electrical chamber. Heavy-wall, die-cast aluminum housing and door isolates driver components for cooler operation. The unique construction allows for passive cooling and natural cleaning of the extruded heat sink ensuring reliable operation at 40°C high ambient conditions. Stainless steel fasteners and hinging allow access to electrical components for installation and maintenance. Optional tool-less hardware available for ease of entry into electrical chamber.

Optics

Choice of twelve patented, high-efficiency AccuLED Optics™ distributions. Optics are precisely designed to shape the light output, maximizing efficiency and application spacing. AccuLED Optics technology creates consistent distributions with the scalability to meet customized application requirements. Offered Standard in 4000K (+/- 275K) CCT and minimum 70 CRI. Optional 3000K CCT, 5000K CCT and 5700K CCT. For the ultimate level of spill light control, an optional house-side shield accessory can be field or factory installed. The house-side shield is designed to seamlessly integrate with the SL2, SL3 or SL4 optics.

Electrical

LED drivers mount to die-cast aluminum back housing for optimal heat sinking, operation efficacy, and prolonged life. Standard drivers feature electronic universal voltage (120-277V 50/60Hz), 347V 60Hz or 480V 60Hz operation. 480V is compatible for use with 480V Wye systems only. Greater than 0.9 power factor, less than 20% harmonic distortion, and is suitable for operation in -40°C to 40°C ambient environments. All fixtures are shipped standard with 10kV/10kA common – and differential – mode surge protection. LightBARs feature an IP66 enclosure rating and maintain greater than 95% lumen maintenance at 60,000 hours per IESNA TM-21. Occupancy sensor and dimming options available.

Mounting

Cast aluminum 6" arm includes bolt guides allowing for easy positioning of fixture during installation to pole or wall surface. Standard single carton packaging of housing, square pole arm and round pole adapter for contractor friendly arrival of product on site. Optional internal mast arm mount accepts a 1-1/4" to 2" O.D. horizontal tenon, while a two-bolt clamping mechanism secures fixture. Cast-in leveling guides provide +/-5° vertical leveling adjustment. Tenon adapters available to slipfit over poles equipped with 2-3/8" or 3-1/2" O.D. tenon. 3G vibration rated.

Finish

Cast components and arm finished in super TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Standard colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available. Consult the McGraw-Edison Architectural Colors brochure for the complete selection.

Warranty

Five-year warranty.

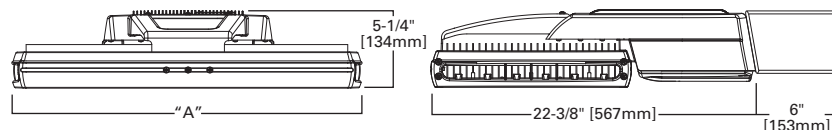


VTS VENTUS LED

2 - 12 LightBARs
Solid State LED

AREA LUMINAIRE

DIMENSIONS



DIMENSIONAL DATA

Number of LightBARs	"A" Width	Weight		EPA [Square Feet]	
		Without Arm	With Arm	Without Arm	With Arm
2-4	12-7/8" [328mm]	24 lbs. [10.91 kgs.]	29 lbs. [13.18 kgs.]	0.94	1.00
5-8	18" [458mm]	30 lbs. [13.64 kgs.]	35 lbs. [15.91 kgs.]	1.10	1.20
9-12	25-7/8" [658mm]	39 lbs. [17.73 kgs.]	44 lbs. [20.00 kgs.]	1.31	1.44

CERTIFICATION DATA

UL/cUL Listed
LM79 / LM80 Compliant
IP66 LightBARs
3G Vibration Rated
ISO 9001

ENERGY DATA

Electronic LED Driver
>0.9 Power Factor
<20% Total Harmonic Distortion
120-277V/50Hz & 60Hz, 347V/60Hz, 480V/60Hz
-40°C Minimum Temperature
40°C Ambient Temperature Rating
50°C Ambient Temperature Rating (HA option)

SHIPPING DATA

Approximate Net Weight:
(See Tabulated Reference Data)

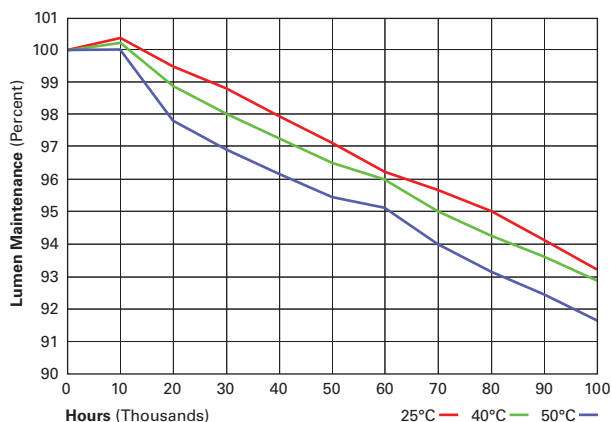
POWER AND LUMENS BY BAR COUNT (21 LED LIGHTBAR)

Number of LightBARs		E02	E03	E04	E05	E06	E07	E08	E09	E10	E11	E12
Drive Current		350mA Drive Current										
Power (Watts)		52W	75W	97W	127W	149W	173W	195W	226W	247W	270W	292W
Current @ 120V (A)		0.44	0.63	0.82	1.07	1.26	1.45	1.63	1.89	2.08	2.26	2.45
Current @ 277V (A)		0.20	0.28	0.36	0.48	0.56	0.64	0.71	0.84	0.92	0.99	1.07
Power (Watts)		58W	82W	99W	132W	159W	174W	196W	227W	247W	271W	293W
Current @ 347V (A)		0.19	0.28	0.29	0.39	0.48	0.56	0.57	0.68	0.76	0.85	0.86
Current @ 480V (A)		0.15	0.20	0.21	0.30	0.36	0.41	0.42	0.51	0.57	0.62	0.63
T2	Lumens	6,173	9,260	12,347	15,434	18,520	21,607	24,694	27,780	30,867	33,954	37,041
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4
T3	Lumens	6,117	9,175	12,233	15,292	18,350	21,409	24,467	27,525	30,584	33,642	36,700
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4
T4	Lumens	5,953	8,929	11,905	14,882	17,858	20,835	23,811	26,787	29,764	32,740	35,716
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
5MQ	Lumens	6,398	9,597	12,795	15,994	19,193	22,392	25,591	28,790	31,989	35,187	38,386
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
5WQ	Lumens	6,315	9,472	12,630	15,787	18,945	22,102	25,260	28,417	31,575	34,732	37,890
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
5XQ	Lumens	6,325	9,488	12,650	15,813	18,975	22,138	25,301	28,463	31,626	34,788	37,951
	BUG Rating	B3-U1-G2	B3-U1-G3	B4-U1-G3	B4-U1-G3	B4-U1-G4	B5-U1-G4	B5-U2-G5	B5-U2-G5	B5-U2-G5	B5-U2-G5	B5-U2-G5
SL2	Lumens	6,018	9,026	12,035	15,044	18,053	21,061	24,070	27,079	30,088	33,096	36,105
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B4-U0-G4
SL3	Lumens	6,034	9,051	12,067	15,084	18,101	21,118	24,135	27,152	30,169	33,186	36,202
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5
SL4	Lumens	5,802	8,703	11,604	14,505	17,406	20,307	23,207	26,108	29,009	31,910	34,811
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
RW	Lumens	6,231	9,346	12,462	15,577	18,692	21,808	24,923	28,039	31,154	34,270	37,385
	BUG Rating	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
SLL/SLR	Lumens	5,375	8,062	10,749	13,436	16,124	18,811	21,498	24,186	26,873	29,560	32,247
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5

LUMEN MAINTENANCE

Ambient Temperature	25,000 Hours*	50,000 Hours*	60,000 Hours*	100,000 Hours	Theoretical L70 (Hours)
25°C	> 99%	> 97%	> 96%	> 93%	> 450,000
40°C	> 98%	> 97%	> 96%	> 92%	> 425,000
50°C	> 97%	> 96%	> 95%	> 91%	> 400,000

* Per IESNA TM-21 data.



LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
10°C	1.02
15°C	1.01
25°C	1.00
40°C	0.99
50°C	0.96

LIGHTBAR OPERATION WITH 2L BI-LEVEL SWITCHING OPTION

Number of LightBars	Circuit 1	Circuit 2
2	1	1
3	2	2
4	2	2
5	3	2
6	3	3
7	4	3
8	4	4
9	5	4
10	6	4
11	7	4
12	8	4

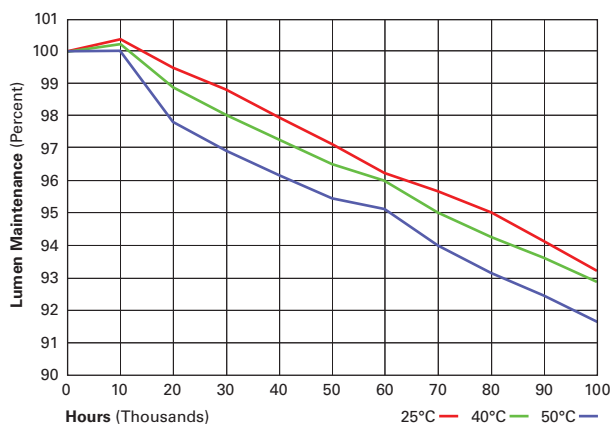
POWER AND LUMENS BY BAR COUNT (7 LED LIGHTBAR)

Number of LightBARs		F02	F03	F04	F05	F06	F07	F08	F09	F10	F11	F12
Drive Current		1A Drive Current										
Power (Watts)		55W	78W	102W	133W	157W	180W	204W	235W	259W	283W	307W
Current @ 120V (A)		0.46	0.66	0.86	1.12	1.31	1.51	1.71	1.97	2.17	2.37	2.57
Current @ 277V (A)		0.21	0.29	0.37	0.50	0.58	0.66	0.74	0.88	0.96	1.04	1.12
Power (Watts)		60W	85W	105W	137W	164W	181W	204W	236W	259W	284W	308W
Current @ 347V (A)		0.19	0.28	0.30	0.41	0.49	0.58	0.60	0.71	0.79	0.88	0.90
Current @ 480V (A)		0.15	0.21	0.22	0.31	0.37	0.43	0.44	0.53	0.59	0.65	0.66
T2	Lumens	5,096	7,641	10,193	12,741	15,289	17,837	20,385	22,933	25,482	28,030	30,578
	BUG Rating	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4
T3	Lumens	5,050	7,574	10,099	12,624	15,149	17,673	20,198	22,723	25,248	27,772	30,297
	BUG Rating	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4
T4	Lumens	4,914	7,371	9,828	12,285	14,742	17,199	19,656	22,114	24,571	27,028	29,485
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4
5MQ	Lumens	5,281	7,922	10,563	13,204	15,844	18,485	21,126	23,767	26,407	29,048	31,689
	BUG Rating	B3-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G3
5WQ	Lumens	5,213	7,820	10,426	13,033	15,640	18,246	20,853	23,459	26,066	28,672	31,279
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
5XQ	Lumens	5,222	7,832	10,443	13,054	15,665	18,275	20,886	23,497	26,108	28,719	31,330
	BUG Rating	B3-U1-G2	B3-U1-G3	B4-U1-G3	B4-U1-G3	B4-U1-G3	B4-U1-G4	B5-U1-G4	B5-U2-G4	B5-U2-G5	B5-U2-G5	B5-U2-G5
SL2	Lumens	4,968	7,451	9,935	12,419	14,903	17,387	19,870	22,354	24,838	27,322	29,806
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4
SL3	Lumens	4,981	7,471	9,962	12,452	14,943	17,433	19,924	22,414	24,905	27,395	29,886
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4
SL4	Lumens	4,790	7,184	9,579	11,974	14,369	16,764	19,158	21,553	23,948	26,343	28,738
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4
RW	Lumens	5,144	7,716	10,287	12,859	15,431	18,003	20,575	23,147	25,719	28,290	30,862
	BUG Rating	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5
SLL/SLR	Lumens	4,437	6,655	8,874	11,092	13,311	15,529	17,747	19,966	22,184	24,403	26,621
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G4	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5

LUMEN MAINTENANCE

Ambient Temperature	25,000 Hours*	50,000 Hours*	60,000 Hours*	100,000 Hours	Theoretical L70 (Hours)
25°C	> 99%	> 97%	> 96%	> 93%	> 450,000
40°C	> 98%	> 97%	> 96%	> 92%	> 425,000
50°C	> 97%	> 96%	> 95%	> 91%	> 400,000

* Per IESNA TM-21 data.



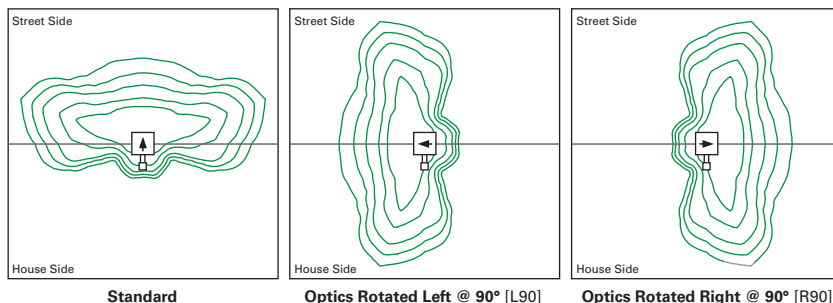
LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
10°C	1.02
15°C	1.01
25°C	1.00
40°C	0.99
50°C	0.96

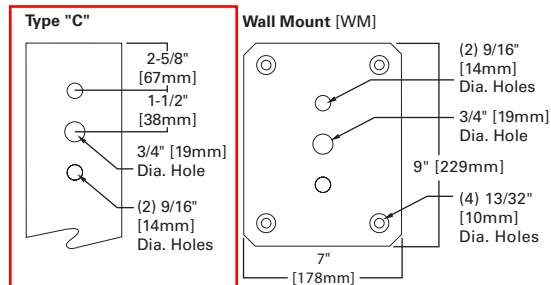
LIGHTBAR OPERATION WITH 2L BI-LEVEL SWITCHING OPTION

Number of LightBars	Circuit 1	Circuit 2
2	1	1
3	2	2
4	2	2
5	3	2
6	3	3
7	4	3
8	4	4
9	5	4
10	6	4
11	7	4
12	8	4

OPTIC ORIENTATION



DRILLING PATTERNS



ORDERING INFORMATION

Sample Number: VTS-E12-LED-E1-T3-GM

Product Family ^{1,2}	Number of LightBARs ^{3,4}		Lamp Type	Voltage	Distribution	Color
VTS=Ventus	E02=(2) 21 LED LightBARs E03=(3) 21 LED LightBARs E04=(4) 21 LED LightBARs E05=(5) 21 LED LightBARs E06=(6) 21 LED LightBARs E07=(7) 21 LED LightBARs E08=(8) 21 LED LightBARs E09=(9) 21 LED LightBARs E10=(10) 21 LED LightBARs E11=(11) 21 LED LightBARs E12=(12) 21 LED LightBARs	F02=(2) 7 LED LightBARs F03=(3) 7 LED LightBARs F04=(4) 7 LED LightBARs F05=(5) 7 LED LightBARs F06=(6) 7 LED LightBARs F07=(7) 7 LED LightBARs F08=(8) 7 LED LightBARs F09=(9) 7 LED LightBARs F10=(10) 7 LED LightBARs F11=(11) 7 LED LightBARs F12=(12) 7 LED LightBARs	LED=Solid State Light Emitting Diodes	E1=Electronic (120-277V) 347=347V ^{5,6} 480=480V ^{5,6,7}	T2=Type II T3=Type III T4=Type IV 5MQ=Type V Square Medium 5WQ=Type V Square Wide 5XQ=Type V Square Extra Wide SL2=Type II with Spill Control SL3=Type III with Spill Control SL4=Type IV with Spill Control RW=Rectangular Wide SLL=90° Spill Light Eliminator Left SLR=90° Spill Light Eliminator Right	AP=Grey BZ=Bronze BK=Black DP=Dark Platinum GM=Graphite Metallic WH=White
Options (Add as Suffix)				Accessories (Order Separately) ²²		
P=Button Type Photocontrol (120, 208, 240 or 277V. Must Specify Voltage) ⁵ R=NEMA Twistlock Photocontrol Receptacle PER7=NEMA 7-PIN Twistlock Photocontrol Receptacle ⁸ HA=50°C High Ambient Temperature Rating ^{9,10} 2L=Two Circuits ^{6,11,12,13} L90=Optics Rotated 90° Left ¹⁴ R90=Optics Rotated 90° Right ¹⁴ 7030=70 CRI / 3000K CCT ¹⁵ 7050=70 CRI / 5000K CCT ¹⁵ 7060=70 CRI / 5700K CCT ¹⁵ 8030=80 CRI / 3000K CCT ¹⁵ TH=Tool-less Door Hardware LCF=LightBAR Cover Plate Matches Housing Finish WG=Wire Guard WM=Wall Mount with Arm IM=Integral Mast Arm MS-LXX=Motion Sensor for On/Off Operation ¹⁶ MS/X-LXX=Motion Sensor for Bi-Level Operation ¹⁷ MS/DIM-LXX=Motion Sensor for Dimming Operation ^{18,19} DIM=0-10V Dimming Drivers ²⁰ HSS=Factory Installed House Side Shield ²¹				VA1033-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon VA1034-XX=2 @ 180° Tenon Adapter for 2-3/8" O.D. Tenon VA1035-XX=3 @ 120° Tenon Adapter for 2-3/8" O.D. Tenon VA1036-XX=4 @ 90° Tenon Adapter for 2-3/8" O.D. Tenon VA1037-XX=2 @ 90° Tenon Adapter for 2-3/8" O.D. Tenon VA1038-XX=3 @ 90° Tenon Adapter for 2-3/8" O.D. Tenon VA1039-XX=2 @ 120° Tenon Adapter for 2-3/8" O.D. Tenon VA1040-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon VA1041-XX=2 @ 180° Tenon Adapter for 3-1/2" O.D. Tenon VA1042-XX=3 @ 120° Tenon Adapter for 3-1/2" O.D. Tenon VA1043-XX=4 @ 90° Tenon Adapter for 3-1/2" O.D. Tenon VA1044-XX=2 @ 90° Tenon Adapter for 3-1/2" O.D. Tenon VA1045-XX=3 @ 90° Tenon Adapter for 3-1/2" O.D. Tenon VA1046-XX=2 @ 120° Tenon Adapter for 3-1/2" O.D. Tenon FSIR-100=Wireless Configuration Tool for Occupancy Sensor ²³ OA/RA1016=NEMA Photocontrol - Multi-Tap OA/RA1027=NEMA Photocontrol - 480V OA/RA1201=NEMA Photocontrol - 347V MA1253=10kV Circuit Module Replacement LB/HSS=Field Installed House Side Shield ²⁴		

NOTES:

- Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to our white paper WP513001EN for additional support information.
- 6" arm and round pole adapter included with fixture.
- 21 LED LightBAR powered at 350mA, 7 LED LightBAR powered at 1A.
- Standard 4000K CCT and nominal 70CRI.
- Not available with HA option.
- Must specify voltage.
- Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).
- Must specify DIM option to add dimming driver(s). Only available in E02-E06 and F02-F06.
- Not available with DIM option or MS/DIM-LXX.
- Not available with button photocontrol or motion sensor. 120 - 277V only.
- Requires two electrical circuits to luminaire. See LightBAR operation table for additional information.
- Consult factory before ordering in combination with MS-LXX or MS/X-LXX options.
- Not available in 347V or 480V.
- Not available with 5MQ, 5WQ or 5XQ distributions. Not available with HSS option.
- Extended lead times apply.
- Sensor housed in external box mounted to the luminaire. Available in E02-E12 and F02-F12 configurations. Replace XX with mounting height in feet for proper lens selection, (e.g., MS-L25). Consult factory for additional information.
- Sensor housed in external box mounted to the luminaire. Available in E02-E12 and F02-F12 configurations. Replace X with number of bars operating in low output mode and replace XX with mounting height for proper lens selection, (e.g., MS/3-L25). Maximum 4 bars in low output mode. Consult factory for additional information.
- Not available with HA option. Only available in F02-F06 and E02-E06. Includes Dimming Drivers. Not available in 347V or 480V.
- Replace XX with mounting height in feet for proper lens selection, (e.g., MS/DIM-L25).
- Available in E02-E06 and F02-F06 only.
- Only for use with SL2, SL3 and SL4 distributions. Not available with L90 or R90 options.
- Replace XX with color suffix.
- Only compatible with MS/DIM-LXX motion sensor.
- One required for each LightBAR. Not available with L90 or R90 options.

Steel Poles



SSS SQUARE STRAIGHT STEEL

Catalog #	SSS4A25SFC1	Type
Project	Froedtert South Southwest Medical Office Bldg	P1
Comments		Date
Prepared by		

FEATURES

- ASTM Grade steel base plate with ASTM A366 base cover
- Hand hole assembly 3" x 5" on 5" and 6" pole; and 2" x 4" on 4" pole
- 10'-39' mounting heights
- Drilled or tenon (specify)

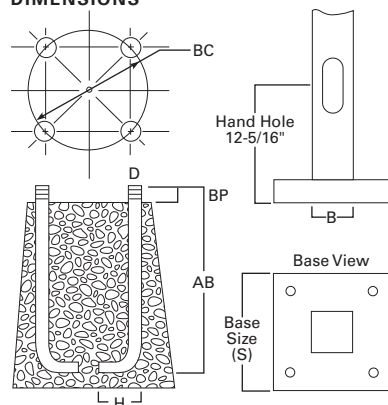
ORDERING INFORMATION

SAMPLE NUMBER: SSS5A20SFM1XG

Product Family	Shaft Size (Inches) ¹	Wall Thickness (Inches)	Mounting Height (Feet)	Base Type	Finish	Mounting Type	Number and Location of Arms	Arm Lengths (Feet)	Options (Add as Suffix)
SSS=Square Straight Steel	4=4" 5=5" 6=6"	A=0.120" M=0.188" X=0.250"	10=10' 15=15' 20=20' 25=25' 30=30' 35=35' 39=39'	S=Square Steel Base	F=Dark Bronze G=Galvanized Steel J=Summit White K=Carbon Bronze L=Dark Platinum P=Primer Powder Coat R=Hartford Green S=Silver T=Graphite Metallic V=Grey W=White X=Custom Color Y=Black	2=2-3/8" O.D. Tenon (4" Long) 3=3-1/2" O.D. Tenon (5" Long) 4=4" O.D. Tenon (6" Long) 5=3" O.D. Tenon (4" Long) 6=2-3/8" O.D. Tenon (6" Long) 7=4" O.D. Tenon (10" Long) A=Type A Drilling C=Type C Drilling E=Type E Drilling F=Type F Drilling G=Type G Drilling J=Type J Drilling K=Type K Drilling M=Type M Drilling R=Type R Drilling Z=Type Z Drilling	1=Single 2=2 at 180° 3=Triple 4=4 at 90° 5=2 at 90° X=None	X=None	A=1/2" Tapped Hub (Specify location desired) B=3/4" Tapped Hub (Specify location desired) C=Convenience Outlet ³ E=GFCI Convenience Outlet ³ G=Ground Lug H=Additional Hand Hole ⁴ L=Drilled for Bumper Glitter V=Vibration Damper

NOTES: 1. All shaft sizes nominal. 2. Square poles are 3 at 90°, round poles are 3 at 120°. 3. Outlet is located 4' above base and on same side of pole as hand hole, unless specified otherwise. Receptacle not included, provision only. 4. Additional hand hole is located 12" below pole top and 90° from standard hand hole location, unless otherwise specified.

DIMENSIONS



WARNING: Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to pole white paper WP513001EN for additional support information. Before installing, make sure proper anchor bolts and templates are obtained. The use of unauthorized accessories such as banners, signs, cameras or pennants for which the pole was not designed voids the pole warranty and may result in pole failure causing serious injury or property damage. Information regarding total loading capacity can be supplied upon request. The pole warranty is void unless poles are used and installed as a complete pole and luminaire combination. This warranty specifically excludes failure as the result of a third party act or omission, misuse, unanticipated uses, fatigue failure or similar phenomena resulting from induced vibration, harmonic oscillation or resonance associated with movement of air currents around the product.

Specifications and dimensions subject to change without notice. Consult your lighting representative at Eaton or visit www.eaton.com/lighting for available options, accessories and ordering information.

Effective Projected Area (At Pole Top)

Mounting Height (Feet)	Catalog Number ^{1,2}	Wall Thickness (Inches)	Base Square ³ (Inches)	Bolt Circle Diameter (Inches)	Anchor Bolt Projection ³ (Inches)	Shaft Size ³ (Inches)	Anchor Bolt Diameter x Length x Hook (Inches)	Net Weight (Pounds)	Maximum Effective Projected Area (Square Feet) ⁴				Max. Fixture Load - Includes Bracket (Pounds)
MH			S	BC	BP	B	D x AB x H		80 mph	90 mph	100 mph	110 mph	
10	SSS4A10S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	85	30.0	22.0	17.0	13.0	100
15	SSS4A15S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	118	15.0	11.5	8.7	6.5	100
20	SSS4A20S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	150	8.7	5.9	3.9	2.5	150
20	SSS5A20S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	183	15.4	11.1	7.9	5.5	150
25	SSS4A25S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	181	3.7	1.7	0.3	--	200
25	SSS5A25S	0.120	10-1/2	11	5	5	3/4 x 25 x 3	222	9.3	6.0	3.5	1.6	200
25	SSS6A25S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	284	9.9	6.1	3.5	1.2	200
30	SSS5A30S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	260	4.7	2.1	--	--	200
30	SSS5M30S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	392	10.4	6.4	3.5	1.5	200
30	SSS6A30S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	330	4.3	1.4	--	--	200
30	SSS6M30S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	489	19.0	13.0	8.7	5.6	200
35	SSS5M35S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	453	5.8	2.8	--	--	200
35	SSS6M35S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	564	12.8	7.2	3.7	1.0	200
35	SSS6X35S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	738	16.5	11.0	6.8	3.5	200
39	SSS6M39S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	618	7.3	3.0	--	--	300
39	SSS6X39S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	816	13.0	7.0	3.7	0.8	300

Effective Projected Area (Two Feet Above Pole Top)

Mounting Height (Feet)	Catalog Number ^{1,2}	Wall Thickness (Inches)	Base Square ³ (Inches)	Bolt Circle Diameter (Inches)	Anchor Bolt Projection ³ (Inches)	Shaft Size ³ (Inches)	Anchor Bolt Diameter x Length x Hook (Inches)	Net Weight (Pounds)	Maximum Effective Projected Area (Square Feet) ⁴				Max. Fixture Load - Includes Bracket (Pounds)
MH			S	BC	BP	B	D x AB x H		80 mph	90 mph	100 mph	110 mph	
10	SSS4A10S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	85	23.0	17.5	14.0	11.0	100
15	SSS4A15S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	118	13.4	10.0	7.5	5.7	100
20	SSS4A20S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	150	7.6	5.2	3.4	2.1	150
20	SSS5A20S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	183	13.8	9.9	7.1	4.9	150
25	SSS4A25S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	181	3.4	1.6	0.3	--	200
25	SSS5A25S	0.120	10-1/2	11	5	5	3/4 x 25 x 3	222	8.5	5.5	3.2	1.5	200
25	SSS6A25S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	284	9.1	5.6	3.0	1.2	200
30	SSS5A30S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	260	1.8	--	--	--	200
30	SSS5M30S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	392	9.6	5.9	1.9	0.2	200
30	SSS6A30S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	330	4.1	1.3	--	--	200
30	SSS6M30S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	489	18.5	12.5	8.4	5.3	200
35	SSS5M35S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	453	5.5	2.4	--	--	200
35	SSS6M35S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	564	11.8	7.0	3.5	1.0	200
35	SSS6X35S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	738	16.0	10.5	6.4	3.4	200
39	SSS6M39S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	618	7.0	2.4	--	--	300
39	SSS6X39S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	816	12.0	6.7	3.0	0.5	300

NOTES:

1. Catalog number includes pole with hardware kit. Anchor bolts not included. Before installing, make sure proper anchor bolts and templates are obtained.
2. Tenon size or machining for rectangular arms must be specified. Hand hole position relative to drill location.
3. Shaft size, base square, anchor bolts and projections may vary slightly. All dimensions nominal.
4. EPAs based on shaft properties with wind normal to flat. EPAs calculated using base wind velocity as indicated plus 30% gust factor.

DESCRIPTION

The Ventus™ LED area luminaire provides uncompromising optical performance and outstanding versatility for a wide variety of area and roadway applications. Patent pending modular LightBAR™ technology delivers uniform and energy conscious illumination to walkways, parking lots, roadways, building areas and any security lighting application. UL/cUL Listed for wet locations.

Catalog #	VTS-E05-LED-E1-T2-BZ	Type
Project	Froedtert South Southwest Medical Office Bldg	P2
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Construction

Die-cast aluminum frame secures thermally conductive, extruded aluminum heat sink to independent electrical chamber. Heavy-wall, die-cast aluminum housing and door isolates driver components for cooler operation. The unique construction allows for passive cooling and natural cleaning of the extruded heat sink ensuring reliable operation at 40°C high ambient conditions. Stainless steel fasteners and hinging allow access to electrical components for installation and maintenance. Optional tool-less hardware available for ease of entry into electrical chamber.

Optics

Choice of twelve patented, high-efficiency AccuLED Optics™ distributions. Optics are precisely designed to shape the light output, maximizing efficiency and application spacing. AccuLED Optics technology creates consistent distributions with the scalability to meet customized application requirements. Offered Standard in 4000K (+/- 275K) CCT and minimum 70 CRI. Optional 3000K CCT, 5000K CCT and 5700K CCT. For the ultimate level of spill light control, an optional house-side shield accessory can be field or factory installed. The house-side shield is designed to seamlessly integrate with the SL2, SL3 or SL4 optics.

Electrical

LED drivers mount to die-cast aluminum back housing for optimal heat sinking, operation efficacy, and prolonged life. Standard drivers feature electronic universal voltage (120-277V 50/60Hz), 347V 60Hz or 480V 60Hz operation. 480V is compatible for use with 480V Wye systems only. Greater than 0.9 power factor, less than 20% harmonic distortion, and is suitable for operation in -40°C to 40°C ambient environments. All fixtures are shipped standard with 10kV/10kA common – and differential – mode surge protection. LightBARs feature an IP66 enclosure rating and maintain greater than 95% lumen maintenance at 60,000 hours per IESNA TM-21. Occupancy sensor and dimming options available.

Mounting

Cast aluminum 6" arm includes bolt guides allowing for easy positioning of fixture during installation to pole or wall surface. Standard single carton packaging of housing, square pole arm and round pole adapter for contractor friendly arrival of product on site. Optional internal mast arm mount accepts a 1-1/4" to 2" O.D. horizontal tenon, while a two-bolt clamping mechanism secures fixture. Cast-in leveling guides provide +/-5° vertical leveling adjustment. Tenon adapters available to slipfit over poles equipped with 2-3/8" or 3-1/2" O.D. tenon. 3G vibration rated.

Finish

Cast components and arm finished in super TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Standard colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available. Consult the McGraw-Edison Architectural Colors brochure for the complete selection.

Warranty

Five-year warranty.

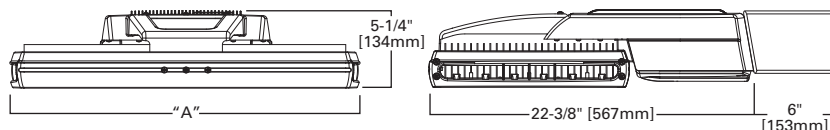


VTS VENTUS LED

2 - 12 LightBARs
Solid State LED

AREA LUMINAIRE

DIMENSIONS



DIMENSIONAL DATA

Number of LightBars	"A" Width	Weight		EPA [Square Feet]	
		Without Arm	With Arm	Without Arm	With Arm
2-4	12-7/8" [328mm]	24 lbs. [10.91 kgs.]	29 lbs. [13.18 kgs.]	0.94	1.00
5-8	18" [458mm]	30 lbs. [13.64 kgs.]	35 lbs. [15.91 kgs.]	1.10	1.20
9-12	25-7/8" [658mm]	39 lbs. [17.73 kgs.]	44 lbs. [20.00 kgs.]	1.31	1.44

CERTIFICATION DATA

UL/cUL Listed
LM79 / LM80 Compliant
IP66 LightBARs
3G Vibration Rated
ISO 9001

ENERGY DATA

Electronic LED Driver
>0.9 Power Factor
<20% Total Harmonic Distortion
120-277V/50Hz & 60Hz, 347V/60Hz, 480V/60Hz
-40°C Minimum Temperature
40°C Ambient Temperature Rating
50°C Ambient Temperature Rating (HA option)

SHIPPING DATA

Approximate Net Weight:
(See Tabulated Reference Data)

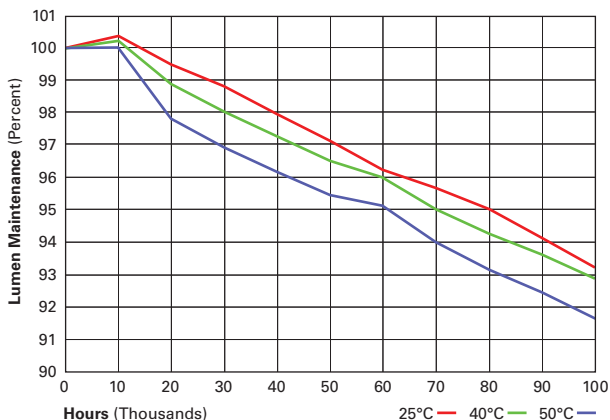
POWER AND LUMENS BY BAR COUNT (21 LED LIGHTBAR)

Number of LightBARs		E02	E03	E04	E05	E06	E07	E08	E09	E10	E11	E12
Drive Current		350mA Drive Current										
Power (Watts)		52W	75W	97W	127W	149W	173W	195W	226W	247W	270W	292W
Current @ 120V (A)		0.44	0.63	0.82	1.07	1.26	1.45	1.63	1.89	2.08	2.26	2.45
Current @ 277V (A)		0.20	0.28	0.36	0.48	0.56	0.64	0.71	0.84	0.92	0.99	1.07
Power (Watts)		58W	82W	99W	132W	159W	174W	196W	227W	247W	271W	293W
Current @ 347V (A)		0.19	0.28	0.29	0.39	0.48	0.56	0.57	0.68	0.76	0.85	0.86
Current @ 480V (A)		0.15	0.20	0.21	0.30	0.36	0.41	0.42	0.51	0.57	0.62	0.63
T2	Lumens	6,173	9,260	12,347	15,434	18,520	21,607	24,694	27,780	30,867	33,954	37,041
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4
T3	Lumens	6,117	9,175	12,233	15,292	18,350	21,409	24,467	27,525	30,584	33,642	36,700
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4
T4	Lumens	5,953	8,929	11,905	14,882	17,858	20,835	23,811	26,787	29,764	32,740	35,716
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
5MQ	Lumens	6,398	9,597	12,795	15,994	19,193	22,392	25,591	28,790	31,989	35,187	38,386
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
5WQ	Lumens	6,315	9,472	12,630	15,787	18,945	22,102	25,260	28,417	31,575	34,732	37,890
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
5XQ	Lumens	6,325	9,488	12,650	15,813	18,975	22,138	25,301	28,463	31,626	34,788	37,951
	BUG Rating	B3-U1-G2	B3-U1-G3	B4-U1-G3	B4-U1-G3	B4-U1-G4	B5-U1-G4	B5-U2-G5	B5-U2-G5	B5-U2-G5	B5-U2-G5	B5-U2-G5
SL2	Lumens	6,018	9,026	12,035	15,044	18,053	21,061	24,070	27,079	30,088	33,096	36,105
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B4-U0-G4
SL3	Lumens	6,034	9,051	12,067	15,084	18,101	21,118	24,135	27,152	30,169	33,186	36,202
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5
SL4	Lumens	5,802	8,703	11,604	14,505	17,406	20,307	23,207	26,108	29,009	31,910	34,811
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
RW	Lumens	6,231	9,346	12,462	15,577	18,692	21,808	24,923	28,039	31,154	34,270	37,385
	BUG Rating	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
SLL/SLR	Lumens	5,375	8,062	10,749	13,436	16,124	18,811	21,498	24,186	26,873	29,560	32,247
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5

LUMEN MAINTENANCE

Ambient Temperature	25,000 Hours*	50,000 Hours*	60,000 Hours*	100,000 Hours	Theoretical L70 (Hours)
25°C	> 99%	> 97%	> 96%	> 93%	> 450,000
40°C	> 98%	> 97%	> 96%	> 92%	> 425,000
50°C	> 97%	> 96%	> 95%	> 91%	> 400,000

* Per IESNA TM-21 data.



LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
10°C	1.02
15°C	1.01
25°C	1.00
40°C	0.99
50°C	0.96

LIGHTBAR OPERATION WITH 2L BI-LEVEL SWITCHING OPTION

Number of LightBars	Circuit 1	Circuit 2
2	1	1
3	2	2
4	2	2
5	3	2
6	3	3
7	4	3
8	4	4
9	5	4
10	6	4
11	7	4
12	8	4

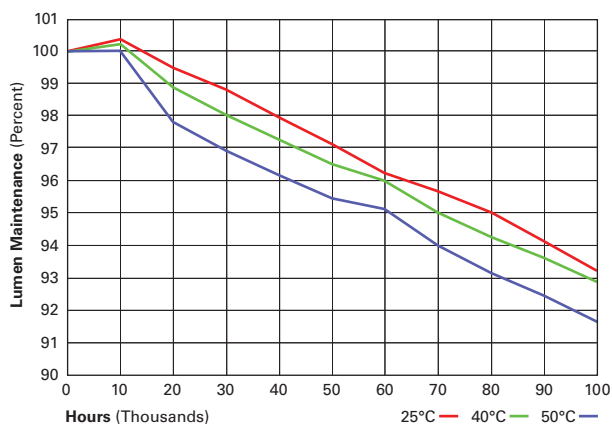
POWER AND LUMENS BY BAR COUNT (7 LED LIGHTBAR)

Number of LightBARs		F02	F03	F04	F05	F06	F07	F08	F09	F10	F11	F12
Drive Current		1A Drive Current										
Power (Watts)		55W	78W	102W	133W	157W	180W	204W	235W	259W	283W	307W
Current @ 120V (A)		0.46	0.66	0.86	1.12	1.31	1.51	1.71	1.97	2.17	2.37	2.57
Current @ 277V (A)		0.21	0.29	0.37	0.50	0.58	0.66	0.74	0.88	0.96	1.04	1.12
Power (Watts)		60W	85W	105W	137W	164W	181W	204W	236W	259W	284W	308W
Current @ 347V (A)		0.19	0.28	0.30	0.41	0.49	0.58	0.60	0.71	0.79	0.88	0.90
Current @ 480V (A)		0.15	0.21	0.22	0.31	0.37	0.43	0.44	0.53	0.59	0.65	0.66
T2	Lumens	5,096	7,641	10,193	12,741	15,289	17,837	20,385	22,933	25,482	28,030	30,578
	BUG Rating	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4
T3	Lumens	5,050	7,574	10,099	12,624	15,149	17,673	20,198	22,723	25,248	27,772	30,297
	BUG Rating	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4
T4	Lumens	4,914	7,371	9,828	12,285	14,742	17,199	19,656	22,114	24,571	27,028	29,485
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4
5MQ	Lumens	5,281	7,922	10,563	13,204	15,844	18,485	21,126	23,767	26,407	29,048	31,689
	BUG Rating	B3-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G3
5WQ	Lumens	5,213	7,820	10,426	13,033	15,640	18,246	20,853	23,459	26,066	28,672	31,279
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
5XQ	Lumens	5,222	7,832	10,443	13,054	15,665	18,275	20,886	23,497	26,108	28,719	31,330
	BUG Rating	B3-U1-G2	B3-U1-G3	B4-U1-G3	B4-U1-G3	B4-U1-G3	B4-U1-G4	B5-U1-G4	B5-U2-G4	B5-U2-G5	B5-U2-G5	B5-U2-G5
SL2	Lumens	4,968	7,451	9,935	12,419	14,903	17,387	19,870	22,354	24,838	27,322	29,806
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4
SL3	Lumens	4,981	7,471	9,962	12,452	14,943	17,433	19,924	22,414	24,905	27,395	29,886
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4
SL4	Lumens	4,790	7,184	9,579	11,974	14,369	16,764	19,158	21,553	23,948	26,343	28,738
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4
RW	Lumens	5,144	7,716	10,287	12,859	15,431	18,003	20,575	23,147	25,719	28,290	30,862
	BUG Rating	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5
SLL/SLR	Lumens	4,437	6,655	8,874	11,092	13,311	15,529	17,747	19,966	22,184	24,403	26,621
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G4	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5

LUMEN MAINTENANCE

Ambient Temperature	25,000 Hours*	50,000 Hours*	60,000 Hours*	100,000 Hours	Theoretical L70 (Hours)
25°C	> 99%	> 97%	> 96%	> 93%	> 450,000
40°C	> 98%	> 97%	> 96%	> 92%	> 425,000
50°C	> 97%	> 96%	> 95%	> 91%	> 400,000

* Per IESNA TM-21 data.



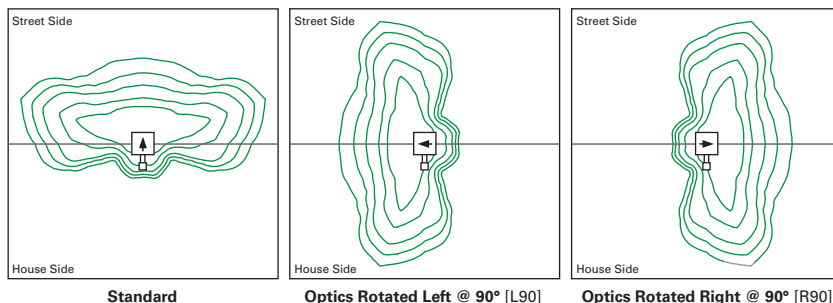
LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
10°C	1.02
15°C	1.01
25°C	1.00
40°C	0.99
50°C	0.96

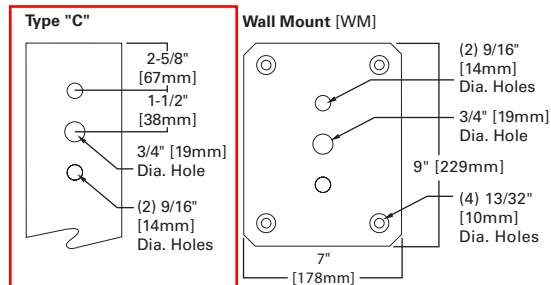
LIGHTBAR OPERATION WITH 2L BI-LEVEL SWITCHING OPTION

Number of LightBars	Circuit 1	Circuit 2
2	1	1
3	2	2
4	2	2
5	3	2
6	3	3
7	4	3
8	4	4
9	5	4
10	6	4
11	7	4
12	8	4

OPTIC ORIENTATION



DRILLING PATTERNS



ORDERING INFORMATION

Sample Number: VTS-E12-LED-E1-T3-GM

Product Family ^{1,2}	Number of LightBARs ^{3,4}		Lamp Type	Voltage	Distribution	Color
VTS=Ventus	E02=(2) 21 LED LightBARs E03=(3) 21 LED LightBARs E04=(4) 21 LED LightBARs E05=(5) 21 LED LightBARs E06=(6) 21 LED LightBARs E07=(7) 21 LED LightBARs E08=(8) 21 LED LightBARs E09=(9) 21 LED LightBARs E10=(10) 21 LED LightBARs E11=(11) 21 LED LightBARs E12=(12) 21 LED LightBARs	F02=(2) 7 LED LightBARs F03=(3) 7 LED LightBARs F04=(4) 7 LED LightBARs F05=(5) 7 LED LightBARs F06=(6) 7 LED LightBARs F07=(7) 7 LED LightBARs F08=(8) 7 LED LightBARs F09=(9) 7 LED LightBARs F10=(10) 7 LED LightBARs F11=(11) 7 LED LightBARs F12=(12) 7 LED LightBARs	LED=Solid State Light Emitting Diodes	E1=Electronic (120-277V) 347=347V ^{5,6} 480=480V ^{5,6,7}	T2=Type II T3=Type III T4=Type IV 5MQ=Type V Square Medium 5WQ=Type V Square Wide 5XQ=Type V Square Extra Wide SL2=Type II with Spill Control SL3=Type III with Spill Control SL4=Type IV with Spill Control RW=Rectangular Wide SLL=90° Spill Light Eliminator Left SLR=90° Spill Light Eliminator Right	AP=Grey BZ=Bronze BK=Black DP=Dark Platinum GM=Graphite Metallic WH=White
Options (Add as Suffix)				Accessories (Order Separately) ²²		
P=Button Type Photocontrol (120, 208, 240 or 277V. Must Specify Voltage) ⁵ R=NEMA Twistlock Photocontrol Receptacle PER7=NEMA 7-PIN Twistlock Photocontrol Receptacle ⁸ HA=50°C High Ambient Temperature Rating ^{9,10} 2L=Two Circuits ^{6,11,12,13} L90=Optics Rotated 90° Left ¹⁴ R90=Optics Rotated 90° Right ¹⁴ 7030=70 CRI / 3000K CCT ¹⁵ 7050=70 CRI / 5000K CCT ¹⁵ 7060=70 CRI / 5700K CCT ¹⁵ 8030=80 CRI / 3000K CCT ¹⁵ TH=Tool-less Door Hardware LCF=LightBAR Cover Plate Matches Housing Finish WG=Wire Guard WM=Wall Mount with Arm IM=Integral Mast Arm MS-LXX=Motion Sensor for On/Off Operation ¹⁶ MS/X-LXX=Motion Sensor for Bi-Level Operation ¹⁷ MS/DIM-LXX=Motion Sensor for Dimming Operation ^{18,19} DIM=0-10V Dimming Drivers ²⁰ HSS=Factory Installed House Side Shield ²¹				VA1033-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon VA1034-XX=2 @ 180° Tenon Adapter for 2-3/8" O.D. Tenon VA1035-XX=3 @ 120° Tenon Adapter for 2-3/8" O.D. Tenon VA1036-XX=4 @ 90° Tenon Adapter for 2-3/8" O.D. Tenon VA1037-XX=2 @ 90° Tenon Adapter for 2-3/8" O.D. Tenon VA1038-XX=3 @ 90° Tenon Adapter for 2-3/8" O.D. Tenon VA1039-XX=2 @ 120° Tenon Adapter for 2-3/8" O.D. Tenon VA1040-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon VA1041-XX=2 @ 180° Tenon Adapter for 3-1/2" O.D. Tenon VA1042-XX=3 @ 120° Tenon Adapter for 3-1/2" O.D. Tenon VA1043-XX=4 @ 90° Tenon Adapter for 3-1/2" O.D. Tenon VA1044-XX=2 @ 90° Tenon Adapter for 3-1/2" O.D. Tenon VA1045-XX=3 @ 90° Tenon Adapter for 3-1/2" O.D. Tenon VA1046-XX=2 @ 120° Tenon Adapter for 3-1/2" O.D. Tenon FSIR-100=Wireless Configuration Tool for Occupancy Sensor ²³ OA/RA1016=NEMA Photocontrol - Multi-Tap OA/RA1027=NEMA Photocontrol - 480V OA/RA1201=NEMA Photocontrol - 347V MA1253=10kV Circuit Module Replacement LB/HSS=Field Installed House Side Shield ²⁴		

NOTES:

- Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to our white paper WP513001EN for additional support information.
- 6" arm and round pole adapter included with fixture.
- 21 LED LightBAR powered at 350mA, 7 LED LightBAR powered at 1A.
- Standard 4000K CCT and nominal 70CRI.
- Not available with HA option.
- Must specify voltage.
- Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).
- Must specify DIM option to add dimming driver(s). Only available in E02-E06 and F02-F06.
- Not available with DIM option or MS/DIM-LXX.
- Not available with button photocontrol or motion sensor. 120 - 277V only.
- Requires two electrical circuits to luminaire. See LightBAR operation table for additional information.
- Consult factory before ordering in combination with MS-LXX or MS/X-LXX options.
- Not available in 347V or 480V.
- Not available with 5MQ, 5WQ or 5XQ distributions. Not available with HSS option.
- Extended lead times apply.
- Sensor housed in external box mounted to the luminaire. Available in E02-E12 and F02-F12 configurations. Replace XX with mounting height in feet for proper lens selection, (e.g., MS-L25). Consult factory for additional information.
- Sensor housed in external box mounted to the luminaire. Available in E02-E12 and F02-F12 configurations. Replace X with number of bars operating in low output mode and replace XX with mounting height for proper lens selection, (e.g., MS/3-L25). Maximum 4 bars in low output mode. Consult factory for additional information.
- Not available with HA option. Only available in F02-F06 and E02-E06. Includes Dimming Drivers. Not available in 347V or 480V.
- Replace XX with mounting height in feet for proper lens selection, (e.g., MS/DIM-L25).
- Available in E02-E06 and F02-F06 only.
- Only for use with SL2, SL3 and SL4 distributions. Not available with L90 or R90 options.
- Replace XX with color suffix.
- Only compatible with MS/DIM-LXX motion sensor.
- One required for each LightBAR. Not available with L90 or R90 options.

Steel Poles



SSS SQUARE STRAIGHT STEEL

Catalog #	SSS4A25SFC1	Type
Project	Froedtert South Southwest Medical Office Bldg	P2
Comments		Date
Prepared by		

FEATURES

- ASTM Grade steel base plate with ASTM A366 base cover
- Hand hole assembly 3" x 5" on 5" and 6" pole; and 2" x 4" on 4" pole
- 10'-39' mounting heights
- Drilled or tenon (specify)

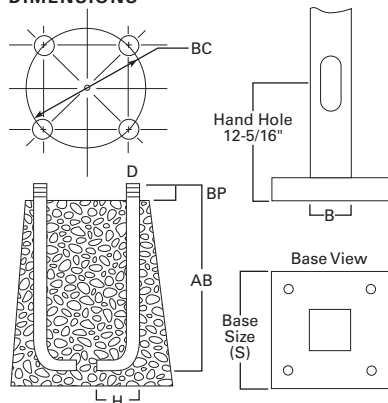
ORDERING INFORMATION

SAMPLE NUMBER: SSS5A20SFM1XG

Product Family	Shaft Size (Inches) ¹	Wall Thickness (Inches)	Mounting Height (Feet)	Base Type	Finish	Mounting Type	Number and Location of Arms	Arm Lengths (Feet)	Options (Add as Suffix)
SSS=Square Straight Steel	4=4" 5=5" 6=6"	A=0.120" M=0.188" X=0.250"	10=10' 15=15' 20=20' 25=25' 30=30' 35=35' 39=39'	S=Square Steel Base	F=Dark Bronze G=Galvanized Steel J=Summit White K=Carbon Bronze L=Dark Platinum P=Primer Powder Coat R=Hartford Green S=Silver T=Graphite Metallic V=Grey W=White X=Custom Color Y=Black	2=2-3/8" O.D. Tenon (4" Long) 3=3-1/2" O.D. Tenon (5" Long) 4=4" O.D. Tenon (6" Long) 5=3" O.D. Tenon (4" Long) 6=2-3/8" O.D. Tenon (6" Long) 7=4" O.D. Tenon (10" Long) A=Type A Drilling C=Type C Drilling E=Type E Drilling F=Type F Drilling G=Type G Drilling J=Type J Drilling K=Type K Drilling M=Type M Drilling R=Type R Drilling Z=Type Z Drilling	1=Single 2=2 at 180° 3=Triple ² 4=4 at 90° 5=2 at 90° X=None	X=None	A=1/2" Tapped Hub (Specify location desired) B=3/4" Tapped Hub (Specify location desired) C=Convenience Outlet ³ E=GFCI Convenience Outlet ³ G=Ground Lug H=Additional Hand Hole ⁴ L=Drilled for Bumper Glitter V=Vibration Damper

NOTES: 1. All shaft sizes nominal. 2. Square poles are 3 at 90°, round poles are 3 at 120°. 3. Outlet is located 4' above base and on same side of pole as hand hole, unless specified otherwise. Receptacle not included, provision only. 4. Additional hand hole is located 12" below pole top and 90° from standard hand hole location, unless otherwise specified.

DIMENSIONS



WARNING: Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to pole white paper WP513001EN for additional support information. Before installing, make sure proper anchor bolts and templates are obtained. The use of unauthorized accessories such as banners, signs, cameras or pennants for which the pole was not designed voids the pole warranty and may result in pole failure causing serious injury or property damage. Information regarding total loading capacity can be supplied upon request. The pole warranty is void unless poles are used and installed as a complete pole and luminaire combination. This warranty specifically excludes failure as the result of a third party act or omission, misuse, unanticipated uses, fatigue failure or similar phenomena resulting from induced vibration, harmonic oscillation or resonance associated with movement of air currents around the product.

Specifications and dimensions subject to change without notice. Consult your lighting representative at Eaton or visit www.eaton.com/lighting for available options, accessories and ordering information.

Effective Projected Area (At Pole Top)

Mounting Height (Feet)	Catalog Number ^{1,2}	Wall Thickness (Inches)	Base Square ³ (Inches)	Bolt Circle Diameter (Inches)	Anchor Bolt Projection ³ (Inches)	Shaft Size ³ (Inches)	Anchor Bolt Diameter x Length x Hook (Inches)	Net Weight (Pounds)	Maximum Effective Projected Area (Square Feet) ⁴				Max. Fixture Load - Includes Bracket (Pounds)
MH			S	BC	BP	B	D x AB x H		80 mph	90 mph	100 mph	110 mph	
10	SSS4A10S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	85	30.0	22.0	17.0	13.0	100
15	SSS4A15S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	118	15.0	11.5	8.7	6.5	100
20	SSS4A20S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	150	8.7	5.9	3.9	2.5	150
20	SSS5A20S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	183	15.4	11.1	7.9	5.5	150
25	SSS4A25S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	181	3.7	1.7	0.3	--	200
25	SSS5A25S	0.120	10-1/2	11	5	5	3/4 x 25 x 3	222	9.3	6.0	3.5	1.6	200
25	SSS6A25S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	284	9.9	6.1	3.5	1.2	200
30	SSS5A30S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	260	4.7	2.1	--	--	200
30	SSS5M30S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	392	10.4	6.4	3.5	1.5	200
30	SSS6A30S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	330	4.3	1.4	--	--	200
30	SSS6M30S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	489	19.0	13.0	8.7	5.6	200
35	SSS5M35S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	453	5.8	2.8	--	--	200
35	SSS6M35S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	564	12.8	7.2	3.7	1.0	200
35	SSS6X35S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	738	16.5	11.0	6.8	3.5	200
39	SSS6M39S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	618	7.3	3.0	--	--	300
39	SSS6X39S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	816	13.0	7.0	3.7	0.8	300

Effective Projected Area (Two Feet Above Pole Top)

Mounting Height (Feet)	Catalog Number ^{1,2}	Wall Thickness (Inches)	Base Square ³ (Inches)	Bolt Circle Diameter (Inches)	Anchor Bolt Projection ³ (Inches)	Shaft Size ³ (Inches)	Anchor Bolt Diameter x Length x Hook (Inches)	Net Weight (Pounds)	Maximum Effective Projected Area (Square Feet) ⁴				Max. Fixture Load - Includes Bracket (Pounds)
MH			S	BC	BP	B	D x AB x H		80 mph	90 mph	100 mph	110 mph	
10	SSS4A10S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	85	23.0	17.5	14.0	11.0	100
15	SSS4A15S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	118	13.4	10.0	7.5	5.7	100
20	SSS4A20S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	150	7.6	5.2	3.4	2.1	150
20	SSS5A20S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	183	13.8	9.9	7.1	4.9	150
25	SSS4A25S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	181	3.4	1.6	0.3	--	200
25	SSS5A25S	0.120	10-1/2	11	5	5	3/4 x 25 x 3	222	8.5	5.5	3.2	1.5	200
25	SSS6A25S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	284	9.1	5.6	3.0	1.2	200
30	SSS5A30S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	260	1.8	--	--	--	200
30	SSS5M30S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	392	9.6	5.9	1.9	0.2	200
30	SSS6A30S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	330	4.1	1.3	--	--	200
30	SSS6M30S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	489	18.5	12.5	8.4	5.3	200
35	SSS5M35S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	453	5.5	2.4	--	--	200
35	SSS6M35S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	564	11.8	7.0	3.5	1.0	200
35	SSS6X35S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	738	16.0	10.5	6.4	3.4	200
39	SSS6M39S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	618	7.0	2.4	--	--	300
39	SSS6X39S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	816	12.0	6.7	3.0	0.5	300

NOTES:

1. Catalog number includes pole with hardware kit. Anchor bolts not included. Before installing, make sure proper anchor bolts and templates are obtained.
2. Tenon size or machining for rectangular arms must be specified. Hand hole position relative to drill location.
3. Shaft size, base square, anchor bolts and projections may vary slightly. All dimensions nominal.
4. EPAs based on shaft properties with wind normal to flat. EPAs calculated using base wind velocity as indicated plus 30% gust factor.

DESCRIPTION

The Ventus™ LED area luminaire provides uncompromising optical performance and outstanding versatility for a wide variety of area and roadway applications. Patent pending modular LightBAR™ technology delivers uniform and energy conscious illumination to walkways, parking lots, roadways, building areas and any security lighting application. UL/cUL Listed for wet locations.

Catalog #	VTS-E05-LED-E1-SL2-BZ-HSS	Type
Project	Froedtert South Southwest Medical Office Bldg	P3
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Construction

Die-cast aluminum frame secures thermally conductive, extruded aluminum heat sink to independent electrical chamber. Heavy-wall, die-cast aluminum housing and door isolates driver components for cooler operation. The unique construction allows for passive cooling and natural cleaning of the extruded heat sink ensuring reliable operation at 40°C high ambient conditions. Stainless steel fasteners and hinging allow access to electrical components for installation and maintenance. Optional tool-less hardware available for ease of entry into electrical chamber.

Optics

Choice of twelve patented, high-efficiency AccuLED Optics™ distributions. Optics are precisely designed to shape the light output, maximizing efficiency and application spacing. AccuLED Optics technology creates consistent distributions with the scalability to meet customized application requirements. Offered Standard in 4000K (+/- 275K) CCT and minimum 70 CRI. Optional 3000K CCT, 5000K CCT and 5700K CCT. For the ultimate level of spill light control, an optional house-side shield accessory can be field or factory installed. The house-side shield is designed to seamlessly integrate with the SL2, SL3 or SL4 optics.

Electrical

LED drivers mount to die-cast aluminum back housing for optimal heat sinking, operation efficacy, and prolonged life. Standard drivers feature electronic universal voltage (120-277V 50/60Hz), 347V 60Hz or 480V 60Hz operation. 480V is compatible for use with 480V Wye systems only. Greater than 0.9 power factor, less than 20% harmonic distortion, and is suitable for operation in -40°C to 40°C ambient environments. All fixtures are shipped standard with 10kV/10kA common – and differential – mode surge protection. LightBARs feature an IP66 enclosure rating and maintain greater than 95% lumen maintenance at 60,000 hours per IESNA TM-21. Occupancy sensor and dimming options available.

Mounting

Cast aluminum 6" arm includes bolt guides allowing for easy positioning of fixture during installation to pole or wall surface. Standard single carton packaging of housing, square pole arm and round pole adapter for contractor friendly arrival of product on site. Optional internal mast arm mount accepts a 1-1/4" to 2" O.D. horizontal tenon, while a two-bolt clamping mechanism secures fixture. Cast-in leveling guides provide +/-5° vertical leveling adjustment. Tenon adapters available to slipfit over poles equipped with 2-3/8" or 3-1/2" O.D. tenon. 3G vibration rated.

Finish

Cast components and arm finished in super TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Standard colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available. Consult the McGraw-Edison Architectural Colors brochure for the complete selection.

Warranty

Five-year warranty.

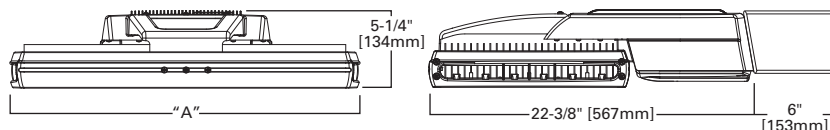


VTS VENTUS LED

2 - 12 LightBARs
Solid State LED

AREA LUMINAIRE

DIMENSIONS



DIMENSIONAL DATA

Number of LightBARs	"A" Width	Weight		EPA [Square Feet]	
		Without Arm	With Arm	Without Arm	With Arm
2-4	12-7/8" [328mm]	24 lbs. [10.91 kgs.]	29 lbs. [13.18 kgs.]	0.94	1.00
5-8	18" [458mm]	30 lbs. [13.64 kgs.]	35 lbs. [15.91 kgs.]	1.10	1.20
9-12	25-7/8" [658mm]	39 lbs. [17.73 kgs.]	44 lbs. [20.00 kgs.]	1.31	1.44

CERTIFICATION DATA

UL/cUL Listed
LM79 / LM80 Compliant
IP66 LightBARs
3G Vibration Rated
ISO 9001

ENERGY DATA

Electronic LED Driver
>0.9 Power Factor
<20% Total Harmonic Distortion
120-277V/50Hz & 60Hz, 347V/60Hz, 480V/60Hz
-40°C Minimum Temperature
40°C Ambient Temperature Rating
50°C Ambient Temperature Rating (HA option)

SHIPPING DATA

Approximate Net Weight:
(See Tabulated Reference Data)

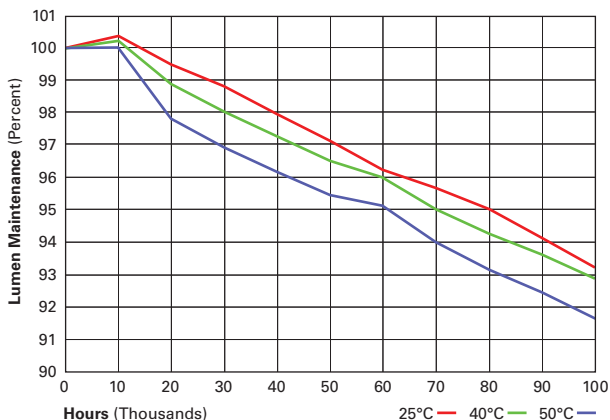
POWER AND LUMENS BY BAR COUNT (21 LED LIGHTBAR)

Number of LightBARs		E02	E03	E04	E05	E06	E07	E08	E09	E10	E11	E12
Drive Current		350mA Drive Current										
Power (Watts)		52W	75W	97W	127W	149W	173W	195W	226W	247W	270W	292W
Current @ 120V (A)		0.44	0.63	0.82	1.07	1.26	1.45	1.63	1.89	2.08	2.26	2.45
Current @ 277V (A)		0.20	0.28	0.36	0.48	0.56	0.64	0.71	0.84	0.92	0.99	1.07
Power (Watts)		58W	82W	99W	132W	159W	174W	196W	227W	247W	271W	293W
Current @ 347V (A)		0.19	0.28	0.29	0.39	0.48	0.56	0.57	0.68	0.76	0.85	0.86
Current @ 480V (A)		0.15	0.20	0.21	0.30	0.36	0.41	0.42	0.51	0.57	0.62	0.63
T2	Lumens	6,173	9,260	12,347	15,434	18,520	21,607	24,694	27,780	30,867	33,954	37,041
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4
T3	Lumens	6,117	9,175	12,233	15,292	18,350	21,409	24,467	27,525	30,584	33,642	36,700
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4
T4	Lumens	5,953	8,929	11,905	14,882	17,858	20,835	23,811	26,787	29,764	32,740	35,716
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
5MQ	Lumens	6,398	9,597	12,795	15,994	19,193	22,392	25,591	28,790	31,989	35,187	38,386
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
5WQ	Lumens	6,315	9,472	12,630	15,787	18,945	22,102	25,260	28,417	31,575	34,732	37,890
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
5XQ	Lumens	6,325	9,488	12,650	15,813	18,975	22,138	25,301	28,463	31,626	34,788	37,951
	BUG Rating	B3-U1-G2	B3-U1-G3	B4-U1-G3	B4-U1-G3	B4-U1-G4	B5-U1-G4	B5-U2-G5	B5-U2-G5	B5-U2-G5	B5-U2-G5	B5-U2-G5
SL2	Lumens	6,018	9,026	12,035	15,044	18,053	21,061	24,070	27,079	30,088	33,096	36,105
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B4-U0-G4
SL3	Lumens	6,034	9,051	12,067	15,084	18,101	21,118	24,135	27,152	30,169	33,186	36,202
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5
SL4	Lumens	5,802	8,703	11,604	14,505	17,406	20,307	23,207	26,108	29,009	31,910	34,811
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
RW	Lumens	6,231	9,346	12,462	15,577	18,692	21,808	24,923	28,039	31,154	34,270	37,385
	BUG Rating	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
SLL/SLR	Lumens	5,375	8,062	10,749	13,436	16,124	18,811	21,498	24,186	26,873	29,560	32,247
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5

LUMEN MAINTENANCE

Ambient Temperature	25,000 Hours*	50,000 Hours*	60,000 Hours*	100,000 Hours	Theoretical L70 (Hours)
25°C	> 99%	> 97%	> 96%	> 93%	> 450,000
40°C	> 98%	> 97%	> 96%	> 92%	> 425,000
50°C	> 97%	> 96%	> 95%	> 91%	> 400,000

* Per IESNA TM-21 data.



LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
10°C	1.02
15°C	1.01
25°C	1.00
40°C	0.99
50°C	0.96

LIGHTBAR OPERATION WITH 2L BI-LEVEL SWITCHING OPTION

Number of LightBars	Circuit 1	Circuit 2
2	1	1
3	2	2
4	2	2
5	3	2
6	3	3
7	4	3
8	4	4
9	5	4
10	6	4
11	7	4
12	8	4

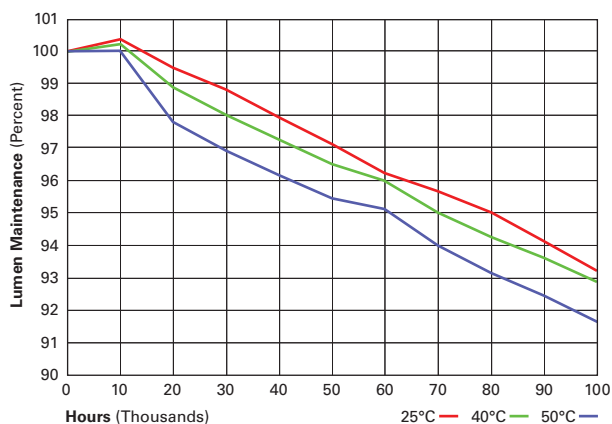
POWER AND LUMENS BY BAR COUNT (7 LED LIGHTBAR)

Number of LightBARs		F02	F03	F04	F05	F06	F07	F08	F09	F10	F11	F12
Drive Current		1A Drive Current										
Power (Watts)		55W	78W	102W	133W	157W	180W	204W	235W	259W	283W	307W
Current @ 120V (A)		0.46	0.66	0.86	1.12	1.31	1.51	1.71	1.97	2.17	2.37	2.57
Current @ 277V (A)		0.21	0.29	0.37	0.50	0.58	0.66	0.74	0.88	0.96	1.04	1.12
Power (Watts)		60W	85W	105W	137W	164W	181W	204W	236W	259W	284W	308W
Current @ 347V (A)		0.19	0.28	0.30	0.41	0.49	0.58	0.60	0.71	0.79	0.88	0.90
Current @ 480V (A)		0.15	0.21	0.22	0.31	0.37	0.43	0.44	0.53	0.59	0.65	0.66
T2	Lumens	5,096	7,641	10,193	12,741	15,289	17,837	20,385	22,933	25,482	28,030	30,578
	BUG Rating	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4
T3	Lumens	5,050	7,574	10,099	12,624	15,149	17,673	20,198	22,723	25,248	27,772	30,297
	BUG Rating	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4
T4	Lumens	4,914	7,371	9,828	12,285	14,742	17,199	19,656	22,114	24,571	27,028	29,485
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4
5MQ	Lumens	5,281	7,922	10,563	13,204	15,844	18,485	21,126	23,767	26,407	29,048	31,689
	BUG Rating	B3-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G3
5WQ	Lumens	5,213	7,820	10,426	13,033	15,640	18,246	20,853	23,459	26,066	28,672	31,279
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
5XQ	Lumens	5,222	7,832	10,443	13,054	15,665	18,275	20,886	23,497	26,108	28,719	31,330
	BUG Rating	B3-U1-G2	B3-U1-G3	B4-U1-G3	B4-U1-G3	B4-U1-G3	B4-U1-G4	B5-U1-G4	B5-U2-G4	B5-U2-G5	B5-U2-G5	B5-U2-G5
SL2	Lumens	4,968	7,451	9,935	12,419	14,903	17,387	19,870	22,354	24,838	27,322	29,806
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4
SL3	Lumens	4,981	7,471	9,962	12,452	14,943	17,433	19,924	22,414	24,905	27,395	29,886
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4
SL4	Lumens	4,790	7,184	9,579	11,974	14,369	16,764	19,158	21,553	23,948	26,343	28,738
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4
RW	Lumens	5,144	7,716	10,287	12,859	15,431	18,003	20,575	23,147	25,719	28,290	30,862
	BUG Rating	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5
SLL/SLR	Lumens	4,437	6,655	8,874	11,092	13,311	15,529	17,747	19,966	22,184	24,403	26,621
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G4	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5

LUMEN MAINTENANCE

Ambient Temperature	25,000 Hours*	50,000 Hours*	60,000 Hours*	100,000 Hours	Theoretical L70 (Hours)
25°C	> 99%	> 97%	> 96%	> 93%	> 450,000
40°C	> 98%	> 97%	> 96%	> 92%	> 425,000
50°C	> 97%	> 96%	> 95%	> 91%	> 400,000

* Per IESNA TM-21 data.



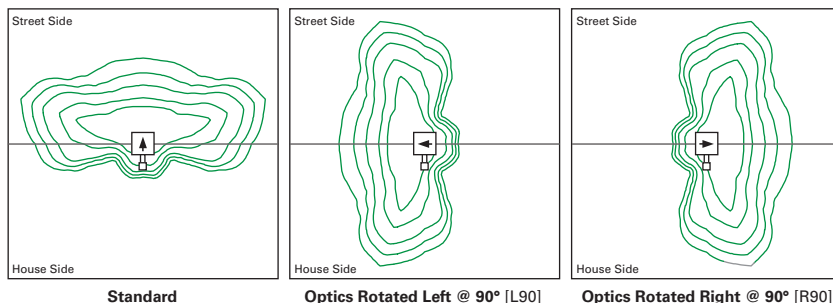
LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
10°C	1.02
15°C	1.01
25°C	1.00
40°C	0.99
50°C	0.96

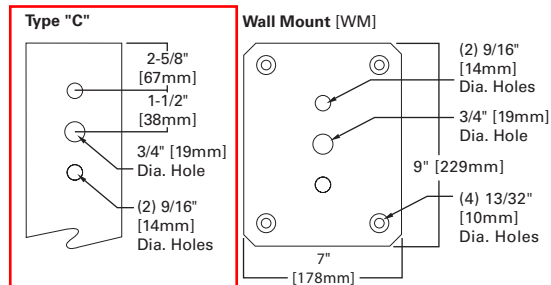
LIGHTBAR OPERATION WITH 2L BI-LEVEL SWITCHING OPTION

Number of LightBars	Circuit 1	Circuit 2
2	1	1
3	2	2
4	2	2
5	3	2
6	3	3
7	4	3
8	4	4
9	5	4
10	6	4
11	7	4
12	8	4

OPTIC ORIENTATION



DRILLING PATTERNS



ORDERING INFORMATION

Sample Number: VTS-E12-LED-E1-T3-GM

Product Family ^{1,2}	Number of LightBARs ^{3,4}		Lamp Type	Voltage	Distribution	Color
VTS=Ventus	E02=(2) 21 LED LightBARs E03=(3) 21 LED LightBARs E04=(4) 21 LED LightBARs E05=(5) 21 LED LightBARs E06=(6) 21 LED LightBARs E07=(7) 21 LED LightBARs E08=(8) 21 LED LightBARs E09=(9) 21 LED LightBARs E10=(10) 21 LED LightBARs E11=(11) 21 LED LightBARs E12=(12) 21 LED LightBARs	F02=(2) 7 LED LightBARs F03=(3) 7 LED LightBARs F04=(4) 7 LED LightBARs F05=(5) 7 LED LightBARs F06=(6) 7 LED LightBARs F07=(7) 7 LED LightBARs F08=(8) 7 LED LightBARs F09=(9) 7 LED LightBARs F10=(10) 7 LED LightBARs F11=(11) 7 LED LightBARs F12=(12) 7 LED LightBARs	LED=Solid State Light Emitting Diodes	E1=Electronic (120-277V) 347=347V ^{5,6} 480=480V ^{5,6,7}	T2=Type II T3=Type III T4=Type IV 5MQ=Type V Square Medium 5WQ=Type V Square Wide 5XQ=Type V Square Extra Wide SL2=Type II with Spill Control SL3=Type III with Spill Control SL4=Type IV with Spill Control RW=Rectangular Wide SLL=90° Spill Light Eliminator Left SLR=90° Spill Light Eliminator Right	AP=Grey BZ=Bronze BK=Black DP=Dark Platinum GM=Graphite Metallic WH=White
Options (Add as Suffix)				Accessories (Order Separately) ²²		
P=Button Type Photocontrol (120, 208, 240 or 277V. Must Specify Voltage) ⁵ R=NEMA Twistlock Photocontrol Receptacle PER7=NEMA 7-PIN Twistlock Photocontrol Receptacle ⁸ HA=50°C High Ambient Temperature Rating ^{9, 10} 2L=Two Circuits ^{6, 11, 12, 13} L90=Optics Rotated 90° Left ¹⁴ R90=Optics Rotated 90° Right ¹⁴ 7030=70 CRI / 3000K CCT ¹⁵ 7050=70 CRI / 5000K CCT ¹⁵ 7060=70 CRI / 5700K CCT ¹⁵ 8030=80 CRI / 3000K CCT ¹⁵ TH=Tool-less Door Hardware LCF=LightBAR Cover Plate Matches Housing Finish WG=Wire Guard WM=Wall Mount with Arm IM=Integral Mast Arm MS-LXX=Motion Sensor for On/Off Operation ¹⁶ MS/X-LXX=Motion Sensor for Bi-Level Operation ¹⁷ MS/DIM-LXX=Motion Sensor for Dimming Operation ^{18, 19} DIM=0-10V Dimming Drivers ²⁰ HSS=Factory Installed House Side Shield ²¹				VA1033-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon VA1034-XX=2 @ 180° Tenon Adapter for 2-3/8" O.D. Tenon VA1035-XX=3 @ 120° Tenon Adapter for 2-3/8" O.D. Tenon VA1036-XX=4 @ 90° Tenon Adapter for 2-3/8" O.D. Tenon VA1037-XX=2 @ 90° Tenon Adapter for 2-3/8" O.D. Tenon VA1038-XX=3 @ 90° Tenon Adapter for 2-3/8" O.D. Tenon VA1039-XX=2 @ 120° Tenon Adapter for 2-3/8" O.D. Tenon VA1040-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon VA1041-XX=2 @ 180° Tenon Adapter for 3-1/2" O.D. Tenon VA1042-XX=3 @ 120° Tenon Adapter for 3-1/2" O.D. Tenon VA1043-XX=4 @ 90° Tenon Adapter for 3-1/2" O.D. Tenon VA1044-XX=2 @ 90° Tenon Adapter for 3-1/2" O.D. Tenon VA1045-XX=3 @ 90° Tenon Adapter for 3-1/2" O.D. Tenon VA1046-XX=2 @ 120° Tenon Adapter for 3-1/2" O.D. Tenon FSIR-100=Wireless Configuration Tool for Occupancy Sensor ²³ OA/RA1016=NEMA Photocontrol - Multi-Tap OA/RA1027=NEMA Photocontrol - 480V OA/RA1201=NEMA Photocontrol - 347V MA1253=10kV Circuit Module Replacement LB/HSS=Field Installed House Side Shield ²⁴		

NOTES:

- Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to our white paper WP513001EN for additional support information.
- 6" arm and round pole adapter included with fixture.
- 21 LED LightBAR powered at 350mA, 7 LED LightBAR powered at 1A.
- Standard 4000K CCT and nominal 70CRI.
- Not available with HA option.
- Must specify voltage.
- Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).
- Must specify DIM option to add dimming driver(s). Only available in E02-E06 and F02-F06.
- Not available with DIM option or MS/DIM-LXX.
- Not available with button photocontrol or motion sensor. 120 - 277V only.
- Requires two electrical circuits to luminaire. See LightBAR operation table for additional information.
- Consult factory before ordering in combination with MS-LXX or MS/X-LXX options.
- Not available in 347V or 480V.
- Not available with 5MQ, 5WQ or 5XQ distributions. Not available with HSS option.
- Extended lead times apply.
- Sensor housed in external box mounted to the luminaire. Available in E02-E12 and F02-F12 configurations. Replace XX with mounting height in feet for proper lens selection, (e.g., MS-L25). Consult factory for additional information.
- Sensor housed in external box mounted to the luminaire. Available in E02-E12 and F02-F12 configurations. Replace X with number of bars operating in low output mode and replace XX with mounting height for proper lens selection, (e.g., MS/3-L25). Maximum 4 bars in low output mode. Consult factory for additional information.
- Not available with HA option. Only available in F02-F06 and E02-E06. Includes Dimming Drivers. Not available in 347V or 480V.
- Replace XX with mounting height in feet for proper lens selection, (e.g., MS/DIM-L25).
- Available in E02-E06 and F02-F06 only.
- Only for use with SL2, SL3 and SL4 distributions. Not available with L90 or R90 options.
- Replace XX with color suffix.
- Only compatible with MS/DIM-LXX motion sensor.
- One required for each LightBAR. Not available with L90 or R90 options.

Steel Poles



SSS SQUARE STRAIGHT STEEL

Catalog #	SSS4A25SFC1	Type
Project	Froedtert South Southwest Medical Office Bldg	P3
Comments		Date
Prepared by		

FEATURES

- ASTM Grade steel base plate with ASTM A366 base cover
- Hand hole assembly 3" x 5" on 5" and 6" pole; and 2" x 4" on 4" pole
- 10'-39' mounting heights
- Drilled or tenon (specify)

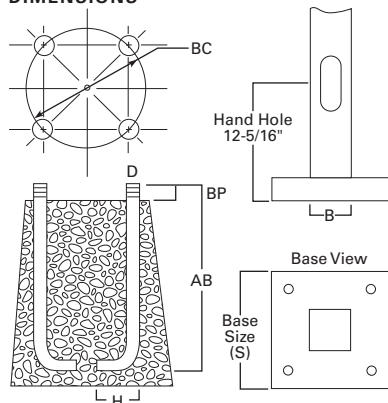
ORDERING INFORMATION

SAMPLE NUMBER: SSS5A20SFM1XG

Product Family	Shaft Size (Inches) ¹	Wall Thickness (Inches)	Mounting Height (Feet)	Base Type	Finish	Mounting Type	Number and Location of Arms	Arm Lengths (Feet)	Options (Add as Suffix)
SSS=Square Straight Steel	4=4" 5=5" 6=6"	A=0.120" M=0.188" X=0.250"	10=10' 15=15' 20=20' 25=25' 30=30' 35=35' 39=39'	S=Square Steel Base	F=Dark Bronze G=Galvanized Steel J=Summit White K=Carbon Bronze L=Dark Platinum P=Primer Powder Coat R=Hartford Green S=Silver T=Graphite Metallic V=Grey W=White X=Custom Color Y=Black	2=2-3/8" O.D. Tenon (4" Long) 3=3-1/2" O.D. Tenon (5" Long) 4=4" O.D. Tenon (6" Long) 5=3" O.D. Tenon (4" Long) 6=2-3/8" O.D. Tenon (6" Long) 7=4" O.D. Tenon (10" Long) A=Type A Drilling C=Type C Drilling E=Type E Drilling F=Type F Drilling G=Type G Drilling J=Type J Drilling K=Type K Drilling M=Type M Drilling R=Type R Drilling Z=Type Z Drilling	1=Single 2=2 at 180° 3=Triple ² 4=4 at 90° 5=2 at 90° X=None	X=None	A=1/2" Tapped Hub (Specify location desired) B=3/4" Tapped Hub (Specify location desired) C=Convenience Outlet ³ E=GFCI Convenience Outlet ³ G=Ground Lug H=Additional Hand Hole ⁴ L=Drilled for Bumper Glitter V=Vibration Damper

NOTES: 1. All shaft sizes nominal. 2. Square poles are 3 at 90°, round poles are 3 at 120°. 3. Outlet is located 4' above base and on same side of pole as hand hole, unless specified otherwise. Receptacle not included, provision only. 4. Additional hand hole is located 12" below pole top and 90° from standard hand hole location, unless otherwise specified.

DIMENSIONS



WARNING: Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to pole white paper WP513001EN for additional support information. Before installing, make sure proper anchor bolts and templates are obtained. The use of unauthorized accessories such as banners, signs, cameras or pennants for which the pole was not designed voids the pole warranty and may result in pole failure causing serious injury or property damage. Information regarding total loading capacity can be supplied upon request. The pole warranty is void unless poles are used and installed as a complete pole and luminaire combination. This warranty specifically excludes failure as the result of a third party act or omission, misuse, unanticipated uses, fatigue failure or similar phenomena resulting from induced vibration, harmonic oscillation or resonance associated with movement of air currents around the product.

Specifications and dimensions subject to change without notice. Consult your lighting representative at Eaton or visit www.eaton.com/lighting for available options, accessories and ordering information.

Effective Projected Area (At Pole Top)

Mounting Height (Feet)	Catalog Number ^{1,2}	Wall Thickness (Inches)	Base Square ³ (Inches)	Bolt Circle Diameter (Inches)	Anchor Bolt Projection ³ (Inches)	Shaft Size ³ (Inches)	Anchor Bolt Diameter x Length x Hook (Inches)	Net Weight (Pounds)	Maximum Effective Projected Area (Square Feet) ⁴				Max. Fixture Load - Includes Bracket (Pounds)
MH			S	BC	BP	B	D x AB x H		80 mph	90 mph	100 mph	110 mph	
10	SSS4A10S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	85	30.0	22.0	17.0	13.0	100
15	SSS4A15S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	118	15.0	11.5	8.7	6.5	100
20	SSS4A20S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	150	8.7	5.9	3.9	2.5	150
20	SSS5A20S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	183	15.4	11.1	7.9	5.5	150
25	SSS4A25S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	181	3.7	1.7	0.3	--	200
25	SSS5A25S	0.120	10-1/2	11	5	5	3/4 x 25 x 3	222	9.3	6.0	3.5	1.6	200
25	SSS6A25S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	284	9.9	6.1	3.5	1.2	200
30	SSS5A30S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	260	4.7	2.1	--	--	200
30	SSS5M30S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	392	10.4	6.4	3.5	1.5	200
30	SSS6A30S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	330	4.3	1.4	--	--	200
30	SSS6M30S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	489	19.0	13.0	8.7	5.6	200
35	SSS5M35S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	453	5.8	2.8	--	--	200
35	SSS6M35S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	564	12.8	7.2	3.7	1.0	200
35	SSS6X35S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	738	16.5	11.0	6.8	3.5	200
39	SSS6M39S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	618	7.3	3.0	--	--	300
39	SSS6X39S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	816	13.0	7.0	3.7	0.8	300

Effective Projected Area (Two Feet Above Pole Top)

Mounting Height (Feet)	Catalog Number ^{1,2}	Wall Thickness (Inches)	Base Square ³ (Inches)	Bolt Circle Diameter (Inches)	Anchor Bolt Projection ³ (Inches)	Shaft Size ³ (Inches)	Anchor Bolt Diameter x Length x Hook (Inches)	Net Weight (Pounds)	Maximum Effective Projected Area (Square Feet) ⁴				Max. Fixture Load - Includes Bracket (Pounds)
MH			S	BC	BP	B	D x AB x H		80 mph	90 mph	100 mph	110 mph	
10	SSS4A10S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	85	23.0	17.5	14.0	11.0	100
15	SSS4A15S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	118	13.4	10.0	7.5	5.7	100
20	SSS4A20S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	150	7.6	5.2	3.4	2.1	150
20	SSS5A20S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	183	13.8	9.9	7.1	4.9	150
25	SSS4A25S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	181	3.4	1.6	0.3	--	200
25	SSS5A25S	0.120	10-1/2	11	5	5	3/4 x 25 x 3	222	8.5	5.5	3.2	1.5	200
25	SSS6A25S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	284	9.1	5.6	3.0	1.2	200
30	SSS5A30S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	260	1.8	--	--	--	200
30	SSS5M30S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	392	9.6	5.9	1.9	0.2	200
30	SSS6A30S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	330	4.1	1.3	--	--	200
30	SSS6M30S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	489	18.5	12.5	8.4	5.3	200
35	SSS5M35S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	453	5.5	2.4	--	--	200
35	SSS6M35S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	564	11.8	7.0	3.5	1.0	200
35	SSS6X35S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	738	16.0	10.5	6.4	3.4	200
39	SSS6M39S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	618	7.0	2.4	--	--	300
39	SSS6X39S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	816	12.0	6.7	3.0	0.5	300

NOTES:

1. Catalog number includes pole with hardware kit. Anchor bolts not included. Before installing, make sure proper anchor bolts and templates are obtained.
2. Tenon size or machining for rectangular arms must be specified. Hand hole position relative to drill location.
3. Shaft size, base square, anchor bolts and projections may vary slightly. All dimensions nominal.
4. EPAs based on shaft properties with wind normal to flat. EPAs calculated using base wind velocity as indicated plus 30% gust factor.

DESCRIPTION

The Ventus™ LED area luminaire provides uncompromising optical performance and outstanding versatility for a wide variety of area and roadway applications. Patent pending modular LightBAR™ technology delivers uniform and energy conscious illumination to walkways, parking lots, roadways, building areas and any security lighting application. UL/cUL Listed for wet locations.

Catalog #	VTS-E08-LED-E1-5XQ-BZ	Type
Project	Froedtert South Southwest Medical Office Bldg	P4
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Construction

Die-cast aluminum frame secures thermally conductive, extruded aluminum heat sink to independent electrical chamber. Heavy-wall, die-cast aluminum housing and door isolates driver components for cooler operation. The unique construction allows for passive cooling and natural cleaning of the extruded heat sink ensuring reliable operation at 40°C high ambient conditions. Stainless steel fasteners and hinging allow access to electrical components for installation and maintenance. Optional tool-less hardware available for ease of entry into electrical chamber.

Optics

Choice of twelve patented, high-efficiency AccuLED Optics™ distributions. Optics are precisely designed to shape the light output, maximizing efficiency and application spacing. AccuLED Optics technology creates consistent distributions with the scalability to meet customized application requirements. Offered Standard in 4000K (+/- 275K) CCT and minimum 70 CRI. Optional 3000K CCT, 5000K CCT and 5700K CCT. For the ultimate level of spill light control, an optional house-side shield accessory can be field or factory installed. The house-side shield is designed to seamlessly integrate with the SL2, SL3 or SL4 optics.

Electrical

LED drivers mount to die-cast aluminum back housing for optimal heat sinking, operation efficacy, and prolonged life. Standard drivers feature electronic universal voltage (120-277V 50/60Hz), 347V 60Hz or 480V 60Hz operation. 480V is compatible for use with 480V Wye systems only. Greater than 0.9 power factor, less than 20% harmonic distortion, and is suitable for operation in -40°C to 40°C ambient environments. All fixtures are shipped standard with 10kV/10kA common – and differential – mode surge protection. LightBARs feature an IP66 enclosure rating and maintain greater than 95% lumen maintenance at 60,000 hours per IESNA TM-21. Occupancy sensor and dimming options available.

Mounting

Cast aluminum 6" arm includes bolt guides allowing for easy positioning of fixture during installation to pole or wall surface. Standard single carton packaging of housing, square pole arm and round pole adapter for contractor friendly arrival of product on site. Optional internal mast arm mount accepts a 1-1/4" to 2" O.D. horizontal tenon, while a two-bolt clamping mechanism secures fixture. Cast-in leveling guides provide +/-5° vertical leveling adjustment. Tenon adapters available to slipfit over poles equipped with 2-3/8" or 3-1/2" O.D. tenon. 3G vibration rated.

Finish

Cast components and arm finished in super TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Standard colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available. Consult the McGraw-Edison Architectural Colors brochure for the complete selection.

Warranty

Five-year warranty.

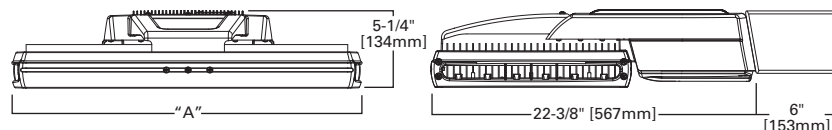


VTS VENTUS LED

2 - 12 LightBARs
Solid State LED

AREA LUMINAIRE

DIMENSIONS



DIMENSIONAL DATA

Number of LightBARs	"A" Width	Weight		EPA [Square Feet]	
		Without Arm	With Arm	Without Arm	With Arm
2-4	12-7/8" [328mm]	24 lbs. [10.91 kgs.]	29 lbs. [13.18 kgs.]	0.94	1.00
5-8	18" [458mm]	30 lbs. [13.64 kgs.]	35 lbs. [15.91 kgs.]	1.10	1.20
9-12	25-7/8" [658mm]	39 lbs. [17.73 kgs.]	44 lbs. [20.00 kgs.]	1.31	1.44

CERTIFICATION DATA

UL/cUL Listed
LM79 / LM80 Compliant
IP66 LightBARs
3G Vibration Rated
ISO 9001

ENERGY DATA

Electronic LED Driver
>0.9 Power Factor
<20% Total Harmonic Distortion
120-277V/50Hz & 60Hz, 347V/60Hz, 480V/60Hz
-40°C Minimum Temperature
40°C Ambient Temperature Rating
50°C Ambient Temperature Rating (HA option)

SHIPPING DATA

Approximate Net Weight:
(See Tabulated Reference Data)

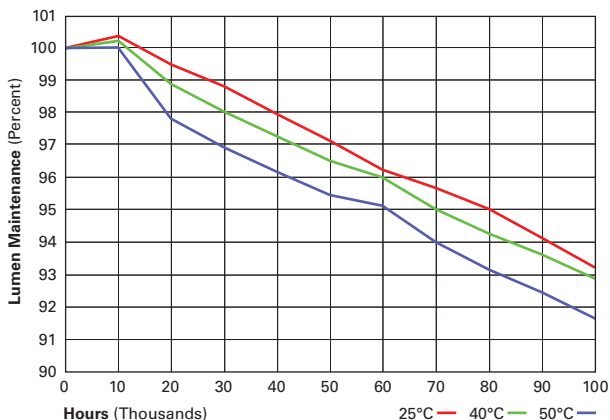
POWER AND LUMENS BY BAR COUNT (21 LED LIGHTBAR)

Number of LightBARs		E02	E03	E04	E05	E06	E07	E08	E09	E10	E11	E12
Drive Current		350mA Drive Current										
Power (Watts)		52W	75W	97W	127W	149W	173W	195W	226W	247W	270W	292W
Current @ 120V (A)		0.44	0.63	0.82	1.07	1.26	1.45	1.63	1.89	2.08	2.26	2.45
Current @ 277V (A)		0.20	0.28	0.36	0.48	0.56	0.64	0.71	0.84	0.92	0.99	1.07
Power (Watts)		58W	82W	99W	132W	159W	174W	196W	227W	247W	271W	293W
Current @ 347V (A)		0.19	0.28	0.29	0.39	0.48	0.56	0.57	0.68	0.76	0.85	0.86
Current @ 480V (A)		0.15	0.20	0.21	0.30	0.36	0.41	0.42	0.51	0.57	0.62	0.63
T2	Lumens	6,173	9,260	12,347	15,434	18,520	21,607	24,694	27,780	30,867	33,954	37,041
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4
T3	Lumens	6,117	9,175	12,233	15,292	18,350	21,409	24,467	27,525	30,584	33,642	36,700
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4
T4	Lumens	5,953	8,929	11,905	14,882	17,858	20,835	23,811	26,787	29,764	32,740	35,716
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
5MQ	Lumens	6,398	9,597	12,795	15,994	19,193	22,392	25,591	28,790	31,989	35,187	38,386
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
5WQ	Lumens	6,315	9,472	12,630	15,787	18,945	22,102	25,260	28,417	31,575	34,732	37,890
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
5XQ	Lumens	6,325	9,488	12,650	15,813	18,975	22,138	25,301	28,463	31,626	34,788	37,951
	BUG Rating	B3-U1-G2	B3-U1-G3	B4-U1-G3	B4-U1-G3	B4-U1-G4	B5-U1-G4	B5-U2-G5	B5-U2-G5	B5-U2-G5	B5-U2-G5	B5-U2-G5
SL2	Lumens	6,018	9,026	12,035	15,044	18,053	21,061	24,070	27,079	30,088	33,096	36,105
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B4-U0-G4
SL3	Lumens	6,034	9,051	12,067	15,084	18,101	21,118	24,135	27,152	30,169	33,186	36,202
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5
SL4	Lumens	5,802	8,703	11,604	14,505	17,406	20,307	23,207	26,108	29,009	31,910	34,811
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
RW	Lumens	6,231	9,346	12,462	15,577	18,692	21,808	24,923	28,039	31,154	34,270	37,385
	BUG Rating	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
SLL/SLR	Lumens	5,375	8,062	10,749	13,436	16,124	18,811	21,498	24,186	26,873	29,560	32,247
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5

LUMEN MAINTENANCE

Ambient Temperature	25,000 Hours*	50,000 Hours*	60,000 Hours*	100,000 Hours	Theoretical L70 (Hours)
25°C	> 99%	> 97%	> 96%	> 93%	> 450,000
40°C	> 98%	> 97%	> 96%	> 92%	> 425,000
50°C	> 97%	> 96%	> 95%	> 91%	> 400,000

* Per IESNA TM-21 data.



LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
10°C	1.02
15°C	1.01
25°C	1.00
40°C	0.99
50°C	0.96

LIGHTBAR OPERATION WITH 2L BI-LEVEL SWITCHING OPTION

Number of LightBars	Circuit 1	Circuit 2
2	1	1
3	2	2
4	2	2
5	3	2
6	3	3
7	4	3
8	4	4
9	5	4
10	6	4
11	7	4
12	8	4

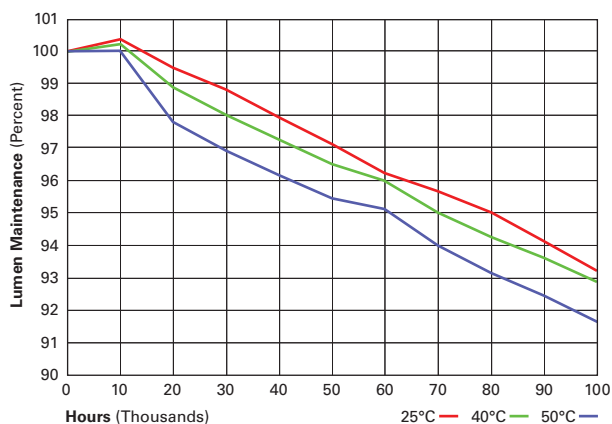
POWER AND LUMENS BY BAR COUNT (7 LED LIGHTBAR)

Number of LightBARs		F02	F03	F04	F05	F06	F07	F08	F09	F10	F11	F12
Drive Current		1A Drive Current										
Power (Watts)		55W	78W	102W	133W	157W	180W	204W	235W	259W	283W	307W
Current @ 120V (A)		0.46	0.66	0.86	1.12	1.31	1.51	1.71	1.97	2.17	2.37	2.57
Current @ 277V (A)		0.21	0.29	0.37	0.50	0.58	0.66	0.74	0.88	0.96	1.04	1.12
Power (Watts)		60W	85W	105W	137W	164W	181W	204W	236W	259W	284W	308W
Current @ 347V (A)		0.19	0.28	0.30	0.41	0.49	0.58	0.60	0.71	0.79	0.88	0.90
Current @ 480V (A)		0.15	0.21	0.22	0.31	0.37	0.43	0.44	0.53	0.59	0.65	0.66
T2	Lumens	5,096	7,641	10,193	12,741	15,289	17,837	20,385	22,933	25,482	28,030	30,578
	BUG Rating	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4
T3	Lumens	5,050	7,574	10,099	12,624	15,149	17,673	20,198	22,723	25,248	27,772	30,297
	BUG Rating	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4
T4	Lumens	4,914	7,371	9,828	12,285	14,742	17,199	19,656	22,114	24,571	27,028	29,485
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4
5MQ	Lumens	5,281	7,922	10,563	13,204	15,844	18,485	21,126	23,767	26,407	29,048	31,689
	BUG Rating	B3-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G3
5WQ	Lumens	5,213	7,820	10,426	13,033	15,640	18,246	20,853	23,459	26,066	28,672	31,279
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
5XQ	Lumens	5,222	7,832	10,443	13,054	15,665	18,275	20,886	23,497	26,108	28,719	31,330
	BUG Rating	B3-U1-G2	B3-U1-G3	B4-U1-G3	B4-U1-G3	B4-U1-G3	B4-U1-G4	B5-U1-G4	B5-U2-G4	B5-U2-G5	B5-U2-G5	B5-U2-G5
SL2	Lumens	4,968	7,451	9,935	12,419	14,903	17,387	19,870	22,354	24,838	27,322	29,806
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4
SL3	Lumens	4,981	7,471	9,962	12,452	14,943	17,433	19,924	22,414	24,905	27,395	29,886
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4
SL4	Lumens	4,790	7,184	9,579	11,974	14,369	16,764	19,158	21,553	23,948	26,343	28,738
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4
RW	Lumens	5,144	7,716	10,287	12,859	15,431	18,003	20,575	23,147	25,719	28,290	30,862
	BUG Rating	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5
SLL/SLR	Lumens	4,437	6,655	8,874	11,092	13,311	15,529	17,747	19,966	22,184	24,403	26,621
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G4	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5

LUMEN MAINTENANCE

Ambient Temperature	25,000 Hours*	50,000 Hours*	60,000 Hours*	100,000 Hours	Theoretical L70 (Hours)
25°C	> 99%	> 97%	> 96%	> 93%	> 450,000
40°C	> 98%	> 97%	> 96%	> 92%	> 425,000
50°C	> 97%	> 96%	> 95%	> 91%	> 400,000

* Per IESNA TM-21 data.



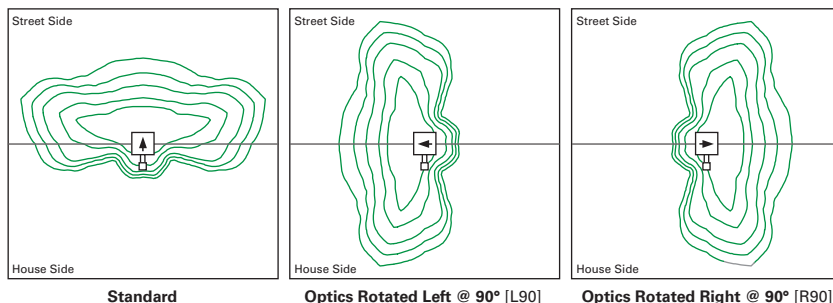
LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
10°C	1.02
15°C	1.01
25°C	1.00
40°C	0.99
50°C	0.96

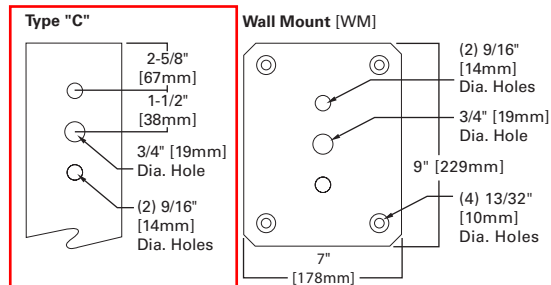
LIGHTBAR OPERATION WITH 2L BI-LEVEL SWITCHING OPTION

Number of LightBars	Circuit 1	Circuit 2
2	1	1
3	2	2
4	2	2
5	3	2
6	3	3
7	4	3
8	4	4
9	5	4
10	6	4
11	7	4
12	8	4

OPTIC ORIENTATION



DRILLING PATTERNS



ORDERING INFORMATION

Sample Number: VTS-E12-LED-E1-T3-GM

Product Family ^{1,2}	Number of LightBARs ^{3,4}		Lamp Type	Voltage	Distribution	Color
VTS=Ventus	E02 =(2) 21 LED LightBARs E03 =(3) 21 LED LightBARs E04 =(4) 21 LED LightBARs E05 =(5) 21 LED LightBARs E06 =(6) 21 LED LightBARs E07 =(7) 21 LED LightBARs E08 =(8) 21 LED LightBARs E09 =(9) 21 LED LightBARs E10 =(10) 21 LED LightBARs E11 =(11) 21 LED LightBARs E12 =(12) 21 LED LightBARs	F02 =(2) 7 LED LightBARs F03 =(3) 7 LED LightBARs F04 =(4) 7 LED LightBARs F05 =(5) 7 LED LightBARs F06 =(6) 7 LED LightBARs F07 =(7) 7 LED LightBARs F08 =(8) 7 LED LightBARs F09 =(9) 7 LED LightBARs F10 =(10) 7 LED LightBARs F11 =(11) 7 LED LightBARs F12 =(12) 7 LED LightBARs	LED =Solid State Light Emitting Diodes	E1 =Electronic (120-277V) 347 =347V ^{5,6} 480 =480V ^{5,6,7}	T2 =Type II T3 =Type III T4 =Type IV 5MQ =Type V Square Medium 5WQ =Type V Square Wide 5XQ =Type V Square Extra Wide SL2 =Type II with Spill Control SL3 =Type III with Spill Control SL4 =Type IV with Spill Control RW =Rectangular Wide SLL =90° Spill Light Eliminator Left SLR =90° Spill Light Eliminator Right	AP =Grey BZ =Bronze BK =Black DP =Dark Platinum GM =Graphite Metallic WH =White
Options (Add as Suffix)				Accessories (Order Separately) ²²		
P =Button Type Photocontrol (120, 208, 240 or 277V. Must Specify Voltage) ⁵ R =NEMA Twistlock Photocontrol Receptacle PER7 =NEMA 7-PIN Twistlock Photocontrol Receptacle ⁸ HA =50°C High Ambient Temperature Rating ^{9, 10} 2L =Two Circuits ^{6, 11, 12, 13} L90 =Optics Rotated 90° Left ¹⁴ R90 =Optics Rotated 90° Right ¹⁴ 7030 =70 CRI / 3000K CCT ¹⁵ 7050 =70 CRI / 5000K CCT ¹⁵ 7060 =70 CRI / 5700K CCT ¹⁵ 8030 =80 CRI / 3000K CCT ¹⁵ TH =Tool-less Door Hardware LCF =LightBAR Cover Plate Matches Housing Finish WG =Wire Guard WM =Wall Mount with Arm IM =Integral Mast Arm MS-LXX =Motion Sensor for On/Off Operation ¹⁶ MS/X-LXX =Motion Sensor for Bi-Level Operation ¹⁷ MS/DIM-LXX =Motion Sensor for Dimming Operation ^{18, 19} DIM =0-10V Dimming Drivers ²⁰ HSS =Factory Installed House Side Shield ²¹				VA1033-XX =Single Tenon Adapter for 2-3/8" O.D. Tenon VA1034-XX =2 @ 180° Tenon Adapter for 2-3/8" O.D. Tenon VA1035-XX =3 @ 120° Tenon Adapter for 2-3/8" O.D. Tenon VA1036-XX =4 @ 90° Tenon Adapter for 2-3/8" O.D. Tenon VA1037-XX =2 @ 90° Tenon Adapter for 2-3/8" O.D. Tenon VA1038-XX =3 @ 90° Tenon Adapter for 2-3/8" O.D. Tenon VA1039-XX =2 @ 120° Tenon Adapter for 2-3/8" O.D. Tenon VA1040-XX =Single Tenon Adapter for 3-1/2" O.D. Tenon VA1041-XX =2 @ 180° Tenon Adapter for 3-1/2" O.D. Tenon VA1042-XX =3 @ 120° Tenon Adapter for 3-1/2" O.D. Tenon VA1043-XX =4 @ 90° Tenon Adapter for 3-1/2" O.D. Tenon VA1044-XX =2 @ 90° Tenon Adapter for 3-1/2" O.D. Tenon VA1045-XX =3 @ 90° Tenon Adapter for 3-1/2" O.D. Tenon VA1046-XX =2 @ 120° Tenon Adapter for 3-1/2" O.D. Tenon FSIR-100 =Wireless Configuration Tool for Occupancy Sensor ²³ OA/RA1016 =NEMA Photocontrol - Multi-Tap OA/RA1027 =NEMA Photocontrol - 480V OA/RA1201 =NEMA Photocontrol - 347V MA1253 =10kV Circuit Module Replacement LB/HSS =Field Installed House Side Shield ²⁴		

NOTES:

- Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to our white paper WP513001EN for additional support information.
- 6" arm and round pole adapter included with fixture.
- 21 LED LightBAR powered at 350mA, 7 LED LightBAR powered at 1A.
- Standard 4000K CCT and nominal 70CRI.
- Not available with HA option.
- Must specify voltage.
- Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).
- Must specify DIM option to add dimming driver(s). Only available in E02-E06 and F02-F06.
- Not available with DIM option or MS/DIM-LXX.
- Not available with button photocontrol or motion sensor. 120 - 277V only.
- Requires two electrical circuits to luminaire. See LightBAR operation table for additional information.
- Consult factory before ordering in combination with MS-LXX or MS/X-LXX options.
- Not available in 347V or 480V.
- Not available with 5MQ, 5WQ or 5XQ distributions. Not available with HSS option.
- Extended lead times apply.
- Sensor housed in external box mounted to the luminaire. Available in E02-E12 and F02-F12 configurations. Replace XX with mounting height in feet for proper lens selection, (e.g., MS-L25). Consult factory for additional information.
- Sensor housed in external box mounted to the luminaire. Available in E02-E12 and F02-F12 configurations. Replace X with number of bars operating in low output mode and replace XX with mounting height for proper lens selection, (e.g., MS/3-L25). Maximum 4 bars in low output mode. Consult factory for additional information.
- Not available with HA option. Only available in F02-F06 and E02-E06. Includes Dimming Drivers. Not available in 347V or 480V.
- Replace XX with mounting height in feet for proper lens selection, (e.g., MS/DIM-L25).
- Available in E02-E06 and F02-F06 only.
- Only for use with SL2, SL3 and SL4 distributions. Not available with L90 or R90 options.
- Replace XX with color suffix.
- Only compatible with MS/DIM-LXX motion sensor.
- One required for each LightBAR. Not available with L90 or R90 options.

Steel Poles



SSS SQUARE STRAIGHT STEEL

Catalog #	SSS4A25SFC1	Type
Project	Froedtert South Southwest Medical Office Bldg	P4
Comments		Date
Prepared by		

FEATURES

- ASTM Grade steel base plate with ASTM A366 base cover
- Hand hole assembly 3" x 5" on 5" and 6" pole; and 2" x 4" on 4" pole
- 10'-39' mounting heights
- Drilled or tenon (specify)

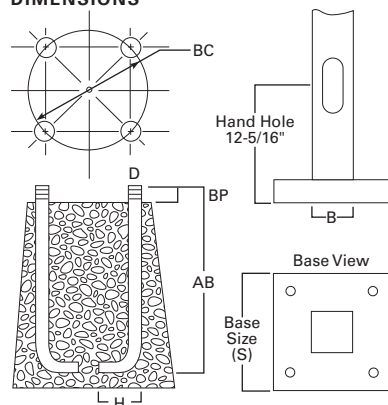
ORDERING INFORMATION

SAMPLE NUMBER: SSS5A20SFM1XG

Product Family	Shaft Size (Inches) ¹	Wall Thickness (Inches)	Mounting Height (Feet)	Base Type	Finish	Mounting Type	Number and Location of Arms	Arm Lengths (Feet)	Options (Add as Suffix)
SSS=Square Straight Steel	4=4" 5=5" 6=6"	A=0.120" M=0.188" X=0.250"	10=10' 15=15' 20=20' 25=25' 30=30' 35=35' 39=39'	S=Square Steel Base	F=Dark Bronze G=Galvanized Steel J=Summit White K=Carbon Bronze L=Dark Platinum P=Primer Powder Coat R=Hartford Green S=Silver T=Graphite Metallic V=Grey W=White X=Custom Color Y=Black	2=2-3/8" O.D. Tenon (4" Long) 3=3-1/2" O.D. Tenon (5" Long) 4=4" O.D. Tenon (6" Long) 5=3" O.D. Tenon (4" Long) 6=2-3/8" O.D. Tenon (6" Long) 7=4" O.D. Tenon (10" Long) A=Type A Drilling C=Type C Drilling E=Type E Drilling F=Type F Drilling G=Type G Drilling J=Type J Drilling K=Type K Drilling M=Type M Drilling R=Type R Drilling Z=Type Z Drilling	1=Single 2=2 at 180° 3=Triple ² 4=4 at 90° 5=2 at 90° X=None	X=None	A=1/2" Tapped Hub (Specify location desired) B=3/4" Tapped Hub (Specify location desired) C=Convenience Outlet ³ E=GFCI Convenience Outlet ³ G=Ground Lug H=Additional Hand Hole ⁴ L=Drilled for Bumper Glitter V=Vibration Damper

NOTES: 1. All shaft sizes nominal. 2. Square poles are 3 at 90°, round poles are 3 at 120°. 3. Outlet is located 4' above base and on same side of pole as hand hole, unless specified otherwise. Receptacle not included, provision only. 4. Additional hand hole is located 12" below pole top and 90° from standard hand hole location, unless otherwise specified.

DIMENSIONS



WARNING: Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to pole white paper WP513001EN for additional support information. Before installing, make sure proper anchor bolts and templates are obtained. The use of unauthorized accessories such as banners, signs, cameras or pennants for which the pole was not designed voids the pole warranty and may result in pole failure causing serious injury or property damage. Information regarding total loading capacity can be supplied upon request. The pole warranty is void unless poles are used and installed as a complete pole and luminaire combination. This warranty specifically excludes failure as the result of a third party act or omission, misuse, unanticipated uses, fatigue failure or similar phenomena resulting from induced vibration, harmonic oscillation or resonance associated with movement of air currents around the product.

Specifications and dimensions subject to change without notice. Consult your lighting representative at Eaton or visit www.eaton.com/lighting for available options, accessories and ordering information.

Effective Projected Area (At Pole Top)

Mounting Height (Feet)	Catalog Number ^{1,2}	Wall Thickness (Inches)	Base Square ³ (Inches)	Bolt Circle Diameter (Inches)	Anchor Bolt Projection ³ (Inches)	Shaft Size ³ (Inches)	Anchor Bolt Diameter x Length x Hook (Inches)	Net Weight (Pounds)	Maximum Effective Projected Area (Square Feet) ⁴				Max. Fixture Load - Includes Bracket (Pounds)
MH			S	BC	BP	B	D x AB x H		80 mph	90 mph	100 mph	110 mph	
10	SSS4A10S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	85	30.0	22.0	17.0	13.0	100
15	SSS4A15S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	118	15.0	11.5	8.7	6.5	100
20	SSS4A20S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	150	8.7	5.9	3.9	2.5	150
20	SSS5A20S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	183	15.4	11.1	7.9	5.5	150
25	SSS4A25S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	181	3.7	1.7	0.3	--	200
25	SSS5A25S	0.120	10-1/2	11	5	5	3/4 x 25 x 3	222	9.3	6.0	3.5	1.6	200
25	SSS6A25S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	284	9.9	6.1	3.5	1.2	200
30	SSS5A30S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	260	4.7	2.1	--	--	200
30	SSS5M30S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	392	10.4	6.4	3.5	1.5	200
30	SSS6A30S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	330	4.3	1.4	--	--	200
30	SSS6M30S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	489	19.0	13.0	8.7	5.6	200
35	SSS5M35S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	453	5.8	2.8	--	--	200
35	SSS6M35S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	564	12.8	7.2	3.7	1.0	200
35	SSS6X35S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	738	16.5	11.0	6.8	3.5	200
39	SSS6M39S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	618	7.3	3.0	--	--	300
39	SSS6X39S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	816	13.0	7.0	3.7	0.8	300

Effective Projected Area (Two Feet Above Pole Top)

Mounting Height (Feet)	Catalog Number ^{1,2}	Wall Thickness (Inches)	Base Square ³ (Inches)	Bolt Circle Diameter (Inches)	Anchor Bolt Projection ³ (Inches)	Shaft Size ³ (Inches)	Anchor Bolt Diameter x Length x Hook (Inches)	Net Weight (Pounds)	Maximum Effective Projected Area (Square Feet) ⁴				Max. Fixture Load - Includes Bracket (Pounds)
MH			S	BC	BP	B	D x AB x H		80 mph	90 mph	100 mph	110 mph	
10	SSS4A10S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	85	23.0	17.5	14.0	11.0	100
15	SSS4A15S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	118	13.4	10.0	7.5	5.7	100
20	SSS4A20S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	150	7.6	5.2	3.4	2.1	150
20	SSS5A20S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	183	13.8	9.9	7.1	4.9	150
25	SSS4A25S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	181	3.4	1.6	0.3	--	200
25	SSS5A25S	0.120	10-1/2	11	5	5	3/4 x 25 x 3	222	8.5	5.5	3.2	1.5	200
25	SSS6A25S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	284	9.1	5.6	3.0	1.2	200
30	SSS5A30S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	260	1.8	--	--	--	200
30	SSS5M30S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	392	9.6	5.9	1.9	0.2	200
30	SSS6A30S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	330	4.1	1.3	--	--	200
30	SSS6M30S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	489	18.5	12.5	8.4	5.3	200
35	SSS5M35S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	453	5.5	2.4	--	--	200
35	SSS6M35S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	564	11.8	7.0	3.5	1.0	200
35	SSS6X35S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	738	16.0	10.5	6.4	3.4	200
39	SSS6M39S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	618	7.0	2.4	--	--	300
39	SSS6X39S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	816	12.0	6.7	3.0	0.5	300

NOTES:

1. Catalog number includes pole with hardware kit. Anchor bolts not included. Before installing, make sure proper anchor bolts and templates are obtained.
2. Tenon size or machining for rectangular arms must be specified. Hand hole position relative to drill location.
3. Shaft size, base square, anchor bolts and projections may vary slightly. All dimensions nominal.
4. EPAs based on shaft properties with wind normal to flat. EPAs calculated using base wind velocity as indicated plus 30% gust factor.

DESCRIPTION

The Ventus™ LED area luminaire provides uncompromising optical performance and outstanding versatility for a wide variety of area and roadway applications. Patent pending modular LightBAR™ technology delivers uniform and energy conscious illumination to walkways, parking lots, roadways, building areas and any security lighting application. UL/cUL Listed for wet locations.

Catalog #	VTS-E08-LED-E1-T4-BZ	Type
Project	Froedtert South Southwest Medical Office Bldg	P5
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Construction

Die-cast aluminum frame secures thermally conductive, extruded aluminum heat sink to independent electrical chamber. Heavy-wall, die-cast aluminum housing and door isolates driver components for cooler operation. The unique construction allows for passive cooling and natural cleaning of the extruded heat sink ensuring reliable operation at 40°C high ambient conditions. Stainless steel fasteners and hinging allow access to electrical components for installation and maintenance. Optional tool-less hardware available for ease of entry into electrical chamber.

Optics

Choice of twelve patented, high-efficiency AccuLED Optics™ distributions. Optics are precisely designed to shape the light output, maximizing efficiency and application spacing. AccuLED Optics technology creates consistent distributions with the scalability to meet customized application requirements. Offered Standard in 4000K (+/- 275K) CCT and minimum 70 CRI. Optional 3000K CCT, 5000K CCT and 5700K CCT. For the ultimate level of spill light control, an optional house-side shield accessory can be field or factory installed. The house-side shield is designed to seamlessly integrate with the SL2, SL3 or SL4 optics.

Electrical

LED drivers mount to die-cast aluminum back housing for optimal heat sinking, operation efficacy, and prolonged life. Standard drivers feature electronic universal voltage (120-277V 50/60Hz), 347V 60Hz or 480V 60Hz operation. 480V is compatible for use with 480V Wye systems only. Greater than 0.9 power factor, less than 20% harmonic distortion, and is suitable for operation in -40°C to 40°C ambient environments. All fixtures are shipped standard with 10kV/10kA common – and differential – mode surge protection. LightBARs feature an IP66 enclosure rating and maintain greater than 95% lumen maintenance at 60,000 hours per IESNA TM-21. Occupancy sensor and dimming options available.

Mounting

Cast aluminum 6" arm includes bolt guides allowing for easy positioning of fixture during installation to pole or wall surface. Standard single carton packaging of housing, square pole arm and round pole adapter for contractor friendly arrival of product on site. Optional internal mast arm mount accepts a 1-1/4" to 2" O.D. horizontal tenon, while a two-bolt clamping mechanism secures fixture. Cast-in leveling guides provide +/-5° vertical leveling adjustment. Tenon adapters available to slipfit over poles equipped with 2-3/8" or 3-1/2" O.D. tenon. 3G vibration rated.

Finish

Cast components and arm finished in super TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Standard colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available. Consult the McGraw-Edison Architectural Colors brochure for the complete selection.

Warranty

Five-year warranty.

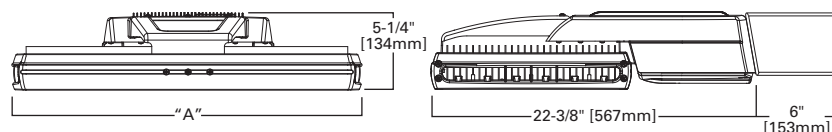


VTS VENTUS LED

2 - 12 LightBARs
Solid State LED

AREA LUMINAIRE

DIMENSIONS



DIMENSIONAL DATA

Number of LightBARs	"A" Width	Weight		EPA [Square Feet]	
		Without Arm	With Arm	Without Arm	With Arm
2-4	12-7/8" [328mm]	24 lbs. [10.91 kgs.]	29 lbs. [13.18 kgs.]	0.94	1.00
5-8	18" [458mm]	30 lbs. [13.64 kgs.]	35 lbs. [15.91 kgs.]	1.10	1.20
9-12	25-7/8" [658mm]	39 lbs. [17.73 kgs.]	44 lbs. [20.00 kgs.]	1.31	1.44

CERTIFICATION DATA

UL/cUL Listed
LM79 / LM80 Compliant
IP66 LightBARs
3G Vibration Rated
ISO 9001

ENERGY DATA

Electronic LED Driver
>0.9 Power Factor
<20% Total Harmonic Distortion
120-277V/50Hz & 60Hz, 347V/60Hz, 480V/60Hz
-40°C Minimum Temperature
40°C Ambient Temperature Rating
50°C Ambient Temperature Rating (HA option)

SHIPPING DATA

Approximate Net Weight:
(See Tabulated Reference Data)

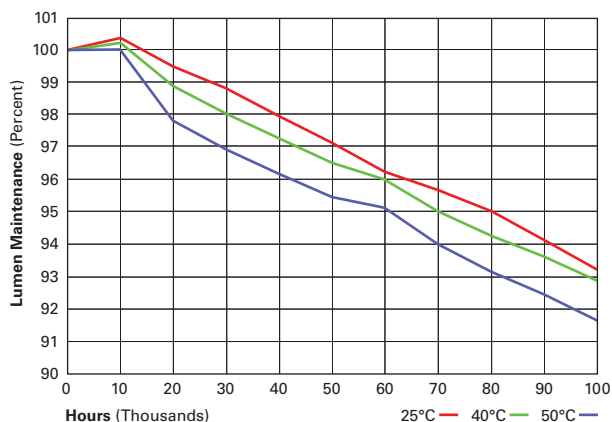
POWER AND LUMENS BY BAR COUNT (21 LED LIGHTBAR)

Number of LightBARs		E02	E03	E04	E05	E06	E07	E08	E09	E10	E11	E12
Drive Current		350mA Drive Current										
Power (Watts)		52W	75W	97W	127W	149W	173W	195W	226W	247W	270W	292W
Current @ 120V (A)		0.44	0.63	0.82	1.07	1.26	1.45	1.63	1.89	2.08	2.26	2.45
Current @ 277V (A)		0.20	0.28	0.36	0.48	0.56	0.64	0.71	0.84	0.92	0.99	1.07
Power (Watts)		58W	82W	99W	132W	159W	174W	196W	227W	247W	271W	293W
Current @ 347V (A)		0.19	0.28	0.29	0.39	0.48	0.56	0.57	0.68	0.76	0.85	0.86
Current @ 480V (A)		0.15	0.20	0.21	0.30	0.36	0.41	0.42	0.51	0.57	0.62	0.63
T2	Lumens	6,173	9,260	12,347	15,434	18,520	21,607	24,694	27,780	30,867	33,954	37,041
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4
T3	Lumens	6,117	9,175	12,233	15,292	18,350	21,409	24,467	27,525	30,584	33,642	36,700
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4
T4	Lumens	5,953	8,929	11,905	14,882	17,858	20,835	23,811	26,787	29,764	32,740	35,716
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
5MQ	Lumens	6,398	9,597	12,795	15,994	19,193	22,392	25,591	28,790	31,989	35,187	38,386
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
5WQ	Lumens	6,315	9,472	12,630	15,787	18,945	22,102	25,260	28,417	31,575	34,732	37,890
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
5XQ	Lumens	6,325	9,488	12,650	15,813	18,975	22,138	25,301	28,463	31,626	34,788	37,951
	BUG Rating	B3-U1-G2	B3-U1-G3	B4-U1-G3	B4-U1-G3	B4-U1-G4	B5-U1-G4	B5-U2-G5	B5-U2-G5	B5-U2-G5	B5-U2-G5	B5-U2-G5
SL2	Lumens	6,018	9,026	12,035	15,044	18,053	21,061	24,070	27,079	30,088	33,096	36,105
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B4-U0-G4
SL3	Lumens	6,034	9,051	12,067	15,084	18,101	21,118	24,135	27,152	30,169	33,186	36,202
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5
SL4	Lumens	5,802	8,703	11,604	14,505	17,406	20,307	23,207	26,108	29,009	31,910	34,811
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
RW	Lumens	6,231	9,346	12,462	15,577	18,692	21,808	24,923	28,039	31,154	34,270	37,385
	BUG Rating	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
SLL/SLR	Lumens	5,375	8,062	10,749	13,436	16,124	18,811	21,498	24,186	26,873	29,560	32,247
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5

LUMEN MAINTENANCE

Ambient Temperature	25,000 Hours*	50,000 Hours*	60,000 Hours*	100,000 Hours	Theoretical L70 (Hours)
25°C	> 99%	> 97%	> 96%	> 93%	> 450,000
40°C	> 98%	> 97%	> 96%	> 92%	> 425,000
50°C	> 97%	> 96%	> 95%	> 91%	> 400,000

* Per IESNA TM-21 data.



LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
10°C	1.02
15°C	1.01
25°C	1.00
40°C	0.99
50°C	0.96

LIGHTBAR OPERATION WITH 2L BI-LEVEL SWITCHING OPTION

Number of LightBars	Circuit 1	Circuit 2
2	1	1
3	2	2
4	2	2
5	3	2
6	3	3
7	4	3
8	4	4
9	5	4
10	6	4
11	7	4
12	8	4

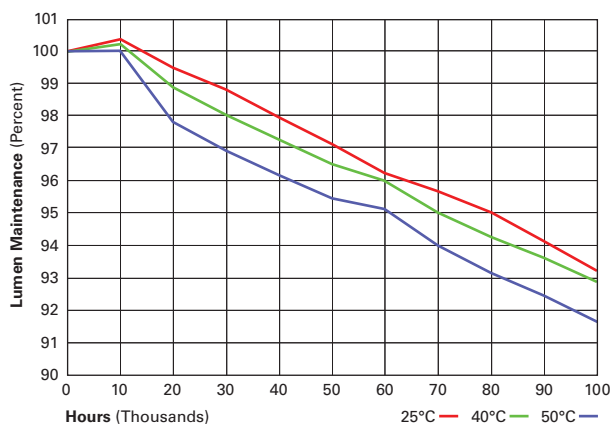
POWER AND LUMENS BY BAR COUNT (7 LED LIGHTBAR)

Number of LightBARs		F02	F03	F04	F05	F06	F07	F08	F09	F10	F11	F12
Drive Current		1A Drive Current										
Power (Watts)		55W	78W	102W	133W	157W	180W	204W	235W	259W	283W	307W
Current @ 120V (A)		0.46	0.66	0.86	1.12	1.31	1.51	1.71	1.97	2.17	2.37	2.57
Current @ 277V (A)		0.21	0.29	0.37	0.50	0.58	0.66	0.74	0.88	0.96	1.04	1.12
Power (Watts)		60W	85W	105W	137W	164W	181W	204W	236W	259W	284W	308W
Current @ 347V (A)		0.19	0.28	0.30	0.41	0.49	0.58	0.60	0.71	0.79	0.88	0.90
Current @ 480V (A)		0.15	0.21	0.22	0.31	0.37	0.43	0.44	0.53	0.59	0.65	0.66
T2	Lumens	5,096	7,641	10,193	12,741	15,289	17,837	20,385	22,933	25,482	28,030	30,578
	BUG Rating	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4
T3	Lumens	5,050	7,574	10,099	12,624	15,149	17,673	20,198	22,723	25,248	27,772	30,297
	BUG Rating	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4
T4	Lumens	4,914	7,371	9,828	12,285	14,742	17,199	19,656	22,114	24,571	27,028	29,485
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4
5MQ	Lumens	5,281	7,922	10,563	13,204	15,844	18,485	21,126	23,767	26,407	29,048	31,689
	BUG Rating	B3-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G3
5WQ	Lumens	5,213	7,820	10,426	13,033	15,640	18,246	20,853	23,459	26,066	28,672	31,279
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
5XQ	Lumens	5,222	7,832	10,443	13,054	15,665	18,275	20,886	23,497	26,108	28,719	31,330
	BUG Rating	B3-U1-G2	B3-U1-G3	B4-U1-G3	B4-U1-G3	B4-U1-G3	B4-U1-G4	B5-U1-G4	B5-U2-G4	B5-U2-G5	B5-U2-G5	B5-U2-G5
SL2	Lumens	4,968	7,451	9,935	12,419	14,903	17,387	19,870	22,354	24,838	27,322	29,806
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4
SL3	Lumens	4,981	7,471	9,962	12,452	14,943	17,433	19,924	22,414	24,905	27,395	29,886
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4
SL4	Lumens	4,790	7,184	9,579	11,974	14,369	16,764	19,158	21,553	23,948	26,343	28,738
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4
RW	Lumens	5,144	7,716	10,287	12,859	15,431	18,003	20,575	23,147	25,719	28,290	30,862
	BUG Rating	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5
SLL/SLR	Lumens	4,437	6,655	8,874	11,092	13,311	15,529	17,747	19,966	22,184	24,403	26,621
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G4	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5

LUMEN MAINTENANCE

Ambient Temperature	25,000 Hours*	50,000 Hours*	60,000 Hours*	100,000 Hours	Theoretical L70 (Hours)
25°C	> 99%	> 97%	> 96%	> 93%	> 450,000
40°C	> 98%	> 97%	> 96%	> 92%	> 425,000
50°C	> 97%	> 96%	> 95%	> 91%	> 400,000

* Per IESNA TM-21 data.



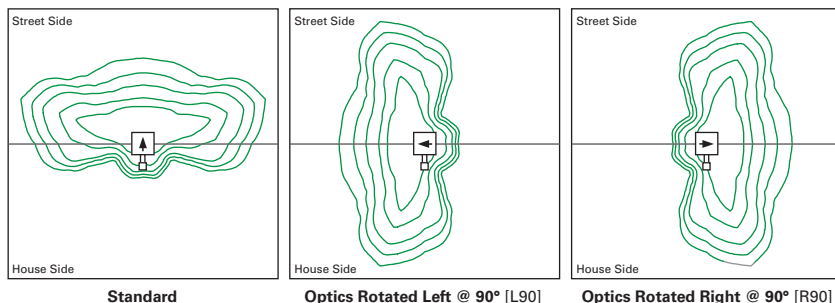
LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
10°C	1.02
15°C	1.01
25°C	1.00
40°C	0.99
50°C	0.96

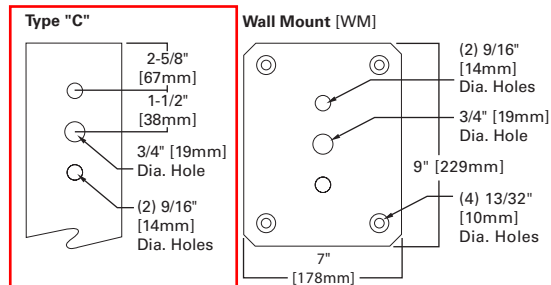
LIGHTBAR OPERATION WITH 2L BI-LEVEL SWITCHING OPTION

Number of LightBars	Circuit 1	Circuit 2
2	1	1
3	2	2
4	2	2
5	3	2
6	3	3
7	4	3
8	4	4
9	5	4
10	6	4
11	7	4
12	8	4

OPTIC ORIENTATION



DRILLING PATTERNS



ORDERING INFORMATION

Sample Number: VTS-E12-LED-E1-T3-GM

Product Family ^{1,2}	Number of LightBARs ^{3,4}		Lamp Type	Voltage	Distribution	Color
VTS=Ventus	E02 =(2) 21 LED LightBARs E03 =(3) 21 LED LightBARs E04 =(4) 21 LED LightBARs E05 =(5) 21 LED LightBARs E06 =(6) 21 LED LightBARs E07 =(7) 21 LED LightBARs E08 =(8) 21 LED LightBARs E09 =(9) 21 LED LightBARs E10 =(10) 21 LED LightBARs E11 =(11) 21 LED LightBARs E12 =(12) 21 LED LightBARs	F02 =(2) 7 LED LightBARs F03 =(3) 7 LED LightBARs F04 =(4) 7 LED LightBARs F05 =(5) 7 LED LightBARs F06 =(6) 7 LED LightBARs F07 =(7) 7 LED LightBARs F08 =(8) 7 LED LightBARs F09 =(9) 7 LED LightBARs F10 =(10) 7 LED LightBARs F11 =(11) 7 LED LightBARs F12 =(12) 7 LED LightBARs	LED=Solid State Light Emitting Diodes	E1=Electronic (120-277V) 347=347V ^{5,6} 480=480V ^{5,6,7}	T2=Type II T3=Type III T4=Type IV 5MQ=Type V Square Medium 5WQ=Type V Square Wide 5XQ=Type V Square Extra Wide SL2=Type II with Spill Control SL3=Type III with Spill Control SL4=Type IV with Spill Control RW=Rectangular Wide SLL=90° Spill Light Eliminator Left SLR=90° Spill Light Eliminator Right	AP=Grey BZ=Bronze BK=Black DP=Dark Platinum GM=Graphite Metallic WH=White
Options (Add as Suffix)				Accessories (Order Separately) ²²		
P=Button Type Photocontrol (120, 208, 240 or 277V. Must Specify Voltage) ⁵ R=NEMA Twistlock Photocontrol Receptacle PER7=NEMA 7-PIN Twistlock Photocontrol Receptacle ⁸ HA=50°C High Ambient Temperature Rating ^{9,10} 2L=Two Circuits ^{6,11,12,13} L90=Optics Rotated 90° Left ¹⁴ R90=Optics Rotated 90° Right ¹⁴ 7030=70 CRI / 3000K CCT ¹⁵ 7050=70 CRI / 5000K CCT ¹⁵ 7060=70 CRI / 5700K CCT ¹⁵ 8030=80 CRI / 3000K CCT ¹⁵ TH=Tool-less Door Hardware LCF=LightBAR Cover Plate Matches Housing Finish WG=Wire Guard WM=Wall Mount with Arm IM=Integral Mast Arm MS-LXX=Motion Sensor for On/Off Operation ¹⁶ MS/X-LXX=Motion Sensor for Bi-Level Operation ¹⁷ MS/DIM-LXX=Motion Sensor for Dimming Operation ^{18,19} DIM=0-10V Dimming Drivers ²⁰ HSS=Factory Installed House Side Shield ²¹				VA1033-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon VA1034-XX=2 @ 180° Tenon Adapter for 2-3/8" O.D. Tenon VA1035-XX=3 @ 120° Tenon Adapter for 2-3/8" O.D. Tenon VA1036-XX=4 @ 90° Tenon Adapter for 2-3/8" O.D. Tenon VA1037-XX=2 @ 90° Tenon Adapter for 2-3/8" O.D. Tenon VA1038-XX=3 @ 90° Tenon Adapter for 2-3/8" O.D. Tenon VA1039-XX=2 @ 120° Tenon Adapter for 2-3/8" O.D. Tenon VA1040-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon VA1041-XX=2 @ 180° Tenon Adapter for 3-1/2" O.D. Tenon VA1042-XX=3 @ 120° Tenon Adapter for 3-1/2" O.D. Tenon VA1043-XX=4 @ 90° Tenon Adapter for 3-1/2" O.D. Tenon VA1044-XX=2 @ 90° Tenon Adapter for 3-1/2" O.D. Tenon VA1045-XX=3 @ 90° Tenon Adapter for 3-1/2" O.D. Tenon VA1046-XX=2 @ 120° Tenon Adapter for 3-1/2" O.D. Tenon FSIR-100=Wireless Configuration Tool for Occupancy Sensor ²³ OA/RA1016=NEMA Photocontrol - Multi-Tap OA/RA1027=NEMA Photocontrol - 480V OA/RA1201=NEMA Photocontrol - 347V MA1253=10kV Circuit Module Replacement LB/HSS=Field Installed House Side Shield ²⁴		

NOTES:

- Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to our white paper WP513001EN for additional support information.
- 6" arm and round pole adapter included with fixture.
- 21 LED LightBAR powered at 350mA, 7 LED LightBAR powered at 1A.
- Standard 4000K CCT and nominal 70CRI.
- Not available with HA option.
- Must specify voltage.
- Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).
- Must specify DIM option to add dimming driver(s). Only available in E02-E06 and F02-F06.
- Not available with DIM option or MS/DIM-LXX.
- Not available with button photocontrol or motion sensor. 120 - 277V only.
- Requires two electrical circuits to luminaire. See LightBAR operation table for additional information.
- Consult factory before ordering in combination with MS-LXX or MS/X-LXX options.
- Not available in 347V or 480V.
- Not available with 5MQ, 5WQ or 5XQ distributions. Not available with HSS option.
- Extended lead times apply.
- Sensor housed in external box mounted to the luminaire. Available in E02-E12 and F02-F12 configurations. Replace XX with mounting height in feet for proper lens selection, (e.g., MS-L25). Consult factory for additional information.
- Sensor housed in external box mounted to the luminaire. Available in E02-E12 and F02-F12 configurations. Replace X with number of bars operating in low output mode and replace XX with mounting height for proper lens selection, (e.g., MS/3-L25). Maximum 4 bars in low output mode. Consult factory for additional information.
- Not available with HA option. Only available in F02-F06 and E02-E06. Includes Dimming Drivers. Not available in 347V or 480V.
- Replace XX with mounting height in feet for proper lens selection, (e.g., MS/DIM-L25).
- Available in E02-E06 and F02-F06 only.
- Only for use with SL2, SL3 and SL4 distributions. Not available with L90 or R90 options.
- Replace XX with color suffix.
- Only compatible with MS/DIM-LXX motion sensor.
- One required for each LightBAR. Not available with L90 or R90 options.

Steel Poles



SSS SQUARE STRAIGHT STEEL

Catalog #	SSS4A25SFC1	Type
Project	Froedtert South Southwest Medical Office Bldg	P5
Comments		Date
Prepared by		

FEATURES

- ASTM Grade steel base plate with ASTM A366 base cover
- Hand hole assembly 3" x 5" on 5" and 6" pole; and 2" x 4" on 4" pole
- 10'-39' mounting heights
- Drilled or tenon (specify)

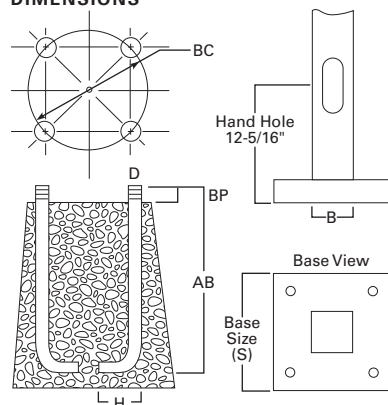
ORDERING INFORMATION

SAMPLE NUMBER: SSS5A20SFM1XG

Product Family	Shaft Size (Inches) ¹	Wall Thickness (Inches)	Mounting Height (Feet)	Base Type	Finish	Mounting Type	Number and Location of Arms	Arm Lengths (Feet)	Options (Add as Suffix)
SSS=Square Straight Steel	4=4" 5=5" 6=6"	A=0.120" M=0.188" X=0.250"	10=10' 15=15' 20=20' 25=25' 30=30' 35=35' 39=39'	S=Square Steel Base	F=Dark Bronze G=Galvanized Steel J=Summit White K=Carbon Bronze L=Dark Platinum P=Primer Powder Coat R=Hartford Green S=Silver T=Graphite Metallic V=Grey W=White X=Custom Color Y=Black	2=2-3/8" O.D. Tenon (4" Long) 3=3-1/2" O.D. Tenon (5" Long) 4=4" O.D. Tenon (6" Long) 5=3" O.D. Tenon (4" Long) 6=2-3/8" O.D. Tenon (6" Long) 7=4" O.D. Tenon (10" Long) A=Type A Drilling C=Type C Drilling E=Type E Drilling F=Type F Drilling G=Type G Drilling J=Type J Drilling K=Type K Drilling M=Type M Drilling R=Type R Drilling Z=Type Z Drilling	1=Single 2=2 at 180° 3=Triple ² 4=4 at 90° 5=2 at 90° X=None	X=None	A=1/2" Tapped Hub (Specify location desired) B=3/4" Tapped Hub (Specify location desired) C=Convenience Outlet ³ E=GFCI Convenience Outlet ³ G=Ground Lug H=Additional Hand Hole ⁴ L=Drilled for Bumper Glitter V=Vibration Damper

NOTES: 1. All shaft sizes nominal. 2. Square poles are 3 at 90°, round poles are 3 at 120°. 3. Outlet is located 4' above base and on same side of pole as hand hole, unless specified otherwise. Receptacle not included, provision only. 4. Additional hand hole is located 12" below pole top and 90° from standard hand hole location, unless otherwise specified.

DIMENSIONS



WARNING: Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to pole white paper WP513001EN for additional support information. Before installing, make sure proper anchor bolts and templates are obtained. The use of unauthorized accessories such as banners, signs, cameras or pennants for which the pole was not designed voids the pole warranty and may result in pole failure causing serious injury or property damage. Information regarding total loading capacity can be supplied upon request. The pole warranty is void unless poles are used and installed as a complete pole and luminaire combination. This warranty specifically excludes failure as the result of a third party act or omission, misuse, unanticipated uses, fatigue failure or similar phenomena resulting from induced vibration, harmonic oscillation or resonance associated with movement of air currents around the product.

Specifications and dimensions subject to change without notice. Consult your lighting representative at Eaton or visit www.eaton.com/lighting for available options, accessories and ordering information.

Effective Projected Area (At Pole Top)

Mounting Height (Feet)	Catalog Number ^{1,2}	Wall Thickness (Inches)	Base Square ³ (Inches)	Bolt Circle Diameter (Inches)	Anchor Bolt Projection ³ (Inches)	Shaft Size ³ (Inches)	Anchor Bolt Diameter x Length x Hook (Inches)	Net Weight (Pounds)	Maximum Effective Projected Area (Square Feet) ⁴				Max. Fixture Load - Includes Bracket (Pounds)
MH			S	BC	BP	B	D x AB x H		80 mph	90 mph	100 mph	110 mph	
10	SSS4A10S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	85	30.0	22.0	17.0	13.0	100
15	SSS4A15S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	118	15.0	11.5	8.7	6.5	100
20	SSS4A20S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	150	8.7	5.9	3.9	2.5	150
20	SSS5A20S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	183	15.4	11.1	7.9	5.5	150
25	SSS4A25S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	181	3.7	1.7	0.3	--	200
25	SSS5A25S	0.120	10-1/2	11	5	5	3/4 x 25 x 3	222	9.3	6.0	3.5	1.6	200
25	SSS6A25S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	284	9.9	6.1	3.5	1.2	200
30	SSS5A30S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	260	4.7	2.1	--	--	200
30	SSS5M30S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	392	10.4	6.4	3.5	1.5	200
30	SSS6A30S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	330	4.3	1.4	--	--	200
30	SSS6M30S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	489	19.0	13.0	8.7	5.6	200
35	SSS5M35S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	453	5.8	2.8	--	--	200
35	SSS6M35S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	564	12.8	7.2	3.7	1.0	200
35	SSS6X35S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	738	16.5	11.0	6.8	3.5	200
39	SSS6M39S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	618	7.3	3.0	--	--	300
39	SSS6X39S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	816	13.0	7.0	3.7	0.8	300

Effective Projected Area (Two Feet Above Pole Top)

Mounting Height (Feet)	Catalog Number ^{1,2}	Wall Thickness (Inches)	Base Square ³ (Inches)	Bolt Circle Diameter (Inches)	Anchor Bolt Projection ³ (Inches)	Shaft Size ³ (Inches)	Anchor Bolt Diameter x Length x Hook (Inches)	Net Weight (Pounds)	Maximum Effective Projected Area (Square Feet) ⁴				Max. Fixture Load - Includes Bracket (Pounds)
MH			S	BC	BP	B	D x AB x H		80 mph	90 mph	100 mph	110 mph	
10	SSS4A10S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	85	23.0	17.5	14.0	11.0	100
15	SSS4A15S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	118	13.4	10.0	7.5	5.7	100
20	SSS4A20S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	150	7.6	5.2	3.4	2.1	150
20	SSS5A20S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	183	13.8	9.9	7.1	4.9	150
25	SSS4A25S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	181	3.4	1.6	0.3	--	200
25	SSS5A25S	0.120	10-1/2	11	5	5	3/4 x 25 x 3	222	8.5	5.5	3.2	1.5	200
25	SSS6A25S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	284	9.1	5.6	3.0	1.2	200
30	SSS5A30S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	260	1.8	--	--	--	200
30	SSS5M30S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	392	9.6	5.9	1.9	0.2	200
30	SSS6A30S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	330	4.1	1.3	--	--	200
30	SSS6M30S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	489	18.5	12.5	8.4	5.3	200
35	SSS5M35S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	453	5.5	2.4	--	--	200
35	SSS6M35S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	564	11.8	7.0	3.5	1.0	200
35	SSS6X35S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	738	16.0	10.5	6.4	3.4	200
39	SSS6M39S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	618	7.0	2.4	--	--	300
39	SSS6X39S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	816	12.0	6.7	3.0	0.5	300

NOTES:

1. Catalog number includes pole with hardware kit. Anchor bolts not included. Before installing, make sure proper anchor bolts and templates are obtained.
2. Tenon size or machining for rectangular arms must be specified. Hand hole position relative to drill location.
3. Shaft size, base square, anchor bolts and projections may vary slightly. All dimensions nominal.
4. EPAs based on shaft properties with wind normal to flat. EPAs calculated using base wind velocity as indicated plus 30% gust factor.

DESCRIPTION

The Ventus™ LED area luminaire provides uncompromising optical performance and outstanding versatility for a wide variety of area and roadway applications. Patent pending modular LightBAR™ technology delivers uniform and energy conscious illumination to walkways, parking lots, roadways, building areas and any security lighting application. UL/cUL Listed for wet locations.

Catalog #	VTS-E12-LED-E1-T4-BZ	Type
Project	Froedtert South Southwest Medical Office Bldg	P6
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Construction

Die-cast aluminum frame secures thermally conductive, extruded aluminum heat sink to independent electrical chamber. Heavy-wall, die-cast aluminum housing and door isolates driver components for cooler operation. The unique construction allows for passive cooling and natural cleaning of the extruded heat sink ensuring reliable operation at 40°C high ambient conditions. Stainless steel fasteners and hinging allow access to electrical components for installation and maintenance. Optional tool-less hardware available for ease of entry into electrical chamber.

Optics

Choice of twelve patented, high-efficiency AccuLED Optics™ distributions. Optics are precisely designed to shape the light output, maximizing efficiency and application spacing. AccuLED Optics technology creates consistent distributions with the scalability to meet customized application requirements. Offered Standard in 4000K (+/- 275K) CCT and minimum 70 CRI. Optional 3000K CCT, 5000K CCT and 5700K CCT. For the ultimate level of spill light control, an optional house-side shield accessory can be field or factory installed. The house-side shield is designed to seamlessly integrate with the SL2, SL3 or SL4 optics.

Electrical

LED drivers mount to die-cast aluminum back housing for optimal heat sinking, operation efficacy, and prolonged life. Standard drivers feature electronic universal voltage (120-277V 50/60Hz), 347V 60Hz or 480V 60Hz operation. 480V is compatible for use with 480V Wye systems only. Greater than 0.9 power factor, less than 20% harmonic distortion, and is suitable for operation in -40°C to 40°C ambient environments. All fixtures are shipped standard with 10kV/10kA common – and differential – mode surge protection. LightBARs feature an IP66 enclosure rating and maintain greater than 95% lumen maintenance at 60,000 hours per IESNA TM-21. Occupancy sensor and dimming options available.

Mounting

Cast aluminum 6" arm includes bolt guides allowing for easy positioning of fixture during installation to pole or wall surface. Standard single carton packaging of housing, square pole arm and round pole adapter for contractor friendly arrival of product on site. Optional internal mast arm mount accepts a 1-1/4" to 2" O.D. horizontal tenon, while a two-bolt clamping mechanism secures fixture. Cast-in leveling guides provide +/-5° vertical leveling adjustment. Tenon adapters available to slipfit over poles equipped with 2-3/8" or 3-1/2" O.D. tenon. 3G vibration rated.

Finish

Cast components and arm finished in super TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Standard colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available. Consult the McGraw-Edison Architectural Colors brochure for the complete selection.

Warranty

Five-year warranty.

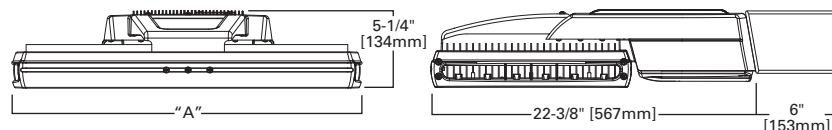


VTS VENTUS LED

2 - 12 LightBARs
Solid State LED

AREA LUMINAIRE

DIMENSIONS



DIMENSIONAL DATA

Number of LightBars	"A" Width	Weight		EPA [Square Feet]	
		Without Arm	With Arm	Without Arm	With Arm
2-4	12-7/8" [328mm]	24 lbs. [10.91 kgs.]	29 lbs. [13.18 kgs.]	0.94	1.00
5-8	18" [458mm]	30 lbs. [13.64 kgs.]	35 lbs. [15.91 kgs.]	1.10	1.20
9-12	25-7/8" [658mm]	39 lbs. [17.73 kgs.]	44 lbs. [20.00 kgs.]	1.31	1.44

CERTIFICATION DATA

UL/cUL Listed
LM79 / LM80 Compliant
IP66 LightBARs
3G Vibration Rated
ISO 9001

ENERGY DATA

Electronic LED Driver
>0.9 Power Factor
<20% Total Harmonic Distortion
120-277V/50Hz & 60Hz, 347V/60Hz, 480V/60Hz
-40°C Minimum Temperature
40°C Ambient Temperature Rating
50°C Ambient Temperature Rating (HA option)

SHIPPING DATA

Approximate Net Weight:
(See Tabulated Reference Data)

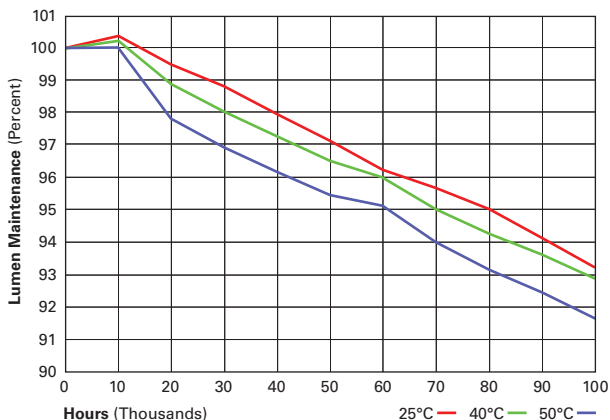
POWER AND LUMENS BY BAR COUNT (21 LED LIGHTBAR)

Number of LightBARs		E02	E03	E04	E05	E06	E07	E08	E09	E10	E11	E12
Drive Current		350mA Drive Current										
Power (Watts)		52W	75W	97W	127W	149W	173W	195W	226W	247W	270W	292W
Current @ 120V (A)		0.44	0.63	0.82	1.07	1.26	1.45	1.63	1.89	2.08	2.26	2.45
Current @ 277V (A)		0.20	0.28	0.36	0.48	0.56	0.64	0.71	0.84	0.92	0.99	1.07
Power (Watts)		58W	82W	99W	132W	159W	174W	196W	227W	247W	271W	293W
Current @ 347V (A)		0.19	0.28	0.29	0.39	0.48	0.56	0.57	0.68	0.76	0.85	0.86
Current @ 480V (A)		0.15	0.20	0.21	0.30	0.36	0.41	0.42	0.51	0.57	0.62	0.63
T2	Lumens	6,173	9,260	12,347	15,434	18,520	21,607	24,694	27,780	30,867	33,954	37,041
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4
T3	Lumens	6,117	9,175	12,233	15,292	18,350	21,409	24,467	27,525	30,584	33,642	36,700
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4
T4	Lumens	5,953	8,929	11,905	14,882	17,858	20,835	23,811	26,787	29,764	32,740	35,716
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
5MQ	Lumens	6,398	9,597	12,795	15,994	19,193	22,392	25,591	28,790	31,989	35,187	38,386
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
5WQ	Lumens	6,315	9,472	12,630	15,787	18,945	22,102	25,260	28,417	31,575	34,732	37,890
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
5XQ	Lumens	6,325	9,488	12,650	15,813	18,975	22,138	25,301	28,463	31,626	34,788	37,951
	BUG Rating	B3-U1-G2	B3-U1-G3	B4-U1-G3	B4-U1-G3	B4-U1-G4	B5-U1-G4	B5-U2-G5	B5-U2-G5	B5-U2-G5	B5-U2-G5	B5-U2-G5
SL2	Lumens	6,018	9,026	12,035	15,044	18,053	21,061	24,070	27,079	30,088	33,096	36,105
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B4-U0-G4
SL3	Lumens	6,034	9,051	12,067	15,084	18,101	21,118	24,135	27,152	30,169	33,186	36,202
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5
SL4	Lumens	5,802	8,703	11,604	14,505	17,406	20,307	23,207	26,108	29,009	31,910	34,811
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
RW	Lumens	6,231	9,346	12,462	15,577	18,692	21,808	24,923	28,039	31,154	34,270	37,385
	BUG Rating	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
SLL/SLR	Lumens	5,375	8,062	10,749	13,436	16,124	18,811	21,498	24,186	26,873	29,560	32,247
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5

LUMEN MAINTENANCE

Ambient Temperature	25,000 Hours*	50,000 Hours*	60,000 Hours*	100,000 Hours	Theoretical L70 (Hours)
25°C	> 99%	> 97%	> 96%	> 93%	> 450,000
40°C	> 98%	> 97%	> 96%	> 92%	> 425,000
50°C	> 97%	> 96%	> 95%	> 91%	> 400,000

* Per IESNA TM-21 data.



LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
10°C	1.02
15°C	1.01
25°C	1.00
40°C	0.99
50°C	0.96

LIGHTBAR OPERATION WITH 2L BI-LEVEL SWITCHING OPTION

Number of LightBars	Circuit 1	Circuit 2
2	1	1
3	2	2
4	2	2
5	3	2
6	3	3
7	4	3
8	4	4
9	5	4
10	6	4
11	7	4
12	8	4

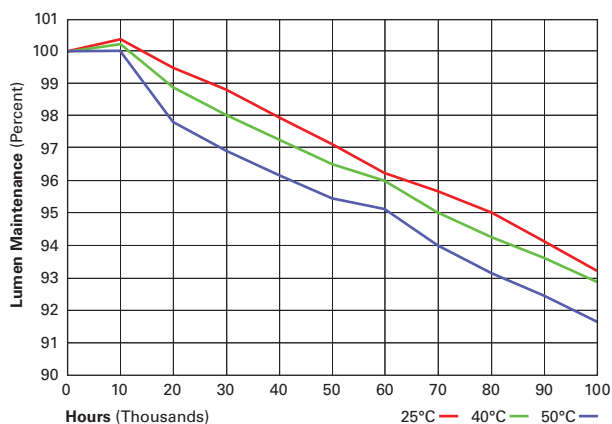
POWER AND LUMENS BY BAR COUNT (7 LED LIGHTBAR)

Number of LightBARs		F02	F03	F04	F05	F06	F07	F08	F09	F10	F11	F12
Drive Current		1A Drive Current										
Power (Watts)		55W	78W	102W	133W	157W	180W	204W	235W	259W	283W	307W
Current @ 120V (A)		0.46	0.66	0.86	1.12	1.31	1.51	1.71	1.97	2.17	2.37	2.57
Current @ 277V (A)		0.21	0.29	0.37	0.50	0.58	0.66	0.74	0.88	0.96	1.04	1.12
Power (Watts)		60W	85W	105W	137W	164W	181W	204W	236W	259W	284W	308W
Current @ 347V (A)		0.19	0.28	0.30	0.41	0.49	0.58	0.60	0.71	0.79	0.88	0.90
Current @ 480V (A)		0.15	0.21	0.22	0.31	0.37	0.43	0.44	0.53	0.59	0.65	0.66
T2	Lumens	5,096	7,641	10,193	12,741	15,289	17,837	20,385	22,933	25,482	28,030	30,578
	BUG Rating	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4
T3	Lumens	5,050	7,574	10,099	12,624	15,149	17,673	20,198	22,723	25,248	27,772	30,297
	BUG Rating	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4
T4	Lumens	4,914	7,371	9,828	12,285	14,742	17,199	19,656	22,114	24,571	27,028	29,485
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4
5MQ	Lumens	5,281	7,922	10,563	13,204	15,844	18,485	21,126	23,767	26,407	29,048	31,689
	BUG Rating	B3-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G3
5WQ	Lumens	5,213	7,820	10,426	13,033	15,640	18,246	20,853	23,459	26,066	28,672	31,279
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
5XQ	Lumens	5,222	7,832	10,443	13,054	15,665	18,275	20,886	23,497	26,108	28,719	31,330
	BUG Rating	B3-U1-G2	B3-U1-G3	B4-U1-G3	B4-U1-G3	B4-U1-G3	B4-U1-G4	B5-U1-G4	B5-U2-G4	B5-U2-G5	B5-U2-G5	B5-U2-G5
SL2	Lumens	4,968	7,451	9,935	12,419	14,903	17,387	19,870	22,354	24,838	27,322	29,806
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4
SL3	Lumens	4,981	7,471	9,962	12,452	14,943	17,433	19,924	22,414	24,905	27,395	29,886
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4
SL4	Lumens	4,790	7,184	9,579	11,974	14,369	16,764	19,158	21,553	23,948	26,343	28,738
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4
RW	Lumens	5,144	7,716	10,287	12,859	15,431	18,003	20,575	23,147	25,719	28,290	30,862
	BUG Rating	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5
SLL/SLR	Lumens	4,437	6,655	8,874	11,092	13,311	15,529	17,747	19,966	22,184	24,403	26,621
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G4	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5

LUMEN MAINTENANCE

Ambient Temperature	25,000 Hours*	50,000 Hours*	60,000 Hours*	100,000 Hours	Theoretical L70 (Hours)
25°C	> 99%	> 97%	> 96%	> 93%	> 450,000
40°C	> 98%	> 97%	> 96%	> 92%	> 425,000
50°C	> 97%	> 96%	> 95%	> 91%	> 400,000

* Per IESNA TM-21 data.



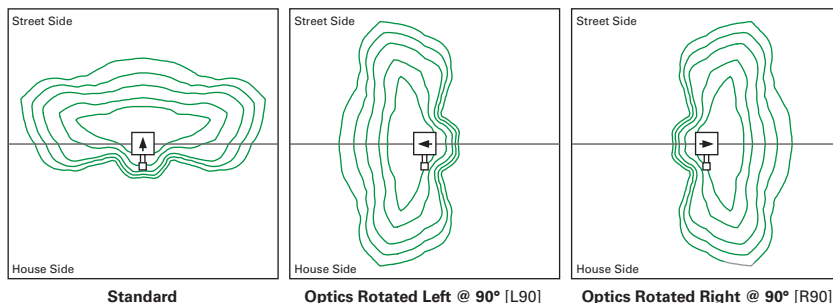
LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
10°C	1.02
15°C	1.01
25°C	1.00
40°C	0.99
50°C	0.96

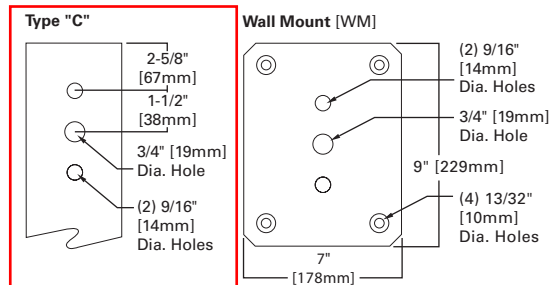
LIGHTBAR OPERATION WITH 2L BI-LEVEL SWITCHING OPTION

Number of LightBars	Circuit 1	Circuit 2
2	1	1
3	2	2
4	2	2
5	3	2
6	3	3
7	4	3
8	4	4
9	5	4
10	6	4
11	7	4
12	8	4

OPTIC ORIENTATION



DRILLING PATTERNS



ORDERING INFORMATION

Sample Number: VTS-E12-LED-E1-T3-GM

Product Family ^{1,2}	Number of LightBARs ^{3,4}		Lamp Type	Voltage	Distribution	Color
VTS=Ventus	E02=(2) 21 LED LightBARs E03=(3) 21 LED LightBARs E04=(4) 21 LED LightBARs E05=(5) 21 LED LightBARs E06=(6) 21 LED LightBARs E07=(7) 21 LED LightBARs E08=(8) 21 LED LightBARs E09=(9) 21 LED LightBARs E10=(10) 21 LED LightBARs E11=(11) 21 LED LightBARs E12=(12) 21 LED LightBARs	F02=(2) 7 LED LightBARs F03=(3) 7 LED LightBARs F04=(4) 7 LED LightBARs F05=(5) 7 LED LightBARs F06=(6) 7 LED LightBARs F07=(7) 7 LED LightBARs F08=(8) 7 LED LightBARs F09=(9) 7 LED LightBARs F10=(10) 7 LED LightBARs F11=(11) 7 LED LightBARs F12=(12) 7 LED LightBARs	LED=Solid State Light Emitting Diodes	E1=Electronic (120-277V) 347=347V ^{5,6} 480=480V ^{5,6,7}	T2=Type II T3=Type III T4=Type IV 5MQ=Type V Square Medium 5WQ=Type V Square Wide 5XQ=Type V Square Extra Wide SL2=Type II with Spill Control SL3=Type III with Spill Control SL4=Type IV with Spill Control RW=Rectangular Wide SLL=90° Spill Light Eliminator Left SLR=90° Spill Light Eliminator Right	AP=Grey BZ=Bronze BK=Black DP=Dark Platinum GM=Graphite Metallic WH=White
Options (Add as Suffix)				Accessories (Order Separately) ²²		
P=Button Type Photocontrol (120, 208, 240 or 277V. Must Specify Voltage) ⁵ R=NEMA Twistlock Photocontrol Receptacle PER7=NEMA 7-PIN Twistlock Photocontrol Receptacle ⁸ HA=50°C High Ambient Temperature Rating ^{9,10} 2L=Two Circuits ^{6,11,12,13} L90=Optics Rotated 90° Left ¹⁴ R90=Optics Rotated 90° Right ¹⁴ 7030=70 CRI / 3000K CCT ¹⁵ 7050=70 CRI / 5000K CCT ¹⁵ 7060=70 CRI / 5700K CCT ¹⁵ 8030=80 CRI / 3000K CCT ¹⁵ TH=Tool-less Door Hardware LCF=LightBAR Cover Plate Matches Housing Finish WG=Wire Guard WM=Wall Mount with Arm IM=Integral Mast Arm MS-LXX=Motion Sensor for On/Off Operation ¹⁶ MS/X-LXX=Motion Sensor for Bi-Level Operation ¹⁷ MS/DIM-LXX=Motion Sensor for Dimming Operation ^{18,19} DIM=0-10V Dimming Drivers ²⁰ HSS=Factory Installed House Side Shield ²¹				VA1033-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon VA1034-XX=2 @ 180° Tenon Adapter for 2-3/8" O.D. Tenon VA1035-XX=3 @ 120° Tenon Adapter for 2-3/8" O.D. Tenon VA1036-XX=4 @ 90° Tenon Adapter for 2-3/8" O.D. Tenon VA1037-XX=2 @ 90° Tenon Adapter for 2-3/8" O.D. Tenon VA1038-XX=3 @ 90° Tenon Adapter for 2-3/8" O.D. Tenon VA1039-XX=2 @ 120° Tenon Adapter for 2-3/8" O.D. Tenon VA1040-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon VA1041-XX=2 @ 180° Tenon Adapter for 3-1/2" O.D. Tenon VA1042-XX=3 @ 120° Tenon Adapter for 3-1/2" O.D. Tenon VA1043-XX=4 @ 90° Tenon Adapter for 3-1/2" O.D. Tenon VA1044-XX=2 @ 90° Tenon Adapter for 3-1/2" O.D. Tenon VA1045-XX=3 @ 90° Tenon Adapter for 3-1/2" O.D. Tenon VA1046-XX=2 @ 120° Tenon Adapter for 3-1/2" O.D. Tenon FSIR-100=Wireless Configuration Tool for Occupancy Sensor ²³ OA/RA1016=NEMA Photocontrol - Multi-Tap OA/RA1027=NEMA Photocontrol - 480V OA/RA1201=NEMA Photocontrol - 347V MA1253=10kV Circuit Module Replacement LB/HSS=Field Installed House Side Shield ²⁴		

NOTES:

- Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to our white paper WP513001EN for additional support information.
- 6" arm and round pole adapter included with fixture.
- 21 LED LightBAR powered at 350mA, 7 LED LightBAR powered at 1A.
- Standard 4000K CCT and nominal 70CRI.
- Not available with HA option.
- Must specify voltage.
- Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).
- Must specify DIM option to add dimming driver(s). Only available in E02-E06 and F02-F06.
- Not available with DIM option or MS/DIM-LXX.
- Not available with button photocontrol or motion sensor. 120 - 277V only.
- Requires two electrical circuits to luminaire. See LightBAR operation table for additional information.
- Consult factory before ordering in combination with MS-LXX or MS/X-LXX options.
- Not available in 347V or 480V.
- Not available with 5MQ, 5WQ or 5XQ distributions. Not available with HSS option.
- Extended lead times apply.
- Sensor housed in external box mounted to the luminaire. Available in E02-E12 and F02-F12 configurations. Replace XX with mounting height in feet for proper lens selection, (e.g., MS-L25). Consult factory for additional information.
- Sensor housed in external box mounted to the luminaire. Available in E02-E12 and F02-F12 configurations. Replace X with number of bars operating in low output mode and replace XX with mounting height for proper lens selection, (e.g., MS/3-L25). Maximum 4 bars in low output mode. Consult factory for additional information.
- Not available with HA option. Only available in F02-F06 and E02-E06. Includes Dimming Drivers. Not available in 347V or 480V.
- Replace XX with mounting height in feet for proper lens selection, (e.g., MS/DIM-L25).
- Available in E02-E06 and F02-F06 only.
- Only for use with SL2, SL3 and SL4 distributions. Not available with L90 or R90 options.
- Replace XX with color suffix.
- Only compatible with MS/DIM-LXX motion sensor.
- One required for each LightBAR. Not available with L90 or R90 options.

Steel Poles



SSS SQUARE STRAIGHT STEEL

Catalog #	SSS4A25SFC1	Type
Project	Froedtert South Southwest Medical Office Bldg	P6
Comments		Date
Prepared by		

FEATURES

- ASTM Grade steel base plate with ASTM A366 base cover
- Hand hole assembly 3" x 5" on 5" and 6" pole; and 2" x 4" on 4" pole
- 10'-39' mounting heights
- Drilled or tenon (specify)

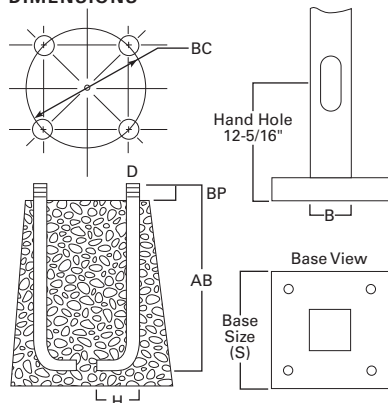
ORDERING INFORMATION

SAMPLE NUMBER: SSS5A20SFM1XG

Product Family	Shaft Size (Inches) ¹	Wall Thickness (Inches)	Mounting Height (Feet)	Base Type	Finish	Mounting Type	Number and Location of Arms	Arm Lengths (Feet)	Options (Add as Suffix)
SSS=Square Straight Steel	4=4" 5=5" 6=6"	A=0.120" M=0.188" X=0.250"	10=10' 15=15' 20=20' 25=25' 30=30' 35=35' 39=39'	S=Square Steel Base	F=Dark Bronze G=Galvanized Steel J=Summit White K=Carbon Bronze L=Dark Platinum P=Primer Powder Coat R=Hartford Green S=Silver T=Graphite Metallic V=Grey W=White X=Custom Color Y=Black	2=2-3/8" O.D. Tenon (4" Long) 3=3-1/2" O.D. Tenon (5" Long) 4=4" O.D. Tenon (6" Long) 5=3" O.D. Tenon (4" Long) 6=2-3/8" O.D. Tenon (6" Long) 7=4" O.D. Tenon (10" Long) A=Type A Drilling C=Type C Drilling E=Type E Drilling F=Type F Drilling G=Type G Drilling J=Type J Drilling K=Type K Drilling M=Type M Drilling R=Type R Drilling Z=Type Z Drilling	1=Single 2=2 at 180° 3=Triple ² 4=4 at 90° 5=2 at 90° X=None	X=None	A=1/2" Tapped Hub (Specify location desired) B=3/4" Tapped Hub (Specify location desired) C=Convenience Outlet ³ E=GFCI Convenience Outlet ³ G=Ground Lug H=Additional Hand Hole ⁴ L=Drilled for Bumper Glitter V=Vibration Damper

NOTES: 1. All shaft sizes nominal. 2. Square poles are 3 at 90°, round poles are 3 at 120°. 3. Outlet is located 4' above base and on same side of pole as hand hole, unless specified otherwise. Receptacle not included, provision only. 4. Additional hand hole is located 12" below pole top and 90° from standard hand hole location, unless otherwise specified.

DIMENSIONS



WARNING: Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to pole white paper WP513001EN for additional support information. Before installing, make sure proper anchor bolts and templates are obtained. The use of unauthorized accessories such as banners, signs, cameras or pennants for which the pole was not designed voids the pole warranty and may result in pole failure causing serious injury or property damage. Information regarding total loading capacity can be supplied upon request. The pole warranty is void unless poles are used and installed as a complete pole and luminaire combination. This warranty specifically excludes failure as the result of a third party act or omission, misuse, unanticipated uses, fatigue failure or similar phenomena resulting from induced vibration, harmonic oscillation or resonance associated with movement of air currents around the product.

Specifications and dimensions subject to change without notice. Consult your lighting representative at Eaton or visit www.eaton.com/lighting for available options, accessories and ordering information.

Effective Projected Area (At Pole Top)

Mounting Height (Feet)	Catalog Number ^{1,2}	Wall Thickness (Inches)	Base Square ³ (Inches)	Bolt Circle Diameter (Inches)	Anchor Bolt Projection ³ (Inches)	Shaft Size ³ (Inches)	Anchor Bolt Diameter x Length x Hook (Inches)	Net Weight (Pounds)	Maximum Effective Projected Area (Square Feet) ⁴				Max. Fixture Load - Includes Bracket (Pounds)
MH			S	BC	BP	B	D x AB x H		80 mph	90 mph	100 mph	110 mph	
10	SSS4A10S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	85	30.0	22.0	17.0	13.0	100
15	SSS4A15S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	118	15.0	11.5	8.7	6.5	100
20	SSS4A20S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	150	8.7	5.9	3.9	2.5	150
20	SSS5A20S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	183	15.4	11.1	7.9	5.5	150
25	SSS4A25S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	181	3.7	1.7	0.3	--	200
25	SSS5A25S	0.120	10-1/2	11	5	5	3/4 x 25 x 3	222	9.3	6.0	3.5	1.6	200
25	SSS6A25S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	284	9.9	6.1	3.5	1.2	200
30	SSS5A30S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	260	4.7	2.1	--	--	200
30	SSS5M30S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	392	10.4	6.4	3.5	1.5	200
30	SSS6A30S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	330	4.3	1.4	--	--	200
30	SSS6M30S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	489	19.0	13.0	8.7	5.6	200
35	SSS5M35S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	453	5.8	2.8	--	--	200
35	SSS6M35S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	564	12.8	7.2	3.7	1.0	200
35	SSS6X35S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	738	16.5	11.0	6.8	3.5	200
39	SSS6M39S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	618	7.3	3.0	--	--	300
39	SSS6X39S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	816	13.0	7.0	3.7	0.8	300

Effective Projected Area (Two Feet Above Pole Top)

Mounting Height (Feet)	Catalog Number ^{1,2}	Wall Thickness (Inches)	Base Square ³ (Inches)	Bolt Circle Diameter (Inches)	Anchor Bolt Projection ³ (Inches)	Shaft Size ³ (Inches)	Anchor Bolt Diameter x Length x Hook (Inches)	Net Weight (Pounds)	Maximum Effective Projected Area (Square Feet) ⁴				Max. Fixture Load - Includes Bracket (Pounds)
MH			S	BC	BP	B	D x AB x H		80 mph	90 mph	100 mph	110 mph	
10	SSS4A10S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	85	23.0	17.5	14.0	11.0	100
15	SSS4A15S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	118	13.4	10.0	7.5	5.7	100
20	SSS4A20S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	150	7.6	5.2	3.4	2.1	150
20	SSS5A20S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	183	13.8	9.9	7.1	4.9	150
25	SSS4A25S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	181	3.4	1.6	0.3	--	200
25	SSS5A25S	0.120	10-1/2	11	5	5	3/4 x 25 x 3	222	8.5	5.5	3.2	1.5	200
25	SSS6A25S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	284	9.1	5.6	3.0	1.2	200
30	SSS5A30S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	260	1.8	--	--	--	200
30	SSS5M30S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	392	9.6	5.9	1.9	0.2	200
30	SSS6A30S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	330	4.1	1.3	--	--	200
30	SSS6M30S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	489	18.5	12.5	8.4	5.3	200
35	SSS5M35S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	453	5.5	2.4	--	--	200
35	SSS6M35S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	564	11.8	7.0	3.5	1.0	200
35	SSS6X35S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	738	16.0	10.5	6.4	3.4	200
39	SSS6M39S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	618	7.0	2.4	--	--	300
39	SSS6X39S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	816	12.0	6.7	3.0	0.5	300

NOTES:

1. Catalog number includes pole with hardware kit. Anchor bolts not included. Before installing, make sure proper anchor bolts and templates are obtained.
2. Tenon size or machining for rectangular arms must be specified. Hand hole position relative to drill location.
3. Shaft size, base square, anchor bolts and projections may vary slightly. All dimensions nominal.
4. EPAs based on shaft properties with wind normal to flat. EPAs calculated using base wind velocity as indicated plus 30% gust factor.

DESCRIPTION

The Ventus™ LED area luminaire provides uncompromising optical performance and outstanding versatility for a wide variety of area and roadway applications. Patent pending modular LightBAR™ technology delivers uniform and energy conscious illumination to walkways, parking lots, roadways, building areas and any security lighting application. UL/cUL Listed for wet locations.

Catalog #	VTS-E05-LED-E1-SL4-BZ-HSS	Type
Project	Froedtert South Southwest Medical Office Bldg	P7
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Construction

Die-cast aluminum frame secures thermally conductive, extruded aluminum heat sink to independent electrical chamber. Heavy-wall, die-cast aluminum housing and door isolates driver components for cooler operation. The unique construction allows for passive cooling and natural cleaning of the extruded heat sink ensuring reliable operation at 40°C high ambient conditions. Stainless steel fasteners and hinging allow access to electrical components for installation and maintenance. Optional tool-less hardware available for ease of entry into electrical chamber.

Optics

Choice of twelve patented, high-efficiency AccuLED Optics™ distributions. Optics are precisely designed to shape the light output, maximizing efficiency and application spacing. AccuLED Optics technology creates consistent distributions with the scalability to meet customized application requirements. Offered Standard in 4000K (+/- 275K) CCT and minimum 70 CRI. Optional 3000K CCT, 5000K CCT and 5700K CCT. For the ultimate level of spill light control, an optional house-side shield accessory can be field or factory installed. The house-side shield is designed to seamlessly integrate with the SL2, SL3 or SL4 optics.

Electrical

LED drivers mount to die-cast aluminum back housing for optimal heat sinking, operation efficacy, and prolonged life. Standard drivers feature electronic universal voltage (120-277V 50/60Hz), 347V 60Hz or 480V 60Hz operation. 480V is compatible for use with 480V Wye systems only. Greater than 0.9 power factor, less than 20% harmonic distortion, and is suitable for operation in -40°C to 40°C ambient environments. All fixtures are shipped standard with 10kV/10kA common – and differential – mode surge protection. LightBARs feature an IP66 enclosure rating and maintain greater than 95% lumen maintenance at 60,000 hours per IESNA TM-21. Occupancy sensor and dimming options available.

Mounting

Cast aluminum 6" arm includes bolt guides allowing for easy positioning of fixture during installation to pole or wall surface. Standard single carton packaging of housing, square pole arm and round pole adapter for contractor friendly arrival of product on site. Optional internal mast arm mount accepts a 1-1/4" to 2" O.D. horizontal tenon, while a two-bolt clamping mechanism secures fixture. Cast-in leveling guides provide +/-5° vertical leveling adjustment. Tenon adapters available to slipfit over poles equipped with 2-3/8" or 3-1/2" O.D. tenon. 3G vibration rated.

Finish

Cast components and arm finished in super TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Standard colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available. Consult the McGraw-Edison Architectural Colors brochure for the complete selection.

Warranty

Five-year warranty.

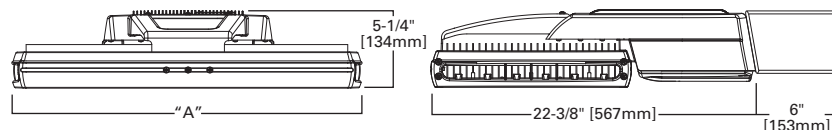


VTS VENTUS LED

2 - 12 LightBARs
Solid State LED

AREA LUMINAIRE

DIMENSIONS



DIMENSIONAL DATA

Number of LightBARs	"A" Width	Weight		EPA [Square Feet]	
		Without Arm	With Arm	Without Arm	With Arm
2-4	12-7/8" [328mm]	24 lbs. [10.91 kgs.]	29 lbs. [13.18 kgs.]	0.94	1.00
5-8	18" [458mm]	30 lbs. [13.64 kgs.]	35 lbs. [15.91 kgs.]	1.10	1.20
9-12	25-7/8" [658mm]	39 lbs. [17.73 kgs.]	44 lbs. [20.00 kgs.]	1.31	1.44

CERTIFICATION DATA

UL/cUL Listed
LM79 / LM80 Compliant
IP66 LightBARs
3G Vibration Rated
ISO 9001

ENERGY DATA

Electronic LED Driver
>0.9 Power Factor
<20% Total Harmonic Distortion
120-277V/50Hz & 60Hz, 347V/60Hz, 480V/60Hz
-40°C Minimum Temperature
40°C Ambient Temperature Rating
50°C Ambient Temperature Rating (HA option)

SHIPPING DATA

Approximate Net Weight:
(See Tabulated Reference Data)

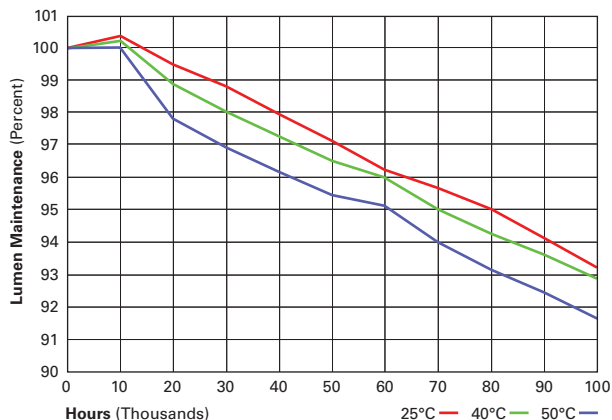
POWER AND LUMENS BY BAR COUNT (21 LED LIGHTBAR)

Number of LightBARs		E02	E03	E04	E05	E06	E07	E08	E09	E10	E11	E12
Drive Current		350mA Drive Current										
Power (Watts)		52W	75W	97W	127W	149W	173W	195W	226W	247W	270W	292W
Current @ 120V (A)		0.44	0.63	0.82	1.07	1.26	1.45	1.63	1.89	2.08	2.26	2.45
Current @ 277V (A)		0.20	0.28	0.36	0.48	0.56	0.64	0.71	0.84	0.92	0.99	1.07
Power (Watts)		58W	82W	99W	132W	159W	174W	196W	227W	247W	271W	293W
Current @ 347V (A)		0.19	0.28	0.29	0.39	0.48	0.56	0.57	0.68	0.76	0.85	0.86
Current @ 480V (A)		0.15	0.20	0.21	0.30	0.36	0.41	0.42	0.51	0.57	0.62	0.63
T2	Lumens	6,173	9,260	12,347	15,434	18,520	21,607	24,694	27,780	30,867	33,954	37,041
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4
T3	Lumens	6,117	9,175	12,233	15,292	18,350	21,409	24,467	27,525	30,584	33,642	36,700
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4
T4	Lumens	5,953	8,929	11,905	14,882	17,858	20,835	23,811	26,787	29,764	32,740	35,716
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
5MQ	Lumens	6,398	9,597	12,795	15,994	19,193	22,392	25,591	28,790	31,989	35,187	38,386
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
5WQ	Lumens	6,315	9,472	12,630	15,787	18,945	22,102	25,260	28,417	31,575	34,732	37,890
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
5XQ	Lumens	6,325	9,488	12,650	15,813	18,975	22,138	25,301	28,463	31,626	34,788	37,951
	BUG Rating	B3-U1-G2	B3-U1-G3	B4-U1-G3	B4-U1-G3	B4-U1-G4	B5-U1-G4	B5-U2-G5	B5-U2-G5	B5-U2-G5	B5-U2-G5	B5-U2-G5
SL2	Lumens	6,018	9,026	12,035	15,044	18,053	21,061	24,070	27,079	30,088	33,096	36,105
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B4-U0-G4
SL3	Lumens	6,034	9,051	12,067	15,084	18,101	21,118	24,135	27,152	30,169	33,186	36,202
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5
SL4	Lumens	5,802	8,703	11,604	14,505	17,406	20,307	23,207	26,108	29,009	31,910	34,811
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5
RW	Lumens	6,231	9,346	12,462	15,577	18,692	21,808	24,923	28,039	31,154	34,270	37,385
	BUG Rating	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
SLL/SLR	Lumens	5,375	8,062	10,749	13,436	16,124	18,811	21,498	24,186	26,873	29,560	32,247
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5

LUMEN MAINTENANCE

Ambient Temperature	25,000 Hours*	50,000 Hours*	60,000 Hours*	100,000 Hours	Theoretical L70 (Hours)
25°C	> 99%	> 97%	> 96%	> 93%	> 450,000
40°C	> 98%	> 97%	> 96%	> 92%	> 425,000
50°C	> 97%	> 96%	> 95%	> 91%	> 400,000

* Per IESNA TM-21 data.



LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
10°C	1.02
15°C	1.01
25°C	1.00
40°C	0.99
50°C	0.96

LIGHTBAR OPERATION WITH 2L BI-LEVEL SWITCHING OPTION

Number of LightBars	Circuit 1	Circuit 2
2	1	1
3	2	2
4	2	2
5	3	2
6	3	3
7	4	3
8	4	4
9	5	4
10	6	4
11	7	4
12	8	4

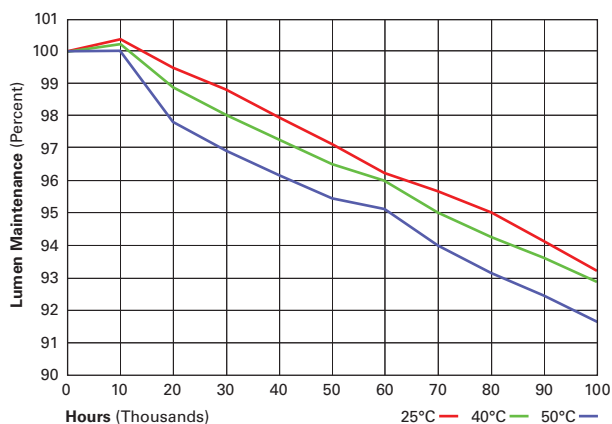
POWER AND LUMENS BY BAR COUNT (7 LED LIGHTBAR)

Number of LightBARs		F02	F03	F04	F05	F06	F07	F08	F09	F10	F11	F12
Drive Current		1A Drive Current										
Power (Watts)		55W	78W	102W	133W	157W	180W	204W	235W	259W	283W	307W
Current @ 120V (A)		0.46	0.66	0.86	1.12	1.31	1.51	1.71	1.97	2.17	2.37	2.57
Current @ 277V (A)		0.21	0.29	0.37	0.50	0.58	0.66	0.74	0.88	0.96	1.04	1.12
Power (Watts)		60W	85W	105W	137W	164W	181W	204W	236W	259W	284W	308W
Current @ 347V (A)		0.19	0.28	0.30	0.41	0.49	0.58	0.60	0.71	0.79	0.88	0.90
Current @ 480V (A)		0.15	0.21	0.22	0.31	0.37	0.43	0.44	0.53	0.59	0.65	0.66
T2	Lumens	5,096	7,641	10,193	12,741	15,289	17,837	20,385	22,933	25,482	28,030	30,578
	BUG Rating	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4
T3	Lumens	5,050	7,574	10,099	12,624	15,149	17,673	20,198	22,723	25,248	27,772	30,297
	BUG Rating	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4
T4	Lumens	4,914	7,371	9,828	12,285	14,742	17,199	19,656	22,114	24,571	27,028	29,485
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4
5MQ	Lumens	5,281	7,922	10,563	13,204	15,844	18,485	21,126	23,767	26,407	29,048	31,689
	BUG Rating	B3-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G3
5WQ	Lumens	5,213	7,820	10,426	13,033	15,640	18,246	20,853	23,459	26,066	28,672	31,279
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
5XQ	Lumens	5,222	7,832	10,443	13,054	15,665	18,275	20,886	23,497	26,108	28,719	31,330
	BUG Rating	B3-U1-G2	B3-U1-G3	B4-U1-G3	B4-U1-G3	B4-U1-G3	B4-U1-G4	B5-U1-G4	B5-U2-G4	B5-U2-G5	B5-U2-G5	B5-U2-G5
SL2	Lumens	4,968	7,451	9,935	12,419	14,903	17,387	19,870	22,354	24,838	27,322	29,806
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4
SL3	Lumens	4,981	7,471	9,962	12,452	14,943	17,433	19,924	22,414	24,905	27,395	29,886
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4
SL4	Lumens	4,790	7,184	9,579	11,974	14,369	16,764	19,158	21,553	23,948	26,343	28,738
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4
RW	Lumens	5,144	7,716	10,287	12,859	15,431	18,003	20,575	23,147	25,719	28,290	30,862
	BUG Rating	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5
SLL/SLR	Lumens	4,437	6,655	8,874	11,092	13,311	15,529	17,747	19,966	22,184	24,403	26,621
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G4	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5

LUMEN MAINTENANCE

Ambient Temperature	25,000 Hours*	50,000 Hours*	60,000 Hours*	100,000 Hours	Theoretical L70 (Hours)
25°C	> 99%	> 97%	> 96%	> 93%	> 450,000
40°C	> 98%	> 97%	> 96%	> 92%	> 425,000
50°C	> 97%	> 96%	> 95%	> 91%	> 400,000

* Per IESNA TM-21 data.



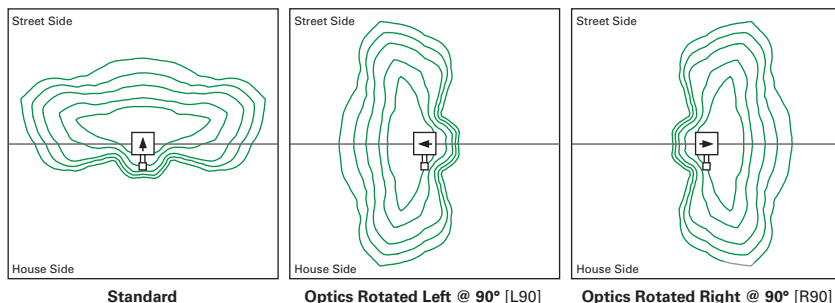
LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
10°C	1.02
15°C	1.01
25°C	1.00
40°C	0.99
50°C	0.96

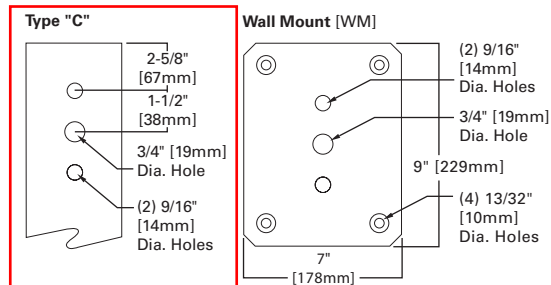
LIGHTBAR OPERATION WITH 2L BI-LEVEL SWITCHING OPTION

Number of LightBars	Circuit 1	Circuit 2
2	1	1
3	2	2
4	2	2
5	3	2
6	3	3
7	4	3
8	4	4
9	5	4
10	6	4
11	7	4
12	8	4

OPTIC ORIENTATION



DRILLING PATTERNS



ORDERING INFORMATION

Sample Number: VTS-E12-LED-E1-T3-GM

Product Family ^{1,2}	Number of LightBARs ^{3,4}		Lamp Type	Voltage	Distribution	Color
VTS=Ventus	E02=(2) 21 LED LightBARs E03=(3) 21 LED LightBARs E04=(4) 21 LED LightBARs E05=(5) 21 LED LightBARs E06=(6) 21 LED LightBARs E07=(7) 21 LED LightBARs E08=(8) 21 LED LightBARs E09=(9) 21 LED LightBARs E10=(10) 21 LED LightBARs E11=(11) 21 LED LightBARs E12=(12) 21 LED LightBARs	F02=(2) 7 LED LightBARs F03=(3) 7 LED LightBARs F04=(4) 7 LED LightBARs F05=(5) 7 LED LightBARs F06=(6) 7 LED LightBARs F07=(7) 7 LED LightBARs F08=(8) 7 LED LightBARs F09=(9) 7 LED LightBARs F10=(10) 7 LED LightBARs F11=(11) 7 LED LightBARs F12=(12) 7 LED LightBARs	LED=Solid State Light Emitting Diodes	E1=Electronic (120-277V) 347=347V ^{5,6} 480=480V ^{5,6,7}	T2=Type II T3=Type III T4=Type IV 5MQ=Type V Square Medium 5WQ=Type V Square Wide 5XQ=Type V Square Extra Wide SL2=Type II with Spill Control SL3=Type III with Spill Control SL4=Type IV with Spill Control RW=Rectangular Wide SLL=90° Spill Light Eliminator Left SLR=90° Spill Light Eliminator Right	AP=Grey BZ=Bronze BK=Black DP=Dark Platinum GM=Graphite Metallic WH=White
Options (Add as Suffix)				Accessories (Order Separately) ²²		
P=Button Type Photocontrol (120, 208, 240 or 277V. Must Specify Voltage) ⁵ R=NEMA Twistlock Photocontrol Receptacle PER7=NEMA 7-PIN Twistlock Photocontrol Receptacle ⁸ HA=50°C High Ambient Temperature Rating ^{9,10} 2L=Two Circuits ^{6,11,12,13} L90=Optics Rotated 90° Left ¹⁴ R90=Optics Rotated 90° Right ¹⁴ 7030=70 CRI / 3000K CCT ¹⁵ 7050=70 CRI / 5000K CCT ¹⁵ 7060=70 CRI / 5700K CCT ¹⁵ 8030=80 CRI / 3000K CCT ¹⁵ TH=Tool-less Door Hardware LCF=LightBAR Cover Plate Matches Housing Finish WG=Wire Guard WM=Wall Mount with Arm IM=Integral Mast Arm MS-LXX=Motion Sensor for On/Off Operation ¹⁶ MS/X-LXX=Motion Sensor for Bi-Level Operation ¹⁷ MS/DIM-LXX=Motion Sensor for Dimming Operation ^{18,19} DIM=0-10V Dimming Drivers ²⁰ HSS=Factory Installed House Side Shield ²¹				VA1033-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon VA1034-XX=2 @ 180° Tenon Adapter for 2-3/8" O.D. Tenon VA1035-XX=3 @ 120° Tenon Adapter for 2-3/8" O.D. Tenon VA1036-XX=4 @ 90° Tenon Adapter for 2-3/8" O.D. Tenon VA1037-XX=2 @ 90° Tenon Adapter for 2-3/8" O.D. Tenon VA1038-XX=3 @ 90° Tenon Adapter for 2-3/8" O.D. Tenon VA1039-XX=2 @ 120° Tenon Adapter for 2-3/8" O.D. Tenon VA1040-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon VA1041-XX=2 @ 180° Tenon Adapter for 3-1/2" O.D. Tenon VA1042-XX=3 @ 120° Tenon Adapter for 3-1/2" O.D. Tenon VA1043-XX=4 @ 90° Tenon Adapter for 3-1/2" O.D. Tenon VA1044-XX=2 @ 90° Tenon Adapter for 3-1/2" O.D. Tenon VA1045-XX=3 @ 90° Tenon Adapter for 3-1/2" O.D. Tenon VA1046-XX=2 @ 120° Tenon Adapter for 3-1/2" O.D. Tenon FSIR-100=Wireless Configuration Tool for Occupancy Sensor ²³ OA/RA1016=NEMA Photocontrol - Multi-Tap OA/RA1027=NEMA Photocontrol - 480V OA/RA1201=NEMA Photocontrol - 347V MA1253=10kV Circuit Module Replacement LB/HSS=Field Installed House Side Shield ²⁴		

NOTES:

- Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to our white paper WP513001EN for additional support information.
- 6" arm and round pole adapter included with fixture.
- 21 LED LightBAR powered at 350mA, 7 LED LightBAR powered at 1A.
- Standard 4000K CCT and nominal 70CRI.
- Not available with HA option.
- Must specify voltage.
- Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).
- Must specify DIM option to add dimming driver(s). Only available in E02-E06 and F02-F06.
- Not available with DIM option or MS/DIM-LXX.
- Not available with button photocontrol or motion sensor. 120 - 277V only.
- Requires two electrical circuits to luminaire. See LightBAR operation table for additional information.
- Consult factory before ordering in combination with MS-LXX or MS/X-LXX options.
- Not available in 347V or 480V.
- Not available with 5MQ, 5WQ or 5XQ distributions. Not available with HSS option.
- Extended lead times apply.
- Sensor housed in external box mounted to the luminaire. Available in E02-E12 and F02-F12 configurations. Replace XX with mounting height in feet for proper lens selection, (e.g., MS-L25). Consult factory for additional information.
- Sensor housed in external box mounted to the luminaire. Available in E02-E12 and F02-F12 configurations. Replace X with number of bars operating in low output mode and replace XX with mounting height for proper lens selection, (e.g., MS/3-L25). Maximum 4 bars in low output mode. Consult factory for additional information.
- Not available with HA option. Only available in F02-F06 and E02-E06. Includes Dimming Drivers. Not available in 347V or 480V.
- Replace XX with mounting height in feet for proper lens selection, (e.g., MS/DIM-L25).
- Available in E02-E06 and F02-F06 only.
- Only for use with SL2, SL3 and SL4 distributions. Not available with L90 or R90 options.
- Replace XX with color suffix.
- Only compatible with MS/DIM-LXX motion sensor.
- One required for each LightBAR. Not available with L90 or R90 options.

Steel Poles



SSS SQUARE STRAIGHT STEEL

Catalog #	SSS4A25SFC1	Type
Project	Froedtert South Southwest Medical Office Bldg	P7
Comments		Date
Prepared by		

FEATURES

- ASTM Grade steel base plate with ASTM A366 base cover
- Hand hole assembly 3" x 5" on 5" and 6" pole; and 2" x 4" on 4" pole
- 10'-39' mounting heights
- Drilled or tenon (specify)

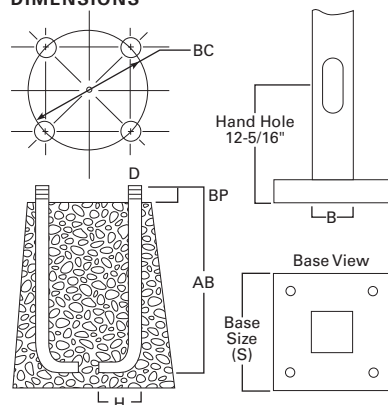
ORDERING INFORMATION

SAMPLE NUMBER: SSS5A20SFM1XG

Product Family	Shaft Size (Inches) ¹	Wall Thickness (Inches)	Mounting Height (Feet)	Base Type	Finish	Mounting Type	Number and Location of Arms	Arm Lengths (Feet)	Options (Add as Suffix)
SSS=Square Straight Steel	4=4" 5=5" 6=6"	A=0.120" M=0.188" X=0.250"	10=10' 15=15' 20=20' 25=25' 30=30' 35=35' 39=39'	S=Square Steel Base	F=Dark Bronze G=Galvanized Steel J=Summit White K=Carbon Bronze L=Dark Platinum P=Primer Powder Coat R=Hartford Green S=Silver T=Graphite Metallic V=Grey W=White X=Custom Color Y=Black	2=2-3/8" O.D. Tenon (4" Long) 3=3-1/2" O.D. Tenon (5" Long) 4=4" O.D. Tenon (6" Long) 5=3" O.D. Tenon (4" Long) 6=2-3/8" O.D. Tenon (6" Long) 7=4" O.D. Tenon (10" Long) A=Type A Drilling C=Type C Drilling E=Type E Drilling F=Type F Drilling G=Type G Drilling J=Type J Drilling K=Type K Drilling M=Type M Drilling R=Type R Drilling Z=Type Z Drilling	1=Single 2=2 at 180° 3=Triple 4=4 at 90° 5=2 at 90° X=None	X=None	A=1/2" Tapped Hub (Specify location desired) B=3/4" Tapped Hub (Specify location desired) C=Convenience Outlet ³ E=GFCI Convenience Outlet ³ G=Ground Lug H=Additional Hand Hole ⁴ L=Drilled for Bumper Glitter V=Vibration Damper

NOTES: 1. All shaft sizes nominal. 2. Square poles are 3 at 90°, round poles are 3 at 120°. 3. Outlet is located 4' above base and on same side of pole as hand hole, unless specified otherwise. Receptacle not included, provision only. 4. Additional hand hole is located 12" below pole top and 90° from standard hand hole location, unless otherwise specified.

DIMENSIONS



WARNING: Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to pole white paper WP513001EN for additional support information. Before installing, make sure proper anchor bolts and templates are obtained. The use of unauthorized accessories such as banners, signs, cameras or pennants for which the pole was not designed voids the pole warranty and may result in pole failure causing serious injury or property damage. Information regarding total loading capacity can be supplied upon request. The pole warranty is void unless poles are used and installed as a complete pole and luminaire combination. This warranty specifically excludes failure as the result of a third party act or omission, misuse, unanticipated uses, fatigue failure or similar phenomena resulting from induced vibration, harmonic oscillation or resonance associated with movement of air currents around the product.

Specifications and dimensions subject to change without notice. Consult your lighting representative at Eaton or visit www.eaton.com/lighting for available options, accessories and ordering information.

Effective Projected Area (At Pole Top)

Mounting Height (Feet)	Catalog Number ^{1,2}	Wall Thickness (Inches)	Base Square ³ (Inches)	Bolt Circle Diameter (Inches)	Anchor Bolt Projection ³ (Inches)	Shaft Size ³ (Inches)	Anchor Bolt Diameter x Length x Hook (Inches)	Net Weight (Pounds)	Maximum Effective Projected Area (Square Feet) ⁴				Max. Fixture Load - Includes Bracket (Pounds)
MH			S	BC	BP	B	D x AB x H		80 mph	90 mph	100 mph	110 mph	
10	SSS4A10S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	85	30.0	22.0	17.0	13.0	100
15	SSS4A15S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	118	15.0	11.5	8.7	6.5	100
20	SSS4A20S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	150	8.7	5.9	3.9	2.5	150
20	SSS5A20S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	183	15.4	11.1	7.9	5.5	150
25	SSS4A25S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	181	3.7	1.7	0.3	--	200
25	SSS5A25S	0.120	10-1/2	11	5	5	3/4 x 25 x 3	222	9.3	6.0	3.5	1.6	200
25	SSS6A25S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	284	9.9	6.1	3.5	1.2	200
30	SSS5A30S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	260	4.7	2.1	--	--	200
30	SSS5M30S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	392	10.4	6.4	3.5	1.5	200
30	SSS6A30S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	330	4.3	1.4	--	--	200
30	SSS6M30S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	489	19.0	13.0	8.7	5.6	200
35	SSS5M35S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	453	5.8	2.8	--	--	200
35	SSS6M35S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	564	12.8	7.2	3.7	1.0	200
35	SSS6X35S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	738	16.5	11.0	6.8	3.5	200
39	SSS6M39S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	618	7.3	3.0	--	--	300
39	SSS6X39S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	816	13.0	7.0	3.7	0.8	300

Effective Projected Area (Two Feet Above Pole Top)

Mounting Height (Feet)	Catalog Number ^{1,2}	Wall Thickness (Inches)	Base Square ³ (Inches)	Bolt Circle Diameter (Inches)	Anchor Bolt Projection ³ (Inches)	Shaft Size ³ (Inches)	Anchor Bolt Diameter x Length x Hook (Inches)	Net Weight (Pounds)	Maximum Effective Projected Area (Square Feet) ⁴				Max. Fixture Load - Includes Bracket (Pounds)
MH			S	BC	BP	B	D x AB x H		80 mph	90 mph	100 mph	110 mph	
10	SSS4A10S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	85	23.0	17.5	14.0	11.0	100
15	SSS4A15S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	118	13.4	10.0	7.5	5.7	100
20	SSS4A20S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	150	7.6	5.2	3.4	2.1	150
20	SSS5A20S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	183	13.8	9.9	7.1	4.9	150
25	SSS4A25S	0.120	10-1/2	11	4-1/2	4	3/4 x 25 x 3	181	3.4	1.6	0.3	--	200
25	SSS5A25S	0.120	10-1/2	11	5	5	3/4 x 25 x 3	222	8.5	5.5	3.2	1.5	200
25	SSS6A25S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	284	9.1	5.6	3.0	1.2	200
30	SSS5A30S	0.120	10-1/2	11	4-1/2	5	3/4 x 25 x 3	260	1.8	--	--	--	200
30	SSS5M30S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	392	9.6	5.9	1.9	0.2	200
30	SSS6A30S	0.120	12-1/2	12-1/2	5	6	1 x 36 x 4	330	4.1	1.3	--	--	200
30	SSS6M30S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	489	18.5	12.5	8.4	5.3	200
35	SSS5M35S	0.188	10-1/2	11	4-1/2	5	3/4 x 25 x 3	453	5.5	2.4	--	--	200
35	SSS6M35S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	564	11.8	7.0	3.5	1.0	200
35	SSS6X35S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	738	16.0	10.5	6.4	3.4	200
39	SSS6M39S	0.188	12-1/2	12-1/2	5	6	1 x 36 x 4	618	7.0	2.4	--	--	300
39	SSS6X39S	0.250	12-1/2	12-1/2	5	6	1 x 36 x 4	816	12.0	6.7	3.0	0.5	300

NOTES:

1. Catalog number includes pole with hardware kit. Anchor bolts not included. Before installing, make sure proper anchor bolts and templates are obtained.
2. Tenon size or machining for rectangular arms must be specified. Hand hole position relative to drill location.
3. Shaft size, base square, anchor bolts and projections may vary slightly. All dimensions nominal.
4. EPAs based on shaft properties with wind normal to flat. EPAs calculated using base wind velocity as indicated plus 30% gust factor.



Corporations Bureau

Form 102-Nonstock Corporation Articles of Incorporation

Name of Corporation

Name of Corporation: Main Street Market Commercial Owners'
Association, Inc.

Principal Office

Mailing Address: 4011 80th Street
City: Kenosha
State: WI
Zip Code: 53142

Registered Agent

Registered Agent Individual: Stephen R. Mills
Name of Entity:
Street Address: 4011 80th Street
City: Kenosha
State: WI
Zip Code: 53142

Select Statement

Select one statement: The corporation will have members
Is this corporation authorized to
make distributions under the
statute?: No
This document was drafted by: Stephen R. Mills

Incorporator

Name: Stephen R. Mills
Street Address: 4011 80th Street
City: Kenosha
State: WI
Zip Code: 53142

Incorporator Signature

I understand that checking this
box constitutes a legal
signature: Yes
Incorporator Signature: Stepehn R. Mills

Optional Articles

The purpose(s) for which the
corporation is incorporated: To operate an association of commercial
real estate owners within the commercial
development known as Main Street Market
in the Village of Pleasant Prairie,

Delayed Effective date:

Directors

Name:	Stephen R. Mills
Street Address:	4011 80th Street
City:	Kenosha
State:	WI
Zip Code:	53142
Name:	Danile Szczap
Street Address:	4011 80th Street
City:	Kenosha
State:	WI
Zip Code:	53142
Name:	John Hotvedt
Street Address:	4011 80th Street
City:	Kenosha
State:	WI
Zip Code:	53142

Optional Contact Information

Name:	Stephen R. Mills
Address:	4011 80th Street
City:	Kenosha
State:	WI
Zip Code:	53142
Phone Number:	262-842-0575
Email Address:	jeh@beardevelopment.com

Endorsement

	FILED
Received Date:	01/30/2018

BYLAWS OF
THE MAIN STREET MARKET COMMERCIAL OWNERS' ASSOCIATION, INC.

ARTICLE I.
General

Section 1. Adoption of Bylaws and Applicability of Definitions. These Bylaws are adopted as the Bylaws of the Main Street Market Commercial Owners' Association, Inc. ("Association"), a Wisconsin corporation organized under the Wisconsin Nonstock Corporation Law to serve as an association of lot owners in Main Street Market, Village of Pleasant Prairie, Kenosha County, Wisconsin, (the "Property"). The provisions of these Bylaws apply to the Property and to the use and occupancy of the Property.

Section 2. Office and Mailing Address. The initial office and mailing address of the Association and of the Board of Directors of the Association ("Board of Directors") shall be located at 4015 – 80th Street, Kenosha, WI 53142.

Section 3. Defined Terms. Capitalized terms used but not specifically defined herein, shall have the meanings assigned to such terms in the Declaration of Development Standards and Protective Covenants for Main Street Market (the "Declaration").

ARTICLE II.
Board of Directors

Section 1. Number and Qualification. The Board of Directors shall initially be appointed by the Developer as set forth in the Declaration and after the period of Developer control of said Board of Directors, shall be composed of three persons, each of whom shall be owners of property, fiduciary owners, members, or employees of owners, or officers, stockholders, or employees of corporate owners.

Section 2. Powers and Duties. The affairs of the Association shall be governed by the Board of Directors. The Board of Directors shall have the powers and duties necessary for the administration of the affairs of the Association. The Board of Directors shall have full power and authority necessary for or desirable to complete enforcement and administration of the Articles of Incorporation, these Bylaws and the Declaration.

Section 3. Election and Term of Office. The members of the Board of Directors elected by the lot owners shall hold office for a term of one year, or until their respective successor shall have been elected by the property owners.

Section 4. Removal of Members of the Board of Directors. At any regular or special meeting of lot owners, any one or more of the members of the Board of Directors previously elected by the lot owners may be removed with or without cause by a majority of the authorized votes of all lot owners, and a successor may be elected to fill the vacancy created.

Section 5. Vacancies. Vacancies in the Board of Directors caused by any reason, other than the removal of a member by a vote of the lot owners, shall be filled by a vote of a majority of the remaining Directors at a special meeting of the Board of Directors held for that purpose promptly after the occurrence of the vacancy even though the Directors present at the meeting may be less than a quorum, and each person so elected shall be a member of the Board of Directors for the remainder of the term of the member so removed until a successor is elected.

Section 6. Organizational Meeting. The first meeting of the members of the Board of Directors shall be held within 30 days of the appointment of the Board of Directors by the Developer, under and pursuant to Section 13.4 of the Declaration.

Section 7. Regular Meetings. Regular meetings of the Board of Directors may be held at the time and place as determined from time to time by a majority of the members of the Board of Directors. Notice of regular meetings of the Board of Directors shall be given to each member of the Board of Directors, by mail or telegram, at least 48 hours prior to the time of the meeting.

Section 8. Special Meetings. Special meetings of the Board of Directors may be called by the President on 48 hours' notice to each member of the Board of Directors, given by mail or telegraph, and the notice shall state the time, place and purpose of the meeting. Special meetings of the Board of Directors shall be called by the President or Secretary in like manner and on like notice on the written request of at least one member of the Board of Directors.

Section 9. Waiver of Notice. Any member of the Board of Directors may, at any time, waive notice of any meeting of the Board of Directors in writing, and the waiver shall be deemed equivalent to the giving of the notice. Attendance by a member of the Board of Directors at any meeting of the Board shall be a waiver of notice of the time and place of the meeting. If all members of the Board of Directors are present at any meeting of the Board, no notice shall be required and any business may be transacted at the meeting.

Section 10. Quorum of Board of Directors. At all meetings of the Board of Directors, a majority of the members shall constitute a quorum for the transaction of business, and the votes of a majority of the members of the Board of Directors present at a meeting at which a quorum is present shall constitute a decision of the Board of Directors. If, at any meeting of the Board of Directors, there shall be less than a quorum present, a majority of those present may adjourn the meeting from time to time. At any adjourned meeting at which a quorum is present, any business which might have been transacted at the meeting originally called may be transacted without further notice.

Section 11. Compensation. No member of the Board of Directors shall receive any compensation from the Association for acting as a Director.

Section 12. Liability of the Board of Directors. The members of the Board of Directors shall not be liable to the property owners for any mistake of judgment, failure to adhere to the provisions of the Articles or these Bylaws, negligence or otherwise, except for their own individual, willful misconduct or bad faith. It is intended that the members of the Board of Directors shall have no personal liability with respect to any contracts made by them on behalf of the Association. At the option of the Board of Directors, Directors' liability insurance may be obtained and shall be paid for as a common expense.

Section 13. Informal Action. Any action which is required to be taken at a meeting of the Board of Directors or which may be taken at a meeting, may be taken without a meeting if a consent in writing setting forth the action so taken shall be signed by all of the Directors entitled to vote with respect to the subject matter. The consent shall have the same force and effect as a unanimous vote.

ARTICLE III. Lot Owners-Members

Section 1. Annual Meetings. The Developer shall select three persons to serve on the Board of Directors of the Association as set forth in Section 13.4 of the Declaration. Thereafter, the annual meetings of the lot owners shall be held as determined by the Board of Directors; but no later than 12 months from the anniversary date of such appointment, on an annual basis. At such meetings, the Board of Directors shall be elected by ballot of the lot owners. The lot owners may transaction other business at the meetings as may properly come before them.

Section 2. Place of Meetings. Meetings of the lot owners shall be held at any suitable place as may be designated by the Incorporator or by the Board of Directors, as the case may be.

Section 3. Notice of Meetings. The Secretary shall mail to each property owner of record a notice of each meeting of the lot owners at least 10, but not more than 20 days prior to the meeting, stating the purpose of the meeting as well as the time and place where it is to be held.

Section 4. Adjournment of Meetings. Any meeting of lot owners at which a quorum has or has not attended may be adjourned at the option of the lot owners by vote of a majority of the authorized votes of the owners who are present, either in person or by proxy, at the meeting.

Section 5. Voting. Each lot shall have between one and five votes, as set forth in Section 13.4 of the Declaration. Each lot owner shall furnish the Association with the owner's name and current mailing address. No lot owner may vote at meetings of the Association until this

information is furnished. The owner or owners of each lot, or some person designated by the owner or owners to act as proxy and who need not be an owner, shall be entitled to cast the vote(s) belonging to the Lot owner at all meetings of the owners. The designation of any proxy shall be made in writing to the Secretary, and shall be revocable at any time by written notice to the Secretary. Each lot owner shall be entitled to cast at all meetings of the owners the vote(s) belonging to each lot owned. Where ownership is in the name of two or more persons, the vote may be exercised as they themselves determine; provided, however, that if any joint owner protests promptly the casting of the vote to the person presiding over the meeting or files a written statement with the Secretary stating that thereafter the vote must be cast pro rata in accordance with each joint owner's interest, then the vote shall thereafter be cast pro rata by all joint owners in accordance with their interests in the lot. Where the lot is sold under a land contract, the land contract vendee shall be entitled to vote the vote(s) for that lot (where there are two or more vendees, they shall be considered joint owners).

Section 6. Quorum. Except as otherwise provided in these Bylaws, the presence in person or by proxy of 33 1/3 percent of the total authorized votes of all owners shall constitute a quorum at all meetings of the lot owners.

Section 7. Majority Vote. The vote of the majority of owners at a meeting at which a quorum shall be present shall be binding upon all owners for all purposes.

Section 8. Membership. All lot owners shall be members of the Association.

ARTICLE IV. Officers

Section 1. Designation, Election and Removal. The principal officers of the Association shall be the President, the Vice President, the Secretary and the Treasurer, all of whom shall be elected annually by the Board of Directors. The Board of Directors may appoint such other officers as, in its judgment, may be necessary. Any two or more offices may be held by the same person, except the offices of President and Secretary and President and Vice President. Any officer may, with or without cause, be removed by the Board of Directors, and a successor selected, by majority vote of the members of the Board of Directors, at any regular meeting of the Board of Directors, or at any special meeting called for that purpose.

Section 2. President. The President shall be the chief executive officer of the Association and shall preside at all meetings of the lot owners and of the Board of Directors. The President shall have all of the general powers and duties of the President of a stock corporation organized under the Wisconsin Business Corporation Law including, but not limited to, the power to appoint lot owners to any committee which is established under these Bylaws.

Section 3. Vice President. The Vice President shall take the place of and perform the duties of the President whenever the President shall be absent or unable to act. If neither the President nor the Vice President is able to act, the Board of Directors shall appoint some other member of the Board of Directors to act in the place of the President on an interim basis. The Vice President shall also perform such other duties as shall from time to time be requested by the Board of Directors or by the President.

Section 4. Secretary. The Secretary shall keep the minutes of all meetings of the owners and of the Board of Directors, have charge of such books and papers as the Board of Directors may direct, and shall, in general, perform all the duties of Secretary of a stock corporation organized under the Wisconsin Business Corporation Law. The Secretary shall count the votes at the meetings of the Association.

Section 5. Treasurer. The Treasurer shall be responsible for Association funds and securities and for keeping full and accurate financial records and books of account showing all receipts and disbursements and for the preparation of all required financial statements. The Treasurer shall be responsible for the deposit of all monies and other valuable effects in the name of the Association in such depositories as may from time to time be designated by the Board of Directors and shall, in general, perform all the duties of the Treasurer of a stock corporation organized under the Wisconsin Business Corporation Law.

Section 6. Agreements, Contracts, Deeds, Checks, Etc. All agreements, contracts, deeds, leases, checks and other instruments of the Association may be executed by any officer or by such other person or persons as may be designated by the Board of Directors.

Section 7. Compensation of Officers. No officer shall receive any compensation from the Association for acting as an officer.

ARTICLE V. Operation of the Property

Section 1. Determination of Assessments. The Board of Directors shall, at least annually, prepare a budget and shall determine the amount of the expenses for the forthcoming year and allocate and assess those expenses against the lot owners according to the Declaration. The Board of Directors may determine: (a) general assessments or charges, (b) special assessments for capital improvements and repairs to the drainage easement areas, and (c) special assessments for exterior maintenance to lots; all as allowed by the Declaration. The Board of Directors shall advise each lot owner in writing of the amount of expenses assessed to each lot owner.

Section 2. Payment of Assessments. All lot owners shall pay the amounts assessed by the Board of Directors pursuant to the provisions of Section 1 of this Article, at such time or times as the Board of Directors shall determine.

Section 3. Collection of Assessments. The Board of Directors shall take prompt action to collect from an owner any assessment due which remains unpaid by the lot owner for more than 30 days from the due date for its payment.

ARTICLE VI. Miscellaneous

Section 1. Notices. All notices to the Board of Directors or the Association shall be sent by registered or certified mail to the office of the Board of Directors or to such other address as the Board of Directors may hereafter designate from time to time.

Section 2. Invalidity. The invalidity of any part of these Bylaws shall not impair or affect in any manner the validity, enforceability, or effect of the balance of these Bylaws.

Section 3. Captions. The captions in these Bylaws are inserted only as a matter of convenience and for reference, and in no way define, limit, or describe the scope of these Bylaws or the intent of any provision of these Bylaws.

Section 4. Singular-Plural. The use of the singular in these Bylaws shall be deemed to include the plural, whenever the context so requires.

Section 5. Waiver. No restriction, condition, obligation, or provision contained in these Bylaws shall be deemed to have been abrogated or waived by reason of any failure of enforcement, regardless of the number of violations or breaches which may occur.

ARTICLE VII. Fiscal Year

Section 1. Adoption of Fiscal Year. The fiscal year of the Association shall begin on the first day of January and end on the last day of December of each year.

ARTICLE VIII.

Section 1. Amendments to Bylaws. These Bylaws may be modified or amended by vote of at least two-thirds of the authorized votes of all lot owners, which vote shall be taken at a meeting of lot owners duly held for that purpose.

IN WITNESS WHEREOF, this instrument has been duly executed this _____ day of _____, 2018.

Main Street Development, LLC

By _____
Stephen R. Mills, Authorized Member

[illegible]

Personally came before me this _____ day of _____, 2018, to me known to be such persons and members who executed the foregoing instrument and acknowledge that they executed the same as the authorized member on behalf of Main Street Market Owner's Association, Inc., by its authority.

Name: _____
Notary Public, State of _____
My commission expires _____



MEMORANDUM

Office of the Village Engineer
Matthew J. Fineour, P.E.

TO: Peggy Herrick, Assistant Planner / Assistant Zoning Administrator

FROM: Matthew Fineour, P.E., Village Engineer

SUBJ: Main Street Market – Phase 1
Onsite Civil Engineering Plans

DATE: February 23, 2018

Peggy,

The Engineering Department has reviewed the preliminary plans for the proposed on-site Main Street Market development phase 1 plans. We have the following comments listed below and noted on the attached mark-up plan. Refer to both this memo and mark-up plan sheets for all engineering comments.

1. See comments on the attached plan mark-up sheets.
 - a. Only plan sheets with comments are included.
 - b. Comments that apply to multiple locations are not repeated for every occurrence.
 - c. Revised submittals shall include a cover letter addressing each comment not addressed or requiring explanation, item by item, to help facilitate Village review of plans.
2. The storm water management plan only addresses the phase 1 area and a portion of the Old Green Bay Road reconstruction limits. The plan shall be expanded or a separate plan submitted to show how the remaining development area and roadway will be addressed.
3. The private water main and sanitary sewer shall be constructed meeting specifications of a public water main, in accordance with Village ordinance 405 – Design Standards and Construction Specifications.
4. Maintenance agreement(s) shall be prepared and executed for the private main and sanitary sewer. The maintenance agreements shall be based on a maintenance plan developed for the life of the facilities. The agreement provisions shall be tied to the Dedicated Private Utility Easement and shall include the following:
 - i. Legal description of the easement.
 - ii. Identification of the private water and sewer facilities.

- iii. Identification of the owner of the water and sewer facilities.
 - iv. Provisions, requirements, and timelines for the operation, inspection, and maintenance of water and sewer facilities by the owner.
 - v. Provisions allowing the Village access to the property to perform inspections or maintenance that are not being properly performed by the owner.
 - vi. Agreement that the owner shall be responsible for all costs associated with the construction and maintenance of the water and sewer facilities.
- 5. Provide a plan / profile of the private water main. This will be required for private water main throughout the development.
 - 6. The reconstruction plans for Old Green Bay Road need to be advanced and reviewed in conjunction with the on-site plans. The planned timing of the road construction shall be provided with consideration of design, permitting, and land acquisition.
 - 7. The design engineer shall also consult with the DOT regarding the design of Old Green Bay Road and STH 165 intersection to verify that the intersection skew is acceptable to the DOT and the design will not affect the proposed development site.
 - 8. The on-site phase 1 construction timing as compared with the reconstruction timing of Old Green Bay Road shall be considered and interim plans prepared if the development construction runs ahead of the roadway project.

The engineering plans have been reviewed for conformance with generally accepted engineering practices and Village policies. Although the data has been reviewed, the design engineer is responsible for the thoroughness and accuracy of plans and supplemental data and for their compliance with all state and local codes, ordinances, and procedures. Modifications to the plans, etc. may be required should errors or changed conditions be found at a future date and as additional information is provided.

Attachments: Plan Mark-Up
Details


THESE PLANS AND DESIGNS ARE COPYRIGHT PROTECTED AND MAY NOT BE USED IN WHOLE OR IN PART WITHOUT THE WRITTEN CONSENT OF PINNACLE ENGINEERING GROUP, LLC

DESIGNED: MAC
REVIEWED: MAC
DRAWN: EP
DATE: 11/14/10

ONSITE CIVIL ENGINEERING INFRASTRUCTURE PLANS
FOR

MAIN STREET MARKET PHASE 1

GREEN BAY RD. □ 104TH ST. PLEASANT PRAIRIE, WI
PLANS PREPARED FOR



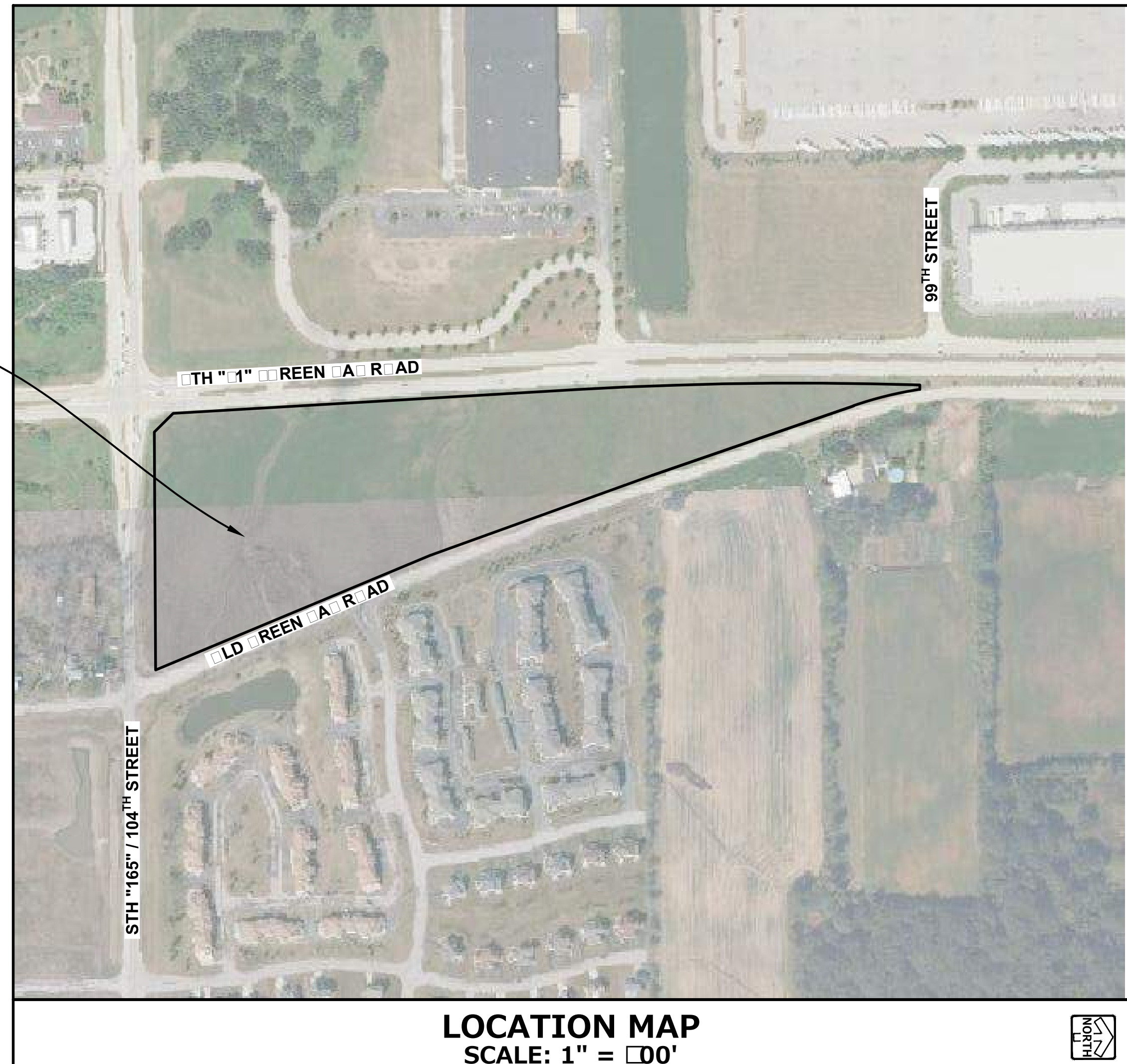
LEGEND

	EXISTING	PROPOSED
SANITARY SEWER MANHOLE	⊙	⊙
STORM SEWER MANHOLE	⊙	⊙
STORM SEWER AREA DRAIN		■
STORM SEWER INLET (ROUND CASTING)	○	●
STORM SEWER INLET (RECTANGULAR CASTING)	□	■
PRECAST FLARED END SECTION	△	▲
CONCRETE HEADWALL	⌒	⌒
AIR RELEASE ASSEMBLY	⊙	⊙
VALVE BOX	⊙	⊙
FIRE HYDRANT	⊙	⊙
BUFFALO BOX	⊙	⊙
CLEANOUT	⊙	⊙
SANITARY SEWER	—	—
FORCE MAIN	—	—
STORM SEWER	—	—
DRAIN TILE	—	—
WATER MAIN	—	—
UTILITY CROSSING	—	—
LIGHTING	⊙	⊙
ELECTRICAL CABLE	—	—
OVERHEAD WIRES	—	—
CAUTION EXISTING UTILITIES NEARBY	—	—
ELECTRICAL TRANSFORMER OR PEDESTAL	⊙	⊙
POWER POLE	⊙	⊙
POWER POLE WITH LIGHT	⊙	⊙
STREET SIGN	⊙	⊙
GAS MAIN	—	—
TELEPHONE LINE	—	—
CONTOUR	749	749
SPOT ELEVATION	X (750.00)	X 750.00
WETLANDS	—	—
FLOODWAY	—	—
FLOODPLAIN	—	—
HIGH WATER LEVEL (HWL)	—	—
NORMAL WATER LEVEL (NWL)	—	—
DIRECTION OF SURFACE FLOW	→	→
DITCH OR SWALE	—	—
DIVERSION SWALE	—	—
OVERFLOW RELIEF ROUTING	→	→
TREE WITH TRUNK SIZE	⊙	⊙
SOIL BORING	⊙	⊙
TOPSOIL PROBE	⊙	⊙
FENCE LINE/TEMPORARY SILT	—	—
FENCE LINE/WIRE	—	—
FENCE LINE/CHAIN LINK OR IRON	—	—
FENCE LINE/WOOD OR PLASTIC	—	—
CONCRETE SIDEWALK	—	—
CURB AND GUTTER	—	—
DEPRESSED CURB	—	—
REVERSE PITCH CURB □ GUTTER	—	—
EASEMENT LINE	—	—

ABBREVIATIONS

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

PROJECT LOCATION



LOCATION MAP
SCALE: 1" = 100'

GENERAL NOTES

- THE INTENTION OF THE PLANS AND SPECIFICATIONS IS TO SET FORTH PERFORMANCE AND CONSTRUCTION MATERIAL STANDARDS FOR THE PROPER EXECUTION OF WORK. ALL WORKS CONTAINED WITHIN THE PLANS AND SPECIFICATIONS SHALL BE COMPLETED IN ACCORDANCE WITH ALL REQUIREMENTS FROM LOCAL, STATE, FEDERAL OR OTHER GOVERNING AGENCY'S LAWS, REGULATIONS, JURISDICTIONAL ORDINANCES, CODES, RULES, ETC., AND THE OWNER'S DIRECTION.
- A DRAFT GEOTECHNICAL REPORT HAS BEEN PREPARED BY CGC, INC DATED SEPTEMBER 21, 2017. THE DATA ON SUB-SURFACE SOIL CONDITIONS IS NOT INTENDED AS A REPRESENTATION OR WARRANTY OF THE CONTINUITY OF SUCH CONDITIONS BETWEEN BORINGS OR INDICATED SAMPLING LOCATIONS. IT SHALL BE EXPRESSLY UNDERSTOOD THAT OWNER WILL NOT BE RESPONSIBLE FOR ANY INTERPRETATIONS OR CONCLUSIONS DRAWN THERE FROM BY THE CONTRACTOR. DATA IS MADE AVAILABLE FOR THE CONVENIENCE OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR PERFORMING ANY ADDITIONAL SOILS INVESTIGATIONS THEY FEEL IS NECESSARY FOR THE PROPER EVALUATION OF THE SITE FOR PURPOSES OF PLANNING, BIDDING, OR CONSTRUCTING THE PROJECT AT NO ADDITIONAL COST TO THE OWNER.
- THE CONTRACTOR IS RESPONSIBLE TO REVIEW AND UNDERSTAND ALL COMPONENTS OF THE PLANS AND SPECIFICATIONS, INCLUDING FIELD VERIFYING SOIL CONDITIONS, PRIOR TO SUBMISSION OF A BID PROPOSAL.
- THE CONTRACTOR SHALL PROMPTLY REPORT ANY ERRORS OR AMBIGUITIES LEARNED AS PART OF THEIR REVIEW OF PLANS, SPECIFICATIONS, REPORTS AND FIELD INVESTIGATIONS.
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE COMPUTATION OF QUANTITIES AND WORK REQUIRED TO COMPLETE THIS PROJECT. THE CONTRACTOR'S BID SHALL BE BASED ON ITS OWN COMPUTATIONS AND IN NO SUCH INSTANCE RELY ON THE ENGINEER'S ESTIMATE.
- QUESTIONS/CLARIFICATIONS WILL BE INTERPRETED BY ENGINEER/OWNER PRIOR TO THE AWARD OF CONTRACT. ENGINEER/OWNER WILL SUBMIT OFFICIAL RESPONSES IN WRITING. INTERPRETATIONS PRESENTED IN OFFICIAL RESPONSES SHALL BE BINDING ON ALL PARTIES ASSOCIATED WITH THE CONTRACT. IN NO WAY SHALL WORD-OF-MOUTH DIALOG CONSTITUTE AN OFFICIAL RESPONSE.
- PRIOR TO START OF WORK, CONTRACTOR SHALL BE COMPLETELY FAMILIAR WITH ALL CONDITIONS OF THE SITE, AND SHALL ACCOUNT FOR CONDITIONS THAT AFFECT, OR MAY AFFECT CONSTRUCTION INCLUDING, BUT NOT LIMITED TO, LIMITATIONS OF WORK ACCESS, SPACE LIMITATIONS, OVERHEAD OBSTRUCTIONS, TRAFFIC PATTERNS, LOCAL REQUIREMENTS, ADJACENT ACTIVITIES, ETC. FAILURE TO CONSIDER SITE CONDITIONS SHALL NOT BE CAUSE FOR CLAIM OF JOB EXTRAS.
- COMMENCEMENT OF CONSTRUCTION SHALL EXPLICITLY CONFIRM THAT THE CONTRACTOR HAS REVIEWED THE PLANS AND SPECIFICATIONS IN ENTIRETY AND CERTIFIES THAT THEIR SUBMITTED BID PROPOSAL CONTAINS PROVISIONS TO COMPLETE THE PROJECT, WITH THE EXCEPTION OF UNFORESEEN FIELD CONDITIONS. ALL APPLICABLE PERMITS HAVE BEEN OBTAINED, AND CONTRACTOR UNDERSTANDS ALL OF THE REQUIREMENTS OF THE PROJECT.
- SHOULD ANY DISCREPANCIES OR CONFLICTS IN THE PLANS OR SPECIFICATIONS BE DISCOVERED AFTER THE AWARD OF CONTRACT, ENGINEER SHALL BE NOTIFIED IN WRITING IMMEDIATELY AND CONSTRUCTION OF ITEMS AFFECTED BY THE DISCREPANCIES/CONFLICTS SHALL NOT COMMENCE, OR CONTINUE, UNTIL A WRITTEN RESPONSE FROM ENGINEER/OWNER IS DISTRIBUTED. IN THE EVENT OF A CONFLICT BETWEEN REFERENCED CODES, STANDARDS, SPECIFICATIONS AND PLANS, THE ONE ESTABLISHING THE MOST STRINGENT REQUIREMENTS SHALL BE FOLLOWED.
- THE CONTRACTOR SHALL, AT ITS OWN EXPENSE, OBTAIN ALL NECESSARY PERMITS AND LICENSES TO COMPLETE THE PROJECT. OBTAINING PERMITS, OR DELAYS, IS NOT CAUSE FOR DELAY OF THE CONTRACT OR SCHEDULE. CONTRACTOR SHALL COMPLY WITH ALL PERMIT REQUIREMENTS.
- THE CONTRACTOR SHALL NOTIFY ALL INTERESTED GOVERNING AGENCIES, UTILITY COMPANIES AFFECTED BY THIS CONSTRUCTION PROJECT, AND DIGGER'S HOTLINE IN ADVANCE OF CONSTRUCTION TO COMPLY WITH ALL JURISDICTIONAL ORDINANCES/CODES/RULES/ETC., PERMIT STIPULATIONS, AND OTHER APPLICABLE STANDARDS.
- SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE TO INITIATE, INSTITUTE, ENFORCE, MAINTAIN, AND SUPERVISE ALL SAFETY PRECAUTIONS AND JOB SITE SAFETY PROGRAMS IN CONNECTION WITH THE WORK.
- QUESTIONS/CLARIFICATIONS WILL BE INTERPRETED BY ENGINEER/OWNER PRIOR TO THE AWARD OF CONTRACT. ENGINEER/OWNER WILL SUBMIT OFFICIAL RESPONSES IN WRITING. INTERPRETATIONS PRESENTED IN OFFICIAL RESPONSES SHALL BE BINDING ON ALL PARTIES ASSOCIATED WITH THE CONTRACT. IN NO WAY SHALL WORD-OF-MOUTH DIALOG CONSTITUTE AN OFFICIAL RESPONSE.
- THE CONTRACTOR SHALL INDEMNIFY THE OWNER, ENGINEER, AND THEIR AGENTS FROM ALL LIABILITY INVOLVED WITH THE CONSTRUCTION, INSTALLATION, AND TESTING OF THE WORK ON THIS PROJECT.

CONTACTS:

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INDEX OF SHEETS

C-1	COVER SHEET
C-2	EXISTING CONDITIONS PLAN
C-3	SITE DIMENSIONAL PAVING PLAN
C-4	GRADING PLAN
C-5	UTILITY PLAN
C-6	SITE STABILIZATION PLAN
C-7 - C-9	CONSTRUCTION DETAILS

REQUIRED SUBMITTALS FOR APPROVAL

- HOT MIX ASPHALT - MIX DESIGN
- CONCRETE PAVEMENTS (EXTERIOR) MIX DESIGN □ DINT PLAN
- PAVEMENT STONE BASE COURSE - GRADATION
- PIPE BEDDING □ TRENCH BACKFILL - GRADATION
- MANHOLE BACKFILL - GRADATION
- PAVEMENT MARKING PAINT

REQUIRED SUBMITTALS FOR RECORDS

- WATER MAIN PIPES □ VALVES □ HYDRANTS □ FITTINGS
- SANITARY SEWER PIPE □ FITTINGS
- STORM SEWER PIPE □ STRUCTURES □ FITTINGS
- TRACER WIRE
- UNDERGROUND UTILITY LOCATION RECORD DRAWINGS
- ADA SIGN □ TRUNCATED DOMES □ PAINT □ STENCILS
- CHEMICAL SOIL STABILIZATION MIX □ DESIGN □ IF APPLICABLE

VILLAGE NOTES

PRIOR TO CONSTRUCTION, A PRE-CONSTRUCTION CONFERENCE MUST BE HELD AT THE VILLAGE OFFICES. THE PRE-CONSTRUCTION CONFERENCE SHALL BE SCHEDULED AND MODERATED BY THE DESIGNING ENGINEER OF RECORD.

EACH CONTRACTOR SHALL HAVE A COPY OF THE VILLAGE APPROVED PLANS, PROJECT MANUAL, AND VILLAGE CONSTRUCTION SPECIFICATIONS ON-SITE DURING TIMES OF CONSTRUCTION. THE CONSTRUCTION SPECIFICATIONS ARE AN INTEGRAL PART OF THE CIVIL ENGINEERING PLANS.

