

**VILLAGE OF GERMANTOWN
N112 W17001 MEQUON ROAD
GERMANTOWN, WI 53022**

MEETING: REGULAR MEETING OF THE VILLAGE BOARD

DATE AND TIME: MONDAY, June 1, 2020 7:00 p.m.

**LOCATION: Germantown Village Hall Board Room
N112 W17001 Mequon Road**

NOTICE: Pursuant to the current recommendation of the Centers for Disease Control and Prevention limiting the size of public gatherings, capacity within the Board Room will be limited. Members of the body and citizens may also attend the meeting virtually through the WebEx platform, Meeting #: 126 038 8525 Password: P5XpiyHRn95 which can be accessed by phone at 408-418-9388 or by logging on at <https://villageofgermantown.my.webex.com/villageofgermantown.my/j.php?MTID=m8704e8424e9c159663e2984bbcc75ceb>. Citizens wishing to view the meeting are encouraged to watch the live broadcast of the meeting through Channel 25 on Spectrum cable, or the livestream on the Village's website. Citizens not wishing to attend the meeting personally or virtually may submit any public comments by sending an email to comments@village.germantown.wi.us by 4 p.m. on the day of the meeting so that it can be provided to the members of the body for their consideration.

AGENDA

- I. **CALL TO ORDER:** *This meeting has been given public notice in accordance with Section 19.83 and 19.84, Wis. Stats, in such form that will apprise the general public and news media of subject matter that is intended for consideration and action.*
- II. **ROLL CALL:**
- III. **PLEDGE OF ALLEGIANCE:**
- IV. **PRESIDENT'S REPORT:**
- V. **ANNOUNCEMENTS OF FORTHCOMING EVENTS OF PUBLIC INTEREST
COMMITTEE AND DEPARTMENT REPORTS:**

The following individuals will be given the opportunity to make announcements of future municipal activities: Village President, Village Board Members, Village Administrator, Village Attorney, Village Clerk, And Department Heads, to include:

Clerk's Office.

Deputy Clerk Hubrich, Presentation of Wisconsin State Flag to the Village of Germantown.

VI. CITIZEN INPUT/PUBLIC APPEARANCE on items not subject to a public hearing:

Please be advised per §19.84(2), information will be received from the public. It is the policy of this municipality that there be a three (3) minute time period, per person, with time extension per the Chief Presiding Officer's discretion; be further advised that there may be limited discussion on the information received, however, no action will be taken under public comments. (15 minutes) Written Public Comments should be directed to comments@village.germantown.wi.us, by 4 p.m. on Monday, June 1st.

VII. CONSENT AGENDA:

- A. Approval of Minutes May 18, 2020 Regular Village Board Meeting.
- B. Accounts payable/payroll
 - 1. May 25, 2020 Accounts Payable \$ 179,740.27
 - 2. May 26, 2020 Payroll (Hourly) \$ 230,710.17
 - 3. May 29, 2020 Payroll (Salary) \$ 107,576.98
 - 4. May 31, 2020 Accounts Payable \$ 1,654.80

The following items were forwarded from **Government and Finance** with a unanimous recommendation.

- C. Resolution 40-2020, Salary Budget Amendment.

VIII. OLD BUSINESS:

- A. Village operations following the termination of the State's Safer at Home Order.

IX. PUBLIC HEARINGS:

- A. None.

X. NEW BUSINESS:

- A. Conditional Use Permit Amendment, Diversified Engineering Inc., Agent for Waste Management of Wisconsin, Property Owner - N96W13840 County Line Road, N96 W13600 & N96 W13640 County Line Road. Amendment to Conditional Use Permit (CUP) No. 04-2019 to operate a truck maintenance facility.
- B. Conditional Use Permit and Conditional Use Permit Amendment, Tyler Edwards, Agent for Menard Inc., Property Owner - W186 N9754 Appleton Avenue. Conditional Use Permit (CUP) for: development within a 25' wetland setback; an amendment to CUP No. 07-2002 to allow the expansion of a store larger than 50,000 sqft; an amendment to CUP No. 08-2002 to allow the expansion of a fenced storage yard; and Ordinance 07-2020, Rezoning to remove .914 acres from the Shoreland-Wetland Zoning District.
- C. Conditional Use Permit, Scott Morgan, Agent for All Terrain Adventure Company LLC, Property Owner - N112 W14972 Mequon Road. Conditional Use Permit for Construction Services-Contractor Shop.
- D. Conditional Use Permit Amendment, D. Lynne Luckow, Redline Canine Training Center and Behavioral Consultation, LLC, Agent for Ozaukee Development Corporation, Property Owner - W188 N11786 Maple Road, Suites 1,2,3 & 4. Amendment to Conditional Use Permit No. 01-2019 for the operation of a dog training operation.

- E. Operator License Denials: Ramone V. Parker, Brian Simmons II
- F. (Renewal): Secondhand Article Dealer Mall/Flea Market License – June 1, 2020 – April 30, 2021 for Beverly J. Solomon Applicant for Pilgrim Antique Mall W156 N11500 Pilgrim Road.
- G. Vacation Carry-Over Policy Change.
- H. We Energies Easement for Installation of Cable to Well #7 (Western Avenue).

XI. ADJOURNMENT.

The next regular meeting of the Village Board will be on Monday, June 15, 2020 at 7:00 p.m.

UPON REASONABLE NOTICE, efforts will be made to accommodate the needs of disabled individuals through appropriate aids and services. For Additional information or to request this service please contact the Village Clerk at (262)250-4740 at least 2 days prior to the meeting.

**VILLAGE OF GERMANTOWN
VILLAGE BOARD MEETING MINUTES
May 18, 2020**

CALL TO ORDER: The meeting was called to order at 7:00 p.m. by President Wolter.

ROLL CALL: Present: President Wolter, Trustees Baum, Hudson, Kaminski, Miller, Pieper, Wing, and Zabel. Trustee Myers was absent excused. Also present: Administrator Kreklow, Clerk Braunschweig, Attorney Sajdak, Director Rath, Director Ratayczak, and Manager Tucker. Clerk's Note: This was a partial Virtual Webex Meeting.

PLEDGE OF ALLEGIANCE:

PRESIDENT'S REPORT:

President Wolter reported that he is happy to see businesses open on Main Street.

The Recycle Center was open. It was staffed with two employees for the safety, traffic, drop off, and monitoring of materials. They have to watch for invasive species and assist the elderly.

**ANNOUNCEMENTS OF FORTHCOMING EVENTS OF PUBLIC
INTEREST/DEPARTMENT AND COMMITTEE REPORTS:**

CITIZEN INPUT/PUBLIC APPEARANCE on items not subject to a public hearing:

American Legion Letter was read in regard to Liquor License Fees.

CONSENT AGENDA:

- A. Approval of Minutes May 4, 2020 Regular Village Board Meeting and May 11, 2020 Special Village Board Meeting.
- B. Accounts payable/payroll
 - 1. May 10, 2020 Accounts Payable \$ 1,030,128.71
 - 2. May 12, 2020 Payroll (Hourly) \$ 226,392.64
 - 3. May 15, 2020 Payroll (Salary) \$ 108,985.34

The following items were forwarded from **Public Works** with a unanimous recommendation.

- C. Update Storm Sewer on GIS Asset Ally with Ruekert – Mielke, in an amount not to exceed \$17,347

Motion (Baum/Kaminski) to approve Consent Agenda Items A-C. Roll Call Voted Carried Unanimously.

OLD BUSINESS:

- A. None.

PUBLIC HEARING:

- A. None.

NEW BUSINESS:

A. Resolution 41-2020, 2020 Budget Savings Plan.

Administrator Kreklow reported on the Budget Savings Plan. He reviewed the possible Equipment Maintenance Delays, possible salary savings, and use of reserves. At the end of 2019 there was 6.7 Million in the general fund reserves. The furlough days would be at one day per quarter for non-frontline staff. Discussion ensued of keeping the seal coating.

MOTION (Zabel/Baum) to approve Resolution 41-2020, 2020 Budget Savings Plan.

MOTION (Zabel/Baum, to address and update the Village Board Monthly at the second meeting of every month. Motion Carried. Miller voted no.

Roll Call Vote of the Original Motion as Amended Carried Unanimously.

B. Water Tower Selection of Color and Logo.

Director Ratayczak came to the podium. The examples of water towers were shown. The flag logo is expensive and deteriorates. The item is to give guidance to the Building Construction Oversight Committee. The darker bottom hides the dirt and mold. Discuss of a large standard block print for Germantown was discussed with “Welcome to” on a 45degree angle in italic and to remove the flag. Discussion ensued of the Troy Ohio tower with the collar to hide the dirt. The use of red and black were discussed.

C. Curbside Recycling Collection / Multi-Family.

Director Ratayczak came to the podium. He reviewed the history of the curbside recycling collection for multi-family. Waste Management collects 5,571 garbage containers and 7,950 recycle containers. \$30,000 was eliminated from the budget for the multi-family recyclable collection. Staff is requesting the Village Board approve the collection of recyclables at the identified locations to be discontinued. Discussion by the Village Board ensued. Previous investigation of the item was discussed and the identification of the multi-family properties. The engineering department identified 2,065 of the 2,379 properties.

MOTION(Baum/Zabel) to Direct Staff to discontinue before September 1, 2020, and to notify property owners immediately. Staff to prepare a letter and work with the Village Attorney. Motion carried unanimously.

D. Engineer Consultant for Freistadt Rd / Maple Rd Intersection Improvements.

Director Ratayczak came to the podium. He reviewed the HSIP Grant from the WisDOT from the fall of 2019. The grant is for 90% of the construction and engineering costs for improvements to the intersection of Freistadt Road and Maple Road.

Motion (Zabel/Baum) to approve contract with GRAEF in the amount of \$139,524.23 for the design and soil investigation of Freistadt and Maple Road Intersection improvements. Roll Call Vote Carried Unanimously.

E. Village operations following the termination of the State's Safer at Home Order.

Attorney Sajdak had drafted a Resolution 42-2020, Adopting the Washington Ozaukee Public Health Department's Blueprint for Reopening for the Purposes of Village Operations Following the End of the State's Safer at Home. This was drafted to follow the Washington County Health Department's Blueprint. Looking to offer Parks programs and Library programs within the guidelines.

Motion (Zabel/Baum) to approve Resolution 42-2020, Adopting the Washington Ozaukee Public Health Department's Blueprint for Reopening for the Purposes of Village Operations Following the End of the State's Safer at Home.

Motion Carried. Pieper and Hudson voted no.

ADJOURNMENT.

ADJOURNMENT: There being no further business, the meeting adjourned at 8:30 p.m.

The next regular meeting of the Village Board will be on Monday, June 1, 2020 at 7:00 p.m.

Respectfully Submitted,

Deanna Braunschweig

Deanna B. Braunschweig, WCMC/CMC
Village Clerk

RESOLUTION NO. 40-2020

APPROVING AMENDMENTS TO THE 2020 BUDGET

Line Item Transfer

Allocate Contingency Funds to Departments to Cover Wage Increase

WHEREAS, the Village Board of the Village of Germantown has approved the 2020 Salary & Compensation Schedule with Resolution #02-2020, and;

WHEREAS, the 2020 Budget included contingency funds in the General Government Department Wage and Benefits lines to cover salary increases, and;

WHEREAS, the funds need to be allocated to the correct department accounts to facilitate proper accounting for the increase, and;

NOW THEREFORE BE IT RESOLVED, that the attached budget amendment detail moving \$103,791 from the contingency allocation to individual departments be approved.

Introduced by: _____

Adopted: _____

Vote: Ayes:____ Nays:____ Absent: _____

Dean M. Wolter, Village President

ATTEST:

Deanna Braunschwig, WCMC/CMC
Village Clerk

Resolution xx-120
Budget Amendment to Allocate Contingency Funds to Departments for 2020 Wage Increase
1% - 2.75% Non-represented employee
2% Public Works Union

Account #	Description	Budget	Change	Adjusted Budget
10-518-510-1900	Salaries Contingency	93,590	(90,791)	2,799
10-518-520-2100	Social Security	7,160	(6,870)	290
	Retirement	6,130	(6,130)	0
10-512-510-1100	Salaries - Administration	116,671	5,361	122,032
10-512-520-2100	Social Security	9,063	410	9,473
10-512-520-2200	Retirement	7,875	362	8,237
10-513-510-1100	Salaries - Clerk	156,316	2,967	159,283
10-513-520-2100	Social Security	12,208	227	12,435
10-513-520-2200	Retirement	10,551	200	10,751
10-514-510-1100	Salaries - Finance	113,381	2,160	115,541
10-514-520-2100	Social Security	8,674	165	8,839
10-514-520-2200	Retirement	7,653	146	7,799
10-517-510-1100	Salaries - Data Processing	26,936	511	27,447
10-517-520-2100	Social Security	2,061	39	2,100
10-517-520-2200	Retirement	1,818	34	1,852
10-519-510-1100	Salaries - Blg. & Grounds Supervisory	31,412	1,030	32,442
10-519-510-1500	Salaries - Custodial & Grounds	88,888	1,778	90,666
10-519-520-2100	Social Security	9,149	215	9,364
10-519-520-2200	Retirement	8,199	190	8,389
10-521-510-1110	Salaries - Police Adm	998,626	15,336	1,013,962
10-521-510-1140	Salaries - Dispatch	405,828	8,664	414,492
10-521-520-2100	Social Security	250,213	1,836	252,049
10-521-520-2200	Retirement	356,204	2,318	358,522
10-522-510-1100	Salaries - Fire Adm	329,516	7,837	337,353
10-522-520-2100	Social Security	81,954	599	82,553
10-522-520-2200	Retirement	105,335	886	106,221
10-523-510-1100	Salaries - Em. Govt	5,000	75	5,075
10-523-520-2100	Social Security	383	6	389
10-523-520-2200	Retirement	587	10	597
10-524-510-1100	Salaries - Inspection Serv	188,951	1,685	190,636
10-524-520-2100	Social Security	15,220	129	15,349
10-524-520-2200	Retirement	12,754	114	12,868
10-541-510-1100	Salaries - DPW Adm	141,388	4,727	146,115
10-541-520-2100	Social Security	10,816	362	11,178
10-541-520-2200	Retirement	8,421	319	8,740
10-542-510-1100	Salaries - Highway	168,341	2,826	171,167
10-542-510	Salaries - DPW Operators	917,766	8,000	925,766
10-542-520-2100	Social Security	84,417	828	85,245
10-542-520-2200	Retirement	69,557	731	70,288
10-546-510-1100	Salaries - Recycle	40,173	803	40,976
10-546-520-2100	Social Security	3,073	61	3,134
10-546-520-2200	Retirement	2,057	54	2,111
10-551-510-1100	Salaries - Library	479,501	10,025	489,526
10-551-520-2100	Social Security	25,243	767	26,010
10-551-520-2200	Retirement	12,736	677	13,413
10-552-510-1100	Salaries - Recreation	247,234	4,157	251,391
10-552-520-2100	Social Security	52,514	318	52,832
10-552-520-2200	Retirement	27,088	281	27,369
10-553-510-1100	Salaries - Parks	135,000	4,000	139,000
10-553-510-1800	Salaries - Parks Operators/ PT	103,667	2,073	105,740
10-553-520-2100	Social Security	18,316	465	18,781
10-553-520-2200	Retirement	10,761	410	11,171
10-554-520-1800	Salaries - Sr. Ctr	54,597	817	55,414
10-554-520-2100	Social Security	4,177	62	4,239
10-554-520-2200	Retirement	3,105	55	3,160
10-563-510-1000	Salaries - Planning	158,992	4,968	163,960
10-563-520-2100	Social Security	12,369	380	12,749
10-563-520-2200	Retirement	10,732	335	11,067
		6,163,467	103,791	6,267,258

BUSINESS OF THE VILLAGE BOARD GERMANTOWN, WI

MEETING DATE: June 1, 2020

AGENDA ITEM: New Business (CONDITIONAL USE PERMIT)

ITEM TITLE: Nick Berner, Diversified Engineering Inc., Agent for Waste Management of WI, Property Owner, N96 W13840 County Line Road; Amendment to Conditional Use Permit (CUP) No. 4-2019 to operate a Truck Maintenance Facility

SUBMITTED BY: Jeffrey W. Retzlaff, Director, Community Development Department

SUMMARY EXPLANATION:

Nick Berner, agent for Waste Management of WI (WM) is requesting approval of an amendment to CUP #4-2019 to operate a 35,035 sqft truck maintenance facility from the property located at N96 W13840 County Line Road. CUP #4-2019 was originally approved in March, 2019 for a 35,035 sqft facility. Since that time, Waste Management has revised their plans to:

- Reduce the office/maintenance building from 35,035 to 29,760 sqft
- Increase waste collection/recycling truck parking from 100 to 130 stalls
- Reduce vehicle parking from 159 to 160 stalls
- Realigned truck parking stalls & circulation to reduce back-up operations

The facility is proposed for the 45.8-acre parcel formerly occupied by WM's Port-O-Let storage operation and adjacent to other parcels owned by WM located north of County Line Road, east of STH 145/Fond du Lac Avenue.

The proposed truck maintenance facility will replace the existing WM operation in Menomonee Falls located at W124 N8925 Boundary Road. The building will have office space and a "pre-launch" area for waste removal/recycling trucks and a 14-bay truck maintenance facility. The WM fleet of waste removal/recycling vehicles is transitioning from diesel to compressed natural gas (CNG) over a planned 5-year timeframe. The operation is expected to serve up to (11) full and part-time office staff and up to 100 truck drivers. Hours of operation are proposed to be 3:30a.m. to 12 midnight, Monday through Friday, and, 5:00am to 12 noon on Saturday.

A public hearing of the CUP application and proposed operation was conducted at the May 11 Plan Commission meeting.

PLAN COMMISSION RECOMMENDATIONS:

APPROVE an amendment to conditional use permit (CUP#4-2019) for Waste Management of WI (WM), property owner to develop and operate a 29,760 sqft truck maintenance facility from the property located at N96 W13840 County Line Road subject to (7) conditions. *

* See Draft CUP for recommended conditions.

CUP #04 – 20

Document No.

CONDITIONAL USE PERMIT

Document Title

VILLAGE OF GERMANTOWN, WASHINGTON COUNTY, WISCONSIN
 CONDITIONAL USE ZONING PERMIT

Whereas the Applicant:

Waste Management of Wisconsin, Inc., Property Owner

agrees to comply with applicable Codes and Ordinances of the Village of Germantown, Wisconsin, and further agrees that all work done pursuant to the permission granted herewith will conform with the applications and drawings filed with and approvals granted by officials of the Village for the purpose of obtaining this permit.

Now, therefore, this permit (an amendment to CUP #04-19) is issued to the Applicant to permit the construction and operation of a Truck Maintenance Facility pursuant to Section 17.34(3)(c) and the installation and use of a 10,000 gal above-ground fuel storage tank pursuant to Section 17.34(3)(b) of the Village's Zoning Code.

Name & Return Address:

**Village of Germantown
 P.O. Box 337
 Germantown, WI 53022**

Parcel Identification No:

GTNV 363-996 & 363-986

**On the following described property located in the Village of Germantown,
 Washington County, Wisconsin:**

N96 W13840 County Line Road (Tax Key: GTNV 363-996)

Lot 2 of Certified Survey Map No. 4247 in the SW ¼ of the SW ¼ of Section 36, Town 9 North, Range 20 East, in the Village of Germantown, Washington County, Wisconsin, containing approximately 8.15 acres.

N96 W13600 & W13640 County Line Road (Tax Key: GTNV 363-986)

All that part of the Southwest ¼ of Section 36 Township 9 North, Range 20 east, Village of Germantown, Washington County Wisconsin, bounded and described as follows:
 COMMENCING at the West ¼ corner of the said Section 36; thence N88°13'49.7" E, along the North Line of the said SW ¼ Section 36 684.747 feet to the point of beginning of this description; thence continuing along the said North line, 845.663 feet; thence S 01°45' 50.53" E, 1241.501 feet; thence South 87°54'15.49" W, 79.981 feet; thence S 01°45' 50.53" E, 1400.00 feet to a point on the South Line, 263.23 feet; thence N 2°05'44.2" W, 363.00 feet; thence S 87°54'15.77" W and parallel to the said South Line, 120.00 feet; thence S 2°05'44.2"E, 363.00 feet to a point on the said South Line; thence S 87°54'15.77" W, 79.49 feet; thence N 01°26'25.02" W, 660.00 feet to the point of beginning of this description and containing approximately 35.63 acres.

Pursuant to the following condition(s):

1. The uses and activities allowed on the property shall be limited to those uses and activities and relative locations specified in the conditional use permit (CUP) and site plan application materials dated January 4, 2019, and supporting documents including a February 11, 2019 letter from Lynn Morgan, and a March 1, 2019 letter from Diversified Engineering Inc. The physical facilities from which said uses and activities are permitted include those as presented in the detailed site development and building plans dated February 28, 2020. Days and hours of operation shall be limited to those specified in the CUP application and supporting materials submitted to the Village. This permit shall include the right to install and use a 10,000 gal above-ground storage fuel tank (AST) to be installed on the site.
2. All temporary and permanent exterior signs require a permit and shall comply with all current sign regulations. Off-premise advertising and directional signage is regulated by the Village and requires a permit if/when allowed.
3. In the event the Village receives complaints regarding noise negatively affecting the nearby residential areas that is coming from the truck maintenance facility operation, including but not limited to noise from truck-mounted backup alarms, WM will cooperate with the Village in resolving the issue. WM has indicated that they will replace the backup alarms with “white noise” warning devices if this noise becomes a problem.
4. The LED fixtures proposed for installation and use on the building and site have the ability to be dimmed at no or low activity periods during the day. WM shall provide a mutually-agreeable schedule or plan detailing when and to what lighting levels the building and/or site lighting will operate and be dimmed on the site should be prepared and submitted to the Village as part of the operational plan. In the event the Village receives complaints regarding light and/or glare coming from the truck maintenance facility site that is not Village Code compliant or becomes public nuisance negatively affecting the nearby residential areas, WM will cooperate with the Village in resolving the issue.
5. No trash, recyclables or other waste material that may create an odor negatively affecting the nearby residential areas shall be kept on the property or in the waste removal/recycling trucks stored on the property.
6. If the use, activities and/or operation subject of this permit falls out of conformity with the conditions herein, or where there is a change in the nature, character, intensity or extent of the permitted conditional uses and activities which cause special problems or harmful effects associated with the permitted uses and activities that were not revealed or anticipated at the time this CUP was granted, or, where conditions imposed by this CUP that were anticipated to mitigate or eliminate harmful effects associated with the uses and activities but are subsequently insufficient to do so, or, for similar cause based upon consideration for the public comfort, safety, and welfare, this conditional use permit may be terminated or modified by the Village Board by the amendment to or addition of conditions after public hearing thereon.
7. WM indicated at the February 11, 2019 public hearing that the compressed natural gas (CNG) to be stored and dispensed on the property does not contain the same odorant found in gas supplied to homes and businesses. WM shall ensure that the storage and use of CNG at this facility does not create an odor or safety issue affecting employees on the site or residents and property owners in the surrounding area.

Granted by the Village Board of the Village of Germantown, Washington County, Wisconsin
on the _____ day of _____, 2020.

Dean Wolter, Village President

ATTEST:

Deanna Braunschweig, Village Clerk

STATE OF WISCONSIN) SS
WASHINGTON COUNTY)

Personally came before me this _____ day of _____, 2020, the above
named Dean Wolter, Village President, and Deanna Braunschweig, Village Clerk, to me
known to be the persons who executed the foregoing instrument and acknowledged the same.

{type or print name of Notary on this line}

{signature of Notary on this line}

Notary Public, State of Wisconsin
My Commission Expires: _____

ACCEPTANCE OF TERMS AND CONDITIONS BY OPERATOR

I, _____, representing Waste Management of Wisconsin, Inc., hereby accept the terms and conditions set forth in this Permit, and realize that non-adherence to the terms and conditions as stated hereon may result in the revocation of this Permit by the Village of Germantown.

Dated this ____ day of _____, 2020

{type or print name on this line}

{signature on this line}

Agent for Waste Management of Wisconsin, Inc., Property Owner

STATE OF WISCONSIN) SS
_____ COUNTY)

Personally came before me this _____ day of _____, 2020, being the above named _____, to me known to be the person who executed the foregoing instrument and acknowledged the same.

{type or print name of Notary on this line}

{signature of Notary on this line}
Notary Public, State of Wisconsin
My Commission Expires: _____

This instrument was drafted by:
Jeffrey W. Retzlaff, AICP
Director, Community Development Department
Village of Germantown, Wisconsin

PLAN COMMISSION MINUTES
May 11, 2020

CALL TO ORDER: Chairman Wolter called the meeting to order at 7:08 pm. The meeting was held as a virtual WebEx meeting.

ROLL CALL: Chairman Dean Wolter, Trustee Rep David Baum, Commissioners Tony Laszewski, Bill Shadid, Bob Williams and Peter Nilles were in attendance. Commissioner Matt Kimmler was absent and excused. Also present were Community Development Director Jeff Retzlaff, Associate Planner Emily Zandt and Planning Assistant Lori Johnson.

PUBLIC INPUT: None

APPROVAL OF MINUTES:

MOTION Baum second Shadid to Approve the minutes from 4-13-20.

MOTION carried.

Waste Management - N96 W13840, W13600 & W13640 County Line Road. The applicant is requesting an amendment to Conditional Use Permit (CUP) No. 4-2019 to operate a truck maintenance facility and Site Plan Review for revised plans for a 29,760 square foot truck maintenance facility. Planner Retzlaff summarized the proposal.

Public Hearing opened at 7:20 pm.

- Don Smith, Waste Management, stated he would answer questions and clarified that Condition #7 be corrected to say compressed gas contain the same odorant found in gas supplied to homes and businesses.
- Richard and Sue Wruck, N96 W14193 Knollcrest Circle. Planner Retzlaff read their letter into the record citing concerns with generator noise, truck traffic noise and County Line Road deteriorating.

Public Hearing closed at 7:27 pm.

MOTION Baum second Shadid to Approve a conditional use permit (CUP) for Waste Management of WI (WM), property owner to develop and operate a 29,760 35,035 sqft truck maintenance facility from the property located at N96 W13840 County Line Road subject to (7) conditions:

- 1. The uses and activities allowed on the property shall be limited to those uses and activities and relative locations specified in the conditional use permit (CUP) and site plan application materials dated January 4, 2019, and supporting documents including a February 11, 2019 letter from Lynn Morgan, and a March 1, 2019 letter from Diversified Engineering Inc. The physical facilities from which said uses and activities are permitted include those as presented in the detailed site development and building plans dated February 28, 2020 ~~March 1, 2019~~. Days and hours of operation shall be limited to those specified in the CUP application and supporting materials submitted to the Village. This permit shall include the right to install and use a 10,000 gal above-ground storage fuel tank (AST) to be installed on the site.***
- 2. All temporary and permanent exterior signs require a permit and shall comply with all current sign regulations. Off-premise advertising and directional signage is regulated by the Village and requires a permit if/when allowed.***
- 3. In the event the Village receives complaints regarding noise negatively affecting the nearby residential areas that is coming from the truck maintenance facility operation, including but not limited to noise from truck-mounted backup alarms, WM will cooperate with the Village in resolving the issue. WM has indicated that they will replace the backup alarms with "white noise"***

warning devices if this noise becomes a problem.

- 4. The LED fixtures proposed for installation and use on the building and site have the ability to be dimmed at no or low activity periods during the day. WM shall provide a mutually-agreeable schedule or plan detailing when and to what lighting levels the building and/or site lighting will operate and be dimmed on the site should be prepared and submitted to the Village as part of the operational plan. In the event the Village receives complaints regarding light and/or glare coming from the truck maintenance facility site that is not Village Code compliant or becomes public nuisance negatively affecting the nearby residential areas, WM will cooperate with the Village in resolving the issue.*
- 5. No trash, recyclables or other waste material that may create an odor negatively affecting the nearby residential areas shall be kept on the property or in the waste removal/recycling trucks stored on the property.*
- 6. If the use, activities and/or operation subject of this permit falls out of conformity with the conditions herein, or where there is a change in the nature, character, intensity or extent of the permitted conditional uses and activities which cause special problems or harmful effects associated with the permitted uses and activities that were not revealed or anticipated at the time this CUP was granted, or, where conditions imposed by this CUP that were anticipated to mitigate or eliminate harmful effects associated with the uses and activities but are subsequently insufficient to do so, or, for similar cause based upon consideration for the public comfort, safety, and welfare, this conditional use permit may be terminated or modified by the Village Board by the amendment to or addition of conditions after public hearing thereon.*
- ~~*7. WM intends to combine a series of adjacent parcels pending approval of the CUP and site development and building plans. WM shall file the certified survey map (CSM) for purposes of combining their parcels within (90) days after Village Board approval of this CUP.*~~
- ~~*8. WM shall prepare and submit to the Village an updated wetland delineation for the property to ensure site development does not encroach into any wetland or the Village's 25' wetland setback. The CSM shall be submitted to the Village within (90) days after Village Board approval of this CUP.*~~
- 7. WM indicated at the February 11, 2019 public hearing that the compressed natural gas (CNG) to be stored and dispensed on the property does not contain the same odorant found in gas supplied to homes and businesses. WM shall ensure that the storage and use of CNG at this facility does not create an odor or safety issue affecting employees on the site or residents and property owners in the surrounding area.*

MOTION to Amend Baum second Nilles to clarify condition #7 by taking out the word not -“the compressed natural gas stored and dispensed on the property does not contain the same odorant”.

Discussion followed. Don Smith, WM, said compressed natural gas vehicles would be extremely quiet. He explained the trucks would hook up to a hose at the end of the day so they are ready in the morning. Maria, TruStar Energy, explained the compressors have low level noise and would not all run at the same time. Commissioner Williams asked if the Village of Germantown is listed on their pollution liability policy including the onsite cleanup pollution liability policy. Mr. Smith agreed to set that up.

MOTION to Amend carried unanimously.

MOTION to Amend Williams second Baum to require Waste Management to add the Village of Germantown as an additional insured on the pollution liability policy as well as the excess pollution liability policy.

MOTION to Amend carried unanimously.

MOTION to Approve the CUP as Amended carried unanimously.

MOTION Baum second Shadid to Approve the site development and building plans for a 29,760 ~~35,035~~ sqft truck maintenance facility from the property located at N96 W13840 County Line Road subject to (11) conditions:

- 1. This approval is subject to all the conditions and requirements set forth herein and adopted by the Plan Commission. Approval is granted for the architectural and engineering plan set dated February 28, 2020 ~~March 1, 2019~~, and the site plan application materials dated January 4, 2019, and supporting documents including a February 11, 2019 letter from Lynn Morgan, and a March 1, 2019 letter from Diversified Engineering Inc., unless superseded by subsequent plan sheets approved by the Village Planner or Engineer pursuant to revisions required herein and/or by the Plan Commission.**
- 2. All landscaping, screening, grading, paving, storm water management, utility and other improvements that are not fire-safety related as shown on the approved site plans shall be installed as proposed prior to issuance of an occupancy permit unless a cash bond or letter of credit in an amount equal to 120 percent of the estimated installation and material costs reviewed and approved by the Village is submitted to the Village as necessary to ensure that installation of the proposed features and improvements will be completed within one (1) year after issuance of the occupancy permit.**
- 3. The following items shall be provided as required by the Village Fire Department: (a) a Knox Box shall be located and installed to a mutually-agreeable location approved by the Germantown Fire Department; (b) the maintenance building and office will require fire sprinkler protection per IBC 903.2.9.1; (c) the Fire Department Connection (FDC) location shall be approved by the Germantown Fire Department; (d) a new man gate shall be installed at the southeast corner of the fenced area on the south side of the maintenance parking lot at a mutually-agreed to location and design with the Germantown fire Department; (e) State approval is required for the 10,000 gal above-ground diesel fuel storage tank.**
- 4. All exterior doors (except primary entrance) shall be clearly marked with reflective 5" or larger letters/numbers to aid emergency personnel access as required by the Police Department.**
- 5. All technical issues, corrections and plan requirements identified by the ~~Village Engineer and~~ Public Works Department staff (see March 24, 2020 February 12, 2019 Village Engineer memo) shall be addressed and reflected in revised plans and/or supplemental information reviewed and approved by Village staff prior to issuance of a building permit (excluding "early start" site clearing and footing/foundation work approved by the Village and/or WI DSPS).**
- 6. WM shall cooperate with the Germantown Fire Department and Menomonee Falls engineering and water utility to ensure adequate water supply and fire flow pressure is provided to the proposed maintenance facility, including conducting pressure testing. WM shall install new fire hydrants and/or other water system improvements required by Menomonee Falls.**
- 7. State approved plans and a \$20,000 occupancy bond are required by the Building Inspection Department as part of the building permit application.**
- ~~8. WM shall prepare and submit to the Village an updated wetland delineation for the property to ensure site development does not encroach into any wetland or the Village's 25' wetland setback. The CSM shall be submitted to the Village within (90) days after Village Board approval of the CUP. In the event development encroaches into a wetland or 25' wetland setback, WM shall obtain the necessary WisDNR and Village permits, or modify the site development accordingly.~~**
- ~~9. All landscaping, screening, grading, paving, storm water management, utility and other improvements that are not fire-safety related as shown on the approved site plans shall be installed as proposed prior to issuance of an occupancy permit unless a cash bond or letter~~**

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

8. WM shall revise the landscape plan to address the Village's street tree requirements. At a minimum, additional street trees in an amount equal to one (1) tree per 50 feet of road frontage of the existing Port-O-Let parcel shall be added to the plan and installed in addition to the site landscaping already shown in the landscape plan.
9. WM shall cooperate with the Menomonee Falls engineering and highway departments to ensure adequate road and intersection capacity and level of service is provided to the proposed maintenance facility and adjacent road system, including the driveway intersections onto County Line road and the Fond du Lac Ave/STH145 intersection. WM shall install and/or contribute to the cost of all road and intersection improvements deemed necessary as a result of or contribution of traffic generated to/from the proposed truck maintenance facility as required by the Menomonee Falls Village Engineer.
10. The paving options shown on Sheets C1.10 and C1.11 include an option for a crushed limestone aggregate surface course for the drive areas around the building and truck parking areas. The Village Code requires bituminous concrete or concrete pavement on non-residential parking areas and drive lanes. The crushed aggregate alternative shall not be installed. WM shall consult with the Village Engineer to investigate acceptable alternative paving options prior to installation of the parking areas and drive lanes if necessary.
11. The landscape plan shall be revised as recommended by the Village Forester to: (a) replace White Spruce with Norway Spruce; and (b) replace Balsam Fir with Concolor Fir.

MOTION carried unanimously.

Menard Inc. - W186 N9754 Appleton Avenue. The property owner has submitted Rezoning, Conditional Use Permit and Site Development and Building Plan applications in support of a proposed storage yard expansion, warehouse addition, building addition and exterior remodeling to the existing store. Planner Retzlaff summarized the proposal.

Public Hearing opened at 7:58 pm.

-Tyler Edwards, agent for Menard Inc., said they were excited to move forward with expanding the store and would answer any questions.

Public Hearing closed at 8:04 pm.

MOTION Baum second Laszewski to Approve the request to rezone and remove 39,833 sqft (.914 acres) of filled wetland from the Shoreland-Wetland Zoning District as shown in the detailed site plans subject to one (1) condition:

1. Menards shall provide a legal description of the wetland fill area to Village staff prior to scheduling the rezoning application for Village Board review.

MOTION carried unanimously.

MOTION Baum second Shadid to Approve a Conditional Use Permit to allow development within the 25' wetland setback area pursuant to Section 24.04 of the Shoreland-Wetland Zoning Code as presented in the revised Site Plan set dated March 5, 2020 (Sheet C1.3).

MOTION carried unanimously.

MOTION Baum second Shadid to Approve a revision to Conditional Use Permit (CUP) #7-2002 to increase the size of retail building to 169,300 sqft with an additional warehouse area of

CONDITIONAL USE PERMIT (CUP) APPLICATION & SITE PLAN REVIEW

5/11/20 Plan Commission Meeting

Waste Management of Wisconsin Inc.

Village Planner Report

Germantown, Wisconsin

Summary

Nick Berner, Diversified Engineering Inc., agent for Waste Management of WI, property owner, is requesting approval of a revised Conditional Use Permit (CUP) to operate and revised site development and building plans for a 29,760 ~~35,035~~ sqft truck maintenance facility from the 45.8-acre property located at N96 W13840 County Line Road.

Location: N96 W13840 County Line Road

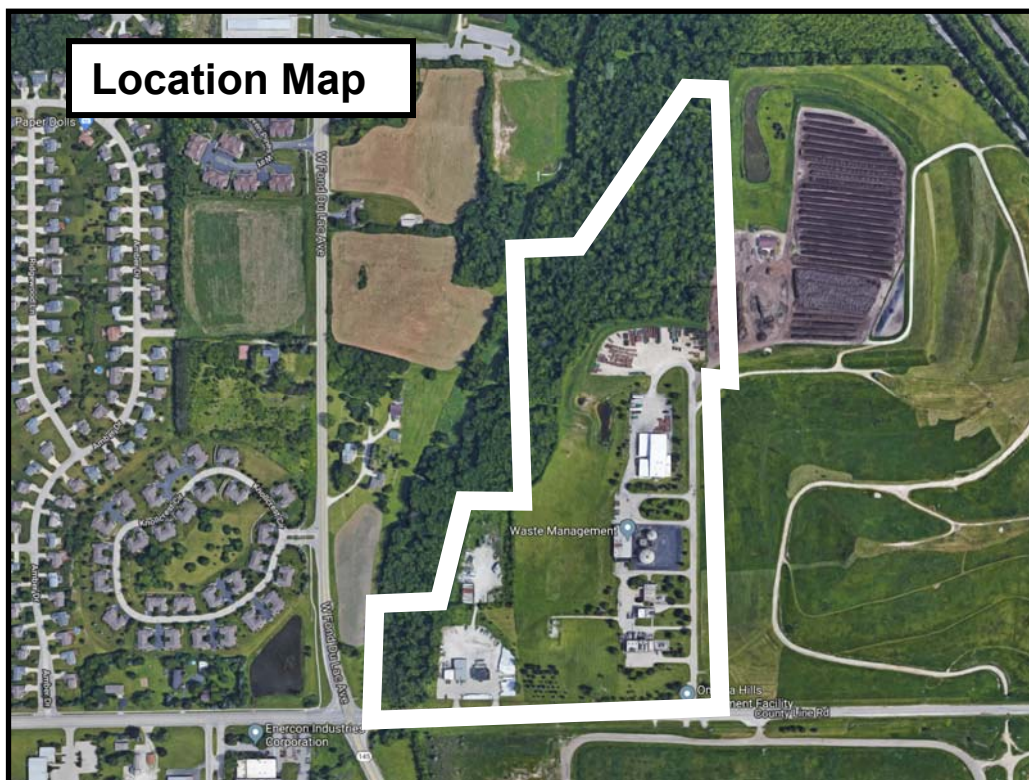
**Applicant/
Property Owner:**

Nick Berner, PE
Diversified Engineering
New Philadelphia, OH

Don Smith, PE
Waste Management of WI
Chicago, IL

Zoning: M-2: General Industrial

Adjacent Land Uses		Zoning
North	Agricultural/Industrial	A-1/M-2
South	Industrial (Menomonee Falls)	n/a
East	Industrial (retired landfill)	M-2
West	Residential/Business	Rd-2/Rs-1/B-3



Background/Proposal

Waste Management of WI (WM) has submitted revised plans for the proposed truck maintenance facility on County Line Road. The proposed facility was granted a conditional use permit (CUP #4-19) by the Village Board in March, 2019. Site development and building plans were conditionally approved by the Plan Commission in March, 2019.

At this time, WM has submitted revisions to the site development and building plans that make the following minor changes to the site and building:

1. Reduce office/maintenance building from 35,035 to 29,760 sqft (footprint)
 - a. 5,760 office
 - b. 24,000 maintenance facility
 - c. 1,897 sqft mezzanine
2. Increase truck parking from 100 to 130 stalls
3. Reduce vehicle parking from 159 to 160 stalls
4. Realigned truck parking stalls & circulation to reduce back-up operations

The following sections of this report are taken from the original March, 2019 report with necessary revisions (and additional commentary) shown in a **strikeout** and **underline** format to clearly show changes and/or current conditions.

Proposal

At this time, Nick Berner, Diversified Engineering Inc., agent for Waste Management of WI, property owner, is requesting approval of a revised Conditional Use Permit (CUP) to operate and revised site development and building plans for a 29,760 ~~35,035~~ sqft truck maintenance facility from the 45.8-acre property located at N96 W13840 County Line Road.

As detailed in the February 28, 2020 ~~January 9~~ project narrative and site development plans, the existing buildings and site improvements on the 8.15-acre parcel formerly occupied by WM's Port-O-Let storage operation will be re-developed to accommodate the proposed truck maintenance facility. The facility will extend onto portions of the adjacent 35.6-acre parcel to the east [NOTE: both parcels have been combined by CSM approved by the Village in September, 2019]. As noted in the application, WM intends to combine a total of four adjoining parcels owned by WM located north of County Line Road, east of STH 145/Fond du Lac Avenue, and west of the private internal driveway commonly referred to as "Midlands Drive" that serves other WM operations (i.e. Orchard Ridge Gas-to-Electric Power Plant, the former WM Healthcare Solutions medical waste recycling operation building, and the WM compost operation). This land combination will be accomplished with a certified survey map (CSM) submitted to the Village pending approval of the conditional use permit and site development & building plan applications.

The proposed truck maintenance facility includes a 29,760 ~~35,035~~ sqft pre-engineered metal building that will serve as a new location for the existing operations and staffing at the Menomonee Falls facility located at W124 N8925 Boundary Road.

The west ~~5,760~~ 9,750 sqft of the building will have office space for ~~eleven (11)~~ thirty (30) staff and a “launch” area serving 90-100 waste hauling truck drivers (office/assembly space for pre-route communications and management). The east ~~24,000~~ 25,285 sqft will have space for a 14-bay truck compressed natural gas (CNG) maintenance facility. The WM vehicle fleet of waste removal/recycling vehicles is transitioning from one that operates with diesel fuel to a fleet of vehicles powered entirely by compressed natural gas (CNG) that results in low or no particulate emissions, greenhouse gases and less noise than comparable diesel-powered trucks. The transition is expected to take a period of five years. A series of trusses supporting an overhead CNG refueling system will be installed in the north parking lot providing each parking stall a retractable refueling hose (~~Sheet A1.2~~). Overhead lighting, cameras and fire detection devices will be installed to and above the truss system. Underground pipes will provide CNG from the on-site CNG compound to the truss refueling system. [NOTE: details for the CNG Fueling Facility are provided in a separate plan set dated 4/14/2020 included with the other revised plans dated 2/28/2020].

The operation is expected to serve up to ~~eleven (11)~~ thirty (30) full and part-time office staff and up to 100 truck drivers. Hours of operation are proposed to be 3:30a.m. to 12 midnight, Monday through Friday, and, 5:00am to 12 noon on Saturday. [NOTE: As explained in the February 28, 2020 Design Narrative, the primary reason for the changes to the proposed facility result from the relocation of thirty (30) office/sales employees to the existing WM facility on Grant Drive in the Germantown Business Park].

In addition to the office and maintenance facility components of the building, site improvements include:

- ~~159~~ 166 employee/visitor vehicle parking stalls (~~44 additional future stalls~~)
- ~~130~~ 140 waste removal/recycling truck parking stalls
- Compressed natural gas (CNG) compound & fueling station
- (2) access driveways serving the facility

Parking, Access and Traffic Circulation

Primary access to the new truck maintenance facility will be provided by the existing westernmost driveway on County Line Road. Secondary access will be provided to/from a new driveway connection linking the parking area north of the facility to the existing internal roadway commonly referred to as “Midlands Drive”; a north-south roadway intersecting County Line Road approximately 1,000 feet east of the access driveway.

On-site parking includes ~~159~~ 166 parking stalls for employees/visitors located south and west of the maintenance facility. ~~An additional 44 stalls can be constructed in a secondary parking area west of the main driveway and parking area south of the building for a total of 210 parking stalls (vs. 207 stalls recommended under the Village’s guidelines) to serve both the truck maintenance facility.~~ An additional ~~130~~ 140 parking stalls for waste removal/recycling trucks are provided north of the building that will be enclosed by a secure 6’ high chain link fence with controlled access gates.

Utilities

Public water and sanitary sewer lateral lines will be extended to the site from existing mains in County Line Road. Water is provided by the Village of Menomonee Falls. Sanitary sewer is provided by Germantown. All other essential utility services including gas, electric, etc. will utilize existing connections.

Storm Water Management

Impervious area across the entire 46.03 acre site will be approximately 14.2 ~~44.8~~ acres (31% ~~25.7%~~) leaving 69 ~~74.3~~% open space (maximum impervious allowed is 50% in the M-2: General Industrial District).

As shown on the Storm Water Management Plan (Sheet C1.12 &), the facility will be served by three (3) ~~two~~ (2) storm water retention basins. Two ~~One~~ basins are ~~is~~ located west of the building and primary driveway into the site and the second basin located in the northeast portion of the site. On-site storm sewers, catch basins, roof drains, ditching and swales will be used to divert run-off into the two basins.

[NOTE: there are multiple alternative paving options shown on Sheets C1.10 and C1.11, including an option for a crushed limestone aggregate surface course for the drive areas around the building and truck parking areas.]

Landscaping

A detailed landscaping plan (Sheet L1.0) shows landscape items comprised of evergreen, deciduous and ornamental trees, shrubs, perennials, and grasses installed at the primary driveway entrance, in landscaped medians in the parking lots around the south and east perimeter of the south parking lot and along the south side of the maintenance building. A low-level berm will be installed east of the parking area with additional evergreen trees to supplement and enhance the existing landscaping along County Line Road.

Existing chain link fencing around the existing Port-O-Let operation will be removed and replaced with new 6' chain link fencing around the maintenance building and parking area for the waste removal/recycling trucks. Controlled gates will be installed at two points of entry/exit to the north parking area and maintenance building (Sheet X1.1).

Lighting. Exterior lighting of the site and SMT building will include:

- ~~(33~~ 24) 249W 31,777 ~~402W~~ 12,500 Lumen LED fixtures w/ 5000K "white" color mounted on 20' poles and 2'5" concrete bases (22'6" max fixture mounted height) along the primary and secondary driveways, ~~and within the parking areas~~ and mounted on the building at a height of 25' around the perimeter;
- ~~(10) 207W 25,500 Lumen LED fixtures w/ 4000K "white" color wall mounted on the building at a height of 25';~~
- (9 5) 249W 32,700 Lumen LED fixtures w/ 5000K "white" color mounted on 20' poles and 2'5" concrete bases (22'6" max fixture mounted height) at the east end of the truss refueling systems and at the CNG compound and quick refueling

-
- station in the north parking area;
 - (68) 74W 10,500 Lumen LED fixtures surface mounted to the truss system at a height of 19’;
 - (7 44) 29W 3,200 Lumen LED wall sconce fixtures mounted on the north, west and south elevations of the office building at a height of 12 feet.
 - (3) 37W 5,240 Lumen LED ceiling fixtures mounted on the north elevation of the office building at a height of 8’6”.

[NOTE: As a result of the fixtures changes noted above, the overall lighting levels increase along the driveways and in the parking lot over those that were previously approved.]

Signage

One (1) 6’ high x 12’ wide (72 sqft) wall sign is proposed on the side (west) façade of the office building facing the parking lot. The sign is comprised of aluminum plates surface mounted to the metal wall panel. No lighting is proposed. No other signage is proposed at this time. A separate sign permit will be submitted for a future monument sign along County Line Road.

Staff Comments

Consistency with Village’s Land Use Plan & M-2 Zoning District.

The 2020 Land Use Plan map classifies this property as “Industrial/Office”. The current zoning of the property (and adjacent WM parcels to the east) is M-2: General Industrial. The proposed truck maintenance facility can be allowed within the M-2 District with a conditional use permit (CUP) under Section 17.35(c) of the M-2 District regulations.

At the initial public hearing, Plan Commission members and staff expressed concern with potential site lighting, noise and odor associated with the new maintenance facility. As discussed, representatives for WM explained that no trash or recyclables will be kept on the maintenance facility site. WM also indicated that in the event that noise becomes a problem for the surrounding residential area (specifically the “beep-beep-beep” noise from truck-mounted backup alarms), they will replace the backup alarms with “white noise” warning devices. These commitments have been ~~should be~~ made part of any conditional use permit.

Site lighting is addressed as part of the site plan submittal. The lighting fixtures and associated levels are greater than those previously approved, but generally consistent with the Village’s fixture requirements and recommended lighting levels for industrial uses/activities. [NOTE: the previously-approved lighting plan had lower lighting levels.] WM staff indicated that the LED fixtures proposed for the site will have the ability to be dimmed at non-activity times during the day. A more detailed plan for when and how lighting will be dimmed on the site has been included as a condition of approval in the CUP but not yet submitted ~~should be prepared and submitted to the Village as part of the operational plan for the operation and review and approval as a condition of approval.~~

As noted above, there are multiple alternative paving options shown on Sheets C1.10 and C1.11, including an option for a crushed limestone aggregate surface course for the drive areas around the building and truck parking areas. The Village Code requires bituminous concrete or concrete pavement on non-residential parking areas and drive lanes. The crushed aggregate alternative is not code compliant.

It has been pointed out that the Village of Menomonee Falls is the current provider of public water to the WM property and other existing buildings in their “complex” in Germantown. The Germantown Fire Department has been working cooperatively with WM and Menomonee Falls staff to ensure adequate water supply and pressure is provided to the proposed maintenance facility. As a result, WM will be replacing and installing new fire hydrants in and around the proposed facility. All parties agreed that a pressure testing will be done to ensure adequate fire flows are available.

Further, Menomonee Falls has maintenance jurisdiction over the segment of County Line Road east of STH145/Fond du Lac Avenue. The Village Engineer for Menomonee Falls has requested traffic counts projected for the maintenance facility operation at the time a driveway permit is request by WM. That traffic information will be used to determine what, if any, intersection and/or driveway improvements, e.g. turn-lanes, by-pass or acceleration lanes, may be required on County Line Road at either of the two driveway intersections.

The landscape plan is adequate except for the street tree requirement along County Line Road. While most of the trees proposed on the site are evergreen trees, additional deciduous trees are required to satisfy the street tree requirement. The landscape plan needs to be revised to address this deficiency. At a minimum, additional street trees in an amount equal to one (1) tree per 50 feet of road frontage shall be added to the plan and installed in addition to the site landscaping already shown in the landscape plan. Further, the landscape plan specifies 3” caliper White Spruce and Black Hills Spruce trees. Unlike deciduous trees, evergreen trees are typically discussed in terms of total height (vs. trunk caliper) under the Village’s landscaping and street tree guidelines. A typical planted size of evergreen trees in Germantown is a minimum of 6-8 feet. If the 3” caliper evergreen trees that WM intends to install as shown on the landscape plan are, in fact, a minimum of 6’-8’, nothing more needs to be done. However, if a 3” caliper evergreen tree is less than 6’ in height, the landscape plan needs to be revised to reflect a minimum planted height of 6’-8’ for evergreen trees.

~~An accessory use proposed for the facility is a 10,000 gal above-ground storage tank (AST) for diesel fuel used by the WM fleet as it transitions to a CNG-powered fleet over the next 5 years. In the M-2: General Industrial District, more than one AST over 5,000 gal capacity requires a conditional use permit and compliance with the Village’s AST regulations under Chapter 11.071 of the Municipal Code. The proposed 10,000 gal AST needs to be added to the list of uses in any approved CUP for the proposed facility.~~

~~As discussed previously, WM intends to combine a number of adjacent parcels it owns pending approval of the CUP and Site Plans. While not required in order to commence~~

~~site preparation and development, WM should be required to file a certified survey map (CSM) for purposes of combining their parcels within (90) days after Village Board action on the CUP application.~~

The WM site contains wetlands on the west side of the property associated with the navigable Nor-X-Way Channel that meanders through the wooded area north and west of the proposed facility. An updated wetland delineation has been submitted that indicates ~~is required for the property to ensure site~~ development does not encroach into any wetland or the Village's 25' wetland setback. As shown on the site plans, development is proposed in a manner that does not come close to, much less encroach into, the wetland areas as previously identified by the WisDNR. ~~Nonetheless, a delineation is needed and should be required to be prepared and submitted to the Village within (90) days after Village board action on the CUP (if approved).~~

Finally, WM has provided a clarification to information provided at the February 11 2019 public hearing regarding the CNG operation. At that time it was stated that the CNG to be used on the property did not contain the same odorant found in gas supplied to homes and businesses. At this time WM indicates the CNG used at this facility will contain the same odorant.

Inspection Services

Inspection Services has indicated that the submission of state-approved plans will be required prior to issuing a building permit along with the required \$20,000 occupancy bond.

Fire Department/Police Department

The Fire Department has been working cooperatively with WM regarding the issues of providing adequate fire flow and hydrants to the site. The Fire Department is recommending approval of the project subject to the following additional requirements not already reflected in the plans:

1. The existing Knox Box shall be relocated to a mutually-agreeable location approved by the Germantown Fire Department;
2. The maintenance building and office will require fire sprinkler protection per IBC 903.2.9.1;
3. The Fire Department Connection (FDC) location shall be approved by the Germantown Fire Department;
4. A new main gate shall be installed at the southeast corner of the fenced area on the south side of the maintenance parking lot;
5. State approval is required for the 10,000 gal above-ground diesel fuel storage tank.

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

Engineering

The Village Public Works Department staff has identified a number of technical issues, plan corrections and code-based requirements that need to be addressed and/or incorporated into the site development and building plans. (see March 24, 2020 ~~February 12, 2019 Village Engineer memo~~). ~~WM has responded to these items in a March 1, 2019 letter and revised plans and supplemental information. WM's responses contained in their March 1, 2019 letter should be made conditions of approval for the Site Plans.~~

Village Forester

The Village Forester has recommended the following landscape plan revisions:

- Replace White Spruce with Norway Spruce. Norway spruce is much less susceptible to needle cast diseases that affect spruce species;
- Replace Balsam Fir with Concolor Fir. Balsam Fir is a much more northern species that does not perform well in southeastern Wisconsin.

Village Planner Recommendation:**Conditional Use Permit**

APPROVE a conditional use permit (CUP) for Waste Management of WI (WM), property owner to develop and operate a 29,760 ~~35,035~~ sqft truck maintenance facility from the property located at N96 W13840 County Line Road subject to (7) conditions:

1. The uses and activities allowed on the property shall be limited to those uses and activities and relative locations specified in the conditional use permit (CUP) and site plan application materials dated January 4, 2019, and supporting documents including a February 11, 2019 letter from Lynn Morgan, and a March 1, 2019 letter from Diversified Engineering Inc. The physical facilities from which said uses and activities are permitted include those as presented in the detailed site development and building plans dated February 28, 2020 ~~March 1, 2019~~. Days and hours of operation shall be limited to those specified in the CUP application and supporting materials submitted to the Village. This permit shall include the right to install and use a 10,000 gal above-ground storage fuel tank (AST) to be installed on the site.
2. All temporary and permanent exterior signs require a permit and shall comply with all current sign regulations. Off-premise advertising and directional signage is regulated by the Village and requires a permit if/when allowed.
3. In the event the Village receives complaints regarding noise negatively affecting the nearby residential areas that is coming from the truck maintenance facility operation, including but not limited to noise from truck-mounted backup alarms, WM will cooperate with the Village in resolving the issue. WM has indicated that they will replace the backup alarms with "white noise" warning devices if this noise becomes a problem.
4. The LED fixtures proposed for installation and use on the building and site have the ability to be dimmed at no or low activity periods during the day. WM shall provide a mutually-agreeable schedule or plan detailing when and to what lighting levels the building and/or site lighting will operate and be dimmed on the site should be prepared and submitted to the Village as part of the operational plan. In the event the Village receives complaints regarding light and/or glare coming from the truck maintenance facility site that is not Village Code compliant or becomes public nuisance negatively affecting the nearby residential areas, WM will cooperate with the Village in resolving the issue.
5. No trash, recyclables or other waste material that may create an odor negatively affecting the nearby residential areas shall be kept on the property or in the waste removal/recycling trucks stored on the property.
6. If the use, activities and/or operation subject of this permit falls out of conformity with the conditions herein, or where there is a change in the nature, character, intensity or extent of the permitted conditional uses and activities which cause special problems or harmful effects associated with the permitted uses and activities that were not revealed or anticipated at the time this CUP was granted, or, where conditions imposed by this CUP that were anticipated to mitigate or eliminate harmful effects associated with the uses and activities but are subsequently insufficient to do so, or, for similar cause based upon consideration for the public comfort, safety, and welfare, this conditional use permit may be terminated or modified by the Village Board by the amendment to or addition of conditions after public hearing thereon.

Village Planner Recommendation:
Conditional Use Permit (*cont*)

- ~~7. WM intends to combine a series of adjacent parcels pending approval of the CUP and site development and building plans. WM shall file the certified survey map (CSM) for purposes of combining their parcels within (90) days after Village Board approval of this CUP.~~
- ~~8. WM shall prepare and submit to the Village an updated wetland delineation for the property to ensure site development does not encroach into any wetland or the Village's 25' wetland setback. The CSM shall be submitted to the Village within (90) days after Village Board approval of this CUP.~~
7. WM indicated at the February 11, 2019 public hearing that the compressed natural gas (CNG) to be stored and dispensed on the property does not contain the same odorant found in gas supplied to homes and businesses. WM shall ensure that the storage and use of CNG at this facility does not create an odor or safety issue affecting employees on the site or residents and property owners in the surrounding area.