RAW CUT/FILL ESTIMATES ON THE SITE ARE AS FOLLOWS:
FROE/TERT SOUTH: CUT - 1,158 CY
FILL - 12,525 CY
MSM PHASE I: CUT - 17,966 CY
FILL - 6,269 CY

REVISIONS

NO.	DATE	DESCRIPTION

COVER SHEET

PLAN | DESIGN | DELIVER
www.pinnacle-engr.com

WISCONSIN OFFICE:
13850 W. BLUEMOUND ROAD
BROOKFIELD, WI 53005
(262) 754-8888
CHICAGO | MILWAUKEE | NATIONWIDE

MAIN STREET MARKET PHASE 1
GREEN BAY RD. □ 104TH ST. PLEASANT PRAIRIE, WI

COVER SHEET

REVISIONS

NO.	DATE	DESCRIPTION

SHEET
C-1
OF
C-9

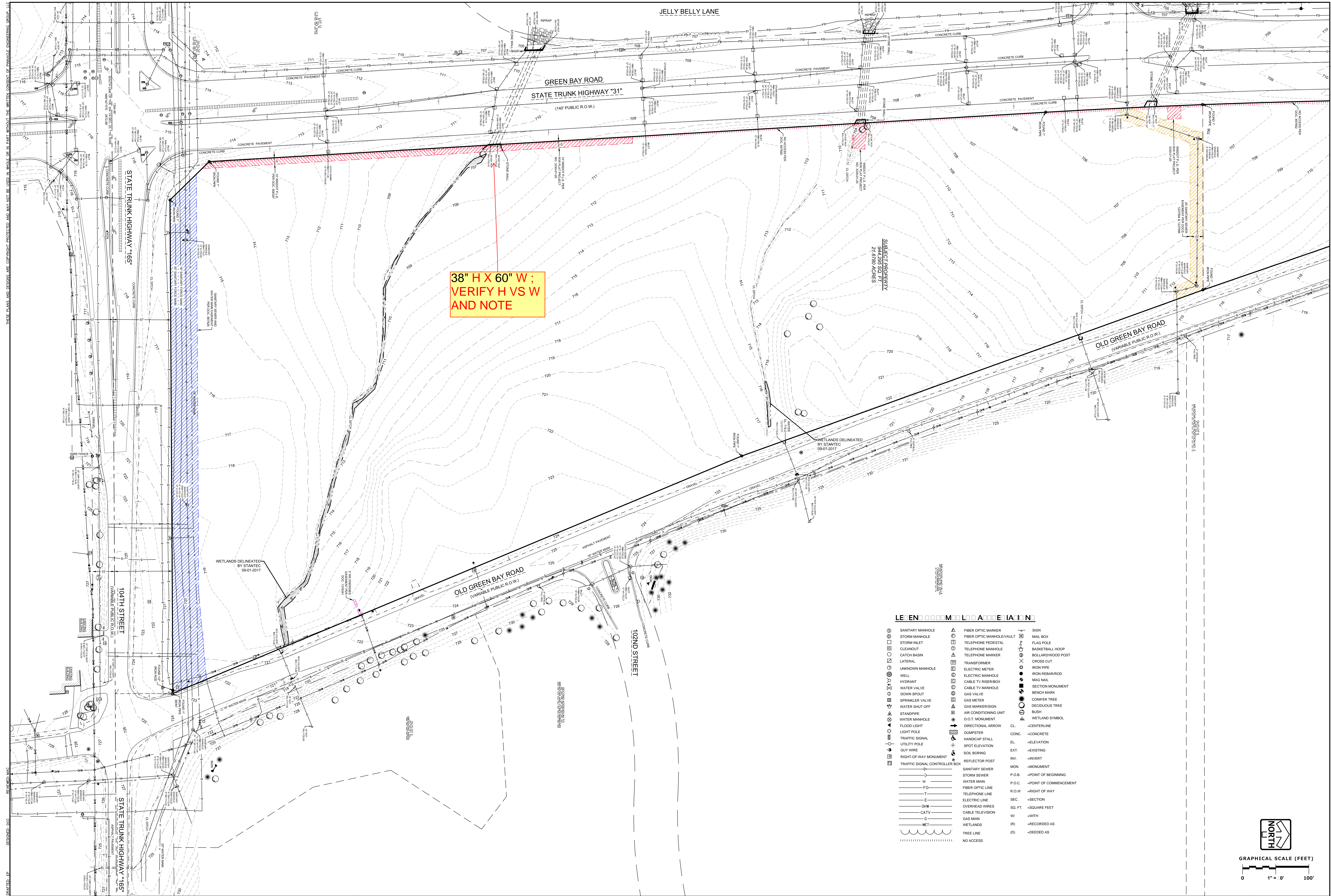
COVER SHEET

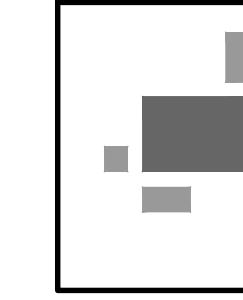
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COVER SHEET

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PINNACLE ENGINEERING GROUP
ENGINEERING | NATURAL RESOURCES | SURVEYING

PLAN | DESIGN | DELIVER
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WISCONSIN OFFICE:
35850 W. BLUEMOUND ROAD
BROOKFIELD, WI 53005
(262) 754-8888

CHICAGO | MILWAUKEE | NATIONWIDE

MAIN STREET MARKET PHASE 1

GREEN BAY RD. □ 104TH ST. PLEASANT PRAIRIE, WI

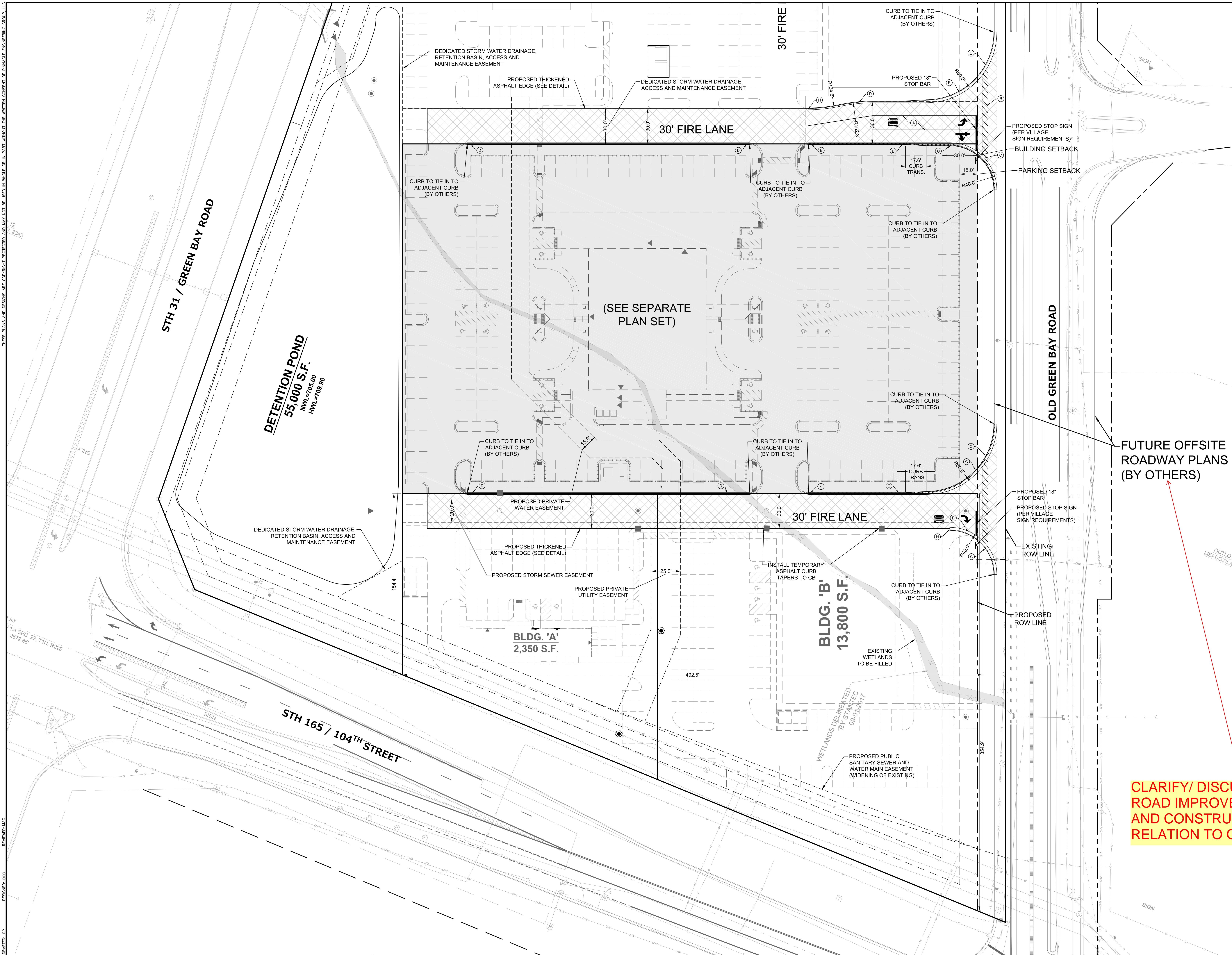
EXISTING CONDITIONS PLAN

REVISIONS		SHEET
NO.	DESCRIPTION	
		C-2
		C-9

PREC: DB No. 1114.10-WI
MAC
START DATE: 12-2017
SCALE: 1" = 100'

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DRAWN: JAC
CHECKED: JAC
REVIEWED: JAC
DATE: 12-03-17



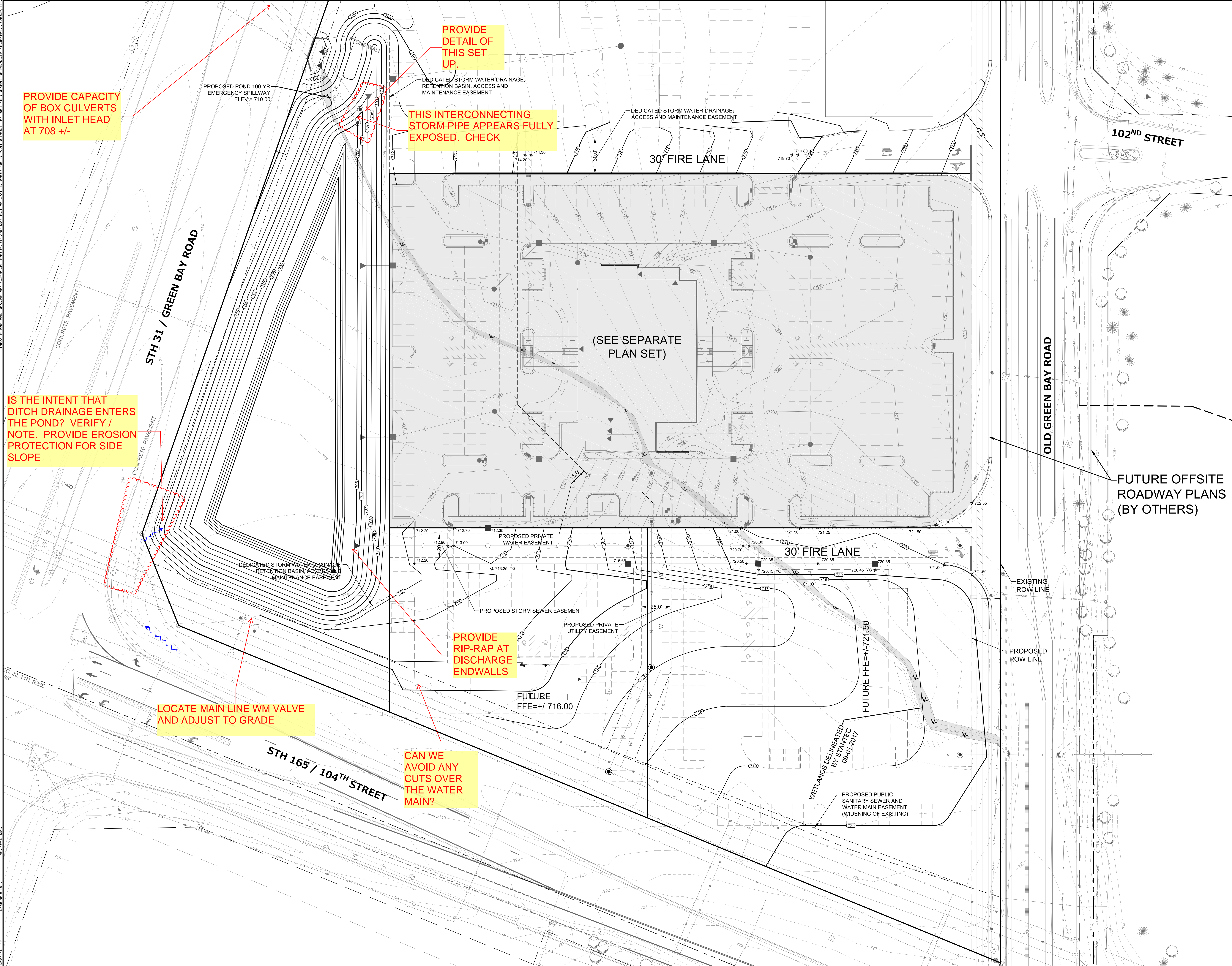
LEGEND

- HEAVY DUTY PAVEMENT
 - CRUSHED AGGREGATE BASE COURSE
 - ASPHALTIC CONCRETE
 - GRADED LESTONED
- 4" SOLID WHITE STRIPE
 - 1" 8-5: C.B.S. (SH) 1" 25-798 M.C. 7"
- PREPARE CURB FOR FUTURE SIDEWALK RAMP
- 18" CURB GUTTER (SEE DETAIL)
- 18" REVERSE CURB GUTTER (SEE DETAIL)
- 18" CURB GUTTER (SEE DETAIL)
- 18" REVERSE CURB GUTTER (SEE DETAIL)
- TAPER CURB HEAD (SEE DETAIL)
- PARKING COLT (FOR INFORMATION ONLY, NOT TO BE PAINTED)
- MAN DOOR

NOTES

- ALL DIMENSIONS ARE FACE OF CURB TO FACE OF CURB OR BUILDING FOUNDATION UNLESS NOTED OTHERWISE. ALL UTILITY DIMENSIONS ARE TO OUTSIDE OF PIPE OR CENTER OF STRUCTURE UNLESS OTHERWISE NOTED. ALL PAVING DIMENSIONS ARE TO FACE OF CURB OR TO EDGE OF PAVEMENT. EXCEPT FOR THE SETBACK FROM PARKING LOTS, HANDLING LANE AND FIRE ACCESS LANE, WHERE THE SETBACK IS MEASURED FROM THE BACK OF CURB TO THE PROPERTY LINE.
- ALL PROPOSED CURB AND GUTTER SHALL BE STANDARD CURB AND GUTTER (SEE DETAIL) UNLESS OTHERWISE NOTED. CURB AND GUTTER DRAINING AWAY FROM THE FACE OF CURB IS NOTED AS REVERSE CURB AND GUTTER.
- ALL RADII ARE MEASURED TO FACE OF CURB UNLESS NOTED OTHERWISE.
- BUILDING DIMENSIONS AND ADJACENT PARKING AND UTILITY LAYOUT HAVE BEEN PREPARED BASED UPON ARCHITECTURAL INFORMATION CURRENT AT THE DATE OF THIS DRAWING. SUBSEQUENT ARCHITECTURAL CHANGES MAY EXIST. THEREFORE CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR PRECISE BUILDING DIMENSIONS AND EXACT UTILITY ENTRANCE LOCATIONS AND NOTIFY THE ARCHITECT AND ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL CONTACT DIGGERS HOTLINE PRIOR TO ANY WORK TO LOCATE UTILITIES AND SHALL CONTACT THE OWNER SHOULD UTILITIES APPEAR TO BE IN CONFLICT WITH THE PROPOSED IMPROVEMENT.
- IMPROVEMENTS ADJACENT TO BUILDING IF SHOWN SUCH AS TRUCK DOCK, RETAINING WALLS, SIDEWALKS, CURBS, FENCES, CANOPIES, CRAMPS, HANDICAP ACCESS, RAMPERS, DUMPSTERS, TRANSFORMERS, ETC. HAVE BEEN SHOWN FOR APPROXIMATE LOCATION ONLY. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS, SPECIFICATIONS AND DETAILS.
- REFER TO ELECTRICAL PLANS FOR LIGHTING LOCATIONS, SPECIFICATIONS AND DETAILS.
- SEE ADDITIONAL NOTES AND DETAILS ON CONSTRUCTION DETAILS.
- ALL PAVING SHALL CONFORM TO STATE OF WISCONSIN STANDARD SPECIFICATIONS FOR HIGHWAY STRUCTURE CONSTRUCTION AND APPLICABLE VILLAGE OF PLEASANT PRAIRIE ORDINANCES AND SPECIFICATIONS CONTAINED WITHIN THIS PLAN SET.
- CONTRACTOR SHALL CONSULT STRIPING COLOR WITH OWNER PRIOR TO CONSTRUCTION.
- PROVIDE CONTRACTOR GRADE ACRYLIC STRIPING PAINT FOR NEW ASPHALT OR COATED ASPHALT. APPLY MARKING PAINT AT A RATE OF ONE GALLON PER THREE TO FOUR HUNDRED LINEAL FEET OF FOUR INCH WIDE STRIPES OR TO MANUFACTURERS SPECIFICATION WHICHEVER IS GREATER.
- THOROUGHLY CLEAN SURFACES FREE OF DIRT, SAND, GRAVEL, COIL AND OTHER FOREIGN MATTER. CONTRACTOR RESPONSIBLE TO INSPECT EXISTING PAVEMENT SURFACES FOR CONDITIONS AND DEFECTS THAT WILL ADVERSELY AFFECT QUALITY OF WORK AND WHICH CANNOT BE PUT INTO AN ACCEPTABLE CONDITION THROUGH NORMAL PREPARATORY WORK AS SPECIFIED.
- DO NOT PLACE MARKING OVER UNSOUND PAVEMENTS. IF THESE CONDITIONS EXIST, NOTIFY OWNER. STARTING INSTALLATION CONSTITUTES CONTRACTOR'S ACCEPTANCE OF SURFACE AS SUITABLE FOR INSTALLATION.
- LAYOUT MARKINGS USING GUIDE LINES, TEMPLATES AND FORMS. STENCILS AND TEMPLATES SHALL BE PROFESSIONALLY MADE TO INDUSTRY STANDARDS. THREE HAND PAINTING OF ARROWS, SYMBOLS, OR WORDING SHALL NOT BE ALLOWED. APPLY STRIPES STRAIGHT AND EVEN.
- PROTECT ADJACENT CURBS, SWALKS, FENCES AND OTHER ITEMS FROM RECEIVING PAINT.
- BARRICADE MARKED AREAS DURING INSTALLATION AND UNTIL THE MARKING PAINT IS DRIED AND READY FOR TRAFFIC.
- ASPHALTIC CONCRETE PAVING SPECIFICATIONS
- CODES AND STANDARDS: THE PLACING, CONSTRUCTION AND COMPOSITION OF THE ASPHALTIC BASE COURSE AND ASPHALTIC CONCRETE SURFACING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTIONS 11.01 AND 11.02 OF THE STATE OF WISCONSIN STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, CURRENT EDITION. HEREINAFTER THIS PUBLICATION WILL BE REFERRED TO AS THE STATE HIGHWAY SPECIFICATIONS.
- WEATHER LIMITATIONS: APPLY TACK COATS WHEN AMBIENT TEMPERATURE < 50°F (10°C) - 70°F (21°C) - 80°F (27°C) - 90°F (32°C) - 100°F (38°C) - 110°F (43°C) - 120°F (49°C) - 130°F (55°C) - 140°F (60°C) - 150°F (66°C) - 160°F (72°C) - 170°F (77°C) - 180°F (83°C) - 190°F (89°C) - 200°F (93°C) - 210°F (99°C) - 220°F (106°C) - 230°F (111°C) - 240°F (117°C) - 250°F (122°C) - 260°F (128°C) - 270°F (133°C) - 280°F (139°C) - 290°F (144°C) - 300°F (150°C) - 310°F (156°C) - 320°F (161°C) - 330°F (167°C) - 340°F (173°C) - 350°F (178°C) - 360°F (183°C) - 370°F (189°C) - 380°F (194°C) - 390°F (199°C) - 400°F (205°C) - 410°F (211°C) - 420°F (216°C) - 430°F (222°C) - 440°F (228°C) - 450°F (233°C) - 460°F (239°C) - 470°F (244°C) - 480°F (250°C) - 490°F (255°C) - 500°F (261°C) - 510°F (267°C) - 520°F (272°C) - 530°F (278°C) - 540°F (283°C) - 550°F (289°C) - 560°F (294°C) - 570°F (299°C) - 580°F (305°C) - 590°F (311°C) - 600°F (316°C) - 610°F (322°C) - 620°F (327°C) - 630°F (333°C) - 640°F (338°C) - 650°F (344°C) - 660°F (349°C) - 670°F (355°C) - 680°F (360°C) - 690°F (366°C) - 700°F (371°C) - 710°F (377°C) - 720°F (382°C) - 730°F (388°C) - 740°F (393°C) - 750°F (399°C) - 760°F (404°C) - 770°F (409°C) - 780°F (415°C) - 790°F (420°C) - 800°F (426°C) - 810°F (431°C) - 820°F (437°C) - 830°F (442°C) - 840°F (448°C) - 850°F (453°C) - 860°F (459°C) - 870°F (464°C) - 880°F (469°C) - 890°F (475°C) - 900°F (480°C) - 910°F (486°C) - 920°F (491°C) - 930°F (497°C) - 940°F (502°C) - 950°F (507°C) - 960°F (513°C) - 970°F (518°C) - 980°F (523°C) - 990°F (529°C) - 1000°F (534°C) - 1010°F (539°C) - 1020°F (545°C) - 1030°F (550°C) - 1040°F (556°C) - 1050°F (561°C) - 1060°F (567°C) - 1070°F (572°C) - 1080°F (578°C) - 1090°F (583°C) - 1100°F (589°C) - 1110°F (594°C) - 1120°F (599°C) - 1130°F (605°C) - 1140°F (610°C) - 1150°F (616°C) - 1160°F (621°C) - 1170°F (627°C) - 1180°F (632°C) - 1190°F (637°C) - 1200°F (643°C) - 1210°F (648°C) - 1220°F (653°C) - 1230°F (659°C) - 1240°F (664°C) - 1250°F (669°C) - 1260°F (675°C) - 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4660°F (2460°C) - 4670°F (2466°C) - 4680°F (2471°C) - 4690°F (2476°C) - 4700°F (2481°C) - 4710°F (2487°C) - 4720°F (2492°C) - 4730°F (2497°C) - 4740°F (2502°C) - 4750°F (2508°C) - 4760°F (2513°C) - 4770°F (2518°C) - 4780°F (2523°C) - 4790°F (2529°C) - 4800°F (2534°C) - 4810°F (2539°C) - 4820°F (2544°C) - 4830°F (2549°C) - 4840°F (2555°C) - 4850°F (2560°C) - 4860°F (2565°C) - 4870°F (2570°C) - 4880°F (2576°C) - 4890°F (2581°C) - 4900°F (2586°C) - 4910°F (2591°C) - 4920°F (2597°C) - 4930°F (2602°C) - 4940°F (2607°C) - 4950°F (2612°C) - 4960°F (2618°C) - 4970°F (2623°C) - 4980°F (2628°C) - 4990°F (2633°C) - 5000°F (2639°C) - 5010°F (2644°C) - 5020°F (2649°C) - 5030°F (2654°C) - 5040°F (2659°C) - 5050°F (2665°C) - 5060°F (2670°C) - 5070°F (2675°C) - 5080°F (2680°C) - 5090°F (2686°C) - 5100°F (2691°C) - 5110°F (2696°C) - 5120°F (2701°C) - 5130°F (2707°C) - 5140°F (2712°C) - 5150°F (2717°C) - 5160°F (2722°C) - 5170°F (2728°C) - 5180°F (2733°C) - 5190°F (2738°C) - 5200°F (2743°C) - 5210°F (2749°C) - 5220°F (2754°C) - 5230°F (2759°C) - 5240°F (2764°C) - 5250°F (2769°C) - 5260°F (2775°C) - 5270°F (2780°C) - 5280°F (2785°C) - 5290°F (2790°C) - 5300°F (2796°C) - 5310°F (2801°C) - 5320°F (2806°C) - 5330°F (2811°C) - 5340°F (2817°C) - 5350°F (2822°C) - 5360°F (2827°C) - 5370°F (2832°C) - 5380°F (2838°C) - 5390°F (2843°C) - 5400°F (2848°C) - 5410°F (2853°C) - 5420°F (2859°C) - 5430°F (2864°C) - 5440°F (2869°C) - 5450°F (2874°C) - 5460°F (2879°C) - 5470°F (2885°C) - 5480°F (2890°C) - 5490°F (2895°C) - 5500°F (2900°C) - 5510°F (2906°C) - 5520°F (2911°C) - 5530°F (2916°C) - 5540°F (2921°C) - 5550°F (2927°C) - 5560°F (2932°C) - 5570°F (2937°C) - 5580°F (2942°C) - 5590°F (2948°C) - 5600°F (2953°C) - 5610°F (2958°C) - 5620°F (2963°C) - 5630°F (2969°C) - 5640°F (2974°C) - 5650°F (2979°C) - 5660°F (2984°C) - 5670°F (2989°C) - 5680°F (2995°C) - 5690°F (3000°C) - 5700°F (3005°C) - 5710°F (3010°C) - 5720°F (3016°C) - 5730°F (3021°C) - 5740°F (3026°C) - 5750°F (3031°C) - 5760°F (3037°C) - 5770°F (3042°C) - 5780°F (3047°C) - 5790°F (3052°C) - 5800°F (3058°C) - 5810°F (3063°C) - 5820°F (3068°C) - 5830°F (3073°C) - 5840°F (3079°C) - 5850°F (3084°C) - 5860°F (3089°C) - 5870°F (3094°C) - 5880°F (3099°C) - 5890°F (3105°C) - 5900°F (3110°C) - 5910°F (3115°C) - 5920°F (3120°C) - 5930°F (3126°C) - 5940°F (3131°C) - 5950°F (3136°C) - 5960°F (3141°C) - 5970°F (3147°C) - 5980°F (3152°C) - 5990°F (3157°C) - 6000°F (3162°C) - 6010°F (3168°C) - 6020°F (3173°C) - 6030°F (3178°C) - 6040°F (3183°C) - 6050°F (3189°C) - 6060°F (3194°C) - 6070°F (3199°C) - 6080°F (3204°C) - 6090°F (3209°C) - 6100°F (3215°C) - 6110°F (3220°C) - 6120°F (3225°C) - 6130°F (3230°C) - 6140°F (3236°C) - 6150°F (3241°C) - 6160°F (3246°C) - 6170°F (3251°C) - 6180°F (3257°C) - 6190°F (3262°C) - 6200°F (3267°C) - 6210°F (3272°C) - 6220°F (3278°C) - 6230°F (3283°C) - 6240°F (3288°C) - 6250°F (3293°C) - 6260°F (3299°C) - 6270°F (3304°C) - 6280°F (3309°C) - 6290°F (3314°C) - 6300°F (3319°C) - 6310°F (3325°C) - 6320°F (3330°C) - 6330°F (3335°C) - 6340°F (3340°C) - 6350°F (3346°C) - 6360°F (3351°C) - 6370°F (3356°C) - 6380°F (3361°C) - 6390°F (3367°C) - 6400°F (3372°C) - 6410°F (3377°C) - 6420°F (3382°C) - 6430°F (3388°C) - 6440°F (3393°C) - 6450°F (3398°C) - 6460°F (3403°C) - 6470°F (3409°C) - 6480°F (3414°C) - 6490°F (3419°C) - 6500°F (3424°C) - 6510°F (3429°C) - 6520°F (3435°C) - 6530°F (3440°C) - 6540°F (3445°C) - 6550°F (3450°C) - 6560°F (3456°C) - 6570°F (3461°C) - 6580°F (3466°C) - 6590°F (3471°C) - 6600°F (3477°C) - 6610°F (3482°C) - 6620°F (3487°C) - 6630°F (3492°C) - 6640°F (3498°C) - 6650°F (3503°C) - 6660°F (3508°C) - 6670°F (3513°C) - 6680°F (3519°C) - 6690°F (3524°C) - 6700°F (3529°C) - 6710°F (3534°C) - 6720°F (3539°C) - 6730°F (3545°C) - 6740°F (3550°C) - 6750°F (3555°C) - 6760°F (3560°C) - 6770°F (3566°C) - 6780°F (3571°C) - 6790°F (3576°C) - 6800°F (3581°C) - 6810°F (3587°C) - 6820°F (3592°C) - 6830°F (3597°C) - 6840°F (3602°C) - 6850°F (3608°C) - 6860°F (3613°C) - 6870°F (3618°C) - 6880°F (3623°C) - 6890°F (3629°C) - 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REVIEWED: MAC



PROVIDE CAPACITY OF BOX CULVERTS WITH INLET HEAD AT 708 +/-

PROVIDE DETAIL OF THIS SET UP.

THIS INTERCONNECTING STORM PIPE APPEARS FULLY EXPOSED. CHECK

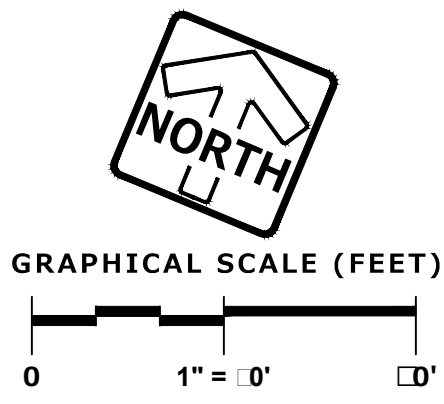
IS THE INTENT THAT DITCH DRAINAGE ENTERS THE POND? VERIFY / NOTE. PROVIDE EROSION PROTECTION FOR SIDE SLOPE

LOCATE MAIN LINE WM VALVE AND ADJUST TO GRADE

PROVIDE RIP-RAP AT DISCHARGE ENDWALLS

CAN WE AVOID ANY CUTS OVER THE WATER MAIN?

- ### NOTES
- CONTRACTOR SHALL VERIFY ALL GRADES/ENSURE ALL AREAS DRAIN PROPERLY AND REPORT ANY DISCREPANCIES TO PINNACLE ENGINEERING GROUP PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITIES.
 - ALL EXISTING CONTOURS REPRESENT EXISTING SURFACE GRADES UNLESS OTHERWISE NOTED. ALL PROPOSED GRADES SHOWN ARE FINISH SURFACE GRADES UNLESS OTHERWISE NOTED.
 - SPOT ELEVATIONS REPRESENT THE GRADE ALONG THE EDGE OF PAVEMENT UNLESS ELEVATIONS AS DEPICTED IN THE PLANS.
 - CONTRACTOR SHALL ASSUME SOLE RESPONSIBILITY FOR THE COMPUTATION(S) OF ALL GRADING QUANTITIES. WHILE REG ATTEMPTS TO PROVIDE A COST EFFECTIVE APPROACH TO BALANCE EARTHWORK/GRADING DESIGN IS BASED ON MANY FACTORS INCLUDING SAFETY, AESTHETICS, AND COMMON ENGINEERING STANDARDS OF CARE/BEFORE NO GUARANTEE CAN BE MADE FOR A BALANCED SITE.
 - THE CONTRACTOR MAY SOLICIT APPROVAL FROM ENGINEER/OWNER TO ADJUST FINAL GRADES FROM DESIGN GRADES TO PROVIDE AN OVERALL SITE BALANCE AS A RESULT OF FIELD CONDITIONS.
 - GRADING ACTIVITIES SHALL BE IN A MANNER TO ALLOW POSITIVE DRAINAGE ACROSS DISTURBED SOILS/WHICH MAY INCLUDE ELEVATION OF TEMPORARY DITCHES TO PREVENT PONDING/AND IF NECESSARY PUMPING TO ALLEVIATE PONDING. CONTRACTOR SHALL PREVENT SURFACE WATER FROM ENTERING INTO ELEVATIONS. IN NO WAY SHALL OWNER BE RESPONSIBLE FOR REMEDIATION OF UNSUITABLE SOILS CREATED/ORIGINATED AS A RESULT OF IMPROPER SITE GRADING OR SEQUENCING. CONTRACTOR SHALL SECURE GRADING ACTIVITIES TO LIMIT EXPOSURE OF DISTURBED SOILS DUE TO WEATHER.
 - THE CONTRACTOR IS RESPONSIBLE FOR MEETING MINIMUM COMPACTION STANDARDS. THE CONTRACTOR SHALL NOTIFY ENGINEER/OWNER IF PROPER COMPACTION CANNOT BE OBTAINED. THE PROJECT'S GEOTECHNICAL CONSULTANT SHALL DETERMINE WHICH IN-SITU SOILS ARE TO BE CONSIDERED UNSUITABLE SOILS. THE ENGINEER/OWNER AND GEOTECHNICAL TESTING CONSULTANT WILL DETERMINE IF REMEDIAL MEASURES WILL BE NECESSARY.
 - IN THE EVENT THAT ANY MOISTURE/DENSITY TEST(S) FAIL TO MEET SPECIFICATION REQUIREMENTS, THE CONTRACTOR SHALL PERFORM CORRECTIVE WORK AS NECESSARY TO BRING THE MATERIAL INTO COMPLIANCE AND RETEST THE FAILED AREA AT NO COST TO THE OWNER.
 - WITH THE AUTHORIZATION OF THE ENGINEER/OWNER, MATERIAL THAT IS TOO WET TO PERMIT PROPER COMPACTION MAY BE SPREAD ON FILL AREAS IN AN EFFORT TO DRY. CONTRACTOR SHALL CLEARLY FIELD MARK THE EXTERIOR LIMITS OF SPREAD MATERIAL WITH PAINTED LATH AND SUBMIT A PLAN TO THE ENGINEER/OWNER THAT IDENTIFIES THE LIMITS. UNDER NO CIRCUMSTANCES SHALL THE SPREAD MATERIAL, DEPTH EXCEED THE MOST RESTRICTIVE OF THE EFFECTIVE TREATMENT DEPTH OF MACHINERY THAT WILL BE USED TO TURN OVER THE SPREAD MATERIAL/OR THE MAXIMUM COMPACTION LIFT DEPTH.
 - THE CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER/OWNER IF GROUNDWATER IS ENCOUNTERED DURING ELEVATION.
 - CONTRACTOR IS SOLELY RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF ADEQUATE AND SAFE TEMPORARY SHORING/BRACING/RETENTION STRUCTURES/AND ELEVATIONS.
 - THE SITE SHALL BE COMPLETED TO WITHIN 0.01' (1/100') OF THE PROPOSED GRADES AS INDICATED WITHIN THE PLANS PRIOR TO PLACEMENT OF TOPSOIL OR STONE. CONTRACTOR IS ENCOURAGED TO SEQUENCE CONSTRUCTION SUCH THAT THE SITE IS DIVIDED INTO SMALLER AREAS TO ALLOW STABILIZATION OF DISTURBED SOILS IMMEDIATELY UPON COMPLETION OF INDIVIDUAL SMALLER AREAS.
 - CONTRACTOR SHALL CONTACT (DIGGERS) HOTLINE FOR LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES AND SHALL BE RESPONSIBLE FOR PROTECTING SAID UTILITIES FROM ANY DAMAGE DURING CONSTRUCTION.
 - CONTRACTOR SHALL PROTECT INLETS AND ADJACENT PROPERTIES WITH SILT FENCING OR APPROVED EROSION CONTROL METHODS UNTIL CONSTRUCTION IS COMPLETED. CONTRACTOR SHALL PLACE SILT FENCING AT DOWN SLOPE SIDE OF GRADING LIMITS.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO ANY EXISTING FACILITIES OR UTILITIES. DAMAGE SHALL BE REPAIRED TO ORIGINAL CONDITION OR BETTER. DAMAGE TO UTILITIES SHALL BE REPAIRED TO ORIGINAL CONDITION OR BETTER. DAMAGE TO UTILITIES SHALL BE REPAIRED TO ORIGINAL CONDITION OR BETTER.
 - WORK WITHIN ANY ROADWAY RIGHT-OF-WAY SHALL BE COORDINATED WITH THE APPROPRIATE MUNICIPAL OFFICIAL PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FEES. GRADING WITHIN RIGHT-OF-WAY IS SUBJECT TO APPROVAL BY SAID OFFICIALS. RESTORATION OF RIGHT-OF-WAY IS CONSIDERED INCIDENTAL AND SHALL BE INCLUDED IN THE COST OF GRADING. RESTORATION SHALL INCLUDE ALL ITEMS NECESSARY TO RESTORE RIGHT-OF-WAY INCLUDING LANDSCAPING.
 - CONTRACTOR SHALL COMPLY WITH ALL PLEASANT PRAIRIE CONSTRUCTION STANDARDS/ORDINANCES.
 - LANDSCAPE AND TURF AREAS SHALL HAVE A MINIMUM OF 2" (2") TOPSOIL REPLACEMENT.
 - 1" TO 2" OF TOPSOIL SHALL BE APPLIED TO ALL AREAS OF THE SITE. 1" TO 2" OF TOPSOIL SHALL BE APPLIED TO ALL AREAS OF THE SITE.



LEGEND	
	STORM SEWER MANHOLE
	STORM SEWER CATCH BASIN/CIRCULAR CASTING
	STORM SEWER CATCH BASIN/RECTANGULAR CASTING
	PROPOSED CONCRETE FLARED END SECTION
	PROPOSED CONTOUR
	SPOT ELEVATION
	DIRECTION OF SURFACE FLOW
	DITCH OR SWALE
	DIVERSION SWALE
	OVERFLOW RELIEF ROUTING
	CONCRETE SIDEWALK
	CURB AND GUTTER
	DEPRESSED CURB
	REVERSE PITCH CURB
	EDGE OF PAVEMENT
	FINISHED FLOOR
	TOP OF WALL
	YARD GRADE
	SIDEWALK

PINNACLE ENGINEERING GROUP
ENGINEERING | NATURAL RESOURCES | SURVEYING
WISCONSIN OFFICE: 15850 W. BLUEMOUND ROAD, BROOKFIELD, WI 53005
(262) 754-8888
CHICAGO | MILWAUKEE | NATIONWIDE

MAIN STREET MARKET PHASE 1

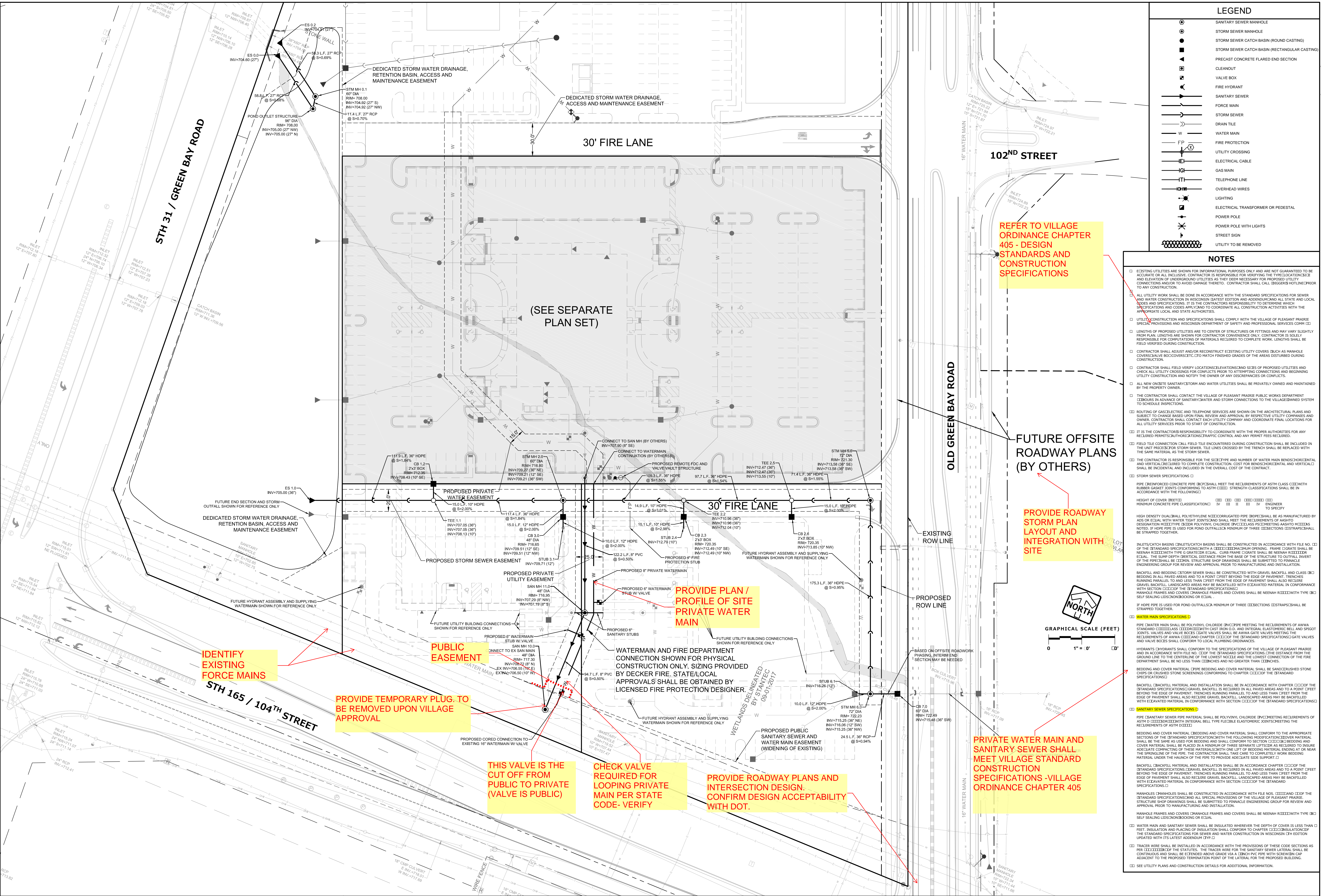
GREEN BAY RD. □ 104TH ST. PLEASANT PRAIRIE, WI

GRADING PLAN

REVISIONS	

PROJECT NO. 1114.10-WI	MAC
START DATE: 12-03-17	SCALE: 1" = 10'
SHEET C-4	OF C-9

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CONTRACTOR WILL BE REQUIRED TO CLEAN ANY DEPOSITED SEDIMENT FROM CONSTRUCTION SITE FROM BOX CULVERTS OR DOWNSTREAM RETENTION BASIN BY JELLY BELLY.

708?

REQUIRE POND CONSTRUCTION UPFRONT AND / PROVISIONS TO PROTECT SEDIMENT FROM ENTERING DOWNSTREAM STORM FACILITIES.

- CONSTRUCTION SITE SEQUENCING
1. INSTALL PERIMETER SILT FENCE, INLET PROTECTION AND TEMPORARY CONSTRUCTION ENTRANCE.

2. STRIP AND STOCKPILE TOPSOIL. INSTALL SILT FENCE AROUND PERIMETER OF STOCKPILE.

3. CONDUCT ROUGH GRADING EFFORTS AND INSTALL CHECK DAMS AND SEDIMENT TRAPS/BASINS AS NEEDED.

4. INSTALL UTILITY PIPING AND STRUCTURES. IMMEDIATELY INSTALL INLET PROTECTION.

5. COMPLETE FINAL GRADING, INSTALLATION OF GRAVEL BASE COURSES, PLACEMENT OF CURBS, PAVEMENTS, WALKS, ETC.

6. PLACE TOPSOIL AND IMMEDIATELY STABILIZE DISTURBED AREAS WITH EROSION CONTROLS.

7. EROSION CONTROL MEASURES SHALL BE REMOVED ONLY AFTER SITE CONSTRUCTION IS COMPLETE WITH ALL SOIL SURFACES HAVING AN ESTABLISHED VEGETATIVE COVER.
- CONTRACTOR MAY MODIFY SEQUENCING AFTER ITEM 1 AS NEEDED TO COMPLETE CONSTRUCTION IF EROSION CONTROLS ARE MAINTAINED IN ACCORDANCE WITH THE CONSTRUCTION EROSION CONTROL REQUIREMENTS.
- GENERAL EROSION AND SEDIMENT CONTROL NOTES
- ☐ ALL CONSTRUCTION SHALL ADHERE TO THE REQUIREMENTS SET FORTH IN EPA'S NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STORMWATER GENERAL PERMIT (DISPERSEMENT NO. WIS-0000000000) FOR CONSTRUCTION SITE LAND DISTURBANCE ACTIVITIES. ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL TECHNICAL STANDARDS AND PROVISIONS IN EFFECT AT THE TIME OF CONSTRUCTION. THESE PROCEDURES AND STANDARDS SHALL BE REFERRED TO AS BEST MANAGEMENT PRACTICES (BMPs). IT IS THE RESPONSIBILITY OF ALL CONTRACTORS ASSOCIATED WITH THE PROJECT TO OBTAIN A COPY OF AND UNDERSTAND THE BMPs PRIOR TO THE START OF CONSTRUCTION ACTIVITIES.

☐ THE EROSION CONTROL MEASURES INDICATED ON THE PLANS ARE THE MINIMUM REQUIREMENTS. ADDITIONAL CONTROL MEASURES AS DIRECTED BY OWNER/ENGINEER OR GOVERNING AGENCIES SHALL BE INSTALLED WITHIN 24 HOURS OF RECEIPT.

☐ MODIFICATIONS TO THE APPROVED SWPPP IN ORDER TO MEET UNFORESEEN FIELD CONDITIONS ARE ALLOWED IF MODIFICATIONS CONFORM TO BMPs. ALL MODIFICATIONS MUST BE APPROVED BY OWNER/ENGINEER/GOVERNING AGENCY PRIOR TO DEVIATION OF THE APPROVED PLAN.

☐ INSTALL PERIMETER EROSION CONTROL MEASURES (SUCH AS CONSTRUCTION ENTRANCES, SILT FENCE AND EXISTING INLET PROTECTION) PRIOR TO ANY SITE WORK (INCLUDING GRADING OR DISTURBANCE OF EXISTING SURFACE CONDITIONS SHOWN ON PLAN) IN ORDER TO PROTECT ADJACENT PROPERTIES/STORM SEWER SYSTEMS FROM SEDIMENT TRANSPORT.

☐ CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT ALL LOCATIONS OF VEHICLE INGRESS/EGRESS POINTS. CONTRACTOR IS RESPONSIBLE TO COORDINATE LOCATIONS WITH THE PROPER AUTHORITIES, PROVIDE NECESSARY FEES AND OBTAIN ALL REQUIRED APPROVALS OR PERMITS. ADDITIONAL CONSTRUCTION ENTRANCES OTHER THAN AS SHOWN ON THE PLANS MUST BE APPROVED BY THE APPLICABLE GOVERNING AGENCIES PRIOR TO INSTALLATION.

☐ PAVED SURFACES ADJACENT TO CONSTRUCTION ENTRANCES SHALL BE SWEEPED AND/OR SCRAPED TO REMOVE ACCUMULATED SOIL/DIRT AND/OR DUST IMMEDIATELY AND AS REQUESTED BY THE GOVERNING AGENCIES.

☐ ALL EXISTING STORM SEWER FACILITIES THAT WILL COLLECT RUNOFF FROM DISTURBED AREAS SHALL BE PROTECTED TO PREVENT SEDIMENT DEPOSITION WITHIN STORM SEWER SYSTEMS. INLET PROTECTION SHALL BE IMMEDIATELY FITTED AT THE INLET OF ALL INSTALLED STORM SEWER AND SILT FENCE SHALL BE IMMEDIATELY FITTED AT ALL INSTALLED CULVERT INLETS. ALL INLETS/STRUCTURES/SCIPES/SCIPES/ SWALES SHALL BE KEPT CLEAN AND FREE OF SEDIMENTATION AND DEBRIS.

☐ EROSION CONTROL FOR UTILITY CONSTRUCTION (STORM SEWER/WATER MAIN, ETC.) OUTSIDE OF THE PERIMETER CONTROLS SHALL INCORPORATE THE FOLLOWING:

PLACE EROSION CONTROL MATERIAL ON THE HIGH SIDE OF THE TRENCH.

BACKFILL, COMPACT AND STABILIZE THE TRENCH IMMEDIATELY AFTER PIPE CONSTRUCTION.

DISCHARGE TRENCH WATER INTO A SEDIMENTATION BASIN OR FILTERING TANK IN ACCORDANCE WITH BMPs PRIOR TO RELEASE INTO STORM SEWER OR DITCHES.

☐ AT A MINIMUM, SEDIMENT BASINS AND NECESSARY TEMPORARY DRAINAGE PROVISIONS SHALL BE CONSTRUCTED AND OPERATIONAL BEFORE BEGINNING OF SIGNIFICANT MASS GRADING OPERATIONS TO PREVENT OFFSITE DISCHARGE OF UNTREATED RUNOFF.

☐ ALL WATERCOURSES AND WETLANDS SHALL BE PROTECTED WITH SILT FENCE TO PREVENT ANY DIRECT DISCHARGE FROM DISTURBED SOILS.

☐ ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES MUST BE MAINTAINED AND REPAIRED AS NEEDED. THE GENERAL CONTRACTOR WILL BE RESPONSIBLE FOR INSPECTION AND REPAIR DURING CONSTRUCTION. THE OWNER WILL BE RESPONSIBLE IF EROSION CONTROL IS REQUIRED AFTER THE CONTRACTOR HAS COMPLETED THE PROJECT.

☐ TOPSOIL STOCKPILES SHALL HAVE A BERM OR TRENCH AROUND THE CIRCUMFERENCE AND PERIMETER SILT FENCE TO CONTROL SILT. IF TOPSOIL STOCKPILE REMAINS UNDISTURBED FOR MORE THAN SEVEN (7) DAYS, TEMPORARY SEEDING AND STABILIZATION IS REQUIRED.

☐ EROSION CONTROL MEASURES TEMPORARILY REMOVED FOR UNAVOIDABLE CONSTRUCTION ACTIVITIES SHALL BE IN WORKING ORDER IMMEDIATELY FOLLOWING COMPLETION OF SUCH ACTIVITIES OR PRIOR TO THE COMPLETION OF EACH WORK DAY, WHICH EVER OCCURS FIRST.

☐ MAINTAIN SOIL EROSION CONTROL DEVICES THROUGH THE DURATION OF THIS PROJECT. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN THIRTY (30) DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED. DISTURBANCES ASSOCIATED WITH EROSION CONTROL REMOVAL SHALL BE IMMEDIATELY STABILIZED.

☐ PUMPS MAY BE USED AS BYPASS DEVICES. IN NO CASE SHALL PUMPED WATER BE DIVERTED OUTSIDE THE PROJECT LIMITS. PUMP DISCHARGE SHALL BE DIRECTED INTO AN APPROVED FILTER BAG OR APPROVED SETTLING DEVICE.

☐ GRADING EFFORTS SHALL BE CONDUCTED IN SUCH A MANNER AS TO MINIMIZE EROSION. EROSION AND SEDIMENT CONTROL MEASURES SHALL CONSIDER THE TIME OF YEAR, SITE CONDITIONS AND THE USE OF TEMPORARY OR PERMANENT MEASURES. ALL DISTURBED AREAS THAT WILL NOT BE WORKED FOR A PERIOD OF FOURTEEN (14) DAYS REQUIRE TEMPORARY SEEDING FOR EROSION CONTROL. SEEDING FOR EROSION CONTROL SHALL BE IN ACCORDANCE WITH TECHNICAL STANDARDS.

☐ ALL DISTURBED SLOPES EXCEEDING (1:1) SHALL BE STABILIZED WITH NORTH AMERICAN GREEN SEED. EROSION MATTING (OR APPROVED EQUIVALENT) AND CHANNELS SHALL BE STABILIZED WITH NORTH AMERICAN GREEN SEED (OR APPROVED EQUIVALENT) OR APPLICATION OF AN APPROVED POLYMER SOIL STABILIZATION TREATMENT OR A COMBINATION THEREOF, AS REQUIRED. EROSION MATTING AND/OR NETTING USED ON-SITE SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S GUIDELINES.

☐ DURING PERIODS OF EXTENDED DRY WEATHER, THE CONTRACTOR SHALL KEEP A WATER TRUCK ON SITE FOR THE PURPOSE OF WATERING DOWN SOILS WHICH MAY OTHERWISE BECOME AIRBORNE. THE CONTRACTOR IS RESPONSIBLE FOR CONTROLLING WIND EROSION DURING CONSTRUCTION AT ALL TIMES.

☐ DISTURBED AREAS AND AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION SHALL BE VISUALLY INSPECTED FOR EVIDENCE OF OR THE POTENTIAL FOR POLLUTANTS ENTERING THE DRAINAGE SYSTEM ON A DAILY BASIS.

☐ QUALIFIED PERSONNEL PROVIDED BY THE GENERAL/PRIME CONTRACTOR SHALL INSPECT DISTURBED AREAS OF THE CONSTRUCTION SITE THAT HAVE NOT BEEN FINALLY STABILIZED AND EROSION AND SEDIMENT CONTROLS WITHIN 24 HOURS OF ALL CLIMATIC OR MORE PRECIPITATION EVENTS WITH A MINIMUM INSPECTION INTERVAL OF ONCE EVERY SEVEN (7) CALENDAR DAYS. IN THE ABSENCE OF A QUALIFYING RAIN OR SNOWFALL EVENT, REPORTING SHALL BE IN ACCORDANCE WITH THE GENERAL PERMIT. CONTRACTOR SHALL IMMEDIATELY ARRANGE TO HAVE ANY DEFICIENT ITEMS REVEALED DURING INSPECTIONS REPAIRED/REPLACED.

☐ SEE ADDITIONAL DETAILS AND NOTES ON SITE STABILIZATION AND CONSTRUCTION DETAILS.

LEGEND

- SANITARY SEWER MANHOLE

STORM SEWER MANHOLE

STORM STORM CATCH BASIN (ROUND CASTING)

STORM SEWER CATCH BASIN (RECTANGULAR CASTING)

PRECAST FLARED END SECTION

CLEANOUT

VALVE BOX

FIRE HYDRANT

PROPOSED CONTOUR

PROPOSED SPOT ELEVATION

WETLANDS

FLOODPLAIN

HIGH WATER LEVEL (HWL)
- NORMAL WATER LEVEL (NWL)
- DIRECTION OF SURFACE FLOW
- DITCH OR SWALE
- DIVERSION SWALE
- OVERFLOW RELIEF ROUTING
- SILT FENCE
- INLET PROTECTION
- CONSTRUCTION ENTRANCE
- HYDROSEED (PER MANUFACTURER SPECIFICATIONS)
- EROSION CONTROL BLANKET (NORTH AMERICAN GREEN S75 OR EQUAL)

PLAN | DESIGN | DELIVER
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PINNACLE ENGINEERING GROUP
ENGINEERING | NATURAL RESOURCES | SURVEYING

WISCONSIN OFFICE:
13850 W. BLUEMOUND ROAD
BROOKFIELD, WI 53005
(262) 754-8888
CHICAGO | MILWAUKEE | NATIONWIDE

MAIN STREET MARKET PHASE 1

GREEN BAY RD. □ 104TH ST. PLEASANT PRAIRIE, WI

SITE STABILIZATION PLAN

REVISIONS

SHEET

C-8
C-9

SITE STABILIZATION PLAN

FOR REVIEW ONLY

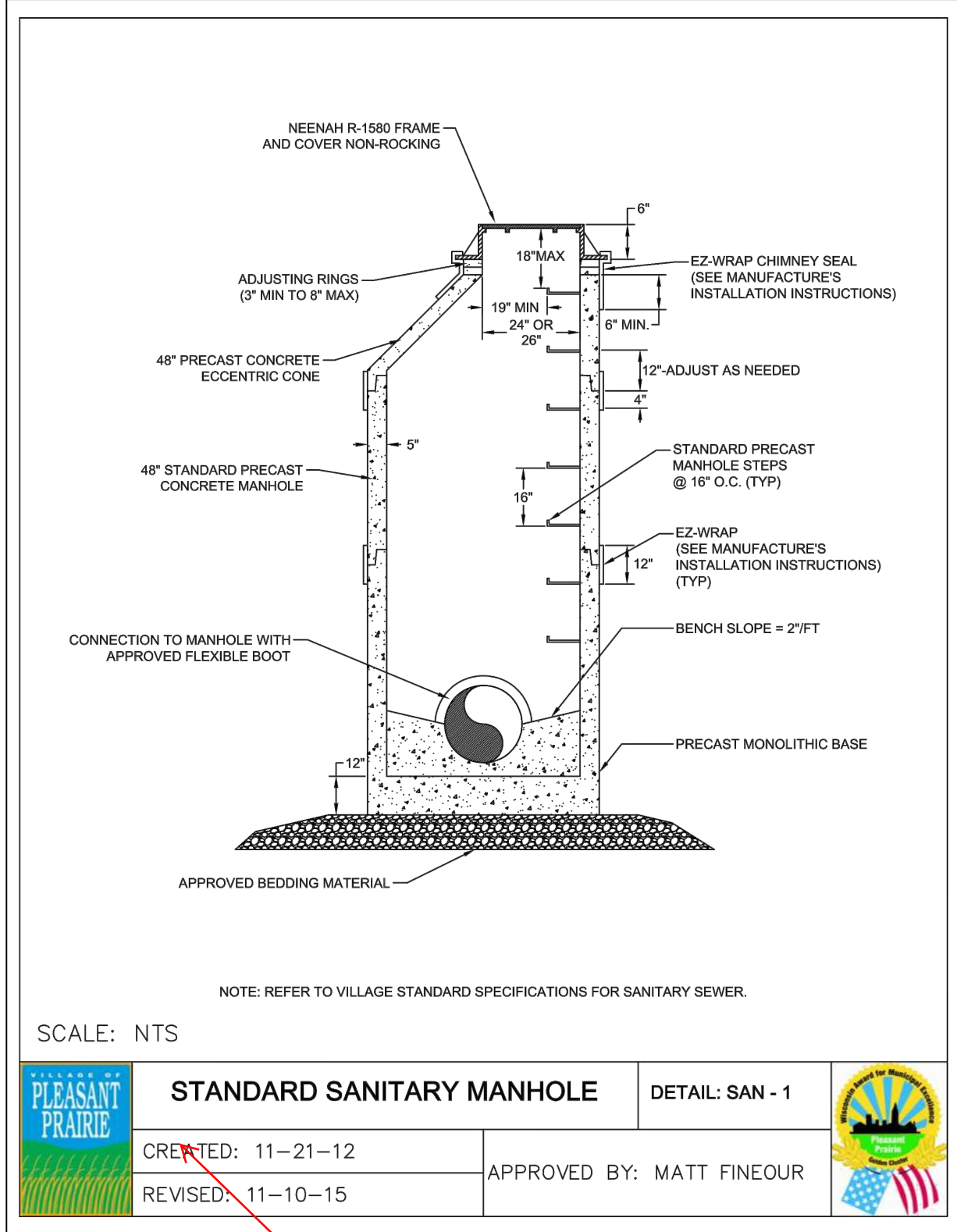
www.pinnacle-engr.com

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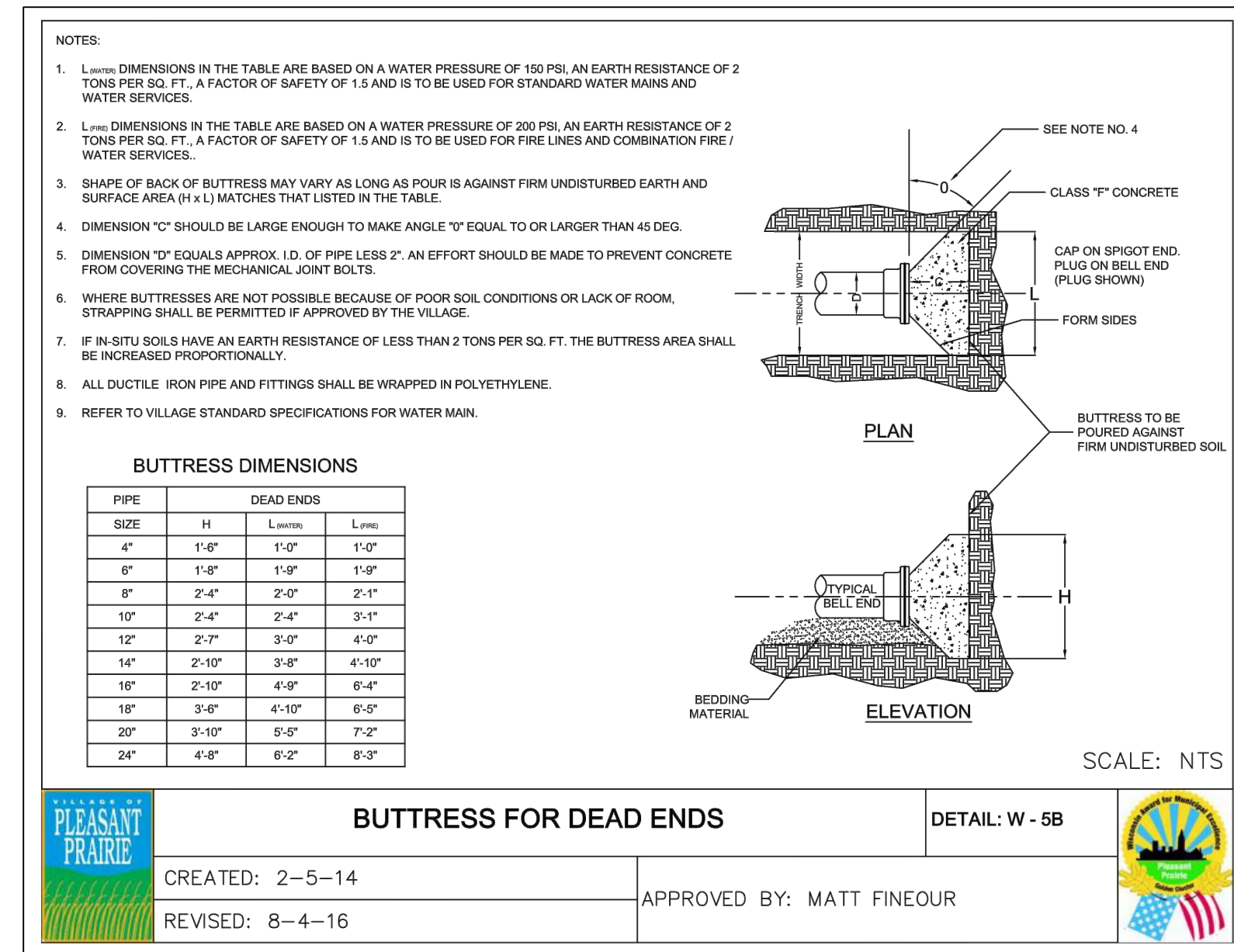
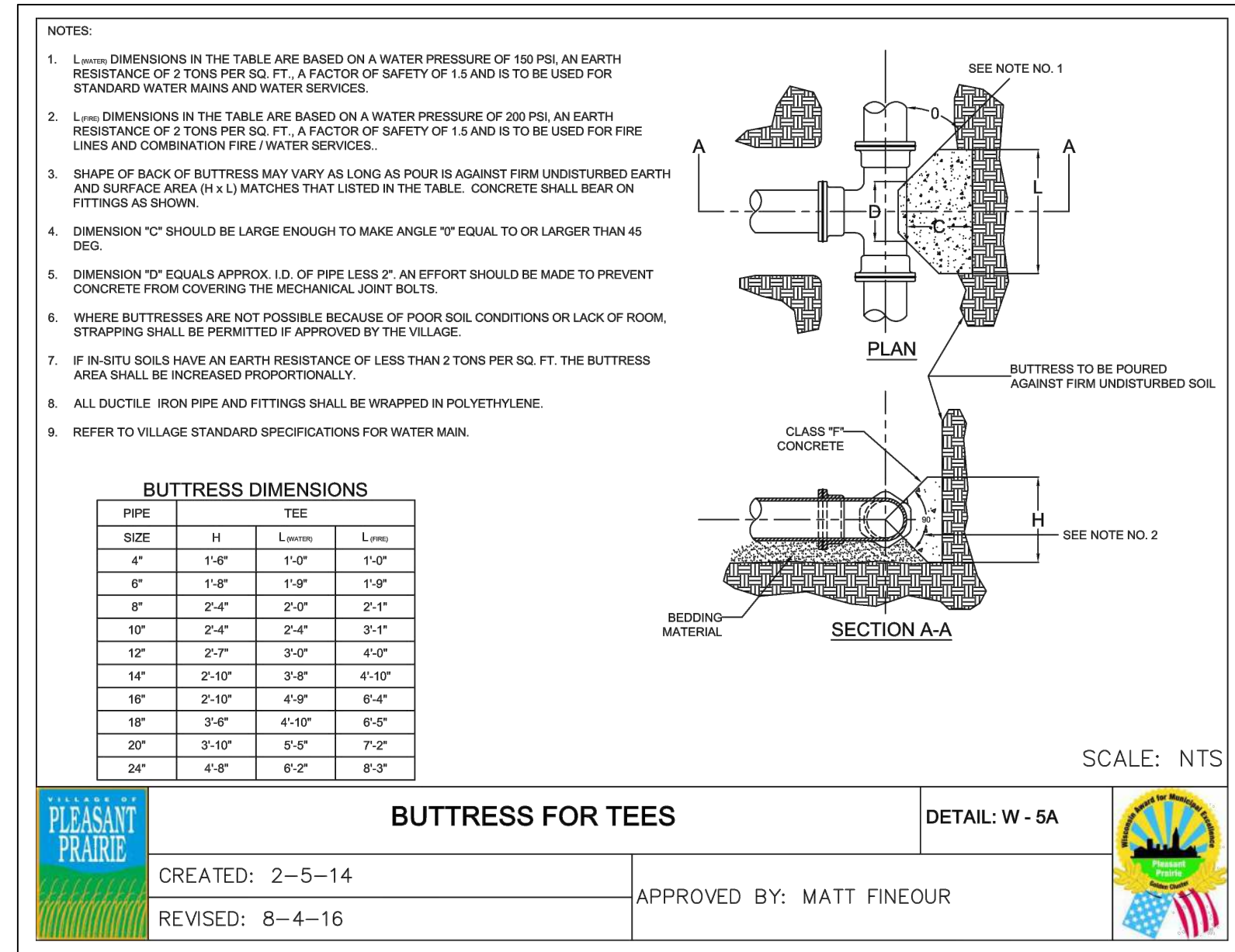
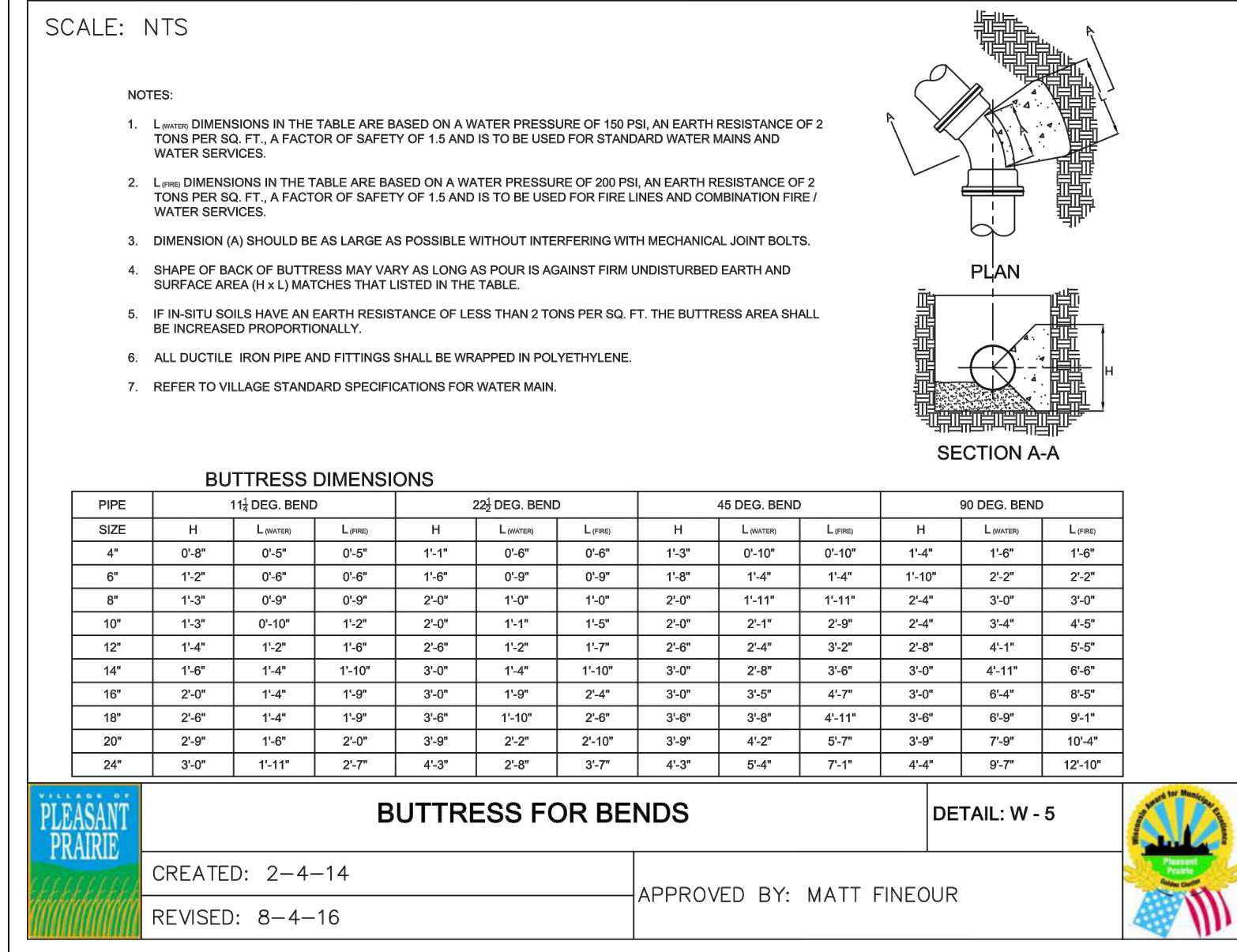
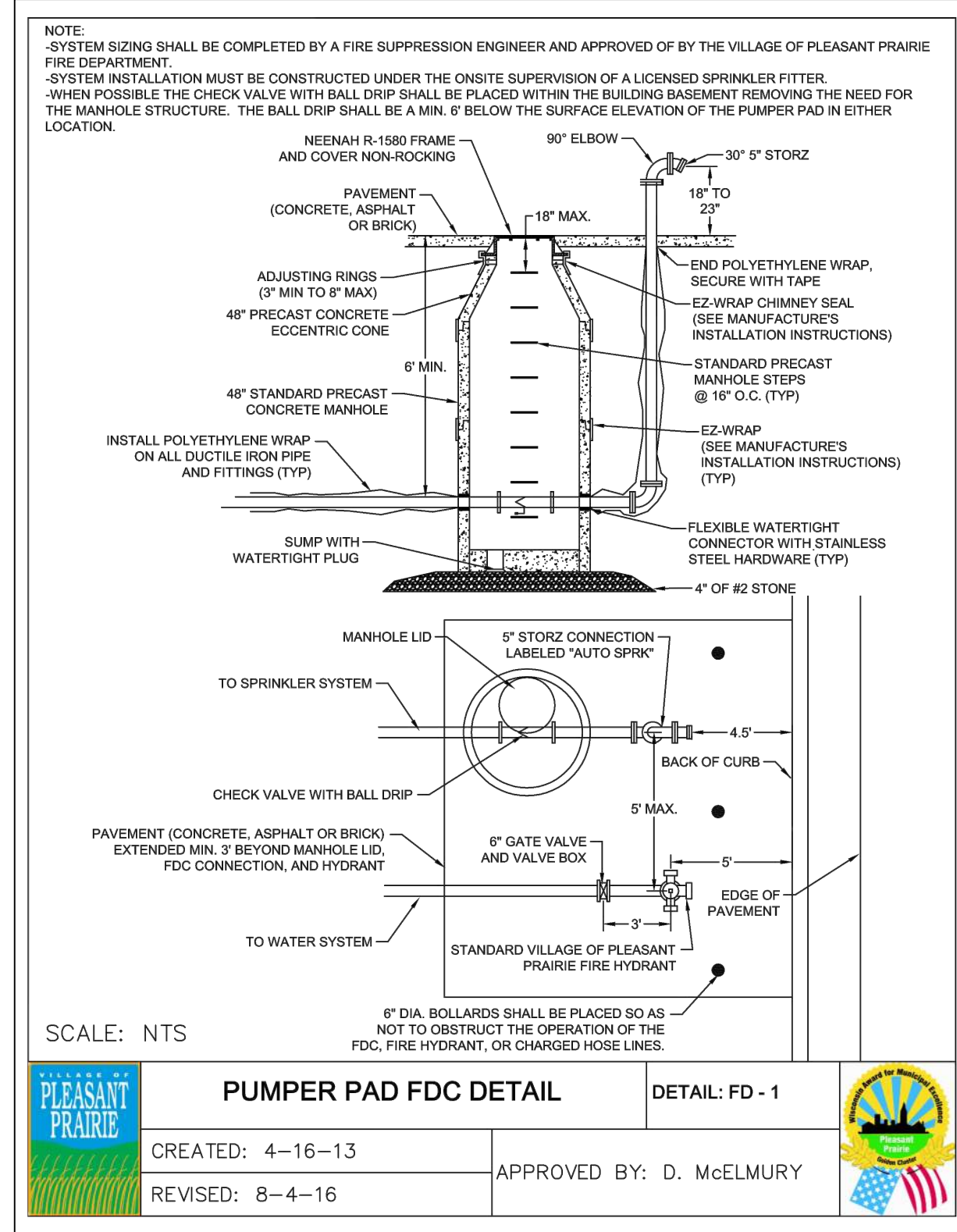
REVIEWED: MAC

DESIGNED: EP

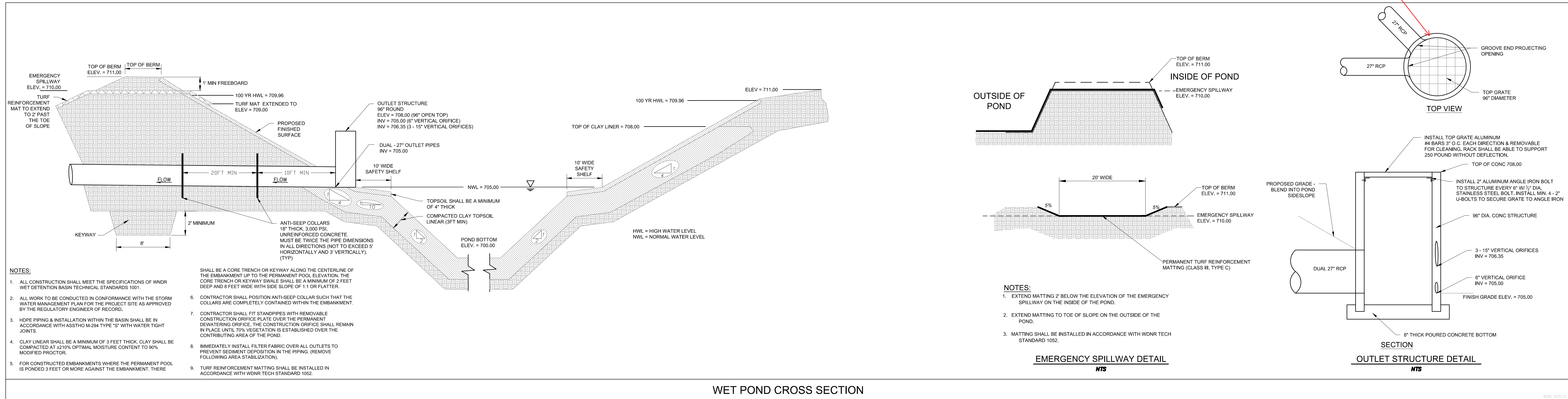
DRAWN: EP



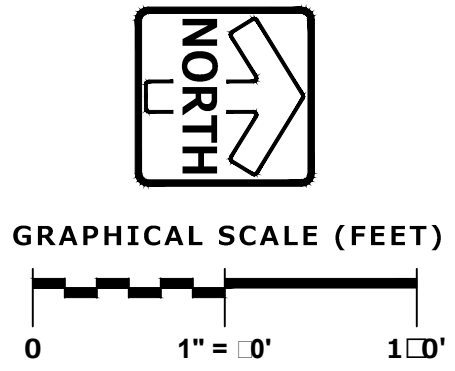
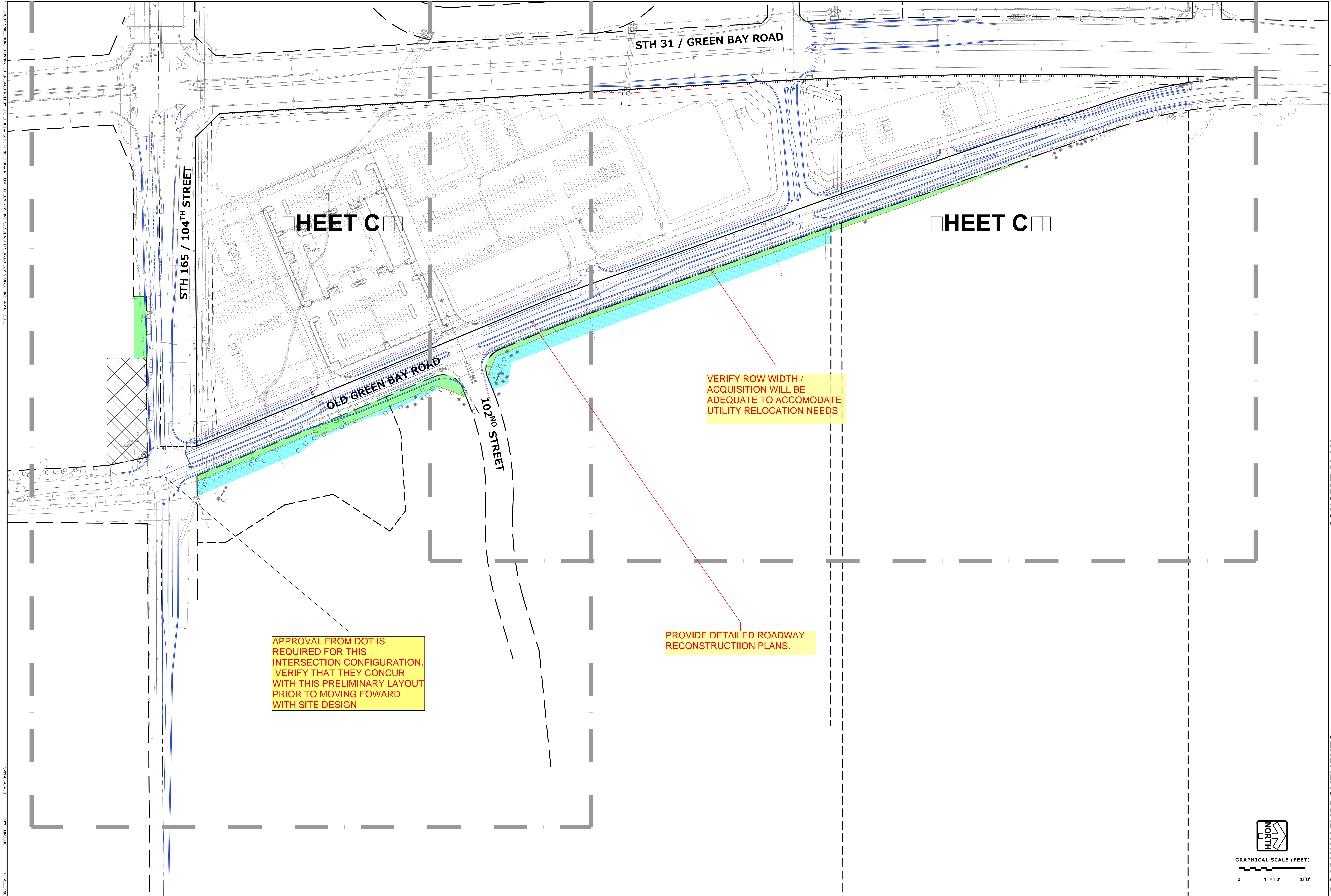
REPLACE DETAIL WITH
CURRENT EDITION-
(REVISED DATE OF
10-30-17

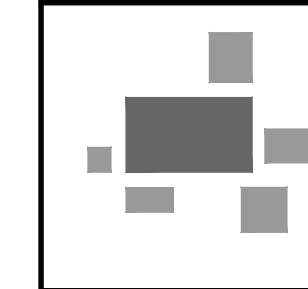


PROVIDE INFORMATION OF
SECTIOND MANHOLE IN
CONFIGURATION. NO ORIFICES OR
OPEN TOP GRATE ON THE OTHER?
VERIFY



DESIGNED: AJS
DRAWN: EP
REVIEWED: MAC
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BROOKFIELD, WI 53005
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**MAIN STREET MARKET
VILLAGE OF PLEASANT PRAIRIE, WI**

OFFSITE ROADWAY IMPROVEMENTS

REVISIONS		SHEET C-1 C-8

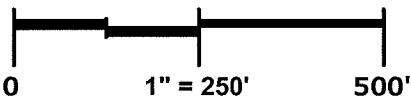
REG. JOB NO. 1114.00-WI
MAC
START DATE 12-01-17
SCALE 1" = 80'

CONTRACT NO. 1114.00-WI

CERTIFIED SURVEY MAP
NO. _____

Being a part of the Southwest 1/4 and the Northwest 1/4 of
the Southwest 1/4 of Section 22, Township 1 North, Range 22
East, Village of Pleasant Prairie, Kenosha County, Wisconsin.

GRAPHICAL SCALE (FEET)

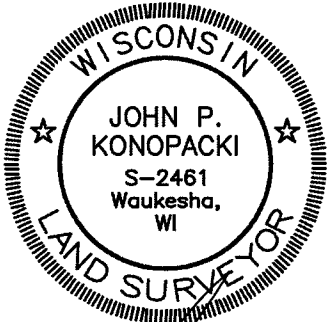


Bearings referenced to the Wisconsin State Plane
Coordinate System, South Zone (N.A.D. 1927). The south
line of the Southwest 1/4 of Section 22, Township 1 North,
Range 22 East has a bearing of N89°40'10"E

Prepared for:
MAIN STREET DEVELOPMENT, LLC
4011 80th Street
Kenosha, WI 53142

LEGEND:

- - Denotes Found 1" Iron Pipe
- - Denotes Found 3/4" Iron Rod, Capped
- ⊙ - Denotes Set 3/4" X 18" Iron Rebar, 1.5 LBS./FT.
- (R) - Denotes "Recorded As"
- //// - Denotes No Access



FEBRUARY 7, 2018

SEE SHEET 5
FOR VICINITY MAP
AND BOUNDARY
LINE TABLE

Tax Key Numbers:
92-4-122-223-0110
94-4-122-223-0202

IS ADDITIONAL ROW
NEEDED ALONG
ENTIRE ROADWAY
FRONTAGE? WHY
ENDING HERE?

LOT 2
174,883 SQ. FT.
4.0148 ACRES

LOT 3
36,815 SQ. FT.
0.8451 ACRES

LOT 4
73,366 SQ. FT.
1.6842 ACRES

SW CORNER, SW 1/4
SEC. 22, T1N, R22E
(FOUND CONC. MON.
W/ BRASS CAP)
N 197,794.54
E 2,567,904.90
(WISCONSIN STATE
PLANE CO-
ORDINATE SYSTEM,
SOUTH ZONE)

SOUTH LINE OF THE SW 1/4 SEC. 22, T1N, R22E
N89°40'10"E 2672.86'

104TH STREET
STATE TRUNK HIGHWAY "165"

Prepared By:

PINNACLE ENGINEERING GROUP

15850 BLUEMOUND ROAD | SUITE 210

BROOKFIELD, WI 53005

OFFICE: (262) 754-8888

This instrument drafted by John P. Konopacki, PLS-License No. S-2461

PEG JOB#1114.10

SHEET 1 OF 8

STORMWATER MANAGEMENT PLAN



Main Street Market – Phase I
Village of Pleasant Prairie, Kenosha County, Wisconsin
PEG Project Number: 1114.10-WI

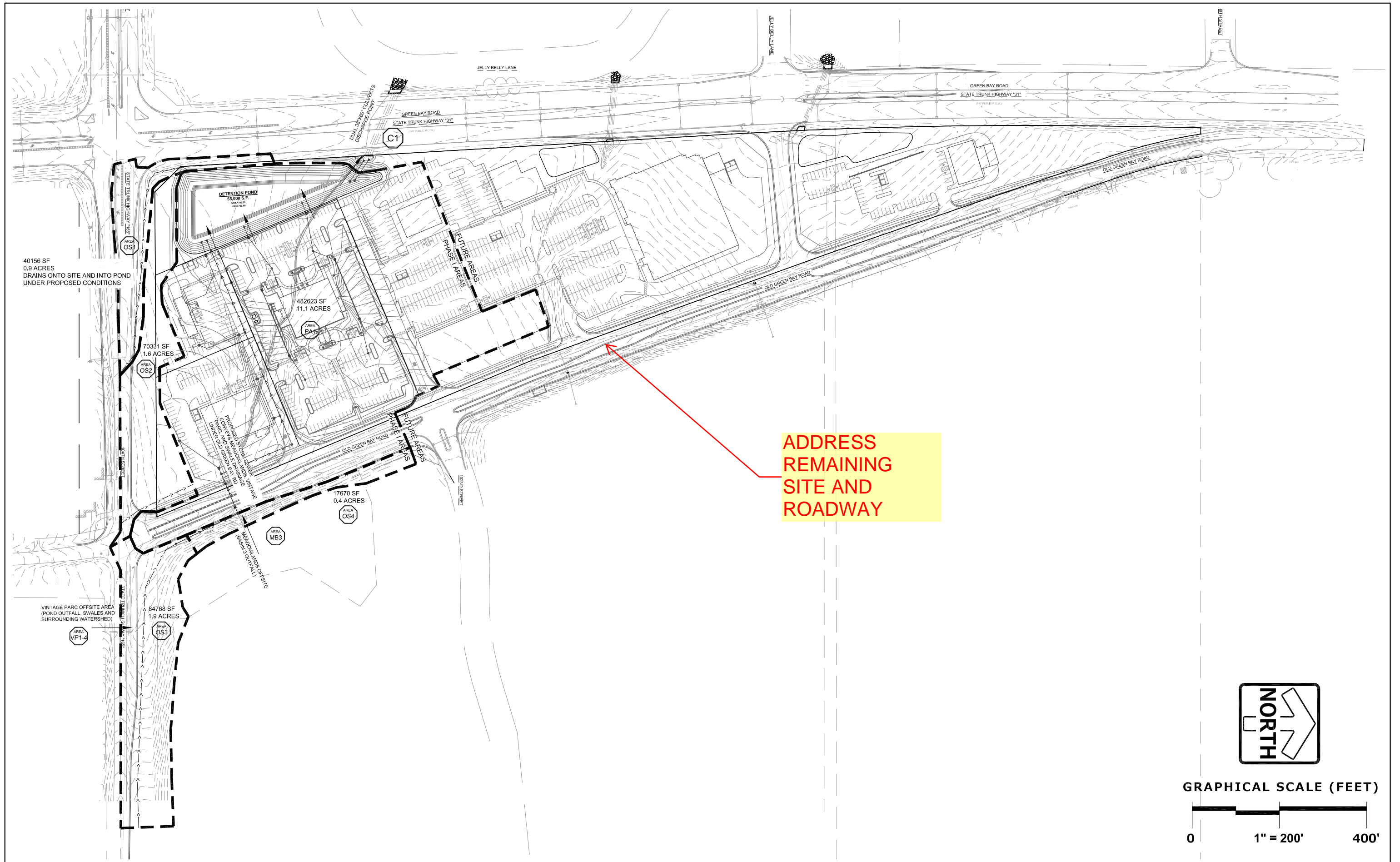
Prepared for:



02/07/2018



PINNACLE ENGINEERING GROUP
15850 W. Bluemound Road | Suite 210 | Brookfield, WI 53005
www.pinnacle-engr.com



MAIN ST MARKET PHASE I - PROPOSED DRAINAGE AREA MAP

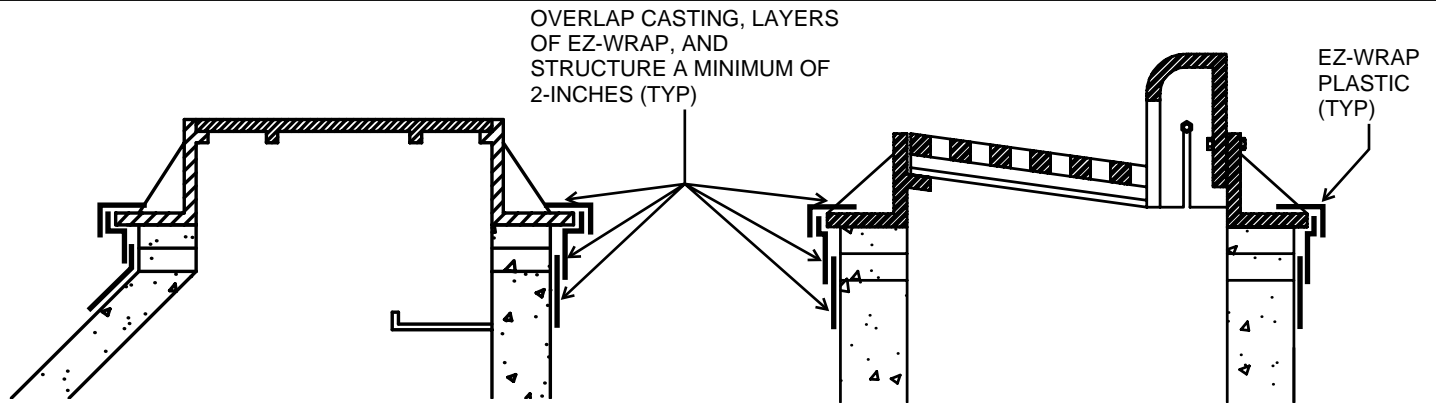
PINNACLE ENGINEERING GROUP

5850 W. BLUEMOUND ROAD | SUITE 210 | BROOKFIELD, WI 53005 | WWW.PINNACLE-ENGR.COM |

2/7/18

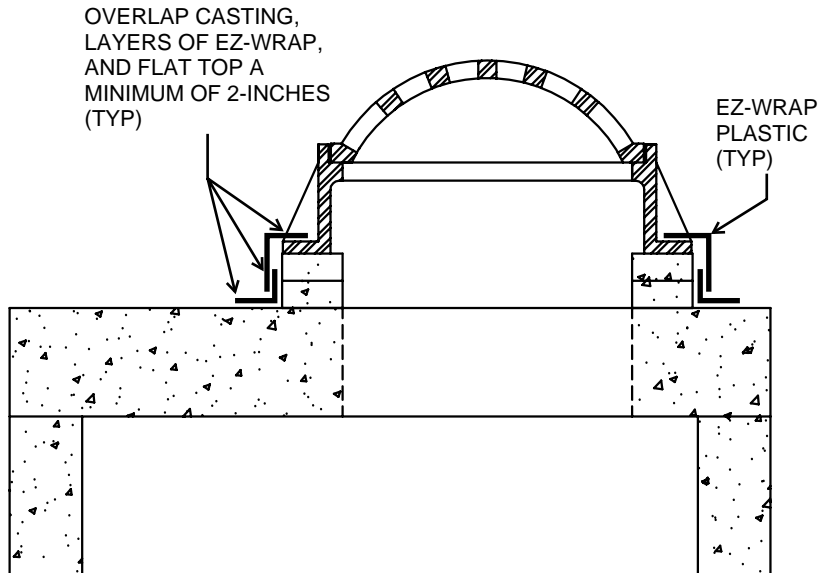
PLAN | DESIGN | DELIVER

PEG JOB# 1114.10

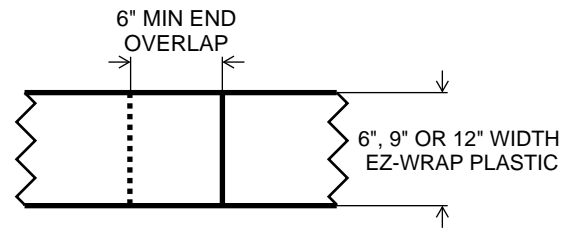


CONE SECTION MANHOLE INSTALLATION

CATCH BASIN INSTALLATION



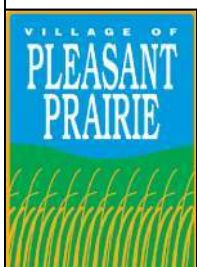
FLAT TOP MANHOLE/INLET INSTALLATION



EZ-WRAP END OVERLAP DETAIL

INSTALLATION INSTRUCTIONS:

1. CLEAN AND DRY THE EXTERIOR SURFACES OF THE CASTING, ADJUSTING RINGS, AND STRUCTURE TO BE WRAPPED. SURFACES AND MATERIALS SHALL BE ABOVE 32 DEGREES.
2. APPLY MANUFACTURER RECOMMENDED AEROSOL ADHESIVE OR EZ-PRIMER #4 TO ALL SURFACES TO BE WRAPPED. EZ-PRIMER SHALL BE APPLIED USING A CLEAN PAINT BRUSH OR ROLLER.
3. WAIT FOR SOLVENTS TO DISPENSE FROM THE TREATED SURFACE. EZ-PRIMER TREATED SURFACE SHALL BE DRY AND APPEAR SMOOTH AND CLEAN. AEROSOL ADHESIVE SHALL BE TACKY. DEPENDING ON THE TEMPERATURE THIS MAY TAKE 10-30 MINUTES FOR EZ-PRIMER OR 1-3 MINUTES FOR AEROSOL ADHESIVE.
4. CUT EZ-WRAP TO LENGTH. CUT ENDS SHALL OVERLAP A MINIMUM OF 6".
5. BEGINNING AT THE BOTTOM OF THE STRUCTURE CAREFULLY INSTALL THE EZ-WRAP TO THE DRY, TREATED SURFACES, REMOVING THE RELEASE PAPER AS YOU APPLY THE EZ-WRAP. DO NOT STRETCH THE EZ-WRAP. PRESS THE EZ-WRAP DOWN FIRMLY AND EVENLY AS YOU COVER THE SURFACES.
6. INSTALL EZ-PRIMER OR AEROSOL ADHESIVE OVER TOP 2-INCHES OF EZ-WRAP AND CUT END TO BE OVERLAID. ALLOW SURFACE TO DRY AS STATED IN STEP 3.
7. INSTALL NEXT SECTION OF EZ-WRAP. OVERLAP THE EZ-WRAP VERTICALLY A MINIMUM OF 2-INCHES. DO NOT STRETCH THE EZ-WRAP. PRESS THE EZ-WRAP DOWN FIRMLY AND EVENLY AS YOU COVER THE SURFACES.
8. REPEAT STEPS 6 AND 7 UNTIL THE ENTIRE CHIMNEY SECTION IS WRAPPED.



CHIMNEY SEAL DETAIL

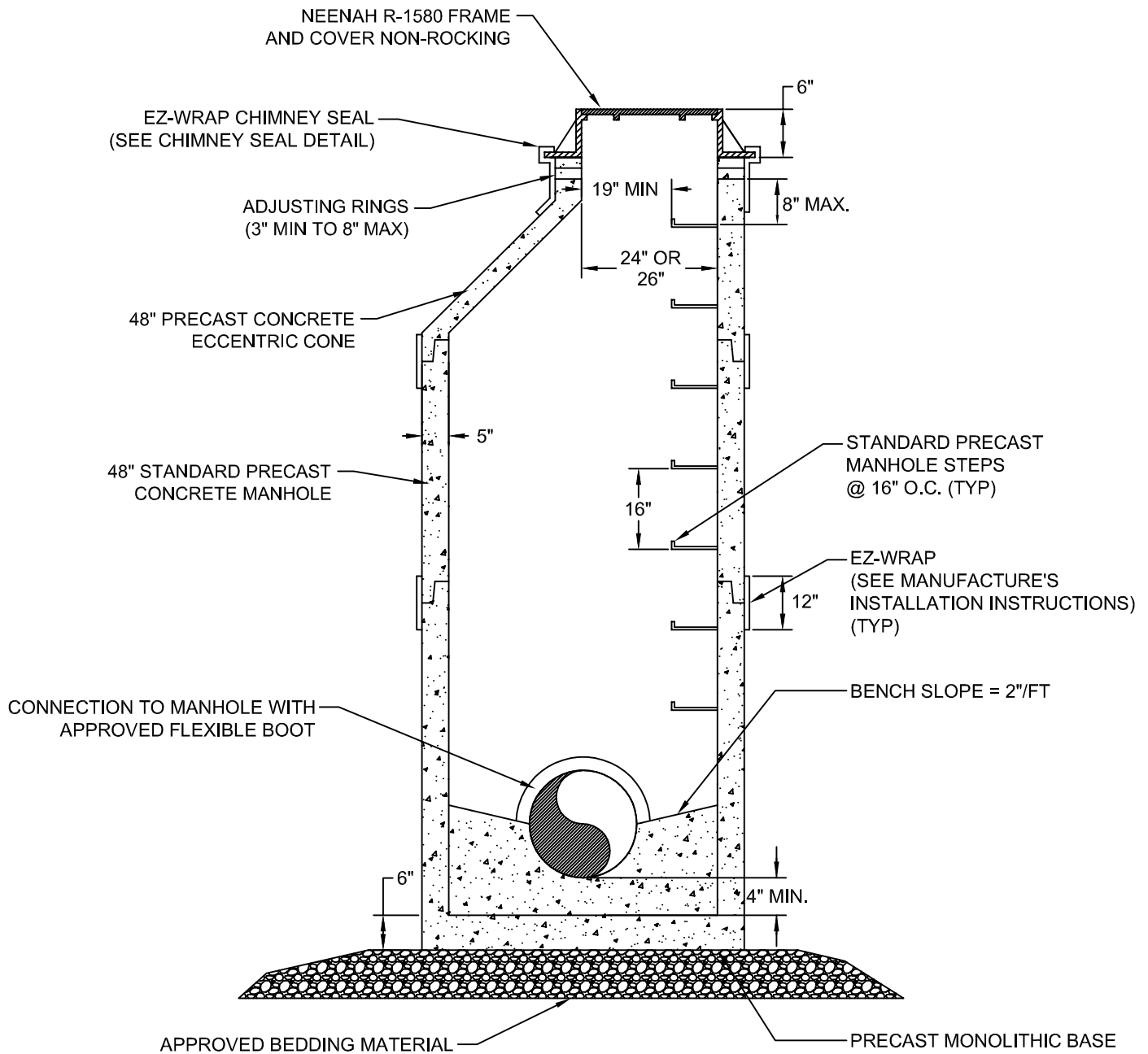
DETAIL: CS - 1

CREATED: 7-11-17

REVISED:

APPROVED BY: MATT FINEOUR





NOTE: REFER TO VILLAGE STANDARD SPECIFICATIONS FOR SANITARY SEWER.

SCALE: NTS

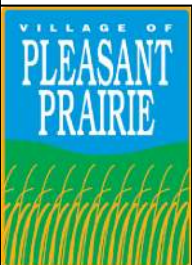
STANDARD SANITARY MANHOLE

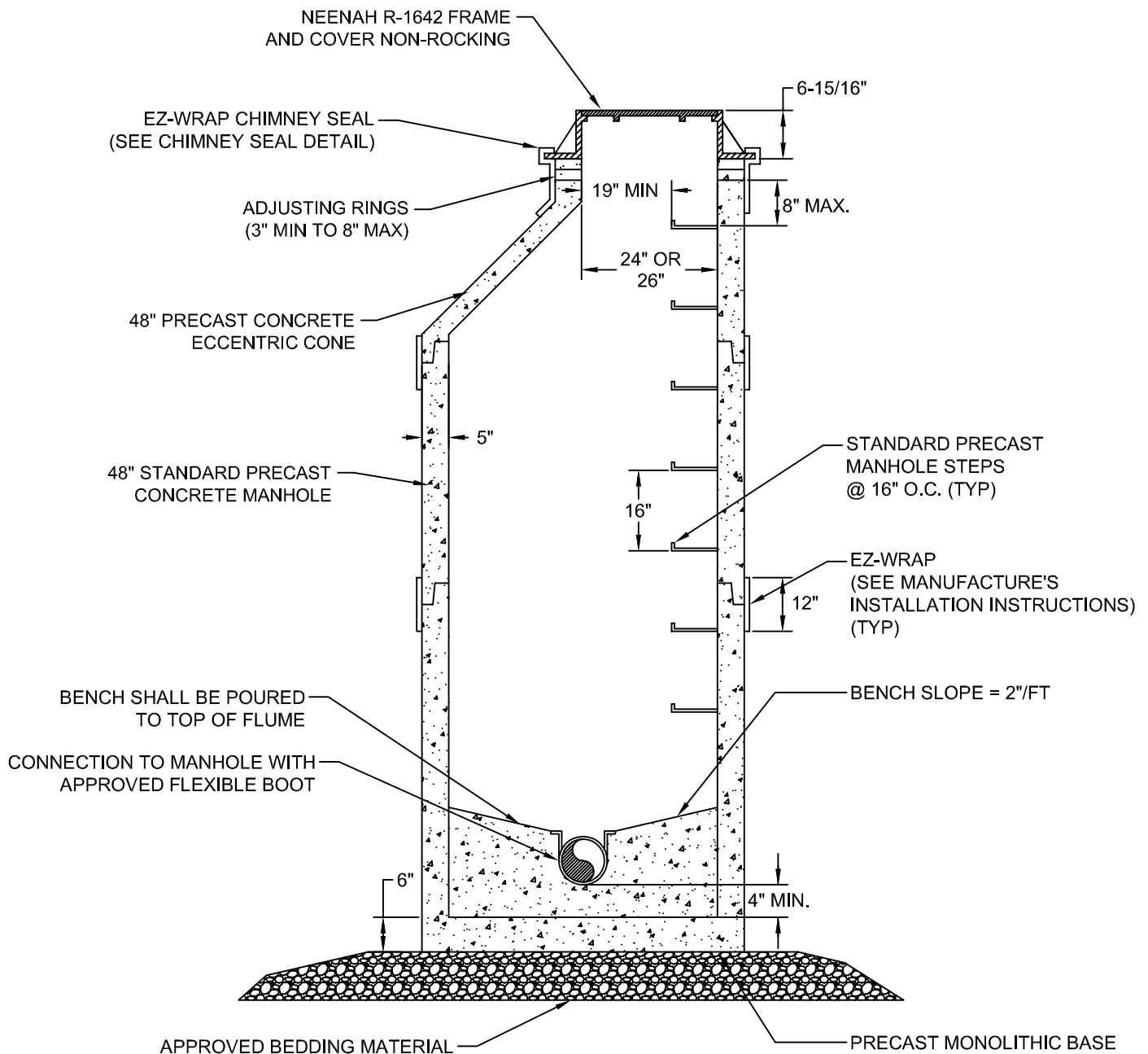
DETAIL: SAN - 1

CREATED: 11-21-12

REVISED: 10-30-17

APPROVED BY: MATT FINEOUR

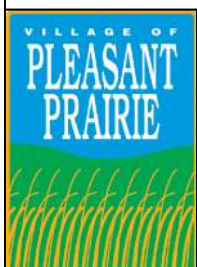




NOTES:

1. STANDARD SAMPLING MANHOLE SHALL HAVE A PALMER-BOWLUS FLUME WITH INTEGRAL APPROACH INSTALLED.
2. VILLAGE OF PLEASANT PRAIRIE DPW SHALL BE CONTACTED FOR FINAL INSPECTION OF SAMPLING MANHOLES.
3. SEE DETAIL SAN-2A AND SAN-2B FOR PALMER-BOWLUS FLUME DETAILS.
4. REFER TO VILLAGE STANDARD SPECIFICATIONS FOR SANITARY MANHOLES.

SCALE: NTS



STANDARD SAMPLING MANHOLE

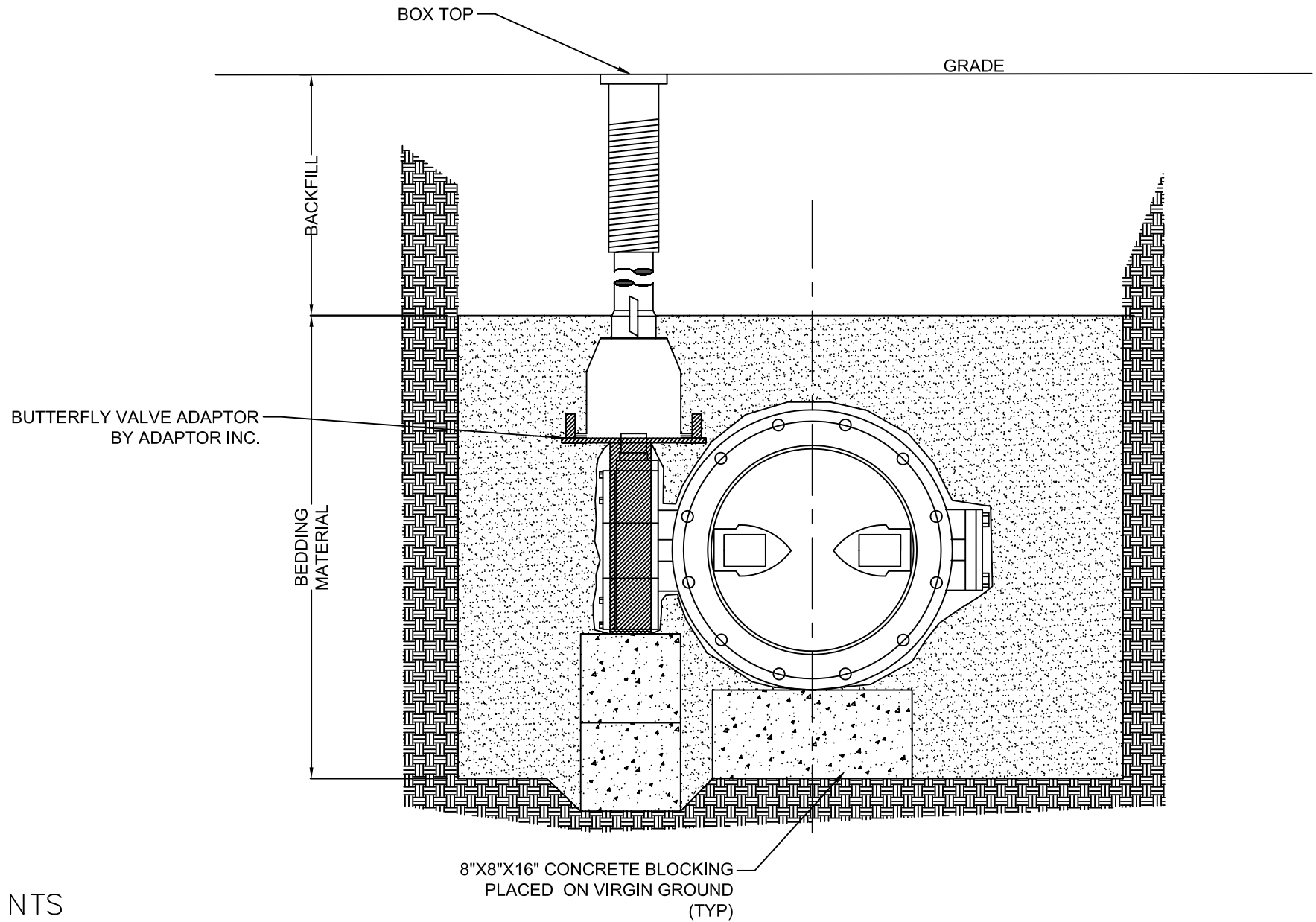
DETAIL: SAN - 2

CREATED: 11-21-12

REVISED: 10-30-17

APPROVED BY: MATT FINEOUR





SCALE: NTS

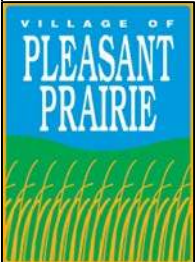
STANDARD BUTTERFLY VALVE BOX SETTING

DETAIL: W - 4

CREATED: 12-14-04

REVISED: 11-16-15


APPROVED BY: MATT FINEOUR





Office of the
Chief of Fire & Rescue
Craig Roepke

VILLAGE STAFF MEMORANDUM

TO: Jean Werbie-Harris, Community Development Director
FROM: Craig Roepke, Chief Fire & Rescue 
CC: Peggy Herrick, Assistant Planner, Community Development
SUBJECT: Fire Department review of Conceptual Plan for Main Street Market
Permit/Trakit#: DEV1802-004
DATE: February 27, 2018

These are comments for the Conceptual Plan received for the multi-building development located at the corner of Hwy 165 and Old Green Bay Road.

The Fire & Rescue department have the following comments regarding the above project.

1. Ensure that the signals to be installed at Hwy 165 and Old Green Bay Rd. have traffic pre-emption installed during the primary installation of the signal standards.
2. Ensure that the signals to be installed at HWY 31 (Green Bay Rd) and Main Street have traffic pre-emption installed during the primary installation of the signal standards.
3. Determine if it is allowable to construct an emergency gated access at the Main Street Rd. to make entry to the rear of the future grocery building.

As plans mature for this project there may be additional review comments as details become available.



COMPREHENSIVE PLAN AMENDMENT

I (We), the undersigned owner(s)/agent do hereby petition the Village Board to amend the Village of Pleasant Prairie 2035 Comprehensive Plan as hereinafter requested related to the following property:

Property Location: Northeast Corner of STH 165 and STH 31

Legal Description: Please see attached

Tax Parcel Number(s): 94-4-122-223-0202 & 92-4-122-223-0110

Check all that apply

☒ Land Use Plan Amendment:

To change the land use designation from Commercial with Urban Reserve
to Commercial

☒ Neighborhood Plan Amendment to Highpoint Neighborhood

☐ Other Amendment to the Comprehensive Plan (specify)

Petitioner's interest in the requested amendment:

To remove the Urban Reserve designation to allow commercial development to proceed. To amend the existing Highpoint Neighborhood Plan to include the revised land use and interior layout of the subject property. The Neighborhood Plan Amendment also includes revised public roadway design.

I (We), have contacted the Community Development Department to arrange a pre-application meeting to discuss the proposed request with the Village staff to determine whether additional information may be needed to consider the request.

I (We), hereby certify that all the above statements and attachments submitted herewith are true and correct to the best of my knowledge.

PROPERTY OWNER:

Print Name: Main Street Development, LLC

Signature: [Signature]

Address: 4011 80th Street

Kenosha WI 53142
(City) (State) (Zip)

Phone: (262) 842-0556

Fax: (262) 842-0557

Email: dan@beardevelopment.com

Date: 1/29/2018

APPLICANT/AGENT:

Print Name: Bear Development, LLC

Signature: [Signature]

Address: 4011 80th Street

Kenosha WI 53142
(City) (State) (Zip)

Phone: (262) 842-0556

Fax: (262) 842-0557

Email: dan@beardevelopment.com

Date: 1/29/2018

Community Development Department, 9915 39th Avenue, Pleasant Prairie WI 53158

262-925-6717



ZONING MAP AMENDMENT APPLICATION

I, (We), the undersigned owner(s)/agent do hereby petition the Village Board of Trustees to amend the Village of Pleasant Prairie as hereinafter requested.

Property Location: Northeast Corner of STH 165 and STH 31

Legal Description: Please see attached

Tax Parcel Number(s): 92-4-122-223-0202 & 92-4-12-223-0110

Existing Zoning District(s): B2 Community Business District with General Agricultural District Overlay

Proposed Zoning District(s): B2 Community Business District with Planned Unit Development (PUD) Overlay District

Proposed Use: Mixed Commercial Development

Compatibility with Adjacent Land Uses:

The proposed zoning is compatible with the existing and planned uses adjacent to the site. Wetland 1 has been permitted to be filled by the WDNR and ACOE. Wetland #2 will remain until such time that a fill permit is obtained. Since no formal plans for this wetland impact are completed, the applicant has been asked by the WDNR to withhold wetland impact permit applications until such time that formal plans showing the actual impact are designed.

If the property is being zoned into multiple zoning classifications or only a portion of the property is being rezoned (i.e. wetlands area) then submit an exhibit with complete legal description of each zoning classification.

I (We), have contacted the Community Development Department to arrange a pre-application meeting to discuss the proposed request to determine whether additional information may be needed for this request.

I, (We), hereby certify that all the above statements and attachments submitted herewith are true and correct to the best of my knowledge.

PROPERTY OWNER:

Print Name: Main Street Development, LLC

Signature: [Signature]

Address: 4011 80th Street

Kenosha WI 53142
(City) (State) (Zip)

Phone: (262) 842-0556

Fax: (262) 842-0557

Email: dan@beardevelopment.com

Date: 2/7/2018

APPLICANT/AGENT:

Print Name: Bear Development, LLC

Signature: [Signature]

Address: 4011 80th Street

Kenosha WI 53142
(City) (State) (Zip)

Phone: (262) 842-0556

Fax: (262) 842-0557

Email: dan@bear development.com

Date: 2/7/2018



ZONING TEXT AMENDMENT APPLICATION

I, (We), the undersigned owner(s)/agent do hereby petition the Village Board of Trustees to amend the Village of Pleasant Prairie as hereinafter requested.

Property Location: Northeast corner of STH 165 and STH 31

Legal Description: Please see attached

Tax Parcel Number(s): 92-4-122-223-0202 & 92-4-122-223-0110

Amend Section(s): Please see attached Petition. of the Village Zoning Ordinance

Purpose of Zoning Text Amendment:

Create a Planned Unit Development for the Main Street Market Development.
Please see attached petition.

If a Planned Unit Development is proposed include a letter indicting the dimensional variations being requested a statement of Community Benefit as required by Chapter 420 of the Village Municipal Code

If another type of Zoning Text Amendment is being proposed, then include the proposed language of the Zoning Text Amendment being requested.

I (We), have contacted the Community Development Department to arrange a pre-application meeting to discuss the proposed request to determine whether additional information may be needed for this request.

I, (We), hereby certify that all the above statements and attachments submitted herewith are true and correct to the best of my knowledge.

PROPERTY OWNER:

Print Name: Main Street Development, LLC

Signature: [Signature]

Address: 4011 80th Street

Kenosha WI 53142
(City) (State) (Zip)

Phone: (262) 842-0556

Fax: (262) 842-0557

Email: dan@beardevelopment.com

Date: 2/5/2018

APPLICANT/AGENT:

Print Name: Bear Development, LLC

Signature: [Signature]

Address: 4011 80th Street

Kenosha WI 53142
(City) (State) (Zip)

Phone: (262) 842-0556

Fax: (262) 842-0557

Email: dan@beardevelopment.com

Date: 2/5/2018

**PETITION FOR ZONING AMENDMENT
B-2 COMMUNITY BUSINESS DISTRICT
PLANNED UNIT DEVELOPMENT**

Your Petitioners, Main Street Development, LLC, respectfully represent to the Plan Commission and Village Board of the Village of Pleasant Prairie, as follows:

1. That Main Street Development, LLC, is the owner of record of the real estate which is subject to this petition and which is more fully described as follows:

LEGAL DESCRIPTION

PARCEL 1:

That part of the North 61.50 acres of the Southwest 1/4 of Section 22, Town 1 North, Range 22 East of the Fourth Principal Meridian, lying between the East line of relocated Highway "31" and the West line of Old Highway "31". Except the North 190 feet; and lying and being in the Village of Pleasant Prairie, Kenosha County, Wisconsin.

PARCEL 2:

The South 98.50 acres of the Southwest 1/4 of Section 22, Township 1 North, Range 22 East of the Fourth Principal Meridian, except that part of the said South 98.50 acres which lies East of Old State Trunk Highway 31; Also excepting that parcel described as: Commencing at a point in the center of Highway 31, 570 feet North of a point 1119.5 feet East of the Southwest corner of said 1/4 Section; thence East 140.9 feet, North 182 feet, West 189.1 feet to the center line of highway, Southeasterly along the center line of said highway 142.5 feet to place of beginning; said land lying and being in the Village of Pleasant Prairie, Kenosha County, Wisconsin. Excepting therefrom: All that part of the Southwest 1/4 of Section 22, Township 1 North, Range 22 East in the Village of Pleasant Prairie, Kenosha County, Wisconsin, described as follows:

Commencing at the Southwest corner of said Section 22, thence North 02°41'03" West and along the West line of said Section 22, 87.07 feet to a point in the new North line of State Trunk Highway 165 and the point of beginning of the following description: Thence continuing North 02°41'03" West and along the West line of said Section 22, 1563.08 feet, more or less, to the North line of the Donald Kleinschmidt property and the North line of the South 98.5 acres of the Southwest 1/4 of said Section 22, as indicated on the Wisconsin Department of Transportation right of way plat dated March 1, 1990 and revised October 30, 1990; thence North 89°53'33" East along said North line, 312.54 feet, more or less, to a point in the West line of the relocated State Trunk Highway 31 and a point in a curve, as indicated on said right of way plat, said point indicated as Station 155+66.57; thence Southerly 245.11 feet along the West line of said relocated highway and the arc of said curve to the left, whose radius is 11,529.16 feet and whose chord bears South 02°46'11" East, 245.11 feet, more or less, to a point of tangency; thence South 03°22'44" East and along the West line of said relocated highway, 1265.43 feet, more or less; thence South 42°04'39" West, 70.45 feet, more or less, to a point in the new North line of State Trunk Highway 165, said point lies 87.00 feet North of, as measured normal to, the South line of the Southwest 1/4 of said Section 22; thence South 89°40'10" West and along the new North line of said highway, 278.58 feet, more or less to the place of beginning. Further excepting therefrom: Begin at the Southwest corner of the Southwest 1/4; thence North 2°41'03" West along the West line of the Southwest 1/4 87.07 feet; thence North 89°40'10" East, parallel with the South line of the Southwest 1/4 278.58 feet; thence North 42°04'39" East 70.43 feet; thence North 3°22'44" West 1265.46 feet to a point of curve (from said point the long chord bears North 2°46'12" West 245.10 feet and the radius bears North 86°37'16" East 11,529.16 feet); thence Northerly along the arc of a curve to the right 245.10 feet to the North property line of the owner; thence North 89°53'33" East along said line 140.09 feet to a point of

curve (from said point the long chord bears South 2°46'57" East 237.10 feet and the radius bears North 87°48'50" East 1,389.16 feet); thence Southerly along the arc of a curve to the left 237.10 feet; thence South 03°22'44" East 1265.46 feet; thence South 44°28'33" East 82.85 feet; thence North 89°40'10" East 776.14 feet to the centerline of the existing S.T.H. 31; thence South 22°36'06" East along said line 94.01 feet to the South line of the Southwest 1/4; thence South 89°40'10" West along said line 1331.77 feet to the point of beginning.

PARCEL NUMBERS: 92-4-122-223-0202 & 92-4-122-223-0110

ACREAGE: 21.76 Acres

2. That the Petitioners are requesting a zoning amendment to the B-2 Commercial Business District - Planned Unit Development District to allow the development of the site as a mixed commercial development.
3. That the subject property consists of 21.76 acres and is located northeast of the intersection of STH 31 and STH 165.
4. That the subject property is presently classified as B-2 Community Business District, with General Agricultural Overlay
5. That the Petitioners are requesting a zoning amendment to the B-2 Community Business District to remove the General Agricultural Overlay- Planned Unit Development District to allow the development the site as a mixed commercial center.
6. That the Property was granted approval for a Neighborhood Plan Amendment for a commercial development
7. That the Petitioners request the PUD to allow flexibility in the development of Main Street Market.
8. That the Petitioner's acknowledge that the subject property shall be developed as a unified and coordinated Planned Unit Development in accordance with Village of Pleasant Prairie Municipal Code, Chapter 420, Section 137.
9. That the Main Street Market shall provide a community benefit reflected in;
 - a. Coordinated Site Planning
 - b. Safe and Efficient Pedestrian and Vehicular Connections
 - c. Consistent Architectural Style, Design and Building Materials
 - d. Attractive Landscaping Planning
 - e. Uniform Parking Lot Lighting
 - f. Coordinated Site Signage

10. The Petitioner's represent that the Planned Unit Development will require future modifications related to setbacks, structure height, lot width, minimum area, parking requirements, etc. as specific site users join the Main Street Market Planned Unit Development. The Petitioner's seek the flexibility allowed by the PUD to create and establish a unified development.

At this time the Petitioner's request the following modification's in the B-2 Community Business District.

- a. That the minimum lot size in the Main Street Market be reduced from the minimum of two (2) acres to a minimum lot size of .75 acres.
- b. That the minimum Gross Floor Area be reduced from the minimum of 4,000 square feet to a minimum of 2,350 square feet only as it relates to Lot 3.
- c. That the fire lanes, maneuvering lanes and parking lot setbacks be reduced to a minimum of 15' from all property lines adjacent to public roadways.
- d. That building setbacks be reduced to a minimum of 30' from all public roadways

Wherefore, Petitioners request that the Village of Pleasant Prairie set a date for a Public Hearing to be held for the proposed request.

Property Owner's Signature

Date

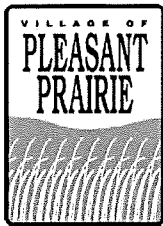
Main Street Development, LLC
4011 80th Street
Kenosha, WI 53142



Applicant's Signature

Date

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



CERTIFIED SURVEY MAP APPLICATION

I, (We), the undersigned owner(s)/agent do hereby petition the Village Board to subdivide the property with a Certified Survey Map (CSM) as hereinafter requested:

Property Location: Northeast Corner of STH 31 and STH165
Legal Description: Please see attached
Tax Parcel Number(s): 92-4-122-223-0202
Existing Zoning District(s): B2 Community Business District with General Agricultural Overlay

Select all that apply:

- ☒ The property abuts or adjoins State Trunk Highway STH 165 and STH 31
- ☐ The property abuts or adjoins County Trunk Highway _____
- ☒ Municipal Sanitary Sewer is available to service said property
- ☒ Municipal Water is available to service said property

I (We), have contacted the Community Development Department to arrange a pre-application meeting to discuss the proposed request with the Village staff to determine whether additional information may be needed to consider the request.

I (We), hereby certify that all the above statements and attachments submitted herewith are true and correct to the best of my knowledge.

PROPERTY OWNER:

Print Name: Main Street Development, LLC
Signature: [Signature]
Address: 4011 80th Street
Kenosha WI 53142
(City) (State) (Zip)
Phone: (262) 842-0556
Fax: (262) 842-0557
Email: dan@beardevelopment.com
Date: 2/7/2018

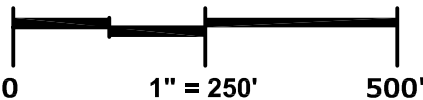
APPLICANT/AGENT:

Print Name: Bear Development, LLC
Signature: [Signature]
Address: 4011 80th Street
Kenosha WI 53142
(City) (State) (Zip)
Phone: (262) 842-0556
Fax: (262) 842-0557
Email: dan@beardevelopment.com
Date: 2/7/2018

CERTIFIED SURVEY MAP
NO. _____

Being a part of the Southwest 1/4 and the Northwest 1/4 of
the Southwest 1/4 of Section 22, Township 1 North, Range 22
East, Village of Pleasant Prairie, Kenosha County, Wisconsin.

GRAPHICAL SCALE (FEET)



Bearings referenced to the Wisconsin State Plane
Coordinate System, South Zone (N.A.D. 1927). The south
line of the Southwest 1/4 of Section 22, Township 1 North,
Range 22 East has a bearing of N89°40'10"E

Prepared for:
MAIN STREET DEVELOPMENT, LLC
4011 80th Street
Kenosha, WI 53142

LEGEND:

- Denotes Found 1" Iron Pipe
- Denotes Found 3/4" Iron Rod, Capped
- Denotes Set 3/4" X 18" Iron Rebar, 1.5 LBS./FT.
- (R) - Denotes "Recorded As"
- Denotes No Access



APRIL 12, 2018

SEE SHEET 5 FOR
EASEMENT LINE TABLE
SEE SHEET 6
FOR VICINITY MAP,
BOUNDARY LINE AND
CURVE TABLES

LOT 2
175,238 SQ. FT.
4.0229 ACRES

LOT 3
36,599 SQ. FT.
0.8402 ACRES

LOT 4
73,093 SQ. FT.
1.6780 ACRES

SW CORNER, SW 1/4
SEC. 22, T1N, R22E
(FOUND CONC. MON.
W/ BRASS CAP)
N 197,794.54
E 2,567,904.90
(WISCONSIN STATE
PLANE CO-
ORDINATE SYSTEM,
SOUTH ZONE)

DEDICATED
FOR PUBLIC
ROAD
PURPOSES
**OLD GREEN
BAY ROAD**
18,937 SQ. FT.
(0.4347 ACRES)

SE CORNER
SW 1/4 SEC. 22
T1N, R22E
(FOUND CONC.
MON. WITH
BRASS CAP)

SOUTH LINE OF THE SW 1/4 SEC. 22, T1N, R22E
N89°40'10"E 2672.86'

104TH STREET
STATE TRUNK HIGHWAY "165"

Prepared By:
PINNACLE ENGINEERING GROUP
15850 BLUEMOUND ROAD | SUITE 210
BROOKFIELD, WI 53005
OFFICE: (262) 754-8888

Tax Key Numbers:
92-4-122-223-0110
94-4-122-223-0202

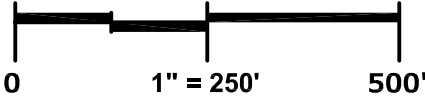
This instrument drafted by John P. Konopacki, PLS-License No. S-2461

PEG JOB#1114.10
SHEET 1 OF 12

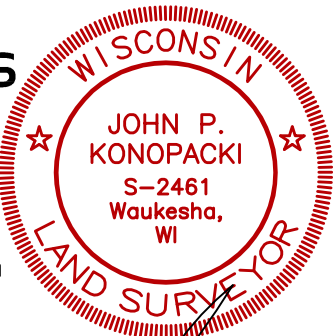
CERTIFIED SURVEY MAP
NO. _____

Being a part of the Southwest 1/4 and the Northwest 1/4 of
the Southwest 1/4 of Section 22, Township 1 North, Range 22
East, Village of Pleasant Prairie, Kenosha County, Wisconsin.