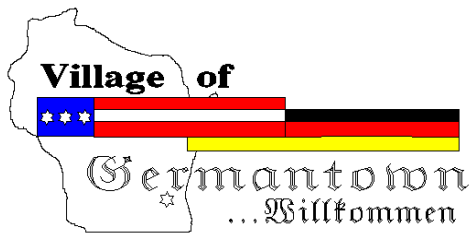
VILLAGE PLANNER RECOMMENDATION:**Site Development & Building Plans**

APPROVE the site development and building plans for a 29,760 ~~35,035~~ sqft truck maintenance facility from the property located at N96 W13840 County Line Road subject to (11) conditions:

1. This approval is subject to all the conditions and requirements set forth herein and adopted by the Plan Commission. Approval is granted for the architectural and engineering plan set dated February 28, 2020 ~~March 1, 2019~~, and the site plan application materials dated January 4, 2019, and supporting documents including a February 11, 2019 letter from Lynn Morgan, and a March 1, 2019 letter from Diversified Engineering Inc., unless superseded by subsequent plan sheets approved by the Village Planner or Engineer pursuant to revisions required herein and/or by the Plan Commission.
2. All landscaping, screening, grading, paving, storm water management, utility and other improvements that are not fire-safety related as shown on the approved site plans shall be installed as proposed prior to issuance of an occupancy permit unless a cash bond or letter of credit in an amount equal to 120 percent of the estimated installation and material costs reviewed and approved by the Village is submitted to the Village as necessary to ensure that installation of the proposed features and improvements will be completed within one (1) year after issuance of the occupancy permit.
3. The following items shall be provided as required by the Village Fire Department: (a) a Knox Box shall be located and installed to a mutually-agreeable location approved by the Germantown Fire Department; (b) the maintenance building and office will require fire sprinkler protection per IBC 903.2.9.1; (c) the Fire Department Connection (FDC) location shall be approved by the Germantown Fire Department; (d) a new man gate shall be installed at the southeast corner of the fenced area on the south side of the maintenance parking lot at a mutually-agreed to location and design with the Germantown fire Department; (e) State approval is required for the 10,000 gal above-ground diesel fuel storage tank.
4. All exterior doors (except primary entrance) shall be clearly marked with reflective 5" or larger letters/numbers to aid emergency personnel access as required by the Police Department.
5. All technical issues, corrections and plan requirements identified by the ~~Village Engineer~~ and Public Works Department staff (see March 24, 2020 February 12, 2019 Village Engineer memo) shall be addressed and reflected in revised plans and/or supplemental information reviewed and approved by Village staff prior to issuance of a building permit (excluding "early start" site clearing and footing/foundation work approved by the Village and/or WI DSPS).
6. WM shall cooperate with the Germantown Fire Department and Menomonee Falls engineering and water utility to ensure adequate water supply and fire flow pressure is provided to the proposed maintenance facility, including conducting pressure testing. WM shall install new fire hydrants and/or other water system improvements required by Menomonee Falls.
7. State approved plans and a \$20,000 occupancy bond are required by the Building Inspection Department as part of the building permit application.

VILLAGE PLANNER RECOMMENDATION:Site Development & Building Plans (*cont.*)

- ~~8. WM shall prepare and submit to the Village an updated wetland delineation for the property to ensure site development does not encroach into any wetland or the Village's 25' wetland setback. The CSM shall be submitted to the Village within (90) days after Village Board approval of the CUP. In the event development encroaches into a wetland or 25' wetland setback, WM shall obtain the necessary WisDNR and Village permits, or, modify the site development accordingly.~~
- ~~9. All landscaping, screening, grading, paving, storm water management, utility and other improvements that are not fire safety related as shown on the approved site plans shall be installed as proposed prior to issuance of an occupancy permit unless a cash bond or letter of credit in an amount equal to 120 percent of the estimated installation and material costs reviewed and approved by the Village is submitted to the Village as necessary to ensure that installation of the proposed features and improvements will be completed within one (1) year after issuance of the occupancy permit.~~
8. WM shall revise the landscape plan to address the Village's street tree requirements. At a minimum, additional street trees in an amount equal to one (1) tree per 50 feet of road frontage of the existing Port-O-Let parcel shall be added to the plan and installed in addition to the site landscaping already shown in the landscape plan.
9. WM shall cooperate with the Menomonee Falls engineering and highway departments to ensure adequate road and intersection capacity and level of service is provided to the proposed maintenance facility and adjacent road system, including the driveway intersections onto County Line road and the Fond du Lac Ave/STH145 intersection. WM shall install and/or contribute to the cost of all road and intersection improvements deemed necessary as a result of or contribution of traffic generated to/from the proposed truck maintenance facility as required by the Menomonee Falls Village Engineer.
10. The paving options shown on Sheets C1.10 and C1.11 include an option for a crushed limestone aggregate surface course for the drive areas around the building and truck parking areas. The Village Code requires bituminous concrete or concrete pavement on non-residential parking areas and drive lanes. The crushed aggregate alternative shall not be installed. WM shall consult with the Village Engineer to investigate acceptable alternative paving options prior to installation of the parking areas and drive lanes if necessary.
11. The landscape plan shall be revised as recommended by the Village Forester to: (a) replace White Spruce with Norway Spruce; and (b) replace Balsam Fir with Concolor Fir.



Engineering Department Memorandum

To : Jeffrey W. Retzlaff, AICP, Planning Director/Zoning Administrator

From : Lawrence Ratayczak, P.E., Director of Public Works

Date : March 24, 2020

Re : Waste Management – Truck Maintenance Facility

Items Reviewed:

1. Civil Plan Set C1.0 – C3.2 (27 pages)

Dated: 02-28-20

General Comments:

1. Please respond to each item below. **A written response addressing each item shall be included in your submittal.**
2. The submitted plans have been reviewed for general conformance with State and Village design guidelines. Additional comments could arise as a result of the plan completion and modifications. The items listed below will need to be fully resolved before the Engineering Dept. can recommend a formal approval of the plans and permit for construction.
3. This project will require a WRAPP/NOI from the DNR. Please submit a copy of the approved permit prior to final approval.
4. The project will require DSPS plumbing a review and approval. Please provide a copy of the DSPS approval prior to engineering approval.
5. Please provide a copy of the wetland delineation for the site.
6. As-builts prepared to Village standards shall be prepared and provided to the Village post-construction (for all applicable items).
7. A professional engineer's original seal is to be affixed, signed and dated on the final set of construction plans.
8. Contact Ryan Ehlerding, 262-250-4723 for a utility permit.
9. As a guide to the review response: Items in *italics* are resolved or acknowledged, items in regular font are to be addressed yet, items in **Bold** are additional feedback to remaining original comment.

Wastewater Utility Comments

1. Plans show new sanitary tying in to Menomonee Falls sewer on County Line Rd. if that is the case, existing laterals for the former Port- o- Let site and the former Engineering services Building need to be abandoned per Germantown standards at the main.

C1.3 Site Improvements Plan

1. It appears there are a number of separate parcels including some public right of way. Will these parcels be combined for this development?

C1.5 Site Grading Plan

2. Provide additional spot elevations in the ditches, specifically at the high and low points.
3. The plan has large portions of parking lots sheet flowing off the edge of the pavement. How will erosion be controlled at the edge of these parking lots to ensure erosion is not an on-going issue?

C1.6 Enlarged Site Grading Plan

1. ADA parking spaces appear to be over the 2% max slope. Provide additional spot elevations showing the 2% slope requirement is met.

C1.7 Site Utility Plan

1. Add invert elevation to Culvert pipes

C3.2 Stormwater Management Note and Details

1. Provide an erosion control plan showing the locations of the erosion control BMP's. Inlet protection, erosion matting, silt fence, etc.
2. Provide erosion control notes that match WDNR guidance. Specifically construction sequence, inspection and reporting requirements, late season stabilization requirements, etc.

Stormwater Management Plan

1. The report references sheet C1.12 for the subbasins. I believe this should reference C3.0.
2. Please provide a plan sheet showing the basins on the existing site as well as the proposed site.
3. Turf grass and lawn areas of the site should be modeled as open space with good grass cover (CN 74)
4. Show Time of concentration path on the existing site conditions. Generally I would expect longer Tc times for the existing condition, but it's difficult to determine how they were calculated.
5. Provide additional information on the rainfall intensity and Tc used for the storm sewer calculations. Storm sewer system 1 would like have a Tc time of 5 minutes and 10 year intensity of 7.14 in/hour.
6. Critical time period should start at 11.75 hours.
7. Provide volumetric data for sub-basin 1 as well as the site as a whole.
8. Provide numeric hydrographs showing the volume over the critical time.
9. Provide water quality calculations using WinSLAMM or other WDNR approved method showing the site as a whole meets the 80% requirement.
10. Provide hydraulic model inputs and hydrograph printouts



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

PAID \$ DATE 3-3-20

SITE PLAN REVIEW APPLICATION

Pursuant to Section 17.43 of the Municipal Code

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

1 APPLICANT OR AGENT

Diversified Engineering Inc.
Nick Berner, P.E.

175 Rav Ave. NE
New Philadelphia, OH 44663

Phone (330) 384-1631

E-Mail nberner@div-eng.com

PROPERTY OWNER

Waste Management of Wisconsin Inc.
Donald Smith, P.E.

W132 N10487 Grant Dr.
Germantown, WI 53022

Phone (262) 250-8700

E-Mail dasmith@wm.com

2 PROPERTY ADDRESS

N98 W13840 County Line Rd. Germantown, WI 53022

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

North	South	East	West
See Attached - ADJACENT	PARCEL ZONING		

4 READ AND INITIAL THE FOLLOWING:

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

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

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

5 SIGNATURES - ALL APPLICATION MUST BE SIGNED BY OWNER

Nick Berner 2/28/20
Applicant Date
Nick Berner

Donald Smith 2/28/20
Owner Date



Village of



Germantown

Willkommen

Fee must accompany application

☐ \$1460 ☒ Paid _____ Date _____

CONDITIONAL USE PERMIT APPLICATION

Pursuant to Section 17.42 of the Municipal Code

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

1 APPLICANT OR AGENT

Diversified Engineering Inc.
Nick Berner, P.E.

175 Ray Ave. NE
New Philadelphia, OH 44663

Phone (330)364-1631

Fax (330)364-4031

E-Mail nberner@div-eng.com

PROPERTY OWNER

Waste Management of Wisconsin Inc.
Donald Smith, P.E.

W132 N10487 Grant Dr.
Germantown, WI 53022

Phone (262)250-8700

dasmith@wm.com

2 TO WHOM SHOULD THE PERMIT BE ISSUED?

Waste Management of Wisconsin, Inc.

3 PROPERTY ADDRESS

N96 W13840 County Line Rd. Germantown, WI 53022

TAX KEY NUMBER

363996 & 363986

4 DESCRIPTION OF EXISTING OPERATION

Briefly describe the use as it exists today, including use, size, number of employees, hours of operation, etc. If this permit involves new construction, describe the current status of the property, e.g. "vacant." Use additional pages as necessary.

Tax Key 363996: Currently occupied by WM Port-o-let division garage, office and storage area (approximately 8.15 ac.).

Tax Key 363986: Currently occupied by WM Orchard Ridge Gas to Electric Power Plant, Industrial Pretreatment Plant and WM Healthcare Solutions building (approximately 35.63 ac.).

5 DESCRIPTION OF PROPOSED OPERATION

Write the name of the proposed conditional use exactly as it appears in the Municipal Code

Germantown, WI Municipal Code, Chapter 17.34 - M-2 General Industrial District, Section 3

Describe the proposed use, including size, number of employees, hours of operation and extent of any new construction/alterations.

Conditional use permit requested for development of parcels 363996 and 363986. Proposed development includes the construction of a Waste Management Truck Maintenance Facility (240'x100') and office space (60'x96'). Hours of operation are anticipated to be 3:30am-midnight, M-F and 5am-noon, Saturday. The facility is anticipated to serve 100 employees during first shift/day shift, and approximately 10 during second shift.

METES AND BOUNDS LEGAL DESCRIPTION OF PROPERTY – REQUIRED

Attach pages as necessary

Tax key 363986: Lot 2- CSM4247 V28 P30 PT of SW V1013 P676 SEC 36-9-20 8.15 ac.

Tax key 363986: PT NW SW V747 P284 PT SOLD SEC 36-9-20

See attached CSM 4247 and Deed and exclusion for 363986

SUPPORTING DOCUMENTATION:

- ☐ Site Plan and elevations for new construction (can be conceptual)
- ☐ Photos of existing use and/or proposed use operating elsewhere
- ☐ _____
- ☐ _____

READ AND INITIAL THE FOLLOWING:

DAS I understand that the Village is under no obligation to issue a Conditional Use Permit and will do so only if the applicant successfully demonstrates that the proposed use is harmonious with the neighborhood and the long range goals of the Village.

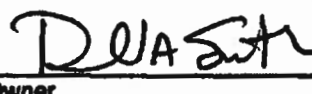
DAS I will notify the Village if any aspects of the conditional use changes. I understand that failure to do so may result in the revocation of the CUP.

DAS I understand that a Conditional Use Permit is valid only if the conditions and restrictions of the permit are met. I understand that failure to comply with any aspect of the permit may result in revocation.

DAS I understand that Village Staff is required to post one or more signs along the street frontage of and/or on the property subject of this application that indicate to nearby property owners and the general public that a public hearing of my application will be held before the Village Plan Commission and/or Village Board prior to action being taken on this application; I hereby grant Village Staff permission to enter onto the property for the expressed purpose of installing said sign(s) provided Village Staff is responsible for installing, maintaining and removing said signs in a reasonable manner and timeframe.

SIGNATURES – ALL APPLICATIONS MUST BE SIGNED BY OWNER!


Applicant _____ Date 2/28/20
Nick Berner


Owner _____ Date 2/28/20
DONALD A. SMITH



Diversified Engineering Inc.

CONSULTING ENGINEERS & SURVEYORS

February 28, 2020

Design Narrative

Project: Waste Management – Germantown Truck Maintenance Facility

The Germantown Truck Maintenance Facility will be a 29,760 square foot pre-engineered metal building located at parcel 363986 & 3639896. The facility will serve as a new CNG compliant facility for existing operations and staffing at the Waste Management Menomonee Falls Facility.

The building will be divided into two structures of differing eaves and use groups with a dividing masonry unit fire wall. The western portion of the facility will be a single-story 5,760 square foot office, 15' eave, consisting of 6 office spaces and 4 cubicles, serving a maximum daily staff of 11. The office space also incorporates locker rooms and launch areas to serve 120-130 drivers/technicians.

The eastern portion of the building will serve as a 24,000 square foot, 28' eave, CNG compliant maintenance facility. The space is designed to operate 14 maintenance bays and a pull through wash bay split by a parts/tools and vital equipment storage space. The building will be equipped with necessary monitoring systems, automated alarms and air change units per CNG code compliance.

The structure has been designed to match the surrounding campus of various industrial buildings owned and operated by Waste Management. Most notably in design materials, color pallet and façade. Additional design considerations have been incorporated with intent of improving site safety and appearance as well as minimize operational noise.

The building has been set approximately 500 feet north from County Line Rd, to allow the existing dilapidated structure and staging area to be removed and replaced. The proposed design incorporates additional green space, landscaped berms and tree lined employee parking area in the place of the existing structure and storage areas. The landscaping berm has been set back from County Line Rd approximately 80-90 feet to allow for additional visibility for on-coming maintenance vehicle traffic.

Maintenance vehicle parking has been located at the north end of the parcel with a dedicated drive to the northeast connecting to the existing drive along the eastern edge of the property. The parking area has been designed to incorporate back in spaces to reduce noise during morning vehicle launches, by ensuring vehicles first move is forward. The dedicated drive to the northeast allows for vehicles to access County Line Rd at an existing pronounced intersection that features added sight distance.

Though this site has been previously approved, there have been some minor design changes to both the site and the building footprint. We have reduced the footprint of the office from 9,750 sf to 5,760 sf (-3,990 sf), reduced the footprint of the shop from 25,000 sf to 24,000 sf (-1,000 sf), increased the truck parking area from 100 to 130 (+30 spaces), and changed the parking area from 159/7hc to 160/5hc (+1/-2hc spaces). The main cause of the reduction was the relocation of 30 office/sales personnel to the existing Germantown building off Grant Rd. In addition to the reduced building, the truck parking was adjusted per the conditional use permit to enforce truck back-up operations to the east.

Sincerely,

Nicholas J. Berner, P.E.
Project Manager

CUP #04 – 19
Document No.

CONDITIONAL USE PERMIT
Document Title

VILLAGE OF GERMANTOWN, WASHINGTON COUNTY, WISCONSIN
CONDITIONAL USE ZONING PERMIT

Document # **1471475**
WASHINGTON COUNTY WISCONSIN
05-10-2019 01:52 PM

Sharon A. Martin
SHARON A MARTIN
WASHINGTON COUNTY
REGISTER OF DEEDS
Fee: \$30.00

Pages: 4

4

Whereas the Applicant:

Waste Management of Wisconsin, Inc., Property Owner

agrees to comply with applicable Codes and Ordinances of the Village of Germantown, Wisconsin, and further agrees that all work done pursuant to the permission granted herewith will conform with the applications and drawings filed with and approvals granted by officials of the Village for the purpose of obtaining this permit.

Now, therefore, this permit is issued to the Applicant to permit the construction and operation of a Truck Maintenance Facility pursuant to Section 17.34(3)(c) and the installation and use of a 10,000 gal above-ground fuel storage tank pursuant to Section 17.34(3)(b) of the Village's Zoning Code.

Name & Return Address:

**Village of Germantown
P.O. Box 337
Germantown, WI 53022**

Parcel Identification No:

GTNV 363-996 & 363-986

On the following described property located in the Village of Germantown, Washington County, Wisconsin:

N96 W13840 County Line Road (Tax Key: GTNV 363-996)

Lot 2 of Certified Survey Map No. 4247 in the SW ¼ of the SW ¼ of Section 36, Town 9 North, Range 20 East, in the Village of Germantown, Washington County, Wisconsin, containing approximately 8.15 acres.

N96 W13600 & W13640 County Line Road (Tax Key: GTNV 363-986)

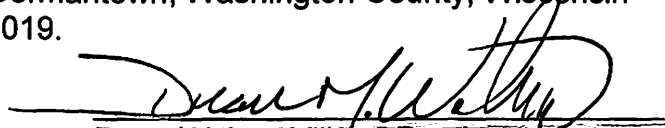
All that part of the Southwest ¼ of Section 36 Township 9 North, Range 20 east, Village of Germantown, Washington County Wisconsin, bounded and described as follows:
COMMENCING at the West ¼ corner of the said Section 36; thence N88°13'49.7" E, along the North Line of the said SW ¼ Section 36 684.747 feet to the point of beginning of this description; thence continuing along the said North line, 845.663 feet; thence S 01°45' 50.53" E, 1241.501 feet; thence South 87°54'15.49" W, 79.981 feet; thence S 01°45' 50.53" E, 1400.00 feet to a point on the South Line, 263.23 feet; thence N 2°05'44.2" W, 363.00 feet; thence S 87°54'15.77" W and parallel to the said South Line, 120.00 feet; thence S 2°05'44.2"E, 363.00 feet to a point on the said South Line; thence S 87°54'15.77" W, 79.49 feet; thence N 01°26'25.02" W, 660.00 feet to the point of beginning of this description and containing approximately 35.63 acres.

Pursuant to the following condition(s):

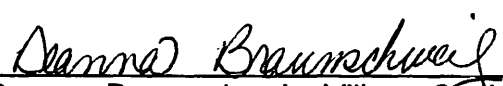
1. The uses and activities allowed on the property shall be limited to those uses and activities and relative locations specified in the conditional use permit (CUP) and site plan application materials dated January 4, 2019, and supporting documents including a February 11, 2019 letter from Lynn Morgan, and a March 1, 2019 letter from Diversified Engineering Inc. The physical facilities from which said uses and activities are permitted include those as presented in the detailed site development and building plans dated March 1, 2019. Days and hours of operation shall be limited to those specified in the CUP application and supporting materials submitted to the Village. This permit shall include the right to install and use a 10,000 gal above-ground storage fuel tank (AST) to be installed on the site.
2. All temporary and permanent exterior signs require a permit and shall comply with all current sign regulations. Off-premise advertising and directional signage is regulated by the Village and requires a permit if/when allowed.
3. In the event the Village receives complaints regarding noise negatively affecting the nearby residential areas that is coming from the truck maintenance facility operation, including but not limited to noise from truck-mounted backup alarms, WM will cooperate with the Village in resolving the issue. WM has indicated that they will replace the backup alarms on the existing fleet of vehicles prior to operating from the County Line property with low impact (e.g. "white noise" or other alternative) backup warning devices if this noise becomes a problem. Said devices shall be added to/replaced on new vehicles added to the fleet within thirty (30) days after operation from the property. WM shall re-evaluate the design and orientation of the truck parking stalls in the north parking lot to reduce the amount and duration of truck backing when driving into, from and within the facility to the extent practical. Any revisions to the parking lot plan shall be presented in a revised site plan to the Village Planner and Village Engineer for review and approval prior to construction of the parking lot.
4. The LED fixtures proposed for installation and use on the building and site have the ability to be dimmed at no or low activity periods during the day. WM shall provide a mutually-agreeable schedule or plan detailing when and to what lighting levels the building and/or site lighting will operate and be dimmed on the site should be prepared and submitted to the Village as part of the operational plan. In the event the Village receives complaints regarding light and/or glare coming from the truck maintenance facility site that is not Village Code compliant or becomes public nuisance negatively affecting the nearby residential areas, WM will cooperate with the Village in resolving the issue.
5. No trash, recyclables or other waste material that may create an odor negatively affecting the nearby residential areas shall be kept on the property or in the waste removal/recycling trucks stored on the property.
6. If the use, activities and/or operation subject of this permit falls out of conformity with the conditions herein, or where there is a change in the nature, character, intensity or extent of the permitted conditional uses and activities which cause special problems or harmful effects associated with the permitted uses and activities that were not revealed or anticipated at the time this CUP was granted, or, where conditions imposed by this CUP that were anticipated to mitigate or eliminate harmful effects associated with the uses and activities but are subsequently insufficient to do so, or, for similar cause based upon consideration for the public comfort, safety, and welfare, this conditional use permit may be terminated or modified by the Village Board by the amendment to or addition of conditions after public hearing thereon.

7. WM intends to combine a series of adjacent parcels pending approval of the CUP and site development and building plans. WM shall file the certified survey map (CSM) for purposes of combining their parcels within (120) days after Village Board approval of this CUP.
8. WM shall prepare and submit to the Village an updated wetland delineation for the property to ensure site development does not encroach into any wetland or the Village's 25' wetland setback. The wetland delineation shall be submitted to the Village within (90) days after Village Board approval of this CUP.

Granted by the Village Board of the Village of Germantown, Washington County, Wisconsin on the 18 day of March, 2019.


Dean Wolter, Village President

ATTEST:


Deanna Braunschweig, Village Clerk

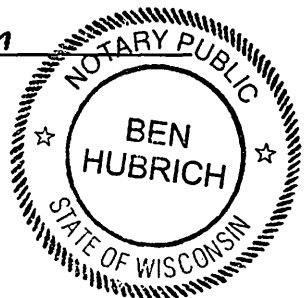
STATE OF WISCONSIN) SS
WASHINGTON COUNTY)

Personally came before me this 19 day of March, 2019, the above named Dean Wolter, Village President, and Deanna Braunschweig, Village Clerk, to me known to be the persons who executed the foregoing instrument and acknowledged the same.

Ben Hubrich
{type or print name of Notary on this line}

Ben Hubrich
{signature of Notary on this line}

Notary Public, State of Wisconsin
My Commission Expires: 5/25/2021



ACCEPTANCE OF TERMS AND CONDITIONS BY OPERATOR

I, DONALD A. SMITH, representing Waste Management of Wisconsin, Inc., hereby accept the terms and conditions set forth in this Permit, and realize that non-adherence to the terms and conditions as stated hereon may result in the revocation of this Permit by the Village of Germantown.

Dated this 6th day of MAY, 2019

DONALD A. SMITH, ENGR. MN612
{type or print name on this line}

DWA Smith
{signature on this line}

Agent for Waste Management of Wisconsin, Inc.; Property Owner

STATE OF WISCONSIN) SS
WASHINGTON COUNTY)

Personally came before me this 6th day of MAY, 2019, being the above named DONALD A. SMITH, to me known to be the person who executed the foregoing instrument and acknowledged the same.

RENEE POHLAND

{type or print name of Notary on this line}

Renee Pohland

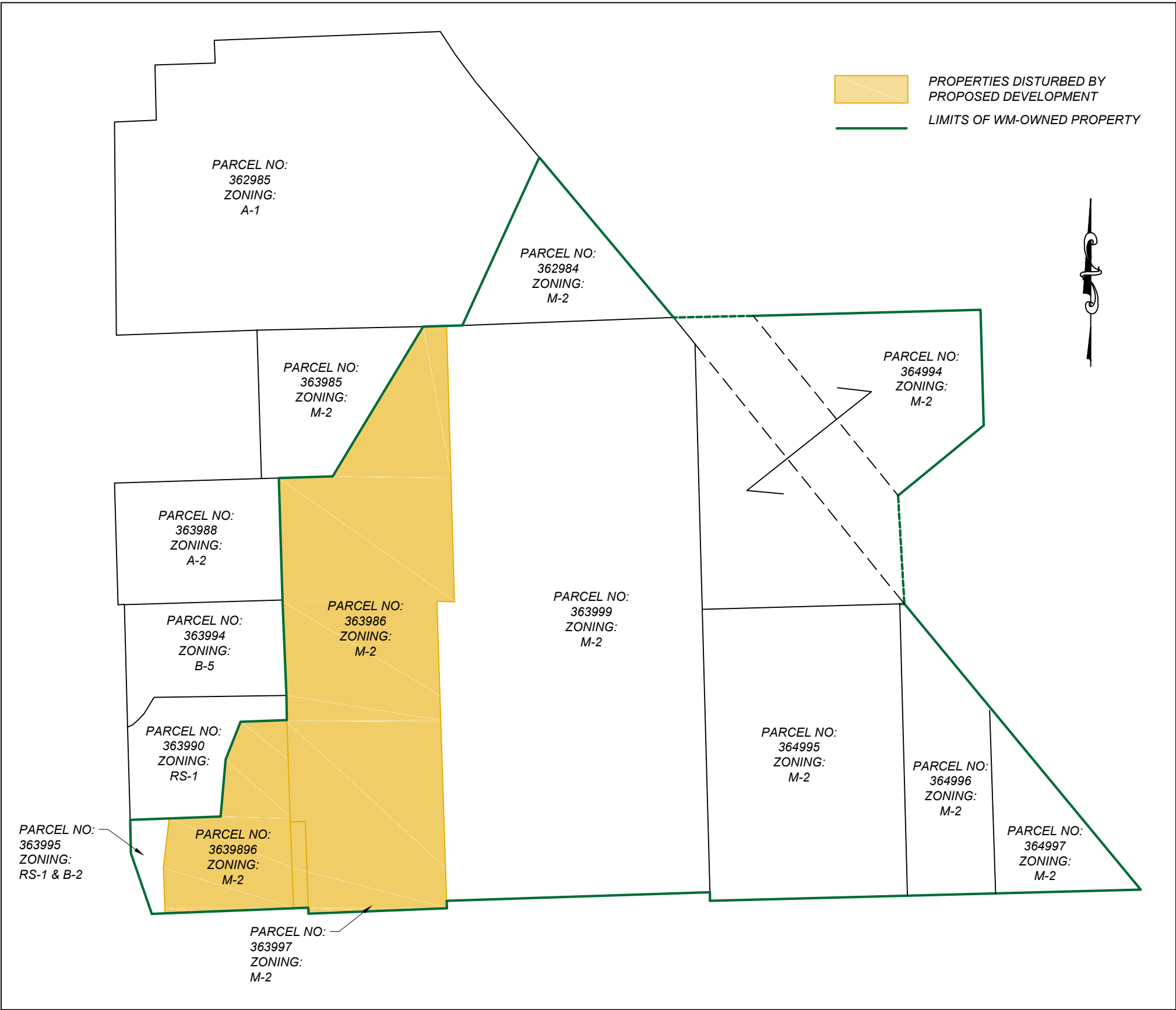
{signature of Notary on this line}

Notary Public, State of Wisconsin

My Commission Expires: 1/27/21

This instrument was drafted by:
Jeffrey W. Retzlaff, AICP
Director, Community Development Department
Village of Germantown, Wisconsin

PLANS FOR:
WASTE MANAGEMENT TRUCK MAINTENANCE FACILITY
N96 W13840 COUNTY LINE RD.
GERMANTOWN, WI 53022



SITE MAP
SCALE: 1" = 200'

PROJECT CONTACTS:

CIVIL ENGINEER:



DIVERSIFIED ENGINEERING INC.
NICK BERNER, P.E.
175 RAY AVE NE
NEW PHILADELPHIA, OH 44663
PHONE: (330) 364-1031
EMAIL: nberner@div-eng.com

OWNER:



WASTE MANAGEMENT OF WISCONSIN, INC.
DONALD SMITH, P.E.
W132 N10487 GRANT DR.
GERMANTOWN, WI 53022
PHONE: (262) 250-8700
EMAIL: dsmith@wm.com