GRAPHICAL SCALE (FEET)



EXISTING
EASEMENTS

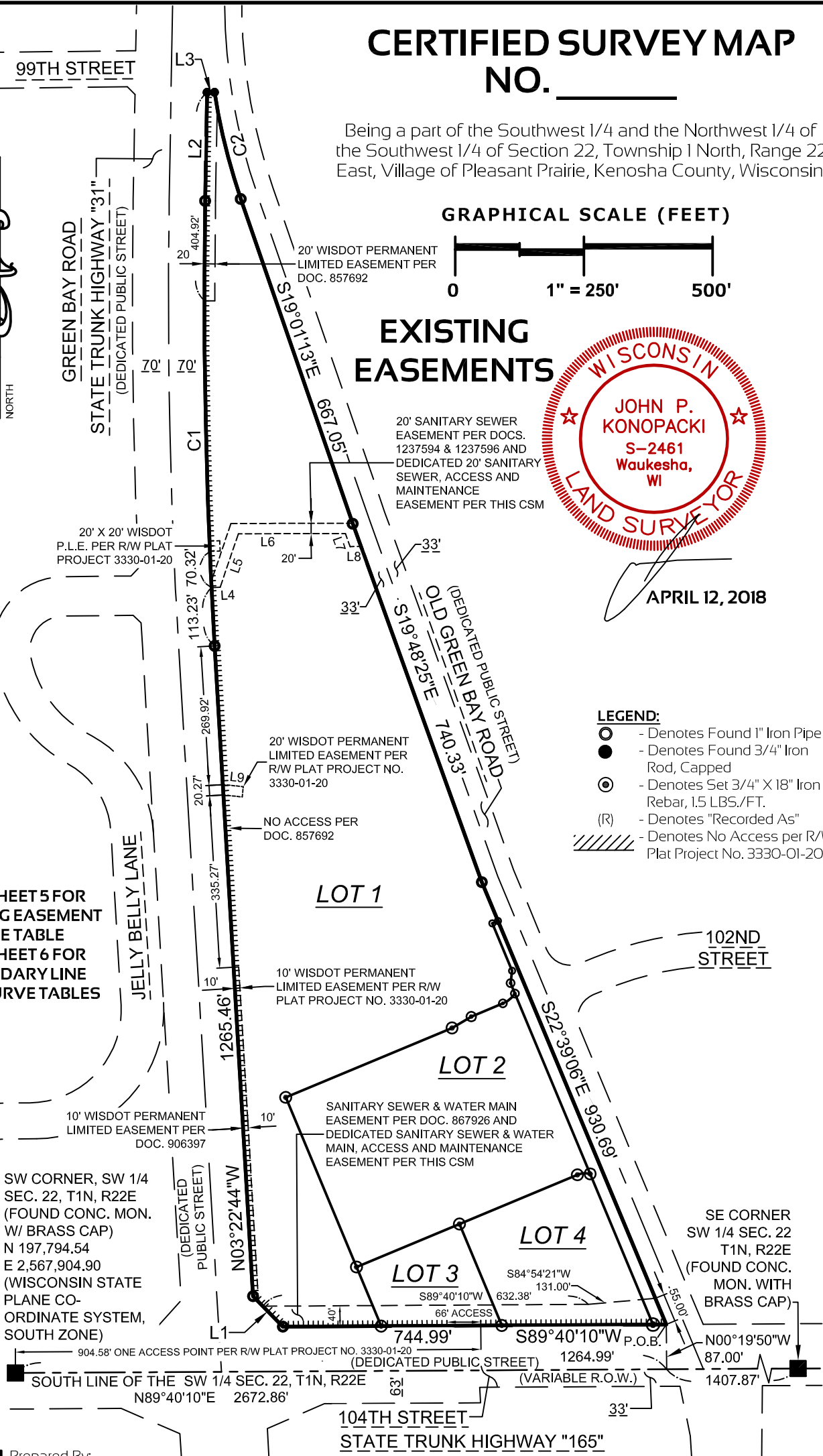


APRIL 12, 2018

LEGEND:

- - Denotes Found 1" Iron Pipe
- - Denotes Found 3/4" Iron Rod, Capped
- ⊙ - Denotes Set 3/4" X 18" Iron Rebar, 1.5 LBS./FT.
- (R) - Denotes "Recorded As"
- /// - Denotes No Access per R/W Plat Project No. 3330-01-20

SEE SHEET 5 FOR
EXISTING EASEMENT
LINE TABLE
SEE SHEET 6 FOR
BOUNDARY LINE
AND CURVE TABLES



SW CORNER, SW 1/4
SEC. 22, T1N, R22E
(FOUND CONC. MON.
W/ BRASS CAP)
N 197,794.54
E 2,567,904.90
(WISCONSIN STATE
PLANE CO-
ORDINATE SYSTEM,
SOUTH ZONE)

SE CORNER
SW 1/4 SEC. 22
T1N, R22E
(FOUND CONC.
MON. WITH
BRASS CAP)

Prepared By:
PINNACLE ENGINEERING GROUP
15850 BLUEMOUND ROAD | SUITE 210
BROOKFIELD, WI 53005
OFFICE: (262) 754-8888

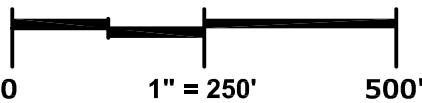
This instrument drafted by John P. Konopacki, PLS-License No. S-2461

PEG JOB#1114.10
SHEET 2 OF 12

CERTIFIED SURVEY MAP
NO. _____

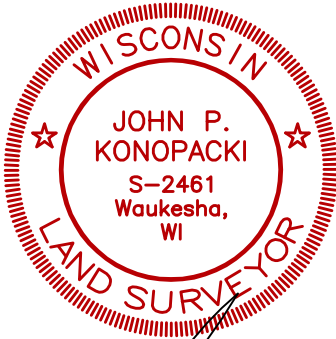
Being a part of the Southwest 1/4 and the Northwest 1/4 of
the Southwest 1/4 of Section 22, Township 1 North, Range 22
East, Village of Pleasant Prairie, Kenosha County, Wisconsin.

GRAPHICAL SCALE (FEET)



NOTES:

- All measurements have been made to the nearest one-hundredth of a foot.
- All angular measurements have been made to the nearest one second.
- Vertical Datum: National Geodetic Vertical Datum of 1929 (NGVD29).
Contours are shown at a 2' interval based on actual ground survey of the
current ground terrain. Reference Benchmark: Chiseled Cross in top of NE
side of Hydrant Flange, 2.1' above grade located 189 feet northeast of the
southwest corner of the Southwest 1/4 Section 22, Town 1 North, Range
22 East, Elevation = 711.961.
- Wetlands delineated by Stantec on September 1, 2017.

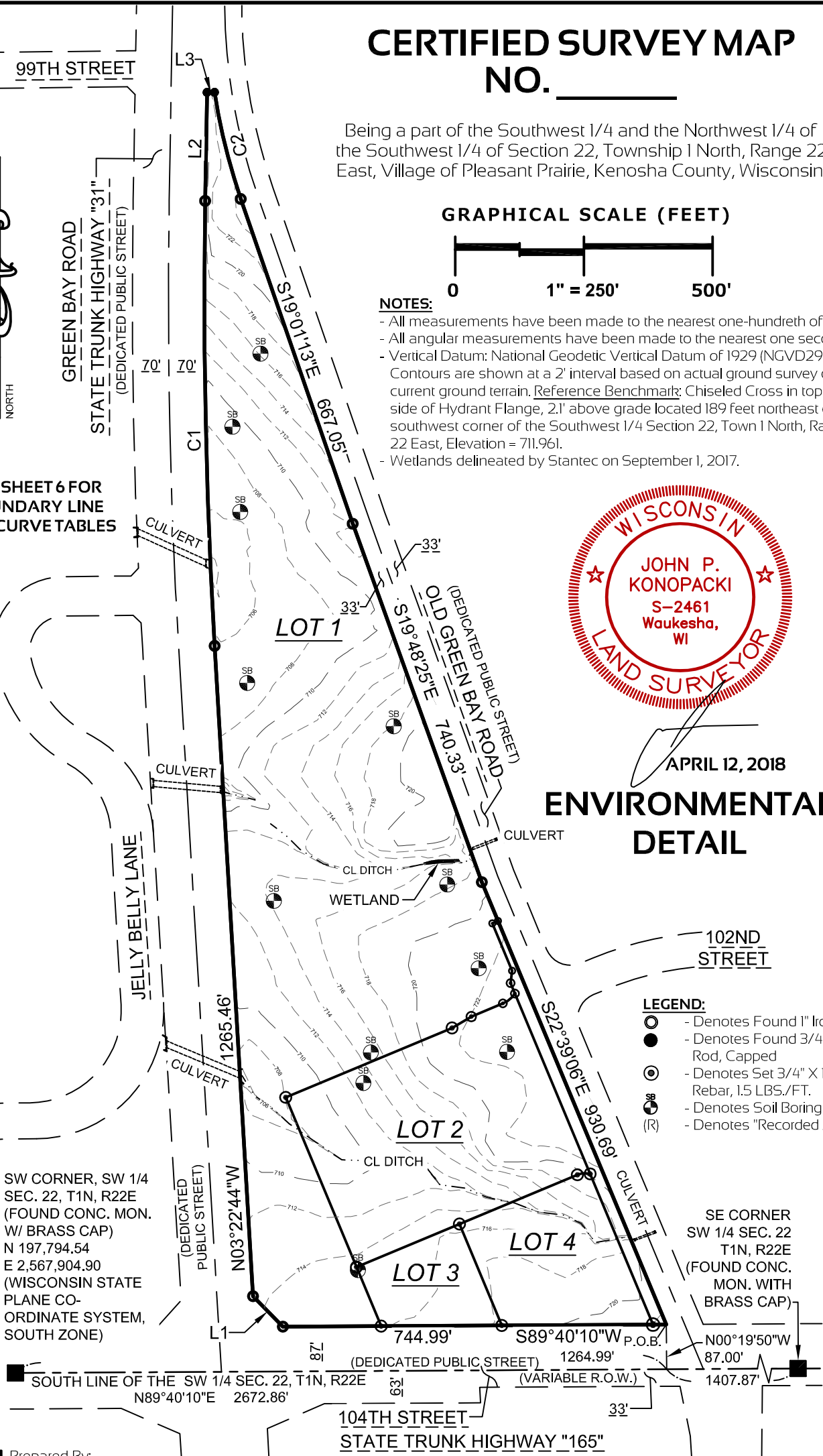


APRIL 12, 2018

ENVIRONMENTAL
DETAIL

LEGEND:

- - Denotes Found 1" Iron Pipe
- - Denotes Found 3/4" Iron Rod, Capped
- ⊙ - Denotes Set 3/4" X 18" Iron Rebar, 1.5 LBS./FT.
- SB - Denotes Soil Boring Pit
- (R) - Denotes "Recorded As"



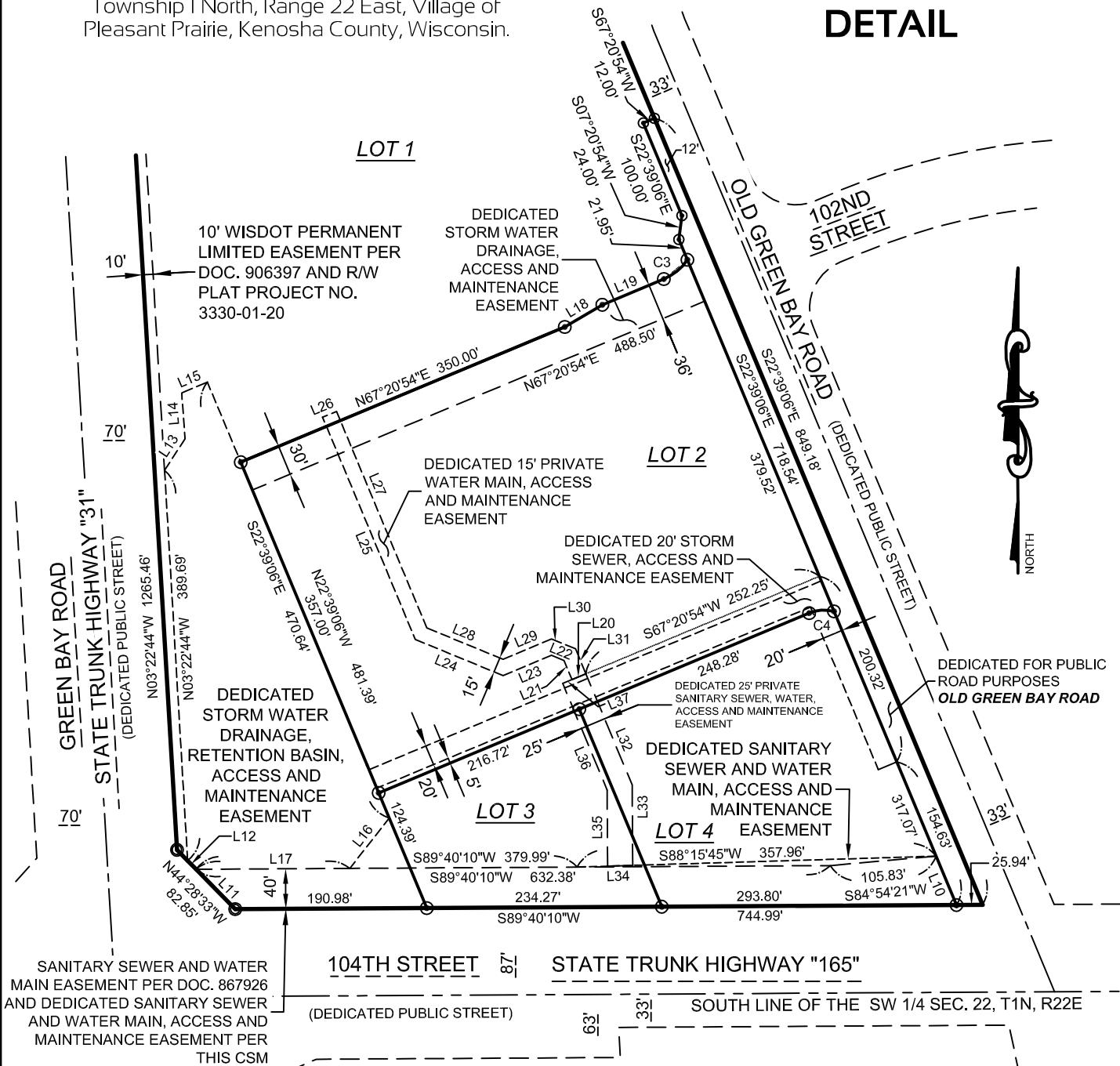
SW CORNER, SW 1/4
SEC. 22, T1N, R22E
(FOUND CONC. MON.
W/ BRASS CAP)
N 197,794.54
E 2,567,904.90
(WISCONSIN STATE
PLANE CO-
ORDINATE SYSTEM,
SOUTH ZONE)

SE CORNER
SW 1/4 SEC. 22
T1N, R22E
(FOUND CONC.
MON. WITH
BRASS CAP)

CERTIFIED SURVEY
MAP NO. _____

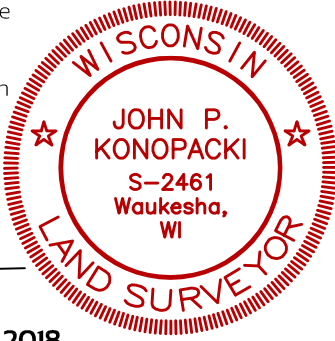
Being a part of the Southwest 1/4 and the
Northwest 1/4 of the Southwest 1/4 of Section 22,
Township 1 North, Range 22 East, Village of
Pleasant Prairie, Kenosha County, Wisconsin.

DEDICATED
EASEMENT
DETAIL



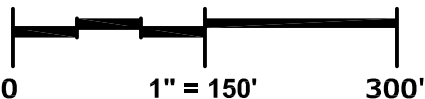
LEGEND:

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APRIL 12, 2018

GRAPHICAL SCALE (FEET)



LINE TABLE		
LINE NO.	BEARING	DISTANCE
L10	N22°39'06"W	52.74'
L11	N44°28'33"W	55.74'
L12	N44°28'33"W	11.89'
L13	N32°56'12"E	37.47'
L14	N04°09'59"W	45.84'
L15	N67°20'54"E	27.74'
L16	S38°03'05"W	63.65'
L17	S89°40'10"W	153.38'
L18	N59°24'18"E	43.42'
L19	N67°20'54"E	66.50'
L20	S67°20'54"W	15.00'
L21	N22°39'06"W	20.66'
L22	N67°39'18"W	13.42'
L23	S67°20'56"W	52.33'

LINE TABLE		
LINE NO.	BEARING	DISTANCE
L24	N67°39'18"W	94.57'
L25	N22°39'06"W	239.99'
L26	N67°20'54"E	15.00'
L27	S22°39'06"E	233.77'
L28	S67°39'18"E	82.14'
L29	N67°20'56"E	52.33'
L30	S67°39'18"E	25.85'
L31	S22°39'04"E	26.88'
L32	S22°39'06"E	120.12'
L33	S00°17'57"E	80.07'
L34	S88°15'45"W	25.01'
L35	N00°17'57"W	75.76'
L36	N22°39'06"W	115.18'
L37	N67°20'54"E	25.00'

Prepared By:

PINNACLE ENGINEERING GROUP

15850 BLUEMOUND ROAD | SUITE 210

BROOKFIELD, WI 53005

OFFICE: (262) 754-8888

This instrument drafted by John P. Konopacki, PLS-License No. S-2461

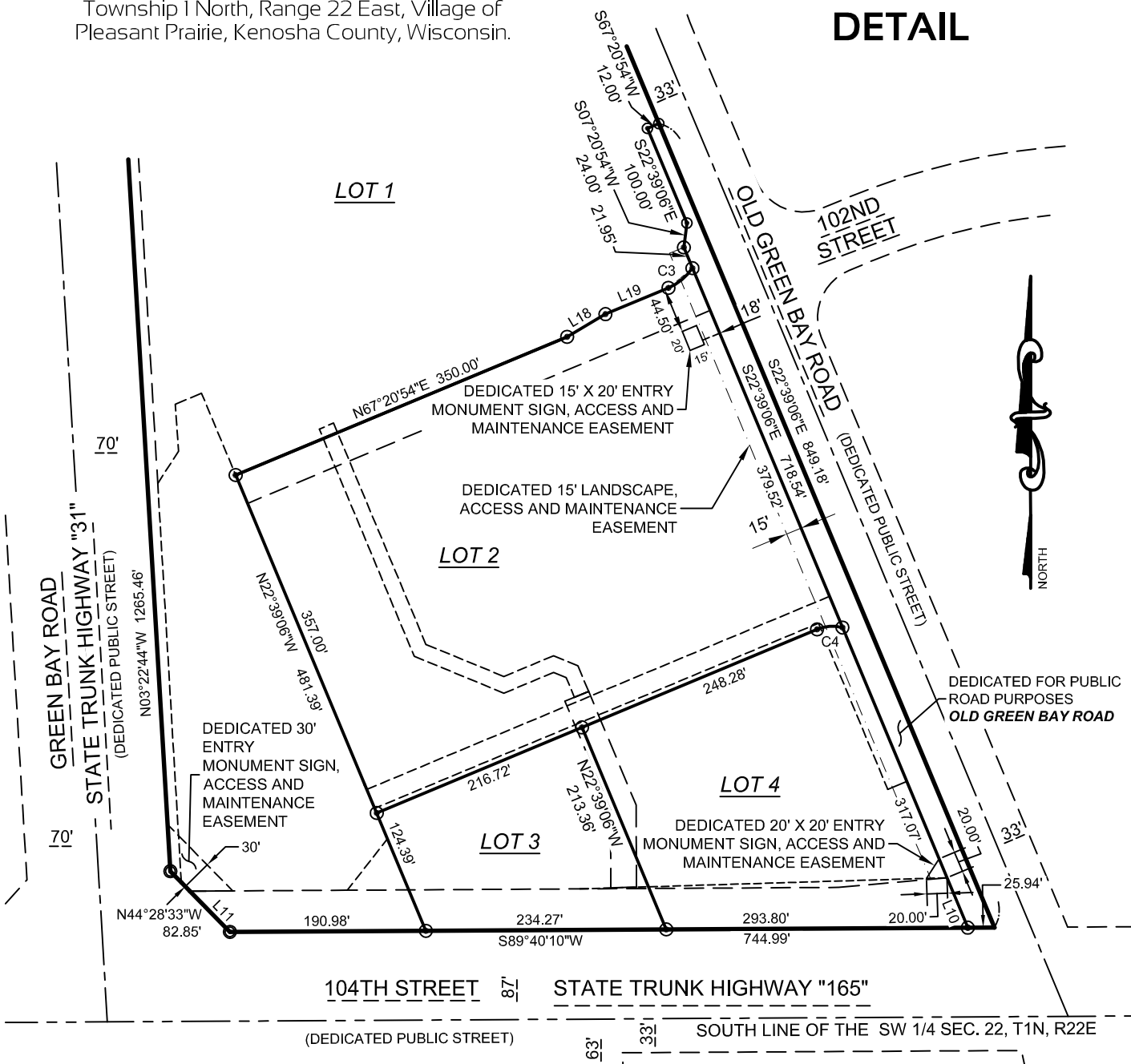
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SHEET 4 OF 12

CERTIFIED SURVEY
MAP NO. _____

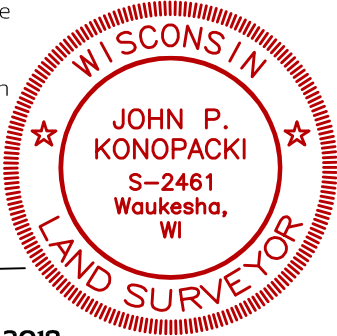
Being a part of the Southwest 1/4 and the
Northwest 1/4 of the Southwest 1/4 of Section 22,
Township 1 North, Range 22 East, Village of
Pleasant Prairie, Kenosha County, Wisconsin.

DEDICATED
EASEMENT
DETAIL



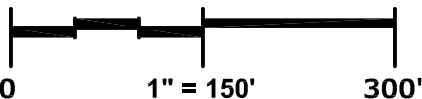
LEGEND:

- - Denotes Found 1" Iron Pipe
- - Denotes Found 3/4" Iron Rod, Capped
- ⊙ - Denotes Set 3/4" X 18" Iron Rebar, 1.5 LBS./FT.



APRIL 12, 2018

GRAPHICAL SCALE (FEET)



Prepared By:

PINNACLE ENGINEERING GROUP

15850 BLUEMOUND ROAD | SUITE 210

BROOKFIELD, WI 53005

OFFICE: (262) 754-8888

This instrument drafted by John P. Konopacki, PLS-License No. S-2461

EASEMENT LINE TABLE		
LINE NO.	BEARING	DISTANCE
L4	N87°21'07"E	16.91'
L5	N18°46'28"E	109.62'
L6	N89°53'37"E	207.95'
L7	S19°48'25"E	26.86'
L8	N89°53'37"E	21.24'
L9	S84°04'58"E	40.00'
L38	N80°27'54"E	39.27'
L39	N50°11'46"W	30.00'
L40	N39°48'14"E	45.00'
L41	S50°11'46"E	30.00'
L42	S39°48'14"W	45.00'

CERTIFIED SURVEY MAP NO. _____

Being a part of the Southwest 1/4 and the Northwest 1/4 of the Southwest 1/4 of
Section 22, Township 1 North, Range 22 East, Village of Pleasant Prairie,
Kenosha County, Wisconsin.

SURVEYOR'S CERTIFICATE

STATE OF WISCONSIN)
WAUKESHA COUNTY) SS

I, John P. Konopacki, Professional Land Surveyor, do hereby certify:

That I have surveyed, mapped and divided that part of the Southwest 1/4
and the Northwest 1/4 of the Southwest 1/4 of Section 22, Township 1 North,
Range 22 East, Village of Pleasant Prairie, Kenosha County, Wisconsin, described as follows:

Commencing at the southwest corner of the Southwest 1/4 of said Section 22;
Thence North 89°40'10" East along the south line of said Southwest 1/4, 1264.99 feet;
Thence North 00°19'50" West, 87.00 feet to the north right of way line of 104th Street - State
Trunk Highway "165" and the Point of Beginning;

Thence South 89°40'10" West along said north right of way line, 744.99 feet to the east right of
way line of Green Bay Road - State Trunk Highway "31";
Thence the following courses along said east right of way line:
North 44°28'33" West, 82.85 feet;
North 03°22'44" West, 1265.46 feet to a point of curvature;
Northerly 864.74 feet along the arc of said curve to the right, whose radius
is 11389.16 feet and whose chord bears North 01°12'14" West, 864.53 feet;
North 00°58'17" East, 210.54 feet;
Thence South 89°58'23" East, 14.56 feet to the westerly right of way line of Old Green Bay Road and a point on a curve;
Thence the following courses along said westerly right of way line:
Southeasterly 213.33 feet along the arc of said curve to the left, whose radius
is 1178.88 feet and whose chord bears South 13°50'11" East, 213.04 feet;
South 19°01'13" East, 667.05 feet;
South 19°48'25" East, 740.33 feet;
South 22°39'06" East, 930.69 feet to the Point of Beginning.

Dedicating the Easterly portion of subject property as graphically shown for public right of way purposes.
Containing 944,295 square feet (21.6780 acres) of land more or less.

That I have made such survey, land division and map by the direction of Main Street Development, LLC, owner of said land.

That such plat is a correct representation of all the exterior boundaries of the land surveyed and the land division thereof made.

That I have fully complied with the provisions of s.236.34 of the Wisconsin State Statue and the Village of Pleasant Prairie Land Division and
Development Control Ordinance in surveying and mapping the same.

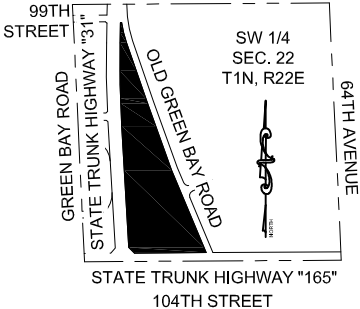


John P. Konopacki
Professional Land Surveyor S-2461

Date: APRIL 12, 2018



VICINITY SKETCH
SCALE 1"=2000'



LINE TABLE		
LINE NO.	BEARING	DISTANCE
L1	N44°28'33"W	82.85'
L2	N00°58'17"E	210.54'
L3	S89°58'23"E	14.56'

CURVE TABLE							
CURVE NO.	LENGTH	RADIUS	DELTA	CHORD BEARING	CHORD LENGTH	TANGENT IN	TANGENT OUT
C1	864.74'	11389.16'	004°21'01"	N01°12'14"W	864.53'	N03°22'44"W	N00°58'17"E
C2	213.33'	1178.88'	010°22'06"	S13°50'11"E	213.04'	S08°39'08"E	S19°01'13"E
C3	30.69'	53.00'	033°10'23"	N50°45'42"E	30.26'		
C4	25.22'	39.00'	037°03'12"	N85°52'31"E	24.78'		

CERTIFIED SURVEY MAP NO. _____

Being a part of the Southwest 1/4 and the Northwest 1/4 of the Southwest 1/4 of
Section 22, Township 1 North, Range 22 East, Village of Pleasant Prairie,
Kenosha County, Wisconsin.

The following "Dedication of Easement Provisions" and "Restrictive Covenants" were drafted by the Village of Pleasant Prairie and are shown hereon as a condition of map approval. Inclusion thereof on this document is not to be considered practicing law in the State of Wisconsin by the above signed Land Surveyor, the Land Surveyor is not responsible for rights granted, perceived or otherwise stated herein.

DEDICATION AND EASEMENT PROVISIONS

1. The fee interest in the areas shown as **Dedicated Public Street** on this CSM and Future Land Divisions were/are being dedicated, given, granted and conveyed to the Village for the local dedicated street rights-of-way and/or to the Wisconsin Department of Transportation (referred to as the "WI DOT") for the State dedicated street rights-of-way for the construction, installation, repair, alteration, replacement, planting and maintenance of public roadway improvements, uses and purposes, including, without limitation, roadway pavement, curbs and gutters, multi-use trails and sidewalks, street signs, street lights, street trees, street signalization and pavement markings, sanitary sewerage system improvements, water system improvements, roadway improvements, storm sewer and drainage system improvements, utility and communications facilities, and for all related ingress and egress. Such fee interest is subject to the following: nonexclusive easements, which are hereby reserved in the street rights-of-way by the Village and/or the WI DOT as shown on the CSM and Future Land Divisions for the Developer, the Association and the Owners whose Lots are adjacent to the public street areas for the required planting, seeding, mowing, watering and maintenance and cutting of grass within the terrace areas; for the maintenance and replanting of street trees within the terrace areas; and the removing of snow and ice from the driveways, multi-use trails and sidewalks within the terrace areas. In the event of any conflict between the rights of the Village and the WI DOT under the existing fee interests in the Dedicated Public Street areas shown on the CSM and Future Land Divisions and the rights of the Developer, the Association or the Owners pursuant to the rights retained herein, the rights of the Village or the WI DOT shall be deemed to be superior.

The Developer shall be responsible for all costs associated with the initial construction, installation, repair, alteration, replacement, snow/ice removal, grading, planting, and maintenance throughout the warranty period, for all public roadway improvements, curbs and gutters, multi-use trails and sidewalks, street signs, street lights, street trees, street signalization and pavement markings, sanitary sewerage system improvements, water system improvements, storm sewer and drainage system improvements, and utility and communications facilities, as defined in the executed Development Agreement between the Developer and the Village on file with the Village Clerk.

The Association shall be responsible, following the warranty period, for all costs associated with the ongoing maintenance and mowing of the street terrace areas and replacement, pruning, watering, mulching, and staking of street trees and landscaping within the Premises, Common Elements or Outlots; maintenance, repair, and replacement of any monument signage, along with the maintenance of its lighting and landscaping; payment of the public street lights energy and facility maintenance costs installed for the Development; installation and maintenance of utility and communications facilities within the Development's common areas or future Outlots; maintenance, repair and replacement of the private parking lots and private sidewalks and public multi-use trails and public sidewalks, along with the snow/ice removal; maintenance, repair and replacement of the private sanitary sewer system improvements; maintenance, repair and replacement of the private water system improvements; and the maintenance, repair and replacement of the private storm water sewer and drainage system improvements and basins used to handle storm water from the Development in accordance with the terms and conditions of the Village Municipal Code and the specific requirements set forth in these Covenants.

The Owners shall be responsible for all costs associated with the their Lot maintenance including the mowing of the street terrace areas and replacement, pruning, watering, mulching, and staking of street trees and landscaping on and abutting their Lot; installation and maintenance of mailboxes; and installation and maintenance of private utility and communications facilities; and all of their site, signage and building improvements in accordance with the terms and conditions of the Village Municipal Code and the specific requirements set forth in these Covenants.

2. Perpetual nonexclusive utility easements coextensive with the **Dedicated General Utility Easement** areas granted by the Developer to WE Energies (f/k/a W.E.P.CO.), AT & T (f/k/a Wisconsin Bell), Spectrum (f/k/a Time Warner Cable Inc.) or other utilities and their respective successors and assigns (collectively referred to as the "Utility and Communications Grantees"), for the purposes of constructing, installing, operating, repairing, altering, replacing and maintaining utility and communication lines and other related facilities to serve the Lots and for any related ingress and egress. The General Utility Easements shall also include the right to trim or cut down trees, bushes, branches, and roots as may be reasonably required, that are interfering with the Utility and Communication Grantees use of the easement areas. To the extent possible, all such utility and communications lines and facilities shall be installed underground. Upon the installation of the utility lines, utility cables and related appurtenances, the elevation of the existing ground surface within the General Utility Easement areas shall only be altered in accordance with a separate agreement between Utility and Communications Grantees and Owners and as may be approved by the Village. Upon the installation of the required utilities, the Owners shall be responsible to restore or cause to be restored, all such land, as nearly as is reasonably possible, to the conditions existing prior to installation of such utilities within the General Utility Easement areas, on which such easements are located on their Lots as does not interfere with the purposes of the utility and communications easements and the use of such easements by the Utility and Communications Grantees. Unless there is a separate agreement entered into between the Owners and Grantees regarding the transfer of the restoration and maintenance responsibilities to the Utility and Communications Grantees, the Easement Grantor shall be responsible for all restoration maintenance. No buildings, fences, or structures of any kind shall be placed within the General Utility Easement areas without the written approval of the Utility and Communication Grantees.

CONTINUED ON PAGE 8



APRIL 12, 2018

CERTIFIED SURVEY MAP NO. _____

Being a part of the Southwest 1/4 and the Northwest 1/4 of the Southwest 1/4 of
Section 22, Township 1 North, Range 22 East, Village of Pleasant Prairie,
Kenosha County, Wisconsin.

The following "Dedication of Easement Provisions" and "Restrictive Covenants" were drafted by the Village of Pleasant Prairie and are shown hereon as a condition of map approval. Inclusion thereof on this document is not to be considered practicing law in the State of Wisconsin by the above signed Land Surveyor, the Land Surveyor is not responsible for rights granted, perceived or otherwise stated herein.

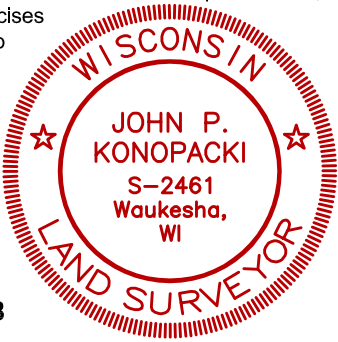
DEDICATION AND EASEMENT PROVISIONS CONTINUED.....

2. (CONTINUED).....The Village generally allows private utilities, including but not limited to electric and communications facilities, to be installed in the Village public street rights-of-way areas with prior written approval from the Village, subject to the requirements of applicable Village ordinances and the requirements of such public uses and purposes of the Village. Further, each individual private utility, electric or communications company shall be responsible for promptly restoring the public street areas to their pre-existing condition, at its own cost, after any use of such areas. In the event the private utility or communication companies do not restore the public street areas to a vegetatively stabilized condition, the individual Lot Owners shall be responsible for the costs of such restoration and may pursue its remedies against the respective utility company(ies). Under no circumstances shall any private utility, electric or communications company conduct any open cutting of the public streets without prior written approval of the Village and/or the WI DOT, depending on jurisdiction. Any such private utility or communications facilities shall be promptly relocated, at the cost of the individual utility, electric or communications company, upon written request of the Village, to serve the public functions and purposes of the Village in the public street area. In the event of any conflict between the rights of the Village or the WI DOT and the rights of the private utility, electric or communications company in such public street areas, the Village's or the WI DOT's rights shall be deemed to be superior.
3. A perpetual nonexclusive easement coextensive with the areas shown as **Dedicated Private Water Mains, Access and Maintenance Easement and Dedicated Private Sanitary Sewer Mains, Access and Maintenance Easement** areas on this CSM and Future Land Divisions are hereby dedicated, given, granted and conveyed by the Developer to the Village for private water system and private sanitary sewer system improvements, uses and purposes, construction, installation, repair, alteration, replacement and maintenance activities and for all related ingress and egress. The Easements granted to the Village shall be exclusive, except for: the Association's and Owner's responsibilities for the construction, installation, repair, alteration and replacement and maintenance of the private water main and private sanitary sewer main and related appurtenances and the use, cleaning, televising and sampling and parking lot maintenance of the Easement land areas. After proper notification, if the Association or Lot Owners fail to undertake regular maintenance on the private water and/or sanitary sewer systems in the Development, the Village shall have the right but not the obligation to exercise its rights under these Easements to undertake such maintenance at the Association's and Owner's cost. In the event of any conflicts between the rights of the Village pursuant to these Easements and the rights of any other persons or entities with respect to these Easements, the Village's rights under these Easements shall be deemed to be superior.
4. A perpetual nonexclusive easement coextensive with the area shown as a **Dedicated Public Sanitary Sewer, Water Main, Access and Maintenance Easement** on the CSM and Future Land Divisions was dedicated, given, granted and conveyed by the former landowner and recorded as Document #867926 at the Kenosha County Register of Deeds Office and a **20' Dedicated Sanitary Sewer, Access and Maintenance Easement** on this CSM was dedicated, given, granted and conveyed by the former landowner and recorded as Documents #81237594 and #1237596 at the Kenosha County Register of Deeds Office to the Village for public sanitary sewerage and public water system improvements, uses and purposes, construction, installation, repair, alteration, replacement and maintenance activities and for all related ingress and egress. The Easements shall be exclusive, except for: (1) the Owners' use, planting and irrigating, care and maintenance of the Easement land areas, as it will not interfere with the improvements, maintenance, uses and purposes of the Village or the respective utilities within the Easements. In the event of any conflicts between the rights of the Village pursuant to these Easements and the rights of any other persons or entities with respect to these Easements, the Village's rights under these Easements shall be deemed to be superior.
5. Nonexclusive easement(s) co-extensive with the areas shown as **Dedicated Entry Monument Sign, Access and Maintenance Easement** on this CSM and Future Land Divisions have been or are dedicated, given, granted and conveyed by the Developer to the Association, the Village and to the Owners for the construction, installation, grading, planting, lighting, irrigation, related maintenance and for all related ingress and egress to the monument signage benefiting the commercial businesses within the Development. These Easements shall be exclusive, except for: (1) other such easements as may be dedicated and conveyed herein with respect to the same area or any portion thereof; (2) such above-ground Easements for the signage repair and replacement; lighting and irrigation installation; grading, planting, mowing and maintenance responsibilities and related ingress and egress in the Easement areas, which shall be required of the Association and Lot Owners and (3) such above-ground Easements for the signage, lighting and irrigation installation and grading, planting, mowing and maintenance responsibilities; and related ingress and egress in the Easement areas as granted to the Village. Unless the Village exercises the Easement rights granted to it hereunder with respect to the Easements, the Village shall have no obligation to do anything pursuant to its rights under these Easements. In the event of any conflict between the rights of the Developer, Association, Owners and the rights of the Village or of other entities with respect to the Easement, the Village's rights under the Easement shall be deemed to be superior.
6. A perpetual easement coextensive the areas shown as a **Dedicated Storm Water Drainage, Retention Basin, Access and Maintenance Easement and Dedicated Storm Water Drainage, Access and Maintenance Easement** on this CSM and Future Land Divisions are hereby dedicated, given granted and conveyed by the Developer to the Association, the Village and to the Owners for the purposes of storm water drainage, storm sewer and retention basin(s) grading, construction, installation, planting, lighting, irrigation, related maintenance and for all related ingress and egress of the drainage areas benefiting the commercial businesses within the Development. These Easements shall be exclusive, except for: (1) other such easements as may be dedicated and conveyed herein with respect to the same area or any portion thereof; (2) such above-ground use for the retention basin and storm sewer installation; grading, planting, mowing and maintenance responsibilities and related ingress and egress in the Easement areas, which shall be required of the Association and Lot Owners and (3) such above-ground Easements for the drainage, storm sewer and retention basin installation; grading, planting, mowing and maintenance responsibilities; and related ingress and egress in the Easement areas as granted to the Village. Unless the Village exercises the Easement rights granted to it hereunder with respect to the Easements, the Village shall have no obligation to do anything pursuant to its rights under these Easements. In the event of any conflict between the rights of the Developer, Association, Owners and the rights of the Village or of other entities with respect to the Easements, the Village's rights under the Easements shall be deemed to be superior.

CONTINUED ON PAGE 9

Prepared By:
PINNACLE ENGINEERING GROUP
15850 BLUEMOUND ROAD 1 SUITE 210
BROOKFIELD, WI 53005
OFFICE: (262) 754-8888


APRIL 12, 2018



CERTIFIED SURVEY MAP NO. _____

Being a part of the Southwest 1/4 and the Northwest 1/4 of the Southwest 1/4 of
Section 22, Township 1 North, Range 22 East, Village of Pleasant Prairie,
Kenosha County, Wisconsin.

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DEDICATION AND EASEMENT PROVISIONS CONTINUED.....

7. Perpetual easements coextensive with the areas shown as a **Dedicated Landscaped, Access and Maintenance Easement** on this CSM and Future Land Divisions are hereby dedicated, given, granted and conveyed by the Developer to the Association, the Village and to the Owners for the purposes of installation, replacement and maintenance of landscape materials, signage, lighting and irrigation and related maintenance and all related ingress and egress benefiting the commercial businesses within the Development. These Easements shall be exclusive, except for: (1) other such easements as may be dedicated and conveyed herein with respect to the same area or any portion thereof; (2) such above-ground use; landscape planting, signage, irrigating, and lighting installation and maintenance responsibilities; and ingress and egress in the Easement areas which shall be required of the Association and Owners and (3) such above-ground use; landscape planting, signage, irrigating, and lighting installation and maintenance responsibilities; and ingress and egress in the Easement areas granted to the Village. Unless the Village exercises the Easement rights granted to it hereunder with respect to the Easements, the Village shall have no obligation to do anything pursuant to its rights under these Easements. In the event of any conflict between the rights of the Developer, Association, Owners and the rights of the Village or of other entities with respect to the Easements, the Village's rights under the Easements shall be deemed to be superior.
8. Nonexclusive easements coextensive with the areas shown as a **Dedicated Vision Triangle Easement** on this CSM and Future Land Divisions are hereby dedicated, given, granted by the Developer to the Village and WI DOT in order to maintain a clear sight line of vision at Old Green Bay Road with the future private driveways, future Main Street and the STH 165 intersections and STH 31 and future Main Street intersection. There shall be no obstructions, such as but not limited to structures, signage, fences, vehicular parking, landscaping, retention basins, or shelters that are permitted within the Easement areas between the heights of two (2) feet and 10 feet unless approved in writing by the Village for local rights-of-way and the WI DOT for state rights-of-way. This restriction is for the benefit of the traveling public and shall be enforceable by the Village and/or WI DOT.

RESTRICTIVE COVENANTS

1. The Developer hereby covenants that the Association, the Owners and the Village shall have the obligation of replanting, maintaining and replacing the public street trees and maintaining the street terrace areas located within the **Dedicated Public Street** rights-of-way areas abutting the Owner's property as shown on this CSM and Future Land Divisions. Such street tree replanting and street terrace mowing and maintenance shall include without limitation and as needed: planting, staking, mulching, weeding, pruning, watering, replanting, mowing and removing of trash, debris, leaves and brush around the trees in order to prevent a nuisance condition. No driveways, signage, mail boxes, parking areas, structures or fences shall be erected within the rights-of-way areas, which might damage the street trees or might interfere with the Village's rights or the WI DOT's rights pursuant to maintaining the public street improvements.

The Developer hereby covenants that the Association and Owners shall also be responsible for all costs associated with the reconstruction, repair, replacement and snow and ice removal of the public multi-use paths and public sidewalks and the payment of public street lights energy and facility maintenance costs within the Dedicated Public Streets abutting this Development, including the costs of the street lighting district created by the Village for the Premises.

These Covenants shall run with the land, shall be binding upon the Association, Owners, their successors, successors and assigns and successors-in-title of the land, in their capacity as Owners, and shall benefit and be enforceable by the Village and/or the WI DOT. Such street public trees planting, public street terrace areas and public multi-use paths and public sidewalks maintenance shall be performed regularly by the Association or abutting the Owners, without compensation, and to the satisfaction of the Village.

To the extent that the Village performs any such public street tree, public street terrace, public multi-use paths and public sidewalks related maintenance activities or is not reimbursed for the public street lights energy and facility maintenance costs, the Association and the respective Owners not having maintained the areas or reimbursed the Village, shall be liable for any costs which may be incurred by the Village, which the Village may recover from such Owners as special assessments or special charges under Section 66.0627 (or successors or similar provisions) of the Wisconsin Statutes or otherwise according to law.

2. The Developer hereby covenants that the Association, the Owners and the Village shall have the obligation of replanting, maintaining and replacing the private landscape plantings, irrigation and signage installed within the private **Dedicated Landscape, Access and Maintenance Easement** areas as shown on this CSM and Future Land Divisions. Such replanting and maintenance shall include without limitation and as needed planting, staking, mulching, weeding, pruning, watering, replanting, and removing of trash, debris, leaves and brush around the trees in order to prevent a nuisance condition. No driveways, signage, mail boxes, parking areas, structures or fences shall be erected within landscape areas, which might damage the landscaping or might interfere with any easements granted to the Village, WI DOT or the Utility and Communication Grantees. This covenant shall run with the land, shall be binding upon the Association and Owners, its successors, successors and assigns and successors-in-title of the land, in their capacity as the Owners, and shall benefit and be enforceable by the Village. Such private Development landscaping maintenance shall be performed regularly, without compensation, and to the satisfaction of the Village.

To the extent that the Village performs any such private landscaping related maintenance activities, the respective Association and Owners shall be liable for any costs which may be incurred by the Village, which the Village may recover from such Owners as special assessments or special charges under Section 66.0627 (or successors or similar provisions) of the Wisconsin Statutes or otherwise according to law. Unless the Village exercises the rights granted to it in the Dedication and Easement Provisions on the CSM, the Village shall have no obligation to do anything pursuant to its rights under this paragraph.

CONTINUED ON PAGE 10



CERTIFIED SURVEY MAP NO. _____

Being a part of the Southwest 1/4 and the Northwest 1/4 of the Southwest 1/4 of
Section 22, Township 1 North, Range 22 East, Village of Pleasant Prairie,
Kenosha County, Wisconsin.

The following "Dedication of Easement Provisions" and "Restrictive Covenants" were drafted by the Village of Pleasant Prairie and are shown hereon as a condition of map approval. Inclusion thereof on this document is not to be considered practicing law in the State of Wisconsin by the above signed Land Surveyor, the Land Surveyor is not responsible for rights granted, perceived or otherwise stated herein.

RESTRICTIVE COVENANTS CONTINUED.....

3. The Developer hereby covenants that the Association, the Owner and the Village shall have the obligation of maintaining and replacing the private **Dedicated Storm Water Drainage, Retention Basin, Access and Maintenance Easement** areas and **Dedicated Storm Water Drainage, Access and Maintenance Easement** areas shown on this CSM and Future Land Divisions in a functional, neat and nuisance-free condition to handle storm water in the Development. Such maintenance shall include, without limitation and as needed, seeding or sodding, maintaining erosion control methods to protect the drainage ways; ditching to re-establish design capacity; installing, repairing and replacing the aerator/fountain, removing of trash and debris leaves, and brush; clearing and repairing basin structures; and mowing and weeding to prevent nuisance conditions. No driveways, patios, fences, signage or structures shall be erected within the storm water drainage and retention basin easement areas which blocks, diverts or re-routes the storm water drainage flow or which might interfere with the Village's rights, unless express written approval is granted by the Village and subject to any such conditions as the Village may impose. This covenant shall run with the land, shall be binding upon the Developer, Association and Owners, their successors, assigns and successor-in-title of the Lots, in their capacity as the Owners and shall benefit and be enforceable by the Village. Such storm water drainage, storm sewer and retention basin maintenance shall be performed regularly, without public compensation, and to the satisfaction of the Village.

To the extent that the Village performs any such storm water drainage, storm sewer or retention basin related maintenance activities, the Association and Owners shall be liable for any costs which may be incurred by the Village, which the Village may recover from such Owners as special assessments or special charges under Section 66.0627 (or successors or similar provisions) of the Wisconsin Statutes or otherwise according to law. Unless the Village exercises the rights granted to it in the Dedication and Easement Provisions on the CSM, the Village shall have no obligation to do anything pursuant to its rights under this paragraph.

4. The Developer hereby covenants that the Association, the Owners and the Village shall have the obligation of maintaining and replacing the **Dedicated Private Water and Private Sanitary Sewer, Access and Maintenance Easement** areas shown on this CSM and Future Land Divisions in a functional, maintenance-free condition to handle private water and private sanitary sewer in the Development. Such private water main system and appurtenances maintenance shall include, without limitation: fire hydrant and water main flushing, water sampling, exercising the water main valves, and inspecting, repairing, replacing and maintaining the private water system pursuant to a regular maintenance schedule as prescribed by the Village. Such private sanitary sewer main system and appurtenances maintenance shall include, without limitation: sanitary sewer main cleaning and televising, and inspecting, repairing and replacing and maintaining the sanitary sewer system pursuant to a regular maintenance schedule as prescribed by the Village. No driveways, patios, fences, signage or structures shall be erected over the private water and sanitary sewer mains. An annual report shall be provided to the Village Public Works Department regarding the regular maintenance undertaken for the private sanitary sewer and water system improvements. This covenant shall run with the land, shall be binding upon the Association and Owners, their successors, assigns and successor-in-title of the Lots, in their capacity as the Owners and shall benefit and be enforceable by the Village. Such water main and sanitary sewer main system improvements maintenance shall be performed regularly, without compensation, and to the satisfaction of the Village.

To the extent that the Village performs any such private water or sanitary sewer system related maintenance activities, the Association and Owners shall be liable for any costs which may be incurred by the Village, which the Village may recover from such Lot Owners as special assessments or special charges under Section 66.0627 (or successors or similar provisions) of the Wisconsin Statutes or otherwise according to law. Unless the Village exercises the rights granted to it in the Dedication and Easement Provisions on the CSM, the Village shall have no obligation to do anything pursuant to its rights under this paragraph.

5. The Developer hereby covenants that the **Dedicated Public Sanitary Sewer Main, Water Main, Access and Maintenance Easement** and this **Dedicated 20' Public Sanitary Sewer Main, Access and Maintenance Easement** areas shown on this CSM and Future Land Divisions hereby places restrictions on the referenced land areas because of the locations of the public easements which were given, granted and conveyed by the previous land owner to the Village for public sanitary sewer and public water main system improvements and maintenance. There shall be no buildings, structures, fences, or signage installed or berms created within these easements that would impact or hinder the Village's ability to maintain said public sanitary sewer and public water main systems, unless express written approval is granted by the Village.

6. The Developer hereby covenants that the **Dedicated Vision Triangle Easements** shown on this CSM and Future Land Divisions hereby places restrictions on the Lots because of the locations of these Easements which were given, granted and conveyed by the Developer to the Village and/or WI DOT to maintain a clear sight line of vision at the intersections of Old Green Bay Road with the private driveways, future Main Street and the STH 165 and the intersection of STH 31 and future Main Street intersection. There shall be no obstructions, such as but not limited to: structures, signage, fences, vehicular parking, landscaping, retention basins, or shelters permitted within the Easement areas between the heights of two (2) feet and 10 feet unless express written approval is granted by the Village for the local roads and the WI DOT for the State roads. This restriction is for the benefit of the traveling public and shall be enforceable by the Village and/or WI DOT.

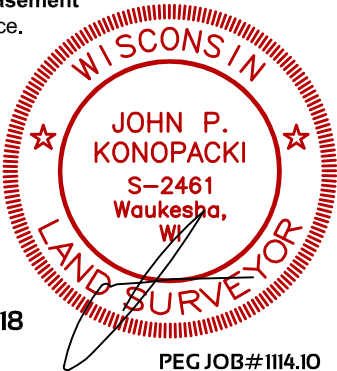
7. As shown on this CSM and pursuant to the WI DOT Right-of-Way Plat Project no. 3330-01-20, there is a **10' WISDOT Permanent Limited Easement, a 20' WI DOT Permanent Limited Easement, and a 20' x 20' WISDOT Permanent Limited Easement** within the Development and recorded as Document #906397 at the Kenosha County Register of Deeds Office.

8. As shown on this CSM, there are **WI DOT Access Restrictions and Permissions** for STH 31 and STH 165 within the Development and recorded at the Kenosha County Register of Deeds Office as Document #857692, which may be modified or adjusted, but only with the expressed written permission of the WI DOT.

Prepared By:
PINNACLE ENGINEERING GROUP
15850 BLUEMOUND ROAD I SUITE 210
BROOKFIELD, WI 53005
OFFICE: (262) 754-8888

This instrument drafted by John P. Konopacki, PLS-License No. S-2461

APRIL 12, 2018



PEG JOB#1114.10
SHEET 10 OF 12

CERTIFIED SURVEY MAP NO. _____

Being a part of the Southwest 1/4 and the Northwest 1/4 of the Southwest 1/4 of
Section 22, Township 1 North, Range 22 East, Village of Pleasant Prairie,
Kenosha County, Wisconsin.

OWNER'S CERTIFICATE OF DEDICATION

Main Street Development, LLC, a Limited Liability Company duly organized and existing under and by virtue of the laws of the State of Wisconsin, as owner, does hereby certify that said limited liability company caused the land described on this certified survey map to be surveyed, divided, mapped and dedicated as represented on this certified survey map.

Main Street Development, LLC, as owner, does further certify that this certified survey map is required by Chapter 236 of the Wisconsin State Statutes to be submitted to the following for approval or objection:

- 1. Village of Pleasant Prairie

IN WITNESS WHEREOF, the said Main Street Development, LLC has caused these presents to be signed by
(name - print) _____, (title - print) _____,
at _____ County, Wisconsin, on this _____ day of _____, 2018.

In the presence of: Main Street Development, LLC

(name - signature - title)

STATE OF WISCONSIN)
_____ COUNTY) SS

Personally came before me this _____ day of _____, 2018, (name) _____,
(title) _____, of the above named Main Street Development, LLC, to me known to be the
persons who executed the foregoing instrument, and to me known to be such _____ (title) of said
limited liability company, and acknowledged that they executed the foregoing instrument as such officer as the deed of said limited liability
company, by its authority.

Notary Public
Name: _____
State of Wisconsin
My Commission Expires: _____

CONSENT OF CORPORATE MORTGAGEE

76DT Corporation, a corporation duly organized and existing under and by virtue of the laws of the State of Wyoming, mortgagee of the
above described land, does hereby consent to the surveying, dividing, mapping and dedication of the land described in the forgoing affidavit
of John P. Konopacki, surveyor, and does hereby consent to the above certification of owners.

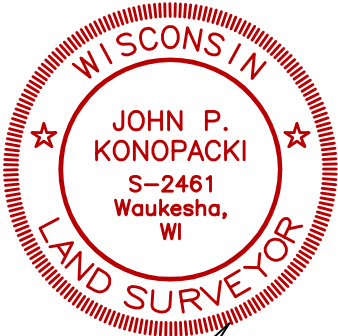
IN WITNESS WHEREOF, the said _____, has caused these presents to be signed by _____,
its President, and its corporate seal to be hereunto affixed this _____ day of _____, 2018.

Date President _____

STATE OF WISCONSIN)
_____ COUNTY) SS

Personally came before me this _____ day of _____, 2018,
_____, to me known to be the person who executed the
foregoing instrument and to me known to be such officer of said corporation and
acknowledged the same.

Notary Public
Name: _____
State of Wisconsin
My Commission Expires: _____




APRIL 12, 2018

CERTIFIED SURVEY MAP NO. _____

Being a part of the Southwest 1/4 and the Northwest 1/4 of the Southwest 1/4 of
Section 22, Township 1 North, Range 22 East, Village of Pleasant Prairie,
Kenosha County, Wisconsin.

PLAN COMMISSION APPROVAL

Approved by the Plan Commission of the Village of Pleasant
Prairie on this _____ day of _____, 2018.

Thomas W. Terwall, Chairman

VILLAGE BOARD APPROVAL

Approved by the Village Board of the Village of Pleasant
Prairie, Wisconsin, on this _____ day of _____, 2018.

John P. Steinbrink, Village President

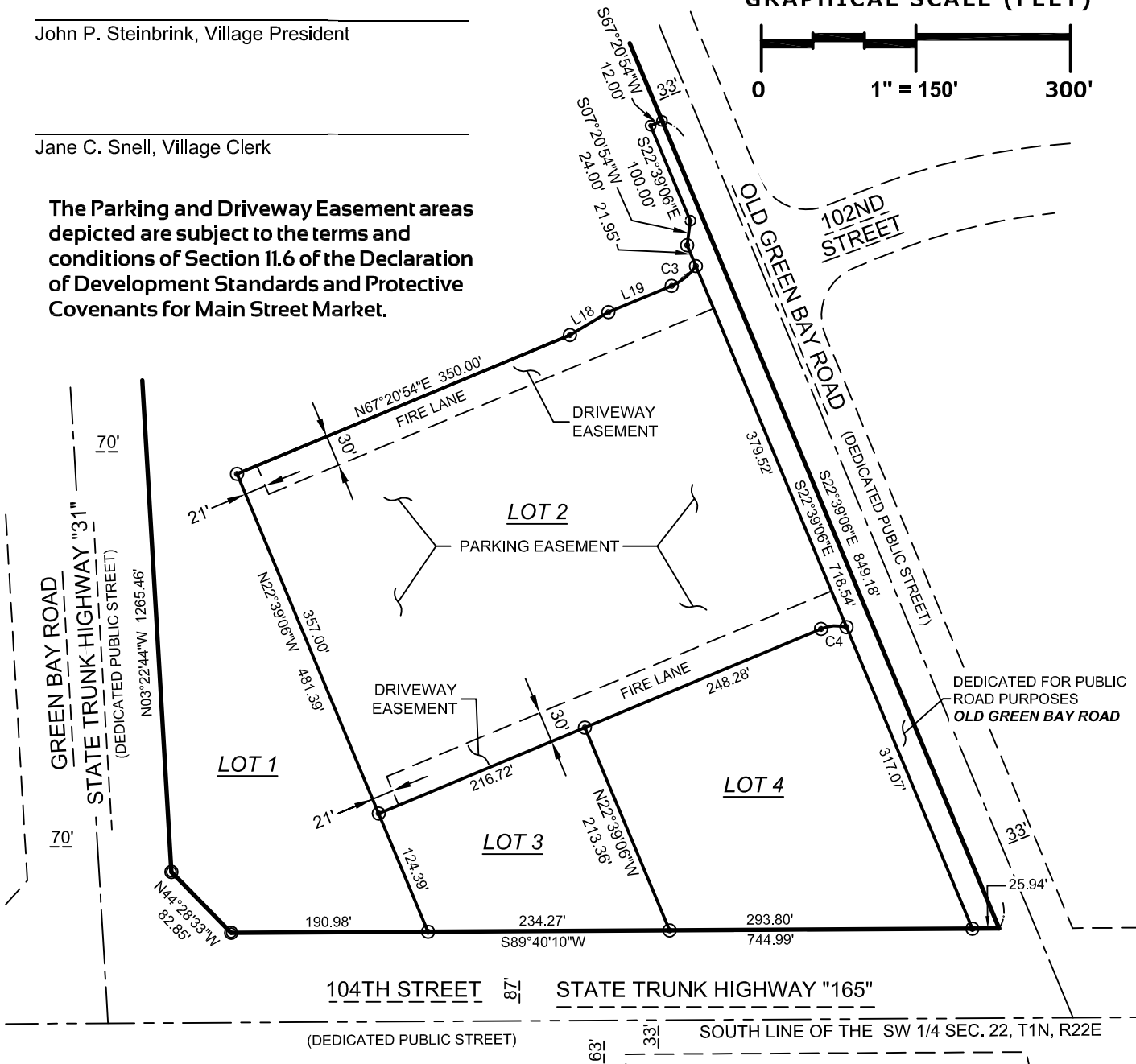
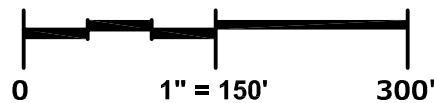
Jane C. Snell, Village Clerk

The Parking and Driveway Easement areas
depicted are subject to the terms and
conditions of Section 11.6 of the Declaration
of Development Standards and Protective
Covenants for Main Street Market.



APRIL 12, 2018

GRAPHICAL SCALE (FEET)



Prepared By:

PINNACLE ENGINEERING GROUP

15850 BLUEMOUND ROAD | SUITE 210
BROOKFIELD, WI 53005
OFFICE: (262) 754-8888

LEGEND:

- - Denotes Found 1" Iron Pipe
- - Denotes Found 3/4" Iron Rod, Capped
- ⊙ - Denotes Set 3/4" X 18" Iron Rebar, 1.5 LBS./FT.

This instrument drafted by John P. Konopacki, PLS-License No. S-2461

PEG JOB#1114.10
SHEET 12 OF 12



February 7, 2018

Jean M. Werbie-Harris
Community Development Director
Village of Pleasant Prairie
9915 39th Avenue
Pleasant Prairie, WI 53158

Dear Ms. Werbie-Harris:

Bear Development is pleased to submit this letter and the accompanying plans as formal application for Phase I of Main Street Market. The subject property is located northeast of the intersection of STH 31 and STH 165 in the Village of Pleasant Prairie.

Main Street Development, LLC has recently purchased the property and is submitting revised Concept Plans for a commercial development including retail, medical clinic and possible office use on the subject property.

Bear Development has received Village of Pleasant Prairie approval of a Comprehensive Plan Amendment to revise the High Pointe Neighborhood Plan and furthermore, has received Village approval of a Master Conceptual Plan.

We are extremely pleased and excited to include Froedert South as an anchor to Main Street Market. To facilitate the Froedert South development we are pleased to submit the enclosed Civil Engineering and Site Infrastructure Plans for Phase I of Main Street Market as well as the Stormwater Management Report for the site. These plans are being submitted in order for the Village to analyze the combined site grading, site utilities and storm water management for Phase I. As future users for Phase I develop, we look forward to bringing forth Final Site and Operations Plans for the remaining parcels.

Please find the following exhibits for Main Street Market Phase I:

- Onsite Civil Engineering Infrastructure Plans
 - Existing Conditions Plan
 - Site Dimensional & Paving Plan
 - Grading Plan

- Utility Plan
 - Site Stabilization Plan
 - Construction Details
- Stormwater Management Plan

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

Thank you for your time and consideration.

Sincerely,



Daniel Szczap
Bear Development, LLC

Cc: S.R. Mills
Stephen C. Mills
John Hotvedt

THESE PLANS AND DESIGNS ARE COPYRIGHT PROTECTED AND MAY NOT BE USED IN WHOLE OR IN PART WITHOUT THE WRITTEN CONSENT OF PINNACLE ENGINEERING GROUP, LLC

DESIGNED: EP

REVIEWED: MAC

DRAWN: EP

ONSITE CIVIL ENGINEERING INFRASTRUCTURE PLANS

FOR

MAIN STREET MARKET PHASE 1

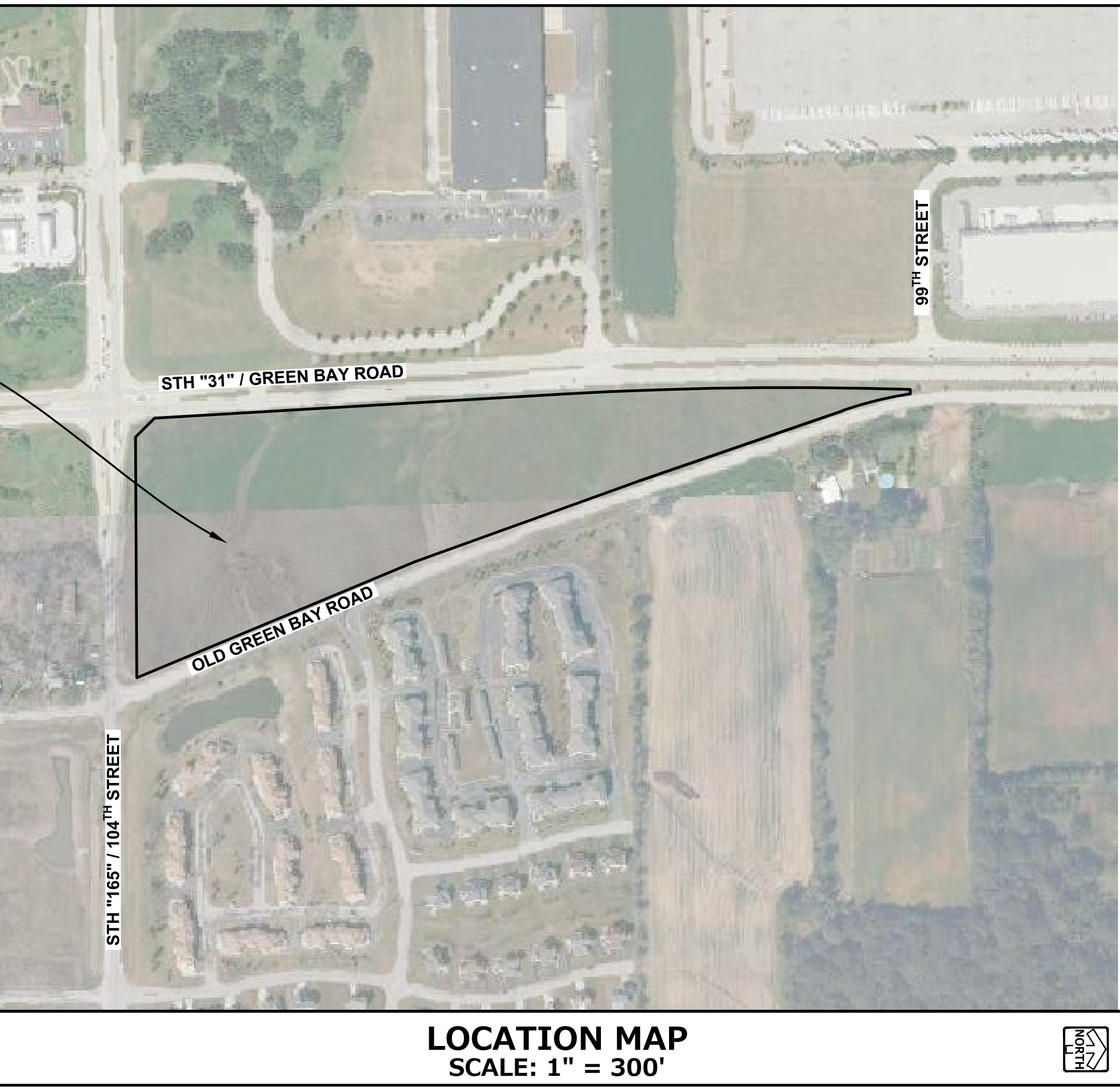
GREEN BAY RD. & 104TH ST. PLEASANT PRAIRIE, WI

PLANS PREPARED FOR



LEGEND		
	EXISTING	PROPOSED
SANITARY SEWER MANHOLE		
STORM SEWER MANHOLE		
STORM SEWER AREA DRAIN		
STORM SEWER INLET (ROUND CASTING)		
STORM SEWER INLET (RECTANGULAR CASTING)		
PRECAST FLARED END SECTION		
CONCRETE HEADWALL		
AIR RELEASE ASSEMBLY		
VALVE BOX		
FIRE HYDRANT		
BUFFALO BOX		
CLEANOUT		
SANITARY SEWER		
FORCE MAIN		
STORM SEWER		
DRAIN TILE		
WATER MAIN		
UTILITY CROSSING		
LIGHTING		
ELECTRICAL CABLE		
OVERHEAD WIRES		
CAUTION EXISTING UTILITIES NEARBY		
ELECTRICAL TRANSFORMER OR PEDESTAL		
POWER POLE		
POWER POLE WITH LIGHT		
STREET SIGN		
GAS MAIN		
TELEPHONE LINE		
CONTOUR		
SPOT ELEVATION		
WETLANDS		
FLOODWAY		
FLOODPLAIN		
HIGH WATER LEVEL (HWL)		
NORMAL WATER LEVEL (NWL)		
DIRECTION OF SURFACE FLOW		
DITCH OR SWALE		
DIVERSION SWALE		
OVERFLOW RELIEF ROUTING		
TREE WITH TRUNK SIZE		
SOIL BORING		
TOPSOIL PROBE		
FENCE LINE, TEMPORARY SILT		
FENCE LINE, WIRE		
FENCE LINE, CHAIN LINK OR IRON		
FENCE LINE, WOOD OR PLASTIC		
CONCRETE SIDEWALK		
CURB AND GUTTER		
DEPRESSED CURB		
REVERSE PITCH CURB & GUTTER		
EASEMENT LINE		

PROJECT LOCATION



LOCATION MAP
SCALE: 1" = 300'

GENERAL NOTES

- THE INTENTION OF THE PLANS AND SPECIFICATIONS IS TO SET FORTH PERFORMANCE AND CONSTRUCTION MATERIAL STANDARDS FOR THE PROPER EXECUTION OF WORK. ALL WORKS CONTAINED WITHIN THE PLANS AND SPECIFICATIONS SHALL BE COMPLETED IN ACCORDANCE WITH ALL REQUIREMENTS FROM LOCAL, STATE, FEDERAL OR OTHER GOVERNING AGENCY'S LAWS, REGULATIONS, JURISDICTIONAL ORDINANCES, CODES, RULES, ETC., AND THE OWNER'S DIRECTION.
- A DRAFT GEOTECHNICAL REPORT HAS BEEN PREPARED BY CGC, INC DATED SEPTEMBER 21, 2017. THE DATA ON SUB-SURFACE SOIL CONDITIONS IS NOT INTENDED AS A REPRESENTATION OR WARRANTY OF THE CONTINUITY OF SUCH CONDITIONS BETWEEN BORINGS OR INDICATED SAMPLING LOCATIONS. IT SHALL BE EXPRESSLY UNDERSTOOD THAT OWNER WILL NOT BE RESPONSIBLE FOR ANY INTERPRETATIONS OR CONCLUSIONS DRAWN THERE FROM BY THE CONTRACTOR. DATA IS MADE AVAILABLE FOR THE CONVENIENCE OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR PERFORMING ANY ADDITIONAL SOILS INVESTIGATIONS THEY FEEL IS NECESSARY FOR THE PROPER EVALUATION OF THE SITE FOR PURPOSES OF PLANNING, BIDDING, OR CONSTRUCTING THE PROJECT AT NO ADDITIONAL COST TO THE OWNER.
- THE CONTRACTOR IS RESPONSIBLE TO REVIEW AND UNDERSTAND ALL COMPONENTS OF THE PLANS AND SPECIFICATIONS, INCLUDING FIELD VERIFYING SOIL CONDITIONS, PRIOR TO SUBMISSION OF A BID PROPOSAL.
- THE CONTRACTOR SHALL PROMPTLY REPORT ANY ERRORS OR AMBIGUITIES LEARNED AS PART OF THEIR REVIEW OF PLANS, SPECIFICATIONS, REPORTS AND FIELD INVESTIGATIONS.
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE COMPUTATION OF QUANTITIES AND WORK REQUIRED TO COMPLETE THIS PROJECT. THE CONTRACTOR'S BID SHALL BE BASED ON ITS OWN COMPUTATIONS AND IN NO SUCH INSTANCE RELY ON THE ENGINEER'S ESTIMATE.
- QUESTIONS/CLARIFICATIONS WILL BE INTERPRETED BY ENGINEER/OWNER PRIOR TO THE AWARD OF CONTRACT. ENGINEER/OWNER WILL SUBMIT OFFICIAL RESPONSES IN WRITING. INTERPRETATIONS PRESENTED IN OFFICIAL RESPONSES SHALL BE BINDING ON ALL PARTIES ASSOCIATED WITH THE CONTRACT. IN NO WAY SHALL WORD-OF-MOUTH DIALOG CONSTITUTE AN OFFICIAL RESPONSE.
- PRIOR TO START OF WORK, CONTRACTOR SHALL BE COMPLETELY FAMILIAR WITH ALL CONDITIONS OF THE SITE, AND SHALL ACCOUNT FOR CONDITIONS THAT AFFECT, OR MAY AFFECT CONSTRUCTION INCLUDING, BUT NOT LIMITED TO, LIMITATIONS OF WORK ACCESS, SPACE LIMITATIONS, OVERHEAD OBSTRUCTIONS, TRAFFIC PATTERNS, LOCAL REQUIREMENTS, ADJACENT ACTIVITIES, ETC. FAILURE TO CONSIDER SITE CONDITIONS SHALL NOT BE CAUSE FOR CLAIM OF JOB EXTRAS.
- COMMENCEMENT OF CONSTRUCTION SHALL EXPLICITLY CONFIRM THAT THE CONTRACTOR HAS REVIEWED THE PLANS AND SPECIFICATIONS IN ENTIRETY AND CERTIFIES THAT THEIR SUBMITTED BID PROPOSAL CONTAINS PROVISIONS TO COMPLETE THE PROJECT, WITH THE EXCEPTION OF UNFORESEEN FIELD CONDITIONS. ALL APPLICABLE PERMITS HAVE BEEN OBTAINED, AND CONTRACTOR UNDERSTANDS ALL OF THE REQUIREMENTS OF THE PROJECT.
- SHOULD ANY DISCREPANCIES OR CONFLICTS IN THE PLANS OR SPECIFICATIONS BE DISCOVERED AFTER THE AWARD OF CONTRACT, ENGINEER SHALL BE NOTIFIED IN WRITING IMMEDIATELY AND CONSTRUCTION OF ITEMS AFFECTED BY THE DISCREPANCIES/CONFLICTS SHALL NOT COMMENCE, OR CONTINUE, UNTIL A WRITTEN RESPONSE FROM ENGINEER/OWNER IS DISTRIBUTED. IN THE EVENT OF A CONFLICT BETWEEN REFERENCED CODES, STANDARDS, SPECIFICATIONS AND PLANS, THE ONE ESTABLISHING THE MOST STRINGENT REQUIREMENTS SHALL BE FOLLOWED.
- THE CONTRACTOR SHALL, AT ITS OWN EXPENSE, OBTAIN ALL NECESSARY PERMITS AND LICENSES TO COMPLETE THE PROJECT. OBTAINING PERMITS, OR DELAYS, IS NOT CAUSE FOR DELAY OF THE CONTRACT OR SCHEDULE. CONTRACTOR SHALL COMPLY WITH ALL PERMIT REQUIREMENTS.
- THE CONTRACTOR SHALL NOTIFY ALL INTERESTED GOVERNING AGENCIES, UTILITY COMPANIES AFFECTED BY THIS CONSTRUCTION PROJECT, AND DIGGERS HOTLINE IN ADVANCE OF CONSTRUCTION TO COMPLY WITH ALL JURISDICTIONAL ORDINANCES/CODES/RULES/ETC., PERMIT STIPULATIONS, AND OTHER APPLICABLE STANDARDS.
- SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE TO INITIATE, INSTITUTE, ENFORCE, MAINTAIN, AND SUPERVISE ALL SAFETY PRECAUTIONS AND JOB SITE SAFETY PROGRAMS IN CONNECTION WITH THE WORK.
- CONTRACTOR SHALL KEEP THE JOBSITE CLEAN AND ORDERLY AT ALL TIMES. ALL LOCATIONS OF THE SITE SHALL BE KEPT IN A WORKING MANNER SUCH THAT DEBRIS IS REMOVED CONTINUOUSLY AND ALL RESPECTIVE CONTRACTORS OPERATE UNDER GENERAL "GOOD HOUSEKEEPING."
- THE CONTRACTOR SHALL INDEMNIFY THE OWNER, ENGINEER, AND THEIR AGENTS FROM ALL LIABILITY INVOLVED WITH THE CONSTRUCTION, INSTALLATION, AND TESTING OF THE WORK ON THIS PROJECT.

CONTACTS:		GOVERNING AGENCY CONTACTS:	
CIVIL ENGINEER: MATT CAREY, P.E. PINNACLE ENGINEERING GROUP 15850 BLUEMOUND ROAD, SUITE 310 BROOKFIELD, WI 53005 (262) 754-8888 CONTRACTOR:	OWNER: DAN SZCZAP BEAR DEVELOPMENT, LLC 4011 80TH STREET KENOSHA, WI 53142 DIRECT: (262) 842-0556 MOBILE: (262) 949-3788 EMAIL: dan@beardevelopment.com SURVEYOR: JOHN P. KONOPACKI, P.L.S. PINNACLE ENGINEERING GROUP 15850 BLUEMOUND ROAD, SUITE 310 BROOKFIELD, WI 53005 (262) 754-8888	PLEASANT PRAIRIE VILLAGE HALL: 9915 39TH STREET PLEASANT PRAIRIE, WI 53158 OFFICE: (262) 694-1400 COMMUNITY DEVELOPMENT DEPARTMENT: JEAN WERBIE-HARRIS, DIRECTOR PLANNING, ZONING ADMINISTRATOR OFFICE: (262) 925-6718 EMAIL: jwerbie-harris@plprairiewi.com PEGGY HERRICK ASSISTANT PLANNER & ZONING ADMINISTRATOR OFFICE: (262) 925-6716 EMAIL: pherrick@plprairiewi.com KRISTINA TRANEL DEPUTY PLANNER & ZONING ADMINISTRATOR 9915 39TH STREET PLEASANT PRAIRIE, WI 53158 OFFICE: (262) 925-6711 EMAIL: ktranel@plprairiewi.com ENGINEERING DEPARTMENT: MATT FINEOUR, P.E. VILLAGE ENGINEER OFFICE: (262) 925-6778 EMAIL: mfineour@plprairiewi.com KURT DAVIDSEN, P.E. ASSISTANT VILLAGE ENGINEER OFFICE: (262) 925-6728 EMAIL: kdavidsen@plprairiewi.com PUBLIC WORKS DEPARTMENT: JOHN STEINBRINK, JR., P.E. DIRECTOR OF PUBLIC WORKS ROGER PRANGE MUNICIPAL BUILDING 8600 GREEN BAY ROAD OFFICE: (262) 925-6768 EMAIL: jsteinbrink@plprairiewi.com RICK MURPHY CONSTRUCTION MANAGER OFFICE: (262) 948-8946 EMAIL: rmurphy@plprairiewi.com	STEVE WLAHOVICH RIGHT OF WAY/EROSION CONTROL INSPECTOR OFFICE: (262) 925-6767 EMAIL: swlahovich@plprairiewi.com BUILDING INSPECTION DEPARTMENT: SANDRO PEREZ BUILDING INSPECTION SUPERINTENDENT OFFICE: (262) 694-9304 DIRECT: (262) 925-6722 EMAIL: sperez@plprairiewi.com DONALD KOEHNE BUILDING INSPECTOR OFFICE: (262) 694-9304 EMAIL: dkoehne@plprairiewi.com MICHAEL KAPRELIAN BUILDING INSPECTOR OFFICE: (262) 694-9304 EMAIL: mkaprelian@plprairiewi.com FIRE & RESCUE DEPARTMENT: CRAIG ROEPKE, CHIEF OF FIRE & RESCUE 8044 88TH AVENUE DIRECT: (262) 948-8981 EMAIL: croepke@plprairiewi.com AARON LONGRIE ASSISTANT FIRE CHIEF OFFICE: (262) 948-8027 EMAIL: croepke@plprairiewi.com WI DEPARTMENT OF NATURAL RESOURCES: ELAINE JOHNSON WATER MANAGEMENT SPECIALIST OFFICE: 262-884-2136 EMAIL: elaine.johnson@wisconsin.gov PETER WOOD, P.E. WATER RESOURCES ENGINEER OFFICE: 262-884-2360 EMAIL: peter.wood@wisconsin.gov

INDEX OF SHEETS	
C-1	COVER SHEET
C-2	EXISTING CONDITIONS PLAN
C-3	SITE DIMENSIONAL & PAVING PLAN
C-4	GRADING PLAN
C-5	UTILITY PLAN
C-6	SITE STABILIZATION PLAN
C-7 - C-9	CONSTRUCTION DETAILS

REQUIRED SUBMITTALS FOR APPROVAL
1. HOT MIX ASPHALT - MIX DESIGN
2. CONCRETE PAVEMENTS (EXTERIOR) - MIX DESIGN & JOINT PLAN
3. PAVEMENT STONE BASE COURSE - GRADATION
4. PIPE BEDDING & TRENCH BACKFILL - GRADATION
5. MANHOLE BACKFILL - GRADATION
6. PAVEMENT MARKING PAINT

REQUIRED SUBMITTALS FOR RECORDS
1. WATER MAIN PIPES, VALVES, HYDRANTS & FITTINGS
2. SANITARY SEWER PIPE & FITTINGS
3. STORM SEWER PIPE, STRUCTURES, & FITTINGS
4. TRACER WIRE
5. UNDERGROUND UTILITY LOCATION RECORD DRAWINGS
6. ADA SIGN & TRUNCATED DOMES, PAINT & STENCILS
7. CHEMICAL SOIL STABILIZATION MIX DESIGN (IF APPLICABLE)

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

VILLAGE NOTES	
PRIOR TO CONSTRUCTION, A PRE-CONSTRUCTION CONFERENCE MUST BE HELD AT THE VILLAGE OFFICES. THE PRE-CONSTRUCTION CONFERENCE SHALL BE SCHEDULED AND MODERATED BY THE DESIGNING ENGINEER OF RECORD.	
EACH CONTRACTOR SHALL HAVE A COPY OF THE VILLAGE APPROVED PLANS, PROJECT MANUAL, AND VILLAGE CONSTRUCTION SPECIFICATIONS ON-SITE DURING TIMES OF CONSTRUCTION. THE CONSTRUCTION SPECIFICATIONS ARE AN INTEGRAL PART OF THE CIVIL ENGINEERING PLANS.	
RAW CUT/FILL ESTIMATES ON THE SITE ARE AS FOLLOWS: FROEDTERT SOUTH: CUT - 1,158 CY FILL - 12,525 CY MSM PHASE I: CUT - 17,966 CY FILL - 6,269 CY	

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

EXPIRATION DATE: JULY 31, 2018

PINNACLE ENGINEERING GROUP, LLC - ENGINEER'S LIMITATION

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

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

REVISIONS	
1	
2	
3	
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PREC OR NO. 1114.10-WI
MAC
START DATE: 12-05-17
SCALE: 1" = 300'

SHEET
C-1
of
C-9

PINNACLE ENGINEERING GROUP
ENGINEERING | NATURAL RESOURCES | SURVEYING

PLAN | DESIGN | DELIVER
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WISCONSIN OFFICE:
15850 W. BLUEMOUND ROAD
BROOKFIELD, WI 53005
(262) 754-8888

CHICAGO | MILWAUKEE | NATIONWIDE

MAIN STREET MARKET PHASE 1

GREEN BAY RD. & 104TH ST. PLEASANT PRAIRIE, WI

COVER SHEET

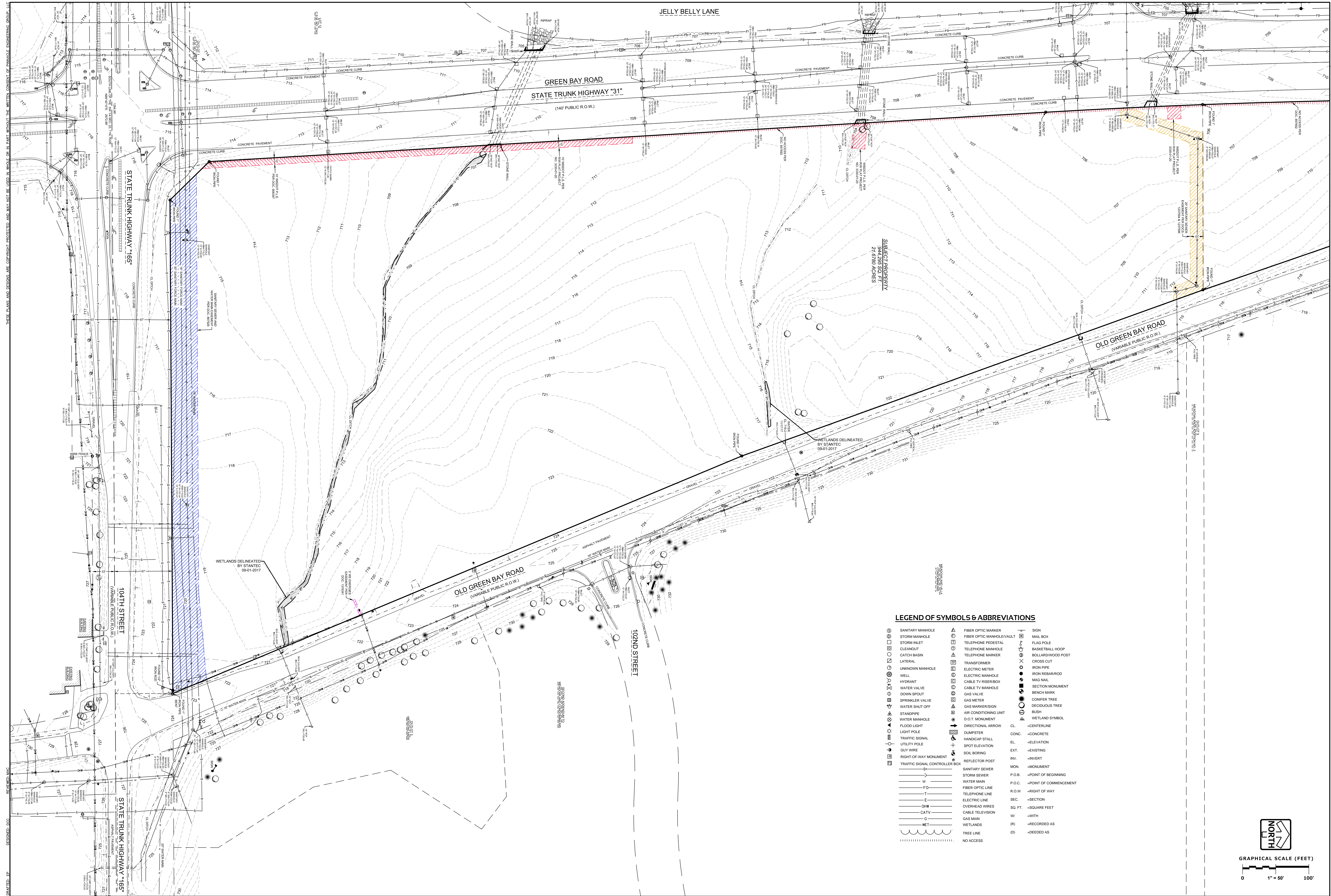
PREC OR NO. 1114.10-WI	MAC	START DATE: 12-05-17	SCALE: 1" = 300'	SHEET C-1 of C-9
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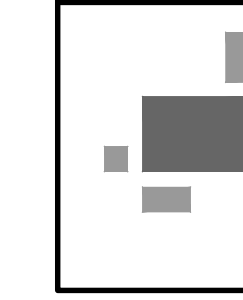
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COVER SHEET

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MAIN STREET MARKET PHASE 1

GREEN BAY RD. & 104TH ST. PLEASANT PRAIRIE, WI

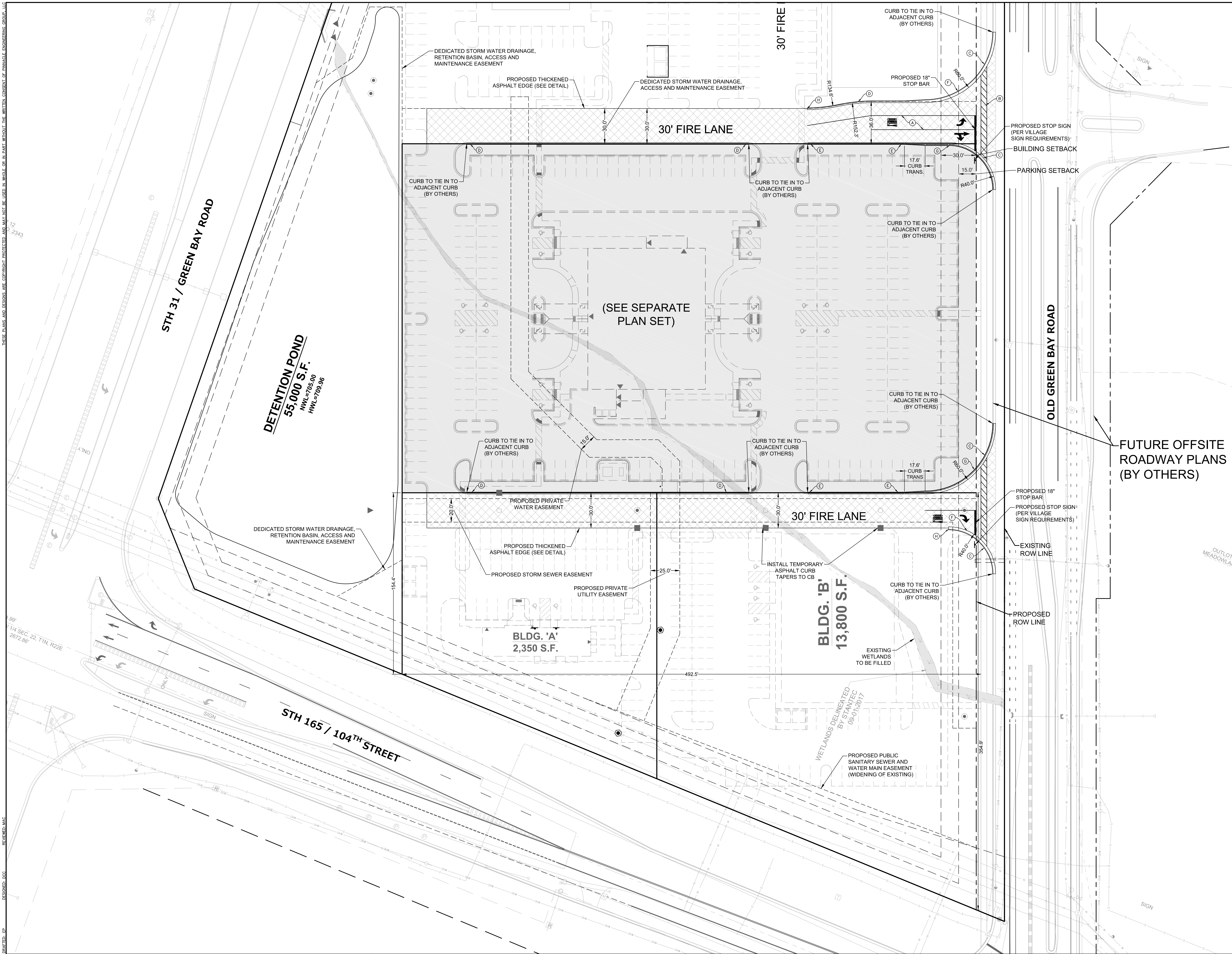
EXISTING CONDITIONS PLAN

REVISIONS		SHEET
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PREC: DR No. 1114.10-WI
MAC
START DATE: 12-05-17
SCALE: 1" = 50'

2\PROJECTS\2017\1114.10-WI\CAD\SHEETS\1114.10-WI EXISTING CONDITIONS.DWG

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DRAWN: JAC
CHECKED: JAC
REVIEWED: JAC



LEGEND

- HEAVY DUTY PAVEMENT
 - 1.0" CRUSHED AGGREGATE BASE COURSE (1-1/4" DENSE GRADED LESTONE)
 - 4" ASPHALTIC CONCRETE (1.5% F)
 - 1.0" CRUSHED AGGREGATE (1.5% F)
 - 2.0" CRUSHED AGGREGATE (1.5% F)
 - 2.0" CRUSHED AGGREGATE (1.5% F)
- 4" SOLID WHITE STRIPE
- 4" DIAGONAL AT 45° SPACED 2' O.C.
- PREPARE CURB FOR FUTURE SIDEWALK RAMPS
- 18" CURB & GUTTER (SEE DETAIL)
- 18" REVERSE CURB & GUTTER (SEE DETAIL)
- 30" CURB & GUTTER (SEE DETAIL)
- 30" REVERSE CURB & GUTTER (SEE DETAIL)
- TAPER CURB HEAD (SEE DETAIL)
- PARKING COUNT (FOR INFORMATION ONLY, NOT TO BE PAINTED)
- MAN DOOR

NOTES

- ALL DIMENSIONS ARE FACE OF CURB TO FACE OF CURB OR BUILDING FOUNDATION UNLESS NOTED OTHERWISE. ALL UTILITY DIMENSIONS ARE TO OUTSIDE OF PIPE OR CENTER OF STRUCTURE UNLESS OTHERWISE NOTED. ALL PAVING DIMENSIONS ARE TO FACE OF CURB OR TO EDGE OF PAVEMENT, EXCEPT FOR THE SETBACK FROM PARKING LOTS, HANDICAP LANE AND FIRE ACCESS LANES, WHERE THE SETBACK IS MEASURED FROM THE BACK OF CURB TO THE PROPERTY LINE.
- ALL PROPOSED CURB AND GUTTER SHALL BE 18" STANDARD CURB AND GUTTER (SEE DETAIL), UNLESS OTHERWISE NOTED. CURB AND GUTTER DRAINING AWAY FROM THE FACE OF CURB IS NOTED AS REVERSE CURB AND GUTTER.
- ALL RADII ARE MEASURED TO FACE OF CURB UNLESS NOTED OTHERWISE.
- BUILDING DIMENSIONS AND ADJACENT PARKING AND UTILITY LAYOUT HAVE BEEN PREPARED BASED UPON ARCHITECTURAL INFORMATION CURRENT AT THE DATE OF THIS DRAWING. SUBSEQUENT ARCHITECTURAL CHANGES MAY EXIST. THEREFORE CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR PRECISE BUILDING DIMENSIONS AND EXACT UTILITY ENTRANCE LOCATIONS AND NOTIFY THE ARCHITECT AND ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL CONTACT DIGGERS HOTLINE (1-800-242-8511) PRIOR TO ANY WORK TO LOCATE UTILITIES AND SHALL CONTACT THE OWNER SHOULD UTILITIES APPEAR TO BE IN CONFLICT WITH THE PROPOSED IMPROVEMENT.
- IMPROVEMENTS ADJACENT TO BUILDING IF SHOWN SUCH AS TRUCK DOCK, RETAINING WALLS, SIDEWALKS, CURBING, FENCES, CANOPIES, RAMPS, HANDICAP ACCESS, PLANTERS, DUMPSTERS, AND TRANSFORMERS ETC. HAVE BEEN SHOWN FOR APPROXIMATE LOCATION ONLY. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS, SPECIFICATIONS, AND DETAILS.
- REFER TO ELECTRICAL PLANS FOR LIGHTING LOCATIONS, SPECIFICATIONS, AND DETAILS.
- SEE ADDITIONAL NOTES AND DETAILS ON CONSTRUCTION DETAILS.
- ALL PAVING SHALL CONFORM TO STATE OF WISCONSIN STANDARD SPECIFICATIONS FOR HIGHWAY & STRUCTURE CONSTRUCTION AND APPLICABLE VILLAGE OF PLEASANT PRAIRIE ORDINANCES, AND SPECIFICATIONS CONTAINED WITHIN THIS PLAN SET.
- CONTRACTOR SHALL CONSULT STRIPING COLOR WITH OWNER PRIOR TO CONSTRUCTION.
- PROVIDE CONTRACTOR GRADE ACRYLIC STRIPING PAINT FOR NEW ASPHALT OR COATED ASPHALT. APPLY MARKING PAINT AT A RATE OF ONE (1) GALLON PER THREE TO FOUR HUNDRED (300-400) LINEAL FEET OF FOUR (4) INCH WIDE STRIPES OR TO MANUFACTURER'S SPECIFICATION, WHICHEVER IS GREATER.
- THOROUGHLY CLEAN SURFACES FREE OF DIRT, SAND, GRAVEL, OIL, AND OTHER FOREIGN MATTER. CONTRACTOR RESPONSIBLE TO INSPECT EXISTING PAVEMENT SURFACES FOR CONDITIONS AND DEFECTS THAT WILL ADVERSELY AFFECT QUALITY OF WORK, AND WHICH CANNOT BE PUT INTO AN ACCEPTABLE CONDITION THROUGH NORMAL PREPARATORY WORK AS SPECIFIED.
- DO NOT PLACE MARKING OVER UNSOUND PAVEMENTS. IF THESE CONDITIONS EXIST, NOTIFY OWNER. STARTING INSTALLATION CONSTITUTES CONTRACTOR'S ACCEPTANCE OF SURFACE AS SUITABLE FOR INSTALLATION.
- LAYOUT MARKINGS USING GUIDE LINES, TEMPLATES AND FORMS. STENCILS AND TEMPLATES SHALL BE PROFESSIONALLY MADE TO INDUSTRY STANDARDS. "FREE HAND" PAINTING OF ARROWS, SYMBOLS, OR WORDING SHALL NOT BE ALLOWED. APPLY STRIPES STRAIGHT AND EVEN.
- PROTECT ADJACENT CURBS, WALKS, FENCES, AND OTHER ITEMS FROM RECEIVING PAINT.
- BARRICADE MARKED AREAS DURING INSTALLATION AND UNTIL THE MARKING PAINT IS DRIED AND READY FOR TRAFFIC.
- ASPHALTIC CONCRETE PAVING SPECIFICATIONS:
 - CODES AND STANDARDS: THE PLACING, CONSTRUCTION AND COMPOSITION OF THE ASPHALTIC BASE COURSE AND ASPHALTIC CONCRETE SURFACING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTIONS 450, 455, 460 AND 465 OF THE STATE OF WISCONSIN STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, CURRENT EDITION. HEREFTER, THIS PUBLICATION WILL BE REFERRED TO AS THE STATE HIGHWAY SPECIFICATIONS.
 - WEATHER LIMITATIONS: APPLY TACK COATS WHEN AMBIENT TEMPERATURE IS ABOVE 50° F (10° C) AND WHEN TEMPERATURE HAS NOT BEEN BELOW 35° F (1° C) FOR 12 HOURS IMMEDIATELY PRIOR TO APPLICATION. DO NOT APPLY WHEN BASE IS WET OR CONTAINS EXCESS OF MOISTURE. CONSTRUCT ASPHALTIC CONCRETE SURFACE COURSE WHEN ATMOSPHERIC TEMPERATURE IS ABOVE 40° (4° C) AND WHEN BASE IS DRY AND WHEN WEATHER IS NOT RAINY. BASE COURSE MAY BE PLACED WHEN AIR TEMPERATURE IS ABOVE 30° F (-1° C).
 - GRADE CONTROL: ESTABLISH AND MAINTAIN REQUIRED LINES AND ELEVATIONS FOR EACH COURSE DURING CONSTRUCTION.
 - CRUSHED AGGREGATE BASE COURSE: THE TOP LAYER OF BASE COURSE SHALL CONFORM TO SECTIONS 301 AND 305, STATE HIGHWAY SPECIFICATIONS.
 - BINDER COURSE AGGREGATE: THE AGGREGATE FOR THE BINDER COURSE SHALL CONFORM TO SECTIONS 460.2.7 AND 315, STATE HIGHWAY SPECIFICATIONS.
 - SURFACE COURSE AGGREGATE: THE AGGREGATE FOR THE SURFACE COURSE SHALL CONFORM TO SECTIONS 460.2.7 AND 465, STATE HIGHWAY SPECIFICATIONS.
 - ASPHALTIC MATERIALS: THE ASPHALTIC MATERIALS SHALL CONFORM TO SECTION 455 AND 460, STATE HIGHWAY SPECIFICATIONS.
 - SURFACE PREPARATION: NOTIFY CONTRACTOR OF UNSATISFACTORY CONDITIONS. DO NOT BEGIN PAVING WORK UNTIL DEFICIENT SURFACE AREAS HAVE BEEN CORRECTED AND ARE READY TO RECEIVE PAVING.

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MAIN STREET MARKET PHASE 1
GREEN BAY RD. & 104TH ST. PLEASANT PRAIRIE, WI

SITE DIMENSIONAL & PAVING PLAN

REVISIONS

NO.	DESCRIPTION	DATE

GRAPHICAL SCALE (FEET)
0 1" = 30' 60'

GRAPHICAL SCALE (FEET)
0 1" = 30' 60'

PROJ. NO. 114-10-WI
MAC
START DATE: 12-05-17
SCALE: 1" = 30'

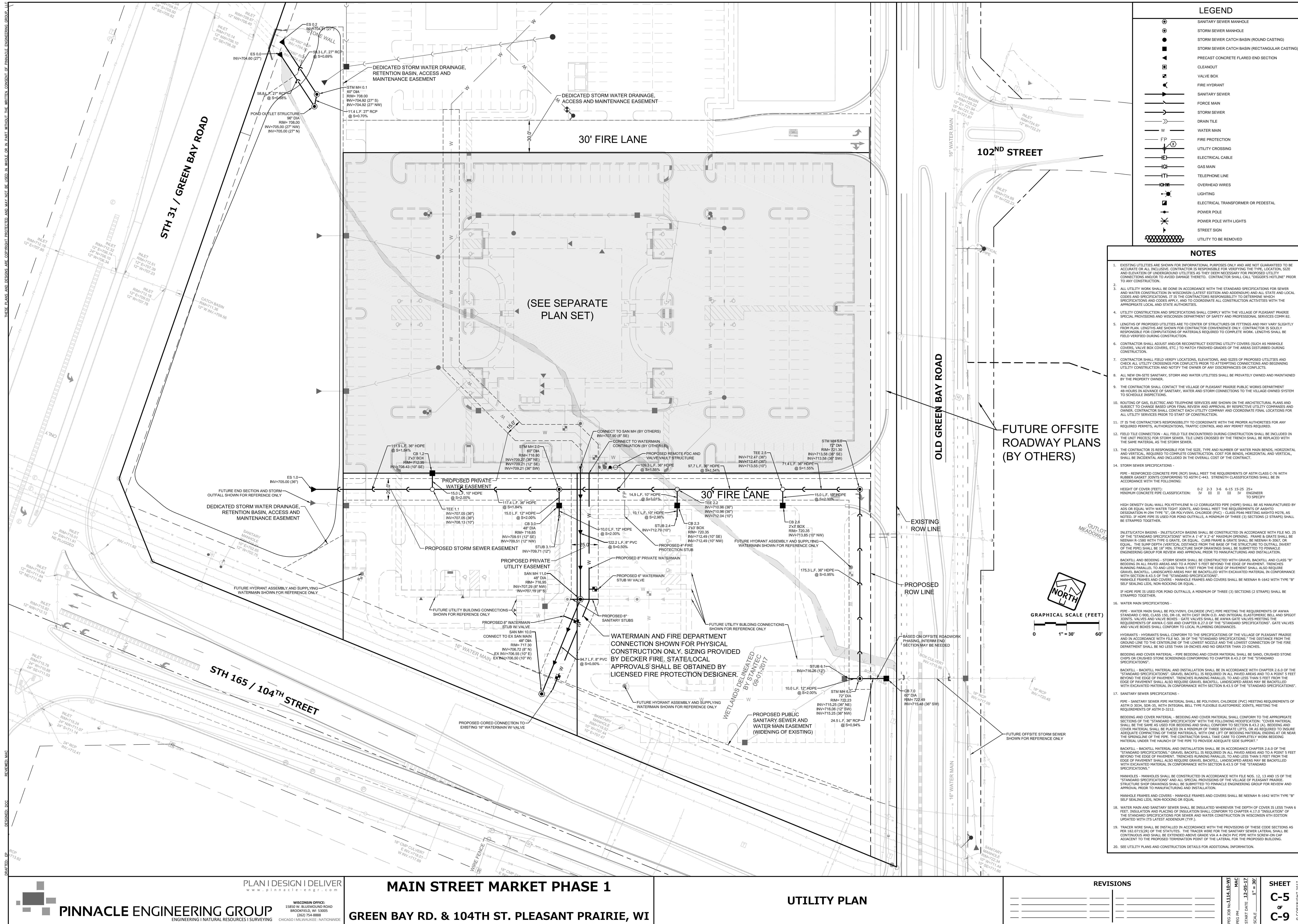
SHEET
C-3
C-9

1. CONTRACTOR SHALL VERIFY ALL GRADES, ENSURE ALL AREAS DRAIN PROPERLY AND REPORT ANY DISCREPANCIES TO PRINCIPLE GEOTECHNICAL GROUP PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITIES.
2. ALL EXISTING CONTOURS REPRESENT EXISTING SURFACE GRADES UNLESS OTHERWISE NOTED. ALL PROPOSED GRADES SHOWN ARE FINISH SURFACE GRADES UNLESS OTHERWISE NOTED.
3. SPOT ELEVATIONS REPRESENT THE GRADE ABOVE THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
4. ALL EXCAVATIONS AND MATERIAL PLACEMENT SHALL BE COMPLETED TO DESIGN ELEVATIONS AS DEPICTED IN THE PLANS.
5. CONTRACTOR SHALL ASSUME SOLE RESPONSIBILITY FOR THE COMPUTATION(S) OF ALL GRADING QUANTITIES. WHILE PER ATTEMPTS TO PROVIDE A COST EFFECTIVE APPROACH TO THE DESIGN, THE CONTRACTOR'S DESIGN IS BASED ON FACTORS, INCLUDING SAFETY, AESTHETICS, AND CURRENT ENGINEERING STANDARD OF CARE, THEREFORE NO GUARANTEE CAN BE MADE FOR A SPECIFIC QUANTITY OF MATERIAL.
6. THE CONTRACTOR MAY SOLICIT APPROVAL FROM ENGINEER/OWNER TO ADJUST FINAL GRADES FROM DESIGN GRADES TO PROVIDE AN OVERALL SITE BALANCE AS A RESULT OF FIELD CONDITIONS.
7. GRADING ACTIVITIES SHALL BE IN A MANNER TO ALLOW POSITIVE DRAINAGE ACROSS DISTURBED AREAS, INCLUDING INCORPORATION OF TEMPORARY DITCHES TO PREVENT PONDING, AND IF NECESSARY PUMPING TO AVOID PONDING. CONTRACTOR SHALL PREVENT SURFACE WATER FROM ENTERING INTO EXCAVATIONS. IF NO SMALL DRAINAGE OR PONDING OCCURS, THE CONTRACTOR SHALL NOT DISCHARGE/ORIGINATE AS A RESULT OF IMPROPER SITE GRADING OR SEQUENCING. THE CONTRACTOR SHALL TAKE NECESSARY ACTIVITIES TO LIMIT EXPOSURE OF DISTURBED SOILS DUE TO WEATHER.
8. THE CONTRACTOR IS RESPONSIBLE FOR MEETING MINIMUM COMPACTION STANDARDS. THE CONTRACTOR SHALL NOTIFY ENGINEER/OWNER IF PROPER COMPACTION CANNOT BE OBTAINED. PROCEED WITH GRADING OF THE ENGINEER/OWNER THAT IDENTIFY ANY GUT-TOUCHES ARE TO BE CONSIDERED UNSUITABLE SOILS. THE ENGINEER/OWNER AND GEOTECHNICAL TESTING CONSULTANT WILL DETERMINE IF REMEDIAL MEASURES ARE REQUIRED.
9. IN THE EVENT THAT ANY MOISTURE DENSITY TEST(S) FAIL TO MEET SPECIFICATION REQUIREMENTS, THE CONTRACTOR SHALL PERFORM CORRECTIVE WORK AS NECESSARY TO BRING THE MATERIAL INTO COMPLIANCE AND RETEST THE FAILED AREA AT A COST TO THE CONTRACTOR.
10. WITH THE AUTHORIZATION OF THE ENGINEER/OWNER, MATERIAL THAT IS TOO WET TO PERMIT PROPER COMPACTION MAY BE SPREAD ON FILL AREAS IN AN EFFORT TO DRY. CONTRACTOR SHALL CLEARLY FIELD MARK THE EXTERIOR LIMITS OF SPREAD MATERIAL. IF THE MATERIAL DRIES TO SUCH A POINT THAT THE ENGINEER/OWNER IDENTIFY THE LIMITS UNDER NO CONDITION SHALL THE SPREAD MATERIAL DEPTH EXCEED THE MAXIMUM DEPTH OF SPREAD MATERIAL. IF THE MATERIAL DRIES TO SUCH A POINT THAT IT WOULD BE USED TO TURNOVER THE SPREAD MATERIAL; OR THE MAXIMUM COMPACTION LIFT DEPTH.
11. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER/OWNER IF GROUNDWATER IS ENCOUNTERED.
12. CONTRACTOR IS SOLELY RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF ADEQUATE AND SAFE TEMPORARY SHORING, BRACING, RETENTION STRUCTURES, AND EXCAVATIONS.
13. THE SITE SHALL BE COMPLETED WITHIN 8-10 FT (+/-) OF THE PROPOSED GRADES UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF THE EXCAVATION. CONTRACTOR IS ENCOURAGED TO SEQUENCE CONSTRUCTION SUCH THAT THE SITE IS DIVIDED INTO SMALLER AREAS TO ALLOW STABILIZATION OF DISTURBED SOILS IMMEDIATELY AFTER COMPLETION OF INDIVIDUAL SMALLER AREAS.
14. CONTRACTOR SHALL CONTACT "DIGGER'S HOTLINE" FOR LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION OF ANY CONSTRUCTION ACTIVITIES AND SHALL BE RESPONSIBLE FOR PROTECTING SUD UTILITIES FROM ANY DAMAGE DURING CONSTRUCTION.
15. CONTRACTOR SHALL PROTECT INTERLUS AND ADJACENT PROPERTIES WITH SLT FENCING OR APPROVED EROSION CONTROL METHODS UNTIL CONSTRUCTION IS COMPLETED. CONTRACTOR SHALL PLACE SLT FENCING AT DOWN SLOPE SIDE OF GRADING LIMITS.
16. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO ANY EXISTING FACILITIES OR ADJACENT PROPERTIES. CONTRACTOR SHALL BE RESPONSIBLE FOR SATISFACTION AT THE EXPENSE OF THE CONTRACTOR.
17. WORK WITHIN ANY ROADWAY RIGHT-OF-WAY SHALL BE COORDINATED WITH THE APPROPRIATE MUNICIPAL OFFICIAL PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES. ANY WORK WITHIN ANY ROADWAY RIGHT-OF-WAY SHALL BE SUBJECT TO APPROVAL BY THE APPROPRIATE MUNICIPAL OFFICIAL. RIGHT-OF-WAY IS CONSIDERED INCIDENTAL, AND SHALL BE INCLUDED IN THE COST OF GRADING. RESTORATION SHALL INCLUDE ALL ITEMS NECESSARY TO RESTORE RIGHT-OF-WAY IN-KIND INCLUDING LANDSCAPING.
18. CONTRACTOR SHALL COMPLY WITH ALL APPLICANT PRAIRIE CONSTRUCTION STANDARDS/ORDINANCES.
19. LANDSCAPE AND TURF AREAS SHALL HAVE A MINIMUM OF 4-INCH TPOSSIL REPAIR.
20. TPOSSIL BERMING SHALL ACHIEVE 50% STANDARD POROSITY DENSITY AT 3% (+/-) OPTIMUM MOISTURE CONTENT.

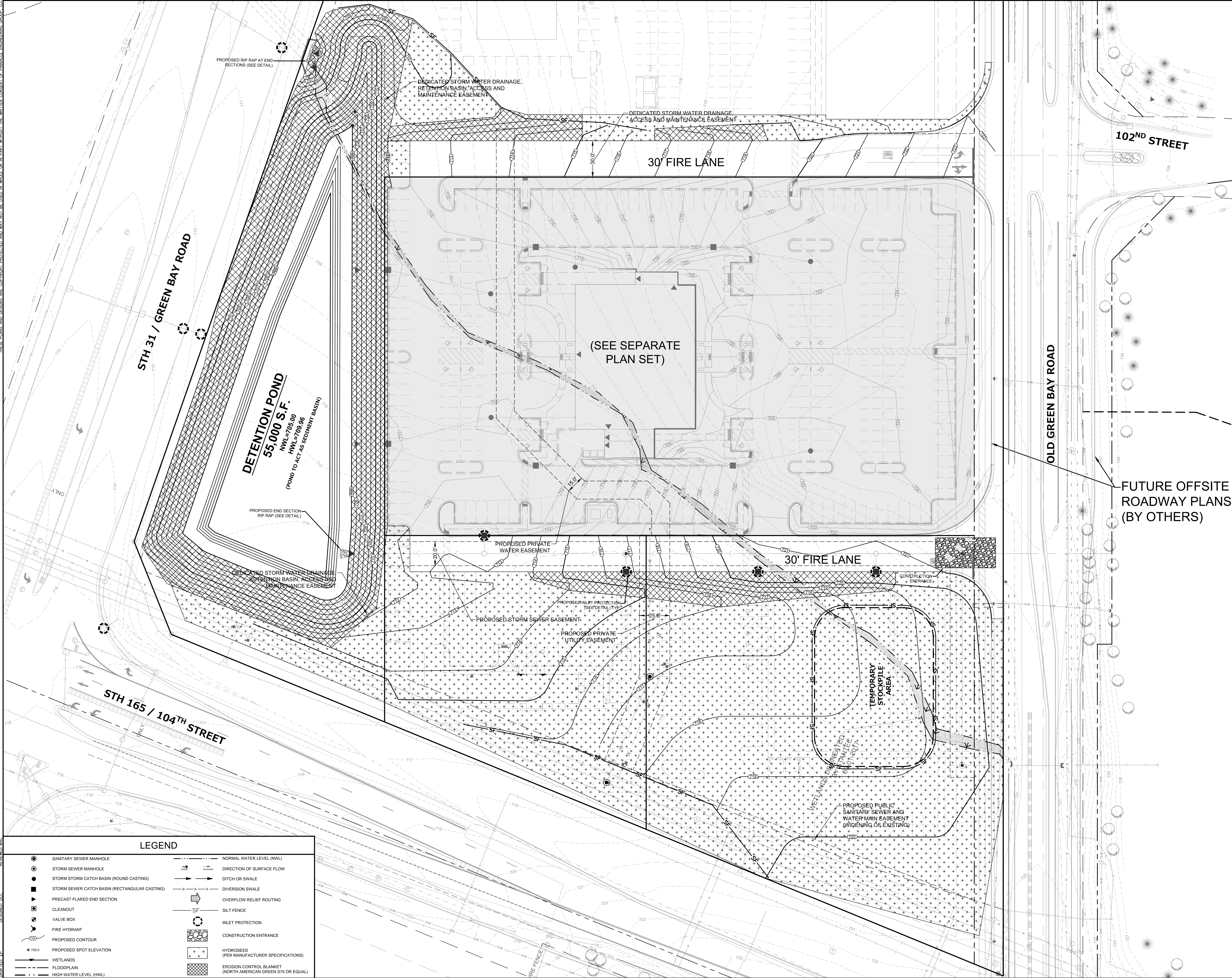
	STORM SEWER MANHOLE
	STORM SEWER CATCH BASIN- ROUND CASTING
	STORM SEWER CATCH BASIN- RECTANGULAR CASTING
	PROPOSED CONCRETE FLARED END SECTION
	PROPOSED CONTOUR
	SPOT ELEVATION
	DIRECTION OF SURFACE FLOW
	DITCH OR SWALE
	DIVISION SWALE
	OVERFLOW RELIEF ROUTING
	CONCRETE SIDEWALK
	CURB AND GUTTER
	DEPRESSED CURB
	REVERSE PITCH CURB & GUTTER
	EDGE OF PAVEMENT
	FINISHED FLOOR
	TOP OF WALL
	YARD GRADE
	SIDEWALK

REG JOB No **1114.10-WF** MAC
REG PM
START DATE **12-05-17**
SCALE **1" = 30'**

SHEET
C-4
OF
C-9




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- ### CONSTRUCTION SITE SEQUENCING
1. INSTALL PERIMETER SILT FENCE, INLET PROTECTION AND TEMPORARY CONSTRUCTION ENTRANCE.
 2. STRIP AND STOCKPILE TOPSOIL. INSTALL SILT FENCE AROUND PERIMETER OF STOCKPILE.
 3. CONDUCT ROUGH GRADING EFFORTS AND INSTALL CHECK DAMS AND SEDIMENT TRAPSBASINS AS NEEDED.
 4. INSTALL UTILITY PIPING AND STRUCTURES. IMMEDIATELY INSTALL INLET PROTECTION.
 5. COMPLETE FINAL GRADING, INSTALLATION OF GRAVEL BASE COURSES, PLACEMENT OF CURBS, PAVEMENTS, WALKS, ETC.
 6. PLACE TOPSOIL AND IMMEDIATELY STABILIZE DISTURBED AREAS WITH EROSION CONTROLS.
 7. EROSION CONTROL MEASURES SHALL BE REMOVED ONLY AFTER SITE CONSTRUCTION IS COMPLETE WITH ALL SOIL SURFACES HAVING AN ESTABLISHED VEGETATIVE COVER.
- CONTRACTOR MAY MODIFY SEQUENCING AFTER ITEM 1 AS NEEDED TO COMPLETE CONSTRUCTION IF EROSION CONTROLS ARE MAINTAINED IN ACCORDANCE WITH THE CONSTRUCTION EROSION CONTROL REQUIREMENTS.

- ### GENERAL EROSION AND SEDIMENT CONTROL NOTES
1. ALL CONSTRUCTION SHALL ADHERE TO THE REQUIREMENTS SET FORTH IN EPA'S NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STORMWATER GENERAL PERMIT (WPDES PERMIT NO. WI-50763-1-1) FOR CONSTRUCTION SITE LAND DISTURBANCE ACTIVITIES. ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL TECHNICAL STANDARDS AND PROVISIONS IN EFFECT AT THE TIME OF CONSTRUCTION. THESE PROCEDURES AND STANDARDS SHALL BE REFERRED TO AS BEST MANAGEMENT PRACTICES (BMP'S). IT IS THE RESPONSIBILITY OF ALL CONTRACTORS ASSOCIATED WITH THE PROJECT TO OBTAIN A COPY OF, AND UNDERSTAND, THE BMP'S PRIOR TO THE START OF CONSTRUCTION ACTIVITIES.
 2. THE EROSION CONTROL MEASURES INDICATED ON THE PLANS ARE THE MINIMUM REQUIREMENTS. ADDITIONAL CONTROL MEASURES AS DIRECTED BY OWNER/ENGINEER OR GOVERNING AGENCIES SHALL BE INSTALLED WITHIN 24 HOURS OF REQUEST.
 3. MODIFICATIONS TO THE APPROVED SWPPP IN ORDER TO MEET UNFORESEEN FIELD CONDITIONS ARE ALLOWED IF MODIFICATIONS CONFORM TO BMP'S. ALL MODIFICATIONS MUST BE APPROVED BY OWNER/ENGINEER/GOVERNING AGENCY PRIOR TO DEVIATION OF THE APPROVED PLAN.
 4. INSTALL PERIMETER EROSION CONTROL MEASURES (SUCH AS CONSTRUCTION ENTRANCES, SILT FENCE AND EXISTING INLET PROTECTION) PRIOR TO ANY SITE WORK, INCLUDING GRADING OR DISTURBANCE OF EXISTING SURFACE COVER, AS SHOWN ON PLAN IN ORDER TO PROTECT ADJACENT PROPERTIES/STORM SEWER SYSTEMS FROM SEDIMENT TRANSPORT.
 5. CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT ALL LOCATIONS OF VEHICLE INGRESS/EGRESS POINTS. CONTRACTOR IS RESPONSIBLE TO COORDINATE LOCATIONS WITH THE PROPER AUTHORITIES, PROVIDE NECESSARY FEES AND OBTAIN ALL REQUIRED APPROVALS OR PERMITS. ADDITIONAL CONSTRUCTION ENTRANCES OTHER THAN AS SHOWN ON THE PLANS MUST BE APPROVED BY THE APPLICABLE GOVERNING AGENCIES PRIOR TO INSTALLATION.
 6. PAVED SURFACES ADJACENT TO CONSTRUCTION ENTRANCES SHALL BE SWEEP AND/OR SCAPED TO REMOVE ACCUMULATED SOIL, DIRT AND/OR DUST IMMEDIATELY AND AS REQUESTED BY THE GOVERNING AGENCIES.
 7. ALL EXISTING STORM SEWER FACILITIES THAT WILL COLLECT RUNOFF FROM DISTURBED AREAS SHALL BE PROTECTED TO PREVENT SEDIMENT DEPOSITION WITHIN STORM SEWER SYSTEMS. INLET PROTECTION SHALL BE IMMEDIATELY FITTED AT THE INLET OF ALL INSTALLED STORM SEWER AND SILT FENCE SHALL BE IMMEDIATELY FITTED AT ALL INSTALLED CULVERT INLETS. ALL INLETS, STRUCTURES, PIPES, AND SWALES SHALL BE KEPT CLEAN AND FREE OF SEDIMENTATION AND DEBRIS.
 8. EROSION CONTROL FOR UTILITY CONSTRUCTION (STORM SEWER, WATER MAIN, ETC.) OUTSIDE OF THE PERIMETER CONTROLS SHALL INCORPORATE THE FOLLOWING:
 - PLACE EXCAVATED TRENCH MATERIAL ON THE HIGH SIDE OF THE TRENCH.
 - BACKFILL, COMPACT AND STABILIZE THE TRENCH IMMEDIATELY AFTER PIPE CONSTRUCTION.
 - DISCHARGE TRENCH WATER INTO A SEDIMENTATION BASIN OR FILTERING TANK IN ACCORDANCE WITH BMP'S PRIOR TO RELEASE INTO STORM SEWER OR DITCHES.
 9. AT A MINIMUM, SEDIMENT BASINS AND NECESSARY TEMPORARY DRAINAGE PROVISIONS SHALL BE CONSTRUCTED AND OPERATIONAL BEFORE BEGINNING OF SIGNIFICANT MASS GRADING OPERATIONS TO PREVENT OFFSITE DISCHARGE OF UNTREATED RUNOFF.
 10. ALL WATERCOURSES AND WETLANDS SHALL BE PROTECTED WITH SILT FENCE TO PREVENT ANY DIRECT DISCHARGE FROM DISTURBED SOILS.
 11. ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES MUST BE MAINTAINED AND REPAIRED AS NEEDED. THE GENERAL CONTRACTOR WILL BE RESPONSIBLE FOR INSPECTION AND REPAIR DURING CONSTRUCTION. THE OWNER WILL BE RESPONSIBLE IF EROSION CONTROL IS REQUIRED AFTER THE CONTRACTOR HAS COMPLETED THE PROJECT.
 12. TOPSOIL STOCKPILES SHALL HAVE A BERM OR TRENCH AROUND THE CIRCUMFERENCE AND PERIMETER SILT FENCE TO CONTROL SILT. IF TOPSOIL STOCKPILE REMAINS UNDISTURBED FOR MORE THAN SEVEN (7) DAYS, TEMPORARY SEEDING AND STABILIZATION IS REQUIRED.
 13. EROSION CONTROL MEASURES TEMPORARILY REMOVED FOR UNAVOIDABLE CONSTRUCTION ACTIVITIES SHALL BE IN WORKING ORDER IMMEDIATELY FOLLOWING COMPLETION OF SUCH ACTIVITIES OR PRIOR TO THE COMPLETION OF EACH WORK DAY, WHICH EVER OCCURS FIRST.
 14. MAINTAIN SOIL EROSION CONTROL DEVICES THROUGH THE DURATION OF THIS PROJECT. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN THIRTY (30) DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED. DISTURBANCES ASSOCIATED WITH EROSION CONTROL REMOVAL SHALL BE IMMEDIATELY STABILIZED.
 15. PUMPS MAY BE USED AS BYPASS DEVICES. IN NO CASE SHALL PUMPED WATER BE DIVERTED OUTSIDE THE PROJECT LIMITS. PUMP DISCHARGE SHALL BE DIRECTED INTO AN APPROVED FILTER BAG OR APPROVED SETTLING DEVICE.
 16. GRADING EFFORTS SHALL BE CONDUCTED IN SUCH A MANNER AS TO MINIMIZE EROSION. EROSION AND SEDIMENT CONTROL MEASURES SHALL CONSIDER THE TIME OF YEAR, SITE CONDITIONS, AND THE USE OF TEMPORARY OR PERMANENT MEASURES. ALL DISTURBED AREAS THAT WILL NOT BE WORKED FOR A PERIOD OF FOURTEEN (14) DAYS REQUIRE TEMPORARY SEEDING FOR EROSION CONTROL. SEEDING FOR EROSION CONTROL SHALL BE IN ACCORDANCE WITH TECHNICAL STANDARDS.
 17. ALL DISTURBED SLOPES EXCEEDING 4:1, SHALL BE STABILIZED WITH NORTH AMERICAN GREEN S75BN. EROSION MATTING (OR APPROVED EQUAL) AND ALL CHANNELS SHALL BE STABILIZED WITH NORTH AMERICAN GREEN C125BN (OR APPROVED EQUAL) OR APPLICATION OF AN APPROVED POLYMER SOIL STABILIZATION TREATMENT OR A COMBINATION THEREOF, AS REQUIRED. EROSION MATTING AND/OR NETTING USED ONSITE SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S GUIDELINES.
 18. DURING PERIODS OF EXTENDED DRY WEATHER, THE CONTRACTOR SHALL KEEP A WATER TRUCK ON SITE FOR THE PURPOSE OF WATERING DOWN SOILS WHICH MAY OTHERWISE BECOME AIRBORNE. THE CONTRACTOR IS RESPONSIBLE FOR CONTROLLING WIND EROSION (DUST) DURING CONSTRUCTION AT HIS/HER EXPENSE.
 19. DISTURBED AREAS AND AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION SHALL BE VISUALLY INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM ON A DAILY BASIS.
 20. QUALIFIED PERSONNEL (PROVIDED BY THE GENERAL/PRIME CONTRACTOR) SHALL INSPECT DISTURBED AREAS OF THE CONSTRUCTION SITE THAT HAVE NOT BEEN FINALLY STABILIZED AND EROSION AND SEDIMENT CONTROLS WITHIN 24 HOURS OF ALL 0.5-INCH, OR MORE, PRECIPITATION EVENTS WITH A MINIMUM INSPECTION INTERVAL OF ONCE EVERY SEVEN (7) CALENDAR DAYS IN THE ABSENCE OF QUALIFYING RAIN OR SNOWFALL EVENT. REPORTING SHALL BE IN ACCORDANCE WITH THE GENERAL PERMIT. CONTRACTOR SHALL IMMEDIATELY ARRANGE TO HAVE ANY DEFICIENT ITEMS REVEALED DURING INSPECTIONS REPAIRED/REPLACED.
 21. SEE ADDITIONAL DETAILS AND NOTES ON SITE STABILIZATION AND CONSTRUCTION DETAILS.

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MAIN STREET MARKET PHASE 1

GREEN BAY RD. & 104TH ST. PLEASANT PRAIRIE, WI

SITE STABILIZATION PLAN

REVISIONS		SHEET
NO.	DESCRIPTION	
		C-6
		C-9

PROJECT NO. 1114-10-WI

DATE 12-05-17

SCALE 1" = 30'

MAC

12-05-17

1" = 30'

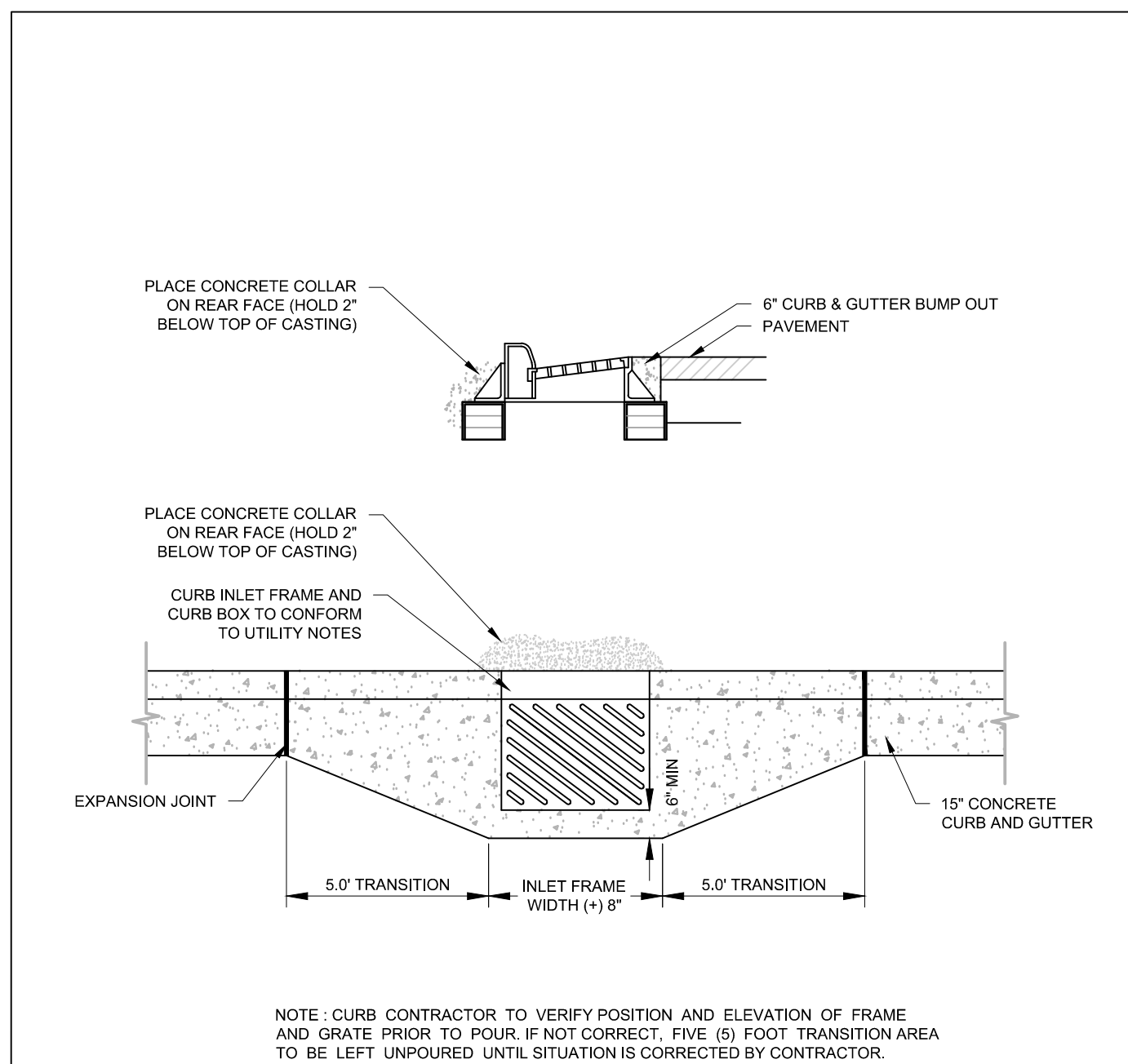
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SITE STABILIZATION PLAN

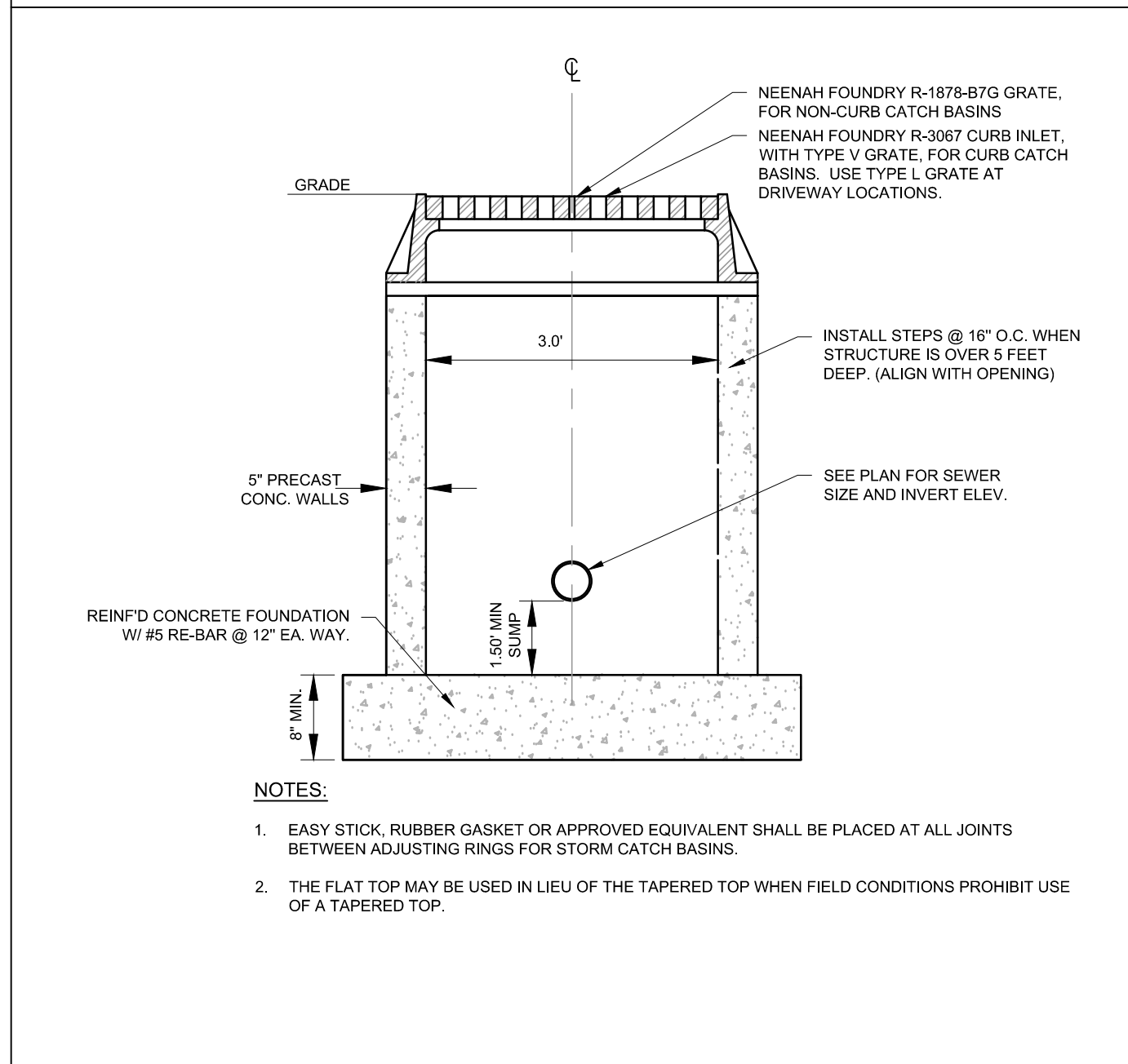
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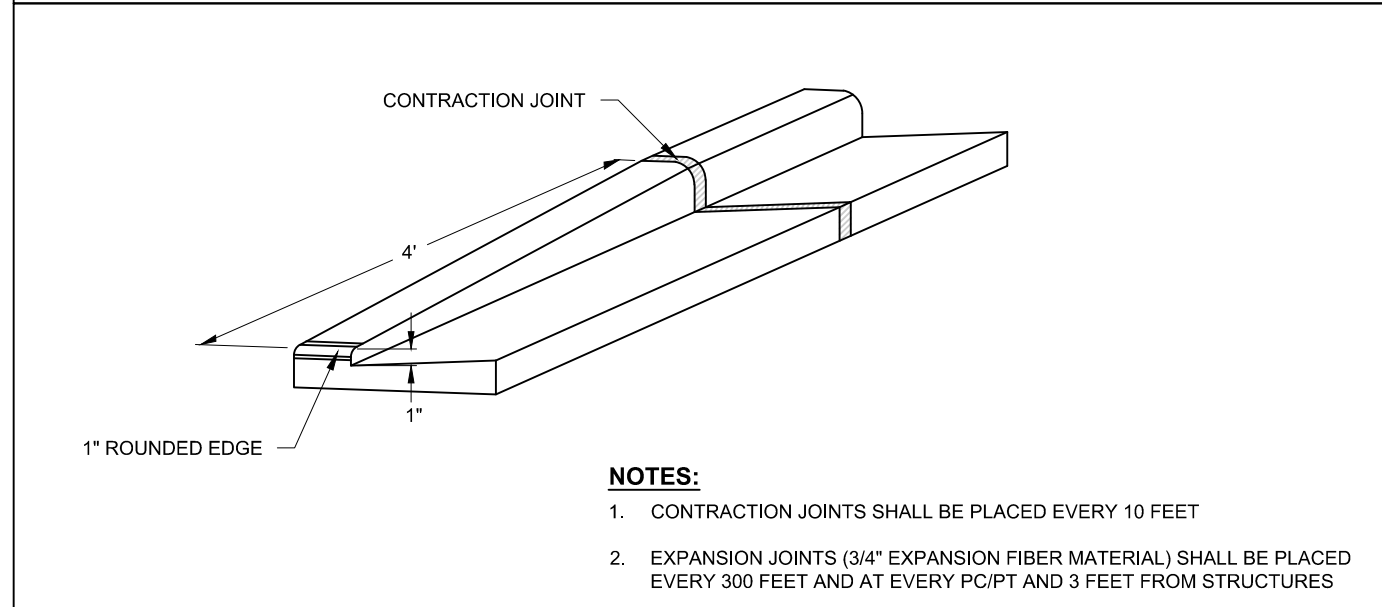
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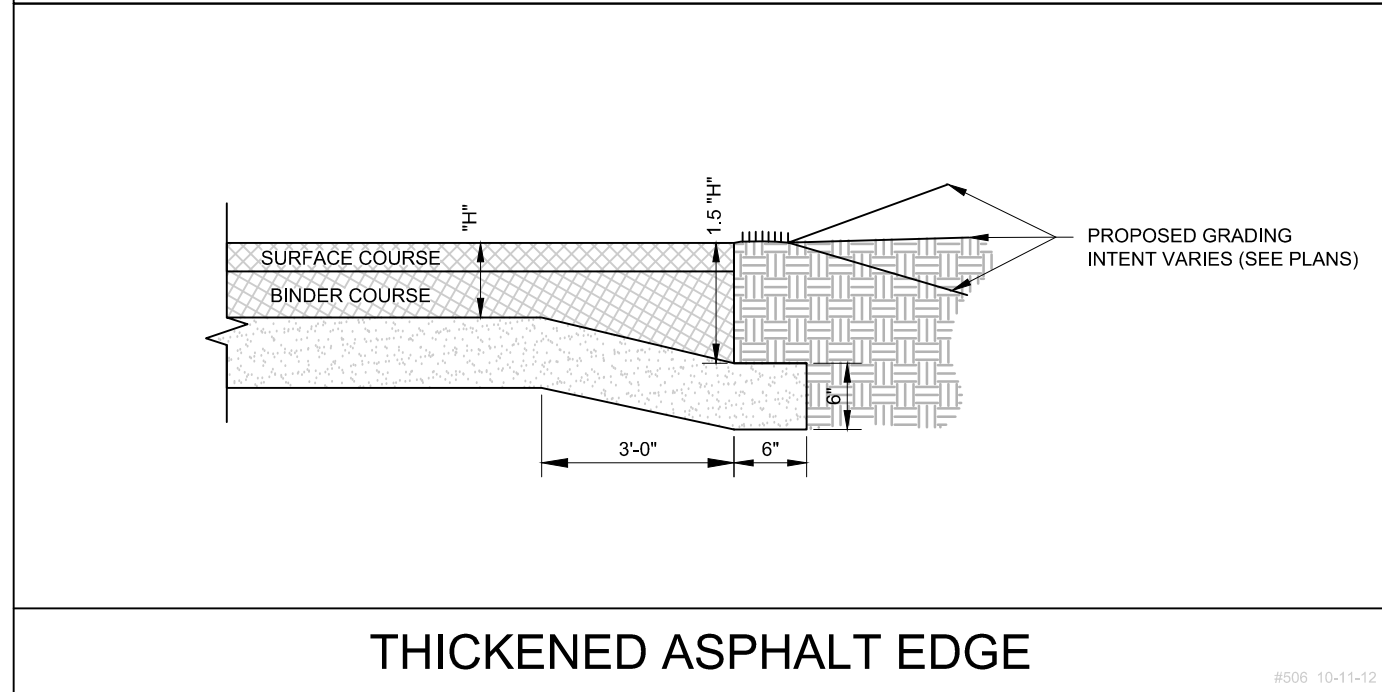
CURB AND GUTTER BUMP OUT



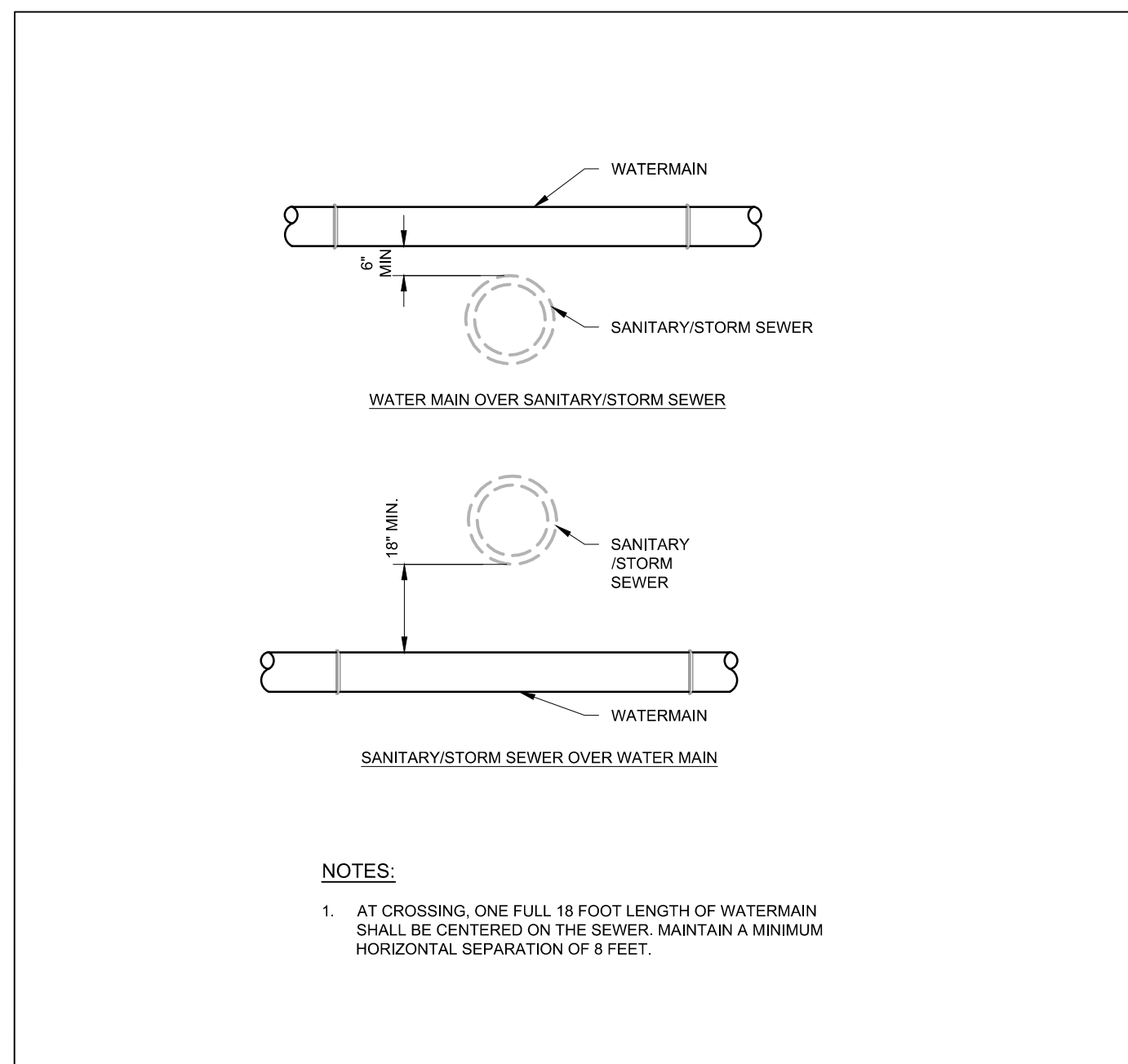
2' x 3' CATCH BASIN



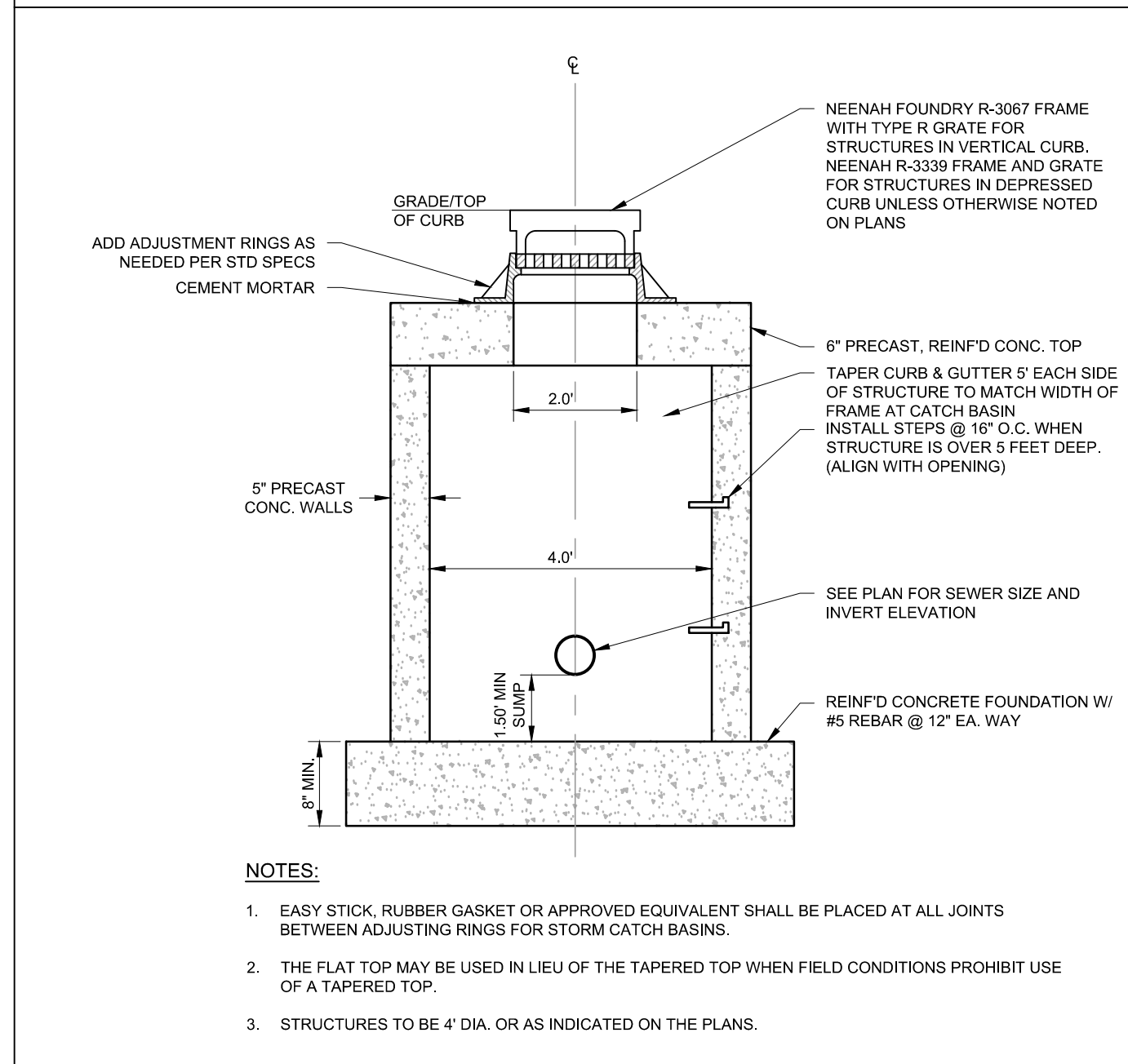
TAPER CURB HEAD



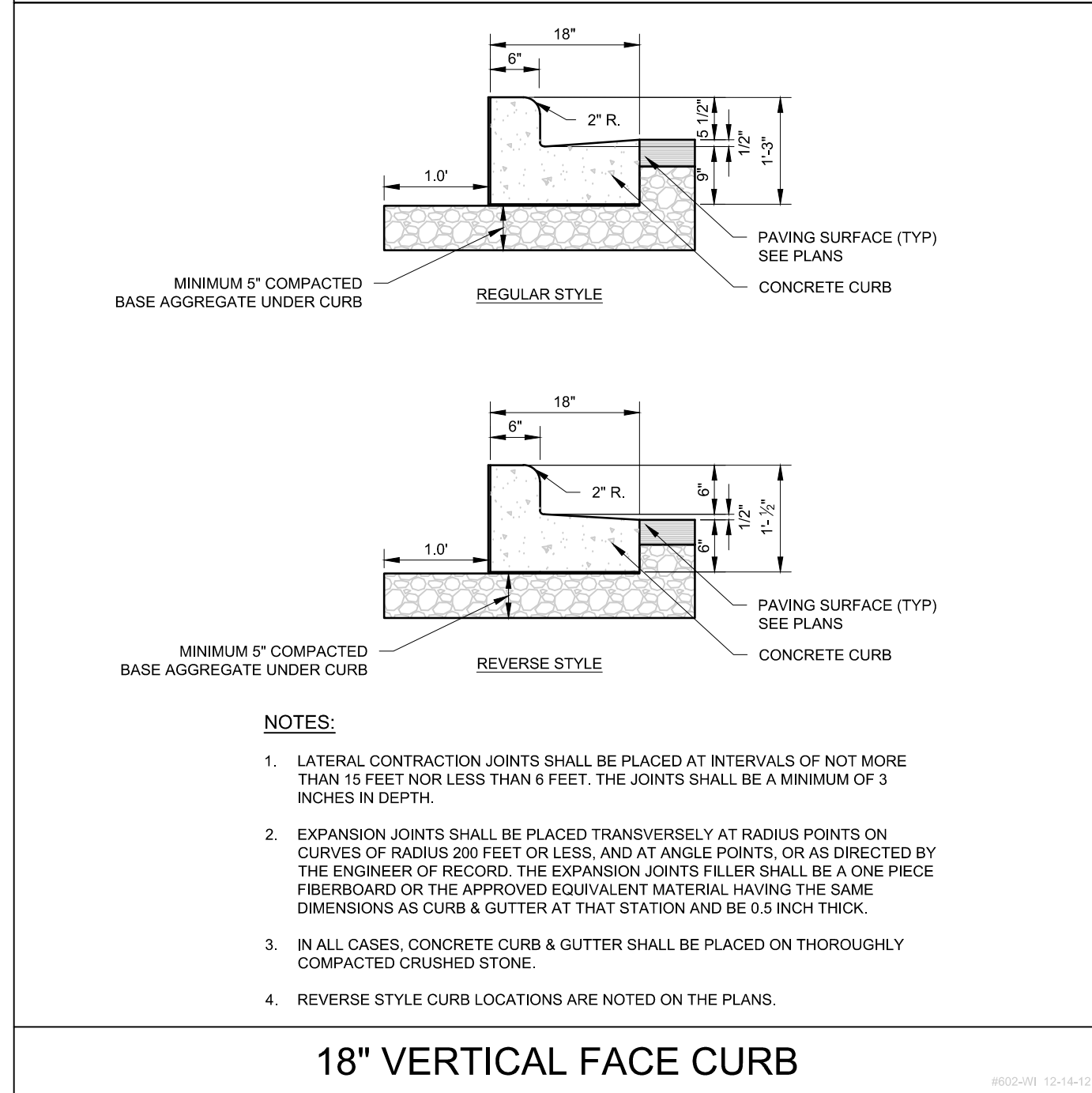
THICKENED ASPHALT EDGE



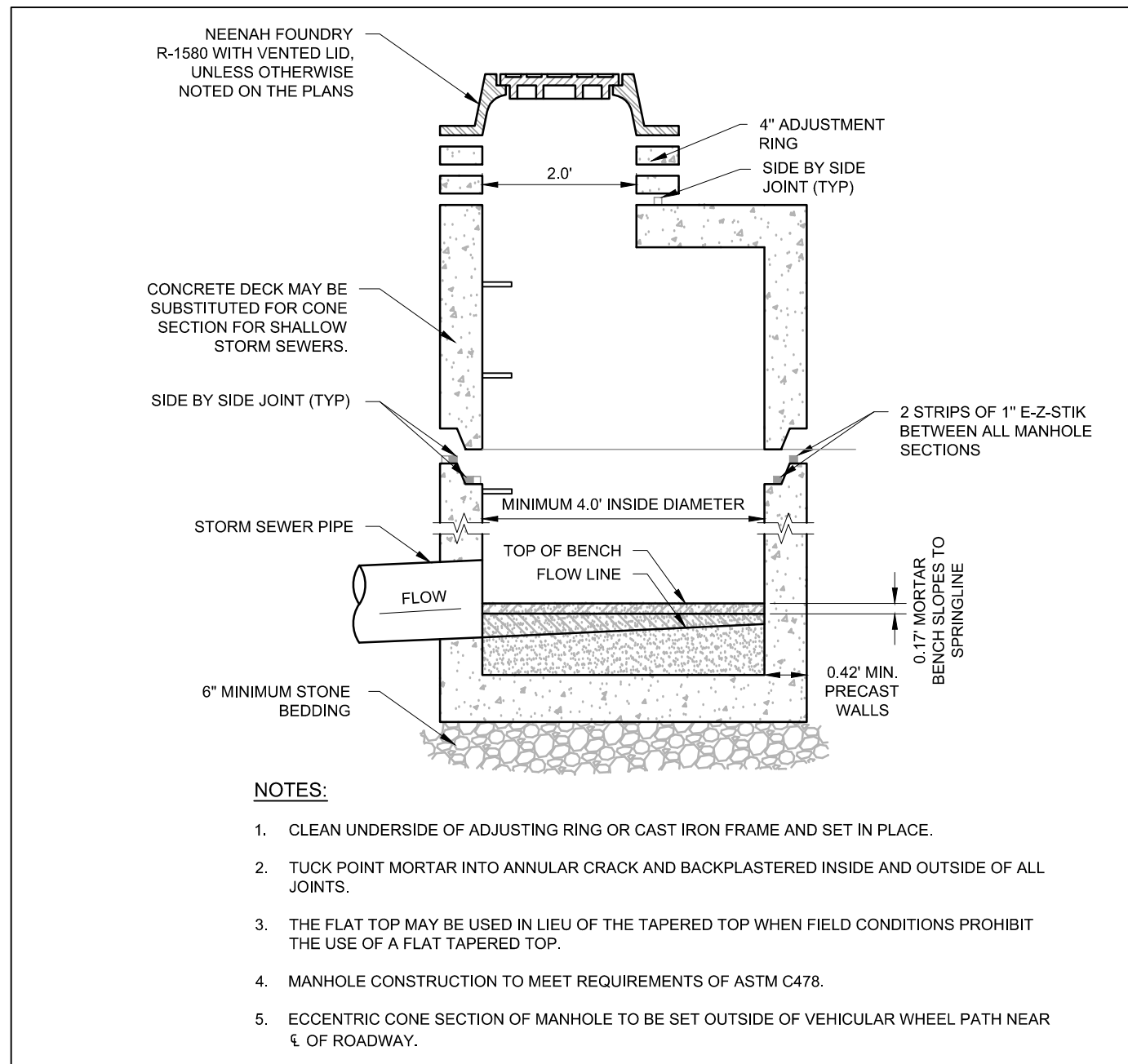
WATER MAIN SEPARATION



CATCH BASIN - CURB



18" VERTICAL FACE CURB



STORM SEWER MANHOLE

NOTE:
1. DAMAGED CURB / GUTTER SECTIONS SHALL BE REMOVED TO THE NEAREST JOINT.
2. CURB AND GUTTER CONSTRUCTED ADJACENT TO EXISTING CURB AND GUTTER SHALL BE INSTALLED USING TWO (2) NO.4 (1/2-INCH), 18-INCH LONG TIE BARS, EVENLY SPACED, DRIVEN 9-INCHES INTO THE EXISTING CURB AND GUTTER.
3. WHERE ADJACENT PAVEMENT SECTION CONTAINS CONCRETE THE GUTTER THICKNESS SHALL EXTEND TO THE BOTTOM OF THE ADJACENT CONCRETE PAVEMENT.


30" VERTICAL FACE CURB AND GUTTER

30" MOUNTABLE CURB AND GUTTER

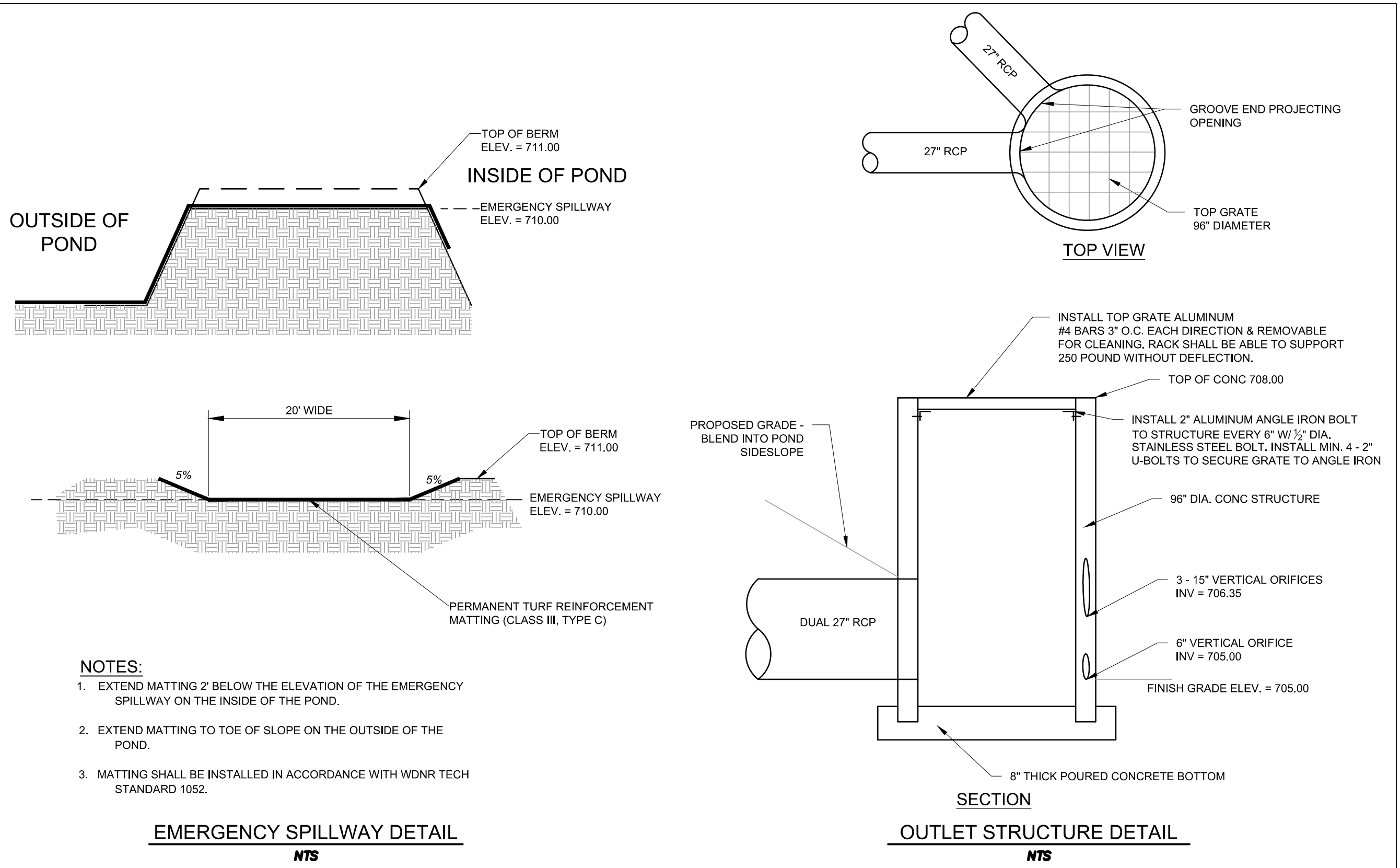
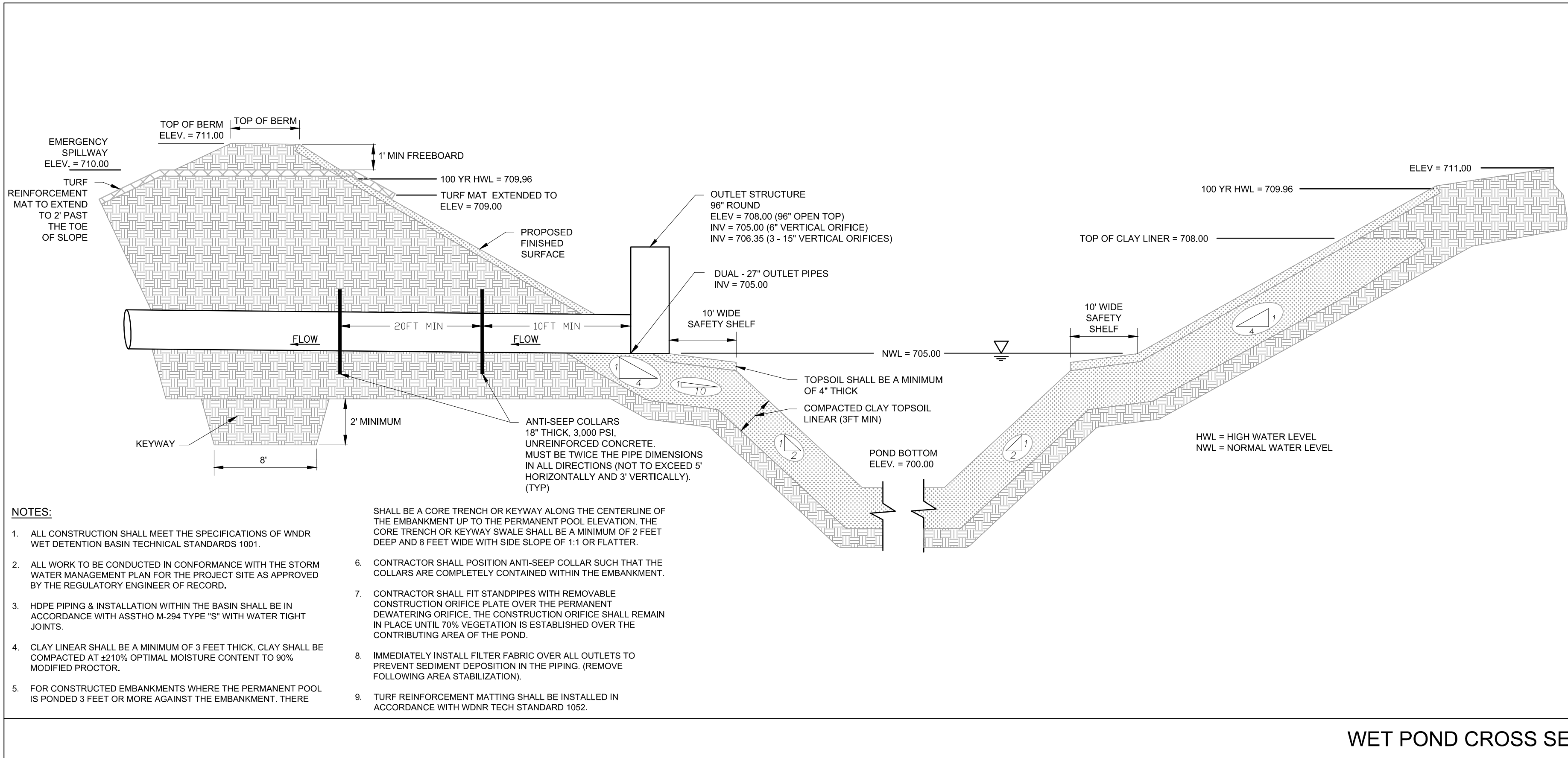
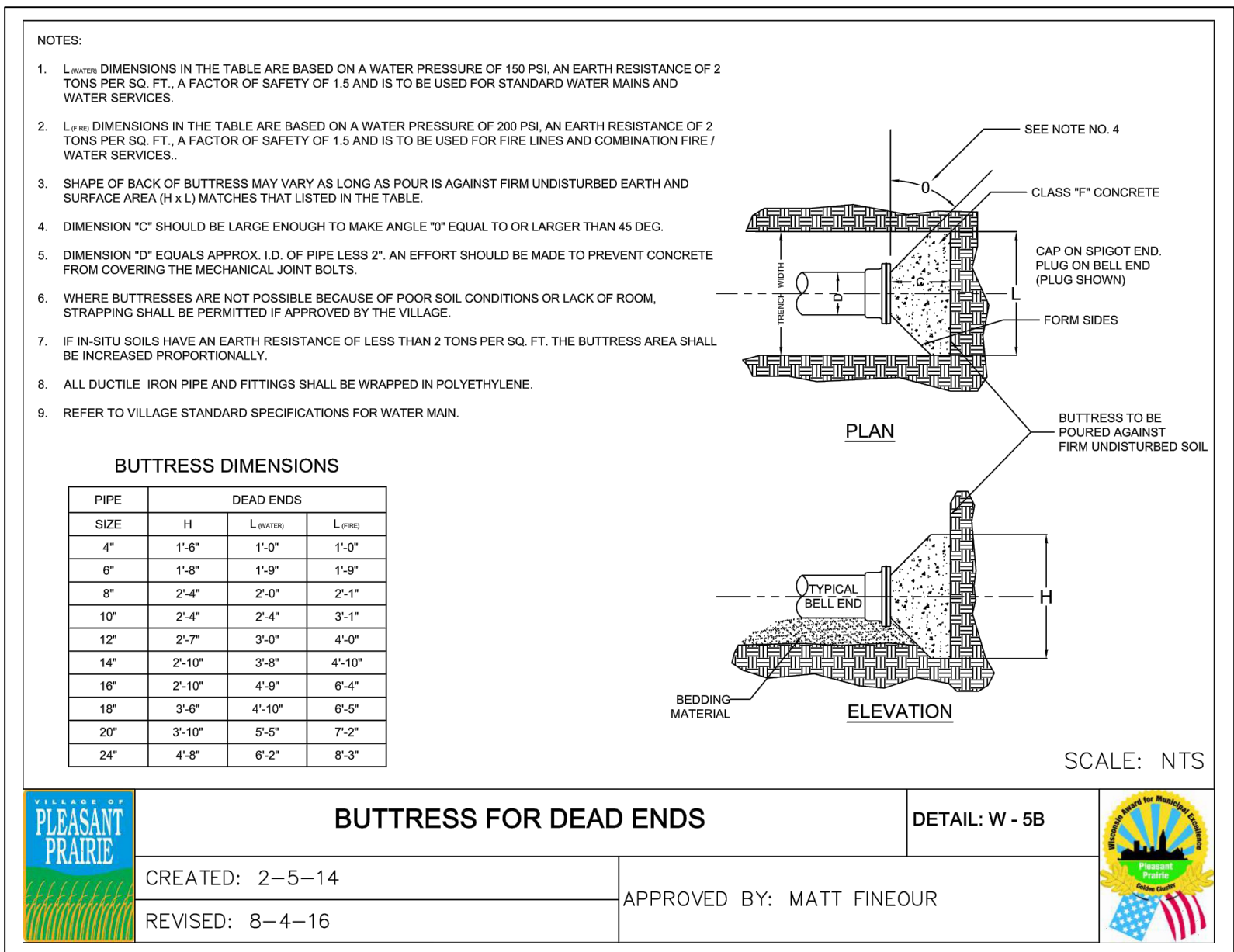
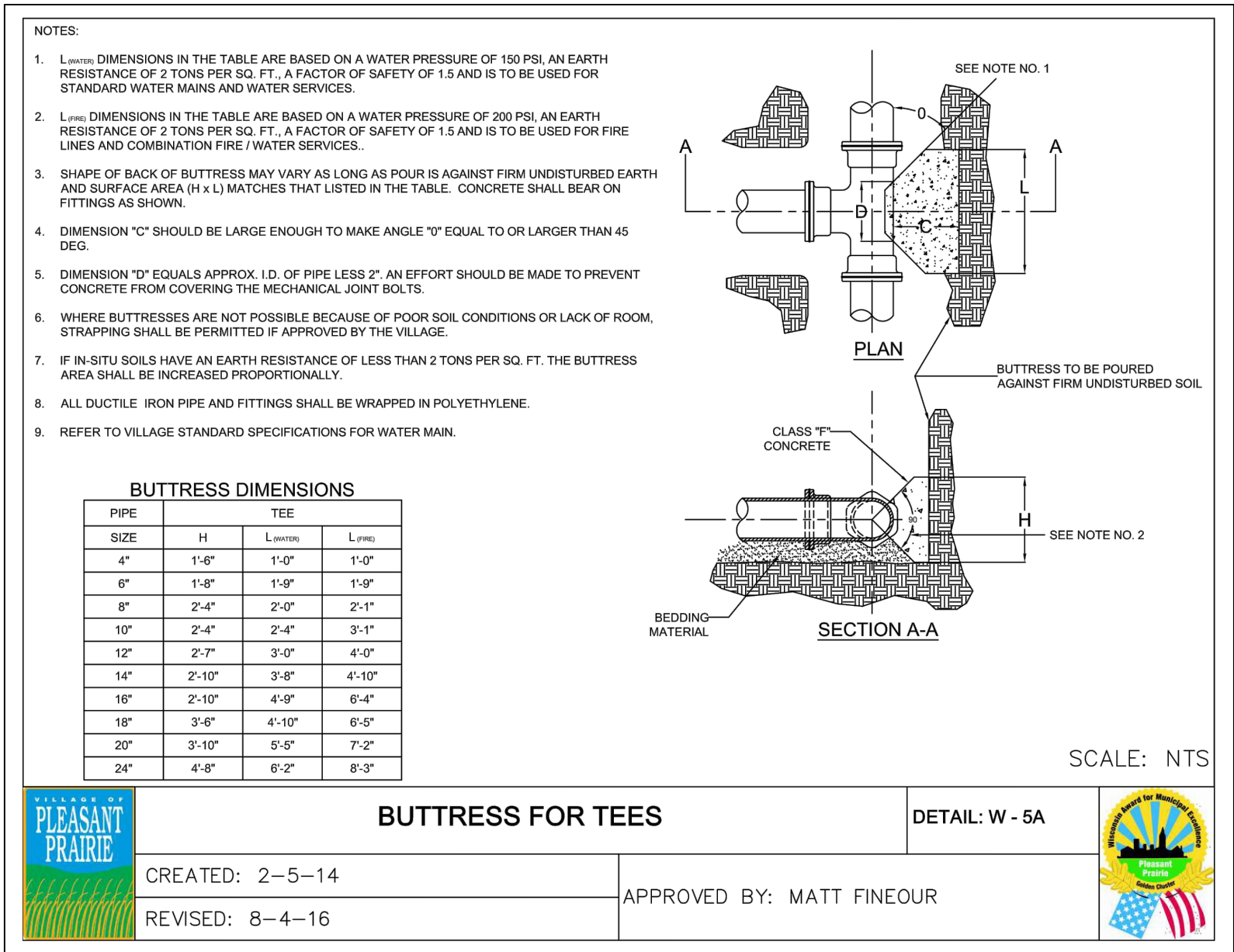
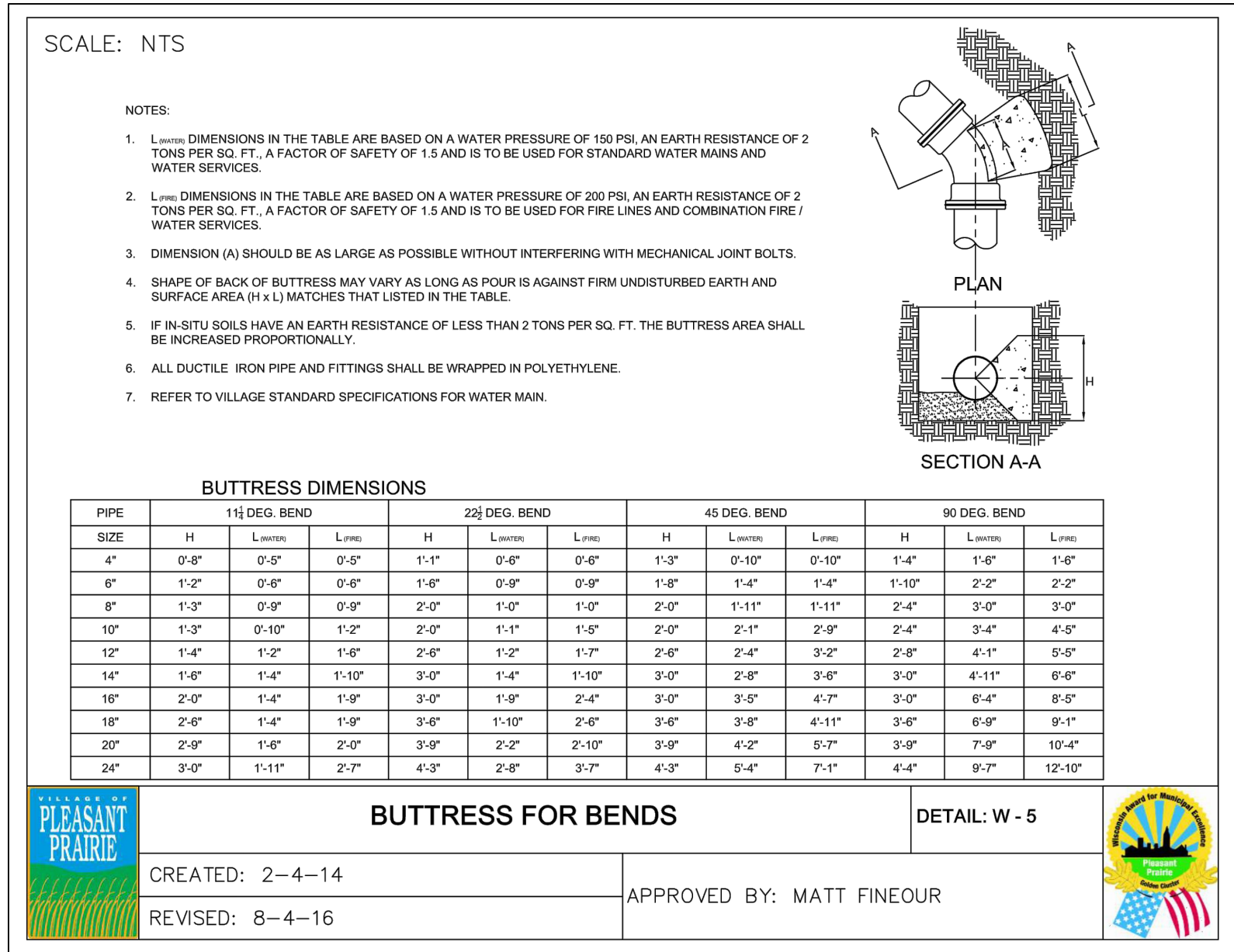
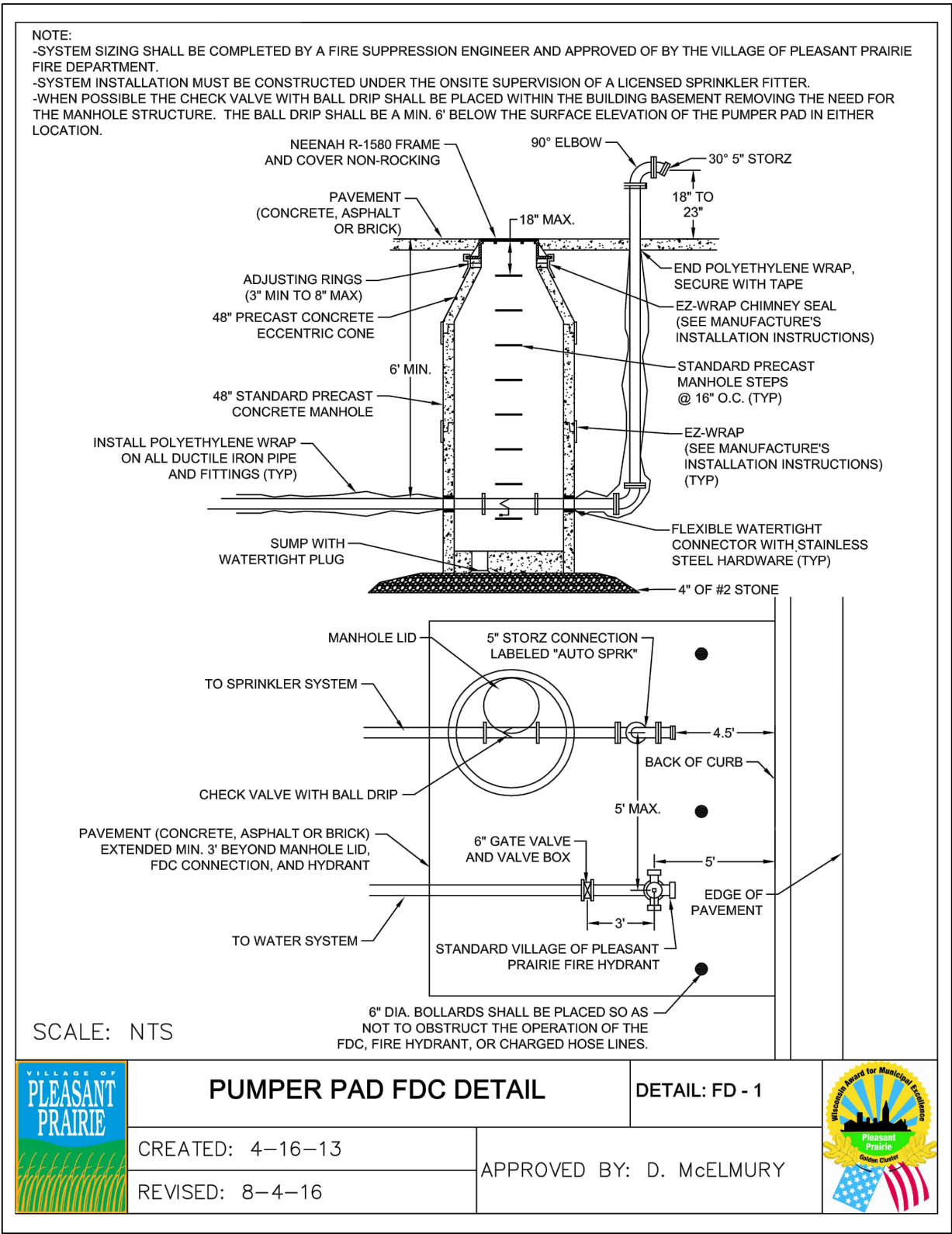
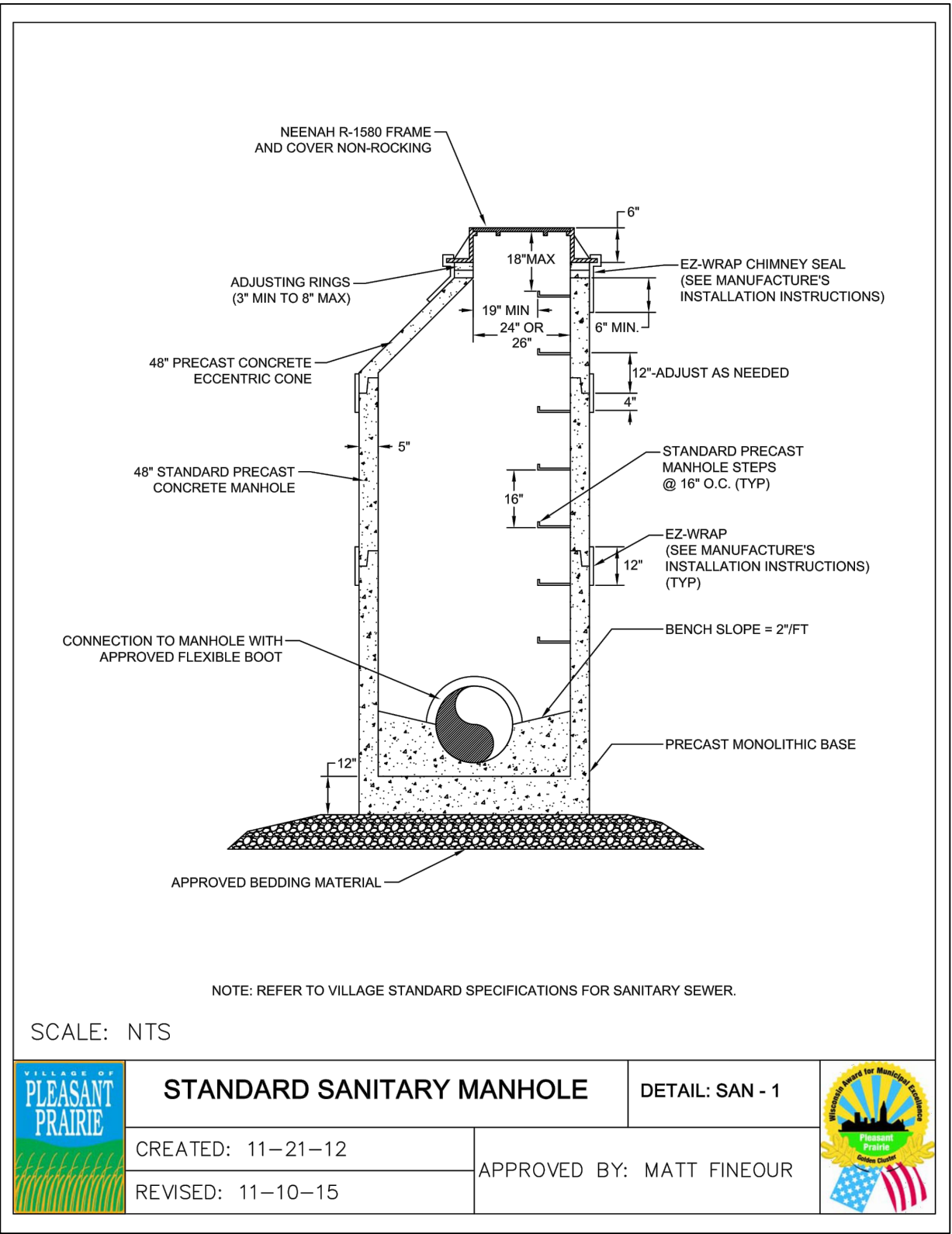
30" VERTICAL FACE CURB AND GUTTER (REVERSE SLOPE GUTTER)

SCALE: NTS

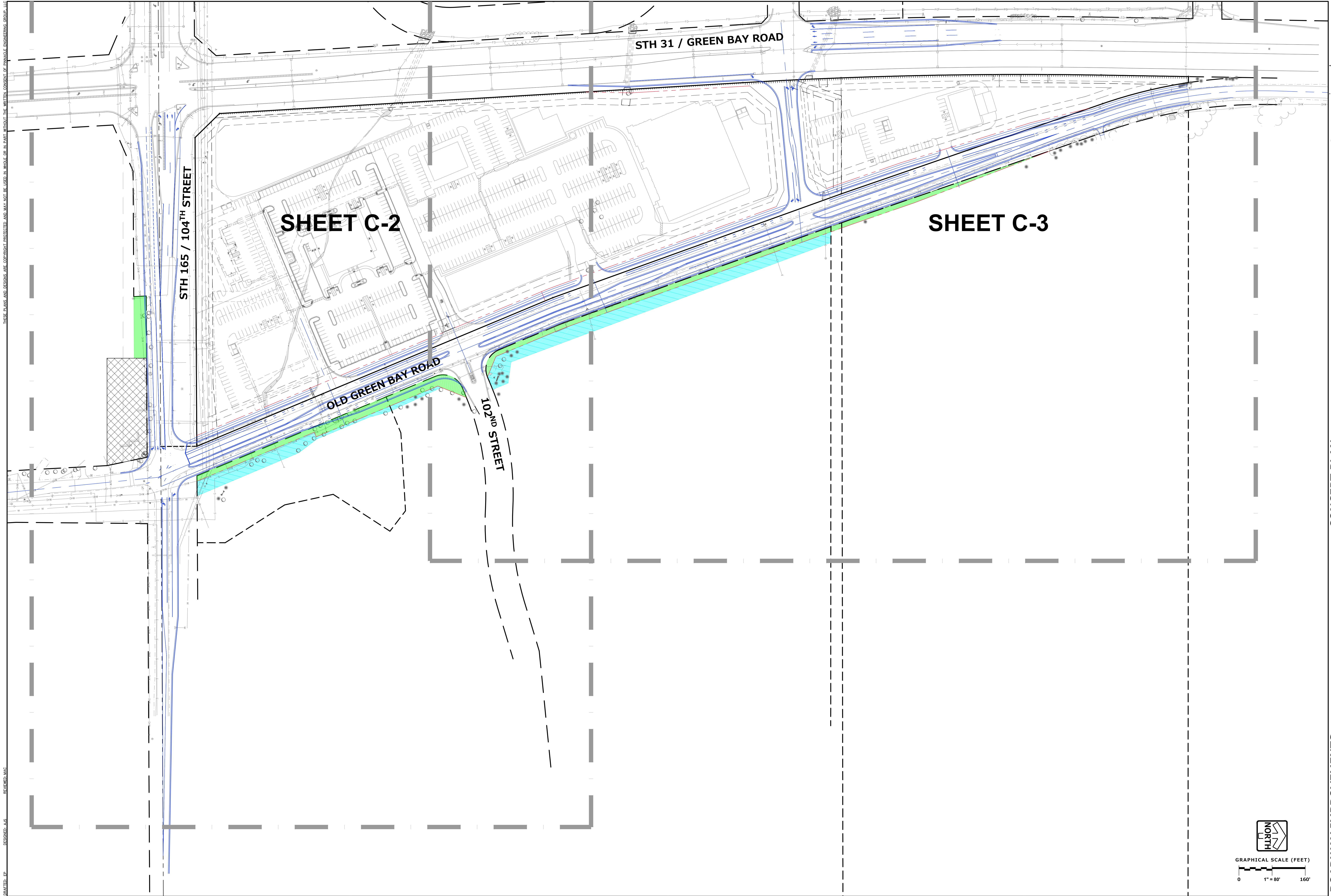
STANDARD CURB & GUTTER DETAILS		DETAIL: RD - 9
CREATED: 2-7-14	APPROVED BY: MATT FINEOUR	
REVISED: 12-1-15		

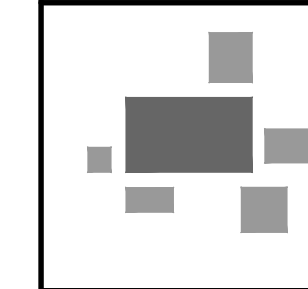


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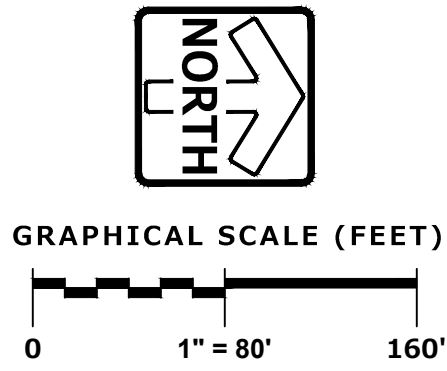
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**MAIN STREET MARKET
VILLAGE OF PLEASANT PRAIRIE, WI**

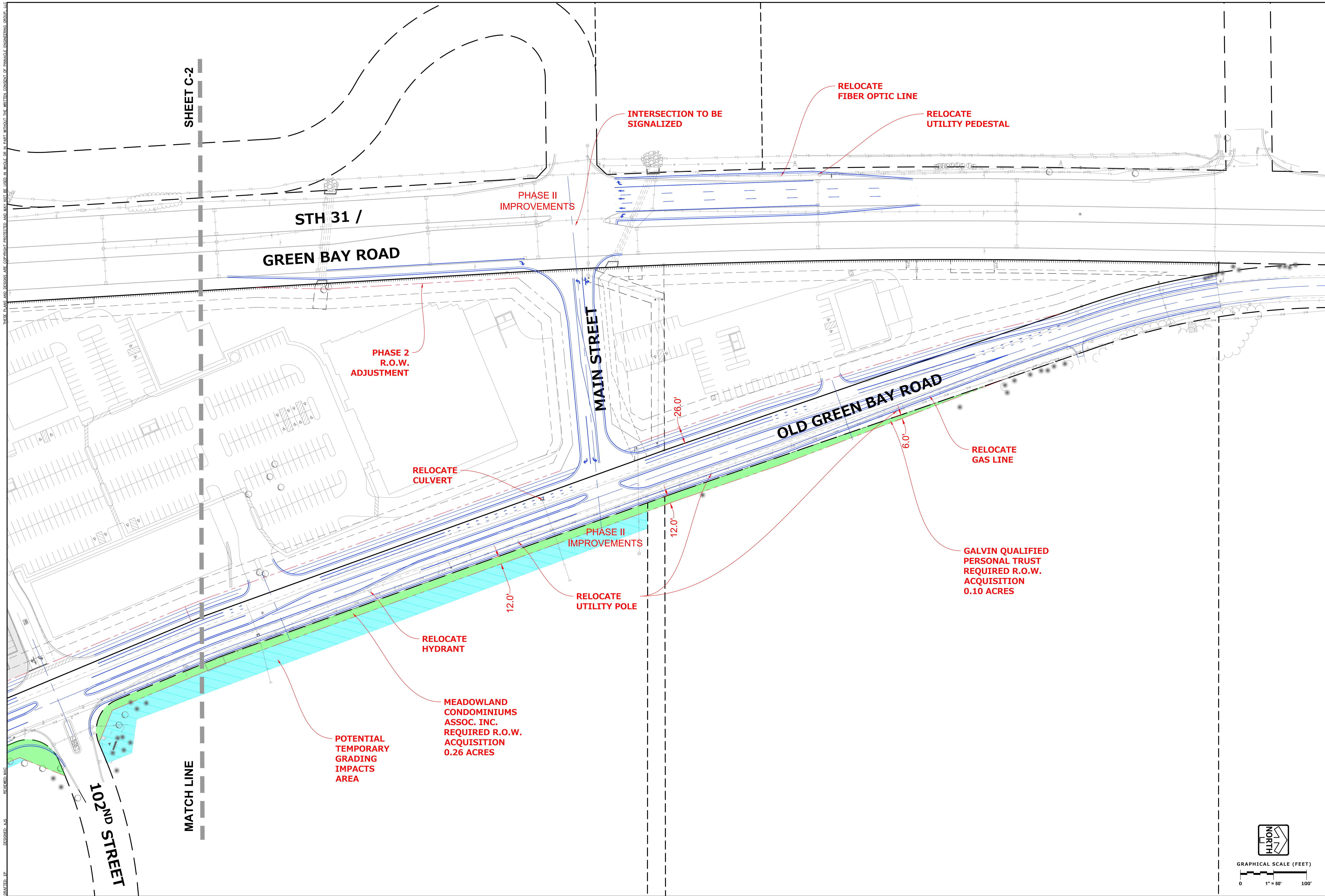
OFFSITE ROADWAY IMPROVEMENTS

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**MAIN STREET MARKET
VILLAGE OF PLEASANT PRAIRIE, WI**

OFFSITE ROADWAY IMPROVEMENTS

REVISIONS

REG. DB No. 1114.00-WI
MAC
START DATE 12-01-17
SCALE 1" = 50'

SHEET
C-3
C-3

STORMWATER MANAGEMENT PLAN



Main Street Market – Phase I
Village of Pleasant Prairie, Kenosha County, Wisconsin
PEG Project Number: 1114.10-WI

Prepared for:



02/07/2018



PINNACLE ENGINEERING GROUP
15850 W. Bluemound Road | Suite 210 | Brookfield, WI 53005
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- Existing Conditions Civil Plan Sheet
- Hydrology Exhibit – Existing Conditions
- Summary Pages from Geotech Report (by CGC, Inc)

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APPENDIX 4 – PREVIOUSLY COMPLETED SWM REPORTS

- Pages from Meadowlands Hydrology Report (by RSV Engineering, Inc)
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APPENDIX 5 – POST-DEVELOPMENT CONDITIONS (WATER QUALITY)

- WinSLAMM Modeling Input Data & Output Computations
- HydroCAD Summary Sheets for Flow Volume Calculations

APPENDIX 6 – WISDOT HYDROLOGY AND HYDRAULICS

- HydroCAD Modeling Output Computations for Pre-Development Conditions
- HydroCAD Modeling Output Computations for Post-Development Conditions

Questions and comments can be directed to:

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INTRODUCTION

The proposed Main Street Market development site represents the tract of land generally bound by Green Bay Road (STH 31) to the west, Old Green Bay Road to the east, and 104th St (STH 165) to the south located in the southwest fourth of Section 22, Town 1 North, Range 22 in the Village of Pleasant Prairie, Kenosha County, WI. A location map that illustrates the tract of land is included in **Appendix 1**.

The development is proposed to include the construction of high impervious development in areas suitable for development. As part of this project, Bear Development Group prepared a Wetland Impact Practicable Alternatives Analysis and permit to impact onsite wetlands and purchase credits for wetlands to be created elsewhere. Following the wetland impact, the overall 21-acre parcel will support approximately 18-acres of developable area.

This stormwater management plan is intended to design stormwater management features to allow full improvement of the phase I areas, regardless of the site layout, to allow for maximum flexibility in development options.

DESIGN CRITERIA

Village of Pleasant Prairie: Chapter 298: Stormwater Management & Drainage

Wisconsin Department of Natural Resources:..... NR 216 & NR 151.12

Water Quality: Removal of 80% of the annual total suspended solids (TSS) load.

Water Quantity: Southeastern Wisconsin Regional Planning Commission (SEWRPC) Planning Report No. 44, A Comprehensive Plan for the Des Plaines River Watershed, June 2003, requirements apply. Des Plaines River Watershed standards present maximum allowable runoff release rates of 0.04 cfs/acre, and 0.3 cfs/acre of new development for 2-year and 100-year storm events, respectively.

Infiltration: *Non-residential* - Infiltrate 60% of the average annual pre-development infiltration volume, or 10% of the 2-year, 24-hour storm, or provide an effective infiltration area equal to at least 2% of the total site area.

ANALYSIS METHODS

HydroCAD® (Version 10.00) software has been used to analyze stormwater characteristics for this stormwater management plan. HydroCAD uses the accepted TR-55 methodology for determining peak discharge runoff rates. Existing ground cover Curve Numbers were selected from the Village of Pleasant Prairie Code of Ordinances, Stormwater Management and Stormwater Drainage System Facilities. The Code of Ordinances Performance Standards specifies a maximum cropland curve number of 80 for hydrologic soil group “D” soils. Curve Numbers for the proposed ground cover were selected using the standard values specified in TR-55 for a “D” hydrologic soil group. Offsite Curve Numbers were selected as specified within WNDR Standard NR 151. NR 151 specifies a maximum cropland curve number of 83 for hydrologic soil group “D” soils. The summary pages from the Geotech report identifying the soil group characteristics are located in **Appendix 2**.

Stormwater modeling was conducted using 2-year and 100-year storm events with respective rainfall amounts of 2.69 and 5.89 inches in accordance with the current NOAA Atlas 14 Point Precipitation Frequency Estimate.

TSS reduction characteristics for the proposed water quality facilities were determined using WinSLAMM® (Version 10.1) Source Loading and Management Model.

PRE-DEVELOPMENT CONDITIONS

The existing site comprises of mostly open farmland with lowlands along the western property line that drains to a series of existing culverts or directly on to Green Bay Rd (STH 31) and into the roadway storm sewer system. There are wetlands present along portions of the existing swales on the site; the wetlands were delineated by Stantec in September of 2017 and are currently being permitted for impacts.

The site generally slopes from east to west. The eastern property line along Old Green Bay Rd has areas 18-ft higher in elevation than those in the low lands along the western property line. Under existing conditions, there are significant offsite flows from the southeast that flow onto the development site. The southmost existing box culvert under Old Green Bay Rd (C2) collects flow from the Meadowlands Basin #3 to the east, the Vintage Parc development site to the southeast, as well as the existing ditches and fringe areas along STH 165 and Old Green Bay Road. These offsite flows are labeled MB3, VP, and E2, respectively, in the existing drainage area map in **Appendix 2**. The southeast offsite flows are discharged into the grassed swale on the development site and are conveyed west to the existing dual 38"x60" culverts (C1) that convey stormwater under STH 31.

Area E3 in the existing drainage area map is conveyed by a grassed swale to a yard catchbasin that connects to the STH 31 storm system. That sewer system discharges west of STH 31 independent of culverts C1.

Additional offsite flows from the Meadowlands development to the east discharge onto the development site and are conveyed west to existing culverts that convey stormwater under STH 31. This Stormwater Management Report only pertains to the development area impacted by Phase I improvements.

Additional existing site information including the Geotech report and the Existing Conditions civil plan sheet with existing contours and culvert locations is included in **Appendix 2**.

POST-DEVELOPMENT CONDITIONS

In order to provide the most flexibility for site layout, the developable area proposed to be detained and treated by the proposed pond has been conservatively modeled as 80% impervious. This method matches the allowable impervious area based on the proposed Planned Unit Development Zoning intended for the site.

The onsite area PA1 is based on the maximum future development area that can be directed to the proposed stormwater management pond while meeting required water quality and quantity benchmarks. This plan does not account for future development to the north outside of the PA1 drainage area boundary, and the report is intended to be updated and amended once future

development to the north occurs. The proposed area PA1 was delineated in part based on the actual contributing area represented within the engineering plans prepared by Pinnacle Engineering Group for the Froedtert South Medical Building. The rest of PA1 consists of the proposed Phase I development, including the access drives north/south of the Froedtert South site, Old Green Bay roadway improvements, and future onsite development. A contributing watershed map and supporting hydrologic modeling output for the proposed conditions is located in **Appendix 3**.

As part of Phase I, roadway improvements will be made to Old Green Bay Rd that will result in the removal of the existing box culvert C2. A new storm sewer line is proposed to convey the southeast offsite areas under Old Green Bay Rd, to the proposed pond, and then ultimately to culvert C1. These offsite areas are labeled MB3, VP, OS3, and OS4 on the proposed drainage area map in **Appendix 3**. Offsite flow areas MB3 and VP are identical to those in the existing condition. OS3 and OS4 are a subdivision of existing area E2 after the roadway improvements for Old Green Bay Rd are completed.

Peak Runoff Rate Attenuation

Design post-development release rates for the proposed project have been calculated using the Des Plaines River Watershed standards of 0.04 cfs/acre and 0.30 cfs/acre for respective 2-year and 100-year rainfall events for areas which will be developed. Based on coordination with the Village of Pleasant Prairie, it was determined that flow from offsite areas could be included in the design post-development release rates. A Post-Development Hydrology Exhibit, and HydroCAD Modeling output can be found in **Appendix 3**.

Stormwater runoff peak rates will be controlled through the usage of the onsite “wet” detention basin. The basin has been situated to collect the onsite storm sewer outfalls, overland relief routing, and southeast offsite areas. Post development peak runoff rate attenuation will be achieved through the outlet control devices and available stormwater detention volume provided above the pond normal water levels.

The pond will also be fitted with an earthen spillway as a tertiary outlet to discharge stormwater runoff in excess of the 100-yr storm.

Design post-development release rates for the proposed development have been computed for the proposed watershed. Modeling includes onsite and offsite areas that will contribute to the proposed Pond.

Presentation of pertinent values from the modeling is contained within the following tables:

POST-DEVELOPMENT (PROPOSED) WATERSHED SUMMARY

Area	Area (ac)	CN	Tc (min)	2-year Peak	100-year Peak
PA1 (COMPOSITE)	10.5	94	6	36.29 cfs	86.44 cfs
Offsite Contributing Areas					
OS1 (COMPOSITE)	0.9	92	10.9	2.42 cfs	6.08 cfs
OS2 (COMPOSITE)	1.6	85	10.0	3.24 cfs	9.92 cfs
OS3 (COMPOSITE)	1.9	87	13.6	3.76 cfs	10.91 cfs
OS4 (COMPOSITE)	0.4	83	6	0.86 cfs	2.77 cfs
MB3 (REPORT + HCAD)	34.6	Varies	Varies	*9.46 cfs	*19.17 cfs
VP1-2 (EX. REPORT)	N/A	N/A	N/A	**8.38 cfs	**36.87 cfs
TOTAL	N/A	N/A	N/A	28.12 cfs	85.72 cfs

*Meadowlands Basin 2-year and 100-year storm event flows were determined by modeling the pond and drainage areas from the previously completed Hydrology Report by RSV Engineering, Inc. This previously completed report did not calculate the 2-year release rate, so the pond needed to be remodeled based on their inputs to determine that rate.

**Vintage Parc 2-year and 100-year storm event flows were taken from the previously completed Stormwater Management Report by Jenkins Survey & Design, Inc.

Relevant pages from the previously completed reports are included in **Appendix 4**. The full reports can be obtained by request.

DESIGN POST-DEVELOPMENT RELEASE RATES

Design Storm	Area (ac)	Des Plaines Standard (cfs/ac)	Des Plaines Allowable (cfs)	Offsite (cfs)	Total Allowable (cfs)
2-year	10.5	0.04	0.42	28.12	28.54
100-year	10.5	0.3	3.15	85.72	88.87

COMPARISON OF PROPOSED TO ALLOWABLE PEAK FLOWS

Discharge Point		Peak Flow 2-year (cfs)	Peak Flow 100-year (cfs)
POND	PROPOSED	*27.35 cfs	*85.53 cfs
	ALLOWABLE	28.54 cfs	88.87 cfs
	MEETS CODE (?)	YES	YES

*The proposed models for the 2-year and 100-year storm events can be found in **Appendix 3**.

Runoff Water Quality

Post-development water quality will be obtained within the wet detention basin. Impervious surfaces will be captured and conveyed into the pond per the current civil design. The primary conveyance will be accomplished through the onsite storm sewer while flows in excess of the capacity of the storm sewer will route along designed overland relief.

The basin has been designed using the parameters set forth in WDNR Technical Standard 1001. The basin features a minimum 5-foot permanent pool depth to allow for sediment settling and storage. The basin will discharge through a multi-stage outlet configuration that includes a dewatering orifice to control runoff associated with a 2-yr storm event. Water quality will be enhanced by 1-foot inlet catch basin sumps located within inlets that serve the parking lots.

To accurately model the magnitude of flow being routed through the pond, the offsite areas have been modeled in WinSLAMM even though it is not required to treat TSS from these areas. In order to only account for the TSS removal for onsite pavement, a series of “Other Devices” have been utilized within the model. The first Other Device #1 is used to remove all of the TSS loading from the offsite areas. The Other Devices #2 and #3 are used to reduce the flow volume from the Meadowlands and Vintage Parc offsite areas to match the volume being discharged under the 2-year storm event. This results in a conservative outlook for the magnitude of flow regarding WinSLAMM modeling. The overall TSS removal % accounts for the removal from Other Device #1, so only the TSS removal % from control practice “S Pond (P1)” should be considered for site compliance.

WinSLAMM modeling indicates that the pond will remove a minimum of 80% TSS prior to runoff leaving the site. Refer to **Appendix 5** for WinSLAMM modeling input/output summaries.

Stormwater Infiltration

Stormwater Infiltration has not been incorporated into this storm water management due to clayey soils and also shallow groundwater present onsite. Per DNR Technical Standard 1002, sites with clayey soils and/or shallow groundwater are exempt from NR 151 infiltration requirements.

Protective Areas

Protective areas are required along all wetlands in order to minimize impacts of pollutants from untreated impervious sources. On this project, all impervious surfaces are directed to one of the wet detention ponds which cumulatively treat the runoff to the 80% TSS removal standard. Thus protective areas are not required under this plan.

WISCONSIN DEPARTMENT OF TRANSPORTATION (WISDOT) STORM SEWER

Design Criteria

FDM 13.1.6 - Section 233.105 (3) states (3) Drainage – The owner of land that directly or indirectly discharges storm water upon a state trunk highway or connecting highway shall submit to the department a drainage analysis and drainage plan that assures to a reasonable degree, appropriate to the circumstances, that the anticipated discharge of storm water upon a state trunk highway or connecting highway following the development of the land is less than or equal to the discharge preceding the development and that the anticipated discharge will not endanger or harm the traveling public, downstream properties or transportation facilities.

FDM 13-10 Attachment 1.1- design frequency of a 50 year storm event for cross culverts and 25 year storm event for all ditches.

FDM 13-15-5.4 “Generally, the maximum high-water elevation should not be higher than the subgrade shoulder point.”

The rational method was used to determine the onsite pre-development, the offsite area, and the 120th Ave. flows.

Existing Flow at Existing Dual 38"x60" Culverts (C1)

Per FDM 13-10 Attachment 1.1 Flood Frequency Selection Chart, the design frequency for a culvert under an expressway or freeway shall be the 50-year event. In addition to analyzing the 50-year, the 25-year will also be checked. In the pre-development condition, onsite Area E1 and offsite areas E2, MB3, and VP are conveyed along the existing grassed swale and discharge at the dual 38"x60" culverts.

Using HydroCAD, the 25- and 50-year pre-development flows were calculated for areas E1, E2, and MB3 and are shown in the summary table below. The HydroCAD modeling summaries can be found in **Appendix 6**. For offsite area VP, the previously completed Stormwater Management Plan for the Vintage Parc development included calculations for the 25- and 50-year flows and those given flows are included in the summary tables.

PRE-DEVELOPMENT (EXISTING) FLOWS TO EXISTING CULVERTS C1

Design Storm	E1 (cfs)	E2 (cfs)	Meadowlands (cfs)	Vintage Parc (cfs)	Pre-Dev Total (cfs)
25-year	30.54	11.06	*15.85	**25.84	83.29
50-year	37.36	13.38	*17.56	**30.96	99.26

*Meadowlands Basin 25-year and 50-year storm event flows were determined by modeling the pond and drainage areas from the previously completed Hydrology Report by RSV Engineering, Inc.

**Vintage Parc 25-year and 50-year storm event flows were taken from the previously completed Stormwater Management Report by Jenkins Survey & Design, Inc.

Relevant pages from the previously completed reports are included in **Appendix 4**. The full reports are available upon request.

Proposed Flow at Existing Dual 38"x60" Culverts (C1)

The onsite Post-development model in HydroCAD (see analysis method above) was modified to calculate the 25- and 50-year storm events having rainfall amounts of 4.53 inches, and 5.19 inches respectively. The rainfall amounts were obtained from the NOAA Atlas 14, Volume 8, Version 2. Under post-development proposed conditions, all the flow conveyed by the existing dual culverts (C1) is first routed through the proposed pond. The HydroCAD modeling summary can be viewed in **Appendix 6**.

POST-DEVELOPMENT (PROPOSED) FLOWS TO EXISTING CULVERTS C1

Design Storm	Pond P1 (cfs)	Post-Dev Total (cfs)	Pre-Dev Total (cfs)	% Reduction
25-year	73.40	73.40	83.29	11.9%
50-year	79.15	79.15	99.26	20.3%

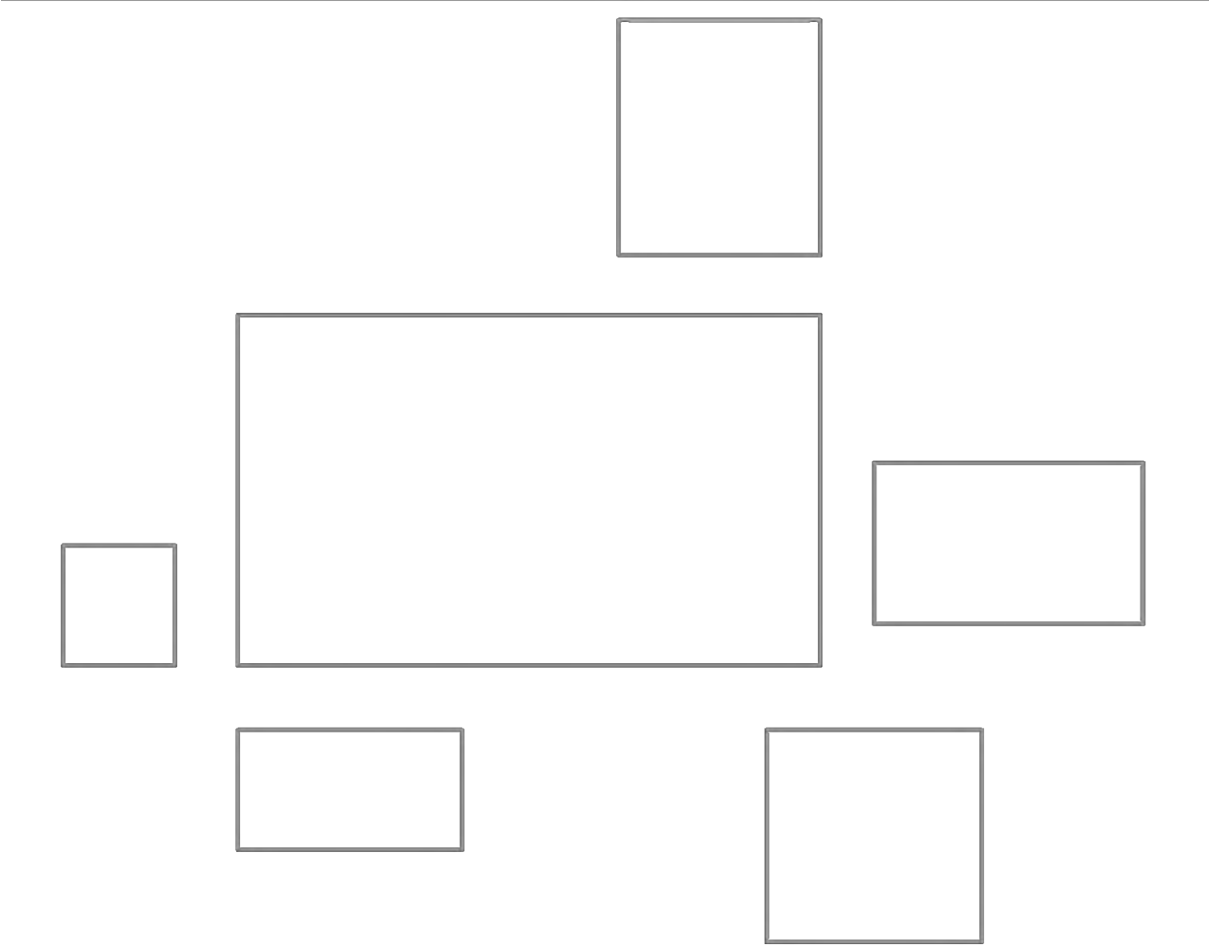
The flows listed above represent the areas affected by the proposed Main Street Market Phase I development along with the offsite areas draining to the existing dual culverts C1. They do not include the areas to the north that drain to the other existing culverts that cross STH 31 as they will remain undeveloped. The onsite development is located completely within the watershed for the existing dual culverts C1.

Des Plaines River watershed flow requirements are very restrictive, which results in reduced flow being conveyed to the existing dual culverts C1 under proposed conditions. The detention provided by the proposed pond provides a significant reduction in flows for the 50- and 25-year storms. According to the FDM 13-10 Attachment 1.1 Flood Frequency Selection Chart, the post-development flow to the culvert is less than or equal to the pre-development flow for the 50-year storm, so the proposed plan is in compliance.

CONCLUSION

The stormwater management features for the Main Street Market Phase I development have been designed to comply with the SEWRPC Planning Report No. 44 A Comprehensive Plan for the Des Plaines River Watershed, Village of Pleasant Prairie Code of Ordinances, and WDNR technical standards NR151 and NR216. Proposed runoff rates will be reduced for 2-year and 100-year storm events to meet Des Plaines River Watershed standards and also to ensure downstream conveyance capacity. Storm water runoff from the development site will be treated to remove at least 80% total suspended solids annually through wet detention. It is believed the site meets criteria set forth in WDNR NR 151 to be exempt from infiltration requirements; therefore, infiltration measures have not been included in this storm water management plan.

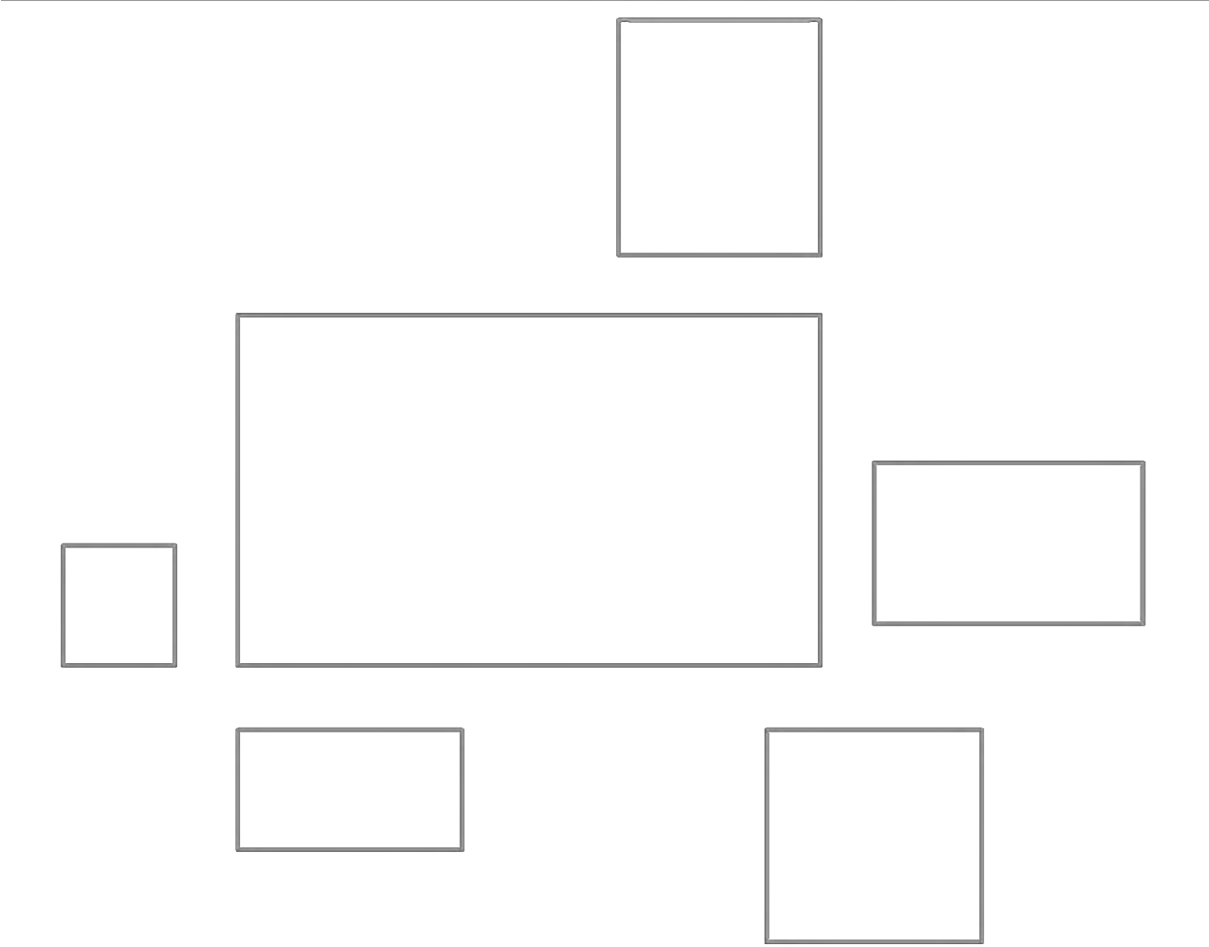
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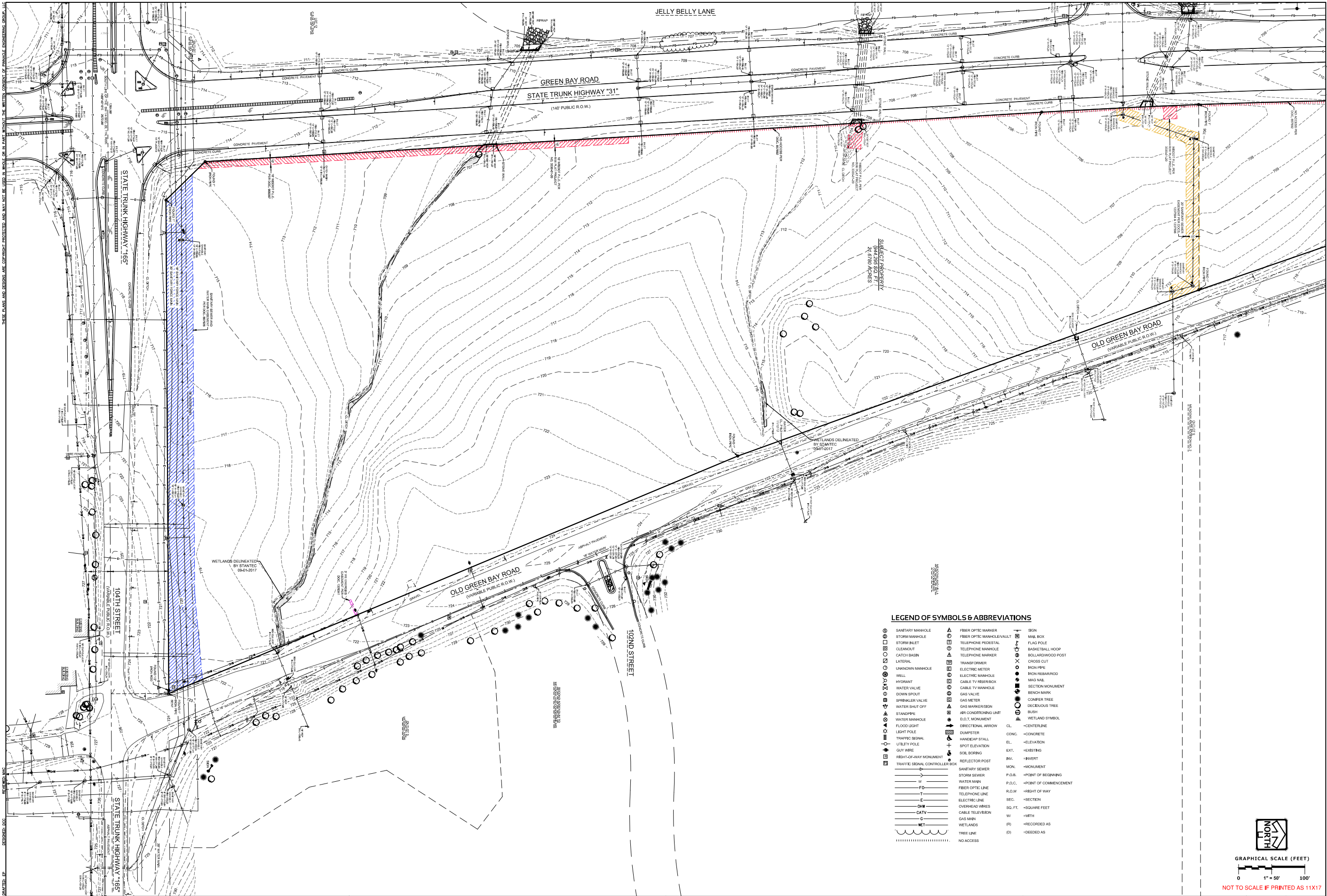



Google Maps Main Street Market - Vicinity Map



Imagery ©2018 Google, Map data ©2018 Google 500 ft







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MAIN STREET MARKET PHASE 1
GREEN BAY RD. & 104TH ST. PLEASANT PRAIRIE, WI

EXISTING CONDITIONS PLAN

REVISIONS	

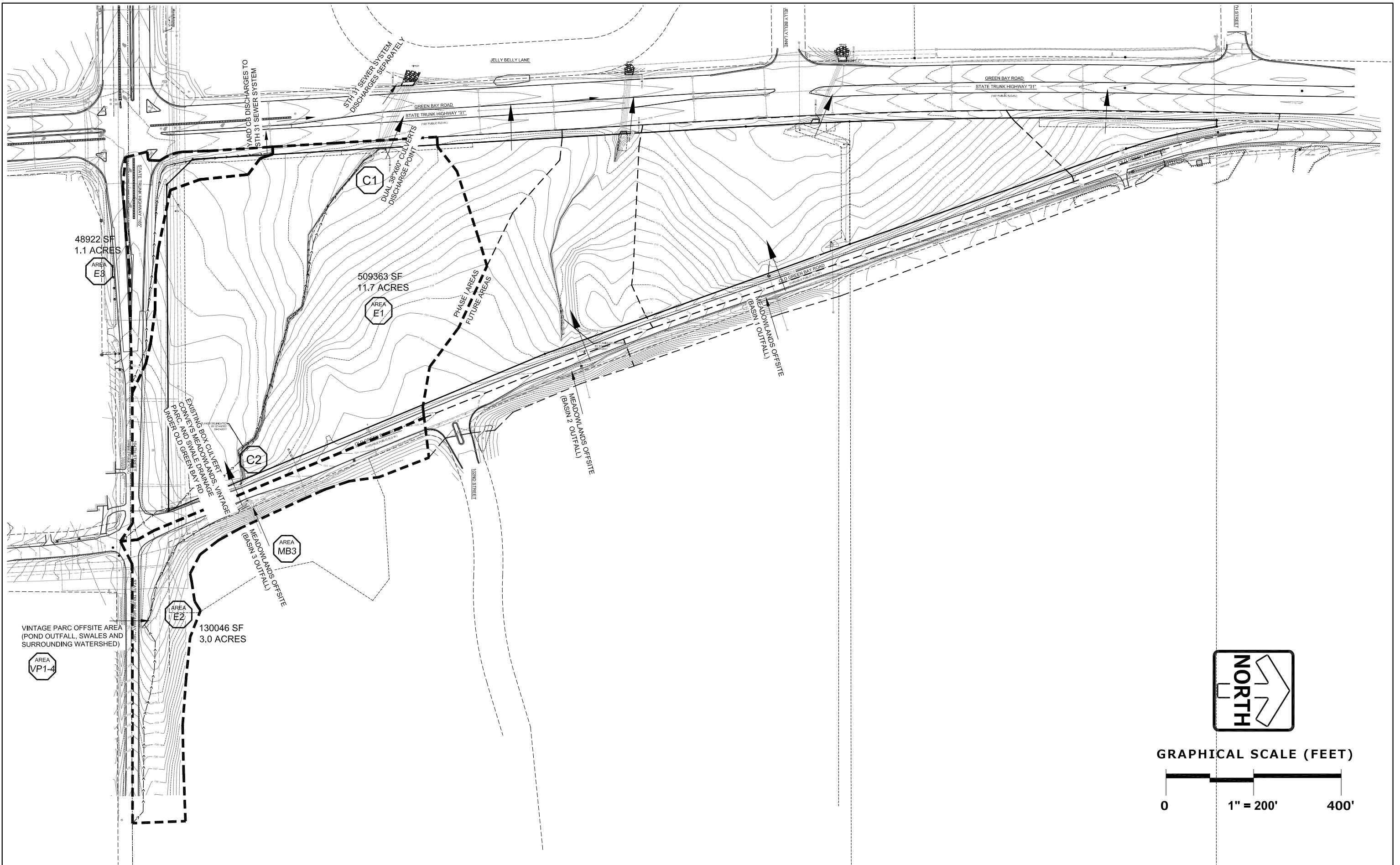
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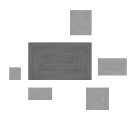
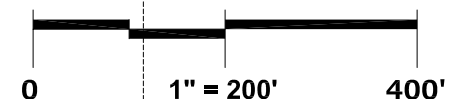
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CHECKED: JAC
DATE: 12-05-17

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GRAPHICAL SCALE (FEET)



MAIN STREET MARKET PHASE I - EXISTING DRAINAGE AREA MAP

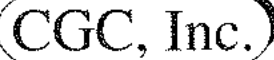
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Construction • Geotechnical
Consulting Engineering/Testing

September 21, 2017
CM17145

Mr. Daniel Szczap
Bear Development, LLC
4011 80th Street
Kenosha, WI 53142

Re: Preliminary Geotechnical Exploration and Evaluation
Proposed Main Street Market Development
NEC Green Bay Road (STH 31) and 104th Street
Pleasant Prairie, Wisconsin

Dear Mr. Szczap:

Construction • Geotechnical Consultants, Inc. (CGC) has completed the preliminary subsurface exploration for the proposed Main Street Market Development in Pleasant Prairie, Wisconsin. The purpose of this exploration was to evaluate the subsurface conditions across the site and to provide preliminary geotechnical-related recommendations regarding site preparation, foundation, floor slab, below-grade wall and pavement design/construction. An electronic copy of this report is being provided for your use. A paper copy can be provided upon request.

PROJECT DESCRIPTION

We understand the proposed development will consist of the Main Street Market which will include various commercial and retail type buildings. Based on the preliminary site plans provided, we understand the development may include up to seven (7) buildings. The buildings will generally consist of one-story slab-on-grade structures. However, a medical clinic is also proposed and is currently planned to consist of a four-story building with a basement, a portion of which may include a walk-out level. Based on the planned construction, and our experience with past similar projects, we anticipate the maximum column loads will range between about 50 to 200 kips and wall loads will vary from about 2 to 5 kips per lineal foot.

Based on our review of elevation contours included on a topographic map obtained from the Kenosha County GIS Mapping website, site grades slope from the eastern side of the site (between about EL 715 to 725 ft along Old Green Bay Road) down to the west (between about EL 705 to 715 ft along STH 31). In addition, several drainage swales and wetland areas extend through the property roughly from east to west. Based on the variable site grades, we anticipate that mass grading will likely be required to establish site grades.

Because the project is in the preliminary/conceptual phase, specific details were not available at the time of this report, including targeted finished floor elevations for the buildings. Therefore, only



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preliminary recommendations are provided in this report and we understand that additional/supplemental exploration will likely be performed once development plans are finalized.

EXPLORATION PROGRAM

The subsurface conditions throughout the development site were explored by drilling a series of fourteen (14) test borings. Ten (10) borings (designated as Borings B-1 through B-10) were drilled within possible future structure areas to depths of 15 to 25 ft. Four (4) borings (designated as Borings SW-1 through SW-4) were drilled within stormwater infiltration basin areas to a depth of 20 ft. The standard penetration test (SPT) borings were drilled on August 15 and 16, 2017. The borings were drilled by Professional Testing Services (under subcontract to CGC) using either a truck-mounted CME-55 drill rig or an ATV track-mounted Geoprobe® equipped with hollow-stem augers and automatic SPT hammers. The number and location of the borings were selected by the client. The boring locations were roughly field staked by CGC prior to the exploration; however, the boring locations in the southern portion of the site should be considered approximate due to the existing dense corn field. The actual locations and the ground surface elevations at the boring locations were determined subsequent to the drilling operations by V2G Surveying, LLC. Specific procedures used for drilling and sampling are described in Appendix A. The approximate boring locations are shown in plan on the Soil Boring Location Map presented in Appendix B.

Water level observations were made in each soil boring during and immediately upon completion of the drilling operation. Representative samples of the subsoils were also collected during the field exploration for classification and laboratory testing. The soils were classified by a geotechnical engineer using the Unified Soil Classification System (USCS) and the samples collected from the stormwater borings (i.e., Borings SW-1 through SW-4) were also classified in accordance with the descriptive procedures, terminology and interpretations presented by the USDA-NRCS Field Book for Describing and Sampling Soils (version 2.0, dated September 2002). Pocket penetrometer readings were also obtained on intact cohesive samples, where appropriate, to aid in the evaluation of their shear strength properties. The final logs and soil evaluation-storm form prepared by the engineer per the USCS and USDA procedures are presented in Appendices B and F, respectively.

SITE CONDITIONS

A. Surface Conditions

The subject property is triangular in shape and consists of two separate parcels covering an area of about 20.8 acres. The site is bound by Green Bay Road (STH 31) to the west, Old Green Bay Road to the east/northeast and STH 165 (104th Street) to the south. Neighboring sites consist of residential

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buildings to the east, industrial buildings to the west and undeveloped land and residences to the south. Currently, the majority of the southern portion of the site consists of a corn field with some heavy wooded/brush areas and the northern portion of the site is grass/weed covered. Several swales and wetland areas are located in the southern half of the property and a buried sanitary sewer line and associated easement extend east-west through the northern portion of the property. Based on aerial photograph review on the Kenosha County GIS Mapping website, an apparent farmstead with several outbuildings was previously located on the west side of Old Green Bay Road, near the southeast corner of the site. Those structures were no longer evident on-site and the area was covered with thick brush. As discussed earlier in this report, site grades slope from the eastern side of the site (between about EL 715 to 725 ft along Old Green Bay Road) down to the west (between about EL 705 to 715 ft along STH 31).

B. Subsurface Conditions

The subsurface profiles encountered at the test boring locations were generally consistent and can be described by the following generalized profile, in descending order:

- Surficial materials consist of about 6 to 16 in. of **topsoil** with the exception of Borings SW-2 and SW-4, where 32 in. and 22 in., respectively of **topsoil** was encountered; underlain by
- Generally stiff to hard **native lean clay to silty clay** with trace to little sand and gravel extending to at least 15 ft to 25 ft. Exceptions were encountered at Boring B-3 where a medium dense **native sand** layer was encountered between depths of about 12 to 17 ft, at Boring SW-1 where medium dense **silty fine sand** was encountered between about 12 to 17 ft and was underlain by very stiff **silty clay to clayey silt** to 20 ft, the maximum depth explored, and at Boring SW-2 where medium dense **silty fine sand over fine to coarse sand** was encountered to at least 20 ft, the maximum depth explored.

Pocket penetrometer readings were performed on relatively undisturbed samples of the clayey soils to provide an estimate of the soil's unconfined compressive strength. Pocket penetrometer readings varied from 0.5 to 4.5 tsf, but were typically between 2.0 to 4.5 psf, indicating a very stiff to hard consistency. SPT N-values in the encountered sand soils ranged from 10 to 21 blows per foot, generally indicating a medium dense relative density.

C. Groundwater Conditions

Groundwater was encountered within Borings B-3, SW-1 and SW-2 during and/or upon completion of drilling at depths ranging from about 8 to 17 ft below existing grades. The measured water levels

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are generally consistent with the encountered sand layers in those borings. No free water was encountered in the remaining test borings during or upon completion of drilling. Based on the encountered water levels and soil coloration, we believe the long-term groundwater level is approximately 6 to 13± ft below the existing ground surface, corresponding to the depths in which the soils transition in color from brown to gray. Higher groundwater levels are possible (at least seasonally) at the site as indicated by the redoximorphic features (i.e., soil mottling) in the natural soils. Water levels can be expected to fluctuate across the site based on such factors as seasonal variations in precipitation, infiltration and surface runoff.

More detailed information regarding the subsurface and groundwater conditions is presented on the soil boring logs contained in Appendix B.

SITE EVALUATION AND PRELIMINARY RECOMMENDATIONS

Based on the findings from the exploration, the site generally contains moderately high strength soils and, in our opinion, can generally be developed as intended, with planned structures being supported by conventional spread footings. However, due to the presence of relatively thick surficial topsoil in some portions of the site, the presence of drainage swales, existing wetlands and the former farmstead structures located in the southeastern corner of the site, special site/subgrade preparation measures may be required in some areas to develop suitable subgrades for future foundation, floor slab and/or pavement support. The extent of subgrade improvement required can be better assessed once development plans are formulated for the site, including the actual siting of buildings on the property, as well as finished floor and/or pavement grades established. Preliminary recommendations for site preparation, foundation, floor slab, below-grade wall, pavement and stormwater infiltration basin design/construction, are presented in the following subsections. Additional information regarding the conclusions and recommendations presented in this report is discussed in Appendix C.

A. Site Preparation

Initial site preparation is recommended to consist of removal of surficial vegetation and topsoil at least 10 ft beyond the proposed building(s) and pavement limits. Based on the findings of the borings, the topsoil thickness typically ranges between 6 and 16 inches across the site, but thicker topsoil deposits (32 in. and 22 in.) were encountered at Borings SW-2 and SW-4, respectively, and deeper deposits may extend into proposed building and pavement areas, considering the heavily vegetated nature of the site and the presence of drainage swales and wetland areas. These soils are generally not considered suitable for re-use as structural fill and should be stockpiled in designated areas beyond the construction limits, or removed from the site. However, these soils may be used



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in landscape areas. If any remnants of the previous structures in the southeastern corner of the site remain or are encountered within planned building and pavement areas, we recommend complete removal of the remnants to facilitate construction of the proposed buildings. Any existing utilities located within the planned new building areas are recommended to be removed and re-routed outside of the building areas and any resulting excavations backfilled with engineered fill in accordance with the recommendations of this report.

While site development plans are in the conceptual stage at this time, it is anticipated that some cutting and filling will likely be required to develop proposed site grades. Following the recommended initial site preparation as discussed in the preceding paragraphs, the exposed subgrades are expected to consist of natural soils generally described as lean clay. To evaluate the suitability of these soils as a supporting medium for development of required fill embankments and/or pavement areas, we recommend the exposed subgrades be evaluated by thoroughly proof-rolling the site with a loaded tri-axle dump truck, scraper or a similar piece of rubber-tired construction equipment. The purpose of proof-rolling is to check the overall stability of the exposed subgrade, as well as for identifying soft or yielding conditions that may require recompaction or undercutting prior to fill placement. If unstable areas are detected, an initial attempt should be made to aerate and densify the subgrade by recompaction where natural moisture contents are at appropriate levels (i.e., on the dry side of optimum moisture content). If this procedure is ineffective, the disturbed soils should be undercut and replaced with compacted fill and/or stabilizing materials such as an imported 3-in. breaker rock. A relatively firm, non-yielding subgrade should be established prior to proceeding with fill placement.

After the subgrade is prepared as recommended, we recommend that fill placement proceed as necessary to establish planned subgrade elevations. The exposed subgrade should be thoroughly compacted with an appropriate piece of construction equipment prior to placement of fills on the site. It is our opinion that the non-organic soils present across the site may be used to develop building and pavement area subgrades. However, the use of these soils in structural areas will require close observation on a regular basis during fill placement including the monitoring of moisture contents, compaction levels and the overall stability of the prepared fill subgrade. Selection, placement and compaction of engineered fills should be in accordance with the guidelines presented in our "Recommended Compacted Fill Specifications" included in Appendix D. Engineered fills placed below structures and pavement areas should be compacted to a minimum of 93 to 95% modified Proctor (ASTM D1557). Regular field density testing should be conducted during fill placement to confirm that satisfactory compaction levels are being achieved.

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B. Seismic Design Category

In our opinion, the average soil/rock properties in the upper 100 ft of the site (based on hand penetrometer readings typically greater than 1.0 tsf on average) can be characterized as a very dense soil profile. This characterization would place the site in Site Class C for seismic design according to the International Building Code (see Table 1613.5.2).

C. Building Foundations and Floor Slabs

Based on the conditions encountered at the boring locations and assuming site preparation is performed as recommended in this report, we anticipate foundation bearing soils will generally consist of a combination of natural stiff to hard lean clay and newly-placed engineered fill. For preliminary planning purposes, net, allowable soil design pressures in the range of 3000 to 4000 psf can be used to size footings in the natural very stiff/hard clayey soil deposits or on engineered granular fills. Footings bearing on engineered clay fills would be limited to a design value of 3000 psf. The development of specific design parameters can be provided with supplemental exploration and/or engineering analysis once the actual siting of structures occurs on the site, and targeted finished floor grades are established.

After preparing the site(s) as described in the subsection entitled "Site Preparation," soils present at the floor slab elevations should generally be suitable for slab-on-grade construction. Subgrade soils beneath slabs are anticipated to consist of either the natural soils or engineered fills.

Other parameters to be used for foundation design include the following:

Minimum Foundation Widths:

- Continuous wall footings: 18 in.
- Individual column pads: 30 in.

Minimum Footing Depths:

- Exterior/perimeter footings: 4 ft
- Interior footings: No minimum required

Note: In unheated space, all footings should be a minimum of 4 ft in depth below finished site grades.

We recommend that footing subgrades be observed by a CGC representative prior to footing construction to check that bearing soils are consistent with the findings of the borings and/or any supplemental exploration completed. Where undercutting is required, the base of the undercut

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excavation should be widened beyond the footing edges at least 0.5 ft in each direction for each foot of undercut depth for stress distribution purposes. Granular backfill compacted to at least 95% compaction (ASTM D1557) or well-compacted 3-in. dense graded base can be used to re-establish footing grade. As an alternate to the use of engineered fill, the undercut excavations could be backfilled with structural lean-mix concrete (i.e., 500 psi). If lean-mix concrete is used, the foundation excavations should be a minimum of 1 foot wider than the footing (6 in. on each side). CGC should be present during footing excavations to determine whether subgrades are satisfactory for the design bearing pressure and to advise on corrective measures, where necessary.

D. Below-Grade Wall Design

We understand the planned medical clinic associated with the development will have a basement. We anticipate that the lower level walls will be laterally restrained by the floor slab and ground level framing. Therefore, *at-rest lateral earth pressures* should be used during design. To minimize the development of such pressures, granular backfill should be placed within 4 to 6 ft of the walls. The importation of granular soils for this purpose will be required. We recommend that a perimeter drainage system be included to intercept potential surface water infiltration and that the granular backfill placed behind the walls be continuously connected to this system. The perimeter drainage system should be sloped to drain to a sump pit. To impede the inflow of surface moisture, the final 2 ft of backfill placed along the lower level walls should consist of a clayey fill cap or other semi-impermeable material such as asphaltic or concrete pavement. The clay cap or pavement should be graded in a manner which promotes positive drainage away from the walls. Recommended perimeter drain details are attached to this report in Appendix E.

Before placing the wall backfill, the exterior walls should be damp-proofed with a spray-applied or mopped-on rubber or bituminous sealer. Compaction of the backfill within 3 to 5 ft of the walls should be performed with lightweight compaction equipment. The granular backfill should be compacted to a minimum of 90% modified Proctor (ASTM D1557) following Appendix D guidelines.

Walls constructed in accordance with the above recommendations may be designed for an equivalent fluid pressure of 55 psf per foot of depth. The basement wall design should also take into account surcharge effects which could be applied during or after construction. Exterior retaining walls (if any) which are free to rotate slightly will be subjected to *active lateral earth pressures* and may be designed for an equivalent fluid pressure of 35 psf per foot of depth.

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E. Pavement Design

We anticipate that pavement areas throughout the proposed development will be located within both cut and fill areas, and therefore the subgrade soils are expected to consist of predominantly lean clay soils (i.e., fill and natural) similar to those encountered in the borings. The prevailing clayey soils present on the site typically exhibit a fairly high potential for frost action, and a resulting reduction in strength and pavement support capability is expected during the spring when thawing conditions exist. Therefore, flexible pavement designs should be based on a CBR value of 3 to 5 for the prepared subgrade, and should include appropriate subbase and base course components. For purposes of design, fills placed within pavement areas are assumed to be compacted to a minimum of 95% modified Proctor (ASTM D1557). Prior to base course placement, pavement subgrades should be proof-rolled/recompacted as described in the Site Preparation subsection of this report and stabilized as needed with breaker rock or replaced with compacted fill.

We assume the pavements within the access drives will be subjected to light to moderate truck traffic (i.e., Traffic Class II), with daily ESALs of 3 or less. The light duty vehicle parking areas are expected to be exposed to automobile traffic (i.e., Traffic Class I) with limited truck traffic. The clay soils (i.e., fill and/or natural) will control the pavement thickness design. Accordingly, the pavement sections tabulated below were selected based on the earlier stated CBR value of 3 to 5, Wisconsin Asphalt Pavement Association (WAPA) design guidelines and a design life of 15 to 20 years.

**Table 1
 Recommended Pavement Sections**

Material	Thickness (in.)			WisDOT Specification ²
	Surface Parking Lots		Heavy Duty Access Drive (<3 ESALs)	
	≤50 Stalls (<1 ESAL)	>50 Stalls (1-2 ESALs)		
Bituminous upper layer	1.5	1.75	1.75	Section 460, Table 460-1, 9.5 mm and 12.5 mm
Bituminous lower layer	2.0	2.25	2.25	Section 460, Table 460-1, 19.0 mm
Dense graded base (fully-fractured crushed stone)	8.0	9.0	10.0	Sections 301 and 305, 31.5 mm and 75 mm
Total Thickness	11.5	13.0	14.0	

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Notes:

1. Wisconsin DOT *Standard Specifications for Highway and Structure Construction*, latest edition, including supplemental specifications, but excluding limitations in Section 460.3.2 relating layer thickness to aggregate size.
2. Compaction requirements:
 - Bituminous concrete: Refer to Section 460-3.
 - Base course: 95% modified Proctor (ASTM D1557); also refer to Section 301.3.4.2, Standard Compaction.
3. Type LT (i.e., SuperPave Type E-0.3) or equivalent asphaltic pavement is recommended. Refer to Section 460, Table 460-2 of the *Standard Specifications*.
4. A stabilization/subbase course consisting of coarse aggregate (e.g., 3-in. dense graded base, select crushed material, breaker run stone, etc.) may be required in areas where yielding and/or unstable subsoil conditions may be exposed at pavement subgrade. Alternately, utilization of a biaxial geogrid (i.e., Tensar BX1100 or equivalent) below an increased thickness of base course (i.e., minimum of 12 in.) has also proven successful in addressing variable subgrade conditions and reducing the extent of undercutting of problematic soils.

Note that if traffic volumes are greater than those assumed, CGC should be allowed to review the recommended pavement sections and adjust them accordingly. The pavement design assumes a stable/non-yielding subgrade and a regular program of preventative maintenance. Alternative pavement designs may prove applicable and should be reviewed by CGC. If there is a delay between subgrade preparation and placing the base course, the subgrade should be recompacted.

Pavement areas subjected to concentrated wheel loads (i.e., loading dock pads, dumpster pads, etc.) should be constructed of Portland cement concrete. The slab should be a minimum of 6-in. thick, be underlain by a minimum of 6 in. of 1.25-in. dense graded base and should contain mesh reinforcement for crack control. A subgrade modulus of 150 pci should be used for concrete pavement design on proof-rolled/recompacted sand or clay subgrades.

The site is underlain by predominantly lean clay soils that are relatively impermeable. Therefore, we recommend that consideration be given to installing pavement underdrains, such as finger drains around catch basins or directed to the planned stormwater basin areas, to minimize the accumulation of water within the subgrade soils and/or base course. The final pavement surface should be constructed to direct surface water off of the existing pavement to suitable drainage infrastructure.

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Maintenance and repair, as needed, of the pavement areas should be performed on a regular basis to keep pavements in a serviceable condition. The maintenance program is recommended to be implemented early in the pavement life to be effective. Failure to perform regular maintenance could reduce the service life of the pavement.

F. Stormwater Infiltration Potential

We understand stormwater management basins are planned in the southwest corner and near the north side of the site along Green Bay Road. Details regarding the basins, including bottom elevations, were not available at the time of this report. Borings SW-1 and SW-2 were drilled within the vicinity of the southwest stormwater management basin and Borings SW-3 and SW-4 were drilled in the northern basin area.

In general, the soils conditions at Borings SW-1 through SW-4 consist of natural silty clay and silty clay loam (USCS lean clay) to depths of about 12 ft and 8 ft, respectively. At Borings SW-3 and SW-4, the prevailing clays extend to the maximum depth drilled (i.e., 20 ft). Below the silty clay loam and silty clay at Boring SW-1, loamy sand (USCS silty fine sand) was encountered between depths of about 12 and 17 ft, underlain by silty clay loam to at least 20 ft, the maximum depth explored. Below the silty clay loam and silty clay at Boring SW-2, loamy sand (USCS silty fine sand to fine to coarse sand) was present in the subsoil profile between a depth of about 8 ft and extended to at least 20 ft, the maximum depth explored. Refer to the soil boring logs in Appendix B and the Soil Evaluation-Storm form in Appendix F for more specific details at each basin location.

The following parameters should be considered for design of infiltration features in the area of Borings SW-1 through SW-4:

Infiltration Potential: The following infiltration parameters were estimated using Table 2 of the WDNR Conservation Practice Standard 1002, *Site Evaluation for Storm Water Infiltration*. The estimated infiltration rates are as follows:

- | | |
|--------------------------|-------------|
| • Silty clay loam (SiCL) | 0.04 in./hr |
| • Silty clay (SIC) | 0.07 in./hr |
| • Loamy sand (LS) | 1.63 in./hr |

Note that the infiltration rates should be considered approximate since they are merely based on soil texture and do not account for in-place soil density and other factors, which will affect the infiltration rate. Where the subsoils contain soil layers of varying texture, the infiltration rate of the soil with the lower infiltration rate will control vertical infiltration.