SITE INFORMATION:

PARCEL NO. 1:	TAX KEY	GTNV_363996	PARCEL NO. 2:	TAX KEY	GTNV_363986	FEMA:	COMMUNITY NUMBER:	550472
ZONING	M2	8.15 AC.	ZONING	M2	35.63 AC.	PANEL #:	0379	D
TOTAL ACREAGE			TOTAL ACREAGE			SUFFIX:	DATE OF FIRM:	11/20/2013
						FIRM ZONE:	A	769 FT.
						BFE:		

BENCHMARKS:

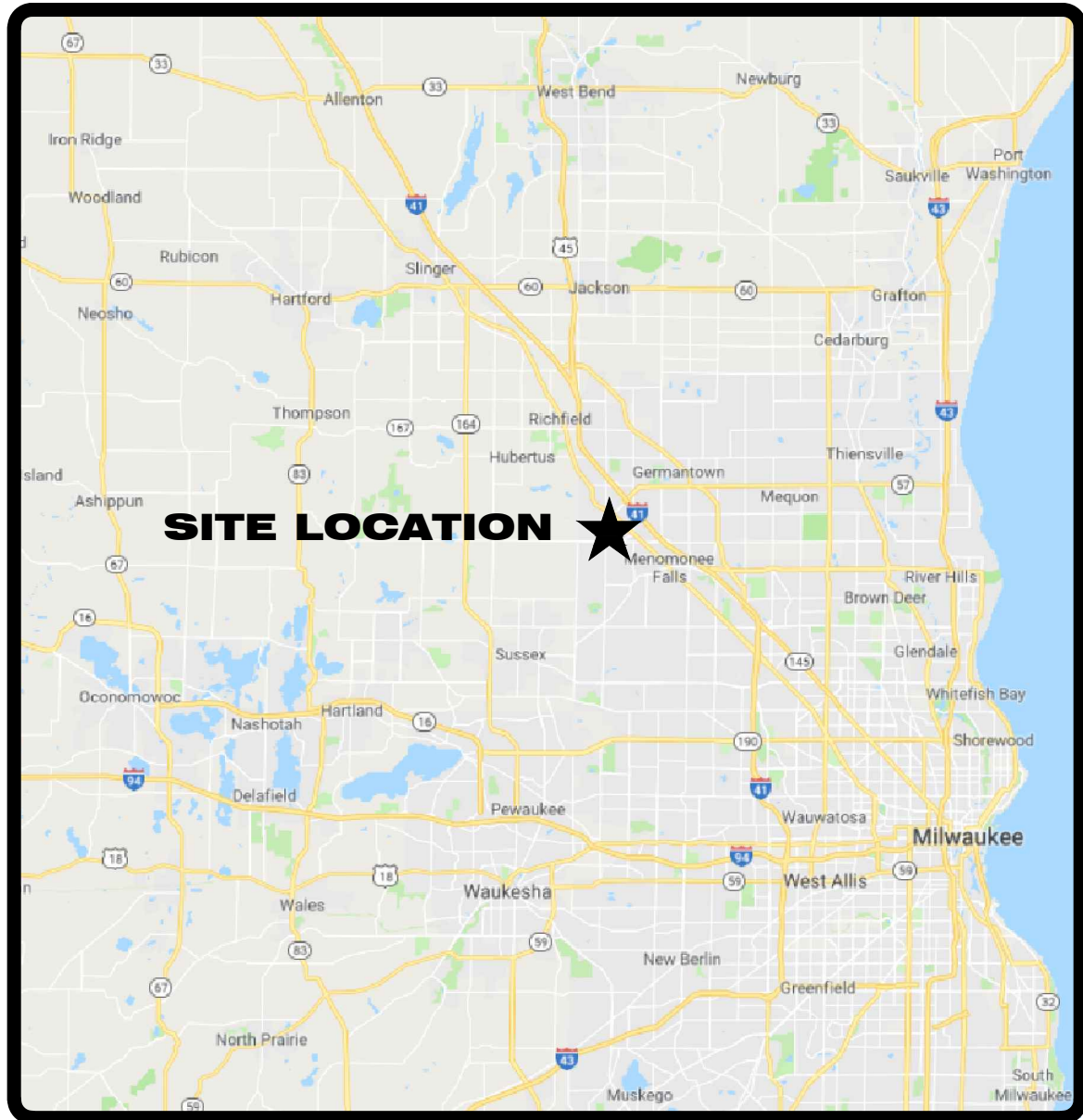
WASHINGTON COUNTY BENCH MARK NO.	102	NATIONAL GEODETIC VERTICAL DATUM OF 1929
DATUM:		
ELEVATION:	766.809	
DETAILED DESCRIPTION:	BENCHMARK 102 IS A CHISELED SQUARE SET IN THE TOP OF THE EASTERLY 60-INCH-DIAMETER CONCRETE CULVERT PIPE	

LEGAL DESCRIPTION:

PARCEL NO. 1: (363996)
LOT 2 - CSM4247 V28 P30 PT OF SW SW V1013 P676 SEC 36-9-20 8.15 AC.

PARCEL NO. 2: (363986)
PT NW SW V747 P264 EXC PT SOLD SEC 36-9-20

ISSUED FOR PERMIT 02/28/2020



DRAWING INDEX:

GENERAL

G1.0 COVER

CIVIL

C1.0 SYMBOLS LEGEND & GENERAL NOTES

C1.1 EXISTING CONDITIONS PLAN

C1.2 SITE DEMOLITION PLAN

C1.3 SITE IMPROVEMENT PLAN

C1.4 ENLARGED SITE IMPROVEMENT PLAN

C1.5 SITE GRADING PLAN

C1.6 ENLARGED SITE GRADING PLAN

C1.7 SITE UTILITY PLAN

C1.8 SITE SANITARY PLAN AND PROFILE

C1.9 SITE WATER PLAN AND PROFILE

C1.10 HARD SURFACE KEY PLAN BASE BID

C1.11 HARD SURFACE KEY PLAN ALT BID

C1.12 SITE STORM SEWER OVERALL PLAN

C1.13 STORM SEWER PLAN & PROFILE

C1.14 STORM SEWER PLAN & PROFILE

C1.15 WEST WET POND PLAN

C1.16 NORTH WET POND PLAN

C1.17 WET POND DETAILS

C2.0 GENERAL DETAILS

C2.1 GENERAL DETAILS

C2.2 SANITARY NOTES & TYPICAL DETAILS

C2.3 WATERLINE NOTES & TYPICAL DETAILS

C2.4 WATERLINE NOTES & TYPICAL DETAILS

CIVIL (cont.)

C2.5 STORM SEWER NOTES & TYPICAL DETAILS

C3.0 STORM WATER MANAGEMENT DRAINAGE MAP

C3.1 STORM WATER MANAGEMENT PLAN

C3.2 SWM NOTES & TYPICAL DETAILS

LANDSCAPING

L1.0 SITE LANDSCAPING PLAN

L2.0 LANDSCAPING DETAILS

EXHIBITS

X1.0 SITE PHOTOMETRIC PLAN

X1.1 SITE FENCING EXHIBIT

X1.2 SITE SNOW REMOVAL EXHIBIT

X1.3 SITE ZONING MAP

X2.0 EROSION CONTROL PLAN - PHASE I

X2.1 EROSION CONTROL PLAN - PHASE II

X2.2 EROSION CONTROL PLAN - PHASE III

X2.3 EROSION CONTROL PLAN - PHASE IV

X2.4 EROSION CONTROL PLAN - PHASE V

ARCHITECTUAL

A1.0 EXTERIOR ELEVATIONS

A1.1 OVERALL FLOOR PLANS

A1.2 ENLARGED FLOOR PLAN (MAINTENANCE BAYS)

A1.3 ENLARGED FLOOR PLAN (OFFICE)

A1.4 CNG TRUSS STRUCTURE TYPICAL DETAIL

WASTE MANAGEMENT

PROJECT: TRUCK MAINTENANCE FACILITY

GERMANTOWN, WI

COVER SHEET

SHEET NO:
G1.0

JOB NO:
ENG-1465

P/W	- Right-of-Way
P/L	- Adjacent Property Line
℄	- Centerline
P.O.B.	- Place/Point of Beginning
P.O.C.	- Place/Point of Commencement
Rad	- Radius
Δ	- Arc Length
arc	- Delta Angle
ChL	- Chord Length
ChB	- Chord Bearing
Calc.	- Calculated
Msd.	- Measured
dd	- Deed
(Record)	- Actual
N.R.D.	- No Recorded Data
F.F.E.	- Finished Floor Elevation
CMP	- Corrugated Metal Pipe
DI	- Ductile Iron
HDPE	- High Density Polyethylene
PVC	- Polyvinyl Chloride
RCP	- Reinforced Concrete Pipe
VCP	- Vitrified Clay Pipe

	- Guardrail
	- Fence (As Noted)
	- Wood Fence (As Noted)
	- Steel Fence (As Noted)
	- Sanitary Sewer
	- Storm Sewer
	- Water Line
	- Underground Gas Pipeline
	- Underground Electric
	- Underground Lighting
	- Underground Telephone
	- Underground Cable T.V.
	- Underground Fiberoptics
	- Overhead Utilities
	- Gravel Area
	- Concrete Area
	- No Parking Area
	- Building Area
	- 1' Elevation Contour
	- 5' Elevation Contour

- - Iron Pin Set
- ▲ - Drill Hole or Railroad Spike Set
- - Iron Pin Found
- ⊙ - Iron Pipe Found
- △ - Monument Found as Noted
- - Stone Monument Found
- - Monument Box
- - Sign
- HC - Air Condition Unit
- WB - Monitoring Well
- - Bollard Post
- PM - Parking Meter
- HS - Air Pump
- ★ - Bollard Light / Ground Light
- ⊙ - Grease Trap
- ⊙ - Ground Light
- ME - Mail Box
- W - Basketball Hoop
- RP - Gate Entry Key Pad
- - Flag Pole
- - Interstate Highway
- - United States Highway
- - State Highway
- - County Highway

	- Manhole
	- Storm Manhole
	- Catch Inlet Basin w/ Grate
	- Curb Basin
	- Storm Vault
	- Cleanout
	- Sanitary Manhole
	- Water Vault
	- Water Stand Pipe
	- Fire Hydrant
	- Post Indicator Valve
	- Water Valve
	- Water Meter
	- Water Manhole
	- Water Backflow Preventer
	- Water Vault
	- Water Curb Box
	- Gas Meter
	- Gas Valve
	- Gas Curb Box
	- Fiberoptic Manhole
	- Cable T.V. Pedestal
	- Electric Meter
	- Electric Transformer
	- Electric Manhole
	- Electric Vault
	- Telephone Pedestal
	- Telephone Manhole
	- Telephone Booth
	- Telephone Vault
	- Traffic Vault
	- Signal Pull Box
	- Power Pole
	- Traffic Pole
	- Telephone Pole
	- Flag Pole
	- Light Pole
	- Guy Wire
	- Utility Vault
	- Underground Utility Marker
	- Vacuum
	- Unknown Valve

	- Encroachment
	- Easement Circle
	- Easement Alt. 1
	- Easement Alt. 1
	- Label 1
	- Label 2
	- Regular Parking Count - Handicap Parking Count
	- Handicap Space

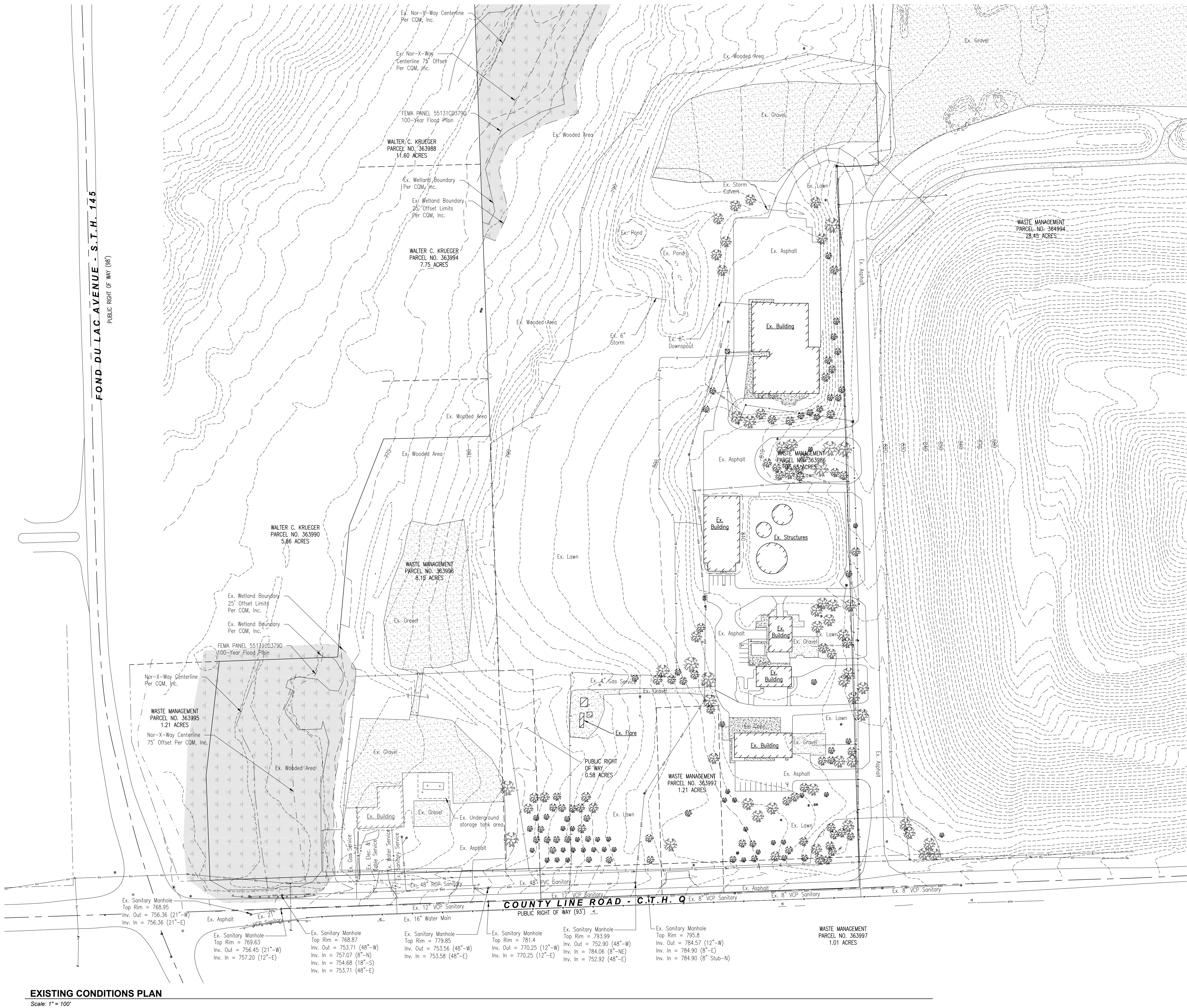
1. All necessary preventative measures will be taken to keep damage from occurring to adjacent structures such as utilities, tree, poles, structures, and private property during the progress of this work. Any and all damages that occur due to construction activities shall be repaired or replaced by the contractor at no expense to the owner.
2. All material excavated or used in the laying of the pipe will be located and stockpiled in a way not to endanger the public, the personnel on the job, or block natural drainages patterns.
3. **DEWATERING:**
Contractor is responsible for all and any necessary dewatering activities for any excavation.
4. **ROOT DRAIN NOTE:**
Root drains, foundation, footings, and other clean water connections to sanitary sewer system are strictly prohibited.
5. **NOTIFICATION:**
Any time utilities are involved, other than city water and sewer, notify One Call prior to excavation.
6. **EROSION CONTROL:**
Contractor to allow no silt or erosion to enter existing/proposed storm sewer system or water courses during construction phase. Contractor shall use erosion control measures such as inlet filters and ditch check dams in accordance with D.O.T. Specifications.
7. All grass areas to be disturbed shall have topsoil removed and stockpiled prior to excavation. Upon completion of construction a 6" minimum of topsoil shall be replaced, then seeded and mulched in accordance with D.O.T. Specifications. All disturbed areas are to be graded to have positive drainage.
8. Underground utilities were plotted from records and field observations and actual locations may deviate from plans. Contractor shall be responsible for verifying location of all underground utilities within the project area.

Contractor shall exercise caution within and adjacent to his work areas so as not to damage existing facilities. Any facilities that are damaged due to the contractor's operations shall be repaired or replaced by the contractor to original or better condition at no expense to the owner.
11. **TRACKING OF MUD UPON PUBLIC WAYS**
It shall be the duty of the contractor to supervise the handling of all traffic entering and leaving the work area to prevent mud or debris of any nature from being tracked onto the sidewalks and streets of the city.
12. **MATERIAL DISPOSAL**
The contractor shall not dump any waste materials on the Owner's property without the written permission of the Owner, or another property without the written permission of the owner or lesser thereof. When such permission is granted, dumping shall be subject to regulations prescribed by the Engineer.
13. **PROTECTION OF TREES**
All trees within the construction area not specified for removal are to be protected by the contractor. Care shall be taken to ensure the the roots are not cut. The contractor shall be responsible for replacing any damaged trees of the same size and kind as damaged. Damaged tree branches shall be properly trimmed immediately after damage.
14. **CONCRETE PROTECTIONS**
The contractor shall protect the finish of all freshly placed concrete from vandalism until the concrete has taken its initial set. The contractor shall be responsible for any damage to the concrete finish caused by vandals due to his or her failure to protect the concrete.
15. **UNDERGROUND STORAGE TANKS**
All underground storage tanks must be removed or closed by a certified tank system remover-cleaner. The certified remover will clean out and remove the tank, properly dispose of the removed waste material and tank, and complete the paperwork required by the DATCP Bureau of Weights and Measures. In the event any petroleum leakage or spillage is observed during the UST removal process, contractor shall immediately notify the Engineer immediately. In the event the spill observed is in need of an urgent response, certified remover shall notify local fire department and the Department of Natural Resources (DNR).

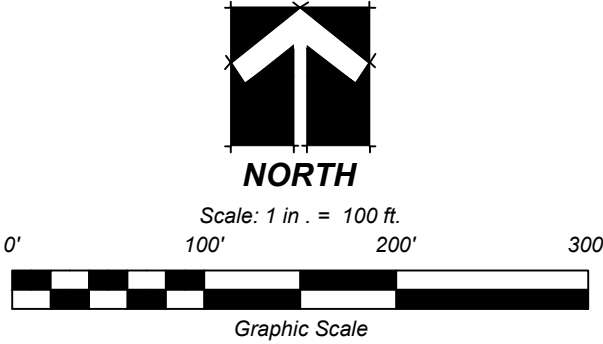
1. Contractor shall submit a maintenance of traffic plan to Waste Management, Maintenance Supervisor and Diversified Engineering for review and approval 15 days prior to start of work.
2. Contractors maintenance of traffic plan shall be in accordance with D.O.T. Specifications.
3. The contractor shall furnish and maintain all necessary safeguards such as barricades, satisfactory barrier lighting, flaggers, and such other traffic control devices as provided in D.O.T. Specifications.
4. All construction traffic control signs used for the project shall conform to the current "Manual of Uniform Traffic Control Devices" and shall be provided, erected, and maintained by the contractor.

CALL BEFORE YOU DIG !
WISCONSIN LAW REQUIRES EXCAVATORS TO NOTIFY
THE PROTECTION SERVICE AT LEAST THREE (3)
BUSINESS DAYS BUT NOT MORE THAN TEN (10)
CALENDAR DAYS PRIOR TO EXCAVATION

 **Wisconsin One Call
Notification Center**
www.diggershotline.com
811 or 1-800-242-8511



EXISTING CONDITIONS PLAN
Scale: 1" = 100'



- LEGEND:**
- Wetland Boundary, per CSM performed by CQM, Inc.
 - Wetland Boundary 25' Offset, per CSM performed by CQM, Inc.
 - Nor-X-Way Centerline, per CSM performed by CQM, Inc.
 - Nor-X-Way 75' offset, per CSM performed by CQM, Inc.
 - FEMA Flood Zone AE - Map Number 55131C0379D, per CSM performed by CQM, Inc.

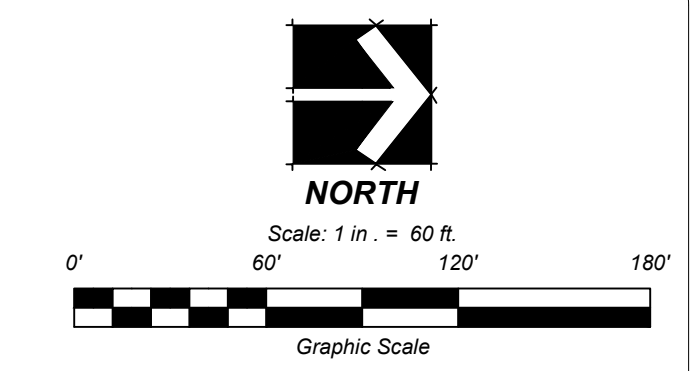
- GENERAL NOTES:**
- All existing utilities are shown herein as reference only and are based on record of the various utility companies and a field survey. Contractor is responsible for determining the exact locations of all utilities prior to any construction activities.
 - All existing conditions, topography, utilities, and property information are taken from a survey of land situated in the Village of Germantown, State of Wisconsin, by surveyors: Construction Quality Management, Inc., 2679 Continental Drive, Green Bay, WI, 54311, ph: (920) 465-3911, fx: (920) 465-3913.
 - All existing wetland information per wetland delineation by Thompson & Associates Wetland Services (June, 2019) and field locations verified by Construction Quality Management, Inc.

ISSUE DATE	02/28/2020	SCALE	1" = 100'	CTR INT.	2'
SURVEYED BY	COM	CHECKED BY	NJB		
DRAWN BY	DSW	APPROVED BY			
REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY
					APP BY

Diversified Engineering Inc.
CONSULTING ENGINEERS & SURVEYORS
150 PARKWAY
NEW PHILADELPHIA, OH 44663
Tel: (330) 364-4331
Fax: (330) 364-4331
www.diversified-eng.com

WASTE MANAGEMENT
PROJECT: TRUCK MAINTENANCE FACILITY
GERMANTOWN, WI
SHEET TITLE: EXISTING CONDITIONS PLAN

SHEET NO:
C1.1
JOB NO:
ENG-1465

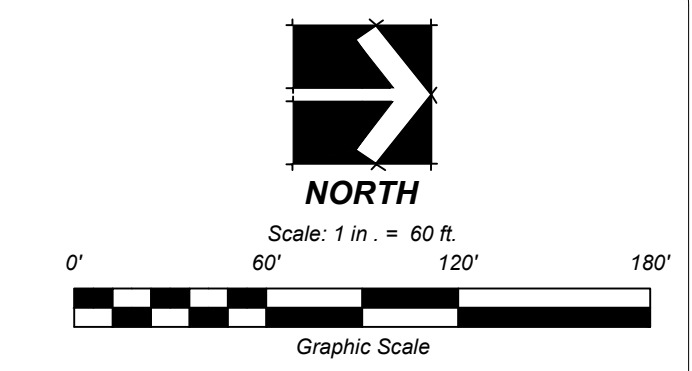
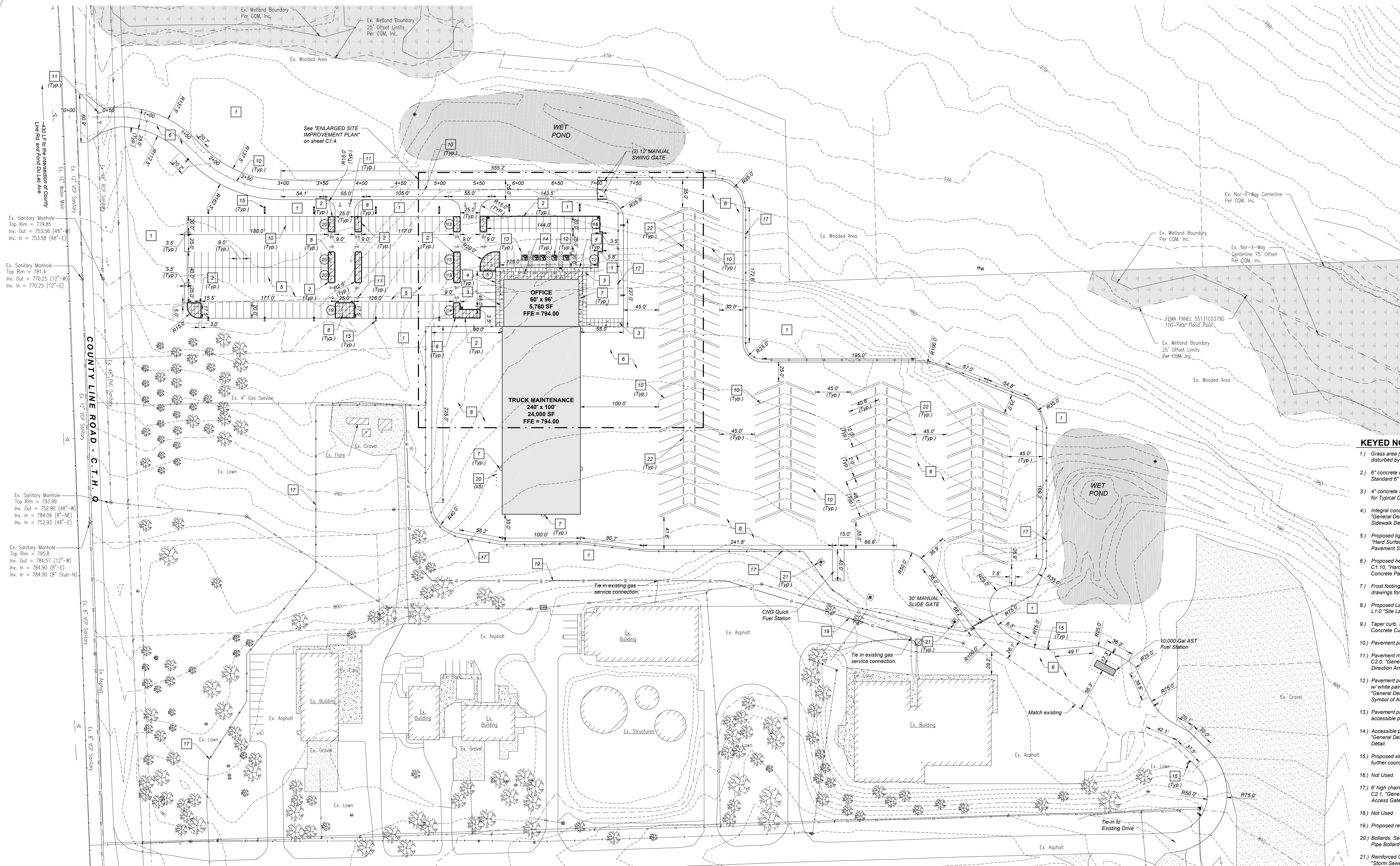


SHEET NO:

C1.2

JOB NO:
ENG-1465

- | | | | |
|---|--|---|---|
| <p>A. At start of project and prior to demolition of existing conditions, contractor shall be in contact with adjacent property owners, city representative, and site representative to coordinate demolition timing.</p> | <p>E. Contractor shall provide traffic control in accordance with the state manual on uniform traffic control devices. See sheet C1.0 "Maintenance of Traffic" for further detail and notes.</p> | <p>J. Contractor shall be responsible for all phasing of demolition when the demolition may impact traffic, access, or utilities to neighbors or facilities to remain and other surrounding infrastructure or facilities.</p> | <p>N. All existing underground tanks must be removed or closed by a certified tank system remover-cleaner. The certified remover will clean out and remove the tank, properly dispose of the removed waste material and tank, and complete the paperwork required by the DATCH Bureau of Weights and Measures. In the event any petroleum leakage or spillage is observed during the UST removal process, contractor shall notify the engineer/owner immediately. In the event the spill observed is in need of an urgent response, certified remover shall notify local fire department and the Department of Natural Resources (DNR).</p> |
| <p>B. Contractor to remove and dispose of all debris and other materials resulting from demolition and construction operations. Disposal will be in accordance with all local, state, and federal regulations governing such operations.</p> | <p>F. Prior to starting demolition, it is the responsibility of the Contractor to obtain all permits, tap fees, bond fees, and construction fees required by local and state governmental agencies.</p> | <p>K. Conduct demolition operations to ensure minimal interference with roads, sidewalks, and any other adjacent occupied facilities.</p> | |
| <p>C. Contractor shall take all precautions necessary to avoid damage to adjacent properties during construction phases of this project. Contractor will be solely responsible for damage to neighboring properties occurring as a result of construction activities.</p> | <p>G. All landfill fees shall be paid by the Contractor.</p> | <p>L. Do not close or obstruct roads, sidewalks, or any other occupied facilities without permission from the local authority having jurisdiction and/or property owners.</p> | |
| <p>D. All existing utilities are shown herein as reference only and are based on record of the various utility companies. Contractor is responsible for determining the exact locations and depths of all utilities prior to demolition activities.</p> | <p>H. Utilities shall be removed and the trenches backfilled with approved backfill material. Backfill material shall be placed in maximum eight inch lifts and compacted in accordance with the geotechnical report or to a minimum of 95% of the maximum dry density as determined by ASTM D-1557 modified proctor method +/- 3% optimum moisture content.</p> | <p>M. The contractor shall be responsible for ensuring the construction site and surrounding areas are free of accumulated debris.</p> | |
| | <p>I. Contractor shall not burn debris or use explosives.</p> | | |



- LEGEND:**
- 8 Proposed Parking Space Count Indicator
 - Proposed Chain Link Fence
 - Proposed Landscaping Area. See Site Landscaping Plan for further coordination

PARKING BREAKDOWN

Total Parking Spaces (Public) = 160
Total Parking Spaces (Handicap) = 5
Typical Parking Space Dimension: 9' x 20' (Unless otherwise noted)

PARKING LOT LANDSCAPING

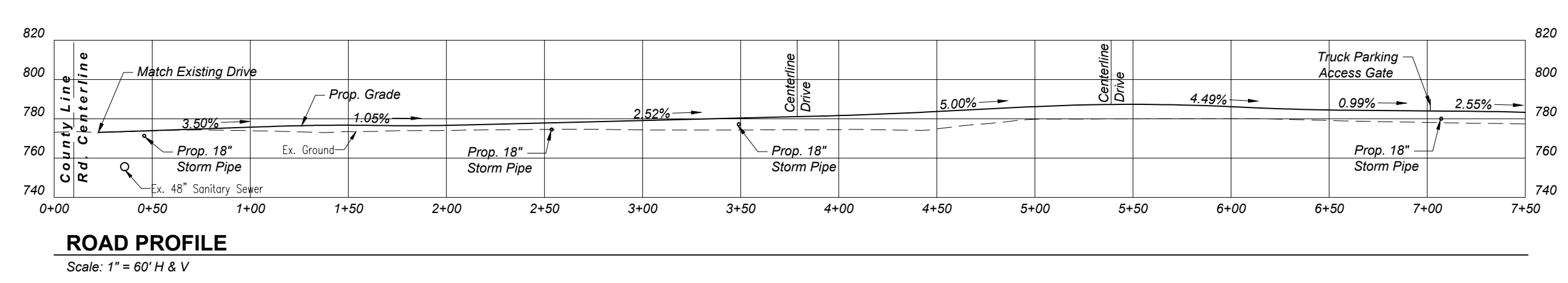
Visitor/Employee Parking Area = 57,501 SF
Interior Landscaping Area = 3,167 SF
Landscape Area Percentage = 5.5%

- KEYED NOTES:**
- Grass area (slope to drain). Re-seed existing lawn where disturbed by new construction and construction activities.
 - 6" concrete curb. See Sheet C2.0, "General Details", for Standard 6" Concrete Curb Detail.
 - 4" concrete sidewalk. See Sheet C2.0, "General Details", for Typical Concrete Sidewalk Section.
 - Integral concrete curb and walk. See Sheet C2.0, "General Details", for Typical Integral Concrete Curb and Sidewalk Detail.
 - Proposed light-duty asphalt pavement. See Sheet C1.10, "Hard Surface Key Plan", for Typical Light-duty Asphalt Pavement Section.
 - Proposed heavy-duty concrete pavement. See Sheet C1.10, "Hard Surface Key Plan", for Typical Heavy-duty Concrete Pavement Section.
 - Frost footing at man doors by G.C. See Structural drawings for further coordination.
 - Proposed Landscaping (Shown for reference). See Sheet L1.0 "Site Landscaping Plan".
 - Taper curb. See sheet C2.0, "General Details", for Concrete Curb Taper Detail.
 - Pavement painting: 4" wide yellow striping.
 - Pavement marking: Yellow directional arrow. See Sheet C2.0, "General Details", for Pavement Marking Typical Direction Arrow.
 - Pavement painting: "Universal Symbol" blue painted field w/ white painted wheelchair and border. See Sheet C2.0, "General Details", for Pavement Marking International Symbol of Accessibility For Parking Stalls.
 - Pavement painting: 4" wide blue paint striping at accessible parking space.
 - Accessible parking sign (post-mounted). See Sheet C2.0 "General Details" for Typical Accessible Parking Sign Detail.
 - Proposed site lighting: By E.C. See site electrical plan for further coordination.
 - Not Used.
 - 6' high chain link security fence / access gate. See sheet C2.1, "General Details", for Typical Chain Link Fence & Access Gate Detail.
 - Not Used.
 - Proposed relocated 4" gas service line location.
 - Bollards. See Sheet C2.1, "General Details", for Typical Pipe Bollard Detail.
 - Reinforced Concrete Catch Basin Apron. See Sheet C2.4, "Storm Sewer Notes & Typical Details", for Typical Concrete Catch Basin Apron Detail.
 - Concrete truck wheel stop. See Sheet C2.0, "General Details", for Typical Concrete Truck Wheel Stop Detail.

SITE IMPROVEMENT PLAN
Scale: 1" = 60'

GENERAL NOTES:

- Provide smooth transition from newly paved areas to existing paved areas as necessary. The existing edge of pavement shall be free of all loose debris at all areas where proposed pavement meets existing pavement. The edge of existing asphalt pavement shall be properly sealed with a tack coat material in all areas where new asphalt pavement is indicated to join existing.
- Contractor is responsible for locating and verifying all existing underground utilities prior to construction, and is responsible for any damage to them during construction.
- All dimensions to face of curb or edge of concrete unless otherwise noted.
- All pavement markings depicting parking spaces, accessible parking spaces, access aisles and no parking signage shall be applied with mechanical equipment and templates at the locations and lengths shown on the plans (two coats all locations). Paint shall be yellow in color (unless otherwise specified) and shall meet all applicable requirements of state department of highway specifications, unless otherwise specified.
- Contractor shall be solely responsible for and take all precautions necessary to avoid damage to adjacent properties during the construction phases of this project.
- All construction methods and materials must conform to current standards and specifications of the federal, state, county, city or local requirements, whichever has jurisdiction.
- All excavated and/or disturbed areas are to be seeded with a locally adaptive turf seed mix after finish grading unless otherwise noted. All newly seeded areas shall have a minimum of 6" of topsoil. Hold soil down 1" from pavement elevation. Contractor to supply straw mulch where grass seed has been planted.
- All radii indicated on plans shall be constructed as circular.
- Resurface or reconstruct at least to original conditions all areas where traffic by contractors, subcontractors or suppliers have damaged existing pavement, lawns or other improvements during construction, after construction work is complete.
- The contractor shall verify all dimensions and elevations in the field prior to the start of construction. The contractor shall be responsible for all field dimensions and elevations during the entire construction schedule. If any discrepancies are found in these plans from actual field dimensions, the contractor shall contact the engineer immediately.



ROAD PROFILE
Scale: 1" = 60' H & V

ISSUE DATE: 02/28/2020 SCALE: 1" = 60' CTR INT. 2'

SURVEYED BY: COM CHECKED BY: NJB

DRAWN BY: DSM APPROVED BY:

REV DATE DESCRIPTION

Diversified Engineering Inc.
CONSULTING ENGINEERS & SURVEYORS
100 PARKWAY
NEW PHILADELPHIA, OH 44663
Phone: (330) 364-4431
Fax: (330) 364-4431
www.diversified-eng.com
Ohio Professional Engineer No. 9202
Ohio Professional Surveyor No. 44663

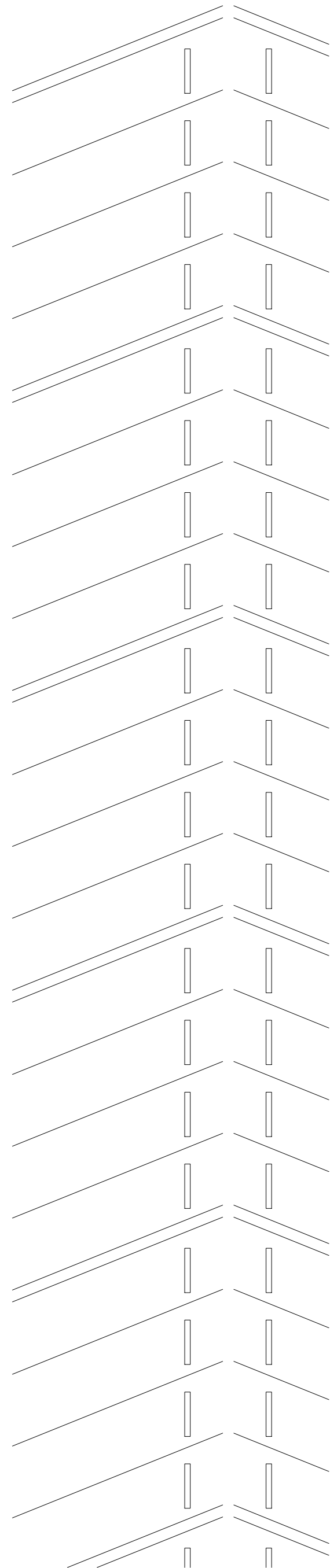
WASTE MANAGEMENT

PROJECT: TRUCK MAINTENANCE FACILITY
GERMANTOWN, WI

SHEET TITLE: SITE IMPROVEMENT PLAN

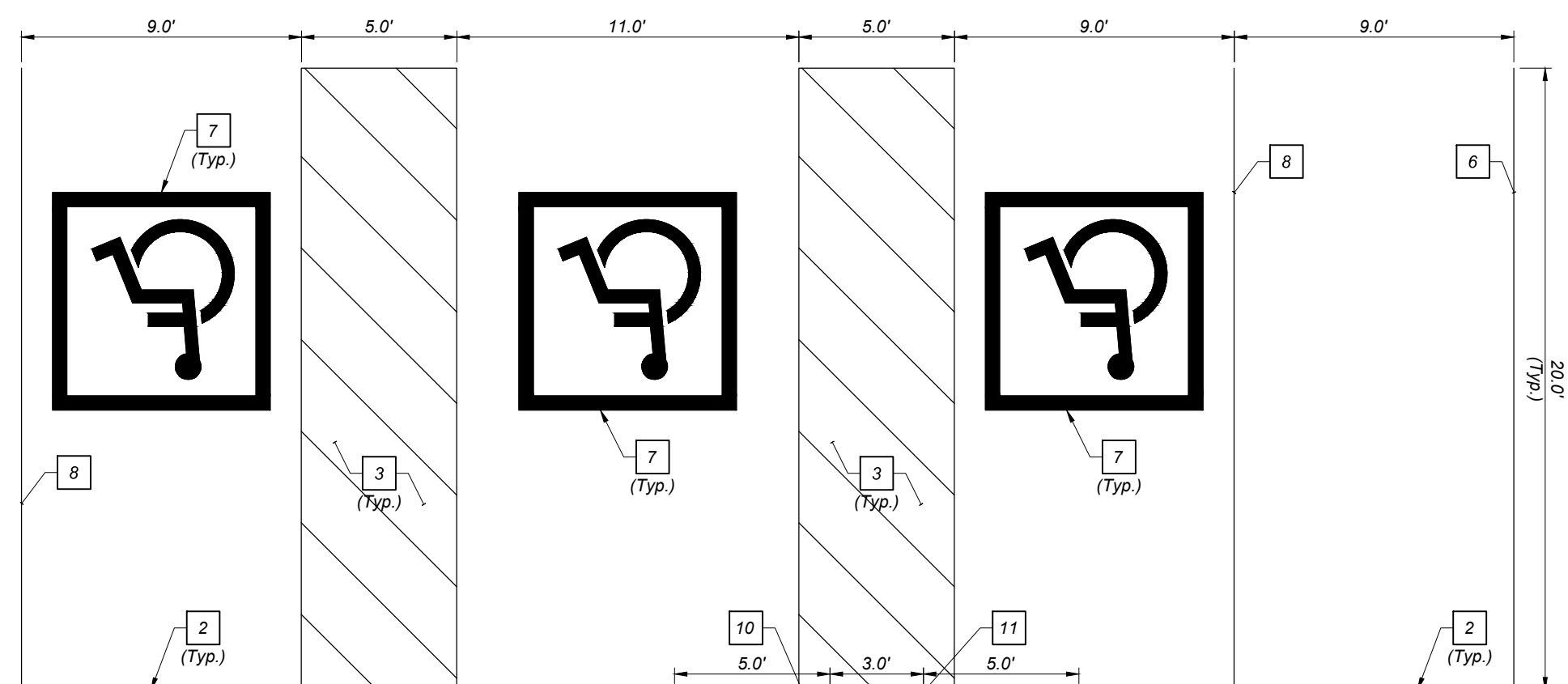
SHEET NO:
C1.3

JOB NO:
ENG-1465



Scale: 1" = 20'

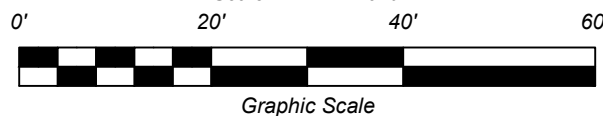
1) Grass area (slope to drain). Re-seed existing lawn where disturbed by new construction and construction activities.	12) Pavement painting: "Universal Symbol", blue painted field w/ white painted wheelchair and border. See Sheet C2.0, "General Details", for Pavement Marking International Symbol of Accessibility For Parking Stalls.
2) 6" concrete curb. See Sheet C2.0, "General Details", for "Standard 6" Concrete Curb Detail.	13) Pavement painting: 4" wide blue paint striping at accessible parking space.
3) 4" concrete sidewalk. See Sheet C2.0, "General Details", for Typical Concrete Sidewalk Section.	14) Accessible parking sign (post-mounted). See Sheet C2.0 "General Details" for Typical Accessible Parking Sign Detail.
4) Integral concrete curb and walk. See Sheet C2.0, "General Details", for Typical Integral Concrete Curb and Sidewalk Detail.	15) Proposed site lighting: By E.C. see site electrical plan for further coordination.
5) Proposed light-duty asphalt pavement. See Sheet C1.10, "Hard Surface Key Plan", for Typical Light-duty Asphalt Pavement Section.	16) Not Used.
6) Proposed heavy-duty concrete pavement. See Sheet C1.10, "Hard Surface Key Plan", for Typical Heavy-duty Concrete Pavement Section.	17) 6' high chain link security fence / access gate. See sheet C2.1, "General Details", for Typical Chain Link Fence & Access Gate Detail.
7) Frost footing at man doors by G.C. See Structural drawings for further coordination.	18) Not Used.
8) Proposed Landscaping: (Shown for reference). See Sheet L1.0 "Site Landscaping Plan".	19) Accessible parking design to meet all governing codes. Quantity as required by I.A.C. & A.D.A. - accessible parking spaces and their access aisles shall be 1:20 running-slope and 1-48 cross-slope. Accessible route delineation shall be 4" wide blue outline w/ 4" blue cross hatch.
9) Taper curb. See sheet C2.0, "General Details", for Concrete Curb Taper Detail.	
10) Pavement painting: 4" wide yellow striping.	
11) Pavement marking: Yellow directional arrow. See Sheet C2.0, "General Details", for Pavement Marking Typical Direction Arrow.	



Scale: 1" = 5'

1) 4" concrete sidewalk. See Sheet C2.0, "General Details", for Typical Concrete Sidewalk Section.	7) Pavement painting: "Universal Symbol", blue painted field w/ white painted wheelchair and border. See Sheet C2.0, "General Details", for Pavement Marking International Symbol of Accessibility for Parking Stalls.
2) Integral concrete curb and walk. See Sheet C2.0, "General Details", for Typical Integral Concrete Curb and Sidewalk Detail.	8) Pavement painting: 4" wide blue paint striping at accessible parking space.
3) Accessible parking design to meet all governing codes. Quantity as required by I.A.C. & A.D.A. - accessible parking spaces and their access aisles shall be 1:20 running slope and 1'4" cross slope. Accessible row delineation shall be 4" wide blue outline w/ 4" blue cross hatching.	9) Accessible parking sign (post-mounted). See Sheet C2.0 "General Details" for Typical Accessible Parking Sign Detail.
4) Frost footed at man doors by G.C. See Structural drawings for further coordination.	10) Curb ramp w/ detectable warning mat.
5) Proposed Landscaping: (Shown for reference). See Sheet L1.0 "Site Landscaping Plan".	11) Detectable warning mat: (1) 2'x3' tile, cast-in-place w/ truncated domes complying with ADA guidelines, brick red. Equal to Detectable Warning Systems - "EZ Set Tile".
6) Pavement painting: 4" wide yellow striping.	

A. Provide smooth transition from newly paved areas to existing pavement as necessary. The existing edge of pavement shall be free of all loose debris at all areas where proposed pavement meets existing pavement. The edge of existing asphalt pavement shall be properly cut with a tack coat material in all areas where new asphalt pavement is indicated to join existing.	F. All construction methods and materials must conform to current standards and specifications of the federal, state, county, city or local requirements, whichever has jurisdiction.
B. Contractor is responsible for locating and verifying all existing underground utilities prior to construction, and is responsible for any damage to them during construction.	G. All excavated and/or disturbed areas are to be seeded with a locally adapted turf seed mix after final grading and surface erosion control measures are installed. There shall be a minimum of 6" of topsoil. Hold soil down 1" from pavement elevation. Contractor to supply straw mulch where grass seed has been planted.
C. All dimensions to face of curb or edge of concrete unless otherwise noted.	H. All radii indicated on plans shall be constructed as circular. Resurface or reconstruct to match to original conditions at all areas where traffic by contractors, subcontractors or suppliers have damaged existing pavement, lawns or other improvements during construction, after construction work is complete.
D. All pavement markings depicting parking spaces, accessible parking spaces, access aisles and all parking signage shall be applied with mechanical equipment and templates at the locations and lengths shown on the plans (two coats at all locations). Paint shall be yellow in color (unless otherwise specified) and shall meet all applicable requirements of state department of highway specifications, unless otherwise specified.	J. The contractor shall verify all field dimensions and elevations in the plans prior to the start of construction. The contractor shall be responsible for all field dimensions and elevations during the entire construction schedule. If any discrepancies are found in these plans from actual field dimensions, the contractor shall contact the engineer immediately.
E. Contractor shall be solely responsible for and take all the necessary steps to ensure that all proposed improvements during the construction phases of this project.	

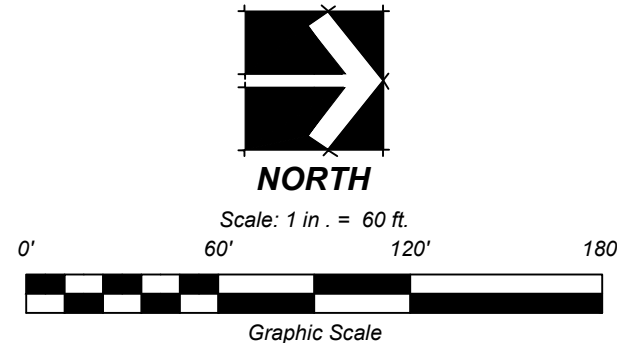
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OBJECT:
TRUCK MAINTENANCE FACILITY

HEET TITLE: ENLARGED SITE IMPROVEMENT PLAN

C1.4

JOB NO:
ENG-1465



Scale: 1" = 60'

Topsoil Removal / Replacement

Topsoil Removal / Replacement

1. Required topsoil shall be hauled and stockpiled on site.
2. Topsoil stockpile shall be sloped to drain and side slopes shall be "tracked and dressed" to minimize erosion.
3. Silt fence shall be constructed around the entire perimeter of the completed stockpile.
4. Topsoil stockpile shall be seeded and mulched to prevent erosion.
5. The completed stockpile shall be seeded with 50# annual ryegrass and 50# perennial ryegrass per acre.
6. The stockpile shall be mulched with 2 tons of straw per acre.
7. Any topsoil removal necessary to perform the site grading shall be considered incidental to the grading. All topsoil shall be removed from areas of excavation or embankment. Upon completion of site grading, 6" of topsoil is to be replaced on all disturbed areas to be seeded.

Site Grading

1. Concurrent with or immediately following removal of topsoil, the area shall be graded to drain as shown on this sheet.

Building Site Preparation

1. The building site shall be graded following topsoil removal and the area of the controlled fill compacted with a sheep's foot roller or vibratory compaction equipment.
2. The controlled fill shall be placed in maximum nine (9) inch loose lifts for all soils, beginning at the lowest elevation, and the lifts shall be level.
 - a) Refer to GEI Consultants, Inc. Subsurface Exploration and Geotechnical Engineering Evaluation report dated June 20, 2019.
3. The controlled fill shall be clean, inorganic soil (LOI<3%), free of any miscellaneous materials, cobbles and boulders (no greater than 3") and have liquid limits (LL) and plasticity indexes (PI) not to exceed 45 and 20, respectively.
4. The fill shall be carefully compacted in lifts to a dry unit weight equal to a minimum 95 percent of the maximum dry unit weight or to a minimum 95% to 100% maximum moisture content as determined by laboratory test for moisture-density relations of soils (ASTM D698). If clean granular soil is used as fill, testing shall be in accordance of ASTM D4254.

5. No fill shall be placed

6. The constructed fill shall be compacted and sealed at the end of every work day to shed water from the surface.
 7. The fill shall be scarified prior to placing any additional fill after it has been sealed to shed water.
 8. Each lift of controlled fill shall be tested for compaction by an approved independent testing laboratory field technician. Tests shall be made in such locations and in such quantity as the construction manager and the testing laboratory deem necessary. A minimum of six (6) tests per lift at random locations shall be made.
 9. The controlled fill shall be constructed to final line and grade as shown on the plans. Sloped areas shall be compacted with an equal number of compaction passes as the level area.
 10. Any material brought on site and subsequently deemed unsuitable for incorporation into the controlled fill shall be removed from the site at the contractor's expense.
- Subgrade Preparation**
1. The entire site shall be proof rolled prior to placement of any fill material under the supervision of the Engineer. Material deemed to be unsuitable is at the discretion of the Engineer. Proof rolling shall be as prescribed in the *Proof Rolling* section below. Once the required grade elevation of the fill is achieved, the subgrade shall be proof rolled prior to any sub-base placement as prescribed in the *Proof Rolling of Subgrade* section below. Deformation of the subgrade is at the discretion of the Engineer.
 2. If the Engineer deems an area of the subgrade as unsuitable, that area shall be overexcavated until suitable material is achieved as determined by the Engineer. Overexcavation depth shall not exceed 2 feet.
 3. Overexcavated areas shall be backfilled with DOT approved, crushed limestone aggregate. Aggregate shall be placed in lifts to not exceed 8". Each lift shall be compacted with a vibratory compactor.
 4. Backfilled areas shall be proof rolled following the guidelines listed in the *Proof Rolling of Subgrade* section below.

Proof Rolling of Subgrade

- Perform the testing of the stability and uniformity of the subgrade compaction in locations shown on the plans by rolling.
2. Use a four wheel conforming to the following:
 - A. Four heavy pneumatic tire wheels mounted on a rigid steel frame.
 - B. Wheels evenly spaced in one line across the width of the roller.
 - C. Wheels arranged so that all wheels carry approximately equal loads when operated over an uneven surface.
 - D. A maximum center-to-center spacing between adjacent wheels not exceeding 32 inches (0.8 m).
 - E. A body for ballast loading capable of varying the gross load from 25 to 50 tons (23 to 45 metric tons).
 - F. Tires capable of operating at inflation pressures ranging from 90 to 150 pounds per square inch (620 to 1040 kPa). Provide a tire pressure gauge for measurement before use.
 - G. Tires filled with liquid from 90 to 95 percent by volume.
3. Provide ballast that consist of ingots of known unit weight, sand bags with a total weight of 100 pounds (45 kg), bags of other material of known unit weight, or other suitable material such that the unit ballast weight is readily determinable at all times. Provide sufficient ballast to load equipment to a maximum gross weight of 50 tons (45 metric tons).
4. Furnish the Engineer information verifying that the weights and tire pressures can be met.
5. After compacting the subgrade and before placing overlying course, proof roll designated subgrade areas. If proof rolling is performed after the underdrains are installed, do not use the proof roller within 1 1/2 feet (450 mm) of the underdrains.
6. Ensure that the subgrade moisture content at the time of proof rolling is within 5 percent of the moisture used for acceptance.
7. Adjust the load and tire inflation pressure according to the following:
 - A. For soils classified as A-3, A-4, A-6, or A-7-6, use a 35-ton (32 metric tons) roller with a tire pressure of 120 pounds per square inch (820 kPa).
 - B. For granular soils, and soil, rock, and granular mixtures, use a 50-ton (46 metric tons) roller with a tire pressure of 150 pounds per square inch (1030 kPa).
 - C. Measure the tire pressure in the presence of the Engineer.
8. Operate equipment at a speed between 2 1/2 and 5 miles per hour (4 and 8 km/hr). Adjust the speed to allow the Engineer to measure the deflections, ruts, or elasticity.
9. Make only one trip of the proof roller over any area. Offset trips to completely cover the subgrade area. Operate the proof roller in a pattern to readily allow recording of the number of coverages.
10. Where proof rolling indicates areas of soft subgrade or areas of non-uniform subgrade stability, the Engineer will investigate for the source of the problem. The Engineer will check the subgrade materials, density, and moisture content. The Contractor is responsible in all problems found in the materials constructed under the Contract Documents. Correct all deficiencies found.
11. Correct the subgrade to a uniform and satisfactory stability according to the current version of the Construction Inspection Manual of Procedures.
12. After proof rolling, check the subgrade for conformance to the plans, and correct all surface irregularities. Shape the subgrade within the tolerances.

[illegible]

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Engineering Inc.**
CONSULTING ENGINEERS & SURVEYORS

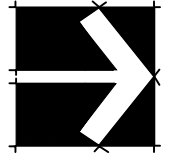
175 RAY AVENUE, N.E.
NEW PHILADELPHIA, OH 44663

Phone: (330) 364-1631
Fax: (330) 364-4031
email: de@div-eng.com

WASTE MANAGEMENT

PROJECT: TRUCK MAINTENANCE FACILITY
GERMANTOWN, WI

SHEET TITLE: SITE GRADING PLAN

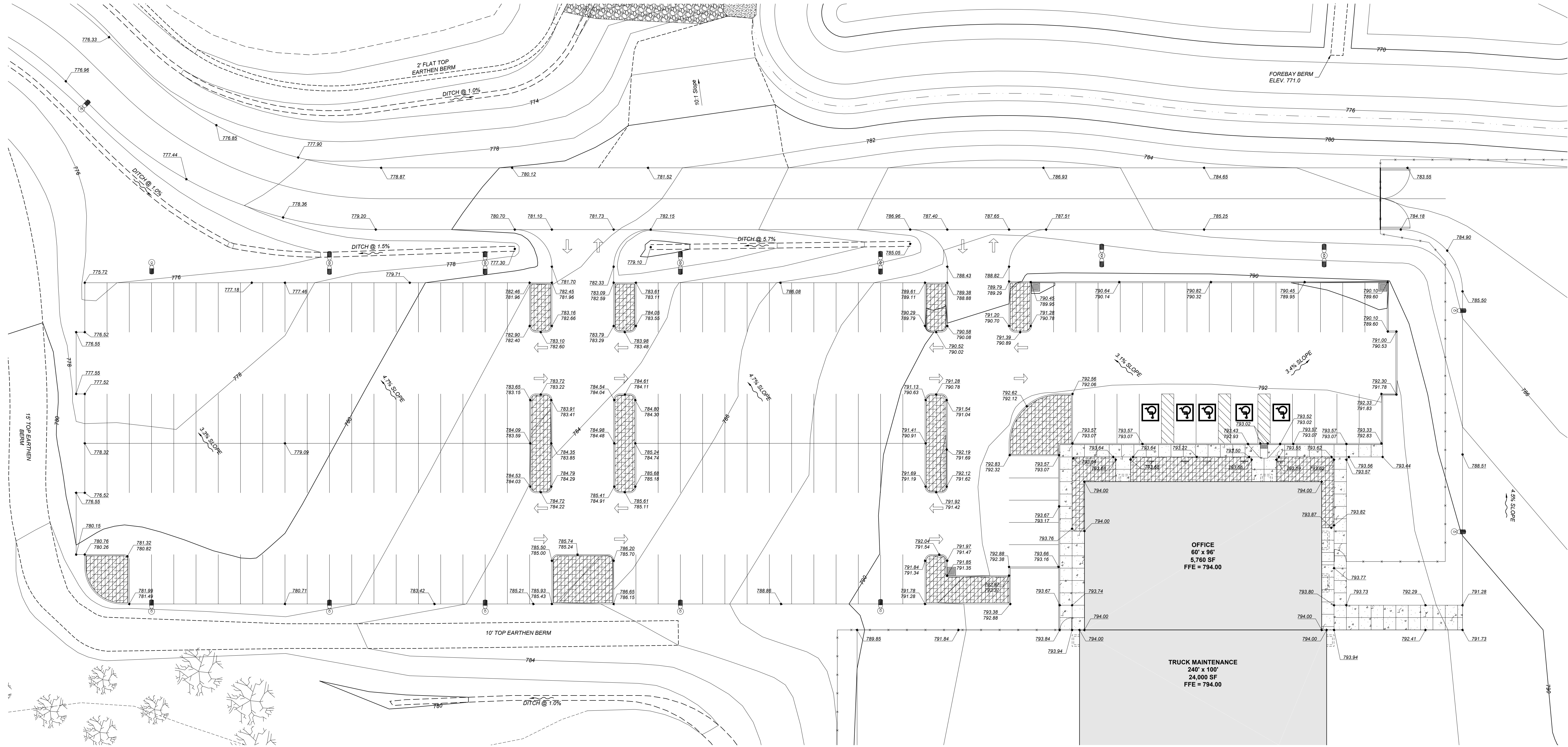


NORTH

Scale: 1 in. = 20 ft.