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Groundwater: Groundwater was encountered within Borings SW-1 and SW-2 at depths ranging from about 8 to 10 ft while drilling and at a depth of about 15 ft in SW-1 upon completion of drilling. The observed water levels generally coincided with the occurrence of the loamy sand soils within the subsoil profile. No free water was encountered during or upon completion of drilling at Borings SW-3 and SW-4. Soils with redoximorphic (i.e., mottling) features were encountered at each of the stormwater borings, generally directly below the surficial topsoil and extending to depths ranging from about 6 to 8 ft below existing grades. Based on the soils encountered, we estimate the seasonal high-water table (SHW) in the area of Borings SW-1 through SW-4 to be located at a depth of about 1 to 2.5 ft below the existing site grades. The predominant silty clay loam and silty clay soils and the apparent seasonal high-water table at shallow depths are considered to be limiting layers and the site, in our opinion, is considered to be “exempt” according to NR 151. Groundwater levels should be expected to fluctuate, as previously discussed.

Bedrock: No bedrock was encountered within Borings SW-1 through SW-4 to the maximum depth of the borings, 20 ft.

The Soil Evaluation-Storm form prepared by the CST per USDA procedures is presented in Appendix F.

CONSTRUCTION CONSIDERATIONS

Due to variations in weather, construction methods and other factors, specific construction problems are difficult to predict. Soil related difficulties which could be encountered on the site are discussed below:

- Due to the potentially sensitive nature of the on-site clayey soils, we recommend that final site grading activities be completed during dry weather, if possible. Construction traffic should be avoided on prepared subgrades to minimize potential disturbance.
- Contingencies in the project budget for subgrade stabilization with 3-in. dense graded base and/or breaker rock in pavement and slab areas should be increased if the project schedule requires that work proceed during adverse weather conditions.
- Earthwork construction during the early spring or late fall could be complicated as a result of wet weather and freezing temperatures. During cold weather, exposed subgrades should be protected from freezing before and after footing construction. Fill should never be placed while frozen or on frozen ground.

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- All excavations extending greater than 4 ft in depth below the existing ground surface should be sloped in accordance with current OSHA standards.
- Based on observations made during the field exploration, groundwater infiltration into footing excavations is not generally expected to be a problem. However, water accumulating at the base of the open excavation as a result of precipitation or seepage from intercepted sand seams should be quickly removed using pumps operating from filtered sump pits, with means and methods the contractor's responsibility.

RECOMMENDED CONSTRUCTION MONITORING

The quality of the foundation and lower level slab subgrades will be largely determined by the level of care exercised during site development. To check that earthwork and foundation construction proceeds in accordance with our recommendations, the following operations should be monitored by CGC:

- Basement excavation, subgrade proof-rolling and undercutting;
- Fill placement and compaction;
- Foundation excavation; and
- Concrete placement.



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* * * * *

It has been a pleasure to serve you on this project. We trust this information is satisfactory for preliminary assessment of the site and for general planning purposes. Prior to final design, it is recommended that an evaluation be made regarding the need for supplemental exploration of the site conditions. We can provide final foundation and pavement recommendations after site development concepts are formulated. If you have any questions or need additional consultation, please contact us.

Sincerely,

CGC, INC.

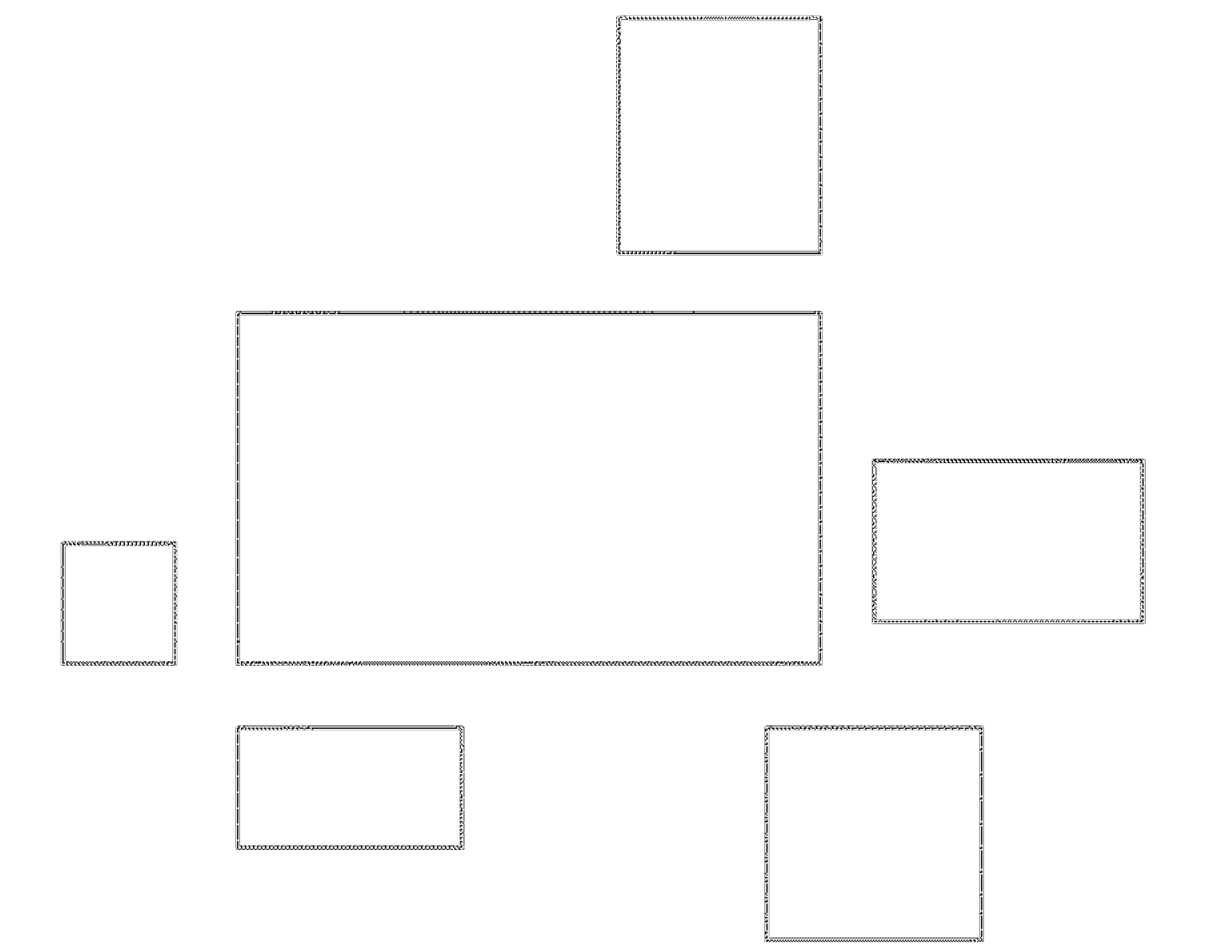
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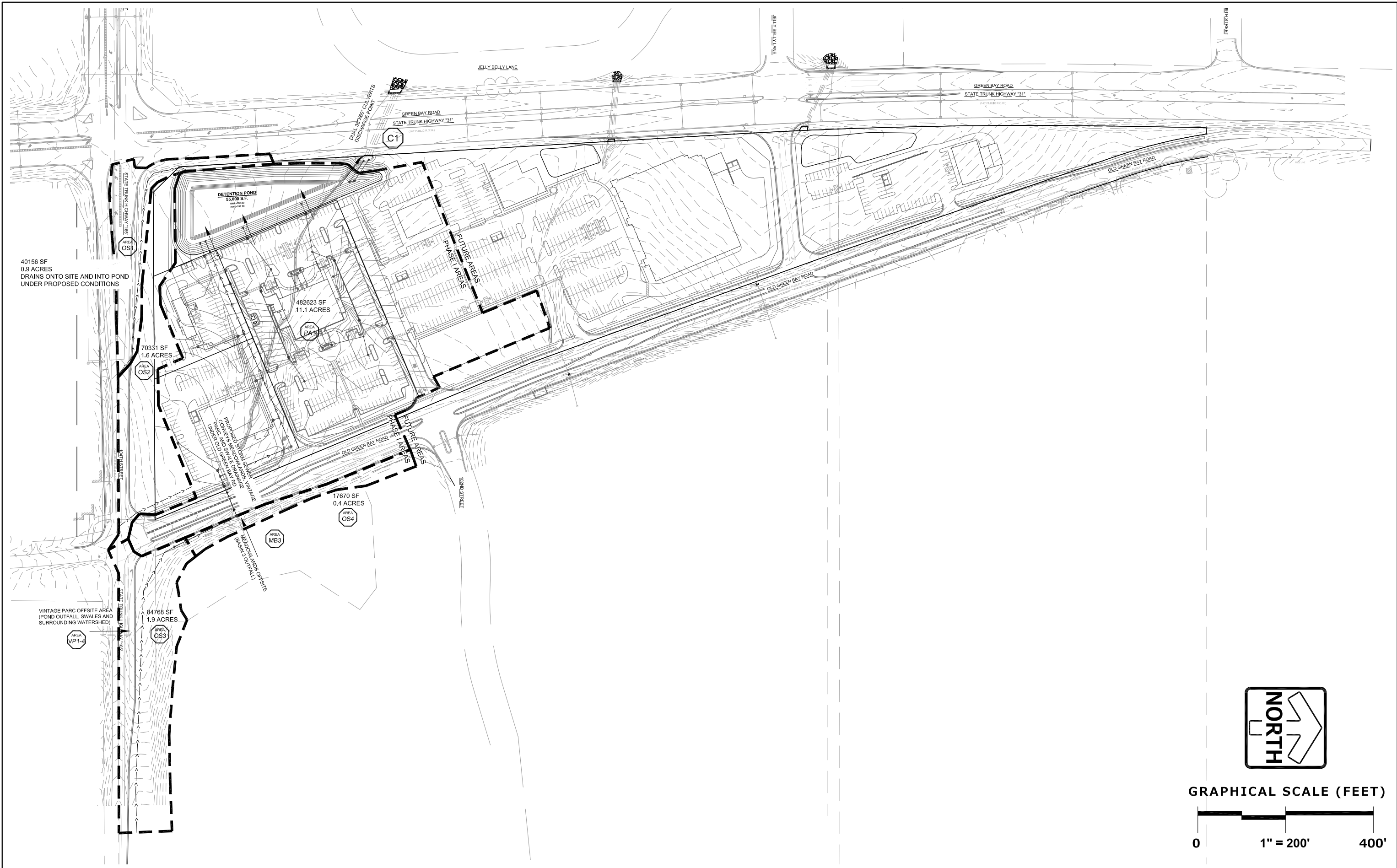
Paul J. Giose, P.E., C.S.T.
Consulting Professional

A handwritten signature in black ink, appearing to read "Jeff P. Simkowski", is written over the printed name.

Jeff P. Simkowski, P.E.
Senior Consulting Professional

- Encl: Appendix A - Field Exploration
Appendix B - Soil Boring Location Map
Logs of Test Borings (14)
Log of Test Boring-General Notes
Unified Soil Classification System
Appendix C - Document Qualifications
Appendix D - Recommended Compacted Fill Specifications
Appendix E - Perimeter Drain Details
Appendix F - WI Dept. of Safety & Professional Services Soil Evaluation-Storm Form
(Borings SW-1 through SW-4)





MAIN ST MARKET PHASE I - PROPOSED DRAINAGE AREA MAP

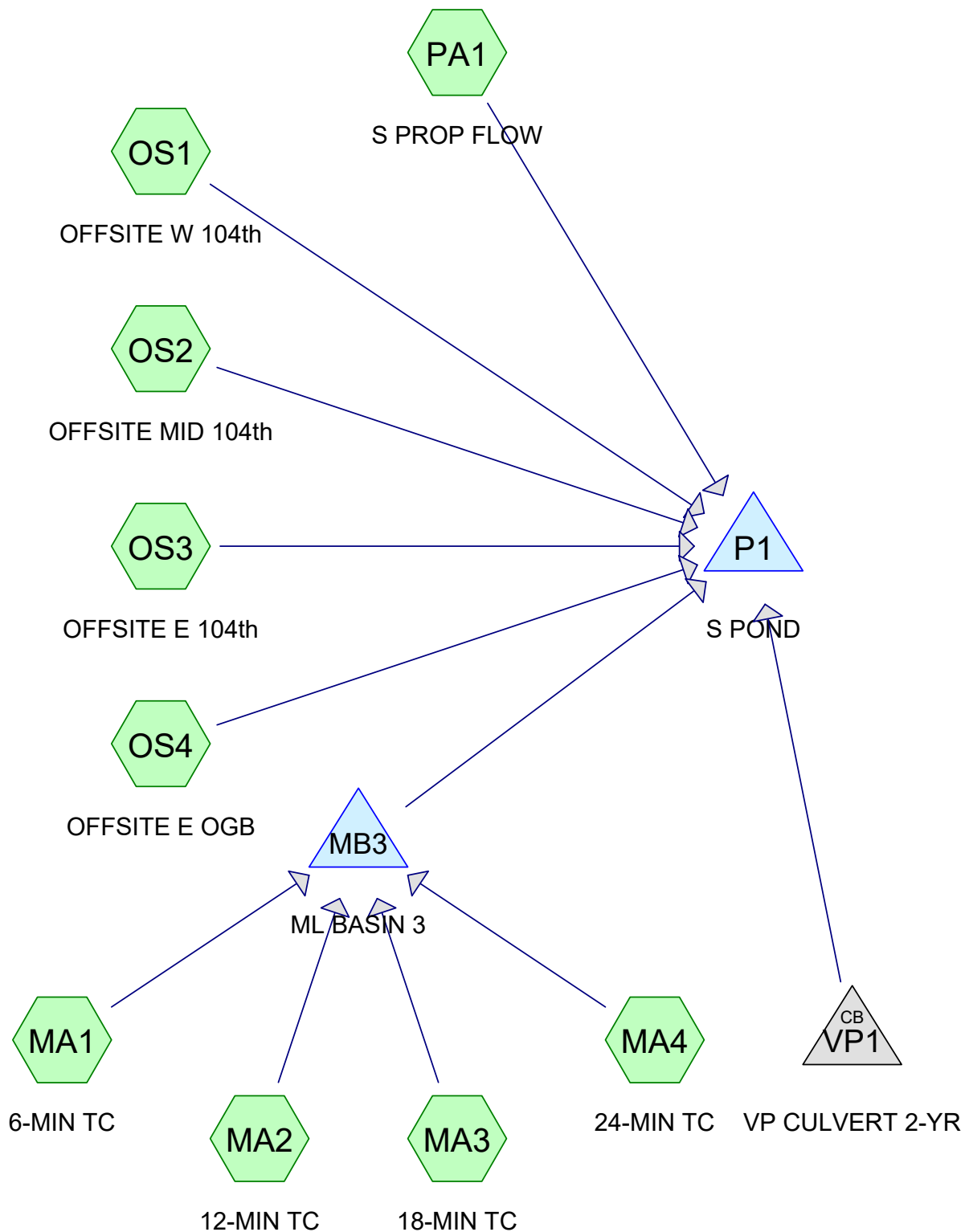
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Summary for Subcatchment MA1: 6-MIN TC

Runoff = 20.60 cfs @ 12.13 hrs, Volume= 0.972 af, Depth= 1.62"

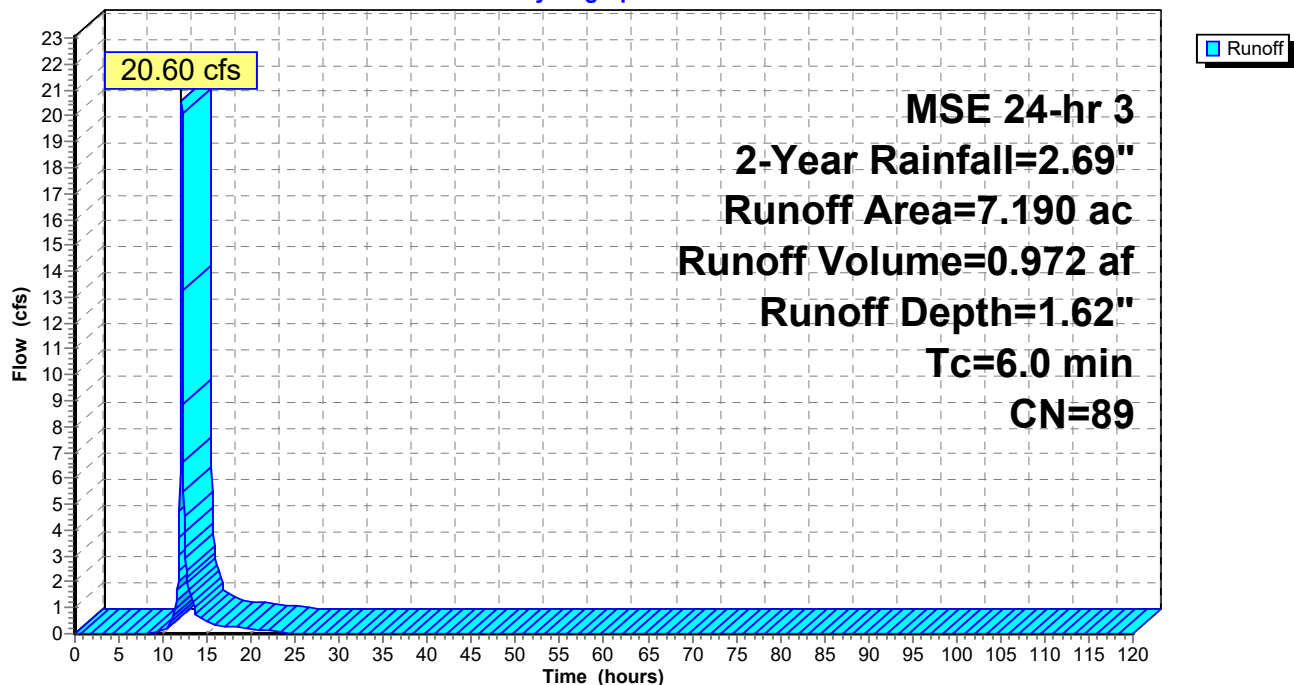
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-Year Rainfall=2.69"

Area (ac)	CN	Description
* 1.380	81	D12
* 0.440	90	D16
* 0.550	84	D18
* 0.540	81	D27
* 0.390	80	D28
* 0.410	80	D29
* 2.800	98	D33
* 0.090	98	D34
* 0.080	98	D35
* 0.510	87	D36
7.190	89	Weighted Average
4.220	83	58.69% Pervious Area
2.970	98	41.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, GIVEN FROM MEADOWLANDS

Subcatchment MA1: 6-MIN TC

Hydrograph



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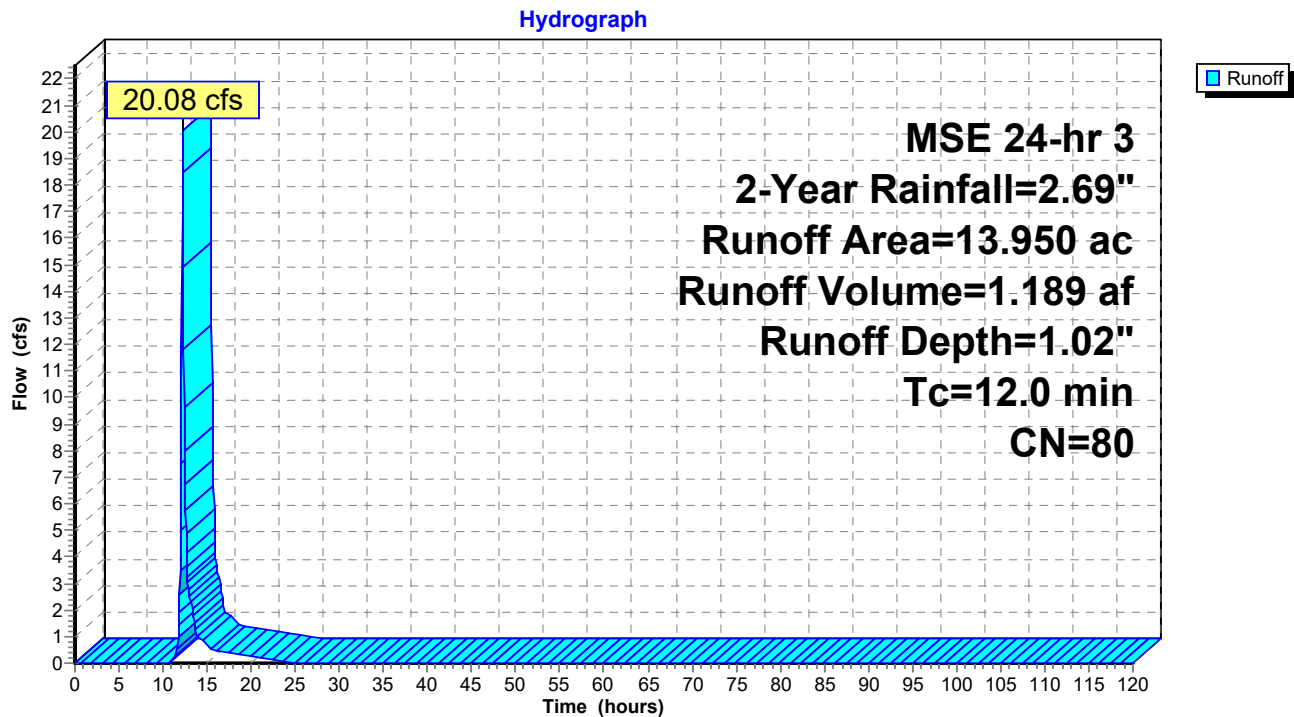
Summary for Subcatchment MA2: 12-MIN TC

Runoff = 20.08 cfs @ 12.21 hrs, Volume= 1.189 af, Depth= 1.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-Year Rainfall=2.69"

	Area (ac)	CN	Description
*	2.180	80	D9
*	1.280	81	D13
*	1.180	89	D19
*	4.410	74	D21
*	1.100	89	D22
*	1.880	80	D24
*	0.370	79	D26
*	1.550	81	D33
	13.950	80	Weighted Average
	13.950	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.0					Direct Entry, GIVEN FROM MEADOWLANDS

Subcatchment MA2: 12-MIN TC

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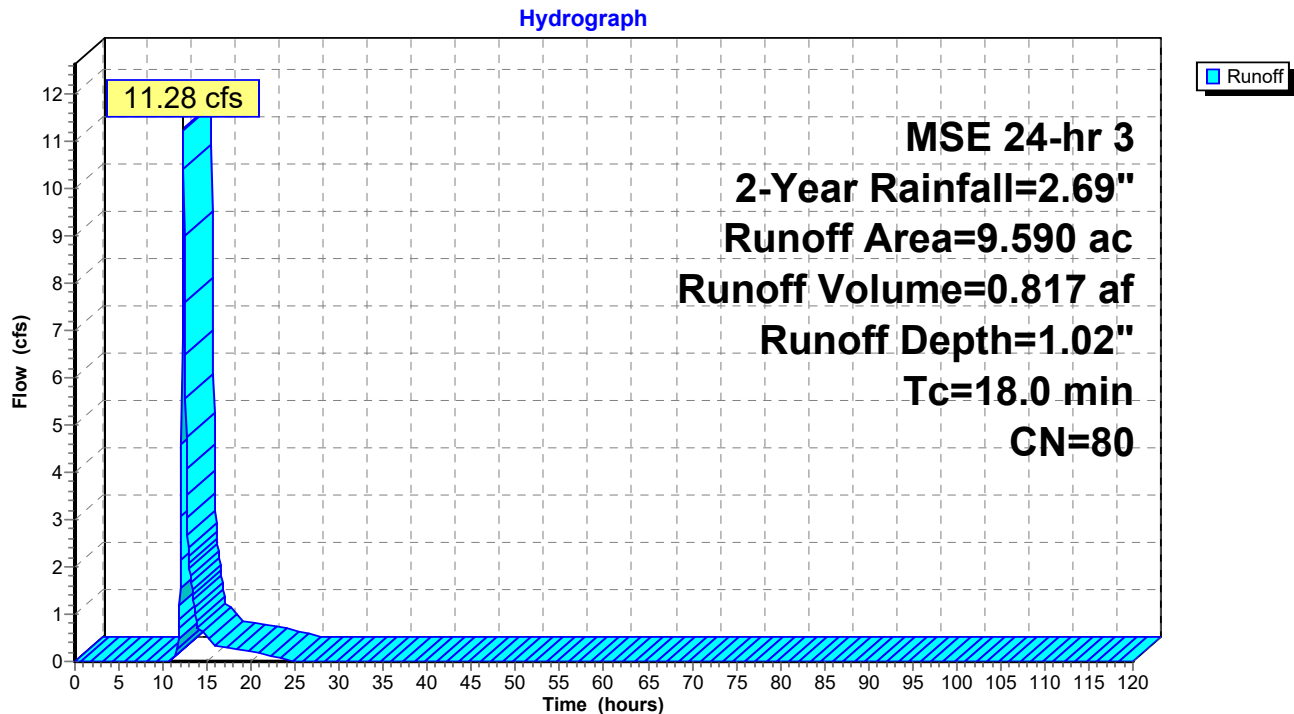
Summary for Subcatchment MA3: 18-MIN TC

Runoff = 11.28 cfs @ 12.29 hrs, Volume= 0.817 af, Depth= 1.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-Year Rainfall=2.69"

	Area (ac)	CN	Description
*	2.270	80	D10
*	1.720	80	D14
*	2.670	80	D15
*	1.210	80	D17
*	1.720	80	D25
	9.590	80	Weighted Average
	9.590	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.0					Direct Entry, GIVEN FROM MEADOWLANDS

Subcatchment MA3: 18-MIN TC

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Summary for Subcatchment MA4: 24-MIN TC

Runoff = 4.93 cfs @ 12.36 hrs, Volume= 0.406 af, Depth= 1.27"

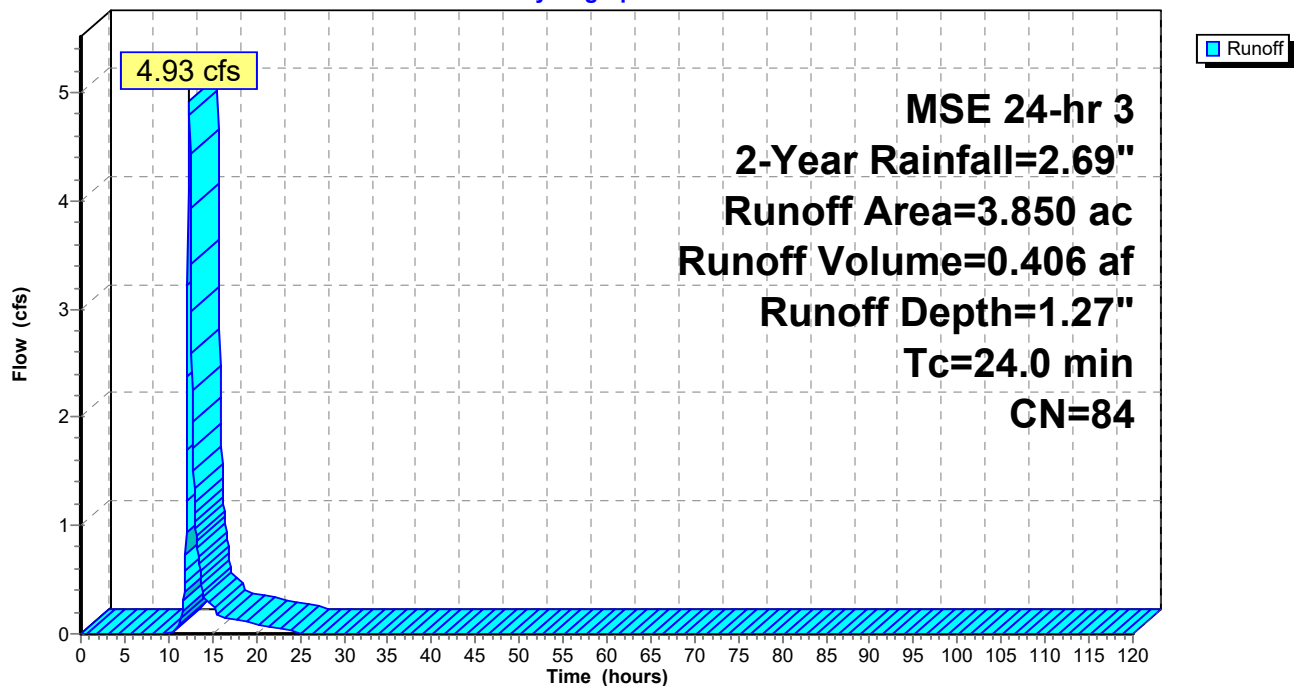
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-Year Rainfall=2.69"

Area (ac)	CN	Description
* 3.850	84	D20
3.850	84	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.0					Direct Entry, GIVEN FROM MEADOWLANDS

Subcatchment MA4: 24-MIN TC

Hydrograph



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Summary for Subcatchment OS1: OFFSITE W 104th

Runoff = 2.42 cfs @ 12.19 hrs, Volume= 0.140 af, Depth= 1.87"

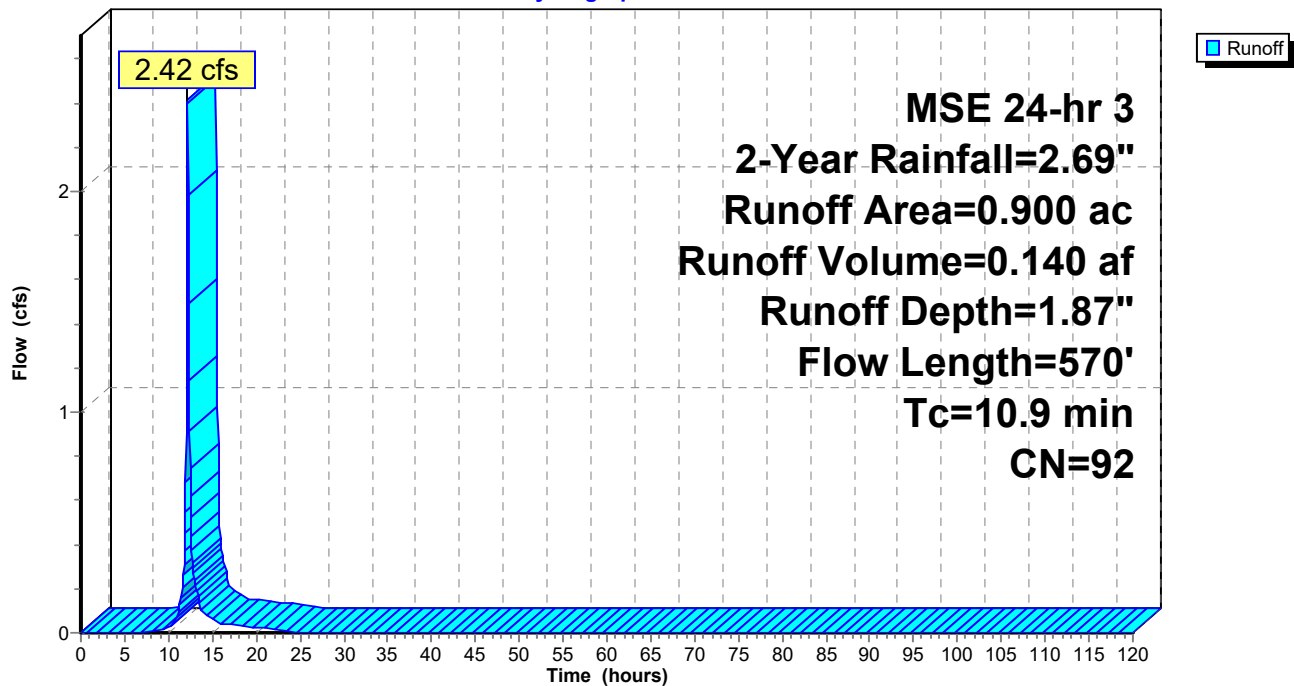
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-Year Rainfall=2.69"

Area (ac)	CN	Description
0.530	98	Paved parking, HSG D
* 0.370	83	Max Cropland for HSG D (NR 151)
0.900	92	Weighted Average
0.370	83	41.11% Pervious Area
0.530	98	58.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	35	0.0400	1.35		Sheet Flow, Road Smooth surfaces n= 0.011 P2= 2.68"
5.3	65	0.0500	0.21		Sheet Flow, Landscape Grass: Short n= 0.150 P2= 2.68"
5.2	470	0.0100	1.50		Shallow Concentrated Flow, Landscape Grassed Waterway Kv= 15.0 fps
10.9	570	Total			

Subcatchment OS1: OFFSITE W 104th

Hydrograph



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Summary for Subcatchment OS2: OFFSITE MID 104th

Runoff = 3.24 cfs @ 12.18 hrs, Volume= 0.178 af, Depth= 1.33"

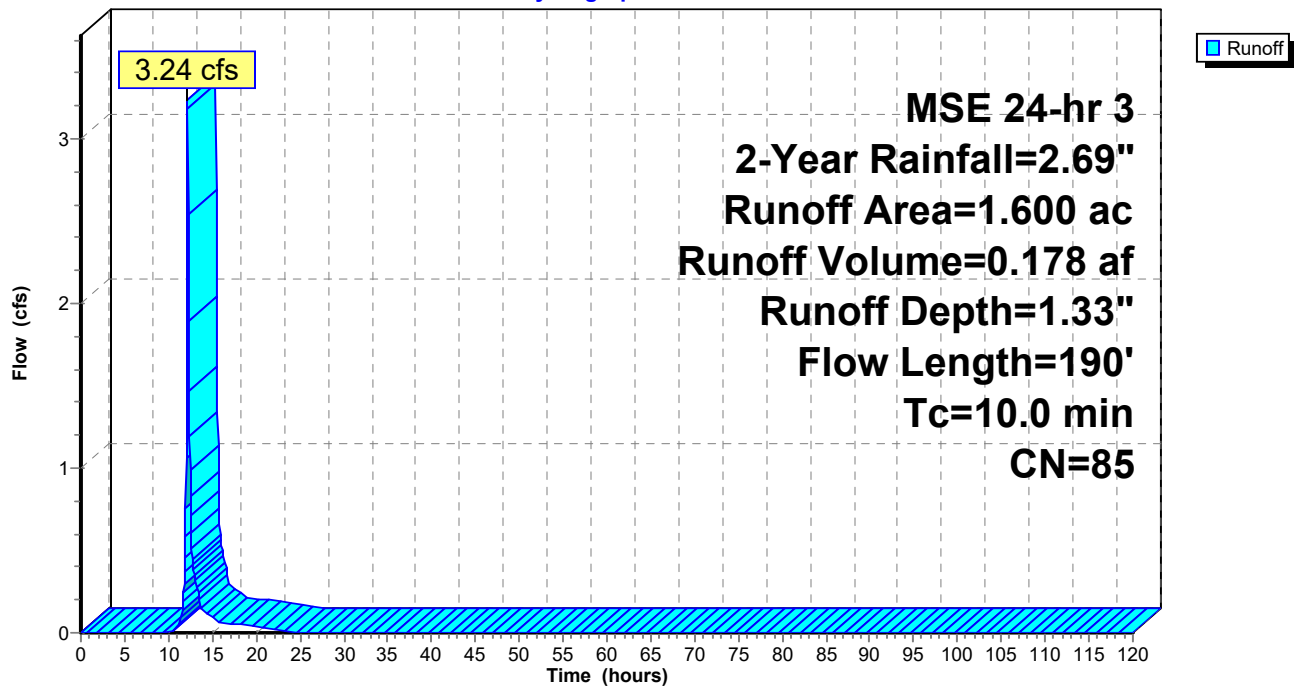
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-Year Rainfall=2.69"

Area (ac)	CN	Description
0.250	98	Paved parking, HSG D
* 1.350	83	Max Cropland for HSG D (NR 151)
1.600	85	Weighted Average
1.350	83	84.38% Pervious Area
0.250	98	15.63% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	30	0.0500	1.43		Sheet Flow, Road Smooth surfaces n= 0.011 P2= 2.68"
9.4	120	0.0400	0.21		Sheet Flow, Landscape Grass: Short n= 0.150 P2= 2.68"
0.2	40	0.0400	3.00		Shallow Concentrated Flow, Landscape Grassed Waterway Kv= 15.0 fps
10.0	190	Total			

Subcatchment OS2: OFFSITE MID 104th

Hydrograph



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Summary for Subcatchment OS3: OFFSITE E 104th

Runoff = 3.76 cfs @ 12.22 hrs, Volume= 0.233 af, Depth= 1.47"

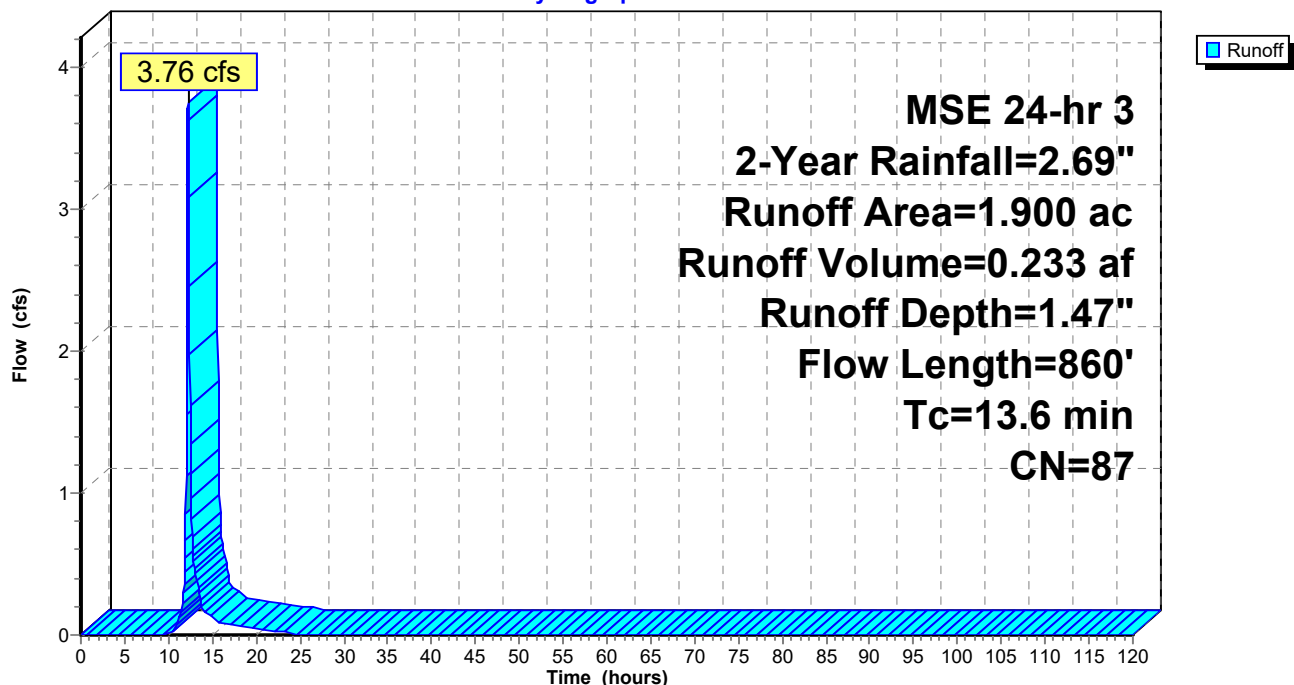
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-Year Rainfall=2.69"

Area (ac)	CN	Description
0.520	98	Paved parking, HSG D
* 1.380	83	Max Cropland for HSG D (NR 151)
1.900	87	Weighted Average
1.380	83	72.63% Pervious Area
0.520	98	27.37% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	20	0.0500	1.32		Sheet Flow, Road Smooth surfaces n= 0.011 P2= 2.68"
7.6	80	0.0300	0.18		Sheet Flow, Landscape Grass: Short n= 0.150 P2= 2.68"
3.0	460	0.0300	2.60		Shallow Concentrated Flow, Landscape Grassed Waterway Kv= 15.0 fps
2.7	300	0.0150	1.84		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
13.6	860	Total			

Subcatchment OS3: OFFSITE E 104th

Hydrograph



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MSE 24-hr 3 2-Year Rainfall=2.69"

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Summary for Subcatchment OS4: OFFSITE E OGB

Runoff = 0.86 cfs @ 12.14 hrs, Volume= 0.040 af, Depth= 1.20"

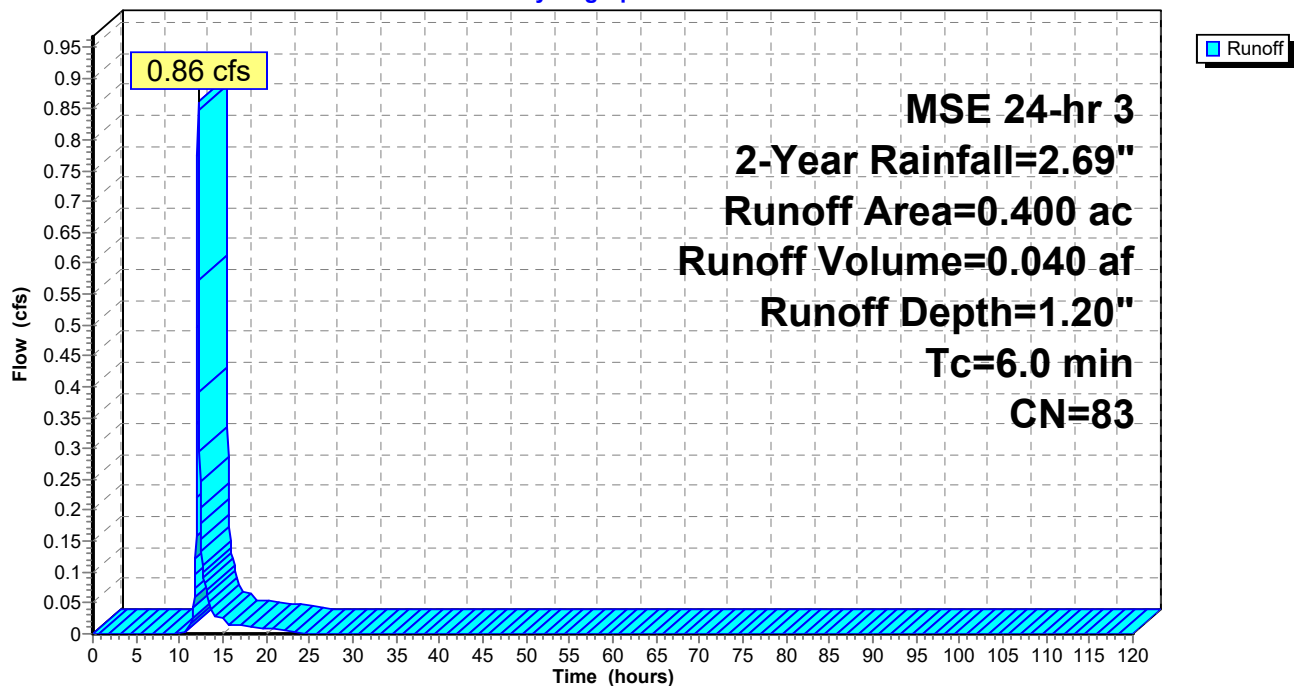
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-Year Rainfall=2.69"

Area (ac)	CN	Description
* 0.400	83	Max Cropland for HSG D (NR 151)
0.400	83	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TR-55 MIN

Subcatchment OS4: OFFSITE E OGB

Hydrograph



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MSE 24-hr 3 2-Year Rainfall=2.69"

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Summary for Subcatchment PA1: S PROP FLOW

Runoff = 36.29 cfs @ 12.13 hrs, Volume= 1.795 af, Depth= 2.05"

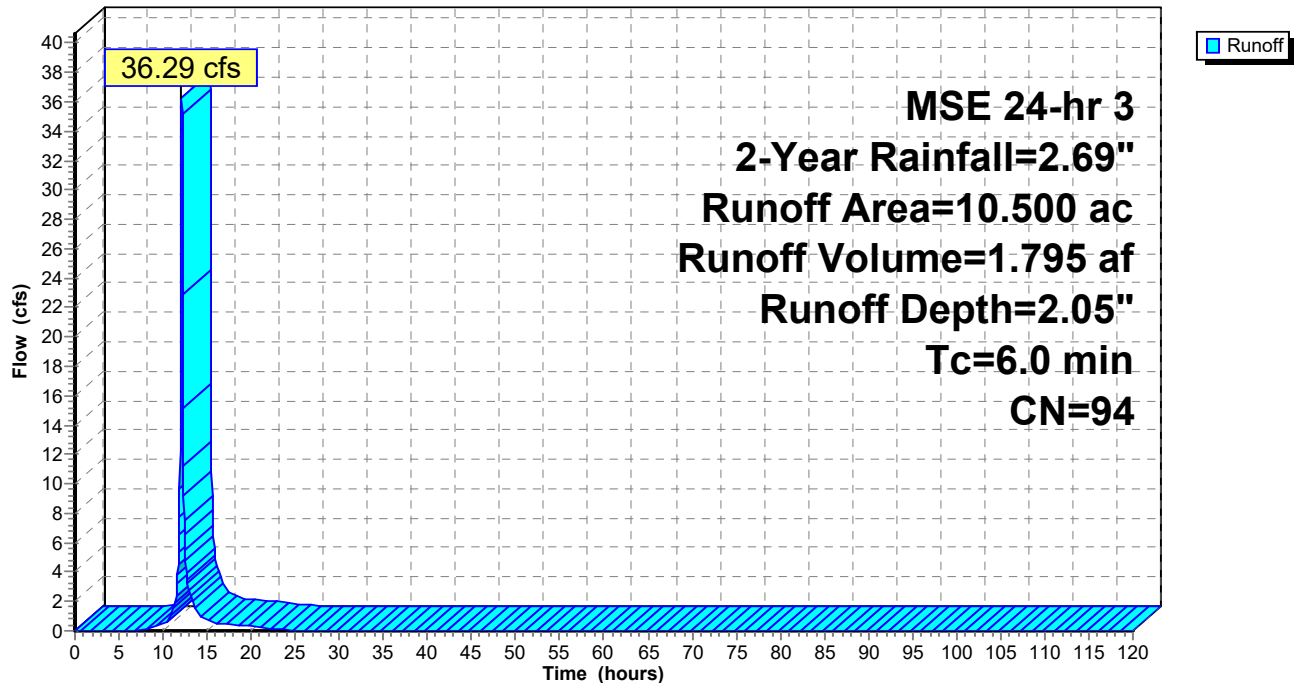
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-Year Rainfall=2.69"

Area (ac)	CN	Description
* 10.500	94	80% IMP (98); 20% PER (80)
10.500	94	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TR-55 MIN

Subcatchment PA1: S PROP FLOW

Hydrograph



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MSE 24-hr 3 2-Year Rainfall=2.69"

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Summary for Pond MB3: ML BASIN 3

Inflow Area = 34.580 ac, 8.59% Impervious, Inflow Depth = 1.17" for 2-Year event
 Inflow = 47.31 cfs @ 12.17 hrs, Volume= 3.384 af
 Outflow = 9.46 cfs @ 12.79 hrs, Volume= 3.384 af, Atten= 80%, Lag= 37.1 min
 Primary = 9.46 cfs @ 12.79 hrs, Volume= 3.384 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
 Peak Elev= 722.44' @ 12.79 hrs Surf.Area= 42,603 sf Storage= 65,972 cf

Plug-Flow detention time= 108.6 min calculated for 3.382 af (100% of inflow)
 Center-of-Mass det. time= 108.9 min (928.5 - 819.6)

Volume	Invert	Avail.Storage	Storage Description
#1	720.45'	313,107 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
720.45	1,000	0	0
721.00	35,328	9,990	9,990
727.00	65,711	303,117	313,107

Device	Routing	Invert	Outlet Devices
#1	Primary	720.45'	18.0" Round Culvert L= 68.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 720.45' / 717.09' S= 0.0494 ' S= 0.0494 ' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.77 sf

Primary OutFlow Max=9.46 cfs @ 12.79 hrs HW=722.44' TW=708.12' (Dynamic Tailwater)
 ↑1=Culvert (Inlet Controls 9.46 cfs @ 5.35 fps)

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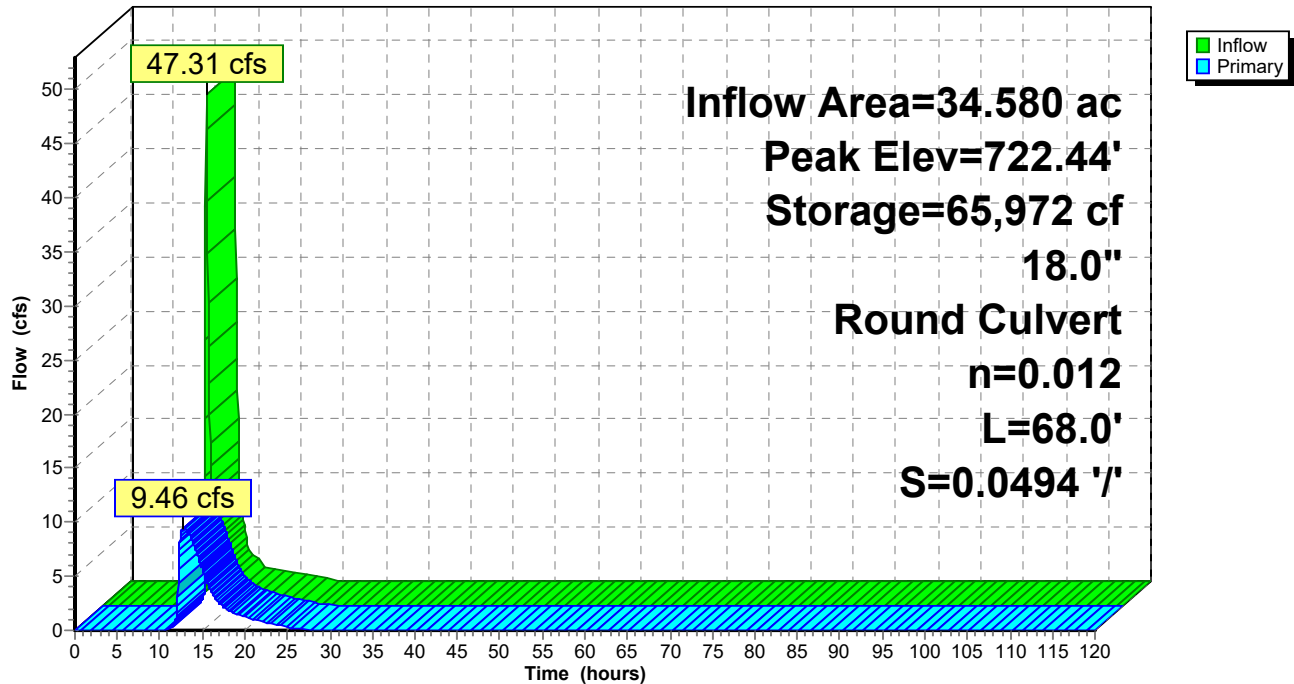
MSE 24-hr 3 2-Year Rainfall=2.69"

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Pond MB3: ML BASIN 3

Hydrograph



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MSE 24-hr 3 2-Year Rainfall=2.69"

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Summary for Pond P1: S POND

Inflow Area = 49.880 ac, 8.56% Impervious, Inflow Depth > 21.39" for 2-Year event
 Inflow = 57.45 cfs @ 12.14 hrs, Volume= 88.912 af
 Outflow = 27.35 cfs @ 12.45 hrs, Volume= 87.177 af, Atten= 52%, Lag= 18.5 min
 Primary = 27.35 cfs @ 12.45 hrs, Volume= 87.177 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
 Peak Elev= 708.18' @ 12.45 hrs Surf.Area= 44,054 sf Storage= 119,980 cf

Plug-Flow detention time= 144.5 min calculated for 87.160 af (98% of inflow)
 Center-of-Mass det. time= 69.4 min (3,492.3 - 3,422.8)

Volume	Invert	Avail.Storage	Storage Description
#1	705.00'	261,675 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
705.00	31,700	0	0
706.00	35,395	33,548	33,548
707.00	39,239	37,317	70,865
708.00	43,279	41,259	112,124
709.00	47,585	45,432	157,556
710.00	52,035	49,810	207,366
711.00	56,584	54,310	261,675

Device	Routing	Invert	Outlet Devices
#1	Primary	705.00'	27.0" Round Culvert X 2.00 L= 58.8' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 705.00' / 704.60' S= 0.0068 ' S= 0.0068 ' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.98 sf
#2	Device 1	705.00'	6.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	706.35'	15.0" Vert. Orifice/Grate X 3.00 C= 0.600
#4	Device 1	708.00'	96.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#5	Secondary	710.00'	10.0' long x 20.0' 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

Primary OutFlow Max=27.35 cfs @ 12.45 hrs HW=708.18' (Free Discharge)

- 1=Culvert (Passes 27.35 cfs of 55.89 cfs potential flow)
- 2=Orifice/Grate (Orifice Controls 1.62 cfs @ 8.24 fps)
- 3=Orifice/Grate (Orifice Controls 19.46 cfs @ 5.29 fps)
- 4=Orifice/Grate (Weir Controls 6.27 cfs @ 1.39 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=705.02' (Free Discharge)

- 5=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

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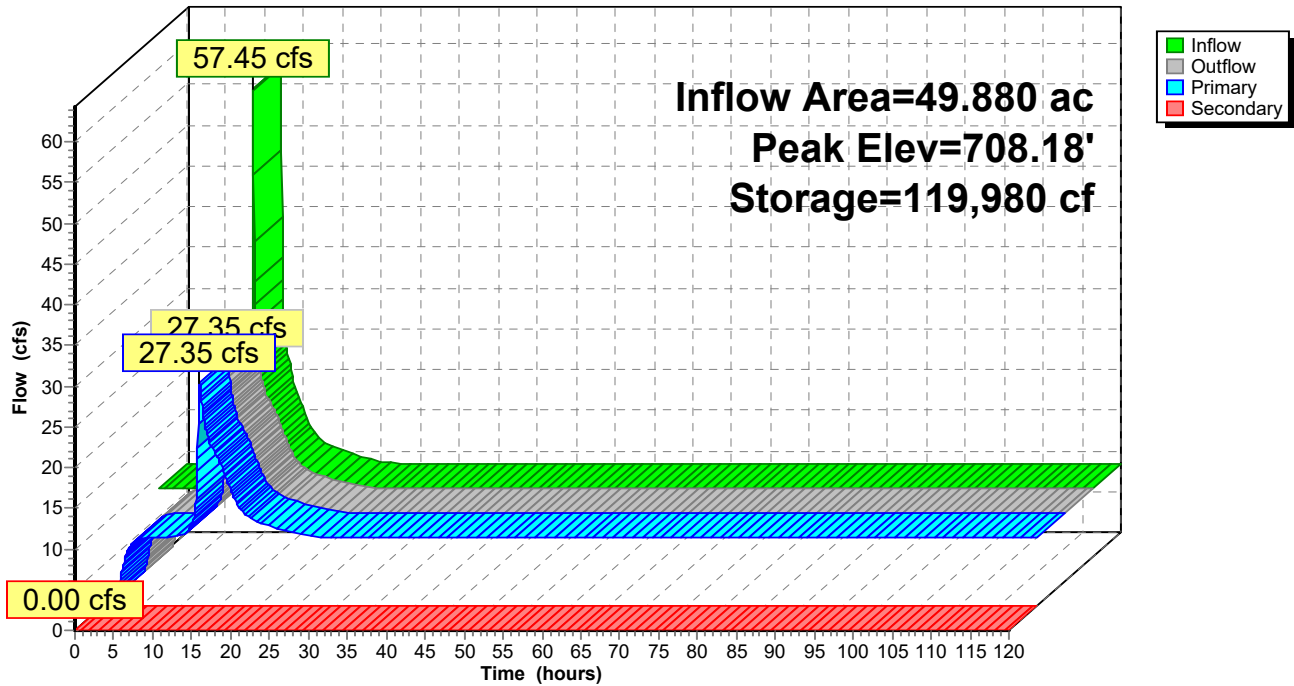
MSE 24-hr 3 2-Year Rainfall=2.69"

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Pond P1: S POND

Hydrograph



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MSE 24-hr 3 2-Year Rainfall=2.69"

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Summary for Pond VP1: VP CULVERT 2-YR

Inflow = 8.38 cfs @ 0.00 hrs, Volume= 83.142 af, Incl. 8.38 cfs Base Flow
Outflow = 8.38 cfs @ 0.00 hrs, Volume= 83.142 af, Atten= 0%, Lag= 0.0 min
Primary = 8.38 cfs @ 0.00 hrs, Volume= 83.142 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs

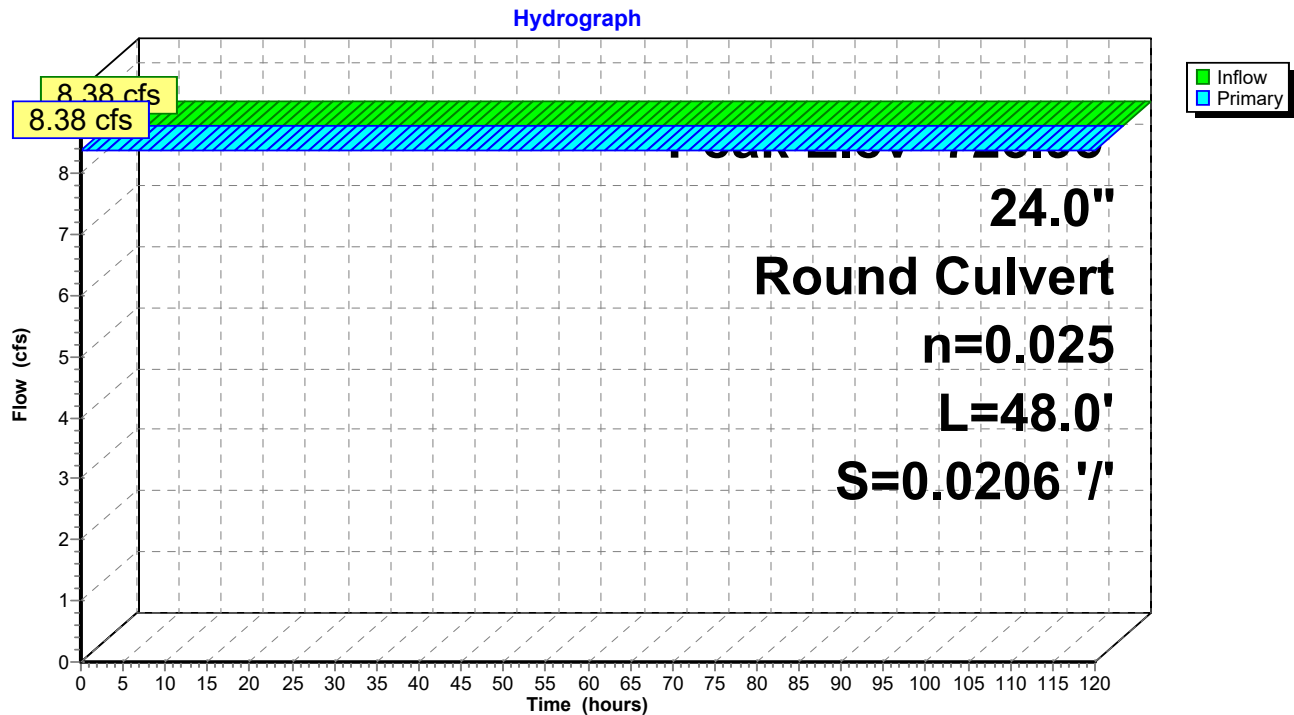
Peak Elev= 725.95' @ 0.00 hrs

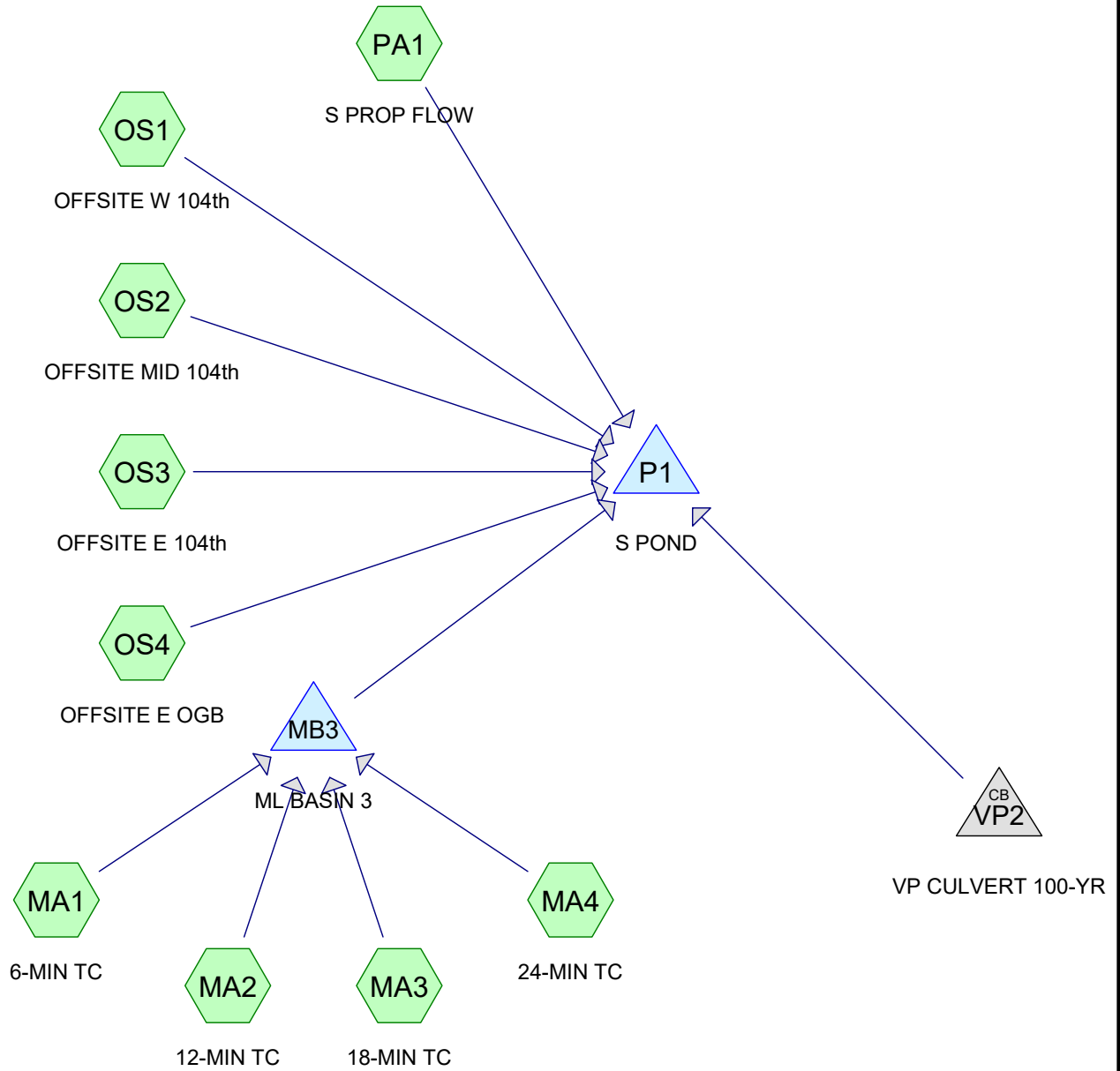
Device	Routing	Invert	Outlet Devices
#1	Primary	724.53'	24.0" Round Culvert L= 48.0' CMP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 724.53' / 723.54' S= 0.0206 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 3.14 sf

Primary OutFlow Max=8.38 cfs @ 0.00 hrs HW=725.95' TW=705.02' (Dynamic Tailwater)

1=Culvert (Barrel Controls 8.38 cfs @ 4.91 fps)

Pond VP1: VP CULVERT 2-YR





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MSE 24-hr 3 100-Year Rainfall=5.89"

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Summary for Subcatchment MA1: 6-MIN TC

Runoff = 55.53 cfs @ 12.13 hrs, Volume= 2.773 af, Depth= 4.63"

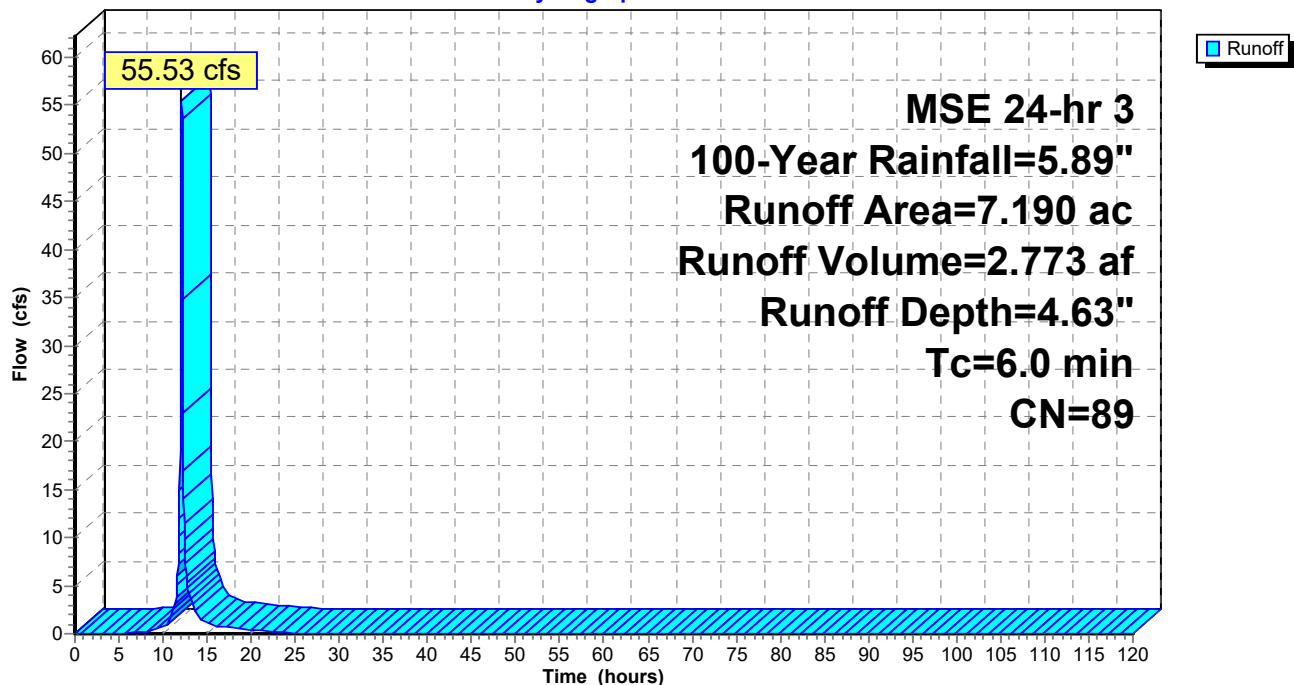
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-Year Rainfall=5.89"

Area (ac)	CN	Description
* 1.380	81	D12
* 0.440	90	D16
* 0.550	84	D18
* 0.540	81	D27
* 0.390	80	D28
* 0.410	80	D29
* 2.800	98	D33
* 0.090	98	D34
* 0.080	98	D35
* 0.510	87	D36
7.190	89	Weighted Average
4.220	83	58.69% Pervious Area
2.970	98	41.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, GIVEN FROM MEADOWLANDS

Subcatchment MA1: 6-MIN TC

Hydrograph



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MSE 24-hr 3 100-Year Rainfall=5.89"

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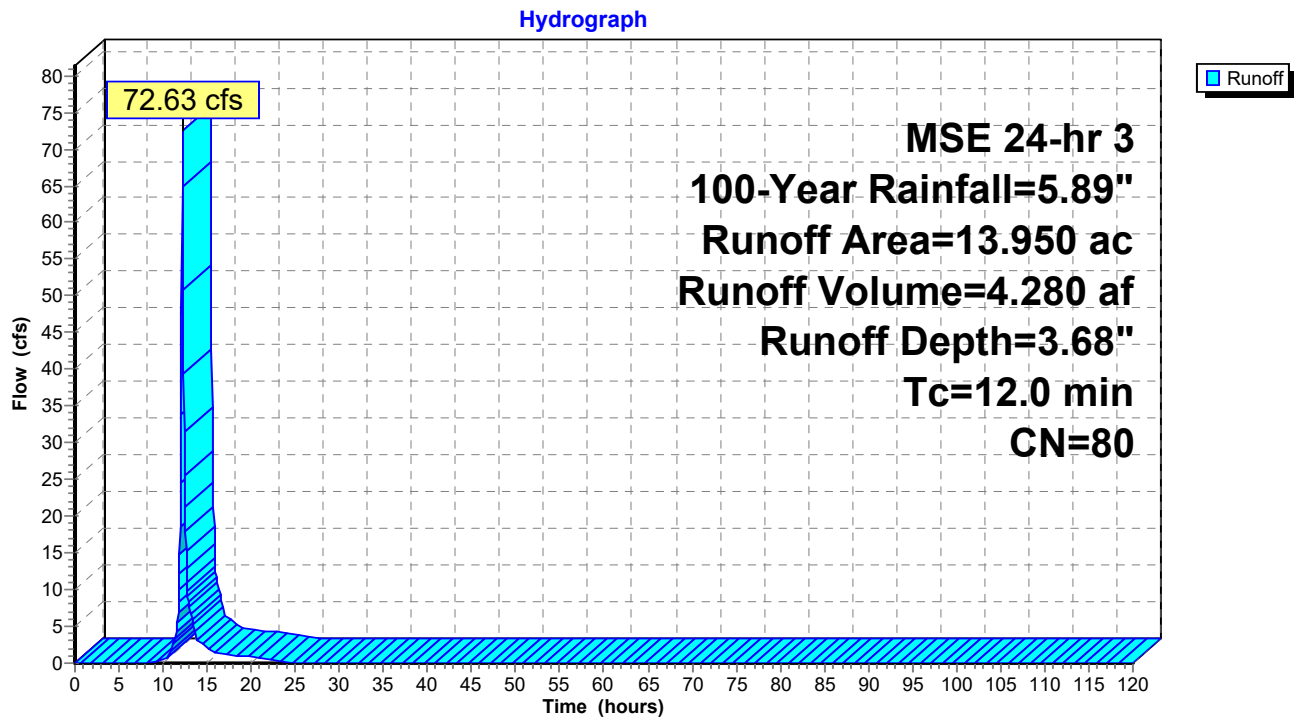
Summary for Subcatchment MA2: 12-MIN TC

Runoff = 72.63 cfs @ 12.20 hrs, Volume= 4.280 af, Depth= 3.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-Year Rainfall=5.89"

	Area (ac)	CN	Description
*	2.180	80	D9
*	1.280	81	D13
*	1.180	89	D19
*	4.410	74	D21
*	1.100	89	D22
*	1.880	80	D24
*	0.370	79	D26
*	1.550	81	D33
	13.950	80	Weighted Average
	13.950	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.0					Direct Entry, GIVEN FROM MEADOWLANDS

Subcatchment MA2: 12-MIN TC

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MSE 24-hr 3 100-Year Rainfall=5.89"

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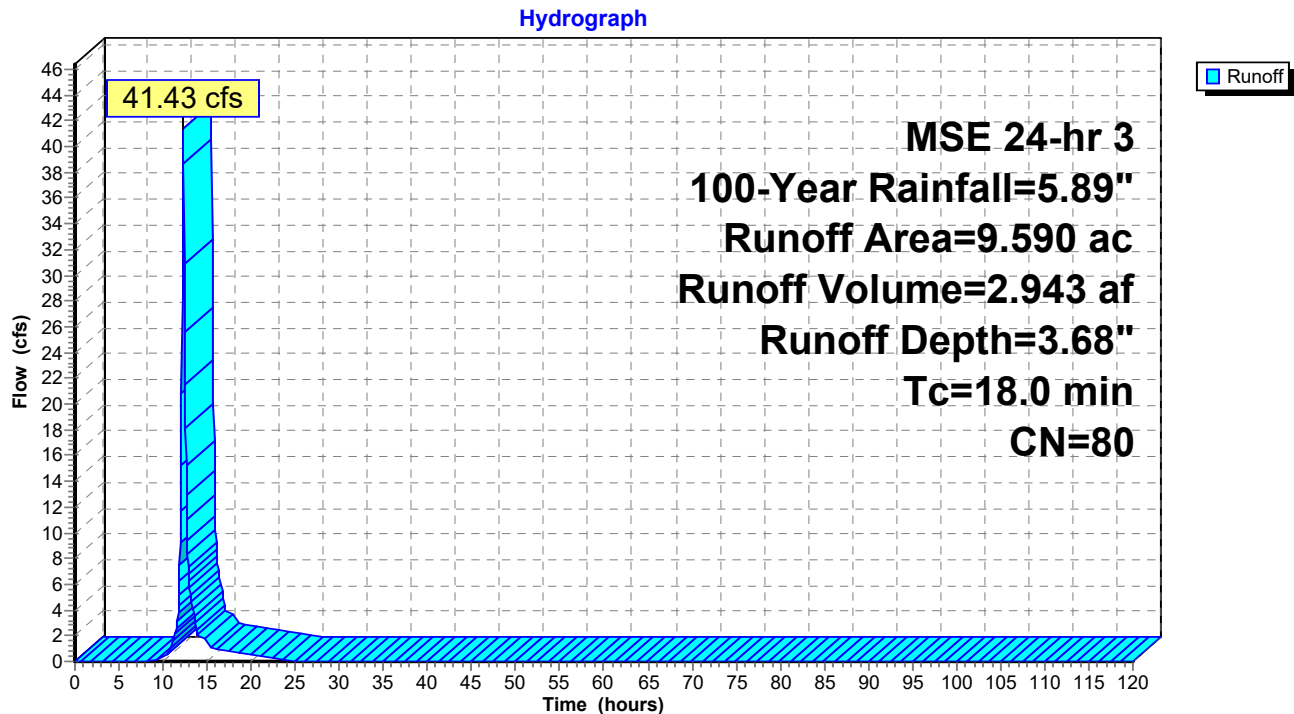
Summary for Subcatchment MA3: 18-MIN TC

Runoff = 41.43 cfs @ 12.27 hrs, Volume= 2.943 af, Depth= 3.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-Year Rainfall=5.89"

	Area (ac)	CN	Description
*	2.270	80	D10
*	1.720	80	D14
*	2.670	80	D15
*	1.210	80	D17
*	1.720	80	D25
	9.590	80	Weighted Average
	9.590	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.0					Direct Entry, GIVEN FROM MEADOWLANDS

Subcatchment MA3: 18-MIN TC

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MSE 24-hr 3 100-Year Rainfall=5.89"

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Summary for Subcatchment MA4: 24-MIN TC

Runoff = 15.82 cfs @ 12.34 hrs, Volume= 1.313 af, Depth= 4.09"

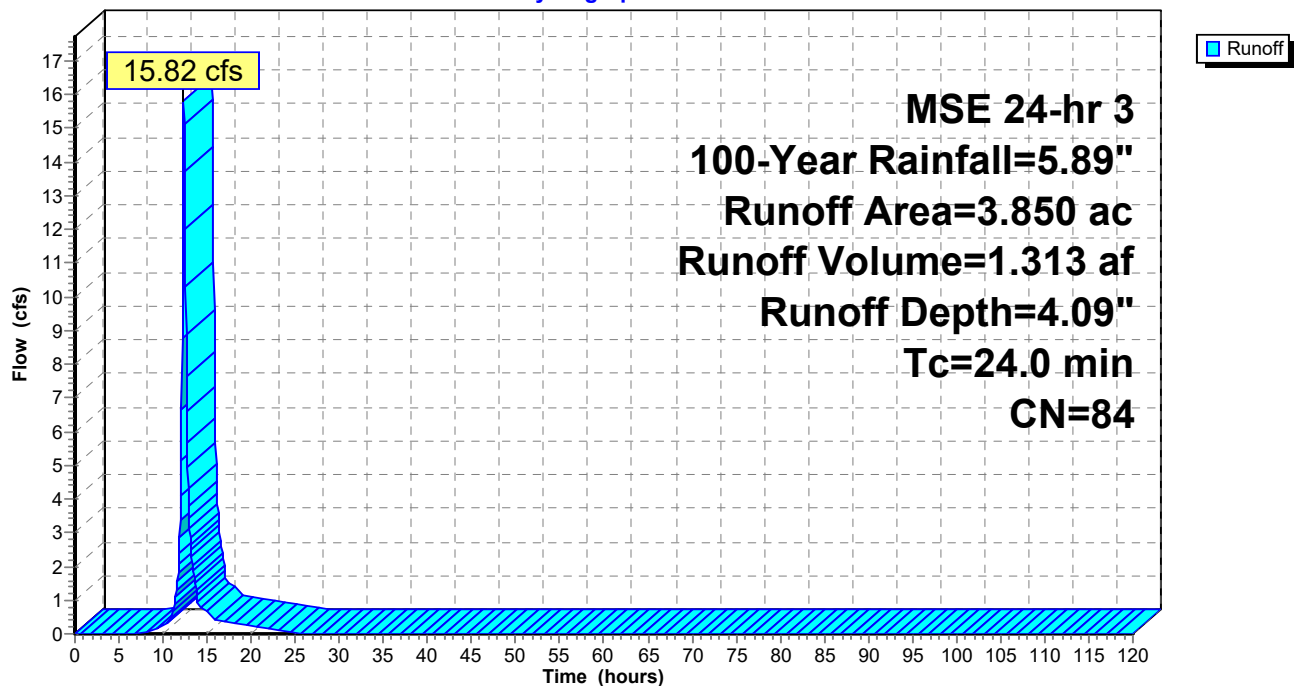
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-Year Rainfall=5.89"

Area (ac)	CN	Description
* 3.850	84	D20
3.850	84	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.0					Direct Entry, GIVEN FROM MEADOWLANDS

Subcatchment MA4: 24-MIN TC

Hydrograph



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MSE 24-hr 3 100-Year Rainfall=5.89"

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Summary for Subcatchment OS1: OFFSITE W 104th

Runoff = 6.08 cfs @ 12.18 hrs, Volume= 0.372 af, Depth= 4.96"

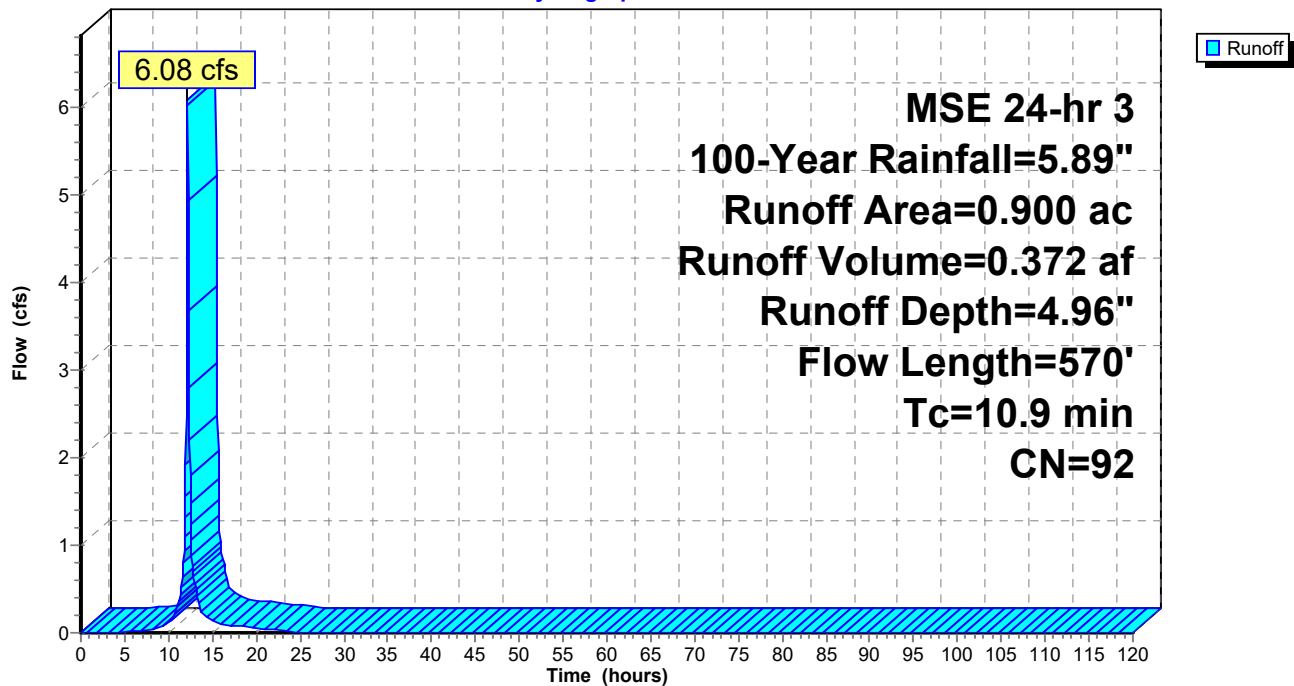
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-Year Rainfall=5.89"

Area (ac)	CN	Description
0.530	98	Paved parking, HSG D
* 0.370	83	Max Cropland for HSG D (NR 151)
0.900	92	Weighted Average
0.370	83	41.11% Pervious Area
0.530	98	58.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	35	0.0400	1.35		Sheet Flow, Road Smooth surfaces n= 0.011 P2= 2.68"
5.3	65	0.0500	0.21		Sheet Flow, Landscape Grass: Short n= 0.150 P2= 2.68"
5.2	470	0.0100	1.50		Shallow Concentrated Flow, Landscape Grassed Waterway Kv= 15.0 fps
10.9	570	Total			

Subcatchment OS1: OFFSITE W 104th

Hydrograph



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MSE 24-hr 3 100-Year Rainfall=5.89"

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Summary for Subcatchment OS2: OFFSITE MID 104th

Runoff = 9.92 cfs @ 12.17 hrs, Volume= 0.560 af, Depth= 4.20"

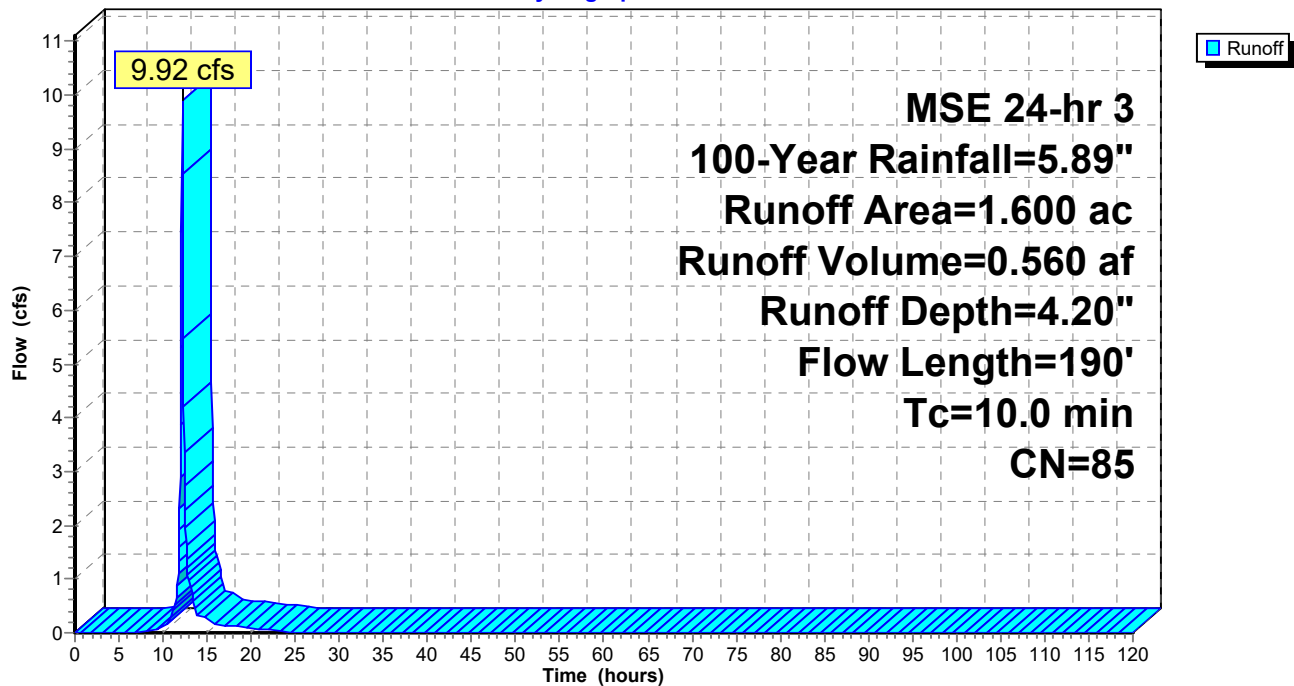
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-Year Rainfall=5.89"

Area (ac)	CN	Description
0.250	98	Paved parking, HSG D
* 1.350	83	Max Cropland for HSG D (NR 151)
1.600	85	Weighted Average
1.350	83	84.38% Pervious Area
0.250	98	15.63% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	30	0.0500	1.43		Sheet Flow, Road Smooth surfaces n= 0.011 P2= 2.68"
9.4	120	0.0400	0.21		Sheet Flow, Landscape Grass: Short n= 0.150 P2= 2.68"
0.2	40	0.0400	3.00		Shallow Concentrated Flow, Landscape Grassed Waterway Kv= 15.0 fps
10.0	190	Total			

Subcatchment OS2: OFFSITE MID 104th

Hydrograph



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MSE 24-hr 3 100-Year Rainfall=5.89"

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Summary for Subcatchment OS3: OFFSITE E 104th

Runoff = 10.91 cfs @ 12.21 hrs, Volume= 0.699 af, Depth= 4.41"

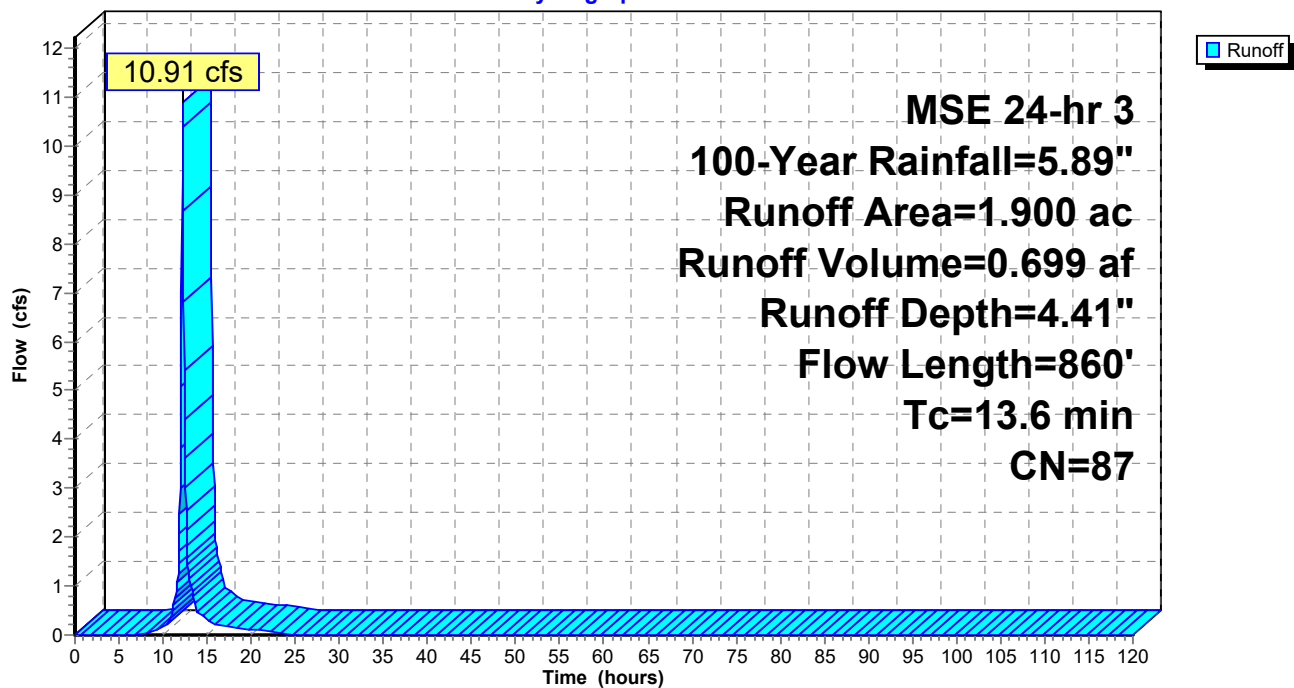
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-Year Rainfall=5.89"

Area (ac)	CN	Description
0.520	98	Paved parking, HSG D
* 1.380	83	Max Cropland for HSG D (NR 151)
1.900	87	Weighted Average
1.380	83	72.63% Pervious Area
0.520	98	27.37% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	20	0.0500	1.32		Sheet Flow, Road Smooth surfaces n= 0.011 P2= 2.68"
7.6	80	0.0300	0.18		Sheet Flow, Landscape Grass: Short n= 0.150 P2= 2.68"
3.0	460	0.0300	2.60		Shallow Concentrated Flow, Landscape Grassed Waterway Kv= 15.0 fps
2.7	300	0.0150	1.84		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
13.6	860	Total			

Subcatchment OS3: OFFSITE E 104th

Hydrograph



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MSE 24-hr 3 100-Year Rainfall=5.89"

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Summary for Subcatchment OS4: OFFSITE E OGB

Runoff = 2.77 cfs @ 12.13 hrs, Volume= 0.133 af, Depth= 3.99"

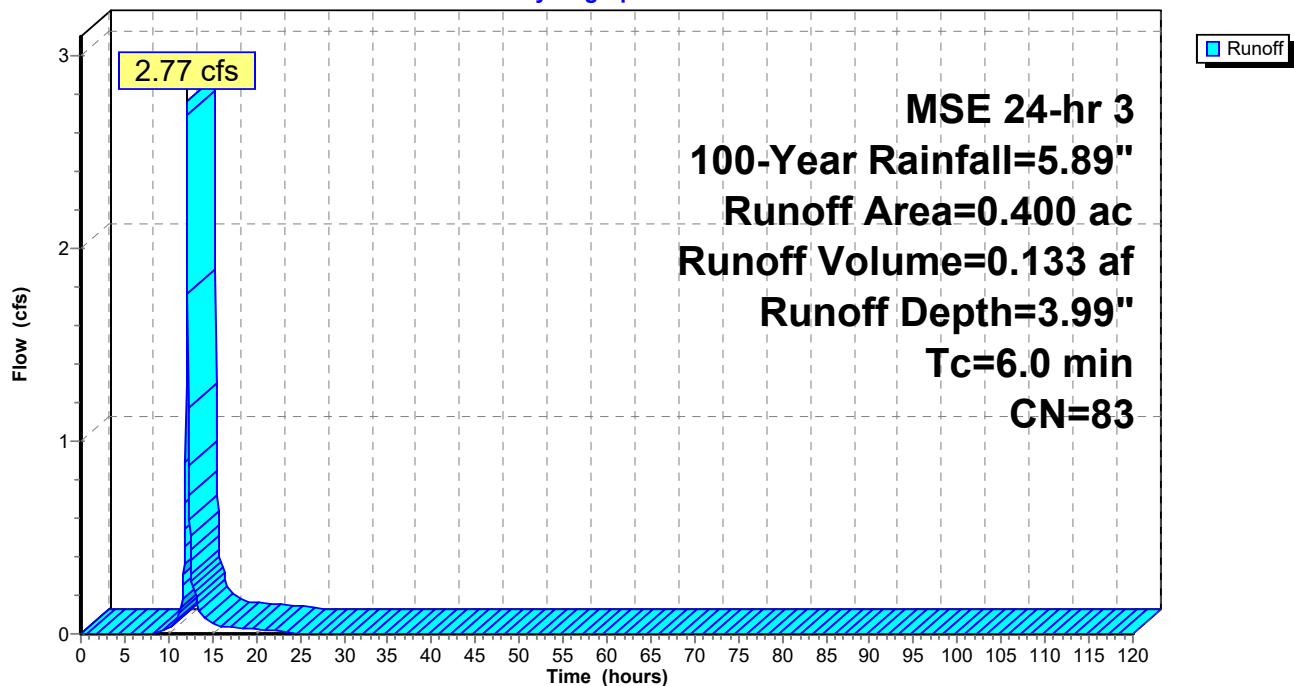
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-Year Rainfall=5.89"

Area (ac)	CN	Description
* 0.400	83	Max Cropland for HSG D (NR 151)
0.400	83	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TR-55 MIN

Subcatchment OS4: OFFSITE E OGB

Hydrograph



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MSE 24-hr 3 100-Year Rainfall=5.89"

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Summary for Subcatchment PA1: S PROP FLOW

Runoff = 86.44 cfs @ 12.13 hrs, Volume= 4.539 af, Depth= 5.19"

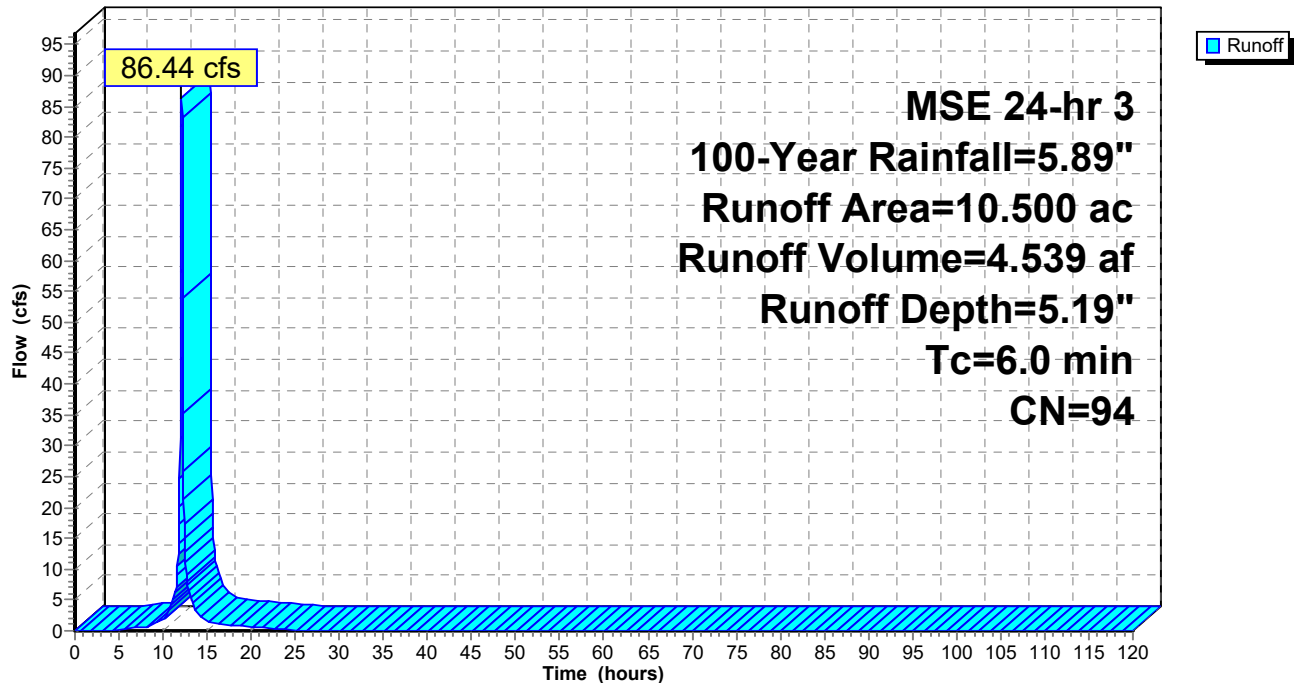
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-Year Rainfall=5.89"

Area (ac)	CN	Description
* 10.500	94	80% IMP (98); 20% PER (80)
10.500	94	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TR-55 MIN

Subcatchment PA1: S PROP FLOW

Hydrograph



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MSE 24-hr 3 100-Year Rainfall=5.89"

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Summary for Pond MB3: ML BASIN 3

Inflow Area = 34.580 ac, 8.59% Impervious, Inflow Depth = 3.92" for 100-Year event
 Inflow = 159.13 cfs @ 12.17 hrs, Volume= 11.310 af
 Outflow = 19.17 cfs @ 13.07 hrs, Volume= 11.310 af, Atten= 88%, Lag= 53.8 min
 Primary = 19.17 cfs @ 13.07 hrs, Volume= 11.310 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
 Peak Elev= 726.27' @ 13.07 hrs Surf.Area= 62,038 sf Storage= 266,781 cf

Plug-Flow detention time= 168.8 min calculated for 11.305 af (100% of inflow)
 Center-of-Mass det. time= 169.0 min (965.2 - 796.2)

Volume	Invert	Avail.Storage	Storage Description
#1	720.45'	313,107 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
720.45	1,000	0	0
721.00	35,328	9,990	9,990
727.00	65,711	303,117	313,107

Device	Routing	Invert	Outlet Devices
#1	Primary	720.45'	18.0" Round Culvert L= 68.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 720.45' / 717.09' S= 0.0494 ' S= 0.0494 ' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.77 sf

Primary OutFlow Max=19.17 cfs @ 13.07 hrs HW=726.27' TW=709.37' (Dynamic Tailwater)
 ↑1=Culvert (Inlet Controls 19.17 cfs @ 10.85 fps)

1114.00 MSM PH1 - PROPOSED

Prepared by Hewlett-Packard Company

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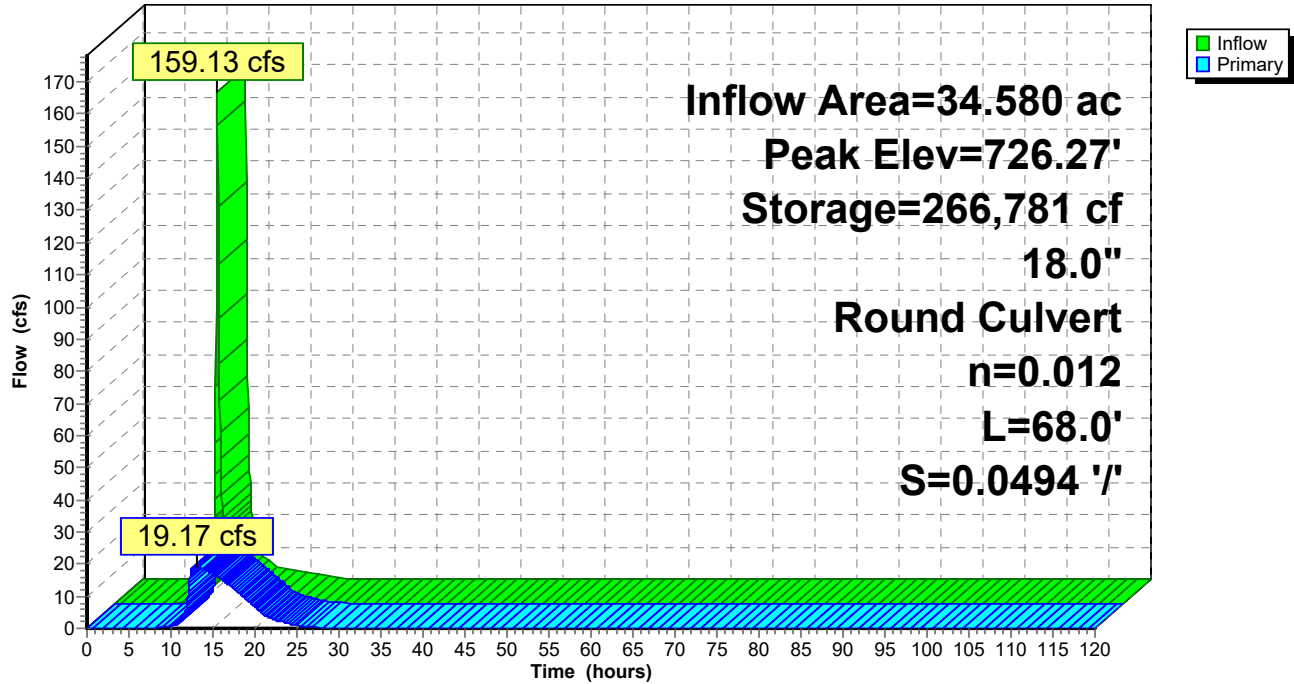
MSE 24-hr 3 100-Year Rainfall=5.89"

Printed 2/7/2018

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Pond MB3: ML BASIN 3

Hydrograph



1114.00 MSM PH1 - PROPOSED

MSE 24-hr 3 100-Year Rainfall=5.89"

Prepared by Hewlett-Packard Company

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Summary for Pond P1: S POND

Inflow Area = 49.880 ac, 8.56% Impervious, Inflow Depth > 92.24" for 100-Year event
 Inflow = 161.85 cfs @ 12.14 hrs, Volume= 383.418 af
 Outflow = 85.53 cfs @ 12.39 hrs, Volume= 380.524 af, Atten= 47%, Lag= 14.9 min
 Primary = 85.53 cfs @ 12.39 hrs, Volume= 380.524 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
 Peak Elev= 709.96' @ 12.39 hrs Surf.Area= 51,878 sf Storage= 205,527 cf

Plug-Flow detention time= 56.4 min calculated for 380.448 af (99% of inflow)
 Center-of-Mass det. time= 26.8 min (3,502.5 - 3,475.7)

Volume	Invert	Avail.Storage	Storage Description
#1	705.00'	261,675 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
705.00	31,700	0	0
706.00	35,395	33,548	33,548
707.00	39,239	37,317	70,865
708.00	43,279	41,259	112,124
709.00	47,585	45,432	157,556
710.00	52,035	49,810	207,366
711.00	56,584	54,310	261,675

Device	Routing	Invert	Outlet Devices
#1	Primary	705.00'	27.0" Round Culvert X 2.00 L= 58.8' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 705.00' / 704.60' S= 0.0068 ' S= 0.0068 ' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.98 sf
#2	Device 1	705.00'	6.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	706.35'	15.0" Vert. Orifice/Grate X 3.00 C= 0.600
#4	Device 1	708.00'	96.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#5	Secondary	710.00'	10.0' long x 20.0' 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

Primary OutFlow Max=85.51 cfs @ 12.39 hrs HW=709.96' (Free Discharge)

- 1=Culvert (Barrel Controls 85.51 cfs @ 10.75 fps)
- 2=Orifice/Grate (Passes < 2.05 cfs potential flow)
- 3=Orifice/Grate (Passes < 30.64 cfs potential flow)
- 4=Orifice/Grate (Passes < 225.99 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=705.10' (Free Discharge)

- 5=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

1114.00 MSM PH1 - PROPOSED

Prepared by Hewlett-Packard Company

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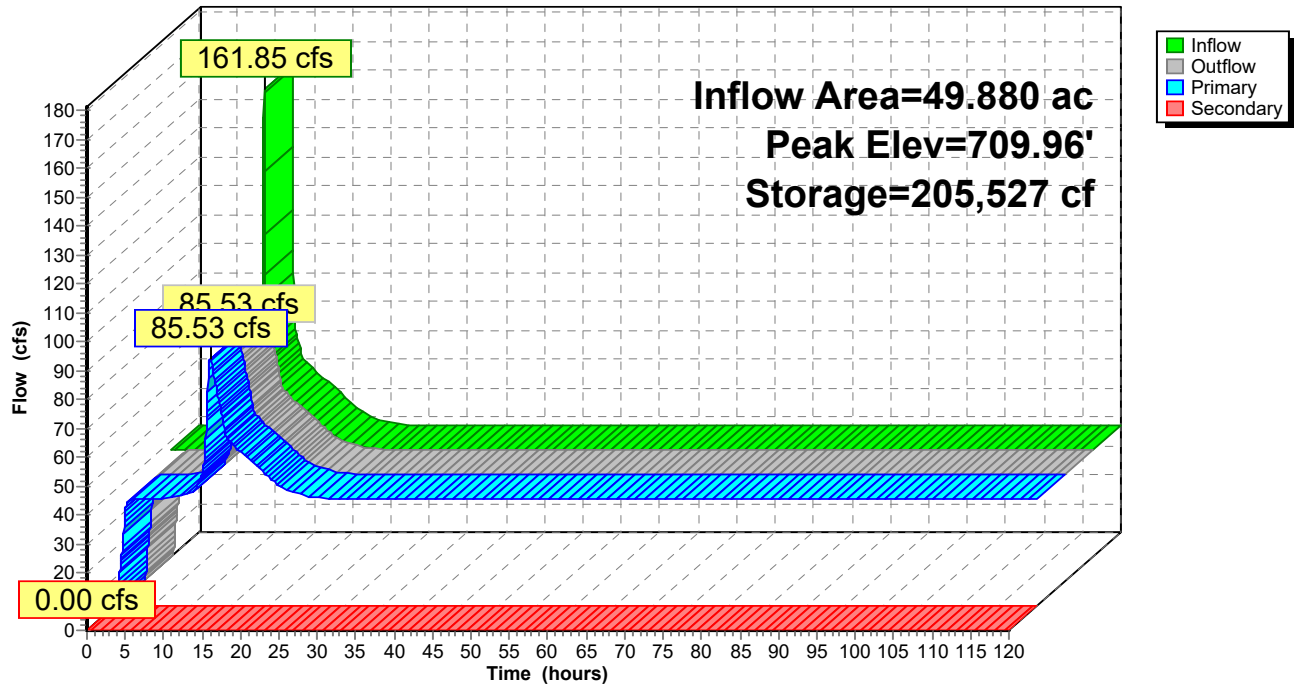
MSE 24-hr 3 100-Year Rainfall=5.89"

Printed 2/7/2018

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Pond P1: S POND

Hydrograph



1114.00 MSM PH1 - PROPOSED

MSE 24-hr 3 100-Year Rainfall=5.89"

Prepared by Hewlett-Packard Company

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Summary for Pond VP2: VP CULVERT 100-YR

Inflow = 36.87 cfs @ 0.00 hrs, Volume= 365.805 af, Incl. 36.87 cfs Base Flow
Outflow = 36.87 cfs @ 0.00 hrs, Volume= 365.805 af, Atten= 0%, Lag= 0.0 min
Primary = 36.87 cfs @ 0.00 hrs, Volume= 365.805 af

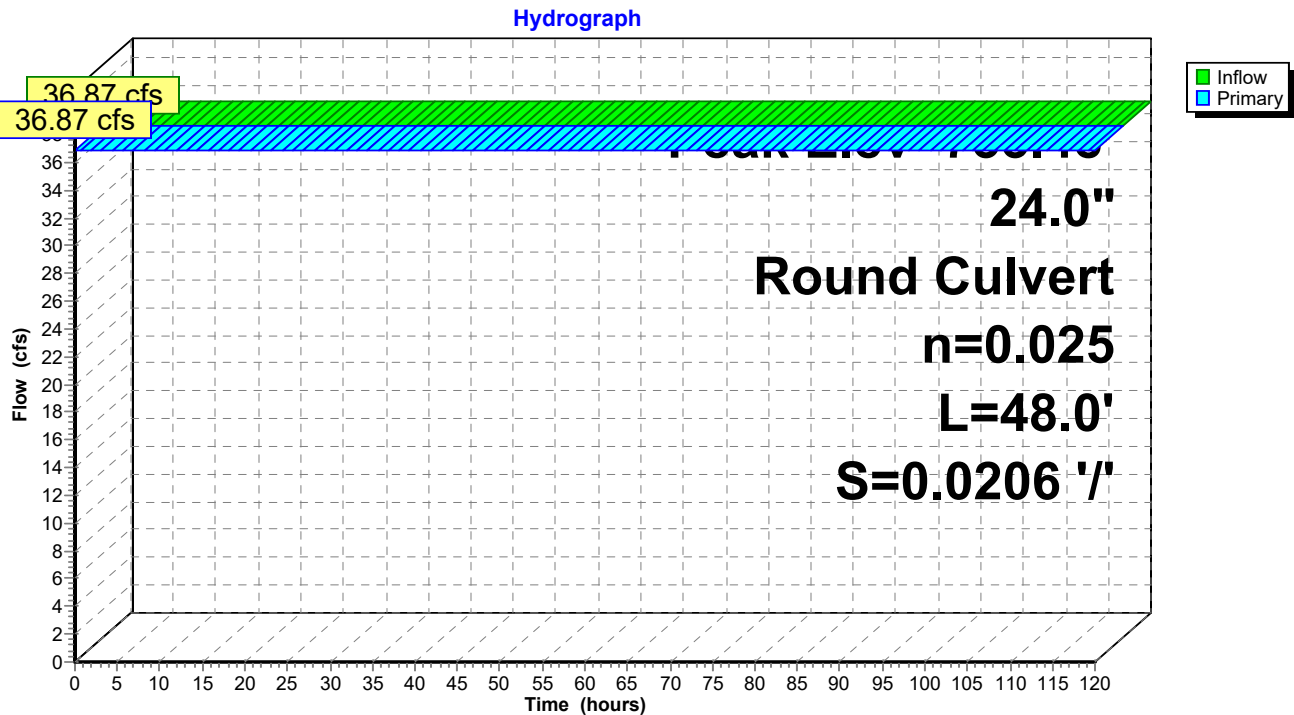
Routing by Dyn-Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs

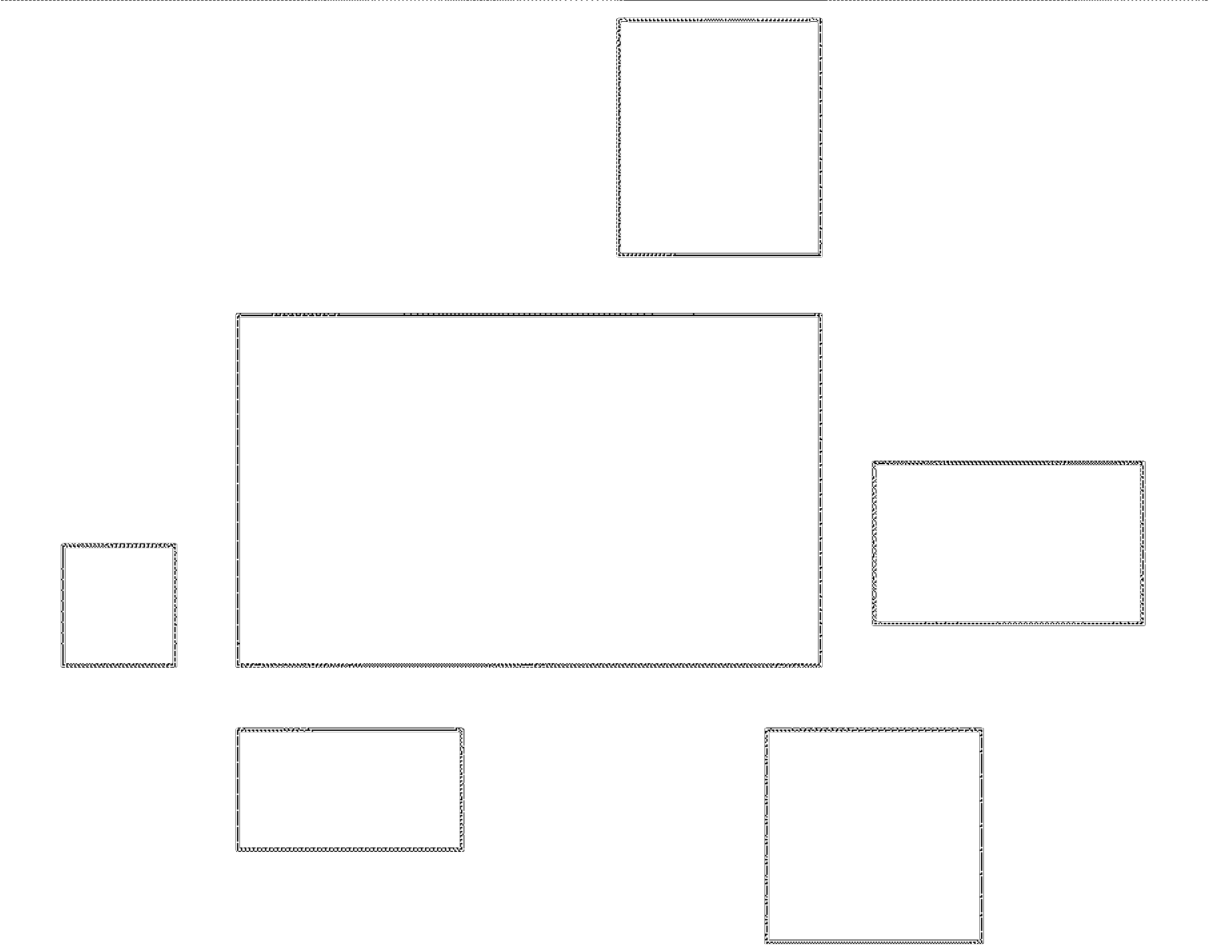
Peak Elev= 733.48' @ 0.00 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	724.53'	24.0" Round Culvert L= 48.0' CMP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 724.53' / 723.54' S= 0.0206 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 3.14 sf

Primary OutFlow Max=36.87 cfs @ 0.00 hrs HW=733.48' TW=705.10' (Dynamic Tailwater)

1=Culvert (Barrel Controls 36.87 cfs @ 11.74 fps)

Pond VP2: VP CULVERT 100-YR



**HYDROLOGY REPORT
FOR
MEADOWLANDS RESIDENTIAL DEVELOPMENT
VILLAGE OF PLEASANT PRAIRIE, WISCONSIN
AUGUST 1999**

PREPARED BY:

**RSV ENGINEERING, INC.
801 MAIN STREET
MUKWONAGO, WI 531149**

**HYDROLOGY REPORT
FOR
MEADOWLANDS RESIDENTIAL DEVELOPMENT
VILLAGE OF PLEASANT PRAIRIE, WISCONSIN**

Meadowlands Residential Development is located in the southeast quarter of the southwest quarter of Section 22, Town 1 North, Range 22 East and is bordered on the west by Old Green Bay Road, on the south by 104th Street (STH 31) and by 64th Avenue on the east. The development will consist of 27 single-family lots, 12 duplex lots, 10 - 8 unit townhouses, 5 - 16 unit multi-family and 4 - 12 unit multi-family buildings. There will also be 7 garages constructed. Paving will consist of approximately 4000 L.F. of public roadway along with parking and private driveways.

Runoff for the site will be collected by storm sewers and directed to one of the four stormwater ponds on the site. The ponds have been sized to reduce the developed 100-year peak runoff to the level of the existing 10-year peak runoff. Calculations were performed using the Soil Conservation Service Technical Release No. 55, "Urban Hydrology for Small Watersheds."

Existing Conditions

The existing site is agricultural land with one residence on the site. The topography is rolling with 0% - 6% slopes. Soils on the site are of the Ashkum, Beecher and Morely soil types. These range from poorly drained to well drained soils. The majority of the site consists of Beecher and Morely soil types which are in Hydraulic Soil Group C. The Ashkum soils may be either Soil Group B or C depending on how well it is drained.

The existing site is divided into 9 drainage areas, noted on the drainage plan as E1 - E10. Area E1 is located on the west side of the site and drains to a 24" x 36" RCP culvert under Old Green Bay Road. Area E2 is located on the west side of the site and drains to an 18" x 18" RCP culvert under Old Green Bay Road. Drainage Area E3 is located on the north side of the site and drains into a natural depression on the site. Runoff for drainage Area E4, located in the middle of the site also collects in an existing depression on the site. Area E5 is located along the north property line and drains off the site to the north. Area E6 is located on the east side of the site and drains into the ditch along 64th Avenue. Runoff from Area E7, located on the west side of the site drains to a 24" CMP culvert under Old Green Bay Road. Area E8 is located on the east side of the site and drains into a natural depression on the site. Drainage Area E9 is located on the south side of the site and drains to a 24" CMP culvert under 104th Street. Area E10 is located along the east side of 64th Street and drains to 100th Avenue.

Developed Conditions

Under developed conditions, the site will be divided into thirty-six drainage areas. The areas that are tributary to the stormwater ponds have been grouped into four drainage basins for the calculations. Basin One is located at the northwest corner of the site and collects drainage areas D1

and D2 and 2 "B" buildings. This basin is to be constructed as a dry basin. A 12" cmp culvert will be placed at the west side of the basin to act as an outlet. The culvert will outfall into the ditch along Old Green Bay Road and then drain into an existing 24"x36" culvert under the road. Basin Two is located in the middle of the west side of the site and collects drainage areas D3 through D8 and D23 along with 3 "B" buildings and 3 "A" buildings. This basin is also to be constructed as a dry basin. The basin will outfall through an 18" cmp culvert into the ditch along Old Green Bay Road and then into an 18"x18" rcp culvert under the road. Basin Three collects drainage areas D9, D10, D12 through D29 and D33 through D36 along with the 10 "C" buildings. This basin is to be constructed as a wet pond with a permanent pool elevation of 721 and a bottom elevation of 713. An 18" cmp culvert will act as an outfall to Old Green Bay Road and into an existing 24" cmp culvert under the road. Areas D11 and D30-D32 drain to the existing ditch along 100th Avenue. The runoff from Area D32 is routed through a detention basin located on lots 14 and 15 which will outfall through a 6" PVC pipe into the ditch along 100th Avenue.

The proposed retention pond outflow rates have been checked against the downstream design criteria used by WisPark to size the storm water facilities west of Old Green Bay Road. The peak runoff rates used by WisPark are as follows:

The north 24" x 36" culvert = 64 cfs;
The middle 18" x 18" culvert = 45 cfs;
The south 24" CMP culvert = 127 cfs.

Erosion Control

Several measures will be taken to provide erosion control for the site. Silt fence will be provided downslope of all disturbed areas and will be placed prior to construction. During construction, a gravel access road will be provided to reduce tracking of dirt. After finished grading is completed, seeding will take place within 7 days.

Erosion control measures will remain in place until a vegetative cover is established.

RUNOFF SUMMARY

EXISTING AREA	DEVELOPED AREA	10 YEAR STORM	100 YEAR STORM
E1	BASIN 1 (D1, D2, 2- "B" BLDGS)	8	5.88
E2	BASIN 2 (D3-D8, D23, 3-"B" BLDGS, 3 "A" BLDGS)	16	15.49
E7	BASIN 3 (D9, D10, D12-D22, D24-D29, D33-D36, 10 "C" BLDGS)	19	15.66
E6, E10	BASIN 4, (D32) D11, D30, D31	13	12.14

The following values were used for the calculations:

Runoff Curve Numbers:

Existing Conditions:

Small grain, straight row crop residue cover, good condition, HSG C = 80

Developed Conditions:

1/8 Residential, HSG C	= 90
Impervious Area	= 98
Open Space, Good Condition, HSG C	= 74
1/2 Ac Lot, HSG C	= 80
1/3 Ac Lot, HSG C	= 81

Mannings Number:

Sheet Flow, Cultivated Soil, Residue Cover > 20%	= 0.17
Sheet Flow, Dense Grass	= 0.24
Channel Flow, Concrete or Asphalt	= 0.013
Channel Flow, Grass Swale	= 0.045

TR-55 TABULAR HYDROGRAPH METHOD
Type II. Distribution
(24 hr. Duration Storm)

Executed: 08-18-1999 16:59:00
Watershed file: --> F:\HMDATA\98117\D9D36 .MOP
Hydrograph file: --> F:\HMDATA\98117\10D9D36.HYD

MEADOWLANDS
DEVELOPED RUNOFF
BASIN III - SOUTHWEST CORNER OF PROPERTY

>>>> Input Parameters Used to Compute Hydrograph <<<<

Subarea Description	AREA (acres)	CN	Tc (hrs)	* Tt (hrs)	Precip. (in)	Runoff (in)	Ia/p input/used
D9	2.18	80.0	0.20	0.00	4.00	2.04	I.13 .13
D10	2.27	80.0	0.30	0.00	4.00	2.04	I.13 .13
D12	1.38	81.0	0.10	0.00	4.00	2.12	I.12 .12
D13	1.28	81.0	0.20	0.00	4.00	2.12	I.12 .12
D14	1.72	80.0	0.30	0.00	4.00	2.04	I.13 .13
D15	2.67	80.0	0.30	0.00	4.00	2.04	I.13 .13
D16	0.44	90.0	0.10	0.00	4.00	2.92	I.06 .10
D17	1.21	80.0	0.30	0.00	4.00	2.04	I.13 .13
D18	0.55	84.0	0.10	0.00	4.00	2.37	I.1 .10
D19	1.18	89.0	0.20	0.00	4.00	2.82	I.06 .10
D20	3.85	84.0	0.40	0.00	4.00	2.37	I.1 .10
D21	4.41	74.0	0.20	0.00	4.00	1.60	I.18 .18
D22	1.10	89.0	0.20	0.00	4.00	2.82	I.06 .10
D24	1.88	80.0	0.20	0.00	4.00	2.04	I.13 .13
D25	1.72	80.0	0.30	0.00	4.00	2.04	I.13 .13
D26	0.37	79.0	0.20	0.00	4.00	1.96	I.13 .13
D27	0.54	81.0	0.10	0.00	4.00	2.12	I.12 .12
D28	0.39	80.0	0.10	0.00	4.00	2.04	I.13 .13
D29	0.41	80.0	0.10	0.00	4.00	2.04	I.13 .13
10 "C" BLDGS	2.80	98.0	0.10	0.00	4.00	3.77	I.01 .10
D33	1.55	81.0	0.20	0.00	4.00	2.12	I.12 .12
D34	0.09	98.0	0.10	0.00	4.00	3.77	I.01 .10
D35	0.08	98.0	0.10	0.00	4.00	3.77	I.01 .10
D36	0.51	87.0	0.10	0.00	4.00	2.64	I.07 .10

* Travel time from subarea outfall to composite watershed outfall point.
I -- Subarea where user specified interpolation between Ia/p tables.