0' 20' 40' 60'

Graphic Scale



ENLARGED SITE GRADING PLAN

Scale: 1" = 20'

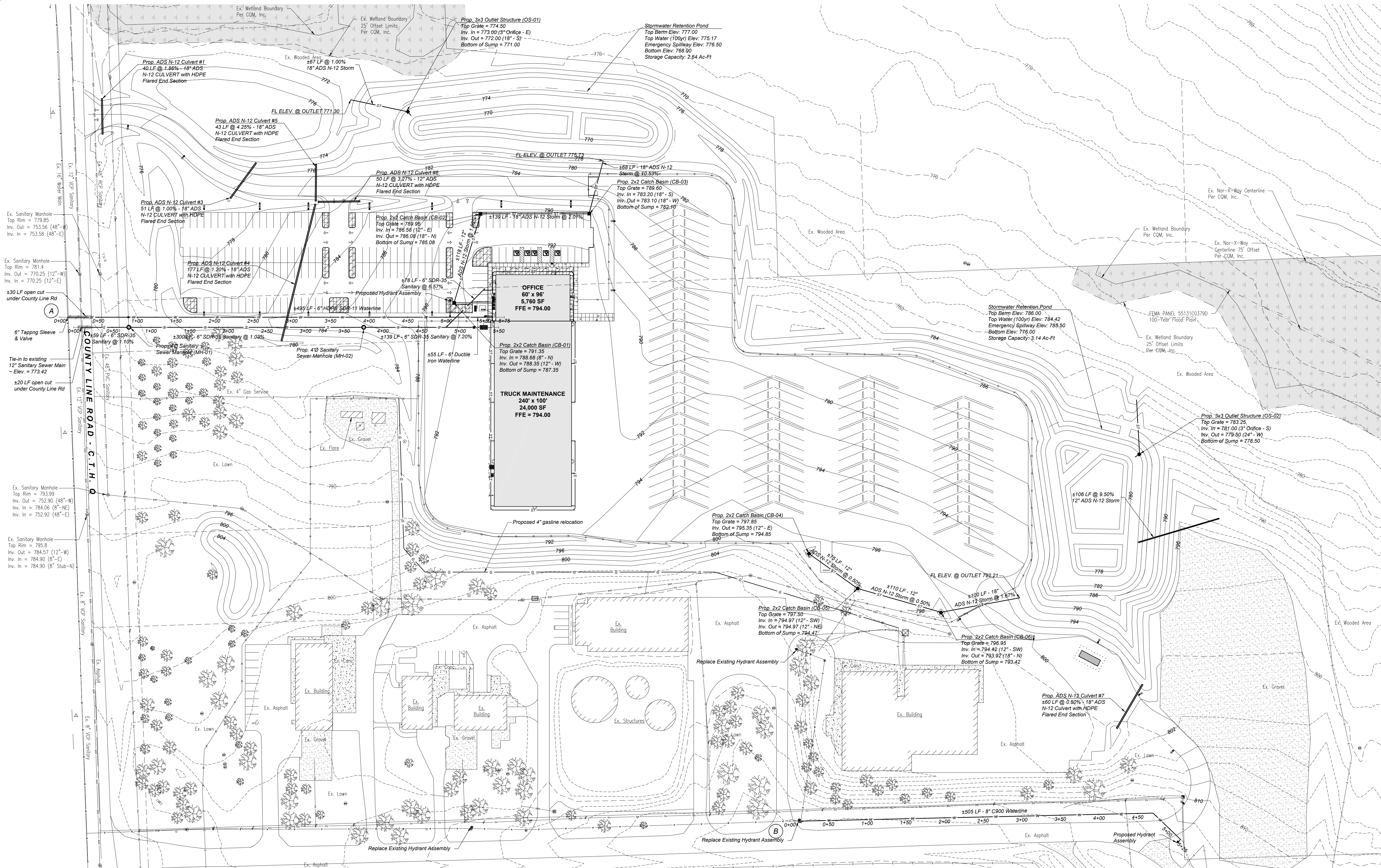
REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY

Diversified Engineering Inc.
CONSULTING ENGINEERS & SURVEYORS
1500 PARKWAY E.
SUITE 200
NEW PHILADELPHIA, OH 44663
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WASTE MANAGEMENT
PROJECT: TRUCK MAINTENANCE FACILITY
GERMANTOWN, WI
SHEET TITLE: ENLARGED SITE GRADING PLAN

SHEET NO:
C1.6
JOB NO:
ENG-1465

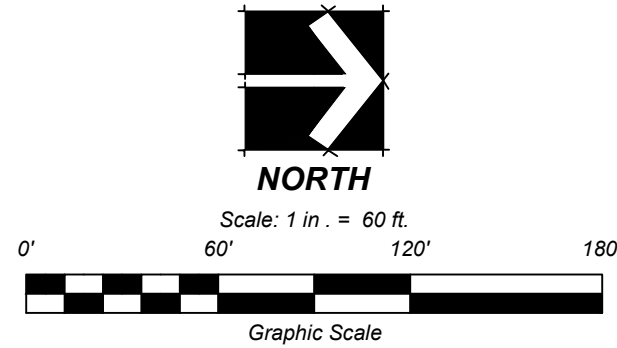
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SITE UTILITY PLAN
Scale: 1" = 60'

GENERAL NOTES:

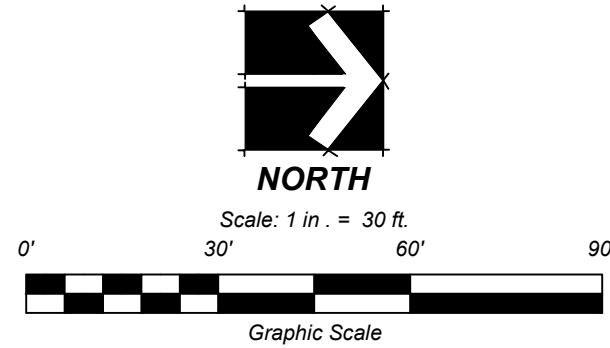
- All existing utilities are shown herein as reference only and are based on record of the various utility companies. Contractor is responsible for determining the exact locations and depths of all utilities prior to any construction activities.
- The contractor shall field verify the elevations and pipe material of existing piping prior to ordering any pre-cast structure.
- The contractor shall refer to architectural plans for exact location and size of downspouts.
- The Site Contractor shall coordinate locations of utilities provided by other trades not shown on this plan.



ISSUE DATE		02/28/2020		SCALE		1" = 60'		CTR INT.		2'	
SURVEYED BY		COM		CHECKED BY		NJB					
DRAWN BY		DSW		APPROVED BY							
REV	DATE	DESCRIPTION				DWN BY	DES BY	CHK BY	APP BY		



PROJECT:	WASTE MANAGEMENT FACILITY GERMANTOWN, WI
SHEET TITLE:	SITE UTILITY PLAN

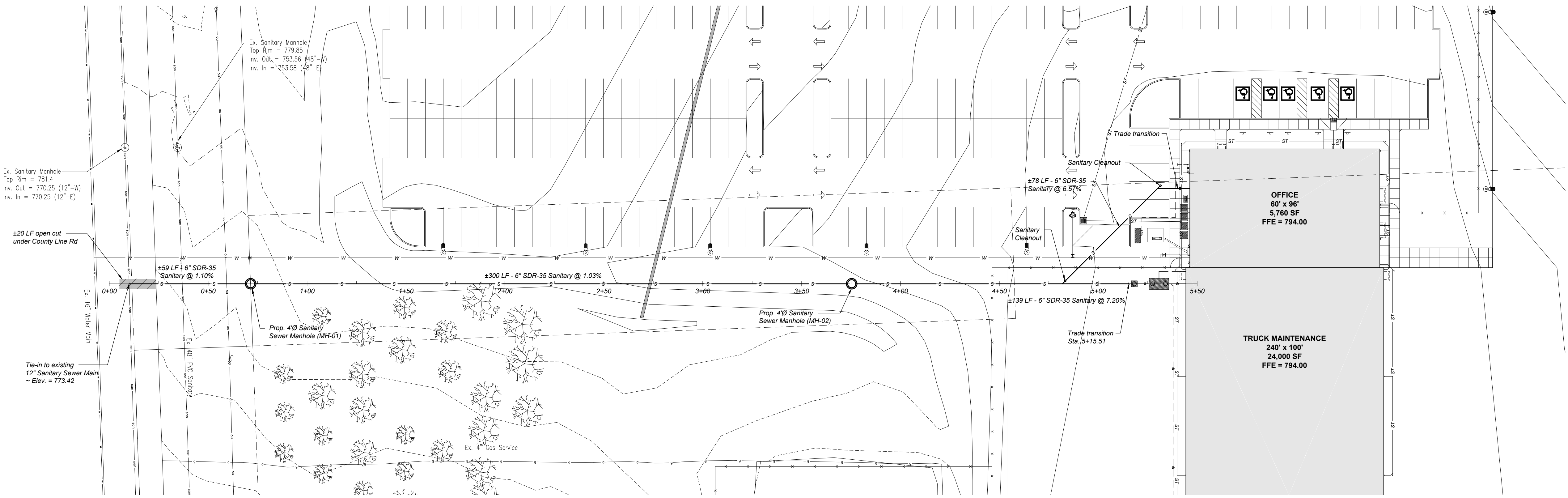


GENERAL NOTES:

- A. All existing utilities are shown herein as reference only and are based on record of the various utility companies. Contractor is responsible for determining the exact locations and depths of all utilities prior to any construction activities.
- B. The contractor shall field verify the elevations and pipe material of existing piping prior to ordering any pre-cast structure.
- C. The contractor shall refer to architectural plans for exact location and size of downspouts.
- D. The Site Contractor shall coordinate locations of utilities provided by other trades not shown on this plan.
- E. Inlet and outlet elevations are to the interior flow line of pipe and does not account for pipe wall thickness.
- F. Manhole depth is determined by subtracting the lowest flow line elevation and does not account for pipe wall thickness of manhole floor thickness.

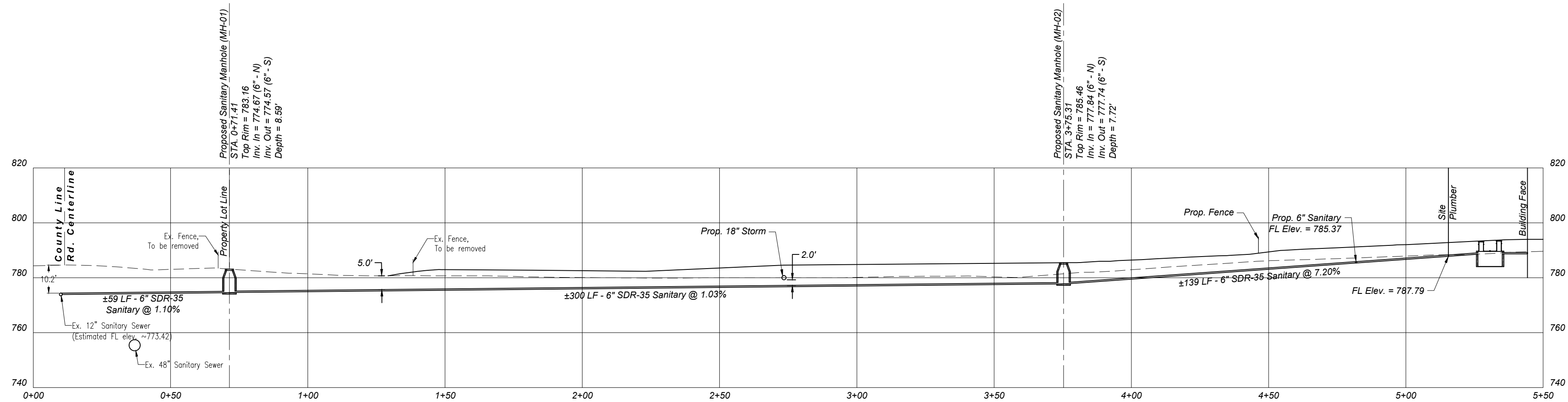
MENOMONEE FALLS NOTES:

- A. Backfill for all trenches shall be 1 1/2" crushed limestone TB (Section 305.2.2.1 of the WisDOT Std. Specifications for Highway and Structure Construction) unless other wise noted in the profile or in the project specification.



SITE SANITARY PLAN

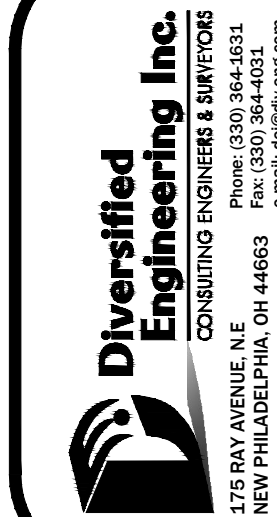
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SANITARY SEWER PROFILE "A"

Scale: 1" = 30' H & V

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SURVEYED BY	COM	CHECKED BY	NJB			
DRAWN BY	DSW	APPROVED BY	NJB			
REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY



WASTE MANAGEMENT

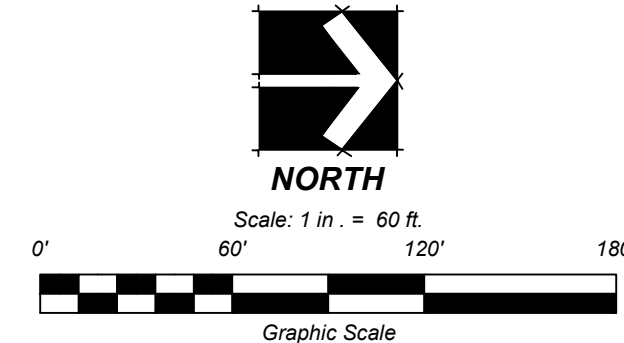
PROJECT: TRUCK MAINTENANCE FACILITY
GERMANTOWN, WI

SHEET TITLE: SITE SANITARY PLAN AND PROFILE

SHEET NO:

C1.8

JOB NO:
ENG-1465

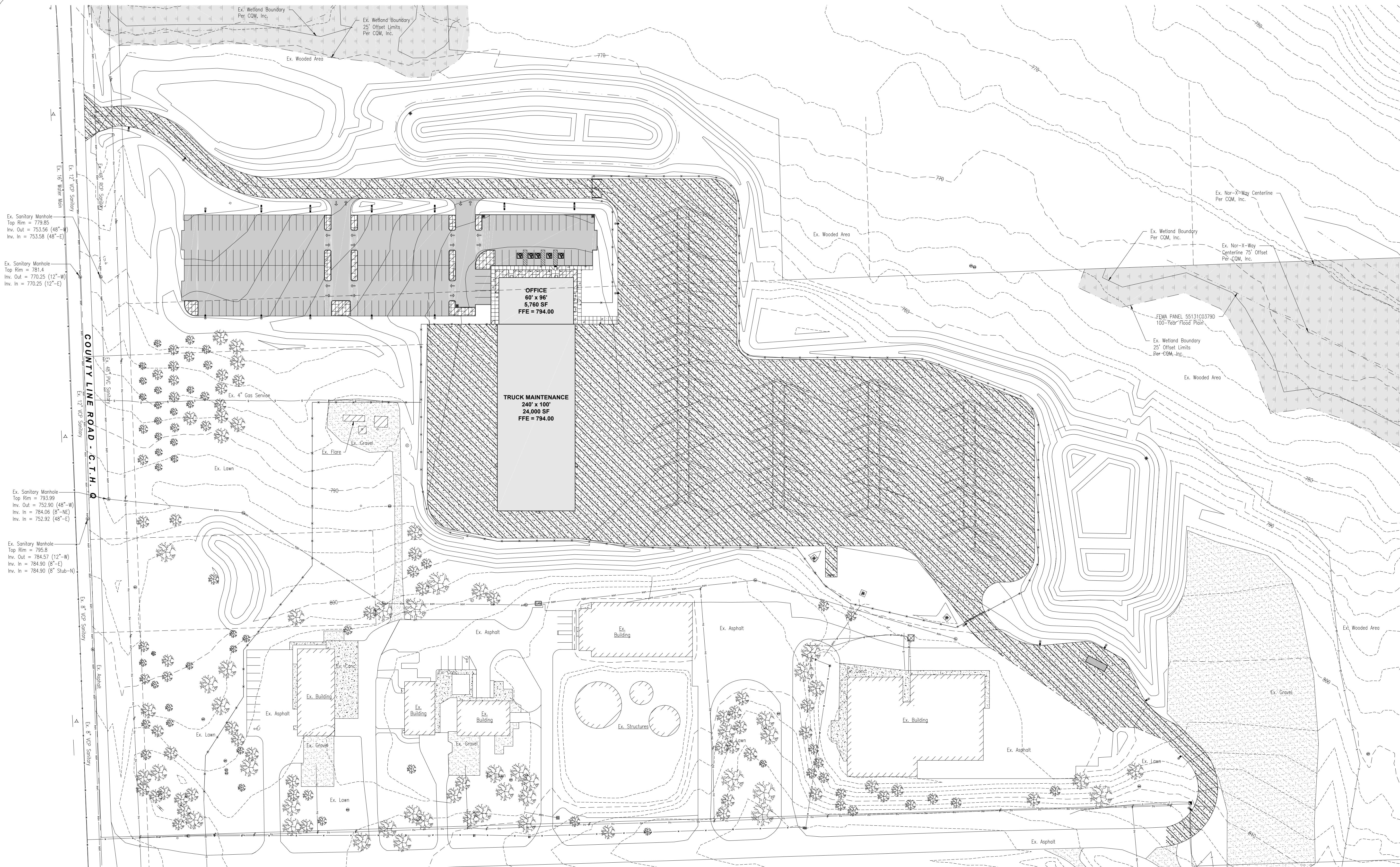


LEGEND:

- Proposed light-duty asphalt pavement, light-duty concrete pavement, see detail on this sheet
- Proposed heavy-duty concrete pavement, heavy-duty asphalt pavement, see detail on this sheet

SITE SURFACING AREAS:

- Heavy-Duty Surfacing - 248,718 SF
- Light-Duty Surfacing - 57,500 SF



HARD SURFACE KEY PLAN BASE BID

Scale: 1" = 60'



- SEC. 465, 1 3/4" ASPHALT CONCRETE SURFACE COURSE
- SEC. 455, TACK COAT FOR INTERMEDIATE COURSE @ 0.05 - 0.07 GAL/S.Y.
- SEC. 460, 3" ASPHALT CONCRETE INTERMEDIATE COURSE
- SEC. 305, 10" - 1-1/4" DENSE-GRADED BASE CRUSHED LIMESTONE AGGREGATE
- SEC. 211, PREPARED AND COMPACTED SUBGRADE, TOP 12" CONDITIONED @ 95% COMPACTION OF STANDARD PROCTOR

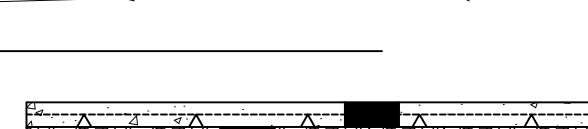
NOTE:
1. ALL ITEMS SHOWN WITH A SECTION NUMBER WILL MEET DOT SPECIFICATIONS.

TYPICAL LIGHT-DUTY ASPHALT SECTION (BASE BID)

DETAIL 1

SCALE: NOT TO SCALE

C1.10



- SEC. 415, 8" REINFORCED PORTLAND CEMENT CONCRETE, WITH #4 REBAR 18" O/C EACH WAY
- SEC. 305, 6" - 1-1/4" DENSE-GRADED BASE CRUSHED LIMESTONE AGGREGATE
- SEC. 211, PREPARED AND COMPACTED SUBGRADE, TOP 12" CONDITIONED @ 95% COMPACTION OF STANDARD PROCTOR

NOTE:
1. ALL ITEMS SHOWN WITH A SECTION NUMBER WILL MEET DOT SPECIFICATIONS.
2. CONTRACTOR TO USE DOWEL BASKETS BETWEEN POURS. CONTRACTOR TO FOLLOW DOT JOINT STANDARDS FOUND ON SHEET C2.1 OR THE LATEST DOT STANDARD.
3. MAXIMUM SPACING BETWEEN CONTRACTION/CONTROL JOINTS SHALL BE 20' O.C.

TYPICAL LIGHT-DUTY PORTLAND CEMENT CONCRETE SECTION (ALT. BID)

DETAIL 2

SCALE: NOT TO SCALE

C1.10



- SEC. 415, 9-1/2" REINFORCED PORTLAND CEMENT CONCRETE, WITH #4 REBAR 18" O/C EACH WAY
- SEC. 305, 6" - 1-1/4" DENSE-GRADED BASE CRUSHED LIMESTONE AGGREGATE
- SEC. 211, PREPARED AND COMPACTED SUBGRADE, TOP 12" CONDITIONED @ 95% COMPACTION OF STANDARD PROCTOR

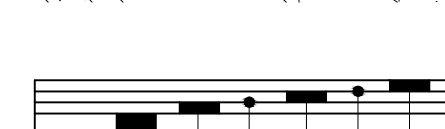
NOTE:
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2. CONTRACTOR TO USE DOWEL BASKETS BETWEEN POURS. CONTRACTOR TO FOLLOW DOT JOINT STANDARDS FOUND ON SHEET C2.1 OR THE LATEST DOT STANDARD.
3. MAXIMUM SPACING BETWEEN CONTRACTION/CONTROL JOINTS SHALL BE 20' O.C.

TYPICAL HEAVY-DUTY PORTLAND CEMENT CONCRETE SECTION (BASE BID)

DETAIL 3

SCALE: NOT TO SCALE

C1.10



- SEC. 465, 2" ASPHALT CONCRETE SURFACE COURSE
- SEC. 455, TACK COAT FOR INTERMEDIATE COURSE @ 0.05 - 0.07 GAL/S.Y.
- SEC. 460, 2 1/4" ASPHALT CONCRETE INTERMEDIATE COURSE
- SEC. 455, TACK COAT FOR INTERMEDIATE COURSE @ 0.05 - 0.07 GAL/S.Y.
- SEC. 460, 3" ASPHALT CONCRETE INTERMEDIATE COURSE
- SEC. 305, 11" - 1-1/4" DENSE-GRADED BASE CRUSHED LIMESTONE AGGREGATE
- SEC. 211, PREPARED AND COMPACTED SUBGRADE, TOP 12" CONDITIONED @ 95% COMPACTION OF STANDARD PROCTOR

NOTE:
1. ALL ITEMS SHOWN WITH A SECTION NUMBER WILL MEET DOT SPECIFICATIONS.

TYPICAL HEAVY-DUTY ASPHALT SECTION (ALT. BID)

DETAIL 4

SCALE: NOT TO SCALE

C1.10



WASTE MANAGEMENT

PROJECT: TRUCK MAINTENANCE FACILITY

GERMANTOWN, WI

SHEET TITLE: HARD SURFACE KEY PLAN

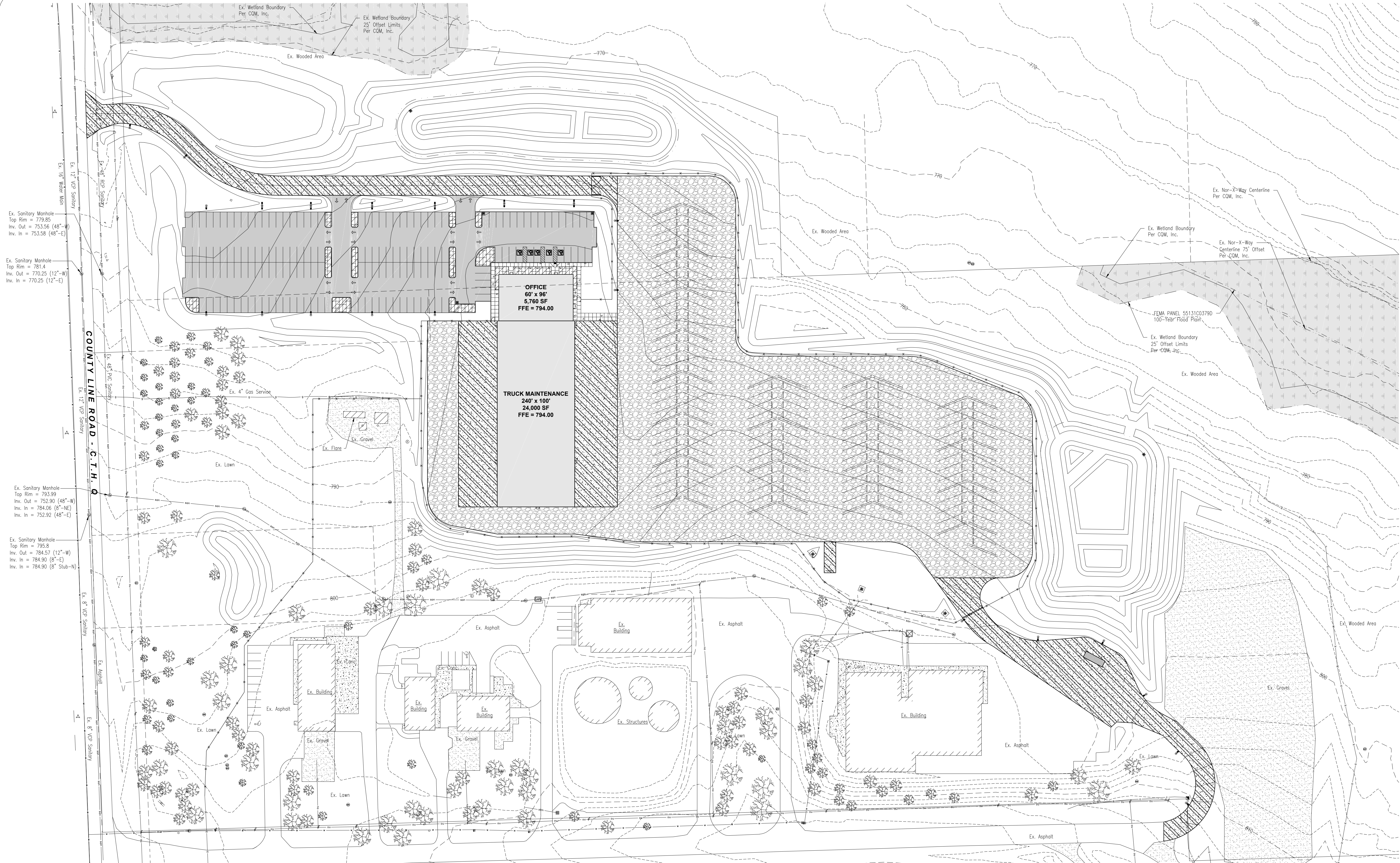
BASE BID

SHEET NO:

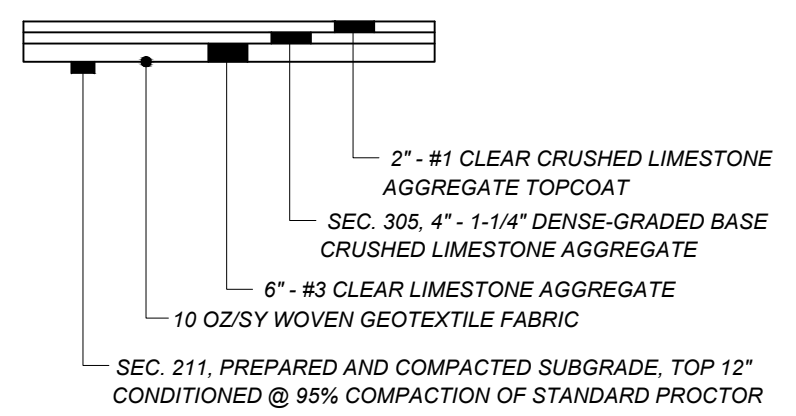
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JOB NO:
ENG-1465

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HARD SURFACE KEY PLAN ALT BID
Scale: 1" = 60'

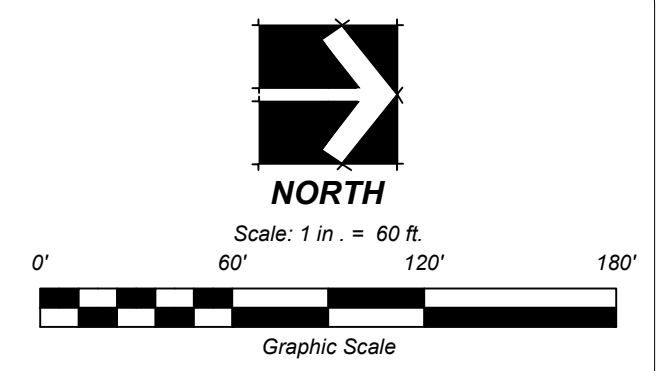


NOTE:
1. ALL ITEMS SHOWN WITH A SECTION NUMBER WILL MEET DOT SPECIFICATIONS.