Total area = 34.58 acres or 0.05403 sq.mi
Peak discharge = 82 cfs

WARNING: Drainage areas of two or more subareas
differ by a factor of 5 or greater.

TR-55 TABULAR HYDROGRAPH METHOD
Type II. Distribution
(24 hr. Duration Storm)

Executed: 08-18-1999 16:59:00
 Watershed file: --> F:\HMDATA\98117\D9D36 .MOP
 Hydrograph file: --> F:\HMDATA\98117\10D9D36.HYD

MEADOWLANDS
DEVELOPED RUNOFF
BASIN III - SOUTHWEST CORNER OF PROPERTY

>>>> Computer Modifications of Input Parameters <<<<<

Subarea Description	Input Values		Rounded Values		Ia/p Interpolated	Ia/p Messages
	Tc (hr)	* Tt (hr)	Tc (hr)	* Tt (hr)	(Yes/No)	
D9	0.20	0.00	**	**	Yes	--
D10	0.25	0.00	0.30	0.00	Yes	--
D12	0.10	0.00	**	**	Yes	--
D13	0.17	0.00	0.20	0.00	Yes	--
D14	0.34	0.00	0.30	0.00	Yes	--
D15	0.34	0.00	0.30	0.00	Yes	--
D16	0.10	0.00	**	**	No	Computed Ia/p < .1
D17	0.32	0.00	0.30	0.00	Yes	--
D18	0.10	0.00	**	**	No	Computed Ia/p < .1
D19	0.19	0.00	0.20	0.00	No	Computed Ia/p < .1
D20	0.41	0.00	0.40	0.00	No	Computed Ia/p < .1
D21	0.21	0.00	0.20	0.00	Yes	--
D22	0.17	0.00	0.20	0.00	No	Computed Ia/p < .1
D24	0.19	0.00	0.20	0.00	Yes	--
D25	0.27	0.00	0.30	0.00	Yes	--
D26	0.20	0.00	**	**	Yes	--
D27	0.12	0.00	0.10	0.00	Yes	--
D28	0.10	0.00	**	**	Yes	--
D29	0.10	0.00	**	**	Yes	--
10 "C" BLDGS	0.10	0.00	**	**	No	Computed Ia/p < .1
D33	0.21	0.00	0.20	0.00	Yes	--
D34	0.10	0.00	**	**	No	Computed Ia/p < .1
D35	0.10	0.00	**	**	No	Computed Ia/p < .1
D36	0.11	0.00	0.10	0.00	No	Computed Ia/p < .1

* Travel time from subarea outfall to composite watershed outfall point.
 ** Tc & Tt are available in the hydrograph tables.

TR-55 TABULAR HYDROGRAPH METHOD
Type II. Distribution
(24 hr. Duration Storm)

Executed: 08-18-1999 16:59:00
Watershed file: --> F:\HMDATA\98117\D9D36 .MOP
Hydrograph file: --> F:\HMDATA\98117\100D9D36.HYD

MEADOWLANDS
DEVELOPED RUNOFF
BASIN III - SOUTHWEST CORNER OF PROPERTY

>>>> Input Parameters Used to Compute Hydrograph <<<<

Subarea Description	AREA (acres)	CN	Tc (hrs)	* Tt (hrs)	Precip. (in)	Runoff (in)	Ia/p input/used
D9	2.18	80.0	0.20	0.00	5.70	3.51	I.09 .10
D10	2.27	80.0	0.30	0.00	5.70	3.51	I.09 .10
D12	1.38	81.0	0.10	0.00	5.70	3.61	I.08 .10
D13	1.28	81.0	0.20	0.00	5.70	3.61	I.08 .10
D14	1.72	80.0	0.30	0.00	5.70	3.51	I.09 .10
D15	2.67	80.0	0.30	0.00	5.70	3.51	I.09 .10
D16	0.44	90.0	0.10	0.00	5.70	4.55	I.04 .10
D17	1.21	80.0	0.30	0.00	5.70	3.51	I.09 .10
D18	0.55	84.0	0.10	0.00	5.70	3.92	I.07 .10
D19	1.18	89.0	0.20	0.00	5.70	4.45	I.04 .10
D20	3.85	84.0	0.40	0.00	5.70	3.92	I.07 .10
D21	4.41	74.0	0.20	0.00	5.70	2.93	I.12 .12
D22	1.10	89.0	0.20	0.00	5.70	4.45	I.04 .10
D24	1.88	80.0	0.20	0.00	5.70	3.51	I.09 .10
D25	1.72	80.0	0.30	0.00	5.70	3.51	I.09 .10
D26	0.37	79.0	0.20	0.00	5.70	3.41	I.09 .10
D27	0.54	81.0	0.10	0.00	5.70	3.61	I.08 .10
D28	0.39	80.0	0.10	0.00	5.70	3.51	I.09 .10
D29	0.41	80.0	0.10	0.00	5.70	3.51	I.09 .10
10 "C" BLDGS	2.80	98.0	0.10	0.00	5.70	5.46	I.01 .10
D33	1.55	81.0	0.20	0.00	5.70	3.61	I.08 .10
D34	0.09	98.0	0.10	0.00	5.70	5.46	I.01 .10
D35	0.08	98.0	0.10	0.00	5.70	5.46	I.01 .10
D36	0.51	87.0	0.10	0.00	5.70	4.23	I.05 .10

* Travel time from subarea outfall to composite watershed outfall point.
I -- Subarea where user specified interpolation between Ia/p tables.

Total area = 34.58 acres or 0.05403 sq.mi
Peak discharge = 137 cfs

WARNING: Drainage areas of two or more subareas
differ by a factor of 5 or greater.

TR-55 TABULAR HYDROGRAPH METHOD
Type II. Distribution
(24 hr. Duration Storm)

Executed: 08-18-1999 16:59:00
 Watershed file: --> F:\HMDATA\98117\D9D36 .MOP
 Hydrograph file: --> F:\HMDATA\98117\100D9D36.HYD

MEADOWLANDS
DEVELOPED RUNOFF
BASIN III - SOUTHWEST CORNER OF PROPERTY

>>>> Computer Modifications of Input Parameters <<<<

Subarea Description	Input Values		Rounded Values		Ia/p	Ia/p Messages
	Tc (hr)	* Tt (hr)	Tc (hr)	* Tt (hr)	Interpolated (Yes/No)	
D9	0.20	0.00	**	**	No	Computed Ia/p < .1
D10	0.25	0.00	0.30	0.00	No	Computed Ia/p < .1
D12	0.10	0.00	**	**	No	Computed Ia/p < .1
D13	0.17	0.00	0.20	0.00	No	Computed Ia/p < .1
D14	0.34	0.00	0.30	0.00	No	Computed Ia/p < .1
D15	0.34	0.00	0.30	0.00	No	Computed Ia/p < .1
D16	0.10	0.00	**	**	No	Computed Ia/p < .1
D17	0.32	0.00	0.30	0.00	No	Computed Ia/p < .1
D18	0.10	0.00	**	**	No	Computed Ia/p < .1
D19	0.19	0.00	0.20	0.00	No	Computed Ia/p < .1
D20	0.41	0.00	0.40	0.00	No	Computed Ia/p < .1
D21	0.21	0.00	0.20	0.00	Yes	--
D22	0.17	0.00	0.20	0.00	No	Computed Ia/p < .1
D24	0.19	0.00	0.20	0.00	No	Computed Ia/p < .1
D25	0.27	0.00	0.30	0.00	No	Computed Ia/p < .1
D26	0.20	0.00	**	**	No	Computed Ia/p < .1
D27	0.12	0.00	0.10	0.00	No	Computed Ia/p < .1
D28	0.10	0.00	**	**	No	Computed Ia/p < .1
D29	0.10	0.00	**	**	No	Computed Ia/p < .1
10 "C" BLDGS	0.10	0.00	**	**	No	Computed Ia/p < .1
D33	0.21	0.00	0.20	0.00	No	Computed Ia/p < .1
D34	0.10	0.00	**	**	No	Computed Ia/p < .1
D35	0.10	0.00	**	**	No	Computed Ia/p < .1
D36	0.11	0.00	0.10	0.00	No	Computed Ia/p < .1

* Travel time from subarea outfall to composite watershed outfall point.

** Tc & Tt are available in the hydrograph tables.

POND-2 Version: 5.21 S/N:

>>>> OUTFLOW HYDROGRAPH ESTIMATOR <<<<
BASIN III
REQUIRED STORM WATER DETENTION FOR
10 YEAR EXISTING STORM
VS.
100 YEAR DEVELOPED STORM

DEVELOPED PEAK RUNOFF:
Inflow Hydrograph: F:\HMDATA\98117\100D6D29.HYD
Qpeak = 137.0 cfs

EXISTING PEAK RUNOFF:
Estimated Outflow: F:\HMDATA\98117\ESTIMATE.EST
Qpeak = 19.0 cfs

Approximate Storage Volume
(computed from t= 11.30 to 12.75 hrs)

REQUIRED STORAGE VOLUME = 4.6 acre-ft
STORAGE VOLUME PROVIDED = 6.85 acre-ft

POND-2 Version: 5.21
S/N:

BASIN III
SOUTHWEST CORNER OF PROPERTY

CALCULATED 08-19-1999 07:44:47
DISK FILE: f:\hmdata\98117\P3 .VOL

Planimeter scale: 1 inch = 1 ft.

Elevation (ft)	Planimeter (sq.in.)	Area (acres)	$A1+A2+\text{sqr}(A1*A2)$ (acres)	* Volume (acre-ft)	Volume Sum (acre-ft)
721.00	35,328.00	0.81	0.00	0.00	0.00
727.00	65,711.00	1.51	3.43	6.85	6.85

* Incremental volume computed by the Conic Method for Reservoir Volumes.

Outlet Structure File: P3 .STR

POND-2 Version: 5.21

S/N:

Date Executed:

Time Executed:

MEADOWLANDS
BASIN III
SOUTHWEST CORNER OF PROPERTY

***** COMPOSITE OUTFLOW SUMMARY *****

Elevation (ft)	Q (cfs)	Contributing Structures
721.00	0.0	1
721.20	0.1	1
721.40	0.6	1
721.60	1.2	1
721.80	2.2	1
722.00	3.1	1
722.20	4.3	1
722.40	5.5	1
722.60	6.7	1
722.80	7.7	1
723.00	8.1	1
723.20	8.6	1
723.40	9.3	1
723.60	9.9	1
723.80	10.6	1
724.00	11.2	1
724.20	11.8	1
724.40	12.4	1
724.60	12.9	1
724.80	13.4	1
725.00	13.9	1
725.20	14.4	1
725.40	14.8	1
725.60	15.3	1
725.80	15.7	1
726.00	16.2	1
726.20	16.5	1
726.40	17.0	1
726.60	17.4	1
726.80	17.7	1
727.00	18.1	1

Outlet Structure File: P3 .STR

POND-2 Version: 5.21

S/N:

Date Executed:

Time Executed:

MEADOWLANDS
BASIN III
SOUTHWEST CORNER OF PROPERTY

Outlet Structure File: f:\hmdata\98117\P3 .STR
Planimeter Input File: f:\hmdata\98117\P3 .VOL
Rating Table Output File: f:\hmdata\98117\P3 .PND

Min. Elev.(ft) = 721 Max. Elev.(ft) = 727 Incr.(ft) = .2

Additional elevations (ft) to be included in table:
* * * * *

SYSTEM CONNECTIVITY

Structure	No.	Q Table	Q Table
-----	---	-----	-----
CULVERT-CR	1	->	1

Outflow rating table summary was stored in file:
f:\hmdata\98117\P3 .PND

Outlet Structure File: P3 .STR

POND-2 Version: 5.21

S/N:

Date Executed:

Time Executed:

MEADOWLANDS
BASIN III
SOUTHWEST CORNER OF PROPERTY

>>>>> Structure No. 1 <<<<<<
(Input Data)

CULVERT-CR
Circular Culvert (With Inlet Control)

E1 elev.(ft)?	721
E2 elev.(ft)?	727.001
Diam. (ft)?	1.5
Inv. el.(ft)?	721
Slope (ft/ft)?	.01
T1 ratio?	
T2 ratio?	
K Coeff.?	.021
M Coeff.?	1.33
c Coeff.?	.0463
Y Coeff.?	.75
Form 1 or 2?	1
Slope factor?	.7

Outlet Structure File: P3 .STR

POND-2 Version: 5.21
Date Executed:

S/N:
Time Executed:

MEADOWLANDS
BASIN III
SOUTHWEST CORNER OF PROPERTY

Outflow Rating Table for Structure #1
CULVERT-CR Circular Culvert (With Inlet Control)

***** INLET CONTROL ASSUMED *****

Elevation (ft)	Q (cfs)	Computation	Messages
721.00	0.0	No headwater	
721.20	0.1	Egu.1: HW =.2	dc=.143 Ac=.086
721.40	0.6	Egu.1: HW =.4	dc=.28 Ac=.228
721.60	1.2	Egu.1: HW =.6	dc=.418 Ac=.402
721.80	2.2	Egu.1: HW =.8	dc=.558 Ac=.599
722.00	3.1	Egu.1: HW =1.0	dc=.675 Ac=.772
722.20	4.3	Egu.1: HW =1.2	dc=.794 Ac=.949
722.40	5.5	Egu.1: HW =1.4	dc=.907 Ac=1.118
722.60	6.7	Egu.1: HW =1.6	dc=.999 Ac=1.25
722.80	7.7	Transition: HW =1.8	
723.00	8.1	Transition: HW =2.0	
723.20	8.6	Transition: HW =2.2	
723.40	9.3	Submerged: HW =2.4	
723.60	9.9	Submerged: HW =2.6	
723.80	10.6	Submerged: HW =2.8	
724.00	11.2	Submerged: HW =3.0	
724.20	11.8	Submerged: HW =3.2	
724.40	12.4	Submerged: HW =3.4	
724.60	12.9	Submerged: HW =3.6	
724.80	13.4	Submerged: HW =3.8	
725.00	13.9	Submerged: HW =4.0	
725.20	14.4	Submerged: HW =4.2	
725.40	14.8	Submerged: HW =4.4	
725.60	15.3	Submerged: HW =4.6	
725.80	15.7	Submerged: HW =4.8	
726.00	16.2	Submerged: HW =5.0	
726.20	16.5	Submerged: HW =5.2	
726.40	17.0	Submerged: HW =5.4	
726.60	17.4	Submerged: HW =5.6	
726.80	17.7	Submerged: HW =5.8	
727.00	18.1	Submerged: HW =6.0	

Used Unsubmerged Egu. Form (1) for elev. less than 722.74 ft
Used Submerged Equation for elevations greater than 723.25 ft
HW=Headwater (ft) dc=Critical depth (ft) Ac=Area (sq.ft) at dc

Transition flows interpolated from the following values:
E1=722.74 ft; Q1=7.58 cfs; Dc=1.07 ft; E2=723.25 ft; Q2=8.66 cfs

POND-2 Version: 5.21 S/N:
EXECUTED: 08-19-1999 07:45:06

Page 1
Return Freq: 100 years

*
* MEADOWLANDS *
* BASIN III *
* SOUTHWEST CORNER OF PROPERTY *
*
*

***** SUMMARY OF ROUTING COMPUTATIONS *****

Pond File: f:\hmdata\98117\P3 .PND
Inflow Hydrograph: f:\hmdata\98117\100D9D36.HYD
Outflow Hydrograph: f:\hmdata\98117\100P3 .HYD

Starting Pond W.S. Elevation = 721.00 ft

***** Summary of Peak Outflow and Peak Elevation *****

Peak Inflow = 137.00 cfs
Peak Outflow = 15.66 cfs
Peak Elevation = 725.78 ft

***** Summary of Approximate Peak Storage *****

Initial Storage = 0.00 ac-ft
Peak Storage From Storm = 5.11 ac-ft

Total Storage in Pond = 5.11 ac-ft

Warning: Inflow hydrograph truncated on left side.



RSV ENGINEERING, INC.
ENGINEERS, PLANNERS, SURVEYORS
CONSTRUCTION MANAGERS
ENVIRONMENTAL SCIENTISTS

801 MAIN STREET, MILWAUKEE, WISCONSIN 53145 (414) 363-2004

	INITIALS	DATE
DESIGN	DKV	12/21/98
DRAWN	DKV	12/21/98
CHECKED		
APPROVED		

REFERENCE

MEADOWLANDS
PLEASANT PRAIRIE
KENOSHA COUNTY, WISCONSIN

NO.	REVISIONS	BY	DATE	DATE FOR A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
1	REVISED LAYOUT	DKV	4/9/99																			

DEVELOPED DRAINAGE PLAN

PROJ. NO. 98-117

SHEET NO.
1
OF
1

RSV - INVESTIGATING ENGINEER/GEOTECHNICAL DON 8/15/99

Revised Stormwater Management Text

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APPENDIX 3 - EXISTING CONDITIONS

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- HYDROCAD HYDROLOGIC MODELING OUTPUT

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- GRADING PLAN SHEETS
- DETAILS SHEETS

Future questions and comments can be directed to:

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1.0 INTRODUCTION

The proposed Vintage Parc Condominiums project is located within the northwest $\frac{1}{4}$ of Section 27, Township 1 north, Range 22 east, within the Village of Pleasant Prairie, WI. The development is bordered to the north by STH 165, to the west by Old Green Bay Road, and to the south and east by undeveloped farmland. A location map indicating the development is located in **Appendix 1**.

The Vintage Parc development will include the construction of fifteen (15) multifamily buildings with supporting driveway and parking facilities, public roadway, and a stormwater retention basin. The site will feature an urban roadway cross section with curb and gutter. Bypass swales are proposed to divert contributing offsite drainage around the site.

2.0 EXISTING CONDITIONS

The existing site comprises of mostly farmland with a small pocket of woodland along the northeast property corner. The site contains four (4) soil types. Soil map units and descriptions are listed in Table 1 below. A soil location map using soils data obtained from the Southeastern Wisconsin Regional Planning Commission (SEWRPC) Regional Map Server which presents both onsite and offsite contributing area soil descriptions can be found in **Appendix 2**.

Table 1 - Soil descriptions

Map Symbol	Map Unit Name	HSG
AtA	Ashkum silty clay loam, 0-3% Slopes	B/D
BcA	Beecher silt loam, 1-3% slopes	C
MzdB	Morley silt loam, 2-6% slopes	C
MzdB2	Morley silt loam, 2-6% slopes, eroded	C

The existing site contains a valley which directs both onsite and offsite stormwater runoff from the southeast property corner to the northwest property corner. The valley conveys stormwater runoff generated by roughly 78.2-acres, including the Vintage Parc site. The offsite watershed features mostly wooded and farmland areas. Roughly 44.3-acrs of this watershed drains to a large depression located southeast of the Vintage Parc property. The natural depression acts as a pond by detaining stormwater runoff before allowing ponded water to release northeast through the onsite valley. The topography of the depression roughly creates a roughly 5.0-acre pond prior to discharging runoff towards Vintage Parc. A 25-year, 24-hour storm event causes roughly 0.65 cfs to release from the depression towards the site and roughly 4.6 cfs is discharged from a 100-year, 24-hour storm. A contributing watershed map and supporting hydrologic modeling output for the exiting conditions is located in **Appendix 3**.

The 78.2-acre watershed is conveyed to an existing 24-inch corrugated metal pipe cross culvert, Culvert C, located approximately 200 feet east of the intersection between STH 165 and Old Green Bay Road. Table 2 summarizes contributing flow rates to Culvert C in existing conditions. Although not required, the 10-year, 25-year, and 50-year, 24-hour storm events are shown to aid in the existing culvert pipe analysis report for the Wisconsin Department of Transportation drainage submittal.

Table 2 – Culvert C pre-development contributing flow rates

	2-YEAR	10-YEAR	25-YEAR	50-YEAR	100-YEAR
Existing	11.02 cfs	22.23 cfs	31.59 cfs	40.26 cfs	50.05 cfs

The resultant headwater that is formed due to the undersized culvert has shown to exceed the STH 165 roadway elevation of 726.75 resulting from a 10-year storm event for pre-development conditions as shown in HydroCAD output. Post-development conditions are located in **Section 6.0** of this report.

3.0 DESIGN CRITERIA

3.1 Village of Pleasant Prairie

Section 395-73: Storm Sewer and Drainage System Facilities

3.2 Wisconsin Department of Natural Resources

WDNR - Technical Standards (NR 151 and NR 216)

Applicable regulatory ordinances are listed below:

Water Quality: "Design computations and all applicable assumptions for stormwater quality practices as needed to show that practices are appropriately sized to accommodate runoff from the one-and-five-tens-inch rainfall." Please refer to **Section 5.1** of this report to view the onsite water quality measures.

Water Quantity: "The post-development two-year peak storm flow release rate shall be 0.04 cfs per acre of new development and the post-development 100-year storm peak flow release rate shall be 0.30 cfs per acre of new development." Please refer to **Section 5.2** of this report to view the onsite water quantity measures.

Infiltration: Residential - Infiltrate 90% of the average annual pre-development infiltration volume, or 25% of the 2-year, 24-hour storm, or provide an effective infiltration area equal to at least 1% of the total site area, or maximum extent practical, where applicable. Please refer to **Section 5.3** of this report to view the onsite infiltration **exemption** reasoning.

Stormwater Conveyance: Storm sewer and open channels have been sized to accommodate stormwater runoff during a 10-year, 24 hour storm event and designed in accordance with WDNR code NR110. Overland relief will be provided to convey larger storm events into the retention basin. Storm sewer design flow rates will include offsite contributing areas, where applicable. Please refer to **Appendix 4** to view the storm sewer design spreadsheet and the contributing drainage area map. Culvert and swale hydraulic characteristics are included in the proposed conditions HydroCAD output.

4.0 ANALYSIS

HydroCAD® Stormwater Modeling System (Version 8.0) software has been used to analyze stormwater characteristics for the Vintage Parc Condominium development. HydroCAD uses the accepted TR-55 methodology for determining peak discharge runoff rates. Curve Numbers for the proposed ground cover were selected using the standard values specified in TR-55 for a "C" hydrologic soil group except for the agricultural land cover, in which case, curve numbers were selected as specified within WDNR Standard NR 151. NR 151 specifies a maximum agricultural curve number of 79 for hydrologic soil group "C" soils. Storm water modeling was conducted using the 1.5" rainfall along with 2-year, 10-year, 25-year, 50-year, and 100-year storm events with respective SEWRPC rainfall amounts of 2.57-inches, 3.62-inches, 4.41-inches, 5.11-inches, and 5.88-inches.

Water quality modeling for the proposed site was determined using WinSLAMM® (Version 9.1) Source Loading and Management Model (SLAMM). Proposed peak discharge rates used within the SLAMM analysis were determined using HydroCAD®

5.0 DESIGN

The proposed development is contained within Drainage area 1. Stormwater generated from the development will be collected by the onsite storm sewer system and drainage swales and then conveyed to Pond P. Pond P reflects the retention basin located in the northwest corner of the property. A contributing watershed map and supporting hydrologic modeling output for the exiting conditions is located in **Appendix 5**. Individual drainage area land cover characteristics are located within the hydrologic modeling.

The offsite drainage contributing to the site has been separated into five (5) drainage areas. The land cover of the offsite watershed is mostly comprised of farmland and woods along with portions of residential lots and roadways.

Drainage area 2 reflects the approximately 7.6-acres of offsite watershed which will be collected by the south bypass swale, SW3. Swale SW3 will convey runoff towards the proposed culvert, C2, within 105th Street. Culvert C2 will outfall into the swale, SW4, along Old Green Bay Road. Swale SW4 will convey runoff towards the existing 24-inch cross culvert, C1, within STH 165.

Drainage area 3 reflects the approximately 11.4-acres of offsite watershed which will be collected by the eastern bypass swale, SW1. Swale SW1 conveys runoff towards the proposed culvert, C3, within 65th Avenue. Culvert C3 will outfall into the swale, SW2, along STH 165. Swale SW2 will convey runoff towards existing culvert C1.

Drainage area 4 reflects the approximately 44.3-acres of offsite watershed which will be collected by a natural depression, D, located to the southeast of the Vintage Parc site. Depression D does not contain an outfall structure so water will pond prior to overland relief. The ponding will increase to an elevation of approximately 737.5 from the lowest elevation of 733.4 before being directed towards the Vintage Parc site. The discharge from the depression will be collected within swale SW3.

Drainage area 5 represents approximately 0.8-acres of offsite watershed which will not enter into a bypass swale. The runoff will be collected by the onsite storm sewer system.

Drainage area 6 reflects the approximately 2.4-acres of offsite watershed along Old Green Bay Road and STH 165 which will contribute to culvert C1.

Further analysis of existing culvert C1 is addressed in **Section 6.0** of this report.

5.1 Water Quality – Total Suspended Solids Reduction

Water quality will be primarily obtained within a wet retention basin, Pond P, along the northwest property corner of the site. The basin has been designed using the parameters set forth in WDNR Technical Standard 1001. The basin features a 5-foot permanent pool depth to allow for sediment settling and storage. The basin will discharge through a multi-stage standpipe. The standpipe will utilize a 4" vertical dewatering orifice which has been sized to provide extended detention volume per WDNR Technical Standard 1001. The dewatering orifice has been designed to release a 1.5" rainfall runoff volume over a period of approximately 26 hours. The 26-hour release period exceeds the required 24 hour minimum to provide 80% total suspended solids reduction. Extended detention calculations and supporting information are located in **Appendix 6**.

Water quality will be enhanced by 1-foot inlet catch basin sumps located within inlets that serve the parking lots and roadway.

SLAMM modeling has shown that the combination of catch basin inlet sumps and Pond P will provide approximately 86% annual removal of total suspended solids. Water quality modeling output and supporting information is located in **Appendix 6**.

5.2 Runoff Rate Control

Allowable post-development stormwater discharge rates for the site have been determined using SEWRPC Des Plaines Watershed standards as instructed by Bob Martin – Village Engineer. Mr. Martin has indicated that offsite water does not require detention even if it enters the onsite retention basin. Offsite water which enters the pond shall be considered direct bypass. Direct bypass allows contributing offsite runoff to discharge from the basin at the same rate at which it enters. Allowable discharge rate methodology has been provided to and accepted by Mr. Martin. The allowable discharge rate calculations for the development are located in **Appendix 5**.

Stormwater runoff generated from the site will be collected by the onsite storm sewer system. The onsite storm sewer system will convey runoff into retention Pond P. A proposed conditions drainage map along with supporting hydrologic and hydraulic modeling can be viewed in **Appendix 5**.

Pond P will provide runoff rate control for the development. The pond will provide rate control for 2-year and 100-year storm events through the use of a multistage standpipe structure connected to a 12-inch outfall pipe. The standpipe will feature a 4-inch vertical dewatering orifice at the normal water elevation, two (2) 4-inch vertical orifices located above the extended detention volume, and a 36" horizontal orifice on the top of standpipe. The standpipe has been sized to achieve desired release rates while maintaining 1-foot of freeboard during a 100-year storm event. The outlet culvert will release stormwater towards existing culvert C1 within STH 165. The pond will also feature a 10-foot wide earthen broad-crested weir. The weir will serve as an emergency spillway for storm events greater than a 100-year, 24-hour storm event and also if the outfall structure should fail. The weir will also be directed toward culvert C1. Table 3 summarizes post-development hydrologic and hydraulic characteristics.

Table 3 – Hydrologic Characteristics

ONSITE DRAINAGE AREAS (HydroCAD Nodes)		2-Year	100-Year
1	Contributes to Retention Pond P (cfs)	18.80	60.71
OFFSITE DRAINAGE AREAS (HydroCAD Nodes)		2-Year	100-Year
2	Contributes to Swale SW3 (cfs)	9.26	38.07
3	Contributes to Swale SW1 (cfs)	4.23	20.28
4	Contributes to Depression D (cfs)	25.06	113.08
5	Offsite Contributing to Onsite Storm Sewer (cfs)	1.09	4.41
6	Contributes to Offsite Right-of-way (cfs)	3.30	13.33

Refer to Appendix 5 to view proposed drainage area maps

STORMWATER MANAGEMENT FEATURES		2-Year	100-Year
DEPRESSION D	Peak Inflow (cfs)	25.06	113.08
	Peak Discharge (cfs)	0.00	4.54
	Peak Water Surface Elevation	736.16	737.99
	Storage Volume At Peak W.S.E.*(Ac-ft)	9.70	
POND P	Peak Inflow (cfs)	19.65	64.08
	Peak Discharge (cfs)	1.22	5.52
	Peak Water Surface Elevation	727.61	730.38
	Storage Volume At Peak W.S.E.*(Ac-ft)	2.52	
	Top of Berm Elevation	732.0	

* W.S.E. - Water Surface Elevation (100-Year Storm)

	2-Year	100-Year
Design Discharge (ONSITE AREA)	1.44	7.51
Total Site Discharge (cfs)	1.22	5.52

5.3 Infiltration

Infiltration has not been incorporated into this stormwater management due to clayey soils present onsite. Table 2 located on page 5 of WDNR Technical Standard 1002 – Site Evaluation for Stormwater Infiltration generalizes infiltration rates for clay and silt soils in the range of 0.03-0.13 inches per hour. Therefore, the site meets criteria outlined in **WDNR NR 151.12(5)c,6.a** which reads, "Areas where the infiltration rate of the soil is less than 0.6 inches/hour measured at the bottom of the infiltration system," under the heading of "The following are not required to meet the requirements of this paragraph" (Infiltration).

6.0 CULVERT ANALYSIS

Stormwater generated by the proposed development will be directed toward the existing 24-inch culvert, C1, within STH 165, which follows existing drainage patterns. The onsite detention basin will serve to reduce post-development runoff rates from the proposed development to Des Plaines River watershed standards. Proposed cross culverts C2 and C3 have been sized to create headwater along swales SW1 and SW3 without overtopping 105th Street and 65th Avenue or encroaching proposed buildings in an effort to reduce peak flow rates toward culvert C1. Table 4 summarizes the positive impacts of allowing culvert headwater and onsite detention upstream of the existing culvert.

Table 4 – Flow rates contributing to existing 24-inch culvert within STH 165

	2-YEAR	10-YEAR	25-YEAR	50-YEAR	100-YEAR
Existing	11.02 cfs	22.23 cfs	31.59 cfs	40.26 cfs	50.05 cfs
Proposed	8.38 cfs	18.50 cfs	25.84 cfs	30.96 cfs	36.87 cfs
Rate Reduction	24%	17%	18%	23%	26%

*Refer to Appendices 3 & 5 to view modeling output

Ponded headwater from existing culvert C1 and proposed culverts C2 and C3 generated from a 100-year storm event will not affect surrounding buildings. Table 5 summarizes the approximate peak headwater elevations for buildings upstream of the culverts.

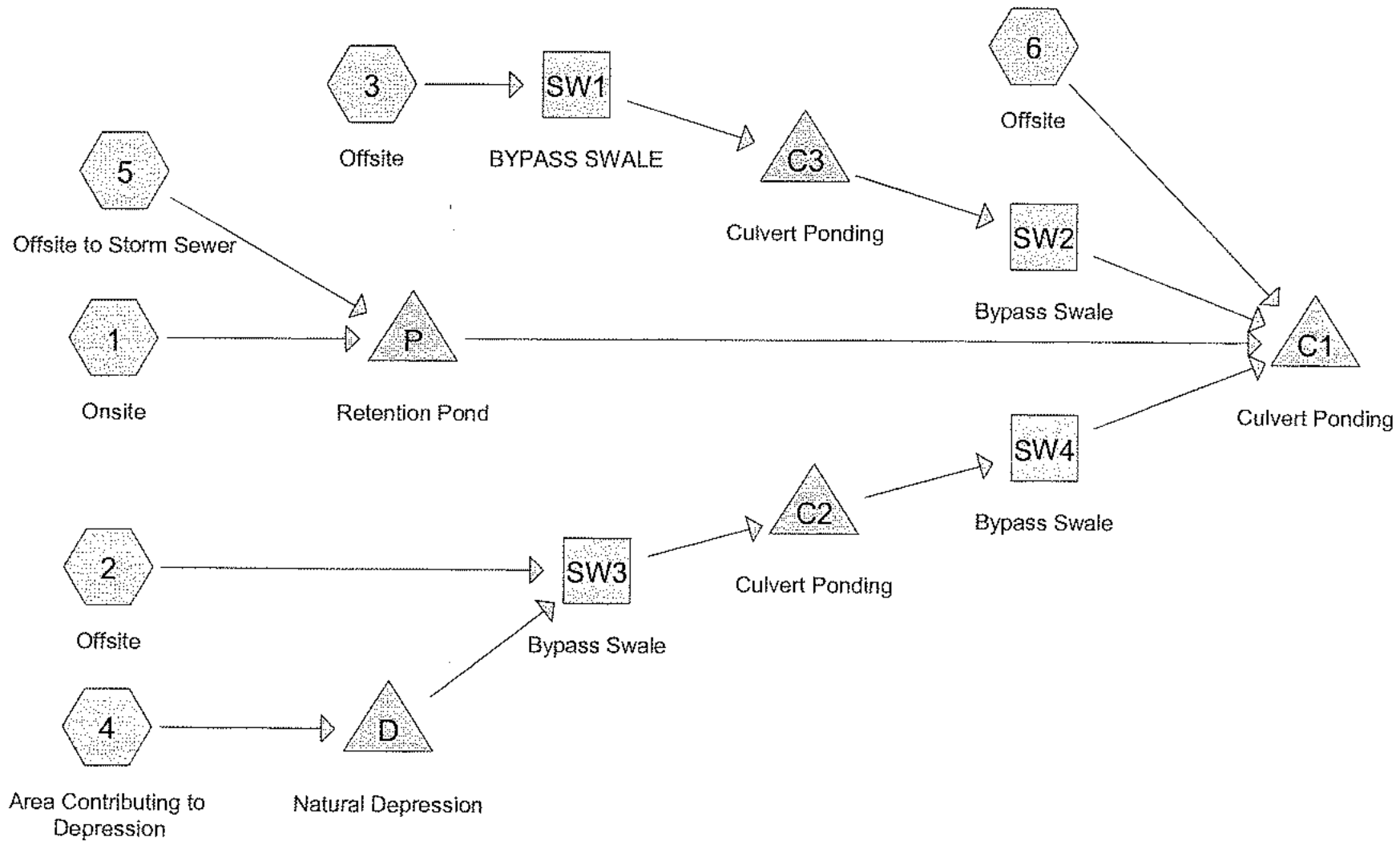
Table 5 – Culvert headwater elevations in relation to adjacent buildings first floor elevations.

	Building			
	1	4	8	15
First Floor Elevation	734.75	737.50	741.25	736.50
Approximate 100-yr Peak Headwater Elevation	727.60	727.60	735.95	734.32
Freeboard	7.15 ft	9.90 ft	5.30 ft	2.18 ft

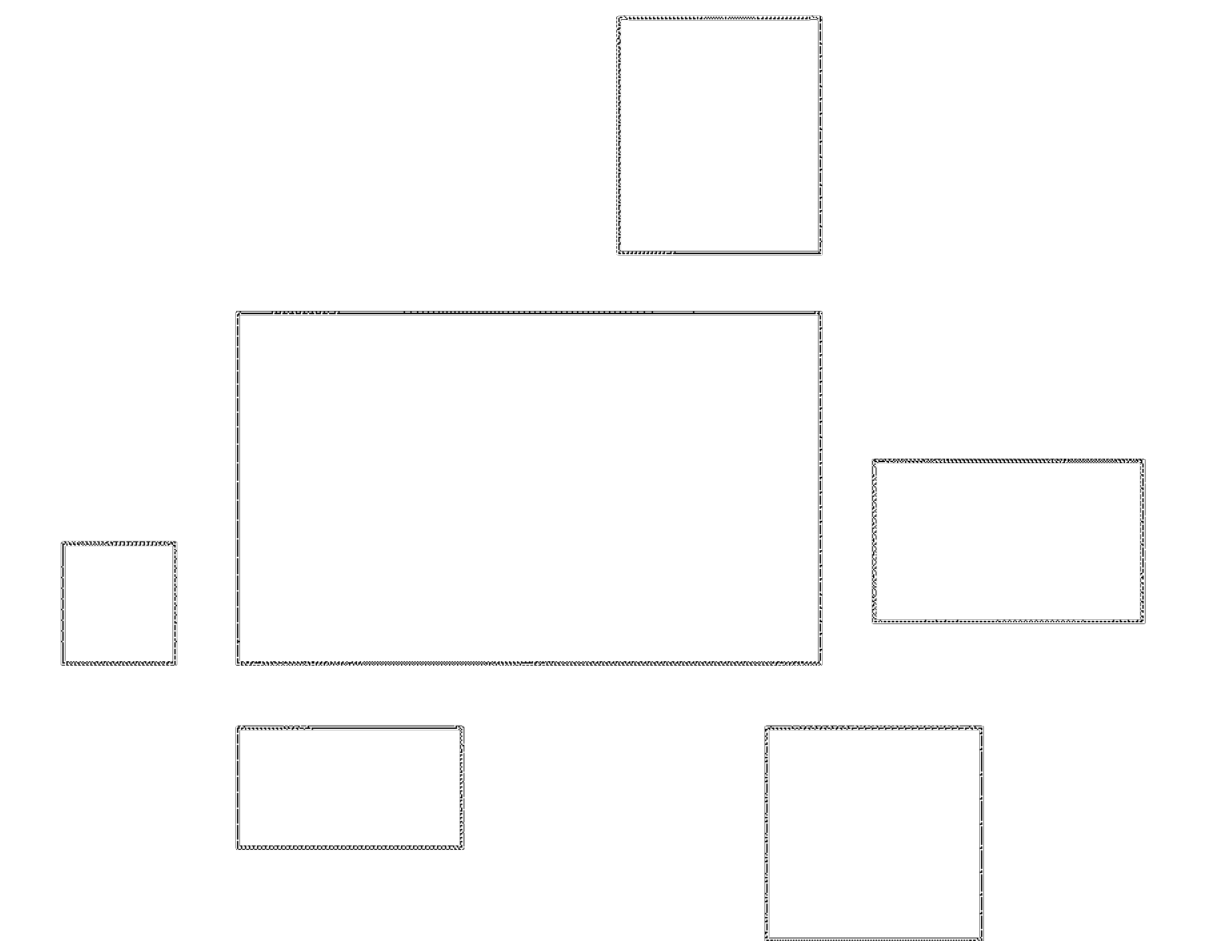
7.0 CONCLUSION

The stormwater management features from the Vintage Parc Condominium development have been designed in accordance with Village of Pleasant Prairie ordinance and WDNR standards NR151 and NR216. The stormwater runoff release rates for the proposed development during 2-year and 100-year storm events are 1.22 cfs and 5.52 cfs, respectively, compared to respective design values of 1.44 cfs and 7.51 cfs. The post-development runoff rates contributing to the existing 24-inch culvert within STH 165 have been reduced from that of existing runoff rates for 2-year and 100-year storm events. Stormwater runoff from the site will be treated to remove at least 80% total suspended solids annually through onsite inlet catch basin sumps and a retention basin. Infiltration measures have not been included within this stormwater management plan due to non-conductive soils present throughout the site.

(Appendices Follow)



Drainage Diagram for 05C2098-Proposed Reduced Tc
 Prepared by Jenkins Survey & Design, Inc. 9/25/2006
 HydroCAD® 8.00 s/n 002918 © 2006 HydroCAD Software Solutions LLC



1114.00 PROPOSED - MSM PH I - InputData

Data file name: Z:\Projects\2017\1114.00-WI\DESIGN\SWMP\SLAMM\1114.10 PROPOSED - MSM PH I.mdb

WinSLAMM Version 10.2.1

Rain file name: C:\WinSLAMM Files\Rain Files\WI Milwaukee 69.RAN

Particulate Solids Concentration file name: C:\WinSLAMM Files\v10.1 WI_AVG01.pscx

Runoff Coefficient file name: C:\WinSLAMM Files\WI_SL06 Dec06.rsvx

Residential Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std

Institutional Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std

Commercial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std

Industrial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std

Other Urban Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std

Freeway Street Delivery file name: C:\WinSLAMM Files\Freeway Dec06.std

Apply Street Delivery Files to Adjust the After Event Load Street Dirt Mass Balance: False

Pollutant Relative Concentration file name: C:\WinSLAMM Files\WI_GEO03.ppdX

Source Area PSD and Peak to Average Flow Ratio File: C:\WinSLAMM Files\NURP Source Area PSD Files.csv

Cost Data file name:

Seed for random number generator: -42

Study period starting date: 01/01/69

Study period ending date: 12/31/69

Start of Winter Season: 12/06

End of Winter Season: 03/28

Date: 02-06-2018

Time: 16:21:24

Site information:

LU# 1 - Commercial: S PROP FLOW Total area (ac): 10.500

1 - Roofs 1: 2.100 ac. Flat Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

13 - Paved Parking 1: 6.300 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

51 - Small Landscaped Areas 1: 2.100 ac. Normal Clayey Low Density Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 2 - Commercial: OS1 Total area (ac): 0.900

13 - Paved Parking 1: 0.530 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

45 - Large Landscaped Areas 1: 0.370 ac. Normal Clayey Low Density Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 3 - Commercial: OS2 Total area (ac): 1.600

13 - Paved Parking 1: 0.250 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

45 - Large Landscaped Areas 1: 1.350 ac. Normal Clayey Low Density Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 4 - Commercial: OS3 Total area (ac): 1.900

13 - Paved Parking 1: 0.520 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

45 - Large Landscaped Areas 1: 1.380 ac. Normal Clayey Low Density Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 5 - Commercial: MEADOWLANDS OS Total area (ac): 34.550

1 - Roofs 1: 6.900 ac. Pitched Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

13 - Paved Parking 1: 20.750 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

45 - Large Landscaped Areas 1: 6.900 ac. Normal Clayey Low Density Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

1114.00 PROPOSED - MSM PH I - InputData

LU# 6 - Commercial: VINTAGE PARK OS Total area (ac): 78.220
13 - Paved Parking 1: 15.950 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
45 - Large Landscaped Areas 1: 62.270 ac. Normal Clayey Low Density Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 7 - Commercial: OS4 Total area (ac): 0.400
45 - Large Landscaped Areas 1: 0.400 ac. Normal Clayey Low Density Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

Control Practice 1: Wet Detention Pond CP# 1 (DS) - S POND (P1)
Particle Size Distribution file name: Not needed - calculated by program
Initial stage elevation (ft): 5
Peak to Average Flow Ratio: 3.8
Maximum flow allowed into pond (cfs): No maximum value entered
Outlet Characteristics:
Outlet type: Orifice 1
1. Orifice diameter (ft): 0.5
2. Number of orifices: 1
3. Invert elevation above datum (ft): 5
Outlet type: Orifice 2
1. Orifice diameter (ft): 1.33
2. Number of orifices: 3
3. Invert elevation above datum (ft): 6.35
Outlet type: Broad Crested Weir
1. Weir crest length (ft): 20
2. Weir crest width (ft): 20
3. Height from datum to bottom of weir opening: 10
Outlet type: Vertical Stand Pipe
1. Stand pipe diameter (ft): 8
2. Stand pipe height above datum (ft): 8
Pond stage and surface area

Entry Number	Stage (ft)	Pond Area (acres)	Natural Seepage (in/hr)	Other Outflow (cfs)
0	0.00	0.0000	0.00	0.00
1	0.01	0.3860	0.00	0.00
2	4.00	0.5290	0.00	0.00
3	5.00	0.7280	0.00	0.00
4	8.00	0.9940	0.00	0.00
5	11.00	1.3000	0.00	0.00

Control Practice 2: Other Device CP# 1 (DS) - DS Other Device # 1
Fraction of drainage area served by device (ac) = 1.00
Concentration reduction fraction = 1.00
Runoff volume reduction fraction = 0

1114.00 PROPOSED - MSM PH I - InputData

Control Practice 3: Other Device CP# 2 (DS) - DS Other Device # 2

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

Concentration reduction fraction = 0.00

Runoff volume reduction fraction = 1

Control Practice 4: Other Device CP# 3 (DS) - DS Other Device # 3

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

Concentration reduction fraction = 0.00

Runoff volume reduction fraction = 1

1114.10 PROPOSED - MSM PH I - Output Summary

SLAMM for Windows Version 10.2.1

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Data file name: Z:\Projects\2017\1114.00-WI\DESIGN\SWMP\SLAMM\1114.10 PROPOSED - MSM PH I.mdb

Data file description:

Rain file name: C:\WinSLAMM Files\Rain Files\WI Milwaukee 69.RAN

Particulate Solids Concentration file name: C:\WinSLAMM Files\v10.1 WI_AVG01.pscx

Runoff Coefficient file name: C:\WinSLAMM Files\WI_SL06 Dec06.rsvx

Residential Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std

Institutional Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std

Commercial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std

Industrial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std

Other Urban Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std

Freeway Street Delivery file name: C:\WinSLAMM Files\Freeway Dec06.std

Pollutant Relative Concentration file name: C:\WinSLAMM Files\WI_GE003.ppdX

Start of Winter Season: 12/06 End of Winter Season: 03/28

Model Run Start Date: 01/01/69 Model Run End Date: 12/31/69

Date of run: 02-06-2018 Time of run: 16:24:23

Total Area Modeled (acres): 128.070

Years in Model Run: 0.99

	Runoff Volume (cu ft)	Percent Runoff Volume Reduction	Particulate Solids Conc. (mg/L)	Particulate Solids Yield (lbs)	Percent Particulate Solids Reduction
Total of all Land Uses without Controls:	4.806E+06	-	124.4	37324	-
Outfall Total with Controls:	1.203E+06	74.97%	11.86	890.7	97.61%
Annualized Total After Outfall Controls:	1.220E+06			903.0	

Land Uses				Junctions				Control Practices				Outfall				Output Summary			
Runoff Volume				Part. Solids Yield (lbs)				Part. Solids Conc. (mg/L)				Summary Table							
Data File: Z:\Projects\2017\1114.10 PROPOSED - MSM PH I.mdb																			
Rain File: WI Milwaukee 69.RAN																			
Date: 02-06-18 Time: 4:23:09 PM																			
Site Description:																			
Col. #:	2	4	5	6	7	9	9	10	11	12	13	14	15	16	17	18	19	20	91
Control Practice No.	Control Practice Type	Total Inflow Volume (cf)	Total Outflow Volume (cf)	Percent Volume Reduction	Total Influent Load (lbs)	Total Effluent Load (lbs)	Percent Load Reduction	Flow Weighted Influent Conc (mg/L)	Flow Weighted Effluent Conc (mg/L)	Percent Conc. Reduction	Influent Median Part. Size (microns)	Effluent Median Part. Size (microns)	Notes	Maximum Flushing Ratio	Maximum Peak Reduction Factor	Maximum Stage (ft)	Hydraulic Volume Out (cf)	Minimum Volume (cf)	Runoff Producing Events/ Ttl. Rains
1	Wet Detention Pond	1.202E+06	1.203E+06	-8.319E-02	4504	990.7	80.22	90.05	11.86	80.247	7.80	1.96	No Pond Overflows	1.0	0.95	9.97	1202997	107136	89/89
2	Other Device	530758	530759	0	4650	0	100.0	140.3	0	100.000	7.80	7.80							89/89
3	Other Device	2.315E+09	150443	93.50	15050	978.3	93.50	104.2	104.2	0.000	7.80	7.80							89/89
4	Other Device	1.994E+09	254101	95.00	19589	2498	95.00	159.8	159.8	0.000	7.80	7.80							99/89

1114.00 MSM PH1 - PROPOSED

MSE 24-hr 3 2-Year Rainfall=2.69"

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Summary for Pond MB3: ML BASIN 3

Inflow Area = 34.580 ac, 8.59% Impervious, Inflow Depth = 1.17" for 2-Year event
 Inflow = 47.31 cfs @ 12.17 hrs, Volume= 3.384 af
 Outflow = 9.46 cfs @ 12.79 hrs, Volume= 3.384 af, Atten= 80%, Lag= 37.1 min
 Primary = 9.46 cfs @ 12.79 hrs, Volume= **3.384 af**

Routing by Dyn-Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
 Peak Elev= 722.44' @ 12.79 hrs Surf.Area= 42,603 sf Storage= 65,972 cf

Plug-Flow detention time= 108.6 min calculated for 3.382 af (100% of inflow)
 Center-of-Mass det. time= 108.9 min (928.5 - 819.6)

3.384 af x 43,560 ft²/ac = 147,407 cf
 Volume of flow for WinSLAMM modeling

Volume	Invert	Avail.Storage	Storage Description
#1	720.45'	313,107 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
720.45	1,000	0	0
721.00	35,328	9,990	9,990
727.00	65,711	303,117	313,107

Device	Routing	Invert	Outlet Devices
#1	Primary	720.45'	18.0" Round Culvert L= 68.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 720.45' / 717.09' S= 0.0494 ' S= 0.0494 ' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.77 sf

Primary OutFlow Max=9.46 cfs @ 12.79 hrs HW=722.44' TW=708.11' (Dynamic Tailwater)
1=Culvert (Inlet Controls 9.46 cfs @ 5.35 fps)

05C2098-Proposed Reduced Tc

Type II 24-hr 2-year SEWRPC Rainfall=2.57"

Prepared by Jenkins Survey & Design, Inc.

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9/25/2006

Time span=0.00-96.00 hrs, dt=0.01 hrs, 9601 points

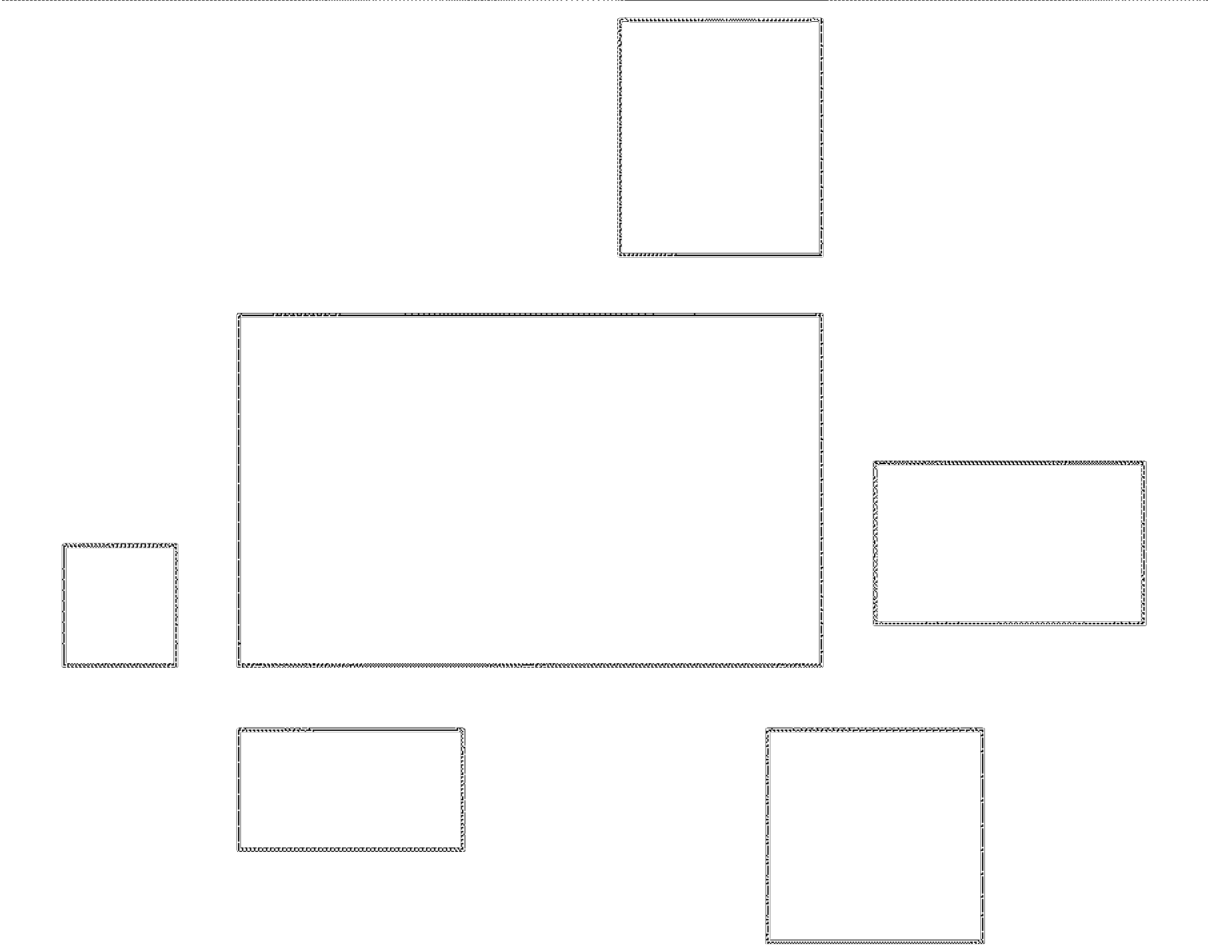
Runoff by SCS TR-20 method, UH=SCS

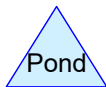
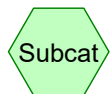
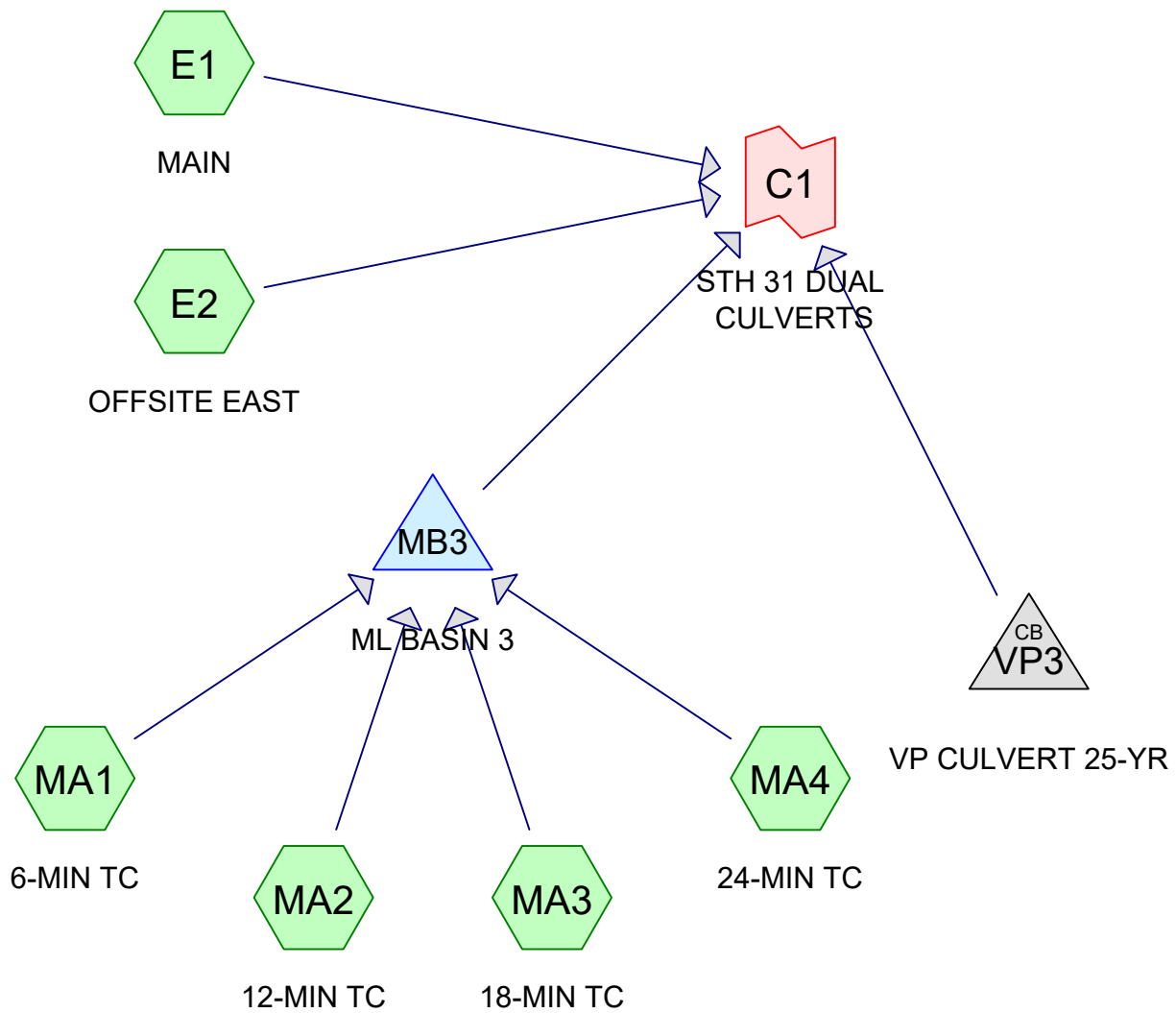
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1: OnsiteRunoff Area=11.740 ac Runoff Depth=1.30"
Tc=16.6 min CN=86 Runoff=18.80 cfs 1.273 af**Subcatchment 2: Offsite**Runoff Area=7.600 ac Runoff Depth=0.88"
Flow Length=580' Tc=12.5 min CN=79 Runoff=9.26 cfs 0.560 af**Subcatchment 3: Offsite**Runoff Area=11.430 ac Runoff Depth=0.78"
Flow Length=811' Tc=61.5 min CN=77 Runoff=4.23 cfs 0.747 af**Subcatchment 4: Area Contributing to Depression**Runoff Area=44.280 ac Runoff Depth=0.83"
Flow Length=1,009' Tc=38.5 min CN=78 Runoff=25.06 cfs 3.076 af**Subcatchment 5: Offsite to Storm Sewer**Runoff Area=0.800 ac Runoff Depth=0.88"
Flow Length=260' Slope=0.0153 '/' Tc=9.7 min CN=79 Runoff=1.09 cfs 0.059 af**Subcatchment 6: Offsite**Runoff Area=2.370 ac Runoff Depth=0.88"
Flow Length=743' Tc=9.1 min CN=79 Runoff=3.30 cfs 0.175 af**Reach SW1: BYPASS SWALE**Avg. Depth=0.38' Max Vel=2.17 fps Inflow=4.23 cfs 0.747 af
n=0.024 L=350.8' S=0.0060 '/' Capacity=108.53 cfs Outflow=4.22 cfs 0.747 af**Reach SW2: Bypass Swale**Avg. Depth=0.29' Max Vel=2.76 fps Inflow=4.21 cfs 0.747 af
n=0.024 L=602.0' S=0.0136 '/' Capacity=488.29 cfs Outflow=4.19 cfs 0.747 af**Reach SW3: Bypass Swale**Avg. Depth=0.54' Max Vel=2.35 fps Inflow=9.26 cfs 0.560 af
n=0.024 L=821.0' S=0.0050 '/' Capacity=116.25 cfs Outflow=7.90 cfs 0.560 af**Reach SW4: Bypass Swale**Avg. Depth=0.34' Max Vel=3.17 fps Inflow=5.87 cfs 0.560 af
n=0.024 L=348.0' S=0.0150 '/' Capacity=202.41 cfs Outflow=5.84 cfs 0.560 af**Pond C1: Culvert Ponding**Peak Elev=726.01' Storage=3,227 cf Inflow=8.38 cfs 2.801 af
Primary=8.07 cfs 2.801 af Secondary=0.00 cfs 0.000 af Outflow=8.07 cfs 2.801 af**Pond C2: Culvert Ponding**Peak Elev=732.08' Storage=2,583 cf Inflow=7.90 cfs 0.560 af
21.0' x 81.0' Culvert Outflow=5.87 cfs 0.560 af**Pond C3: Culvert Ponding**Peak Elev=734.62' Storage=377 cf Inflow=4.22 cfs 0.747 af
27.0' x 114.0' Culvert Outflow=4.21 cfs 0.747 af**Pond D: Natural Depression**Peak Elev=736.16' Storage=3.076 af Inflow=25.06 cfs 3.076 af
Outflow=0.00 cfs 0.000 af**Pond P: Retention Pond**Peak Elev=727.61' Storage=32,466 cf Inflow=19.65 cfs 1.332 af
Outflow=1.22 cfs 1.319 af

Total Runoff Area = 78.220 ac Runoff Volume = 5.890 af Average Runoff Depth = 0.90"
79.61% Pervious Area = 62.270 ac 20.39% Impervious Area = 15.950 ac

5.890 acft x 43,560 ft²/ac = 256,568 cf
Volume of flow for WinSLAMM modeling





1114.00 MSM PH1 - EXISTING

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MSE 24-hr 3 25-Year Rainfall=4.53"

Printed 2/7/2018

Page 2

Summary for Subcatchment E1: MAIN

Runoff = 30.54 cfs @ 12.35 hrs, Volume= 2.510 af, Depth= 2.57"

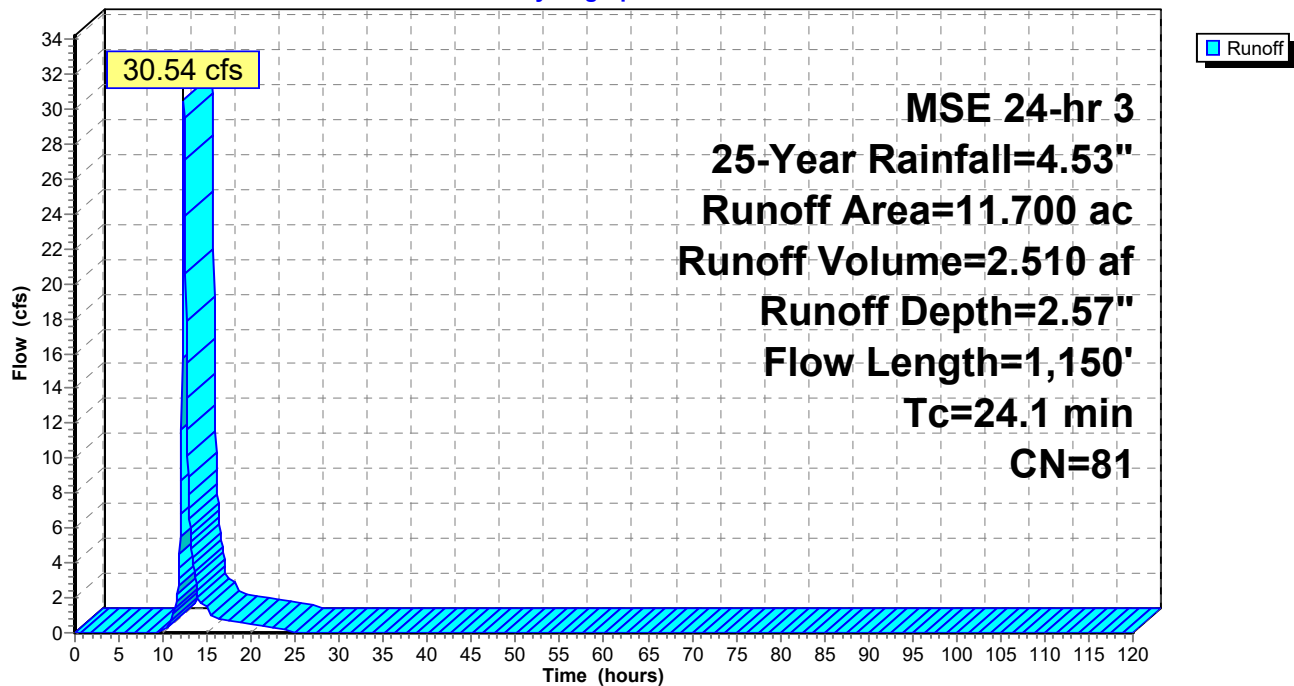
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 25-Year Rainfall=4.53"

Area (ac)	CN	Description
* 11.300	80	Max CN for Cropland HSG D (PP)
0.400	98	Paved parking, HSG D
11.700	81	Weighted Average
11.300	80	96.58% Pervious Area
0.400	98	3.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.0	100	0.0400	1.66		Sheet Flow, Paved Smooth surfaces n= 0.011 P2= 2.68"
15.6	100	0.0200	0.11		Sheet Flow, Grass Grass: Dense n= 0.240 P2= 2.68"
7.5	950	0.0200	2.12		Shallow Concentrated Flow, Swale Grassed Waterway Kv= 15.0 fps
24.1	1,150	Total			

Subcatchment E1: MAIN

Hydrograph



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MSE 24-hr 3 25-Year Rainfall=4.53"

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Summary for Subcatchment E2: OFFSITE EAST

Runoff = 11.06 cfs @ 12.22 hrs, Volume= 0.688 af, Depth= 2.75"

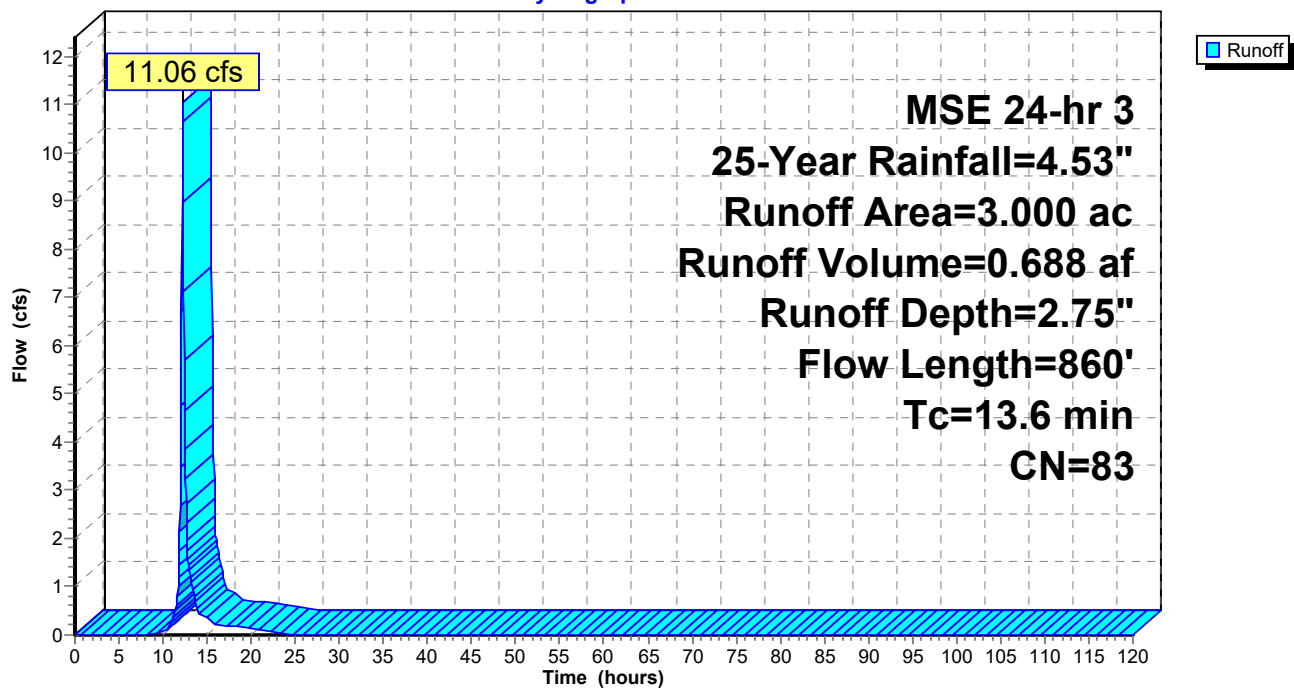
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 25-Year Rainfall=4.53"

Area (ac)	CN	Description
0.500	98	Paved parking, HSG D
* 2.500	80	Max CN for Cropland HSG D (PP)
3.000	83	Weighted Average
2.500	80	83.33% Pervious Area
0.500	98	16.67% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	20	0.0500	1.32		Sheet Flow, Paved Smooth surfaces n= 0.011 P2= 2.68"
7.6	80	0.0300	0.18		Sheet Flow, Grass Grass: Short n= 0.150 P2= 2.68"
3.0	460	0.0300	2.60		Shallow Concentrated Flow, Grass Grassed Waterway Kv= 15.0 fps
2.7	300	0.0150	1.84		Shallow Concentrated Flow, Grass Grassed Waterway Kv= 15.0 fps
13.6	860	Total			

Subcatchment E2: OFFSITE EAST

Hydrograph



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MSE 24-hr 3 25-Year Rainfall=4.53"

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Summary for Subcatchment MA1: 6-MIN TC

Runoff = 40.71 cfs @ 12.13 hrs, Volume= 1.991 af, Depth= 3.32"

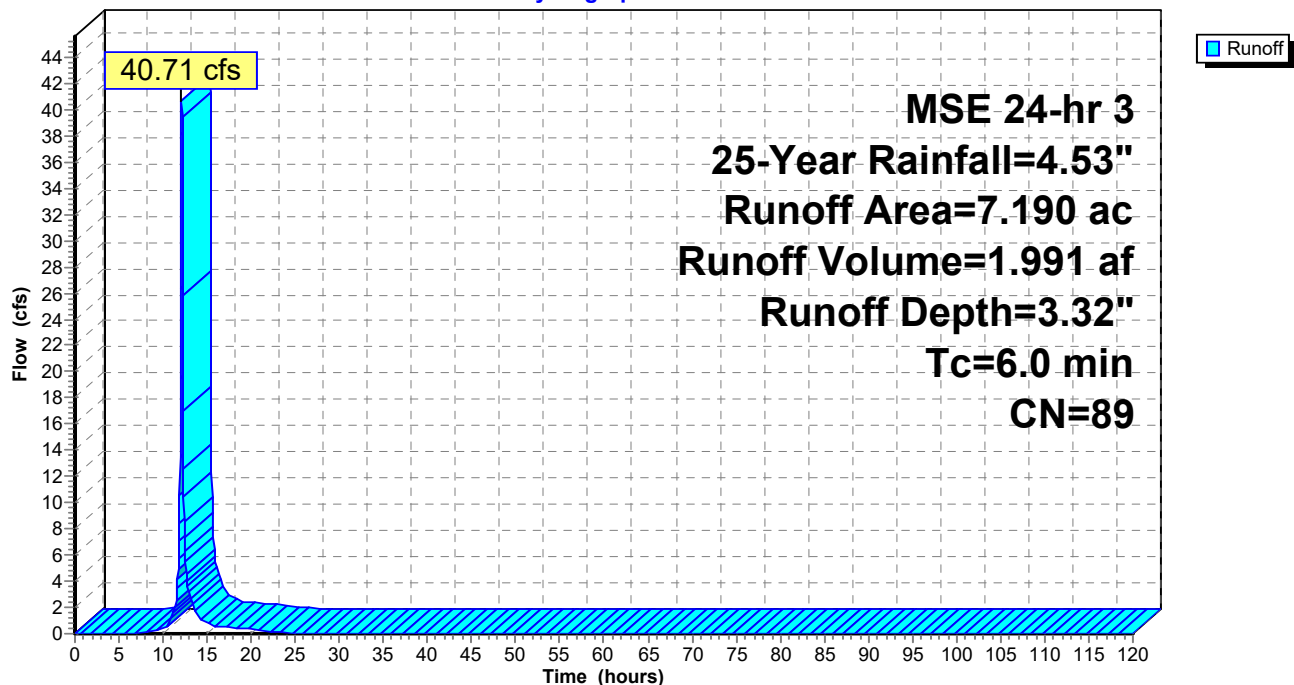
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 25-Year Rainfall=4.53"

Area (ac)	CN	Description
* 1.380	81	D12
* 0.440	90	D16
* 0.550	84	D18
* 0.540	81	D27
* 0.390	80	D28
* 0.410	80	D29
* 2.800	98	D33
* 0.090	98	D34
* 0.080	98	D35
* 0.510	87	D36
7.190	89	Weighted Average
4.220	83	58.69% Pervious Area
2.970	98	41.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, GIVEN FROM MEADOWLANDS

Subcatchment MA1: 6-MIN TC

Hydrograph



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MSE 24-hr 3 25-Year Rainfall=4.53"

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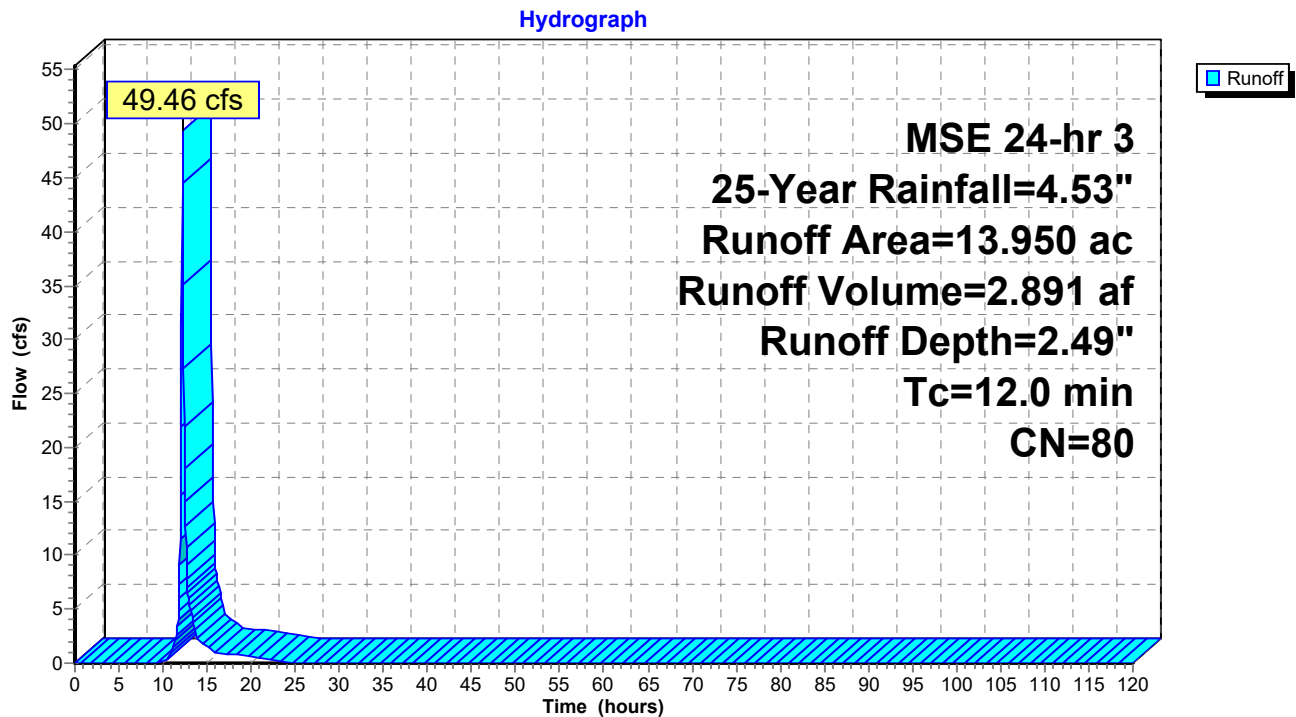
Summary for Subcatchment MA2: 12-MIN TC

Runoff = 49.46 cfs @ 12.20 hrs, Volume= 2.891 af, Depth= 2.49"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 25-Year Rainfall=4.53"

Area (ac)	CN	Description
* 2.180	80	D9
* 1.280	81	D13
* 1.180	89	D19
* 4.410	74	D21
* 1.100	89	D22
* 1.880	80	D24
* 0.370	79	D26
* 1.550	81	D33
13.950	80	Weighted Average
13.950	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.0					Direct Entry, GIVEN FROM MEADOWLANDS

Subcatchment MA2: 12-MIN TC

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MSE 24-hr 3 25-Year Rainfall=4.53"

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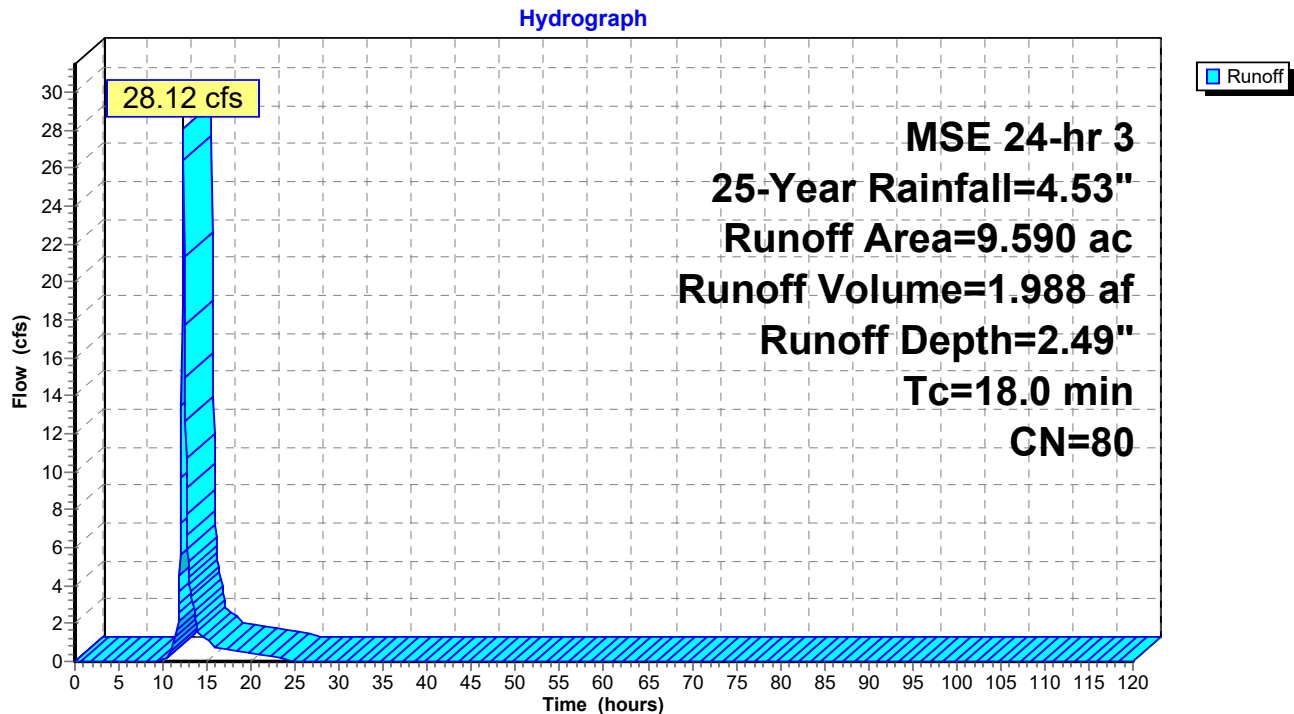
Summary for Subcatchment MA3: 18-MIN TC

Runoff = 28.12 cfs @ 12.27 hrs, Volume= 1.988 af, Depth= 2.49"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 25-Year Rainfall=4.53"

	Area (ac)	CN	Description
*	2.270	80	D10
*	1.720	80	D14
*	2.670	80	D15
*	1.210	80	D17
*	1.720	80	D25
	9.590	80	Weighted Average
	9.590	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.0					Direct Entry, GIVEN FROM MEADOWLANDS

Subcatchment MA3: 18-MIN TC

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MSE 24-hr 3 25-Year Rainfall=4.53"

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Summary for Subcatchment MA4: 24-MIN TC

Runoff = 11.09 cfs @ 12.35 hrs, Volume= 0.912 af, Depth= 2.84"

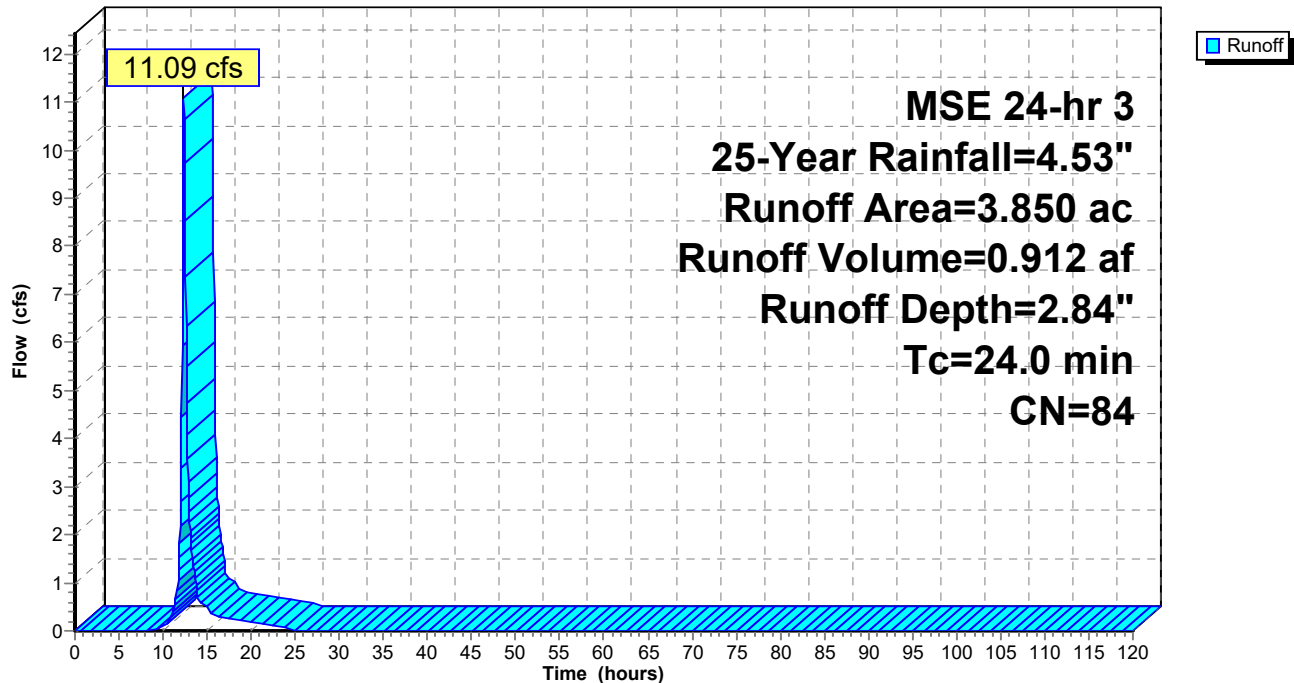
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 25-Year Rainfall=4.53"

Area (ac)	CN	Description
* 3.850	84	D20
3.850	84	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.0					Direct Entry, GIVEN FROM MEADOWLANDS

Subcatchment MA4: 24-MIN TC

Hydrograph



1114.00 MSM PH1 - EXISTING

MSE 24-hr 3 25-Year Rainfall=4.53"

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Summary for Pond MB3: ML BASIN 3

Inflow Area = 34.580 ac, 8.59% Impervious, Inflow Depth = 2.70" for 25-Year event
 Inflow = 110.13 cfs @ 12.17 hrs, Volume= 7.783 af
 Outflow = 15.85 cfs @ 12.94 hrs, Volume= 7.783 af, Atten= 86%, Lag= 46.1 min
 Primary = 15.85 cfs @ 12.94 hrs, Volume= 7.783 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
 Peak Elev= 724.67' @ 12.94 hrs Surf.Area= 53,910 sf Storage= 173,719 cf

Plug-Flow detention time= 140.4 min calculated for 7.779 af (100% of inflow)
 Center-of-Mass det. time= 140.7 min (944.1 - 803.4)

Volume	Invert	Avail.Storage	Storage Description
#1	720.45'	313,107 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
720.45	1,000	0	0
721.00	35,328	9,990	9,990
727.00	65,711	303,117	313,107

Device	Routing	Invert	Outlet Devices
#1	Primary	720.45'	18.0" Round Culvert L= 68.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 720.45' / 717.09' S= 0.0494 ' S= 0.0494 ' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.77 sf

Primary OutFlow Max=15.85 cfs @ 12.94 hrs HW=724.67' TW=0.00' (Dynamic Tailwater)
 ↑1=Culvert (Inlet Controls 15.85 cfs @ 8.97 fps)

1114.00 MSM PH1 - EXISTING

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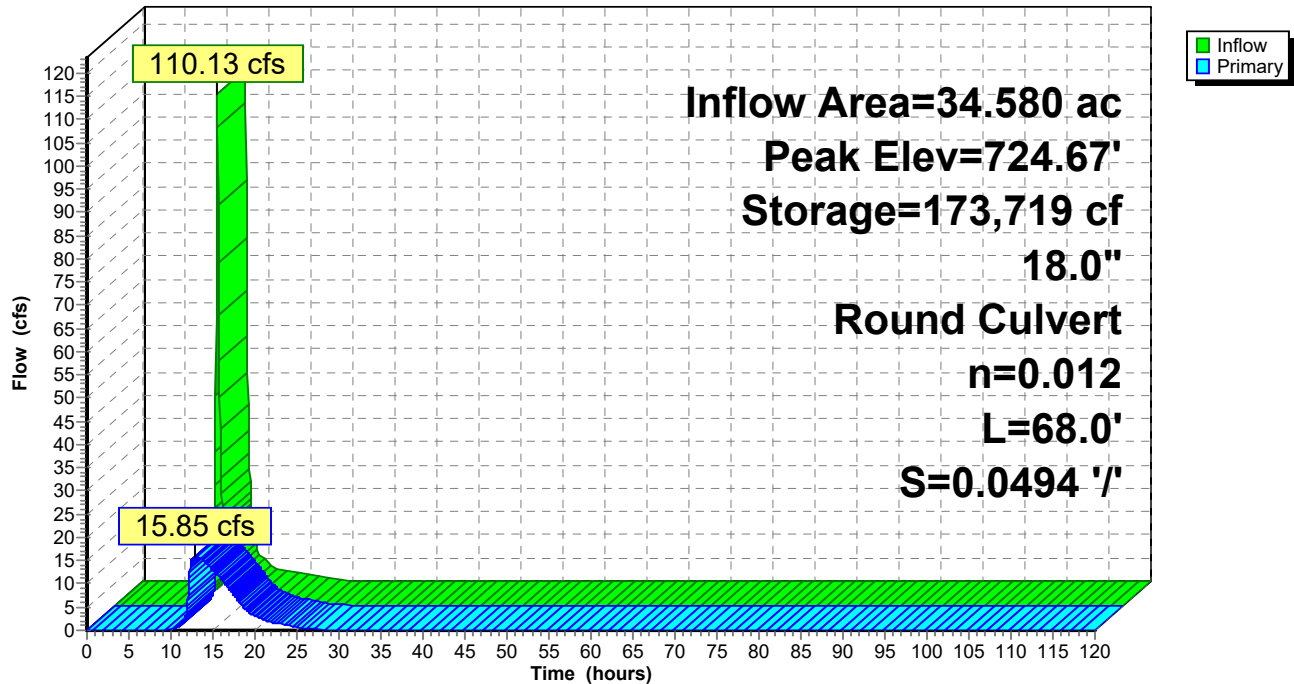
MSE 24-hr 3 25-Year Rainfall=4.53"

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Pond MB3: ML BASIN 3

Hydrograph



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MSE 24-hr 3 25-Year Rainfall=4.53"

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Summary for Pond VP3: VP CULVERT 25-YR

Inflow = 25.84 cfs @ 0.00 hrs, Volume= 256.371 af, Incl. 25.84 cfs Base Flow
Outflow = 25.84 cfs @ 0.15 hrs, Volume= 256.371 af, Atten= 0%, Lag= 9.0 min
Primary = 25.84 cfs @ 0.15 hrs, Volume= 256.371 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs

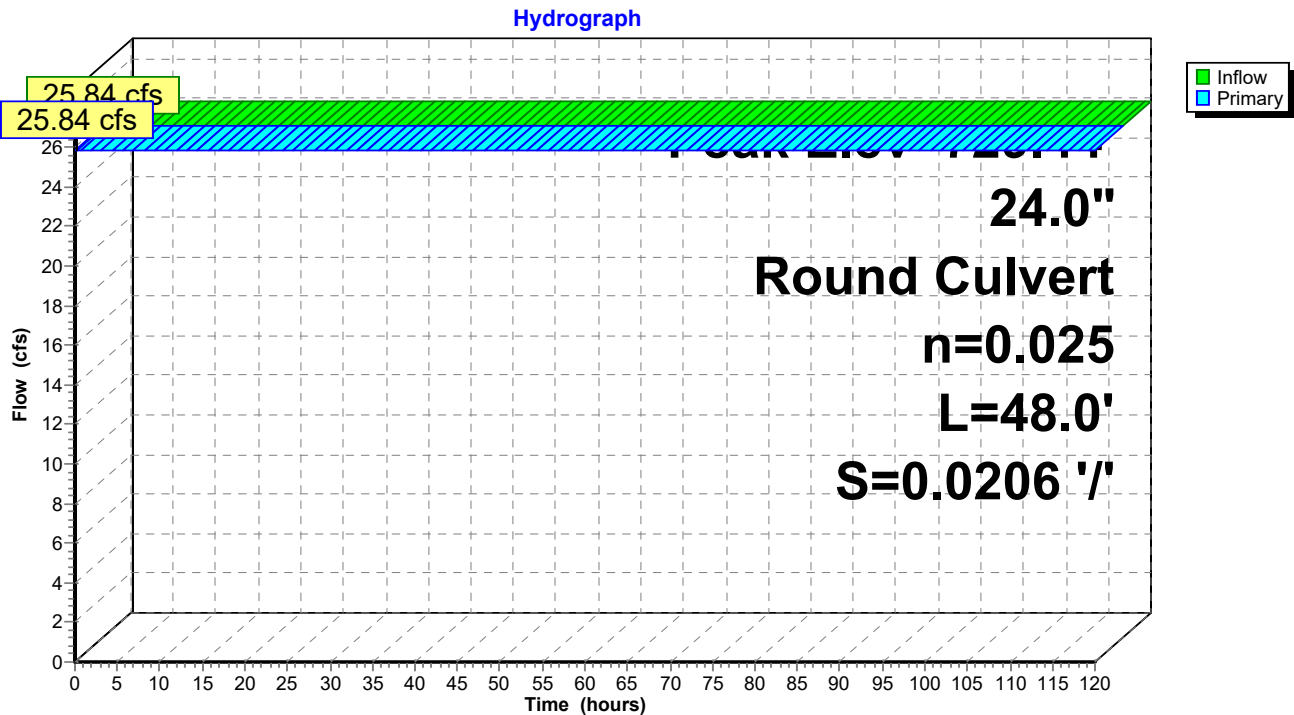
Peak Elev= 729.44' @ 0.00 hrs

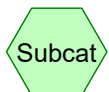
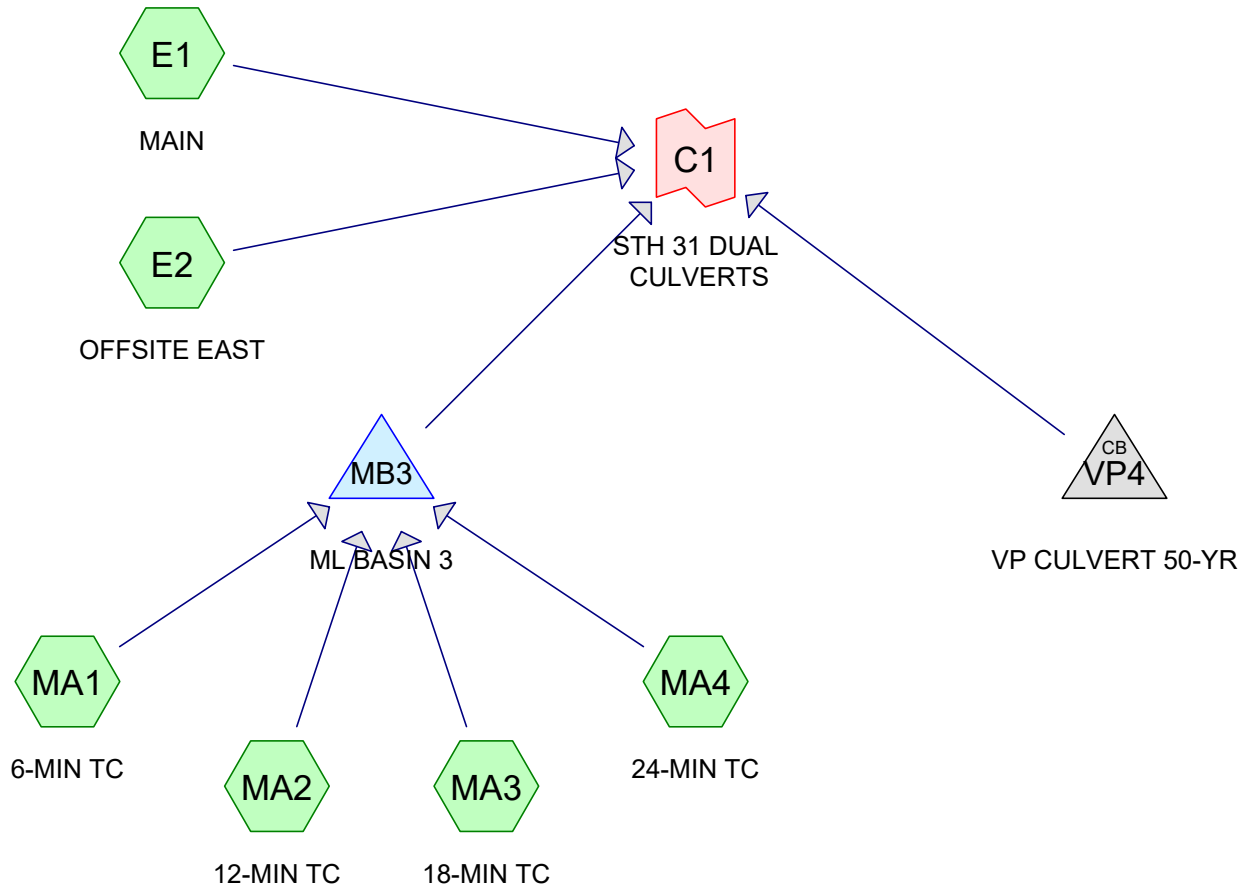
Device	Routing	Invert	Outlet Devices
#1	Primary	724.53'	24.0" Round Culvert L= 48.0' CMP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 724.53' / 723.54' S= 0.0206 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 3.14 sf

Primary OutFlow Max=25.84 cfs @ 0.15 hrs HW=729.44' TW=0.00' (Dynamic Tailwater)

↑1=Culvert (Barrel Controls 25.84 cfs @ 8.23 fps)

Pond VP3: VP CULVERT 25-YR

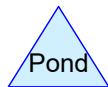




Subcat



Reach



Pond



Link

Routing Diagram for 1114.00 MSM PH1 - EXISTING

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1114.00 MSM PH1 - EXISTING

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MSE 24-hr 3 50-Year Rainfall=5.19"

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Summary for Subcatchment E1: MAIN

Runoff = 37.36 cfs @ 12.35 hrs, Volume= 3.075 af, Depth= 3.15"

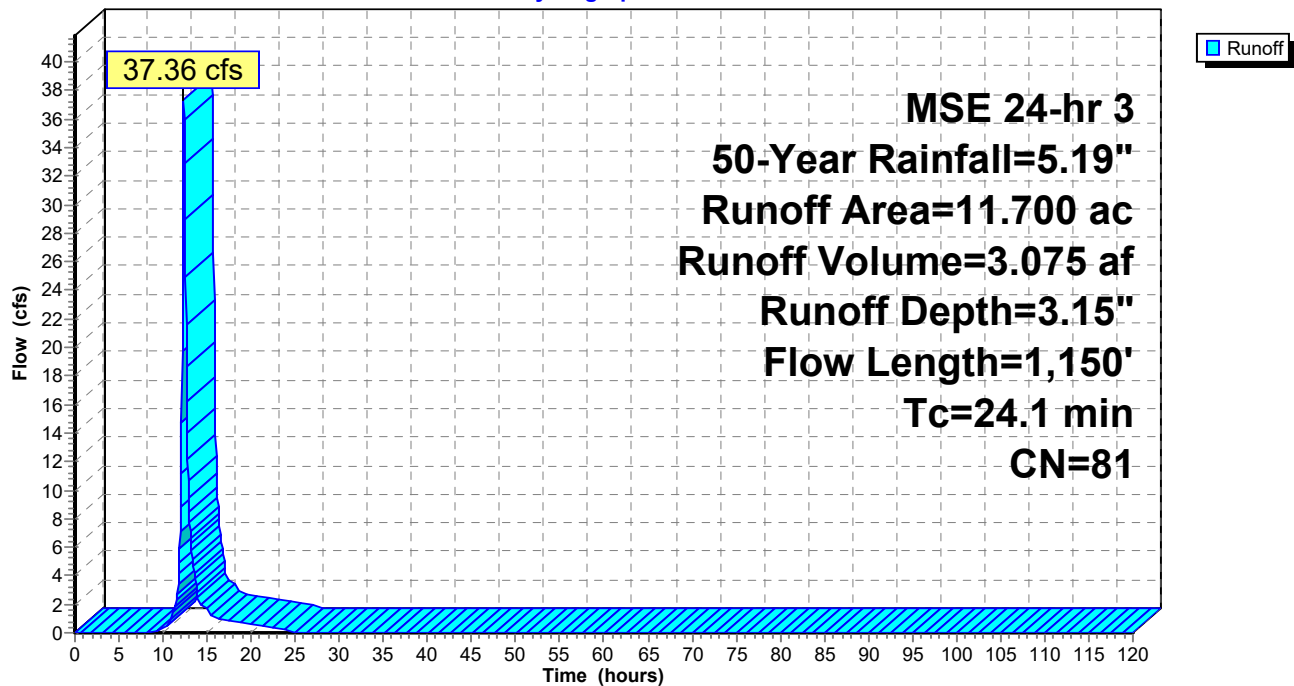
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 50-Year Rainfall=5.19"

Area (ac)	CN	Description
* 11.300	80	Max CN for Cropland HSG D (PP)
0.400	98	Paved parking, HSG D
11.700	81	Weighted Average
11.300	80	96.58% Pervious Area
0.400	98	3.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.0	100	0.0400	1.66		Sheet Flow, Paved Smooth surfaces n= 0.011 P2= 2.68"
15.6	100	0.0200	0.11		Sheet Flow, Grass Grass: Dense n= 0.240 P2= 2.68"
7.5	950	0.0200	2.12		Shallow Concentrated Flow, Swale Grassed Waterway Kv= 15.0 fps
24.1	1,150	Total			

Subcatchment E1: MAIN

Hydrograph



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MSE 24-hr 3 50-Year Rainfall=5.19"

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Summary for Subcatchment E2: OFFSITE EAST

Runoff = 13.38 cfs @ 12.22 hrs, Volume= 0.837 af, Depth= 3.35"

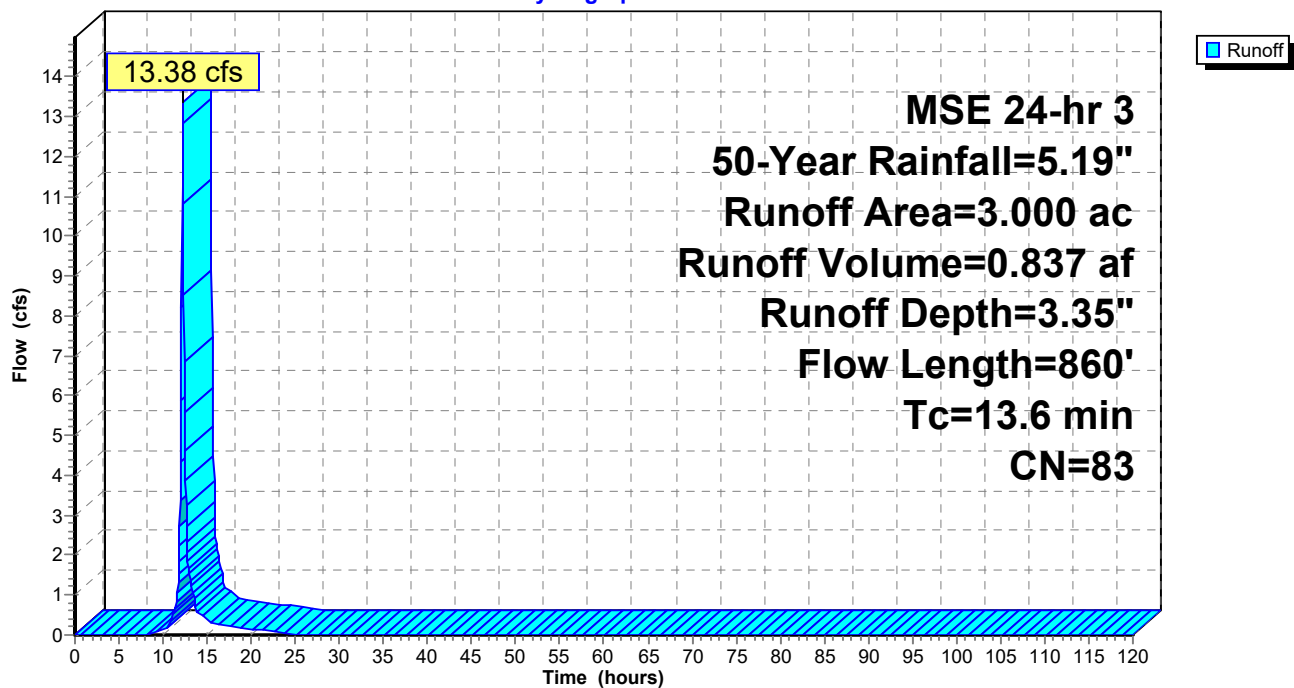
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 50-Year Rainfall=5.19"

Area (ac)	CN	Description
0.500	98	Paved parking, HSG D
* 2.500	80	Max CN for Cropland HSG D (PP)
3.000	83	Weighted Average
2.500	80	83.33% Pervious Area
0.500	98	16.67% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	20	0.0500	1.32		Sheet Flow, Paved Smooth surfaces n= 0.011 P2= 2.68"
7.6	80	0.0300	0.18		Sheet Flow, Grass Grass: Short n= 0.150 P2= 2.68"
3.0	460	0.0300	2.60		Shallow Concentrated Flow, Grass Grassed Waterway Kv= 15.0 fps
2.7	300	0.0150	1.84		Shallow Concentrated Flow, Grass Grassed Waterway Kv= 15.0 fps
13.6	860	Total			

Subcatchment E2: OFFSITE EAST

Hydrograph



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MSE 24-hr 3 50-Year Rainfall=5.19"

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Summary for Subcatchment MA1: 6-MIN TC

Runoff = 47.92 cfs @ 12.13 hrs, Volume= 2.369 af, Depth= 3.95"

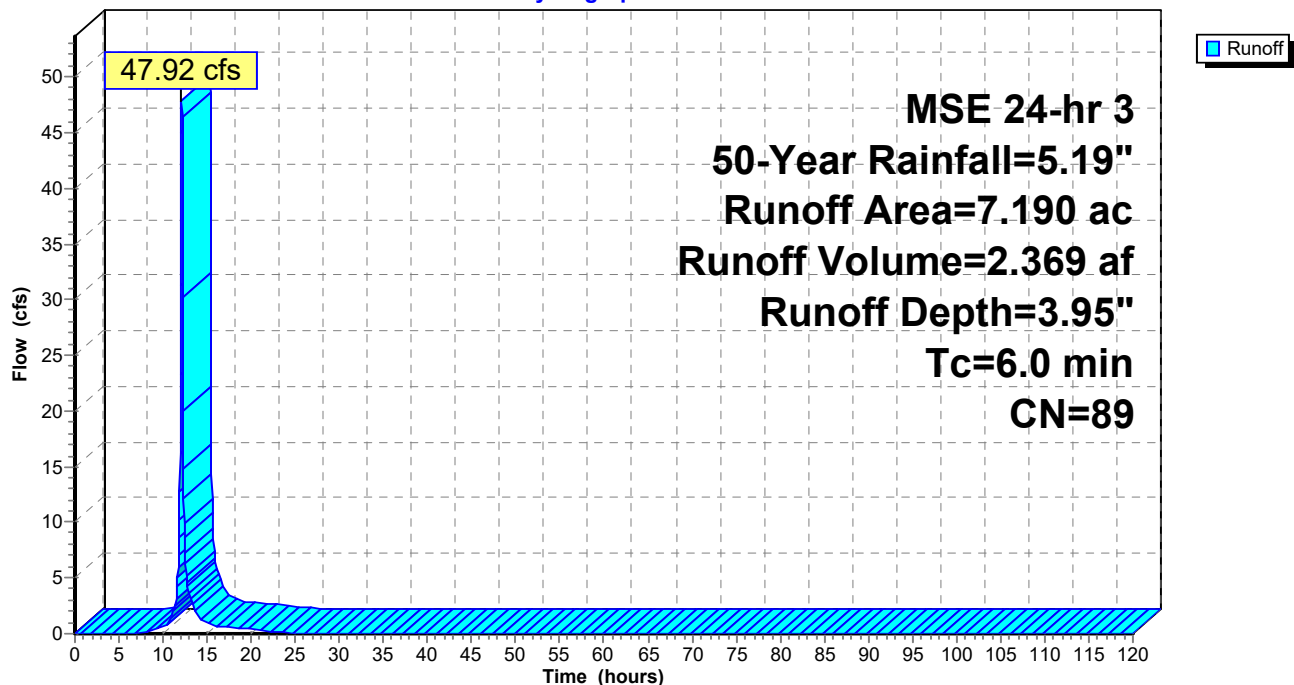
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 50-Year Rainfall=5.19"

Area (ac)	CN	Description
* 1.380	81	D12
* 0.440	90	D16
* 0.550	84	D18
* 0.540	81	D27
* 0.390	80	D28
* 0.410	80	D29
* 2.800	98	D33
* 0.090	98	D34
* 0.080	98	D35
* 0.510	87	D36
7.190	89	Weighted Average
4.220	83	58.69% Pervious Area
2.970	98	41.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, GIVEN FROM MEADOWLANDS

Subcatchment MA1: 6-MIN TC

Hydrograph



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MSE 24-hr 3 50-Year Rainfall=5.19"

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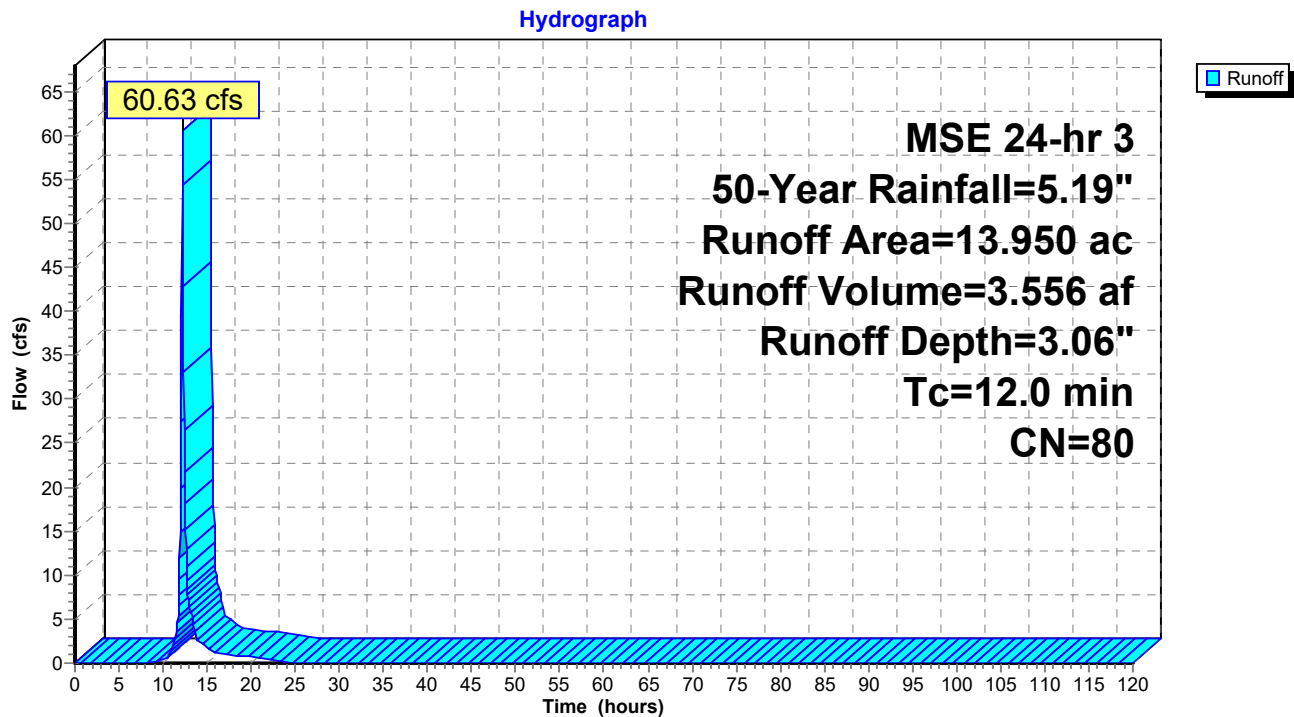
Summary for Subcatchment MA2: 12-MIN TC

Runoff = 60.63 cfs @ 12.20 hrs, Volume= 3.556 af, Depth= 3.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 50-Year Rainfall=5.19"

	Area (ac)	CN	Description
*	2.180	80	D9
*	1.280	81	D13
*	1.180	89	D19
*	4.410	74	D21
*	1.100	89	D22
*	1.880	80	D24
*	0.370	79	D26
*	1.550	81	D33
	13.950	80	Weighted Average
	13.950	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.0					Direct Entry, GIVEN FROM MEADOWLANDS

Subcatchment MA2: 12-MIN TC

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MSE 24-hr 3 50-Year Rainfall=5.19"

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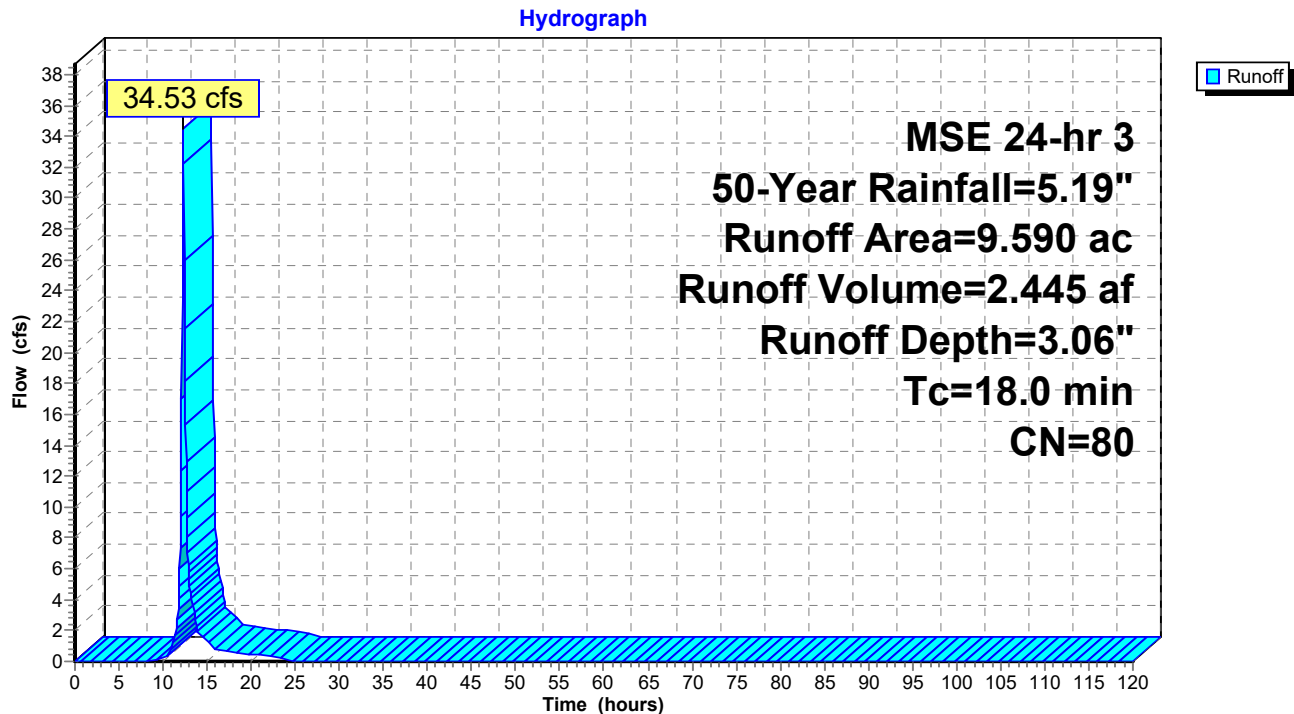
Summary for Subcatchment MA3: 18-MIN TC

Runoff = 34.53 cfs @ 12.27 hrs, Volume= 2.445 af, Depth= 3.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 50-Year Rainfall=5.19"

	Area (ac)	CN	Description
*	2.270	80	D10
*	1.720	80	D14
*	2.670	80	D15
*	1.210	80	D17
*	1.720	80	D25
	9.590	80	Weighted Average
	9.590	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.0					Direct Entry, GIVEN FROM MEADOWLANDS

Subcatchment MA3: 18-MIN TC

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MSE 24-hr 3 50-Year Rainfall=5.19"

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Summary for Subcatchment MA4: 24-MIN TC

Runoff = 13.38 cfs @ 12.34 hrs, Volume= 1.105 af, Depth= 3.44"

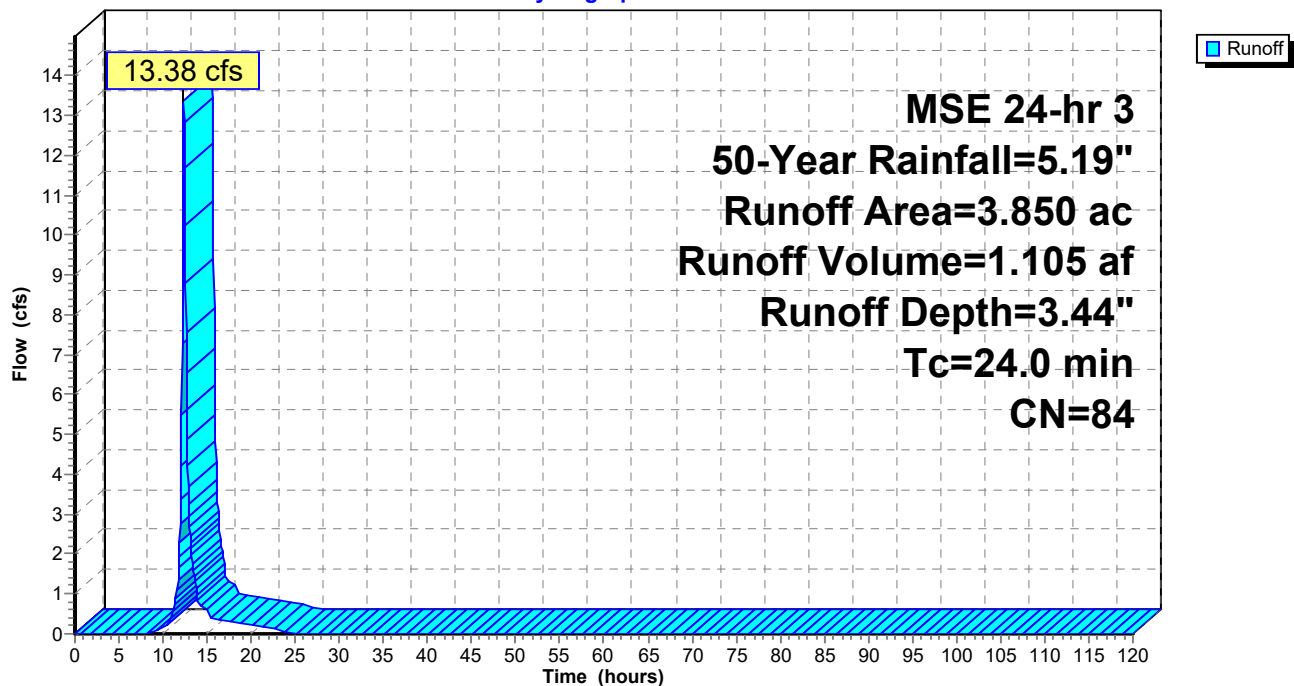
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 50-Year Rainfall=5.19"

Area (ac)	CN	Description
* 3.850	84	D20
3.850	84	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.0					Direct Entry, GIVEN FROM MEADOWLANDS

Subcatchment MA4: 24-MIN TC

Hydrograph



1114.00 MSM PH1 - EXISTING

MSE 24-hr 3 50-Year Rainfall=5.19"

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Summary for Pond MB3: ML BASIN 3

Inflow Area = 34.580 ac, 8.59% Impervious, Inflow Depth = 3.29" for 50-Year event
 Inflow = 133.78 cfs @ 12.17 hrs, Volume= 9.476 af
 Outflow = 17.56 cfs @ 13.01 hrs, Volume= 9.476 af, Atten= 87%, Lag= 49.9 min
 Primary = 17.56 cfs @ 13.01 hrs, Volume= 9.476 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
 Peak Elev= 725.46' @ 13.01 hrs Surf.Area= 57,908 sf Storage= 217,861 cf

Plug-Flow detention time= 155.3 min calculated for 9.476 af (100% of inflow)
 Center-of-Mass det. time= 154.3 min (953.9 - 799.6)

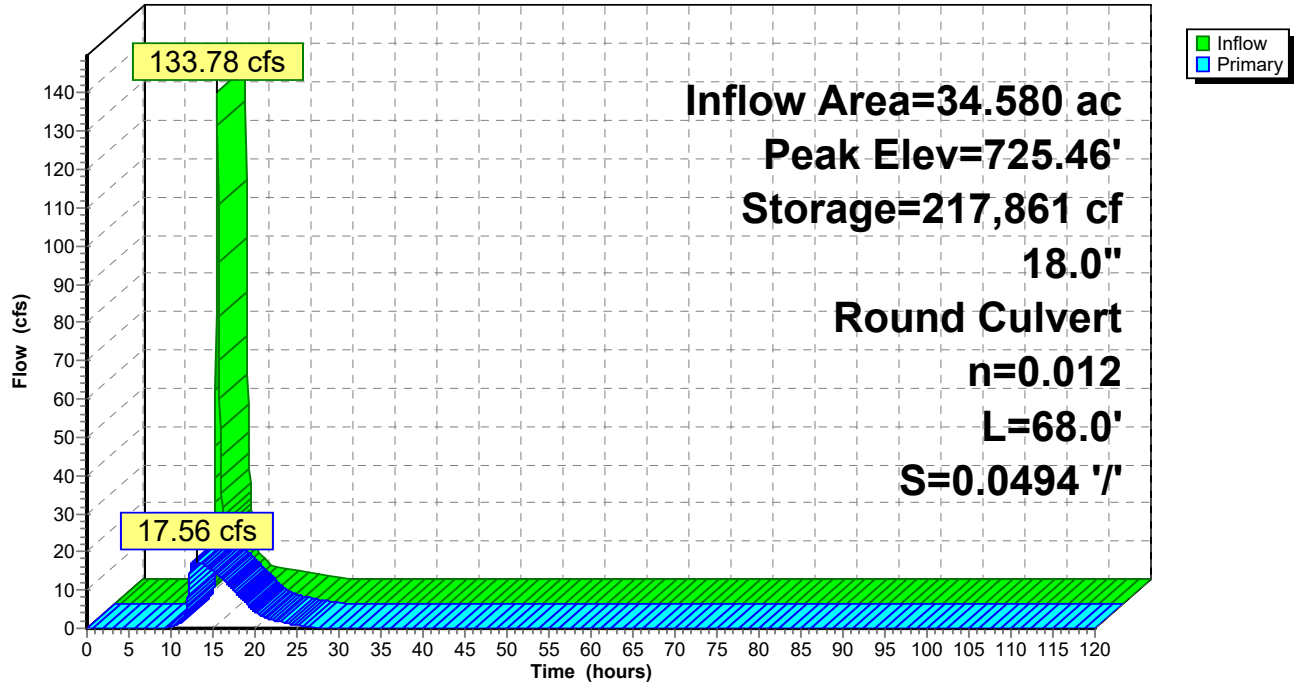
Volume	Invert	Avail.Storage	Storage Description
#1	720.45'	313,107 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
720.45	1,000	0	0
721.00	35,328	9,990	9,990
727.00	65,711	303,117	313,107

Device	Routing	Invert	Outlet Devices
#1	Primary	720.45'	18.0" Round Culvert L= 68.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 720.45' / 717.09' S= 0.0494 ' S= 0.0494 ' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.77 sf

Primary OutFlow Max=17.56 cfs @ 13.01 hrs HW=725.46' TW=0.00' (Dynamic Tailwater)
 ↑1=Culvert (Inlet Controls 17.56 cfs @ 9.94 fps)

Pond MB3: ML BASIN 3

Hydrograph



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MSE 24-hr 3 50-Year Rainfall=5.19"

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Summary for Pond VP4: VP CULVERT 50-YR

Inflow = 30.96 cfs @ 0.00 hrs, Volume= 307.169 af, Incl. 30.96 cfs Base Flow
Outflow = 30.96 cfs @ 0.00 hrs, Volume= 307.169 af, Atten= 0%, Lag= 0.0 min
Primary = 30.96 cfs @ 0.00 hrs, Volume= 307.169 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs

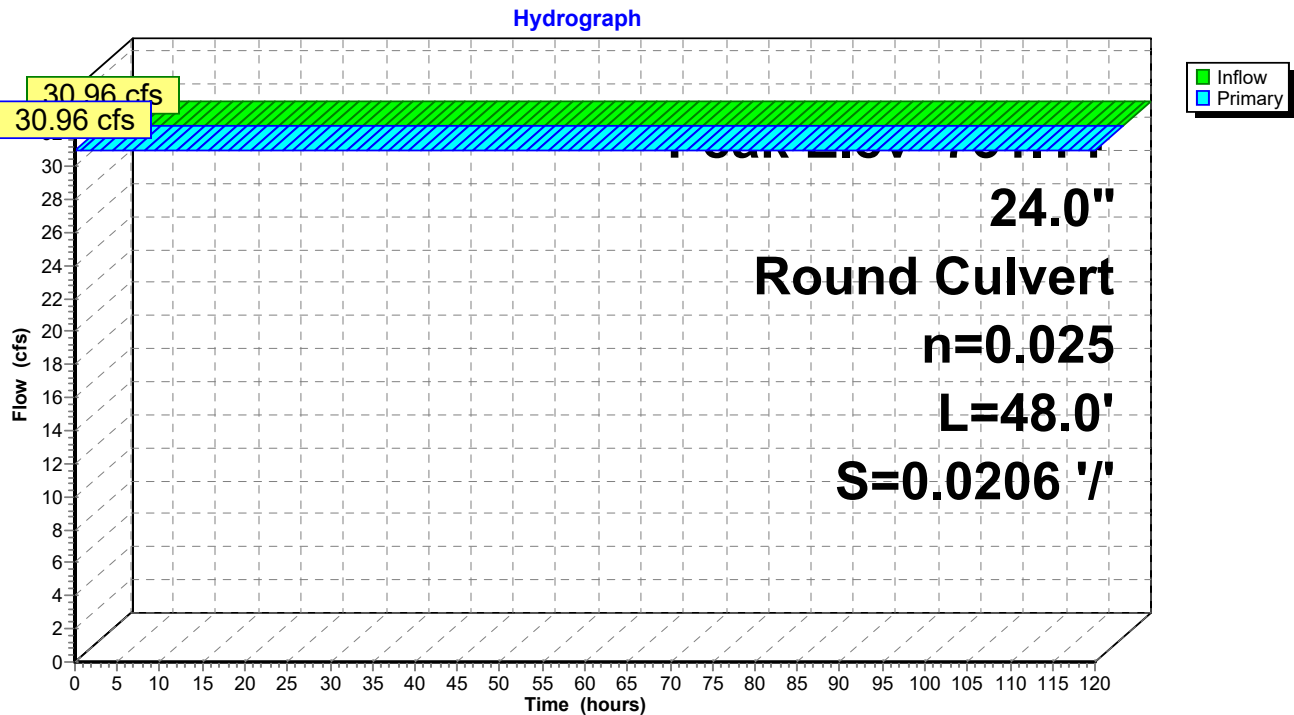
Peak Elev= 731.14' @ 0.00 hrs

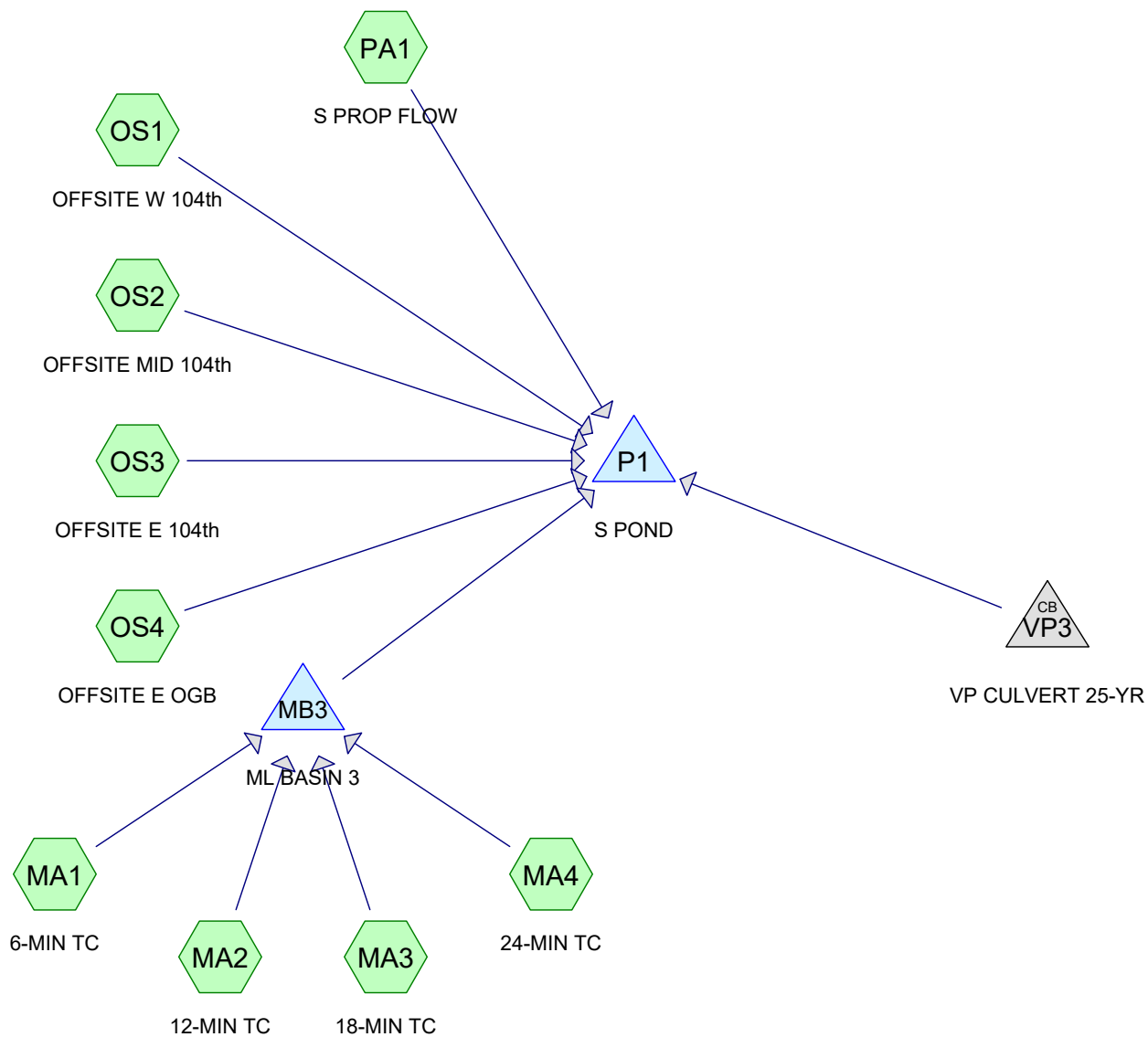
Device	Routing	Invert	Outlet Devices
#1	Primary	724.53'	24.0" Round Culvert L= 48.0' CMP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 724.53' / 723.54' S= 0.0206 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 3.14 sf

Primary OutFlow Max=30.96 cfs @ 0.00 hrs HW=731.14' TW=0.00' (Dynamic Tailwater)

↑**1=Culvert** (Barrel Controls 30.96 cfs @ 9.85 fps)

Pond VP4: VP CULVERT 50-YR





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MSE 24-hr 3 25-Year Rainfall=4.53"

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Summary for Subcatchment MA1: 6-MIN TC

Runoff = 40.71 cfs @ 12.13 hrs, Volume= 1.991 af, Depth= 3.32"

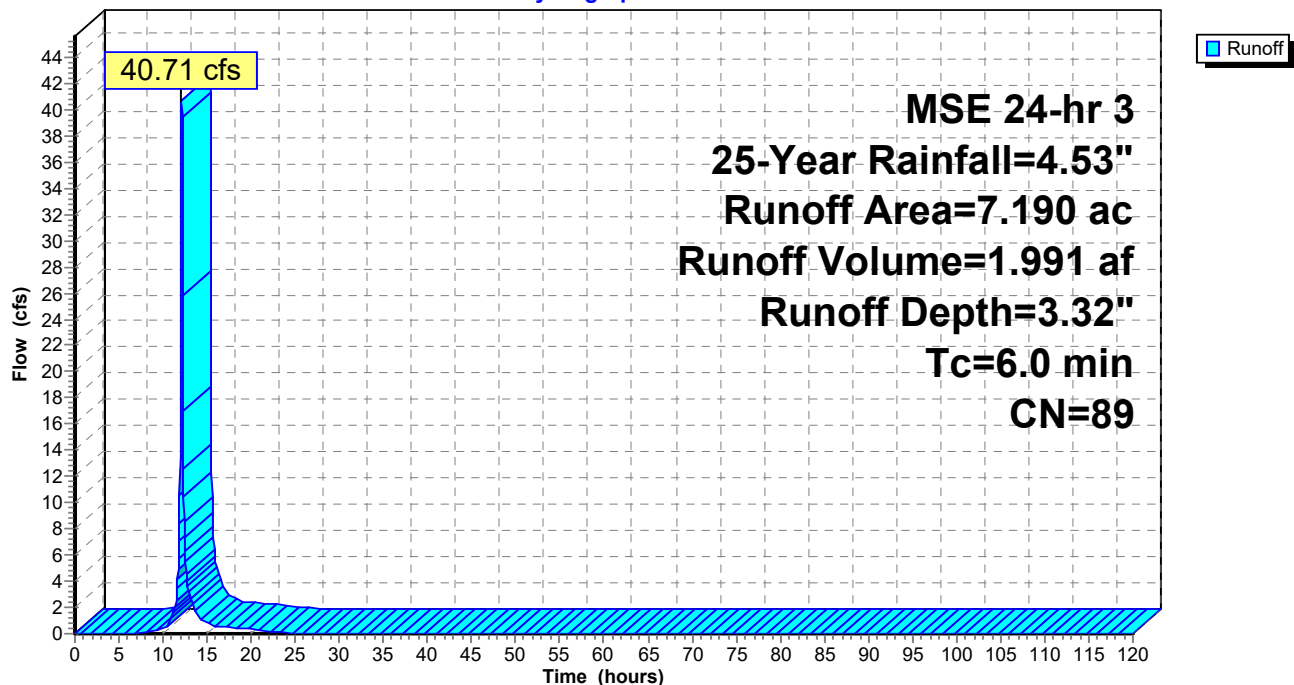
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 25-Year Rainfall=4.53"

Area (ac)	CN	Description
* 1.380	81	D12
* 0.440	90	D16
* 0.550	84	D18
* 0.540	81	D27
* 0.390	80	D28
* 0.410	80	D29
* 2.800	98	D33
* 0.090	98	D34
* 0.080	98	D35
* 0.510	87	D36
7.190	89	Weighted Average
4.220	83	58.69% Pervious Area
2.970	98	41.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, GIVEN FROM MEADOWLANDS

Subcatchment MA1: 6-MIN TC

Hydrograph



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MSE 24-hr 3 25-Year Rainfall=4.53"

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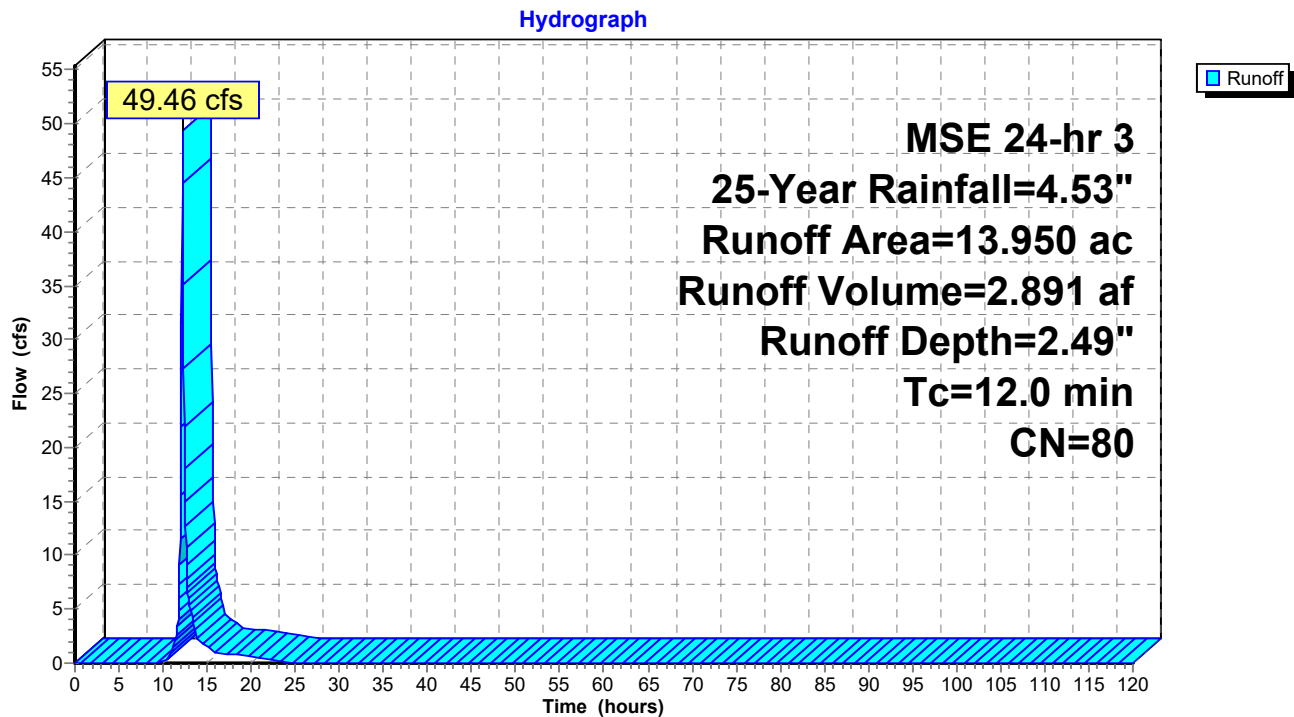
Summary for Subcatchment MA2: 12-MIN TC

Runoff = 49.46 cfs @ 12.20 hrs, Volume= 2.891 af, Depth= 2.49"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 25-Year Rainfall=4.53"

Area (ac)	CN	Description
* 2.180	80	D9
* 1.280	81	D13
* 1.180	89	D19
* 4.410	74	D21
* 1.100	89	D22
* 1.880	80	D24
* 0.370	79	D26
* 1.550	81	D33
13.950	80	Weighted Average
13.950	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.0					Direct Entry, GIVEN FROM MEADOWLANDS

Subcatchment MA2: 12-MIN TC

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MSE 24-hr 3 25-Year Rainfall=4.53"

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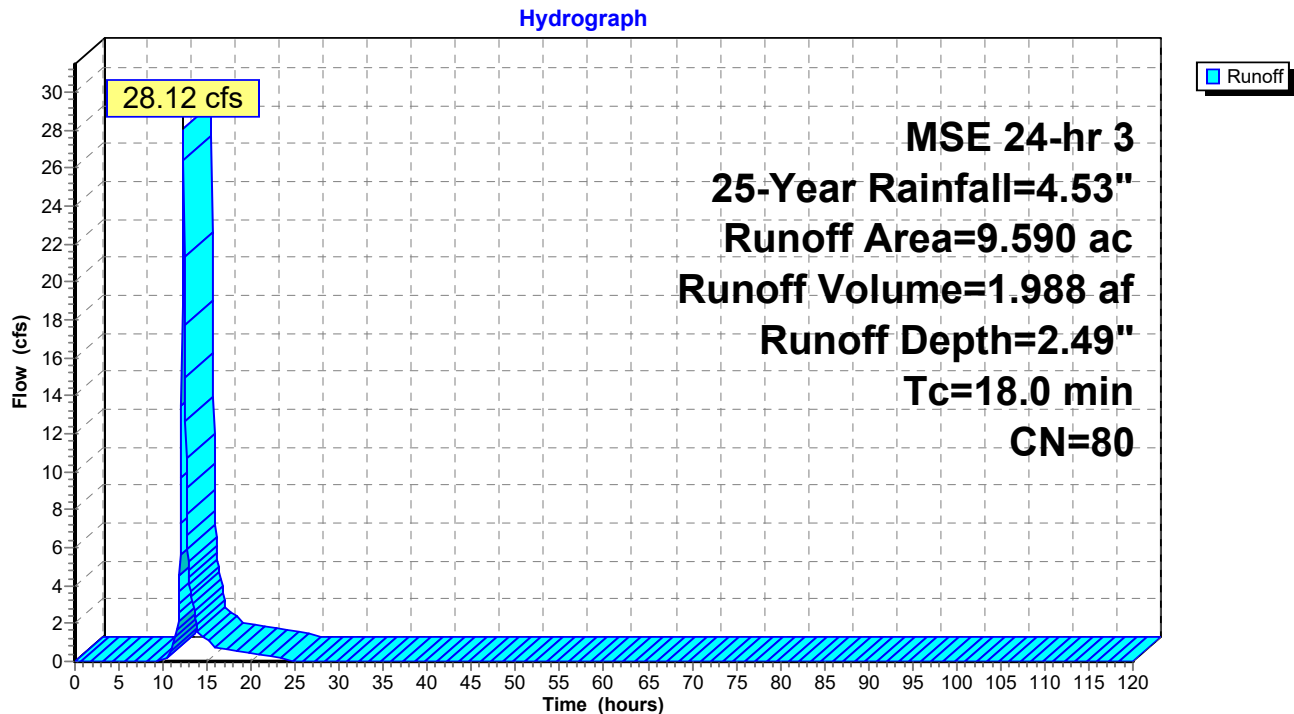
Summary for Subcatchment MA3: 18-MIN TC

Runoff = 28.12 cfs @ 12.27 hrs, Volume= 1.988 af, Depth= 2.49"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 25-Year Rainfall=4.53"

	Area (ac)	CN	Description
*	2.270	80	D10
*	1.720	80	D14
*	2.670	80	D15
*	1.210	80	D17
*	1.720	80	D25
	9.590	80	Weighted Average
	9.590	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.0					Direct Entry, GIVEN FROM MEADOWLANDS

Subcatchment MA3: 18-MIN TC

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MSE 24-hr 3 25-Year Rainfall=4.53"

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Summary for Subcatchment MA4: 24-MIN TC

Runoff = 11.09 cfs @ 12.35 hrs, Volume= 0.912 af, Depth= 2.84"

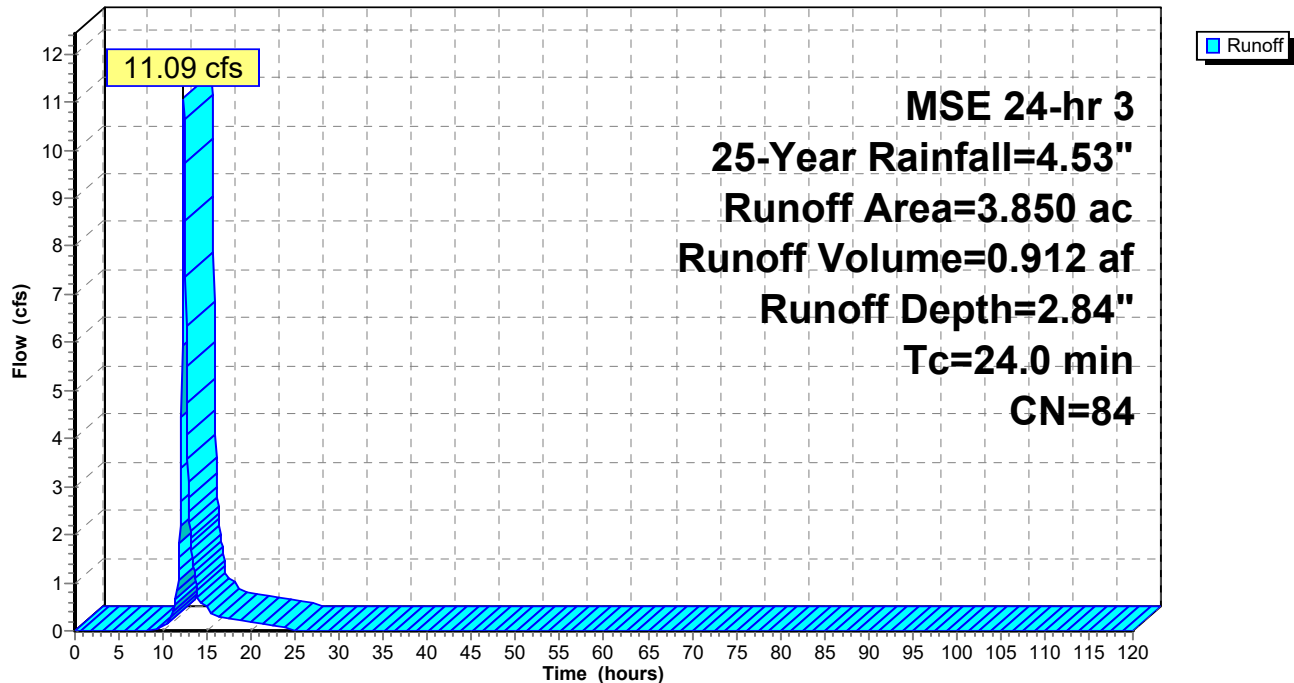
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 25-Year Rainfall=4.53"

Area (ac)	CN	Description
* 3.850	84	D20
3.850	84	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.0					Direct Entry, GIVEN FROM MEADOWLANDS

Subcatchment MA4: 24-MIN TC

Hydrograph



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MSE 24-hr 3 25-Year Rainfall=4.53"

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Summary for Subcatchment OS1: OFFSITE W 104th

Runoff = 4.53 cfs @ 12.18 hrs, Volume= 0.272 af, Depth= 3.63"

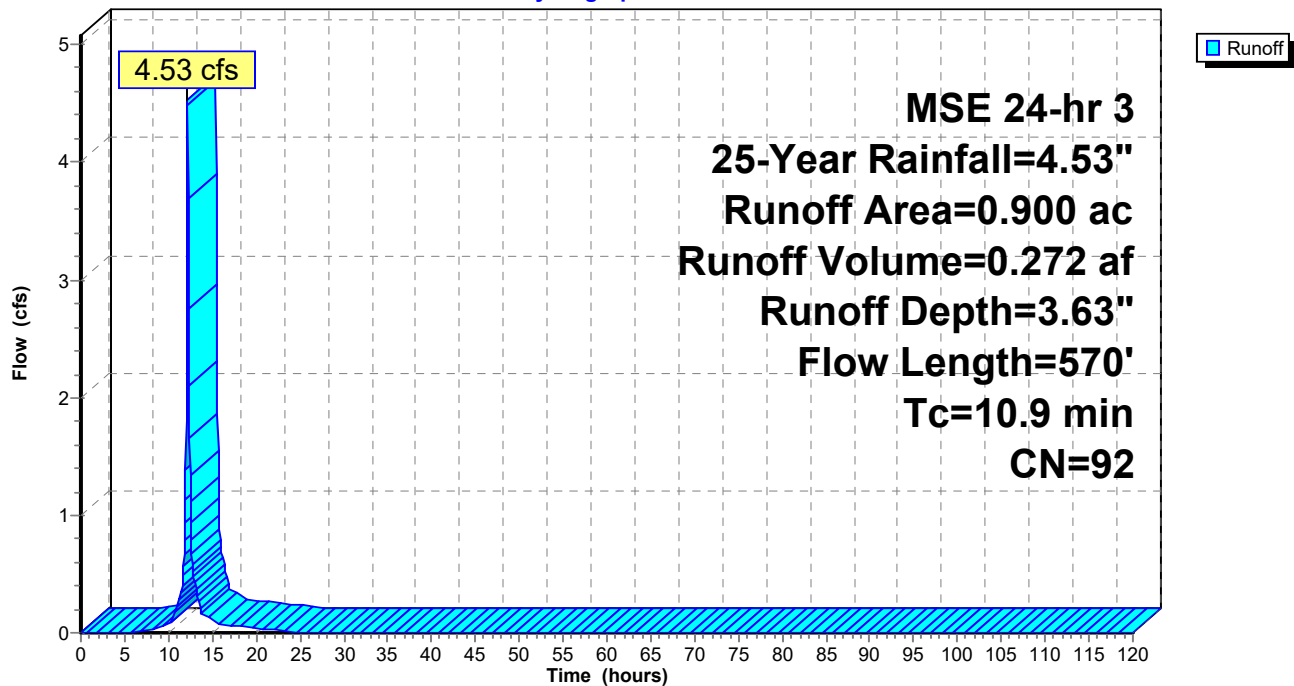
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 25-Year Rainfall=4.53"

Area (ac)	CN	Description
0.530	98	Paved parking, HSG D
* 0.370	83	Max Cropland for HSG D (NR 151)
0.900	92	Weighted Average
0.370	83	41.11% Pervious Area
0.530	98	58.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	35	0.0400	1.35		Sheet Flow, Road Smooth surfaces n= 0.011 P2= 2.68"
5.3	65	0.0500	0.21		Sheet Flow, Landscape Grass: Short n= 0.150 P2= 2.68"
5.2	470	0.0100	1.50		Shallow Concentrated Flow, Landscape Grassed Waterway Kv= 15.0 fps
10.9	570	Total			

Subcatchment OS1: OFFSITE W 104th

Hydrograph



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MSE 24-hr 3 25-Year Rainfall=4.53"

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Summary for Subcatchment OS2: OFFSITE MID 104th

Runoff = 7.04 cfs @ 12.17 hrs, Volume= 0.392 af, Depth= 2.94"

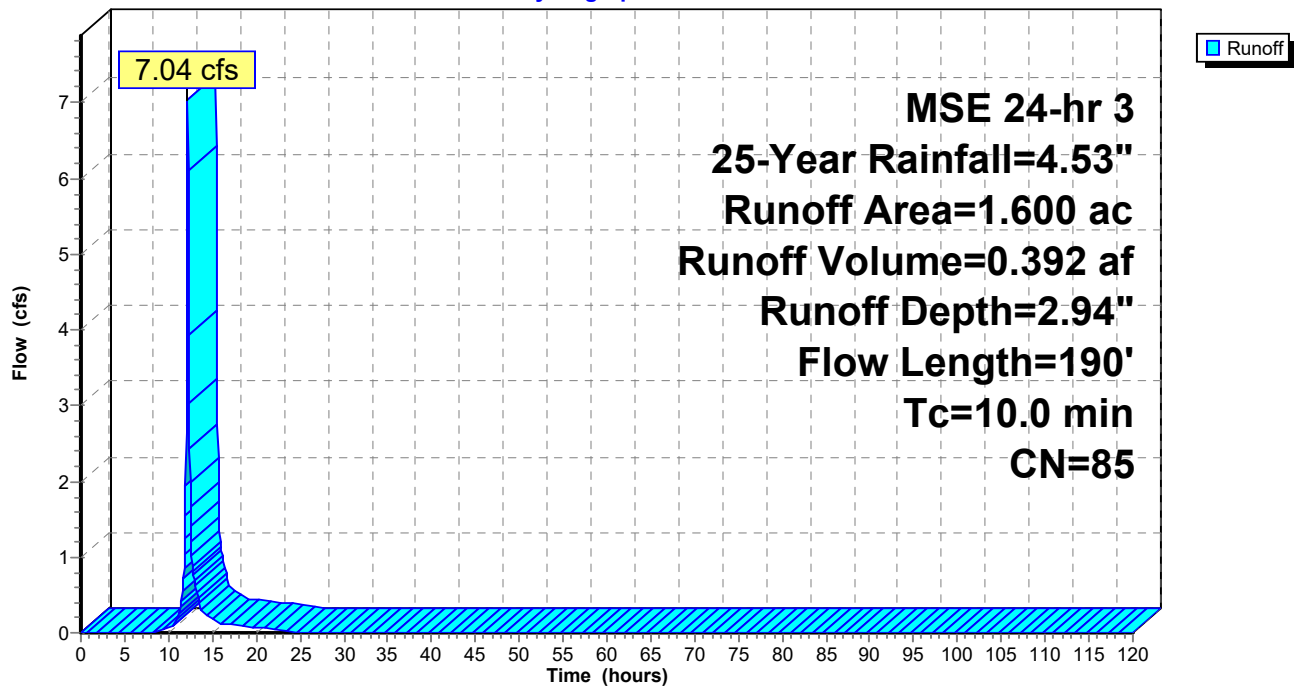
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 25-Year Rainfall=4.53"

Area (ac)	CN	Description
0.250	98	Paved parking, HSG D
* 1.350	83	Max Cropland for HSG D (NR 151)
1.600	85	Weighted Average
1.350	83	84.38% Pervious Area
0.250	98	15.63% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	30	0.0500	1.43		Sheet Flow, Road Smooth surfaces n= 0.011 P2= 2.68"
9.4	120	0.0400	0.21		Sheet Flow, Landscape Grass: Short n= 0.150 P2= 2.68"
0.2	40	0.0400	3.00		Shallow Concentrated Flow, Landscape Grassed Waterway Kv= 15.0 fps
10.0	190	Total			

Subcatchment OS2: OFFSITE MID 104th

Hydrograph



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MSE 24-hr 3 25-Year Rainfall=4.53"

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Summary for Subcatchment OS3: OFFSITE E 104th

Runoff = 7.85 cfs @ 12.22 hrs, Volume= 0.495 af, Depth= 3.13"

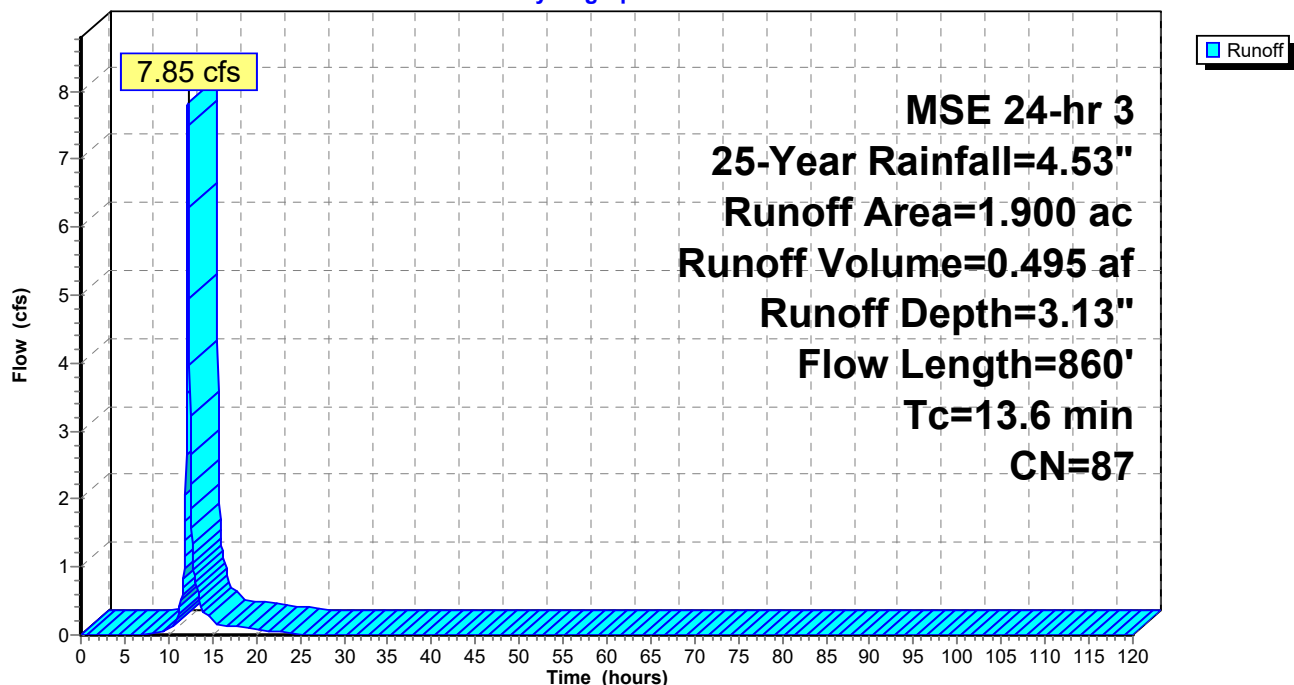
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 25-Year Rainfall=4.53"

Area (ac)	CN	Description
0.520	98	Paved parking, HSG D
* 1.380	83	Max Cropland for HSG D (NR 151)
1.900	87	Weighted Average
1.380	83	72.63% Pervious Area
0.520	98	27.37% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	20	0.0500	1.32		Sheet Flow, Road Smooth surfaces n= 0.011 P2= 2.68"
7.6	80	0.0300	0.18		Sheet Flow, Landscape Grass: Short n= 0.150 P2= 2.68"
3.0	460	0.0300	2.60		Shallow Concentrated Flow, Landscape Grassed Waterway Kv= 15.0 fps
2.7	300	0.0150	1.84		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
13.6	860	Total			

Subcatchment OS3: OFFSITE E 104th

Hydrograph



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MSE 24-hr 3 25-Year Rainfall=4.53"

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Summary for Subcatchment OS4: OFFSITE E OGB

Runoff = 1.94 cfs @ 12.13 hrs, Volume= 0.092 af, Depth= 2.75"

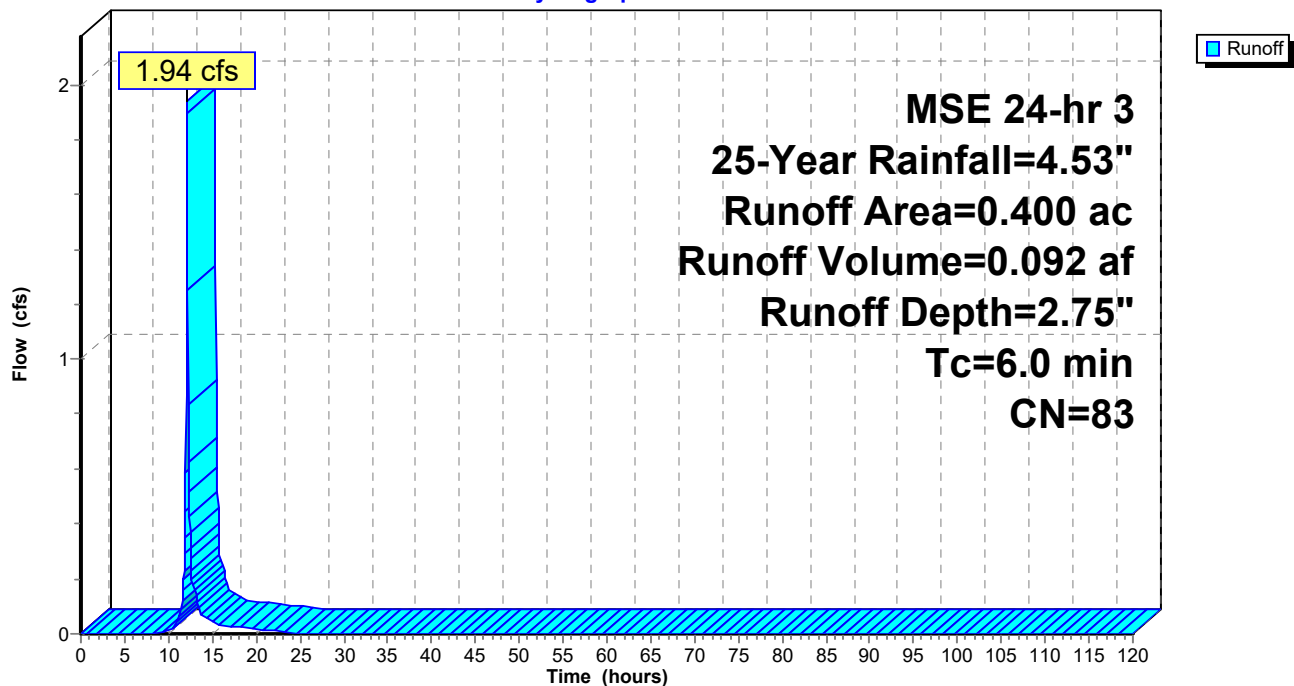
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 25-Year Rainfall=4.53"

Area (ac)	CN	Description
* 0.400	83	Max Cropland for HSG D (NR 151)
0.400	83	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TR-55 MIN

Subcatchment OS4: OFFSITE E OGB

Hydrograph



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MSE 24-hr 3 25-Year Rainfall=4.53"

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Summary for Subcatchment PA1: S PROP FLOW

Runoff = 65.29 cfs @ 12.13 hrs, Volume= 3.364 af, Depth= 3.84"

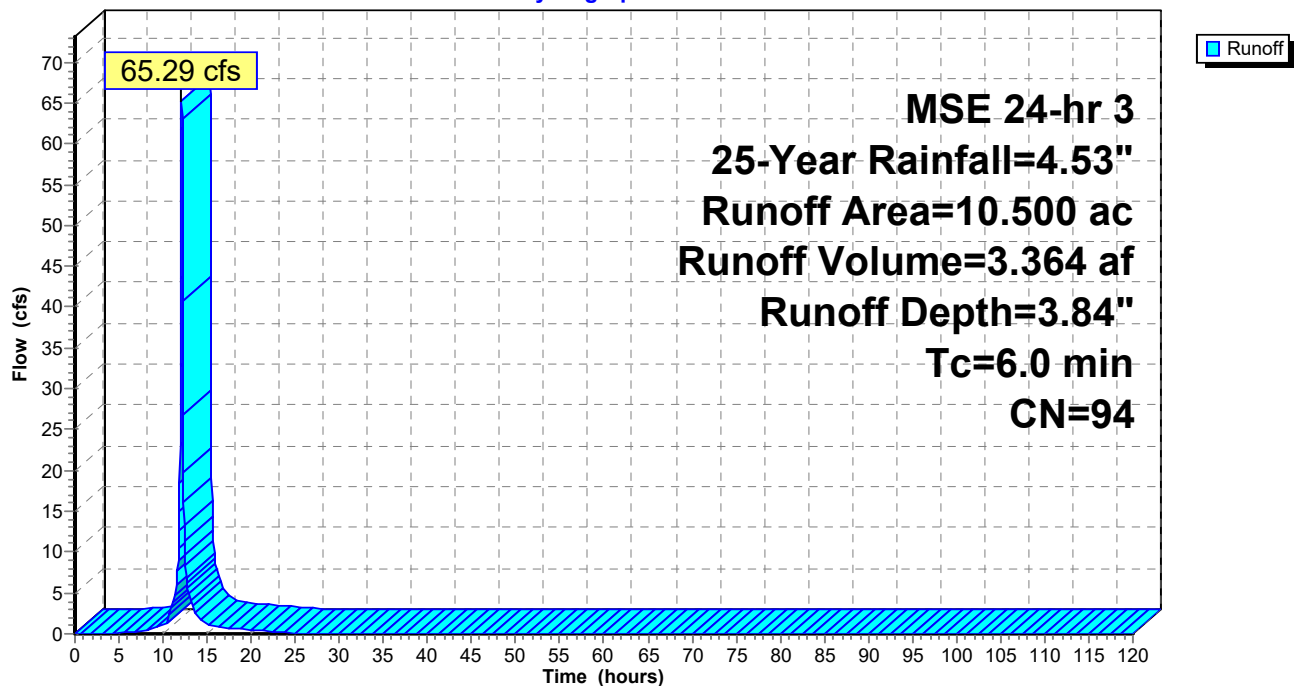
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 25-Year Rainfall=4.53"

Area (ac)	CN	Description
* 10.500	94	80% IMP (98); 20% PER (80)
10.500	94	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TR-55 MIN

Subcatchment PA1: S PROP FLOW

Hydrograph



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MSE 24-hr 3 25-Year Rainfall=4.53"

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Summary for Pond MB3: ML BASIN 3

Inflow Area = 34.580 ac, 8.59% Impervious, Inflow Depth = 2.70" for 25-Year event
 Inflow = 110.13 cfs @ 12.17 hrs, Volume= 7.783 af
 Outflow = 15.85 cfs @ 12.94 hrs, Volume= 7.783 af, Atten= 86%, Lag= 46.1 min
 Primary = 15.85 cfs @ 12.94 hrs, Volume= 7.783 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
 Peak Elev= 724.67' @ 12.94 hrs Surf.Area= 53,910 sf Storage= 173,719 cf

Plug-Flow detention time= 140.4 min calculated for 7.779 af (100% of inflow)
 Center-of-Mass det. time= 140.7 min (944.1 - 803.4)

Volume	Invert	Avail.Storage	Storage Description
#1	720.45'	313,107 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
720.45	1,000	0	0
721.00	35,328	9,990	9,990
727.00	65,711	303,117	313,107

Device	Routing	Invert	Outlet Devices
#1	Primary	720.45'	18.0" Round Culvert L= 68.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 720.45' / 717.09' S= 0.0494 ' S= 0.0494 ' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.77 sf

Primary OutFlow Max=15.85 cfs @ 12.94 hrs HW=724.67' TW=708.52' (Dynamic Tailwater)
 ↑1=Culvert (Inlet Controls 15.85 cfs @ 8.97 fps)

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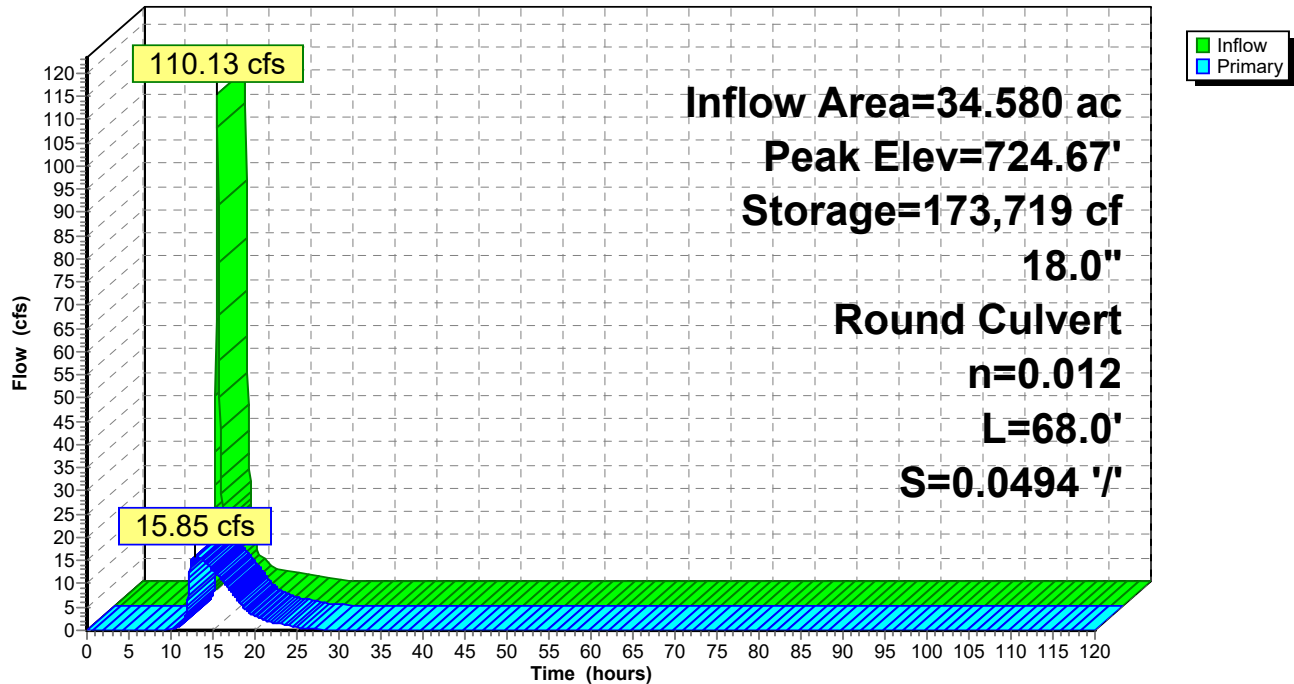
MSE 24-hr 3 25-Year Rainfall=4.53"

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Pond MB3: ML BASIN 3

Hydrograph



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MSE 24-hr 3 25-Year Rainfall=4.53"

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Summary for Pond P1: S POND

Inflow Area = 49.880 ac, 8.56% Impervious, Inflow Depth > 64.66" for 25-Year event
 Inflow = 119.50 cfs @ 12.14 hrs, Volume= 268.769 af
 Outflow = 73.40 cfs @ 12.30 hrs, Volume= 266.040 af, Atten= 39%, Lag= 9.8 min
 Primary = 73.40 cfs @ 12.30 hrs, Volume= 266.040 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
 Peak Elev= 709.14' @ 12.30 hrs Surf.Area= 48,224 sf Storage= 164,432 cf

Plug-Flow detention time= 75.0 min calculated for 265.987 af (99% of inflow)
 Center-of-Mass det. time= 35.7 min (3,510.3 - 3,474.6)

Volume	Invert	Avail.Storage	Storage Description
#1	705.00'	261,675 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
705.00	31,700	0	0
706.00	35,395	33,548	33,548
707.00	39,239	37,317	70,865
708.00	43,279	41,259	112,124
709.00	47,585	45,432	157,556
710.00	52,035	49,810	207,366
711.00	56,584	54,310	261,675

Device	Routing	Invert	Outlet Devices
#1	Primary	705.00'	27.0" Round Culvert X 2.00 L= 58.8' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 705.00' / 704.60' S= 0.0068 ' S= 0.0068 ' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.98 sf
#2	Device 1	705.00'	6.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	706.35'	15.0" Vert. Orifice/Grate X 3.00 C= 0.600
#4	Device 1	708.00'	96.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#5	Secondary	710.00'	10.0' long x 20.0' 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

Primary OutFlow Max=73.39 cfs @ 12.30 hrs HW=709.14' (Free Discharge)

- 1=Culvert (Barrel Controls 73.39 cfs @ 9.23 fps)
- 2=Orifice/Grate (Passes < 1.87 cfs potential flow)
- 3=Orifice/Grate (Passes < 26.10 cfs potential flow)
- 4=Orifice/Grate (Passes < 100.43 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=705.07' (Free Discharge)

- 5=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

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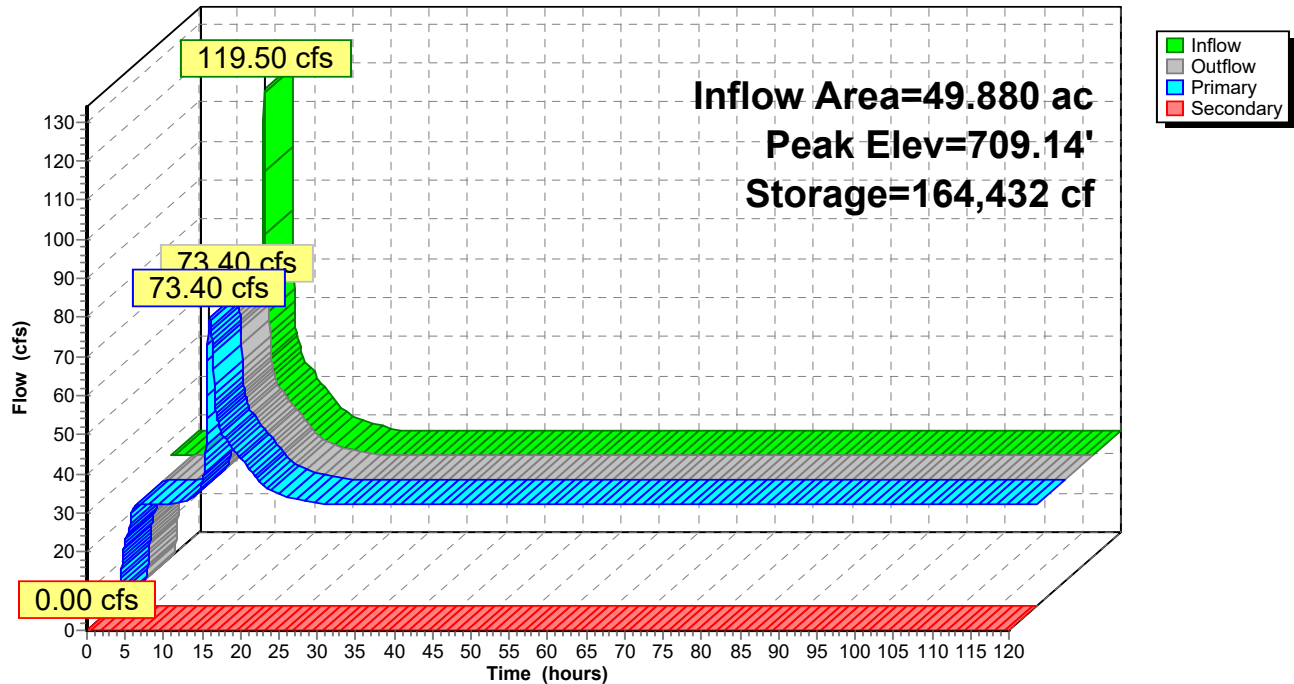
MSE 24-hr 3 25-Year Rainfall=4.53"

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Pond P1: S POND

Hydrograph



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MSE 24-hr 3 25-Year Rainfall=4.53"

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Summary for Pond VP3: VP CULVERT 25-YR

Inflow = 25.84 cfs @ 0.00 hrs, Volume= 256.371 af, Incl. 25.84 cfs Base Flow
Outflow = 25.84 cfs @ 0.15 hrs, Volume= 256.371 af, Atten= 0%, Lag= 9.0 min
Primary = 25.84 cfs @ 0.15 hrs, Volume= 256.371 af

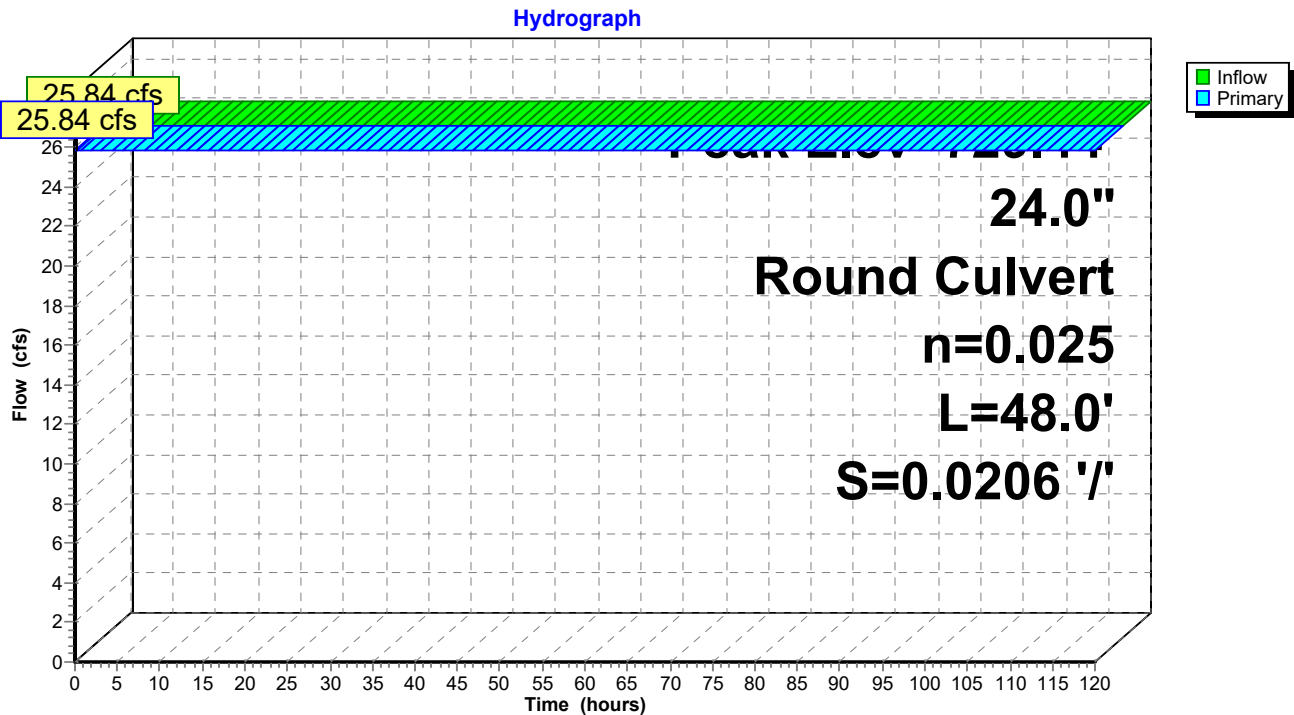
Routing by Dyn-Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs

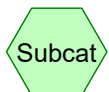
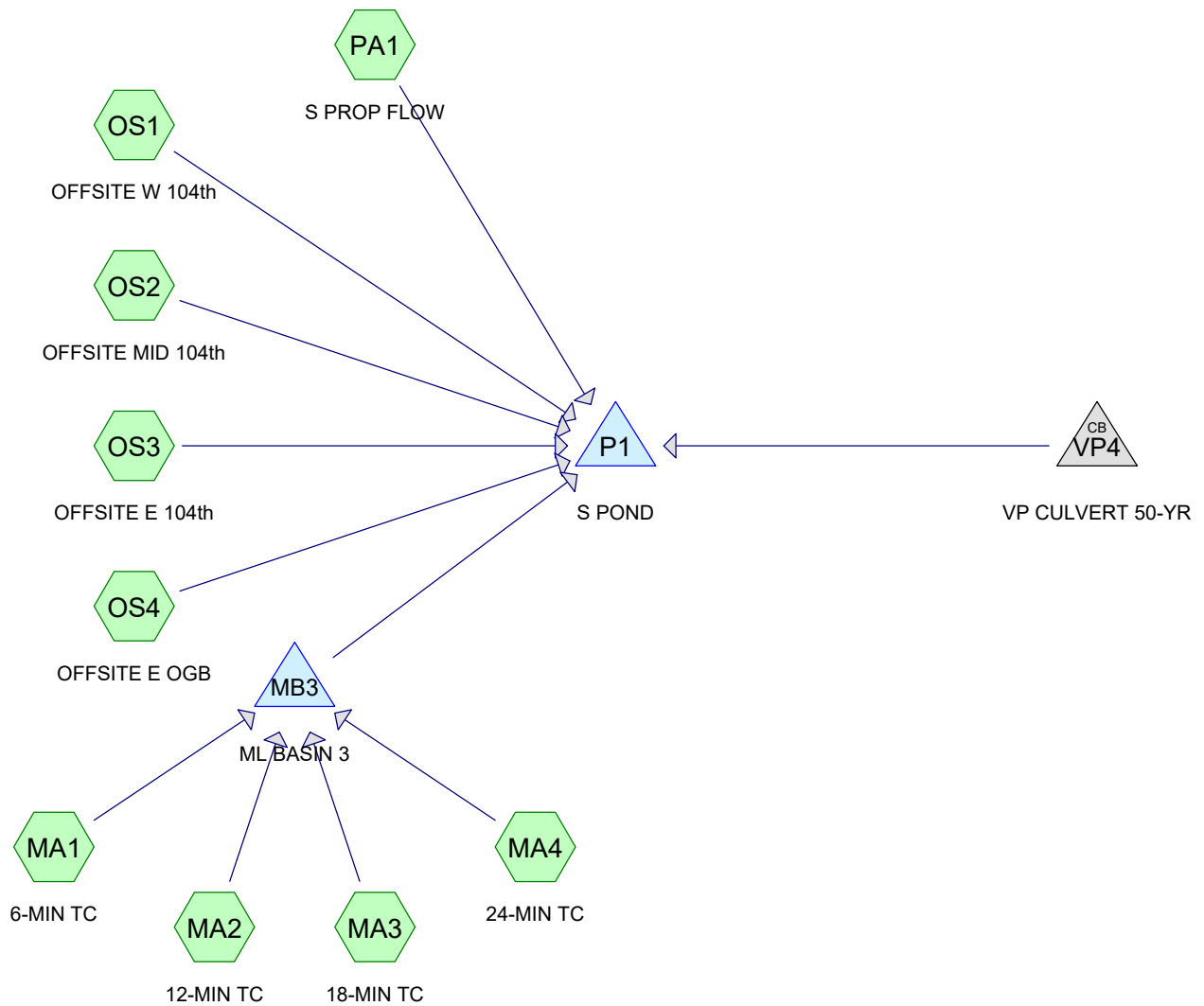
Peak Elev= 729.44' @ 0.00 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	724.53'	24.0" Round Culvert L= 48.0' CMP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 724.53' / 723.54' S= 0.0206 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 3.14 sf

Primary OutFlow Max=25.84 cfs @ 0.15 hrs HW=729.44' TW=705.50' (Dynamic Tailwater)

1=Culvert (Barrel Controls 25.84 cfs @ 8.23 fps)

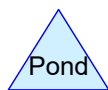
Pond VP3: VP CULVERT 25-YR



Subcat



Reach



Pond



Link

Routing Diagram for 1114.00 MSM PH1 - PROPOSED
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1114.00 MSM PH1 - PROPOSED

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MSE 24-hr 3 50-Year Rainfall=5.19"

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Summary for Subcatchment MA1: 6-MIN TC

Runoff = 47.92 cfs @ 12.13 hrs, Volume= 2.369 af, Depth= 3.95"

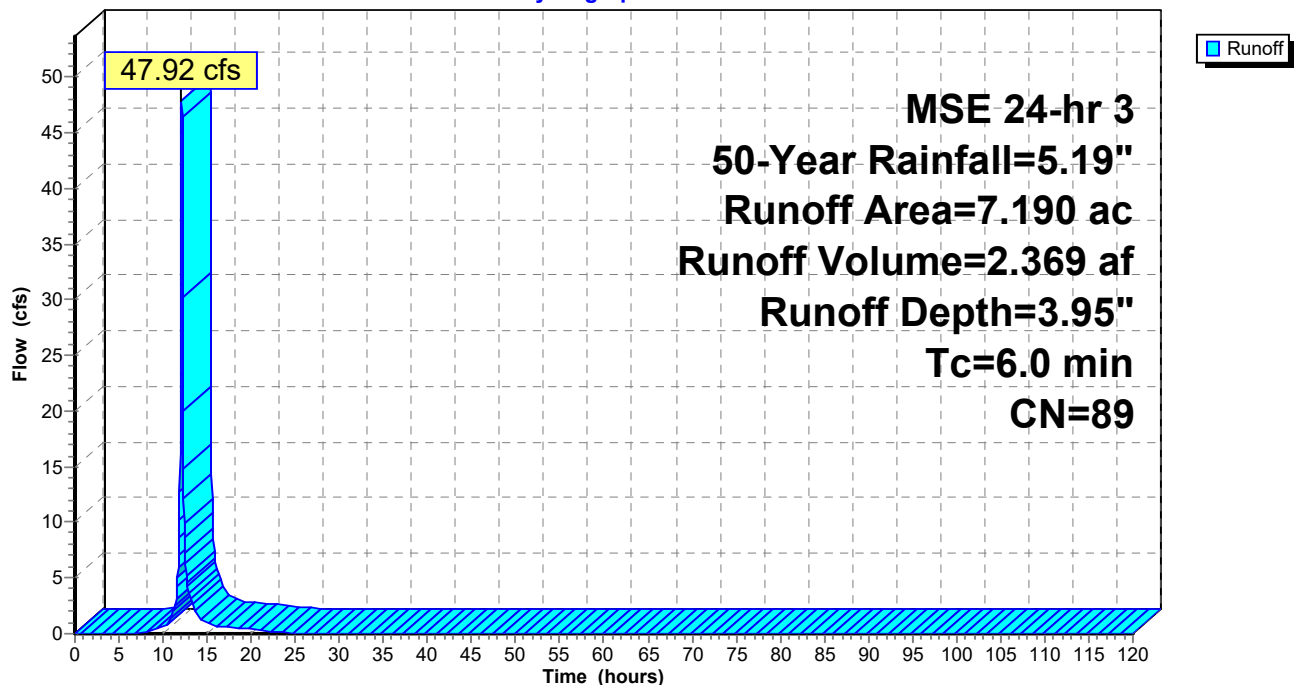
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 50-Year Rainfall=5.19"

Area (ac)	CN	Description
* 1.380	81	D12
* 0.440	90	D16
* 0.550	84	D18
* 0.540	81	D27
* 0.390	80	D28
* 0.410	80	D29
* 2.800	98	D33
* 0.090	98	D34
* 0.080	98	D35
* 0.510	87	D36
7.190	89	Weighted Average
4.220	83	58.69% Pervious Area
2.970	98	41.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, GIVEN FROM MEADOWLANDS

Subcatchment MA1: 6-MIN TC

Hydrograph



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MSE 24-hr 3 50-Year Rainfall=5.19"

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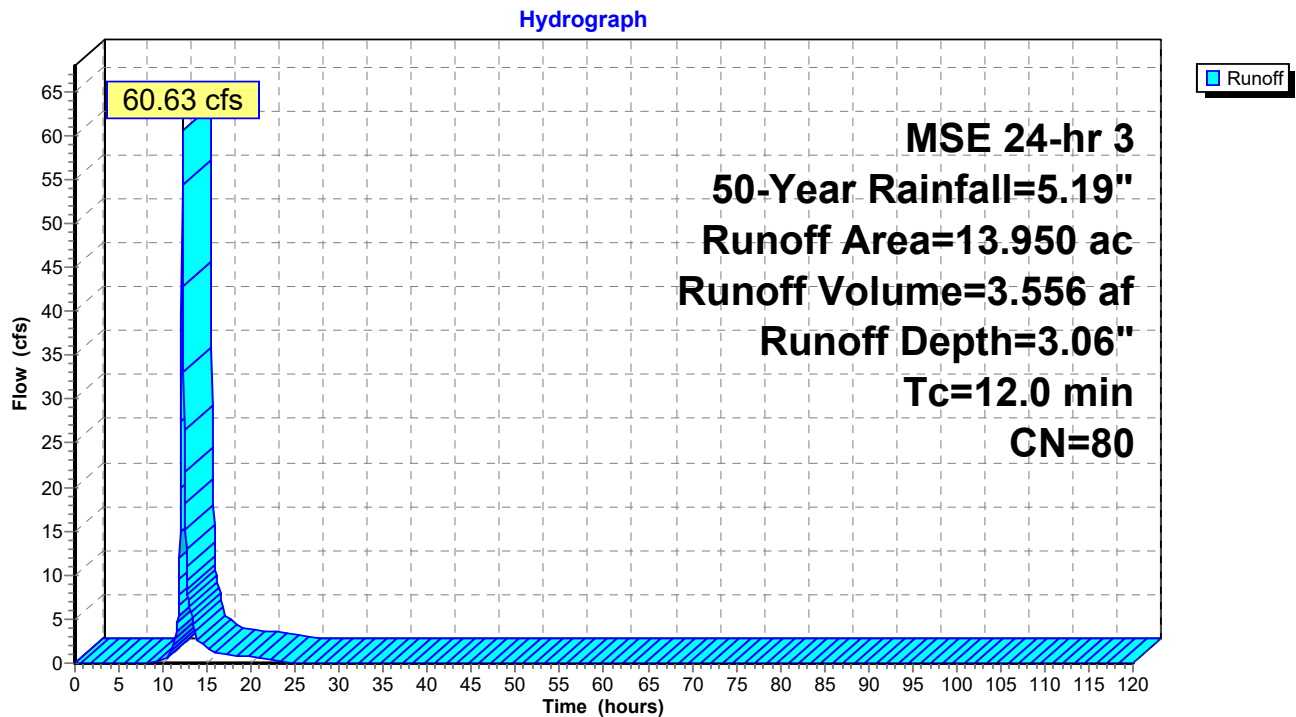
Summary for Subcatchment MA2: 12-MIN TC

Runoff = 60.63 cfs @ 12.20 hrs, Volume= 3.556 af, Depth= 3.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 50-Year Rainfall=5.19"

	Area (ac)	CN	Description
*	2.180	80	D9
*	1.280	81	D13
*	1.180	89	D19
*	4.410	74	D21
*	1.100	89	D22
*	1.880	80	D24
*	0.370	79	D26
*	1.550	81	D33
	13.950	80	Weighted Average
	13.950	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.0					Direct Entry, GIVEN FROM MEADOWLANDS

Subcatchment MA2: 12-MIN TC

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MSE 24-hr 3 50-Year Rainfall=5.19"

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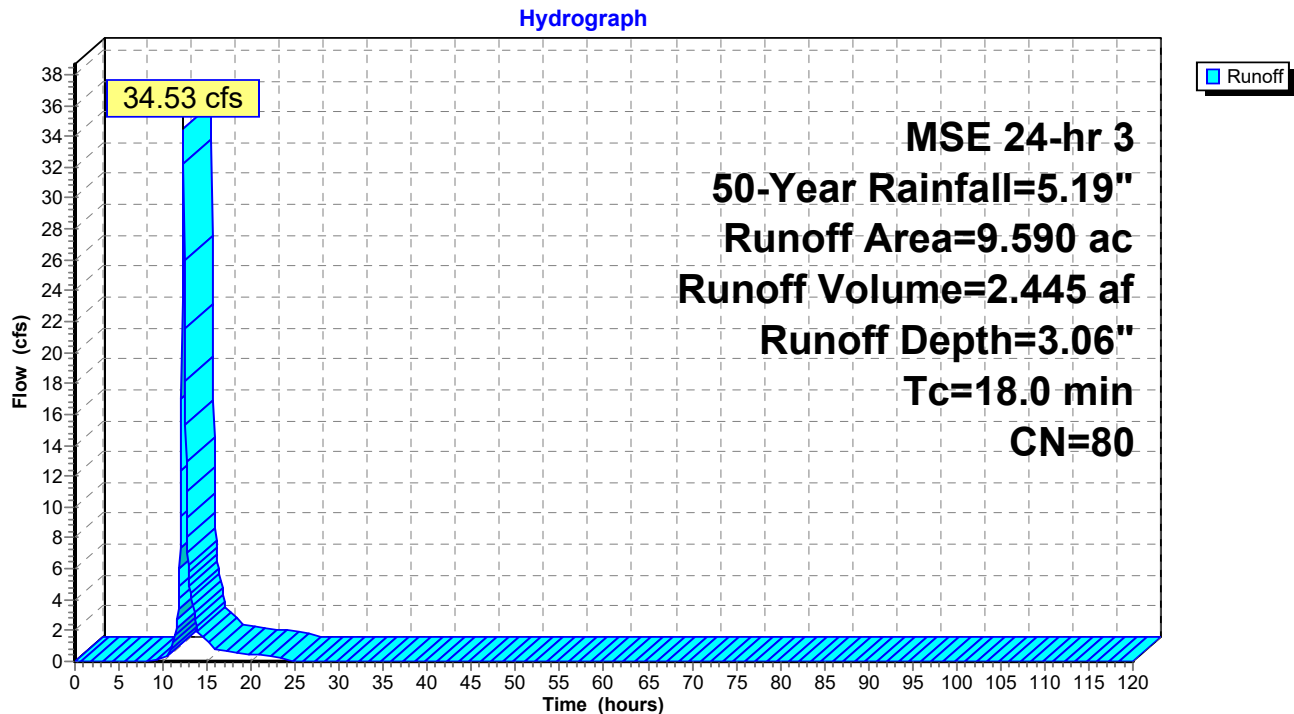
Summary for Subcatchment MA3: 18-MIN TC

Runoff = 34.53 cfs @ 12.27 hrs, Volume= 2.445 af, Depth= 3.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 50-Year Rainfall=5.19"

	Area (ac)	CN	Description
*	2.270	80	D10
*	1.720	80	D14
*	2.670	80	D15
*	1.210	80	D17
*	1.720	80	D25
	9.590	80	Weighted Average
	9.590	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.0					Direct Entry, GIVEN FROM MEADOWLANDS

Subcatchment MA3: 18-MIN TC

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MSE 24-hr 3 50-Year Rainfall=5.19"

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Summary for Subcatchment MA4: 24-MIN TC

Runoff = 13.38 cfs @ 12.34 hrs, Volume= 1.105 af, Depth= 3.44"

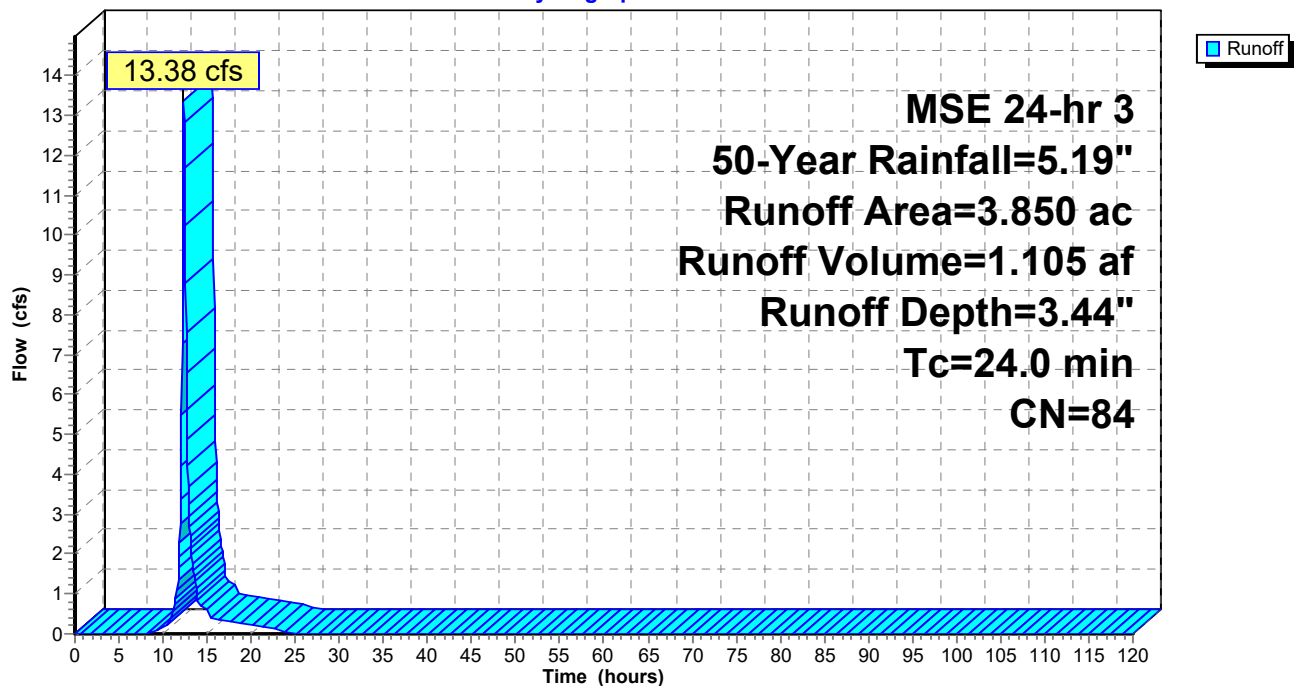
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 50-Year Rainfall=5.19"

Area (ac)	CN	Description
* 3.850	84	D20
3.850	84	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.0					Direct Entry, GIVEN FROM MEADOWLANDS

Subcatchment MA4: 24-MIN TC

Hydrograph



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MSE 24-hr 3 50-Year Rainfall=5.19"

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Summary for Subcatchment OS1: OFFSITE W 104th

Runoff = 5.29 cfs @ 12.18 hrs, Volume= 0.321 af, Depth= 4.27"

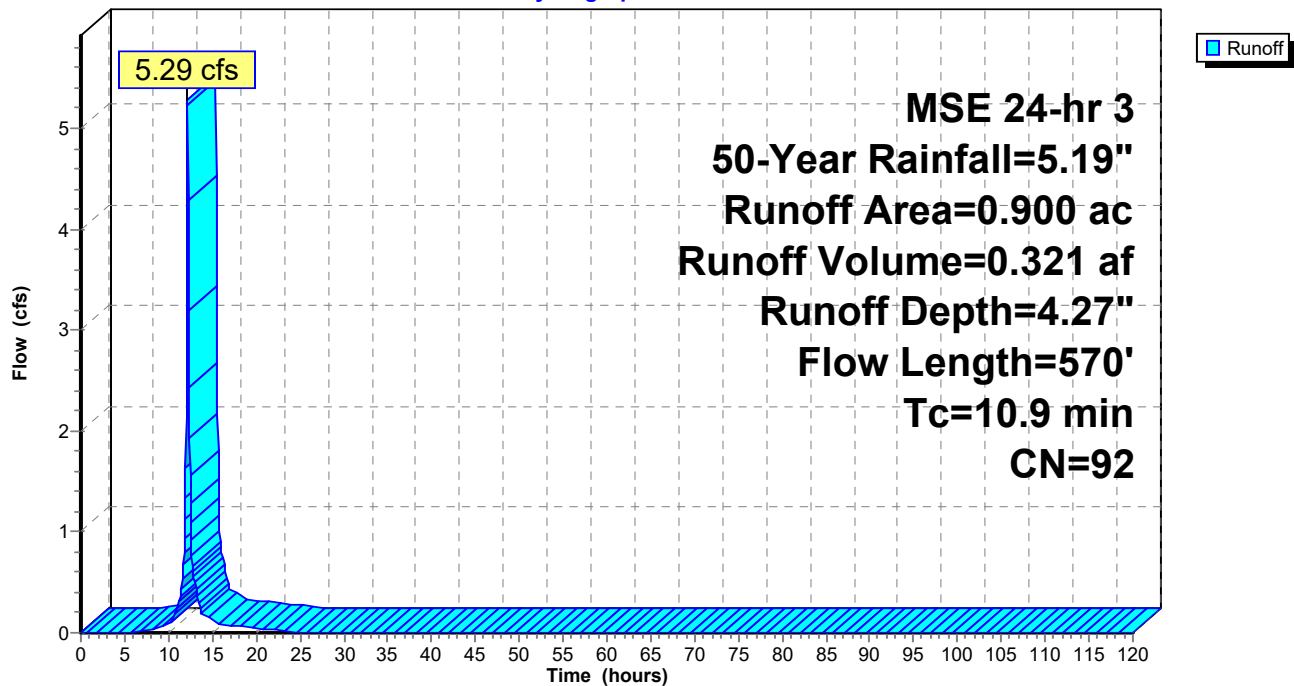
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 50-Year Rainfall=5.19"

Area (ac)	CN	Description
0.530	98	Paved parking, HSG D
* 0.370	83	Max Cropland for HSG D (NR 151)
0.900	92	Weighted Average
0.370	83	41.11% Pervious Area
0.530	98	58.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	35	0.0400	1.35		Sheet Flow, Road Smooth surfaces n= 0.011 P2= 2.68"
5.3	65	0.0500	0.21		Sheet Flow, Landscape Grass: Short n= 0.150 P2= 2.68"
5.2	470	0.0100	1.50		Shallow Concentrated Flow, Landscape Grassed Waterway Kv= 15.0 fps
10.9	570	Total			

Subcatchment OS1: OFFSITE W 104th

Hydrograph



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MSE 24-hr 3 50-Year Rainfall=5.19"

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Summary for Subcatchment OS2: OFFSITE MID 104th

Runoff = 8.44 cfs @ 12.17 hrs, Volume= 0.473 af, Depth= 3.54"

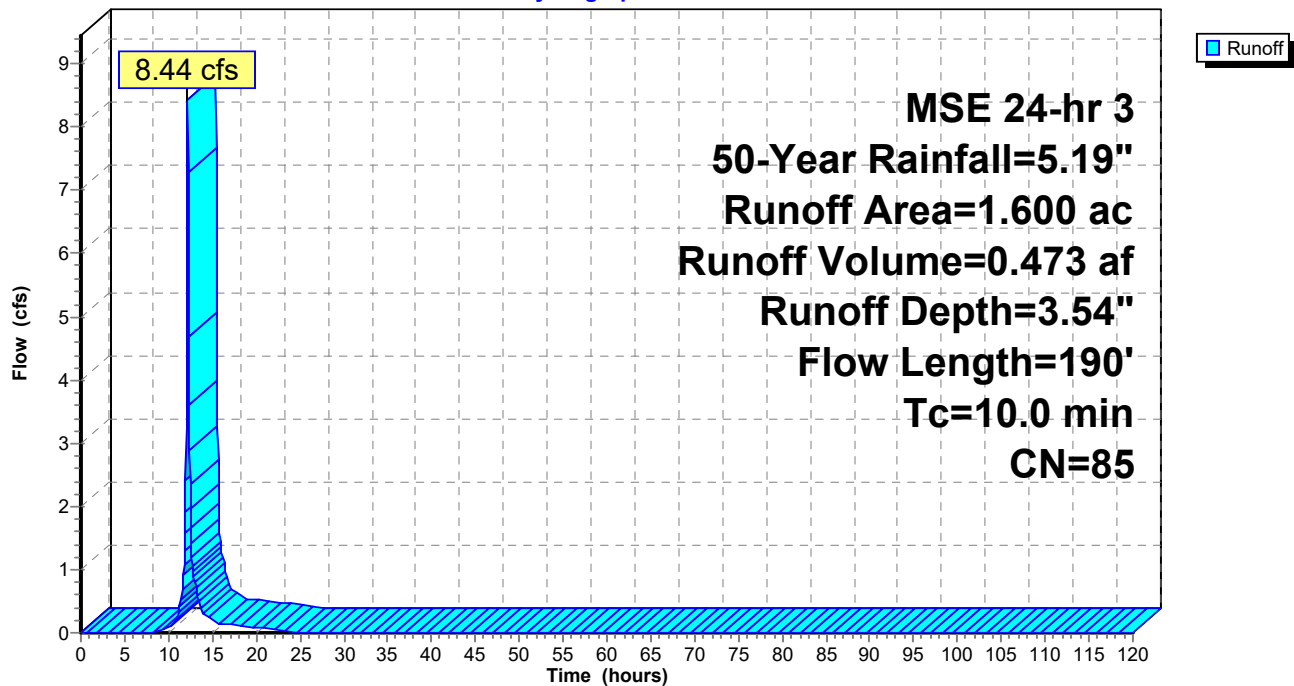
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 50-Year Rainfall=5.19"

Area (ac)	CN	Description
0.250	98	Paved parking, HSG D
* 1.350	83	Max Cropland for HSG D (NR 151)
1.600	85	Weighted Average
1.350	83	84.38% Pervious Area
0.250	98	15.63% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	30	0.0500	1.43		Sheet Flow, Road Smooth surfaces n= 0.011 P2= 2.68"
9.4	120	0.0400	0.21		Sheet Flow, Landscape Grass: Short n= 0.150 P2= 2.68"
0.2	40	0.0400	3.00		Shallow Concentrated Flow, Landscape Grassed Waterway Kv= 15.0 fps
10.0	190	Total			

Subcatchment OS2: OFFSITE MID 104th

Hydrograph



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MSE 24-hr 3 50-Year Rainfall=5.19"

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Summary for Subcatchment OS3: OFFSITE E 104th

Runoff = 9.33 cfs @ 12.21 hrs, Volume= 0.593 af, Depth= 3.75"

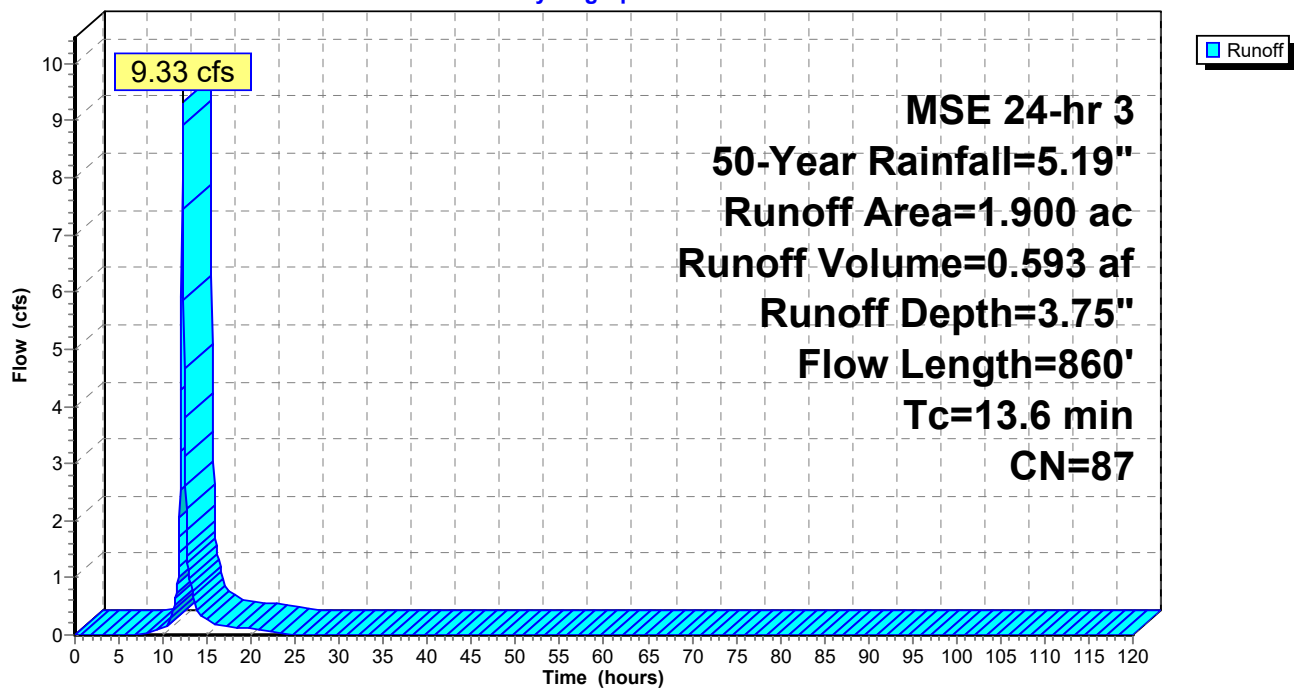
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 50-Year Rainfall=5.19"

Area (ac)	CN	Description
0.520	98	Paved parking, HSG D
* 1.380	83	Max Cropland for HSG D (NR 151)
1.900	87	Weighted Average
1.380	83	72.63% Pervious Area
0.520	98	27.37% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	20	0.0500	1.32		Sheet Flow, Road Smooth surfaces n= 0.011 P2= 2.68"
7.6	80	0.0300	0.18		Sheet Flow, Landscape Grass: Short n= 0.150 P2= 2.68"
3.0	460	0.0300	2.60		Shallow Concentrated Flow, Landscape Grassed Waterway Kv= 15.0 fps
2.7	300	0.0150	1.84		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
13.6	860	Total			

Subcatchment OS3: OFFSITE E 104th

Hydrograph



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MSE 24-hr 3 50-Year Rainfall=5.19"

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Summary for Subcatchment OS4: OFFSITE E OGB

Runoff = 2.34 cfs @ 12.13 hrs, Volume= 0.112 af, Depth= 3.35"

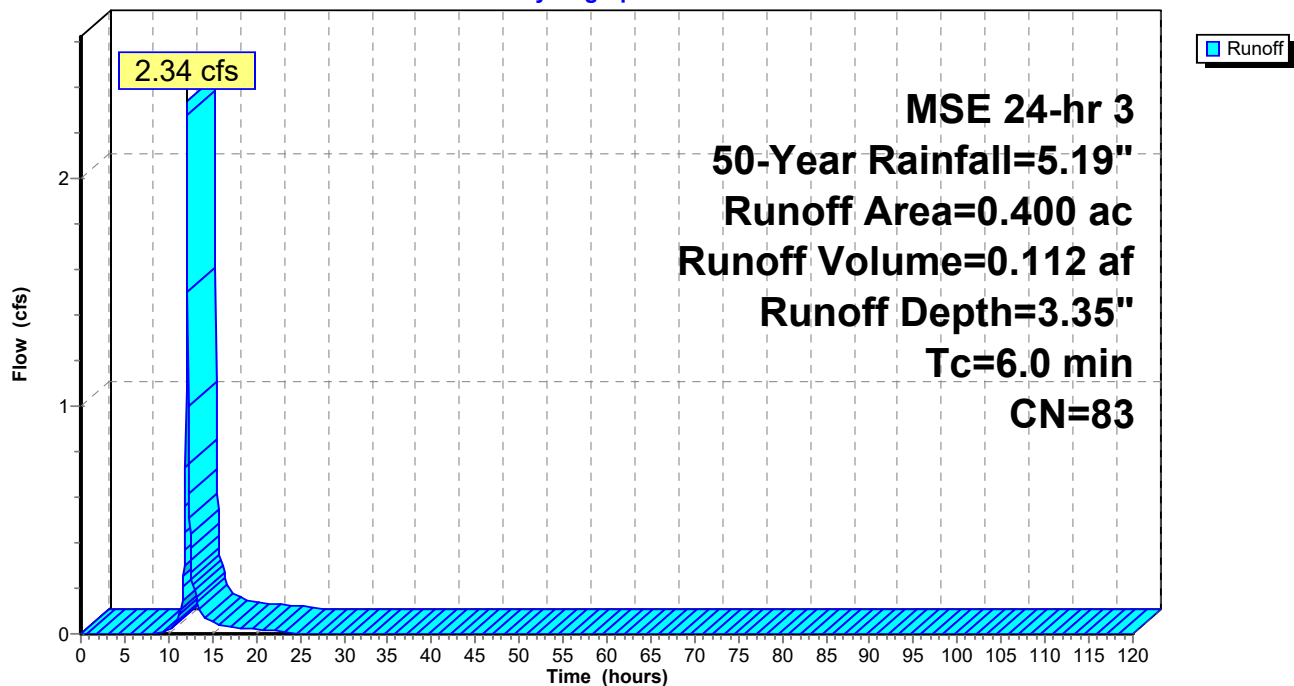
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 50-Year Rainfall=5.19"

Area (ac)	CN	Description
* 0.400	83	Max Cropland for HSG D (NR 151)
0.400	83	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TR-55 MIN

Subcatchment OS4: OFFSITE E OGB

Hydrograph



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MSE 24-hr 3 50-Year Rainfall=5.19"

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Summary for Subcatchment PA1: S PROP FLOW

Runoff = 75.57 cfs @ 12.13 hrs, Volume= 3.934 af, Depth= 4.50"

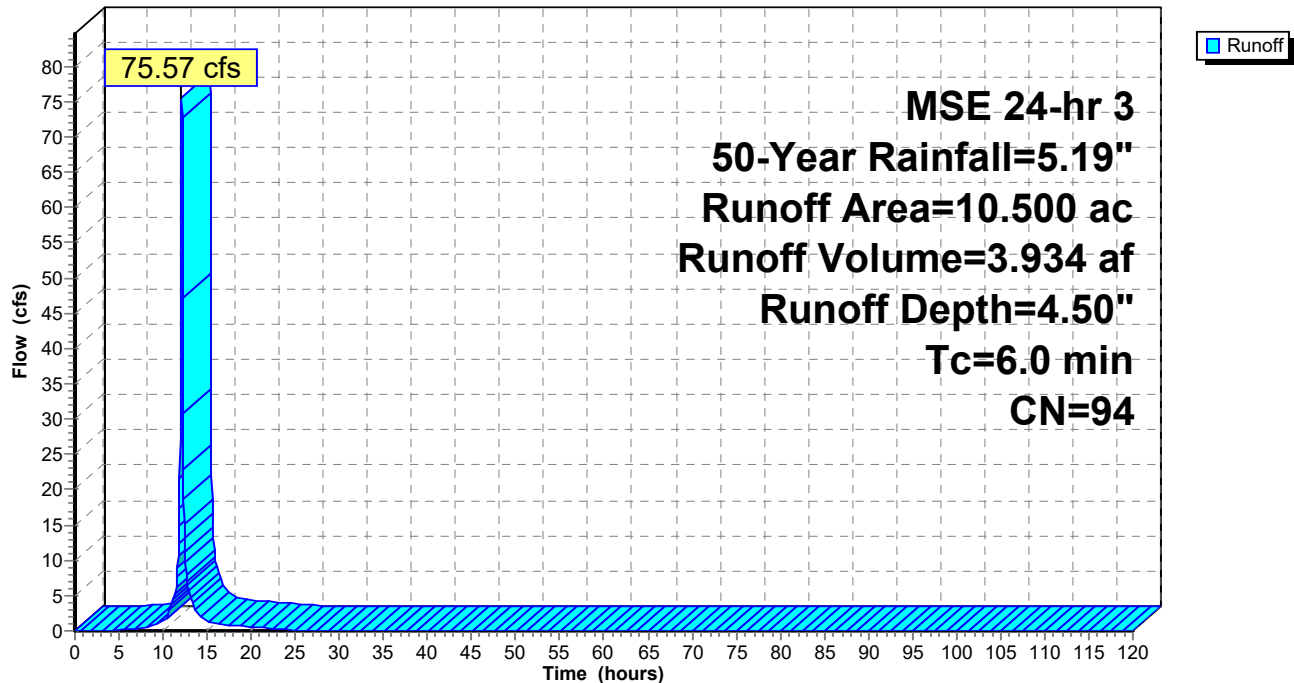
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 50-Year Rainfall=5.19"

Area (ac)	CN	Description
* 10.500	94	80% IMP (98); 20% PER (80)
10.500	94	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, TR-55 MIN

Subcatchment PA1: S PROP FLOW

Hydrograph



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MSE 24-hr 3 50-Year Rainfall=5.19"

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Summary for Pond MB3: ML BASIN 3

Inflow Area = 34.580 ac, 8.59% Impervious, Inflow Depth = 3.29" for 50-Year event
 Inflow = 133.78 cfs @ 12.17 hrs, Volume= 9.476 af
 Outflow = 17.56 cfs @ 13.01 hrs, Volume= 9.476 af, Atten= 87%, Lag= 49.9 min
 Primary = 17.56 cfs @ 13.01 hrs, Volume= 9.476 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
 Peak Elev= 725.46' @ 13.01 hrs Surf.Area= 57,908 sf Storage= 217,861 cf

Plug-Flow detention time= 155.3 min calculated for 9.476 af (100% of inflow)
 Center-of-Mass det. time= 154.3 min (953.9 - 799.6)

Volume	Invert	Avail.Storage	Storage Description
#1	720.45'	313,107 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
720.45	1,000	0	0
721.00	35,328	9,990	9,990
727.00	65,711	303,117	313,107

Device	Routing	Invert	Outlet Devices
#1	Primary	720.45'	18.0" Round Culvert L= 68.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 720.45' / 717.09' S= 0.0494 ' S= 0.0494 ' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.77 sf

Primary OutFlow Max=17.56 cfs @ 13.01 hrs HW=725.46' TW=708.88' (Dynamic Tailwater)
 ↑1=Culvert (Inlet Controls 17.56 cfs @ 9.94 fps)

1114.00 MSM PH1 - PROPOSED

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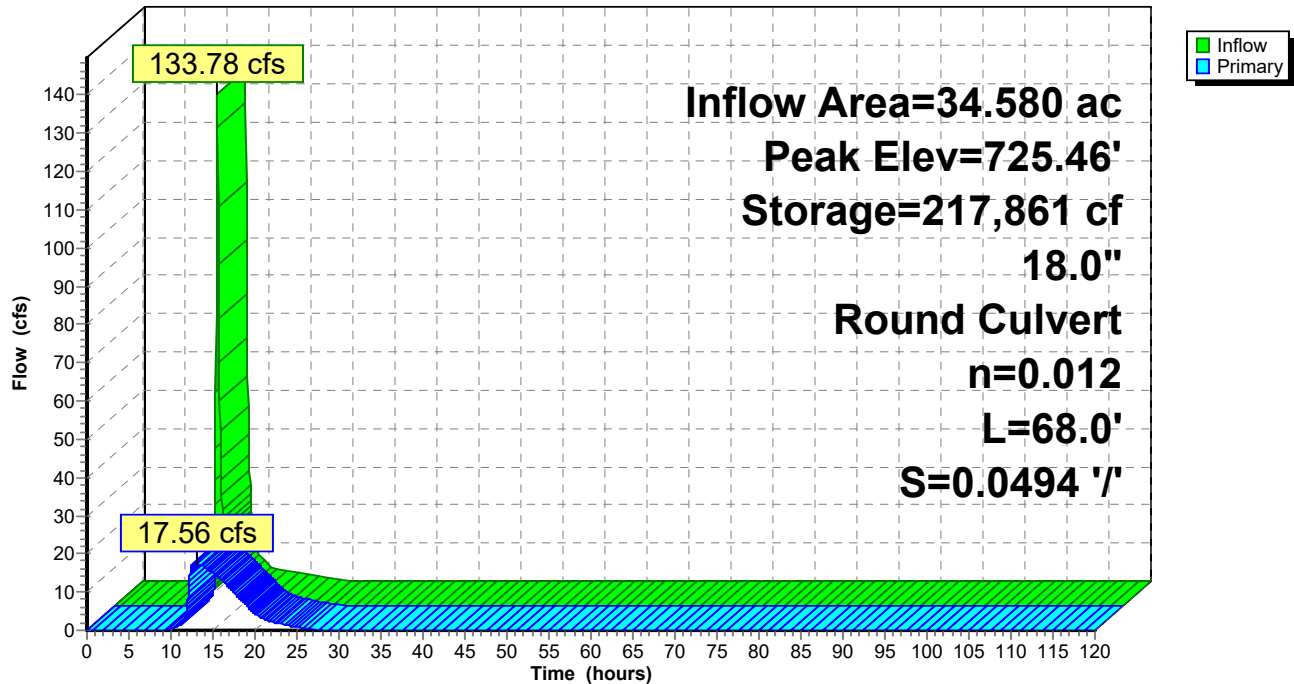
MSE 24-hr 3 50-Year Rainfall=5.19"

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Pond MB3: ML BASIN 3

Hydrograph



1114.00 MSM PH1 - PROPOSED

MSE 24-hr 3 50-Year Rainfall=5.19"

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Summary for Pond P1: S POND

Inflow Area = 49.880 ac, 8.56% Impervious, Inflow Depth > 77.48" for 50-Year event
 Inflow = 139.92 cfs @ 12.14 hrs, Volume= 322.076 af
 Outflow = 79.15 cfs @ 12.34 hrs, Volume= 319.265 af, Atten= 43%, Lag= 12.3 min
 Primary = 79.15 cfs @ 12.34 hrs, Volume= 319.265 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs
 Peak Elev= 709.52' @ 12.34 hrs Surf.Area= 49,884 sf Storage= 182,736 cf

Plug-Flow detention time= 64.8 min calculated for 319.068 af (99% of inflow)
 Center-of-Mass det. time= 30.8 min (3,505.2 - 3,474.4)

Volume	Invert	Avail.Storage	Storage Description
#1	705.00'	261,675 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
705.00	31,700	0	0
706.00	35,395	33,548	33,548
707.00	39,239	37,317	70,865
708.00	43,279	41,259	112,124
709.00	47,585	45,432	157,556
710.00	52,035	49,810	207,366
711.00	56,584	54,310	261,675

Device	Routing	Invert	Outlet Devices
#1	Primary	705.00'	27.0" Round Culvert X 2.00 L= 58.8' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 705.00' / 704.60' S= 0.0068 ' S= 0.0068 ' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.98 sf
#2	Device 1	705.00'	6.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	706.35'	15.0" Vert. Orifice/Grate X 3.00 C= 0.600
#4	Device 1	708.00'	96.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#5	Secondary	710.00'	10.0' long x 20.0' 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

Primary OutFlow Max=79.12 cfs @ 12.34 hrs HW=709.52' (Free Discharge)

1=Culvert (Barrel Controls 79.12 cfs @ 9.95 fps)
 2=Orifice/Grate (Passes < 1.95 cfs potential flow)
 3=Orifice/Grate (Passes < 28.25 cfs potential flow)
 4=Orifice/Grate (Passes < 153.29 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=705.09' (Free Discharge)

5=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

1114.00 MSM PH1 - PROPOSED

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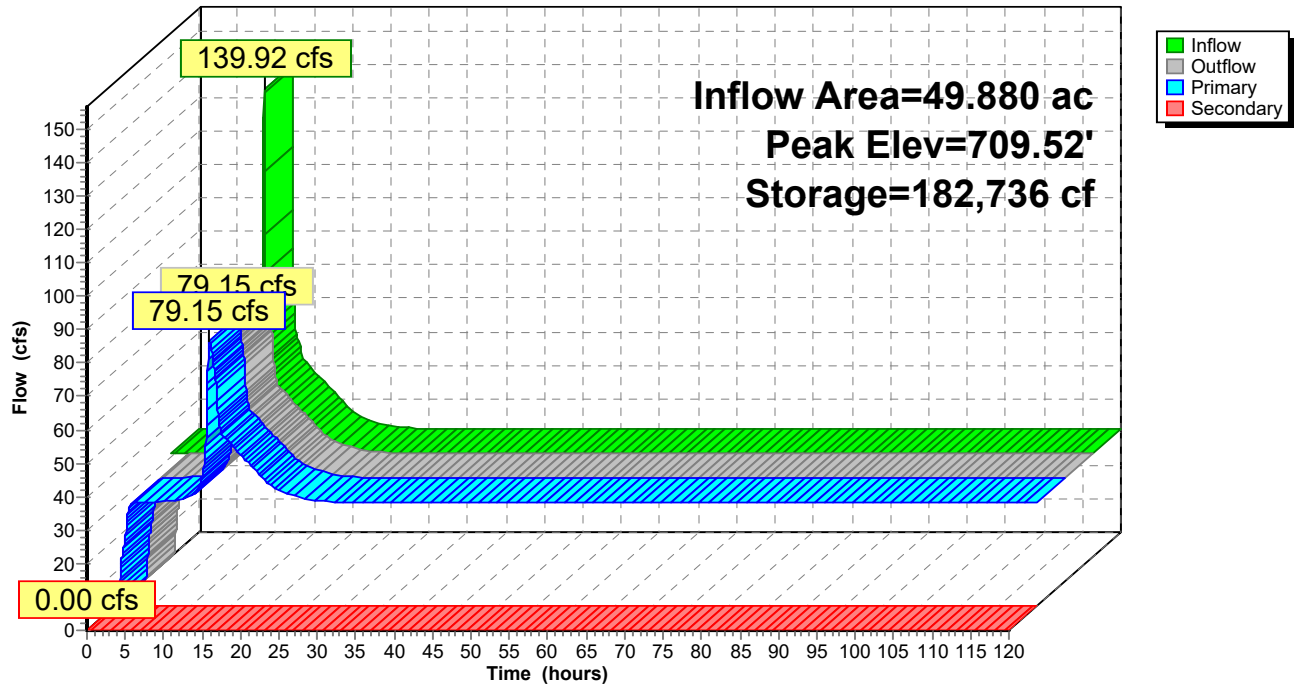
MSE 24-hr 3 50-Year Rainfall=5.19"

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Pond P1: S POND

Hydrograph



1114.00 MSM PH1 - PROPOSED

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MSE 24-hr 3 50-Year Rainfall=5.19"

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Summary for Pond VP4: VP CULVERT 50-YR

Inflow = 30.96 cfs @ 0.00 hrs, Volume= 307.169 af, Incl. 30.96 cfs Base Flow
Outflow = 30.96 cfs @ 0.00 hrs, Volume= 307.169 af, Atten= 0%, Lag= 0.0 min
Primary = 30.96 cfs @ 0.00 hrs, Volume= 307.169 af

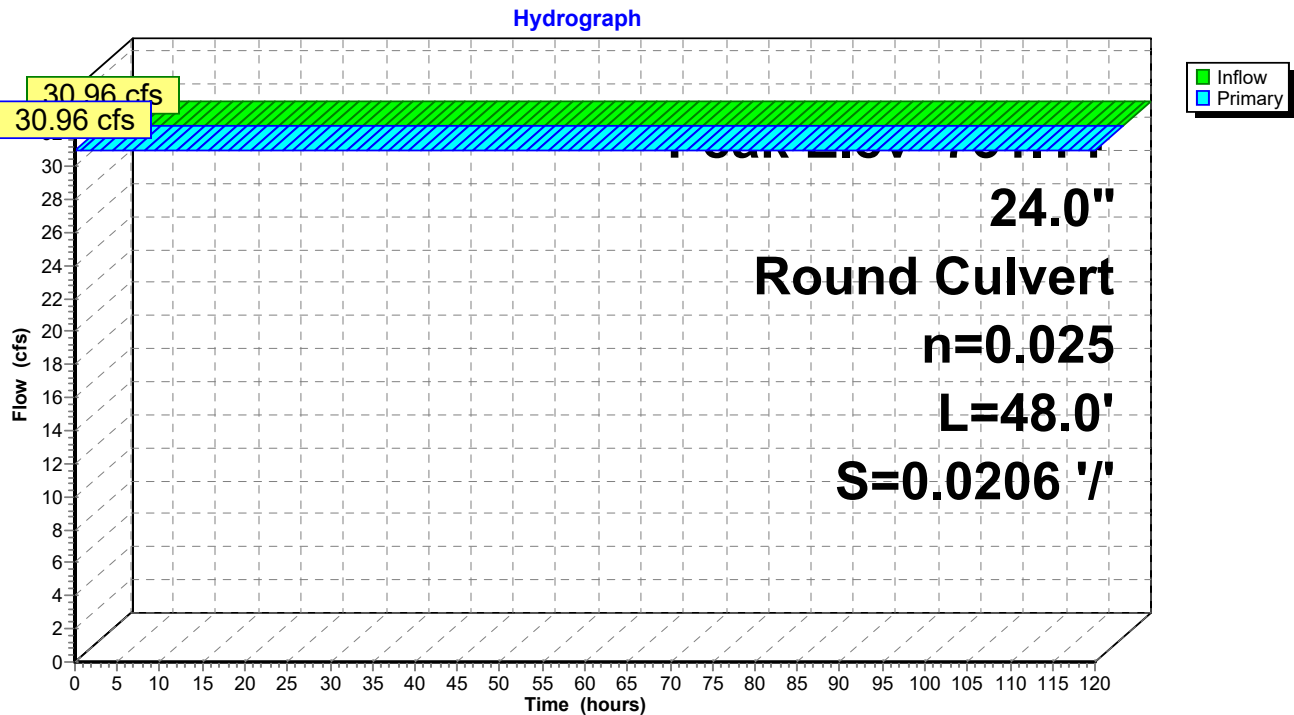
Routing by Dyn-Stor-Ind method, Time Span= 0.00-120.00 hrs, dt= 0.05 hrs

Peak Elev= 731.14' @ 0.00 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	724.53'	24.0" Round Culvert L= 48.0' CMP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 724.53' / 723.54' S= 0.0206 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 3.14 sf

Primary OutFlow Max=30.96 cfs @ 0.00 hrs HW=731.14' TW=705.09' (Dynamic Tailwater)

1=Culvert (Barrel Controls 30.96 cfs @ 9.85 fps)

Pond VP4: VP CULVERT 50-YR



February 7, 2018

Jean M. Werbie-Harris
Community Development Director
Village of Pleasant Prairie
9915 39th Avenue
Pleasant Prairie, WI 53158

Dear Ms. Werbie-Harris:

Bear Development is pleased to submit this letter and the accompanying plans as formal application for revisions to the approved Concept Plan for a mixed use commercial development known as Main Street Market.

The subject property is located northeast of the intersection of STH 31 and STH 165 in the Village of Pleasant Prairie. The property consists of approximately 21.76 acres and is located in the High Pointe Neighborhood.

Main Street Development, LLC has recently purchased the property and is submitting revised Concept Plans for a commercial development including retail, medical clinic and possible office use on the subject property.

We are happy to report that our feasibility studies have generated positive results. In addition to the studies, Bear Development has met with the Village for a pre-application conference and subsequently received Village of Pleasant Prairie approval of a Comprehensive Plan Amendment to revise the High Pointe Neighborhood Plan and furthermore, has received Village approval of a Master Conceptual Plan.

Since the approvals, Bear Development has continued to make progress on the off-site traffic improvements required for the project, namely Old Green Bay Road. As you will find on the enclosed plans, the Master Conceptual Plan now includes the approved alignment and Right of Way width of Old Green Bay Road. The approved road design had significant impacts on the interior site planning. Those impacts have been analyzed and accounted for. Bear Development is proposing a commercial development very similar in nature to the existing High Pointe Neighborhood Plan.

We are extremely pleased and excited to include Froedert South as an anchor to Main Street Market. As you will find in the enclosed plans, the updated Froedert South layout and orientation has been included in the Master Conceptual Plan. Please find the following exhibits which illustrate the revised Concept Plan for Main Street Market:

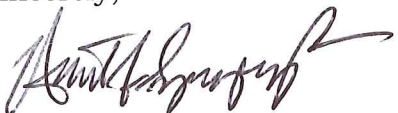
- Revised Master Conceptual Plan
- Phase I Site Improvement Plans
- Proposed Off-Site Roadway Improvements

With any Conceptual Plan, particularly a project that includes future users, we anticipate many details to evolve during the life of the project. The submitted Concept Plan represents the initial step in the entitlement process and will continually be revised, defined and improved as the project advances.

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

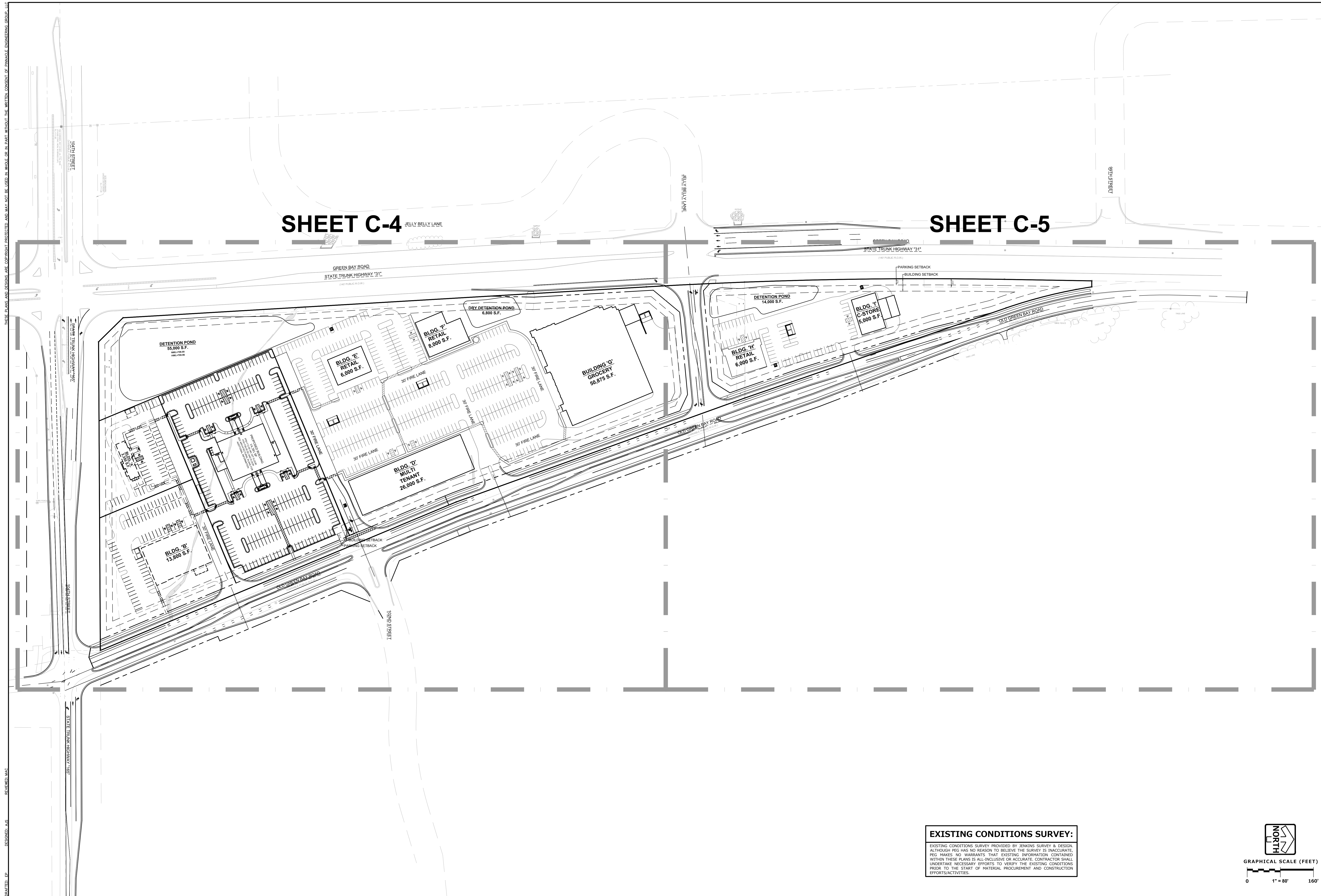
Thank you for your time and consideration.

Sincerely,



Daniel Szczap
Bear Development, LLC

Cc: S.R. Mills
Stephen C. Mills
John Hotvedt



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GRAPHICAL SCALE (FEET)

0 1" = 80' 160

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MAIN STREET MARKET

VILLAGE OF PLEASANT PRAIRIE, WI

CONCEPT SITE PLAN OVERVIEW

REVISIONS		
<u>1</u>	<u>OVERALL SITE UPDATE</u>	<u>01/31/18</u>

1114 00-WT

MAC

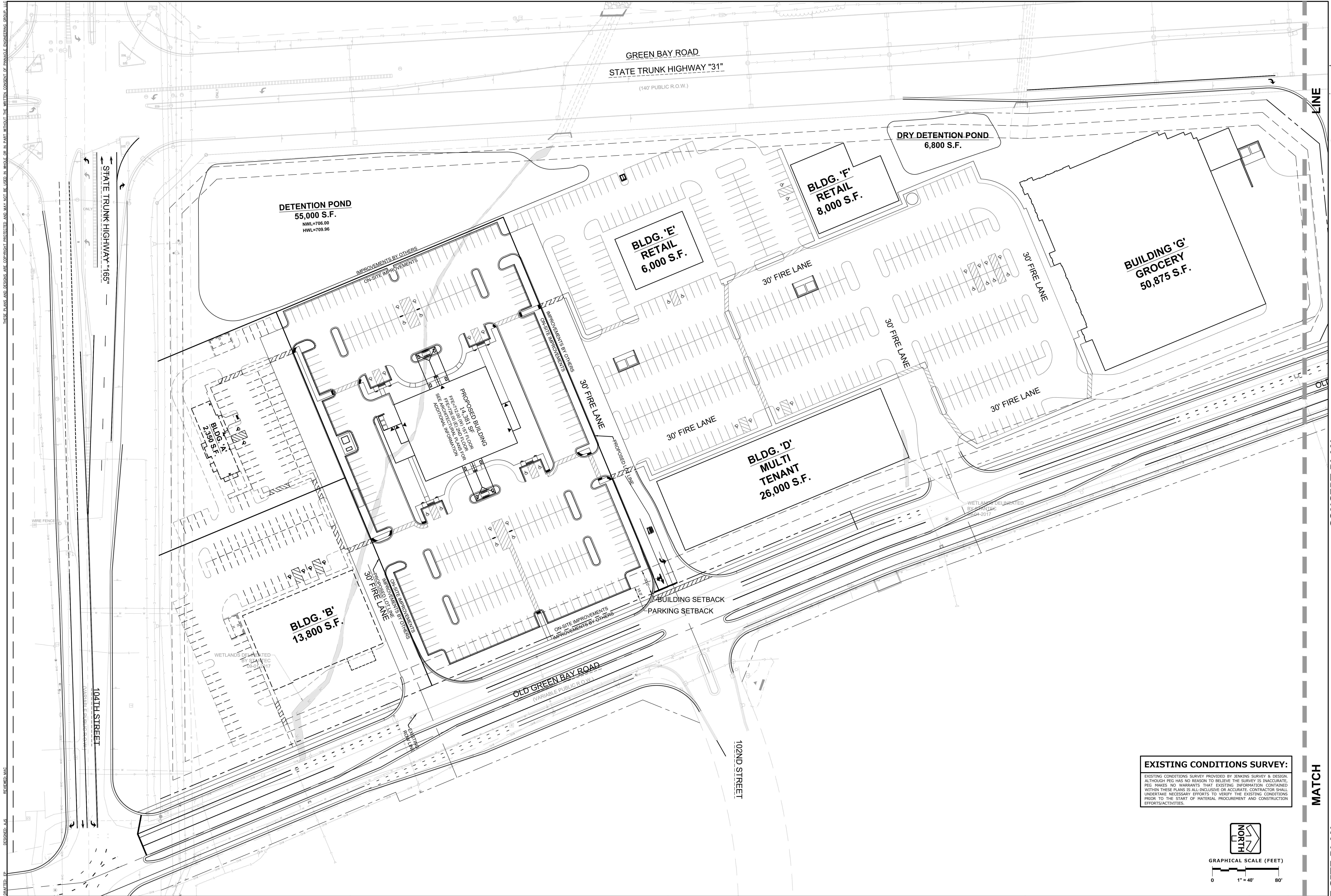
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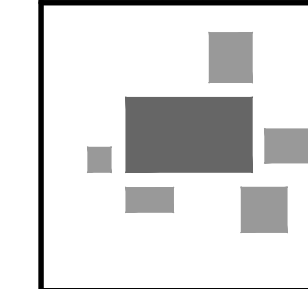
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DESIGNED: EP
CHECKED: JAS
REVIEWED: MAC
DATE: 01/31/18





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MAIN STREET MARKET VILLAGE OF PLEASANT PRAIRIE, WI

CONCEPT SITE PLAN

REVISIONS		DATE	BY	CHECKED	DATE
NO.	DESCRIPTION				
1	OVERALL SITE UPDATE	01/31/18	MAC		

PROJECT: 1114.00-WI
SHEET: C-4
DATE: 01/31/18
SCALE: 1" = 40'

DESIGNED: EP
CHECKED: JAS
REVIEWED: MAC
DATE: 01/31/18

SHEET
C-4
C-11

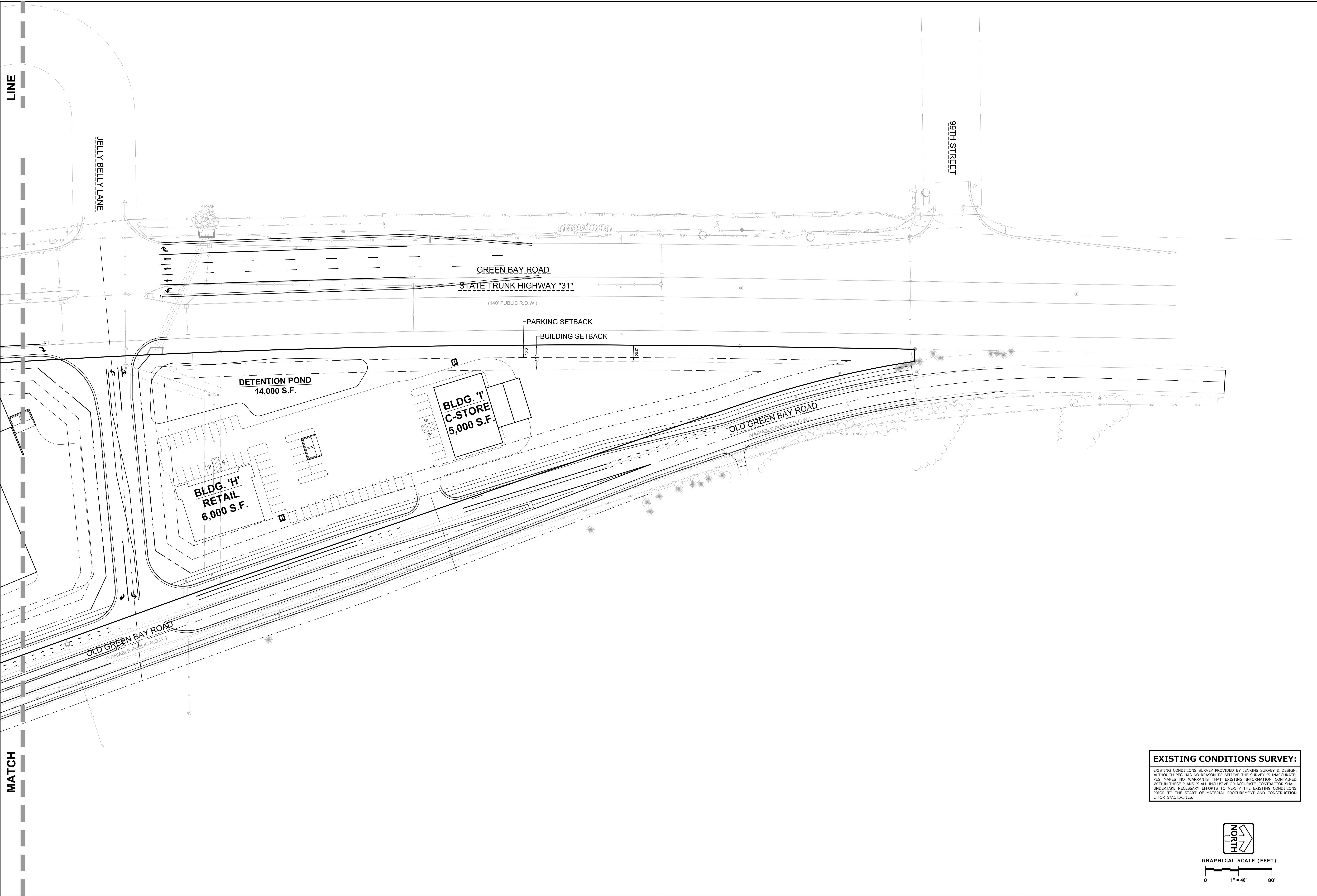
CONCEPT SITE PLAN

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DESIGNED: EP

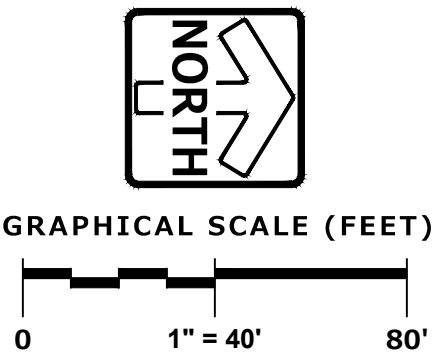
DESIGNED: DC


REVIEWED: MAC



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**MAIN STREET MARKET
VILLAGE OF PLEASANT PRAIRIE, WI**

CONCEPT SITE PLAN

REVISIONS		
1	OVERALL SITE UPDATE	01/31/18

PEG JOB NO. 1114.00-WI
PEG PM: MAC
START DATE: 09-18-17
SCALE: 1" = 40'

SHEET
C-5
of
C-11

Resolution No. 18-11
**Resolution of Appreciation and Thanks
to Thomas W. Terwall
for His Years of Service to the
Village of Pleasant Prairie Plan Commission**

WHEREAS, Thomas Terwall diligently served the people of Pleasant Prairie in various roles for forty-one years; and

WHEREAS, on May 1, 1995 Thomas Terwall was appointed to the Pleasant Prairie Plan Commission where he has served with dedication including his time in the role as Chairman of the Commission; and

WHEREAS, Thomas Terwall served as a Pleasant Prairie Town Supervisor for ten years, as a Town Chairman for two years and served as the first Village President for six years; and

WHEREAS, Thomas Terwall was instrumental in transitioning the community from a Town without zoning to a Village dedicated to comprehensive planning in 1989; and

WHEREAS, Thomas Terwall influenced many highly esteemed economic development projects during his time serving the Village, most notably the creation of the first Tax Incremental Financing District for the development of the LakeView Corporate Park; and

WHEREAS, Thomas Terwall supported the development and implementation of planning efforts ranging from the Chiwaukee Prairie/Carol Beach Plan to the first multi-jurisdictional comprehensive plan; and

WHEREAS, Thomas Terwall was dedicated to bringing balance to the community and a voice to residents by his mindful approach to planning relating to environmental issues and economic development; and

WHEREAS, the Village of Pleasant Prairie would like to acknowledge and sincerely thank Thomas for being a visionary and helping to shape the Plan Commission and the Village into what it has become today.

NOW, THEREFORE BE IT RESOLVED, that the Village of Pleasant Prairie does hereby extend our sincere appreciation and thanks to Thomas W. Terwall for his forty-one years of commitment and attentive service to the people of Pleasant Prairie in the cause of quality municipal planning.

Considered and adopted this 16th day of April, 2018

Michael J. Serpe, Vice Chairman

Attest:

James Bandura, Secretary