TYPICAL HEAVY-DUTY AGGREGATE
PAVEMENT SECTION (ALT. BID)

DETAIL
SCALE: NOT TO SCALE

1
C1.11



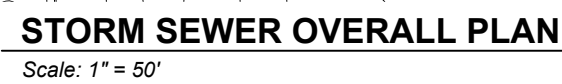
- LEGEND:**
- Proposed light-duty asphalt pavement, light-duty concrete pavement, see detail on this sheet C1.13
 - Proposed heavy-duty concrete pavement, heavy-duty asphalt pavement, see detail on sheet C1.13
 - Proposed heavy-duty aggregate pavement, see detail on this sheet
- SITE SURFACING AREAS:**
- Heavy-Duty Hard Surface Alt. - 65,270 SF
 - Light-Duty Hard Surface Alt. - 57,500 SF
 - Heavy-Duty Aggregate - 183,440 SF

REV	DATE	DESCRIPTION	APPROVED BY	CHECKED BY	SCALE	1" = 60'	CTR INT.	2"	APP BY

Diversified Engineering Inc.
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Fax: (330) 364-4431
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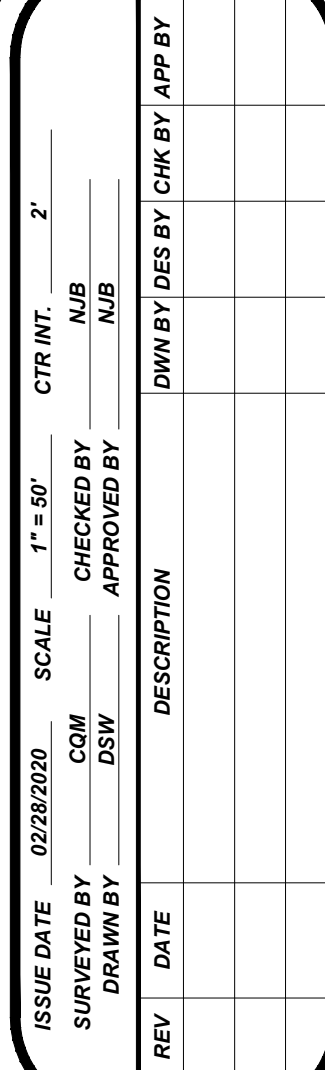
WASTE MANAGEMENT
PROJECT: TRUCK MAINTENANCE FACILITY
GERMANTOWN, WI
SHEET TITLE: HARD SURFACE KEY PLAN
ALT BID

SHEET NO:
C1.11
JOB NO:
ENG-1465



A. **STREET SWEEPING:** Streets directly adjacent to construction entrances and receiving traffic from the development area shall be cleaned daily to remove sediment tracked off-site.

B. **INTERNAL INSPECTION AND MAINTENANCE:** All controls on the development shall be inspected at least once every seven (7) calendar days and within 24 hours after any storm event greater than one-half (0.5) inch of rain per 24 hour period by the Owner.



WASTE MANAGEMENT

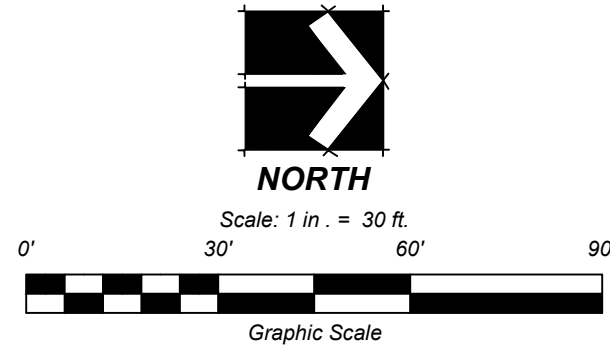
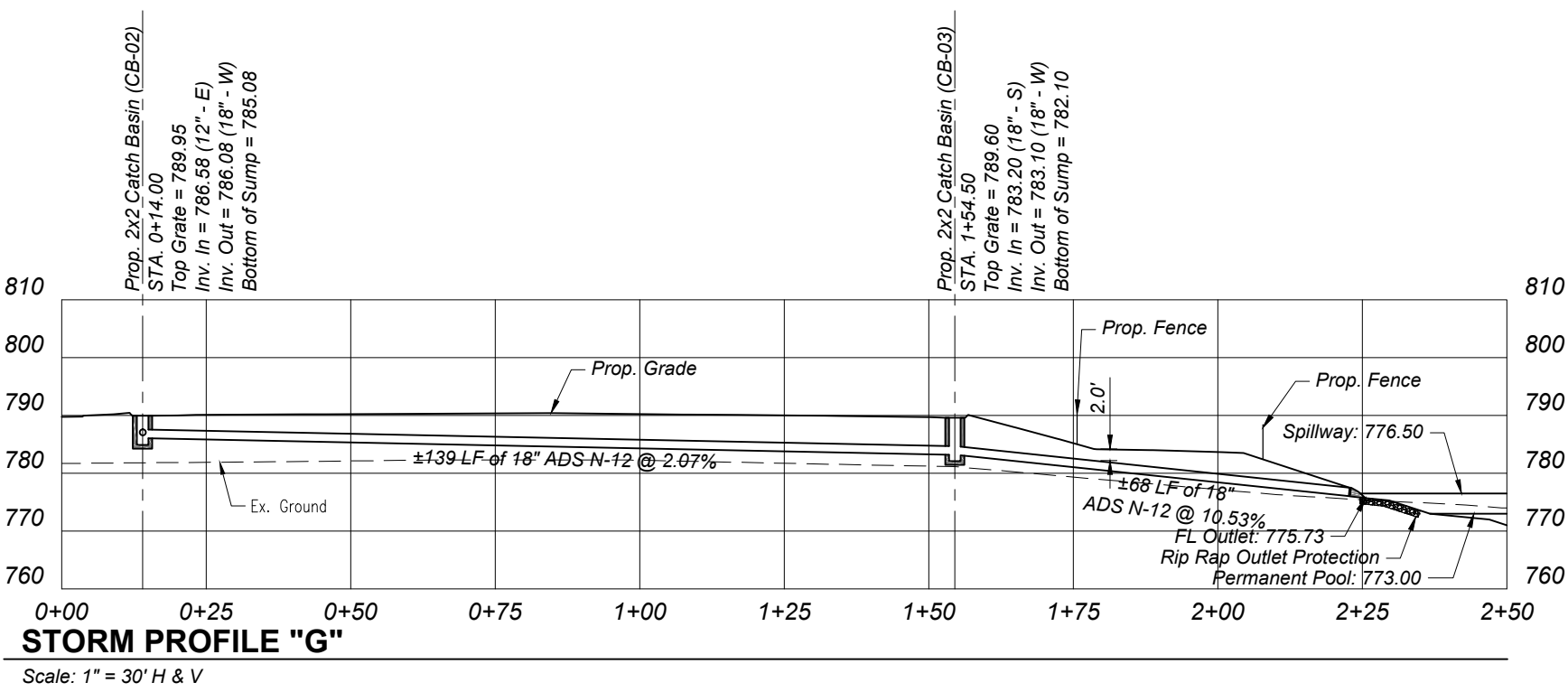
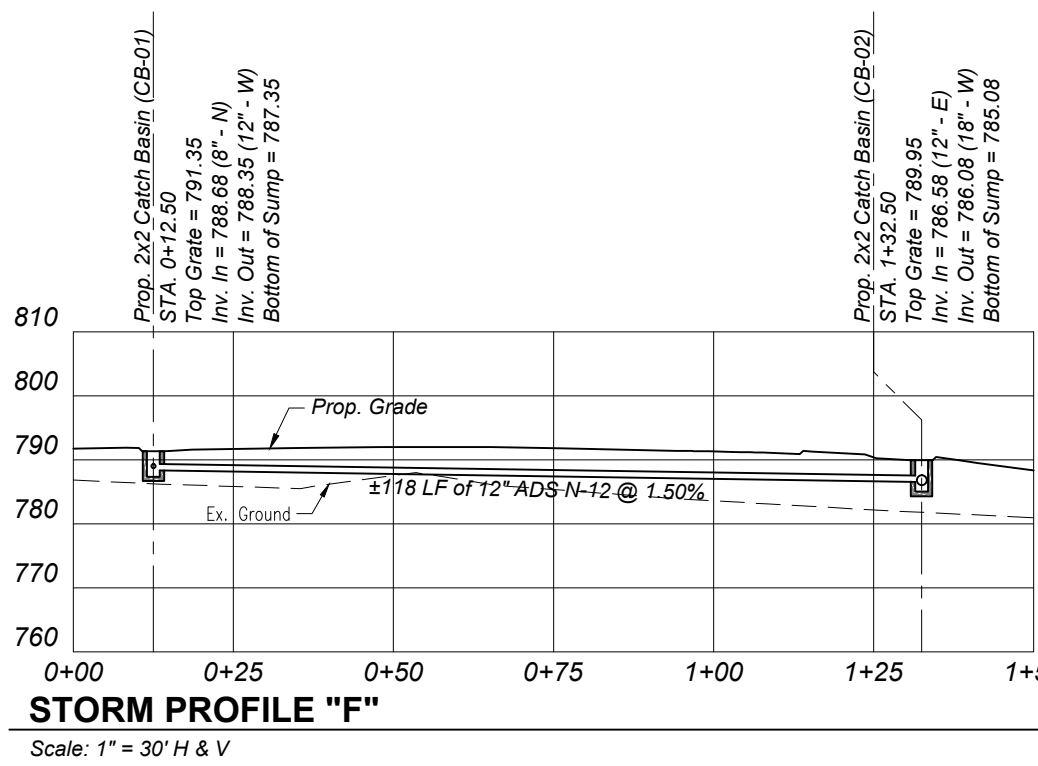
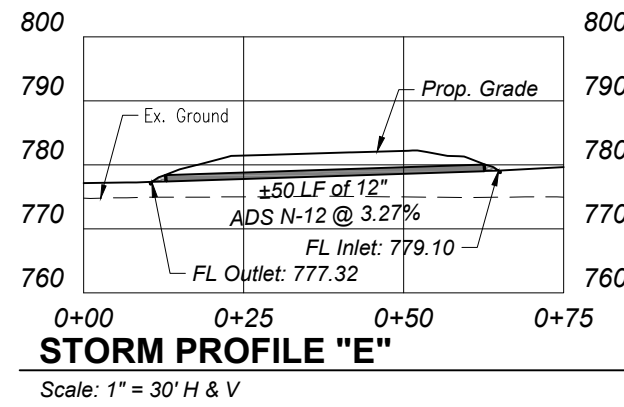
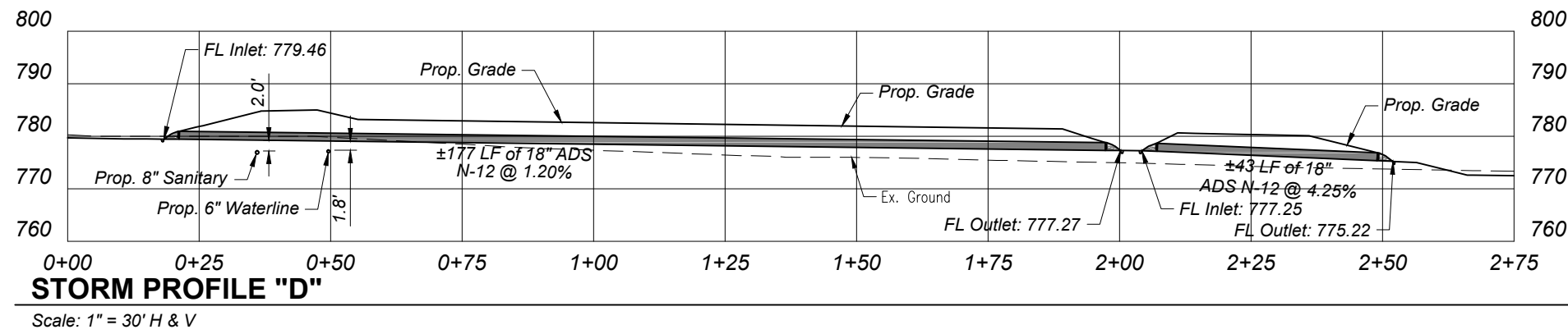
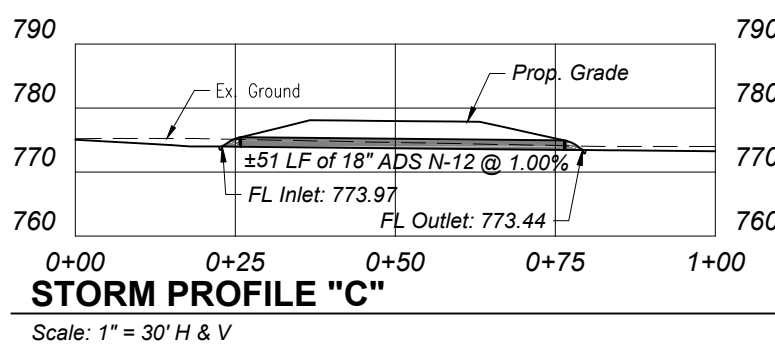
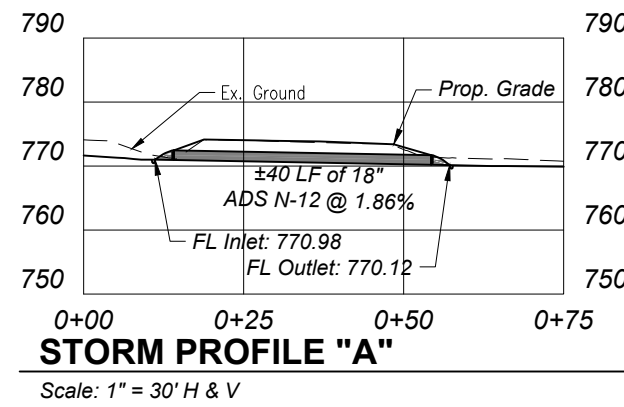
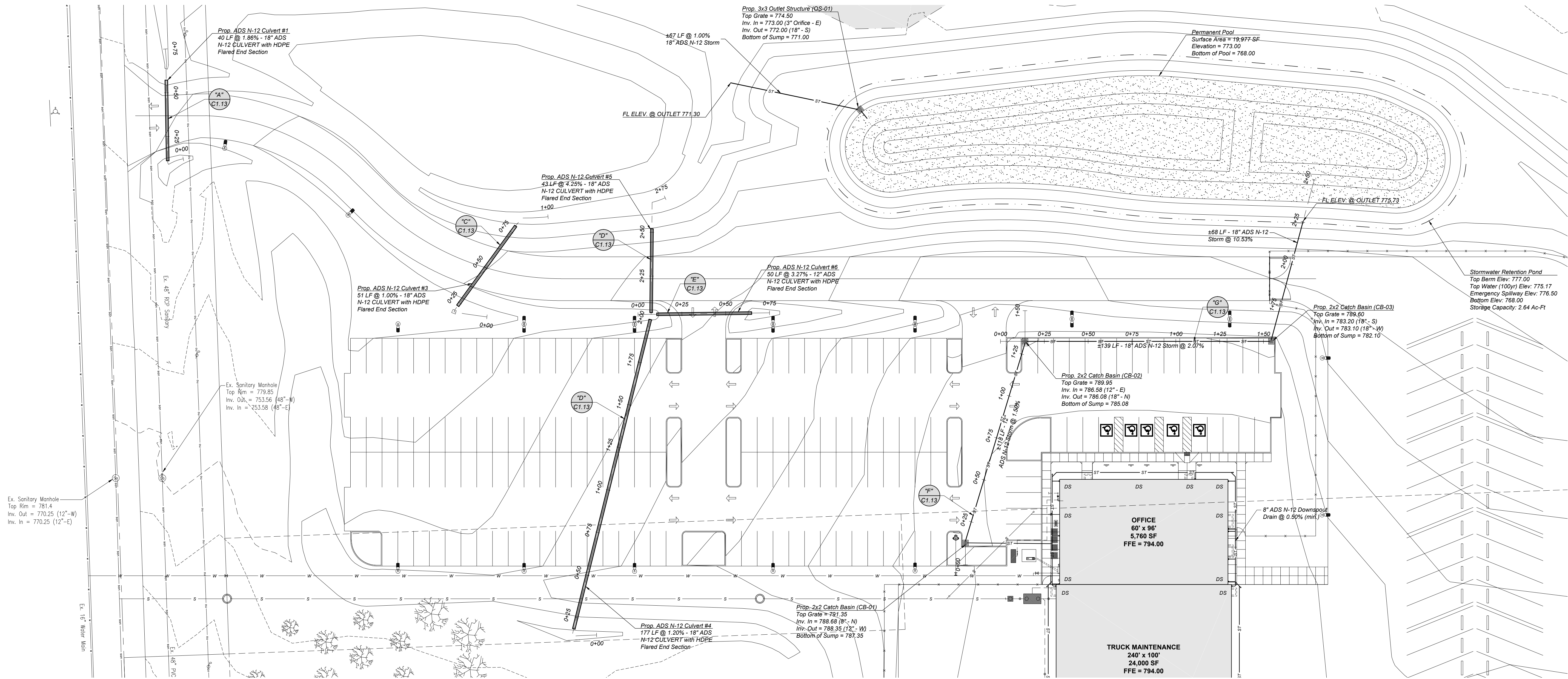
PROJECT: TRUCK MAINTENANCE FACILITY
GERMANTOWN, WI

SHEET TITLE: STORM SEWER OVERALL PLAN

C1.12

JOB NO:
ENG-1465

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GENERAL NOTES:

- All existing utilities are shown herein as reference only and are based on record of the various utility companies. Contractor is responsible for determining the exact locations and depths of all utilities prior to any construction activities.
- The contractor shall field verify the elevations and pipe material of existing piping prior to ordering any pre-cast structure.
- The contractor shall refer to architectural plans for exact location and size of downspouts.
- The Site Contractor shall coordinate locations of utilities provided by other trades not shown on this plan.
- Inlet and outlet elevations are to the interior flow line of pipe and does not account for pipe wall thickness.

REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY

Diversified Engineering Inc.
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Phone: (330) 364-4431
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www.derside-eng.com

WASTE MANAGEMENT
PROJECT: TRUCK MAINTENANCE FACILITY
GERMANTOWN, WI
SHEET TITLE: STORM SEWER
PLAN AND PROFILE

SHEET NO:
C1.13
JOB NO:
ENG-1465



Scale: 1 in. = 30

9

Graphic Scale

GENERAL NOTES:

- A. All existing utilities are shown herein as reference only and are based on record of the various utility companies. Contractor is responsible for determining the exact locations and depths of all utilities prior to any construction activities.
- B. The contractor shall field verify the elevations of existing material of existing piping prior to ordering any pre-cast structure.
- C. The contractor shall refer to architectural plans for exact location and size of downspouts.
- D. The Site Contractor shall coordinate locations of utilities provided by other trades not shown on this plan.
- E. Inlet and outlet elevations are to the interior flow line of pipe and does not account for pipe wall thickness.



Scale: 1" = 30'



Scale: 1" = 30' H & V



Scale: 1" = 30' H & V



Scale: 1" = 30' H & V

**Diversified
Engineering Inc.**

WASTE MANAGEMENT

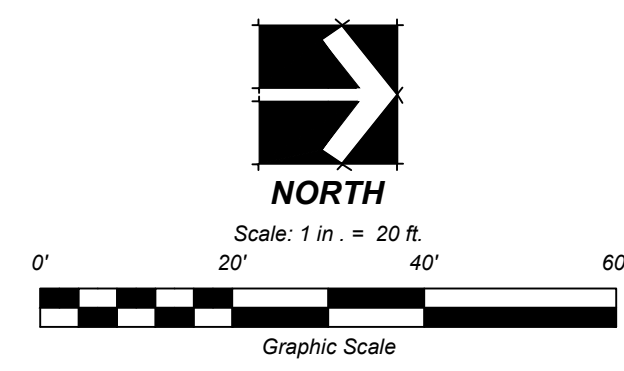
PROJECT: **TRUCK MAINTENANCE FACILITY**

GERMANTOWN, WI

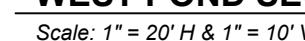
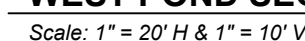
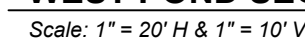
SHEET NO:

C1.14

JOB NO:
ENG-1465



Scale: 1" = 20'



- ## GENERAL NOTES:
- A. All existing utilities are shown herein as reference only and are based on record of the various utility companies. Contractor is responsible for determining the exact locations and depths of all utilities prior to any construction activities.
 - B. The contractor shall field verify the elevations are pipe material of existing piping prior to ordering any pre-cast structure.
 - C. The Contractor shall refer to architectural plans for exact location and size of dimensions.
 - D. The Site Contractor shall coordinate locations of utilities provided by other trades not shown on this plan.
 - E. Inlet and outlet elevations are to the interior flow line of pipe and does not account for pipe wall thickness.

ISSUE DATE	02/28/2020	SCALE	1" = 20'	CTR INT.	2'
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				CHK BY	APP BY



WASTE MANAGEMENT

PROJECT: TRUCK MAINTENANCE FACILITY

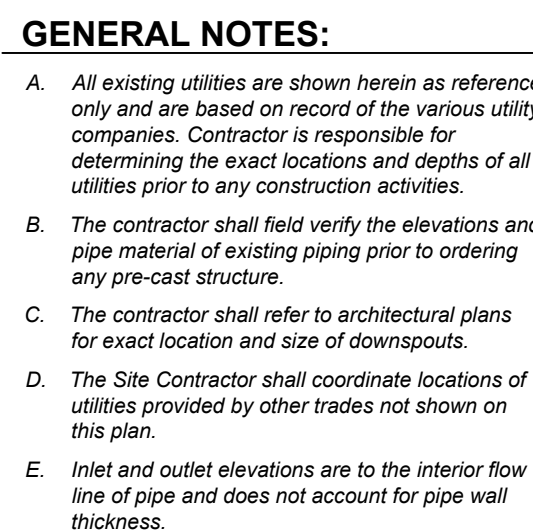
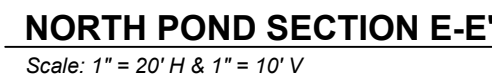
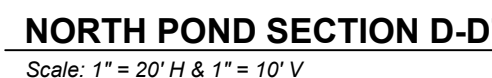
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WEST WET POND PLAN

SHEET NO:

C1.15

JOB NO:
ENG-1465

Environ. Monit. Assess. 2023, 277, 1000



**Diversified
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NEW PHILADELPHIA, OH 44663
Phone: (330) 364-1631
Fax: (330) 364-4031

SHEET NO:

JOB NO:
ENG-1465

WASTE STORAGE FACILITY
(No.)
Code 313

1a. Soils (Directly Below Liner) ^{Note 1}			
% Fines		≥ 20%	≥ 20%
Plasticity Index (PI)		≥ 7	—
Thickness (from bottom and sides)		≥ 2 ft.	≥ 3 ft.
Compaction of placed material		WI Spec 203 ^{Note 2}	WI Spec 203 ^{Note 2}
1b. Liner Cover Material Thickness			
Bottom		≥ 1 ft.	≥ 1 ft.
Side Slopes		≥ 2 ft.	≥ 2 ft.
Compaction of Placed Materials		WI Spec 203 ^{Note 2}	WI Spec 203 ^{Note 2}
2. Separation Distances			
Well Distance ^{Note 3}		≥ 250 ft.	≥ 250 ft.
Sinkholes		≥ 400 ft.	≥ 400 ft.
Subsurface Saturation (V.A.9)		≥ 4 ft.	≥ 5 ft.
Bedrock		≥ 4 ft.	≥ 5 ft.
3. Impoundment			
Inside Slope ^{Note 4}		3:1 or flatter	
4. Other			
Liner Protection	Agitation and Pumping Locations	Minimum dimension of 20 ft. wide x 30 ft. long x 4 in. thick concrete pad or sump in bottom and 20 ft. wide ramp or a 16 ft. wide ramp with 18 in. high curb to top of facility. GCL continues under the concrete pad or sump. Poured in place concrete slabs shall meet requirements of Section V.B.1.	
	- Scraping and Other Mechanical Means of Removing Solids and Sand	Sand bedding may be used in conjunction with a geosynthetic clay liner, but the design must include a method to remove sand from the waste stream before the waste is stored in the liner or the liner must be protected to allow mechanical removal of the sand. Poured in place concrete slabs shall meet requirements of Section V.B.1.	
GCL Material ^{Note 5}		Non-woven needle punched.	

Note 5: The liner shall be installed according to manufacturer's specifications and WI FOTG Construction Specification 203, Geosynthetic Clay Liner.



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CONSULTING ENGINEERS & SURVEYORS

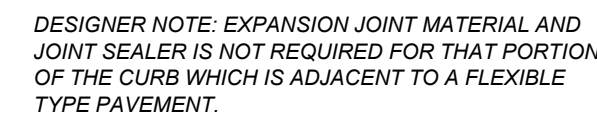
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Fax: (330) 364-4031
e-mail: de@div-eng.com
Web: www.div-eng.com

SHEET NO:

C1.17

JOB NO:
ENG-1465



STANDARD 6" CONCRETE CURB DETAIL

DETAIL

SCALE: NOT TO SCALE



DETAIL

SCALE: NOT TO SCALE



DETAIL

SCALE: NOT TO SCALE



DETAIL

SCALE: NOT TO SCALE



PAVEMENT MARKING INTERNATIONAL SYMBOL OF ACCESSIBILITY FOR PARKING STALLS

DETAIL

SCALE: NOT TO SCALE



DETAIL

SCALE: NOT TO SCALE



DETAIL

SCALE: NOT TO SCALE



DETAIL

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WASTE MANAGEMENT

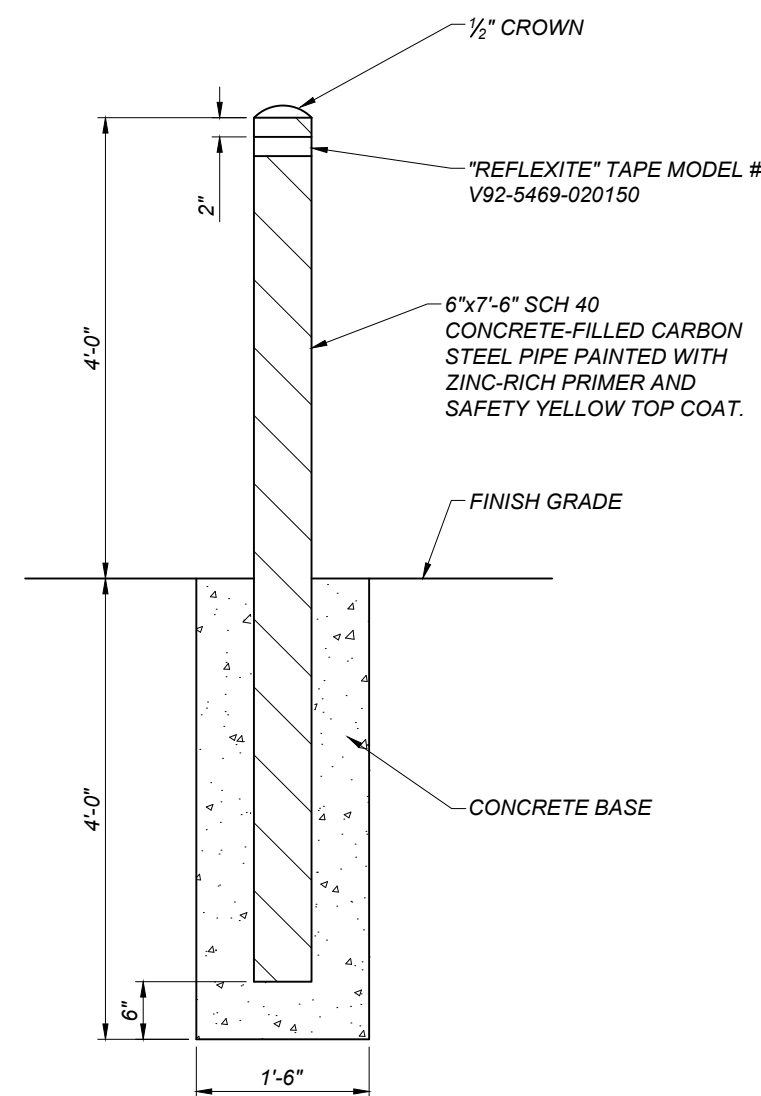
PROJECT: TRUCK MAINTENANCE FACILITY

SHEET TITLE:

SHEET NO:

C2.0

JOB NO:
ENG-1465

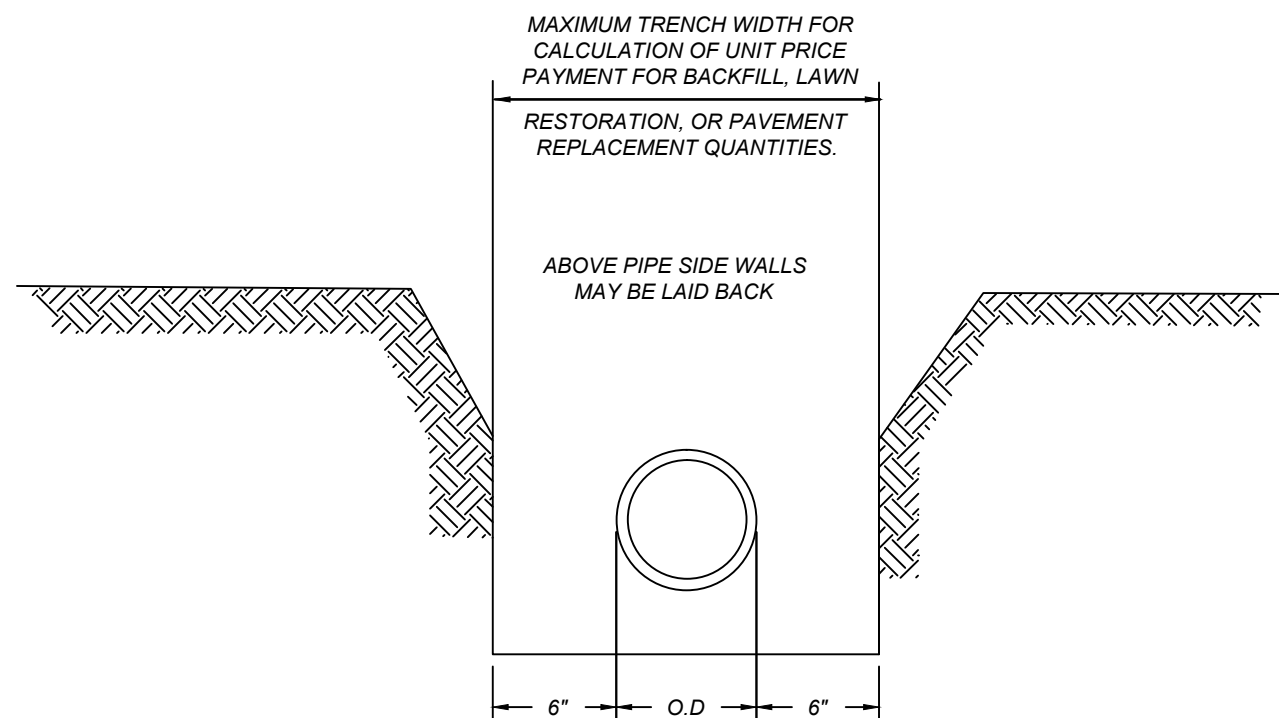


TYPICAL PIPE BOLLARD

DETAIL

SCALE: NOT TO SCALE

1
C2.1



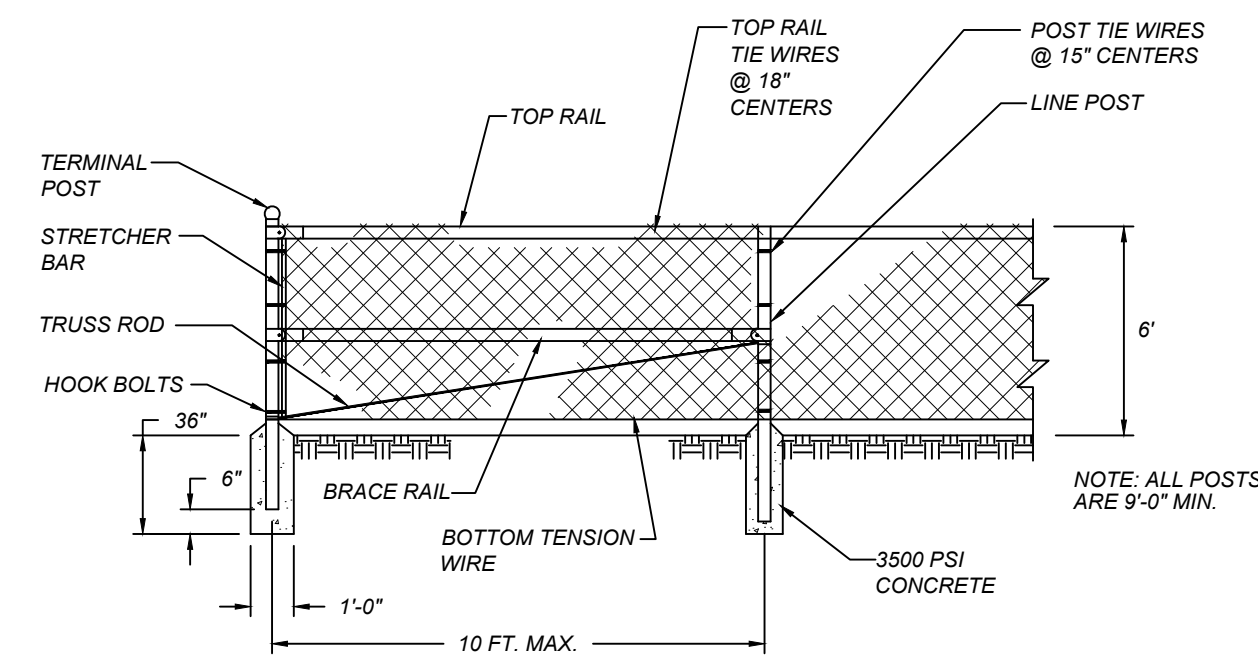
SINGLE PIPE TYPICAL TRENCH

DETAIL

SCALE: NOT TO SCALE

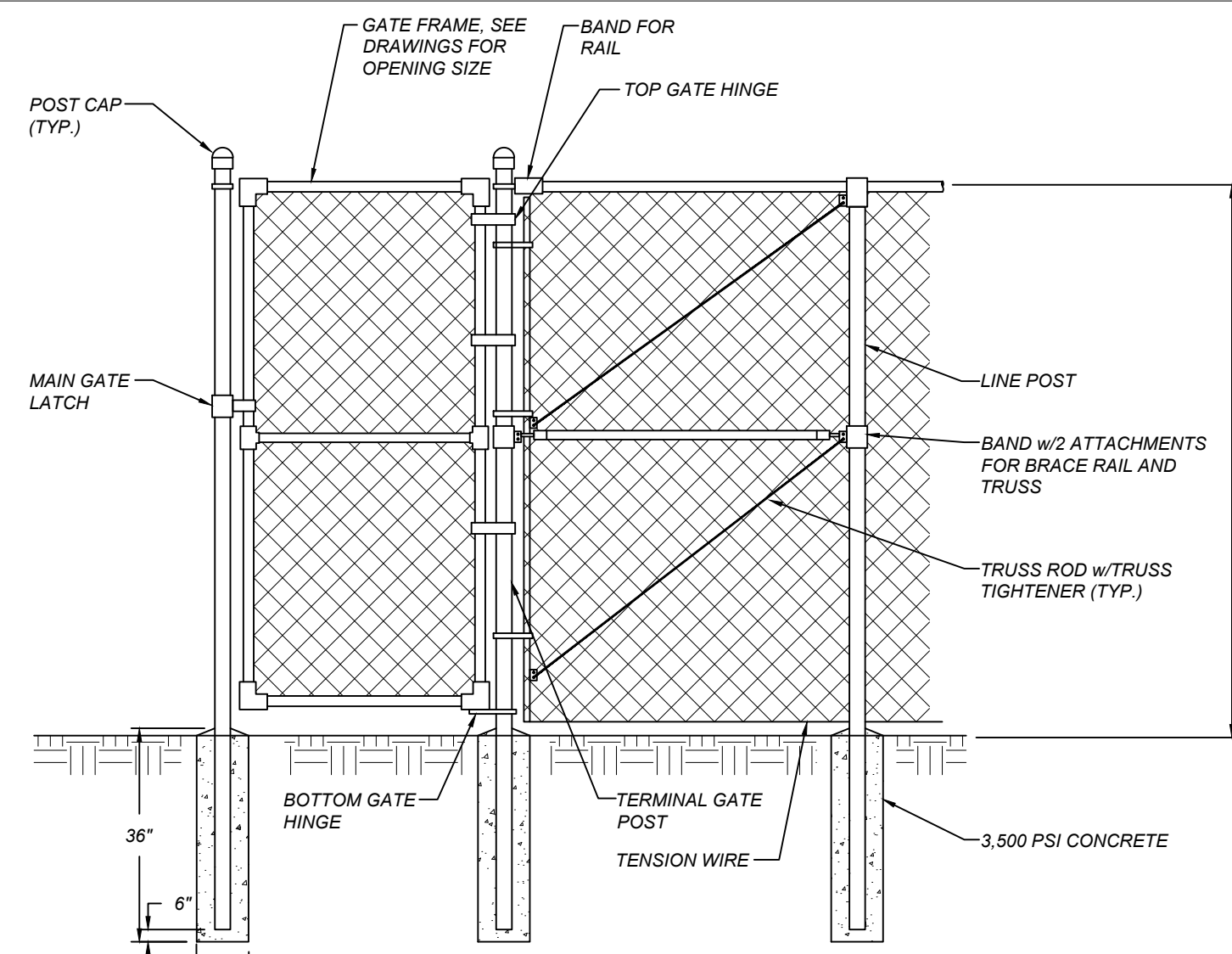
2
C2.1

- NOTES:
1. INCLUDE ANY COST ASSOCIATED WITH RESTORATION, REPAIR, AND REPLACEMENT, OUTSIDE THE ALLOWABLE TRENCH WIDTH IN THE COST OF WORK WITHIN THE ALLOWABLE TRENCH WIDTH.
 2. THE WIDTH OF THE ACTUAL TRENCH BELOW THE ELEVATION OF THE TOP OF THE PIPE IS LIMITED TO WIDTHS ALLOWED BY THE APPLICABLE ASTM STANDARD FOR THE TYPE OF PIPE BEING USED.

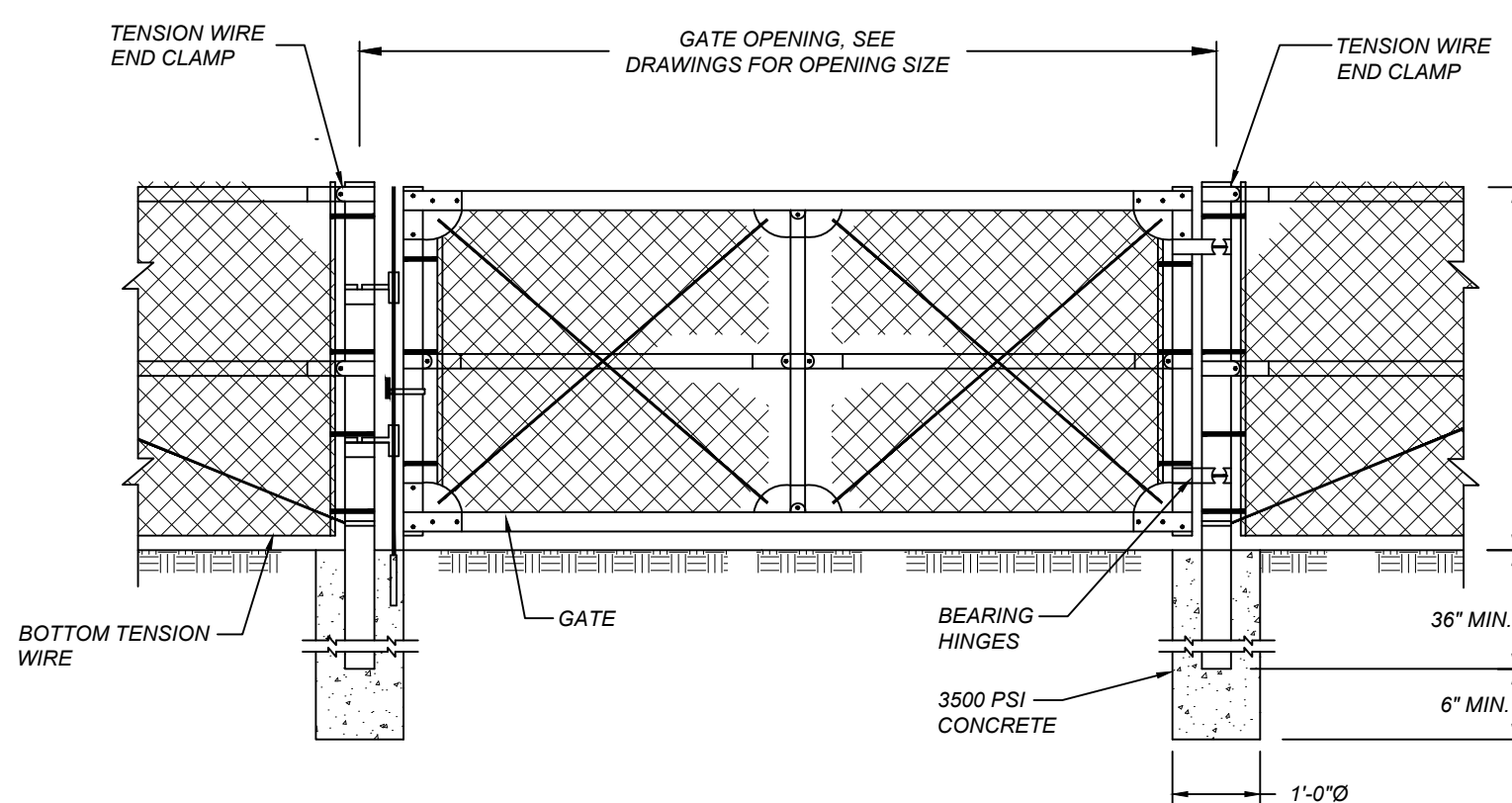


FENCE DETAILS
NOT TO SCALE

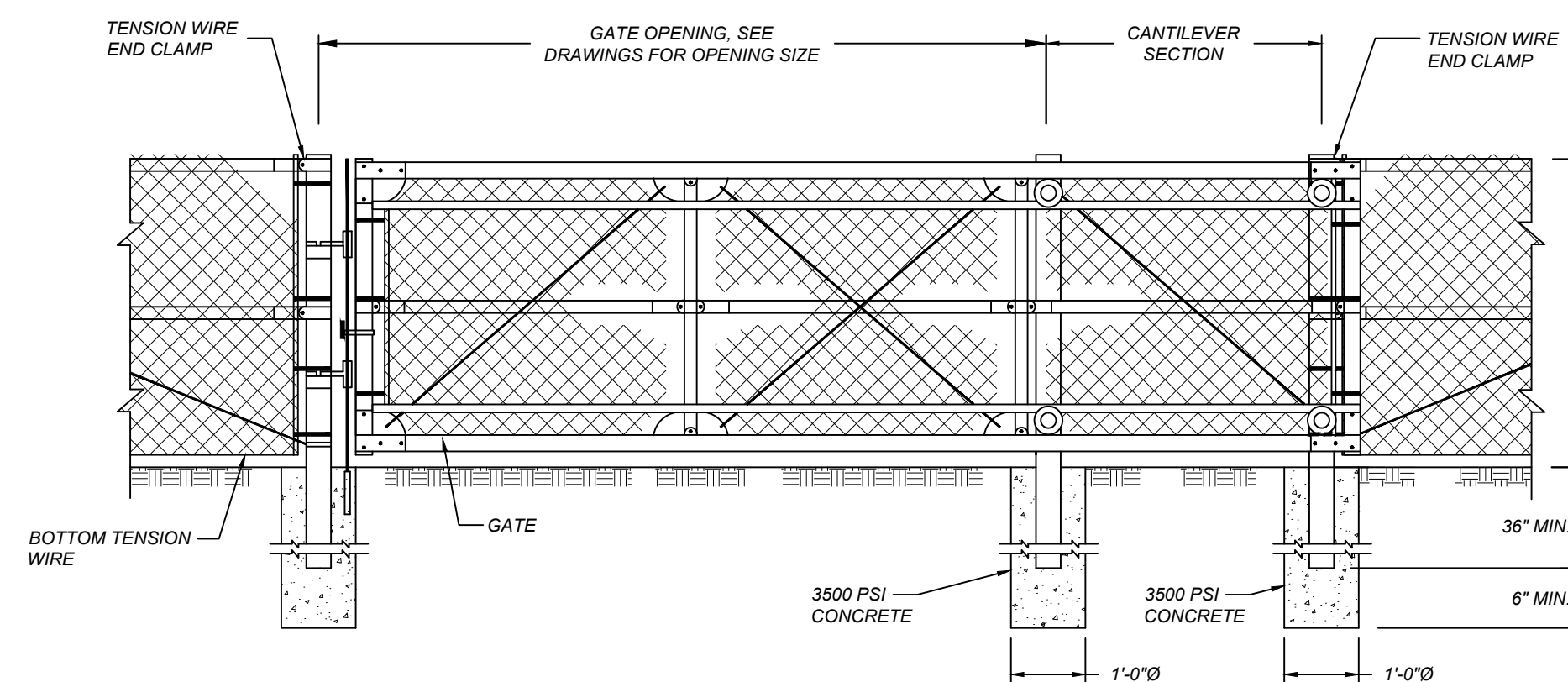
- CONSTRUCTION NOTES:
1. MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE MANUFACTURER'S SPECIFICATIONS.
 2. ALL POSTS SHALL BE INSTALLED VERTICALLY. WHERE POSTS ARE INSTALLED ON AN INCLINED SURFACE, THE ANGLE OF THE POST SHALL BE ADJUSTED SO THAT THE POST WILL BE VERTICAL.
 3. THE FENCING SHALL BE #11 GAGE FENCE FABRIC, STANDARD 2-INCH CHAIN LINK DIAMOND MESH, MAXIMUM CLEAR SPACING AT BOTTOM IS 2".
 4. CONTRACTOR TO CONFIRM ALL SAFETY SPECIFICATIONS PRIOR TO FABRICATION / INSTALLATION OF FENCE, GATES AND APPURTENANCES.



MAN GATE DETAIL
NOT TO SCALE

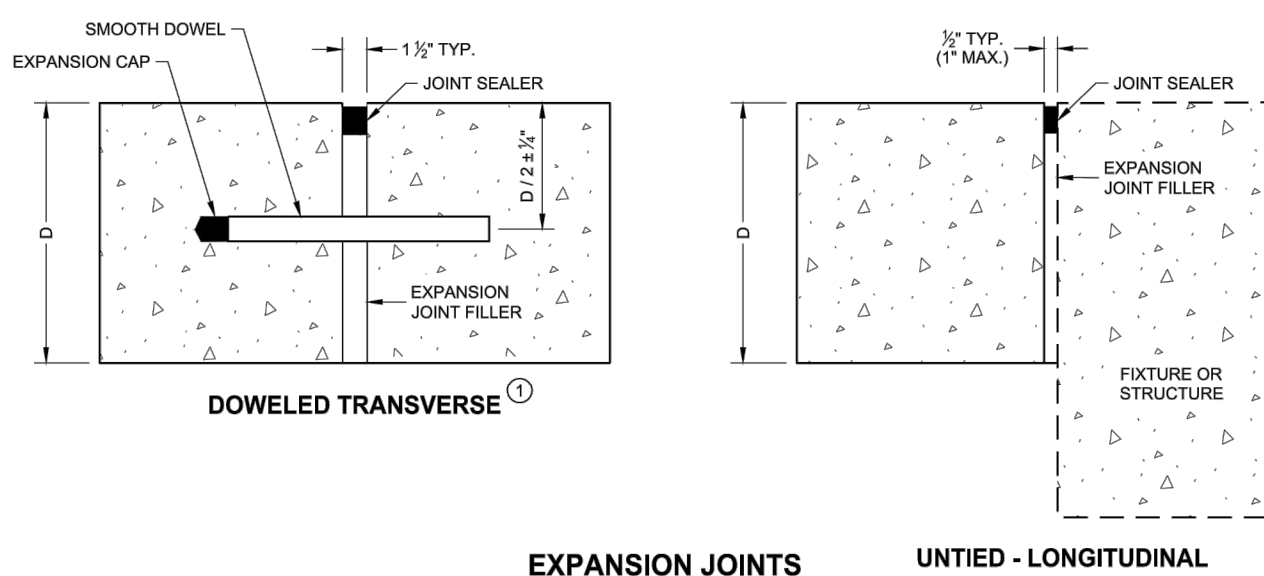


SWING GATE DETAIL
NOT TO SCALE



SLIDE GATE DETAIL
NOT TO SCALE

SDD 13C18-c Concrete Pavement Joint Types



EXPANSION JOINTS UNTIED - LONGITUDINAL

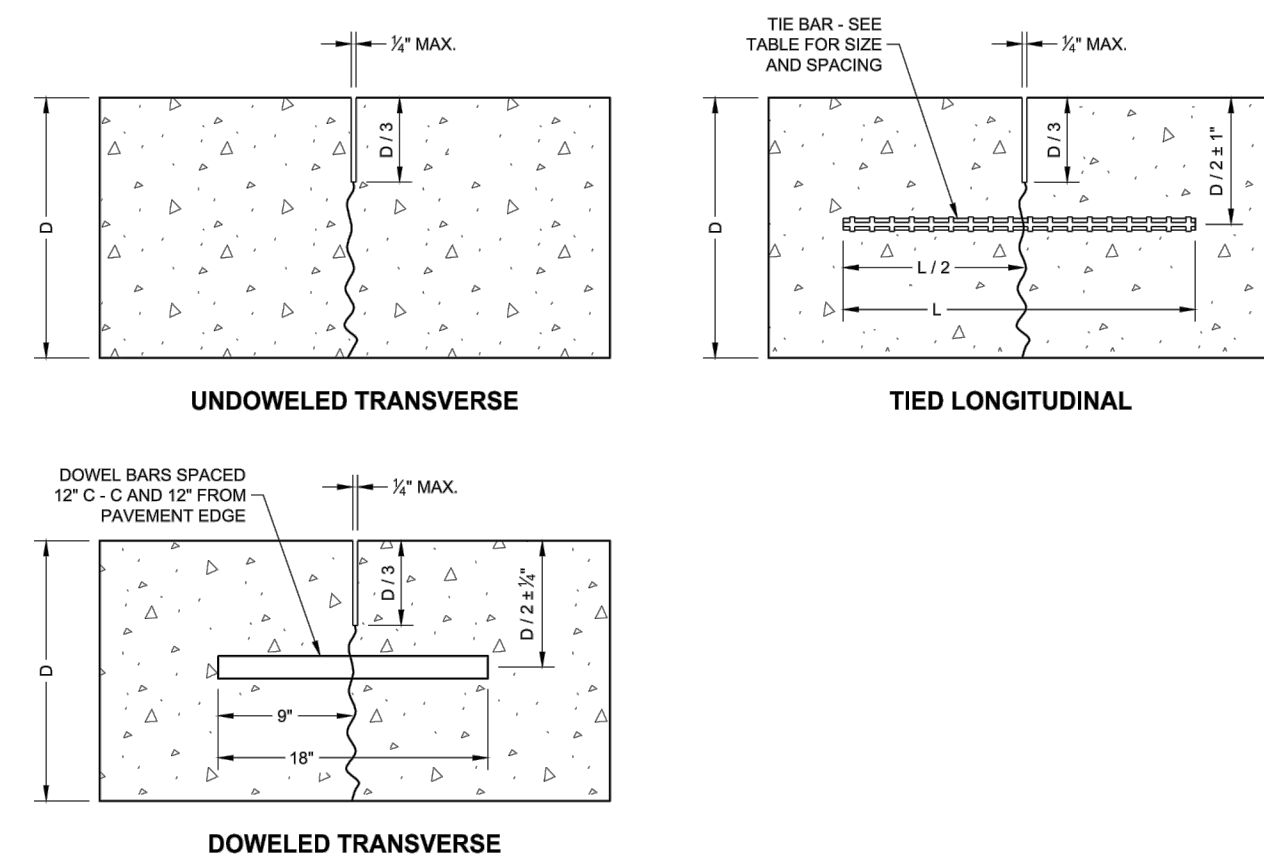
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

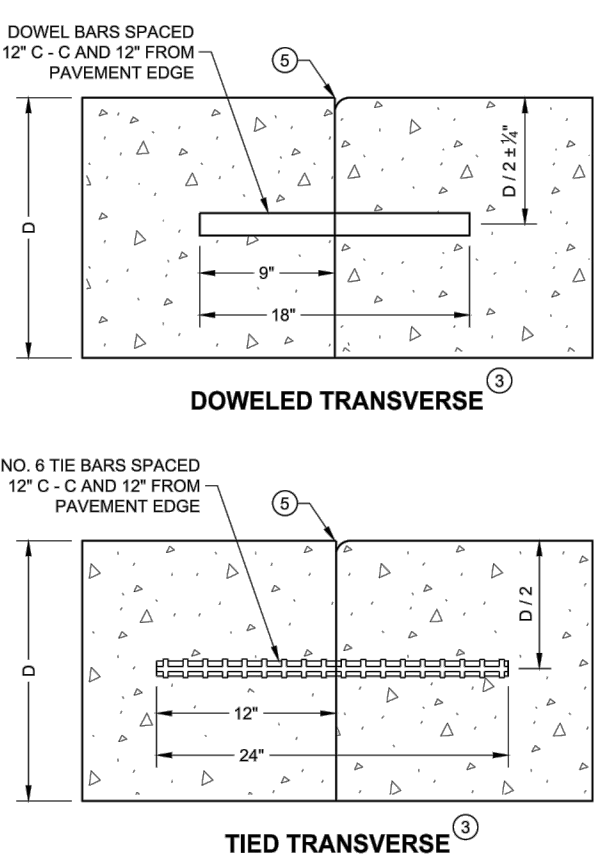
** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN THE BARS WILL BE 30" AT TRANSVERSE JOINTS.

GENERAL NOTES

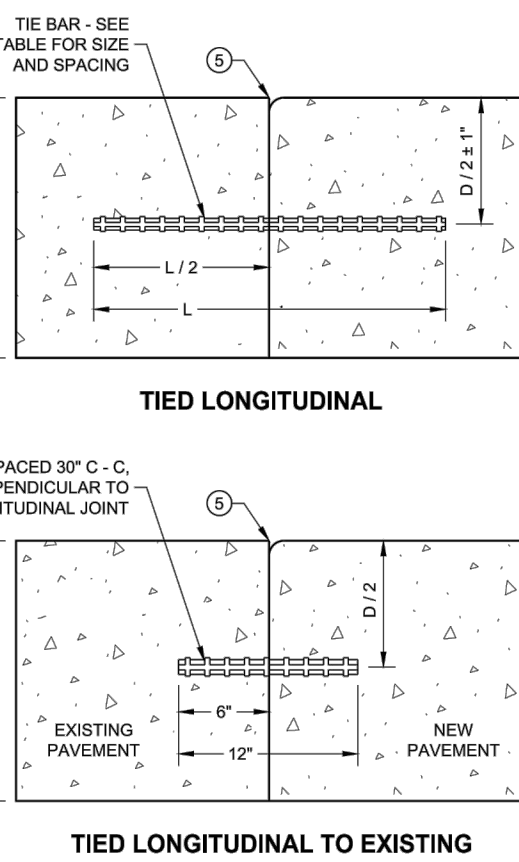
1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH SDD 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.
4. CONSTRUCTION JOINTS CAN BE FORMED OR SAWED.
5. IF JOINT IS FORMED, PROVIDE A 1/2" RADIUS.
6. ANCHOR THE BARS INTO DRILLED HOLES WITH AN EPOXY.



CONTRACTION JOINTS



CONSTRUCTION JOINTS



TIED LONGITUDINAL TO EXISTING

CONCRETE PAVEMENT JOINT TYPES

DETAIL

SCALE: NOT TO SCALE

4
C2.1

CONCRETE PAVEMENT JOINT TYPES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

TYPICAL CHAIN LINK FENCE & ACCESS GATE

DETAIL

SCALE: NOT TO SCALE

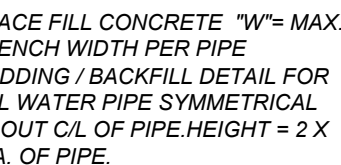
3
C2.1

ISSUE DATE		02/28/2020		SCALE		N.T.S.		CTR INT.			
SURVEYED BY		COM		CHECKED BY		NJB		NJB			
DRAWN BY		DSW		APPROVED BY							
REV		DATE		DESCRIPTION		DWN BY		DES BY		CHK BY APP BY	

Diversified Engineering Inc.
CONSULTING ENGINEERS & SURVEYORS
1500 PARKWAY DRIVE, SUITE 200
NEW PHILADELPHIA, OH 44663
PH: (330) 364-4431
FAX: (330) 364-4431
WWW.DIVERSIFIED-ENG.COM

WASTE MANAGEMENT
PROJECT: TRUCK MAINTENANCE FACILITY
GERMANTOWN, WI
SHEET TITLE: GENERAL DETAILS

SHEET NO:
C2.1
JOB NO:
ENG-1465

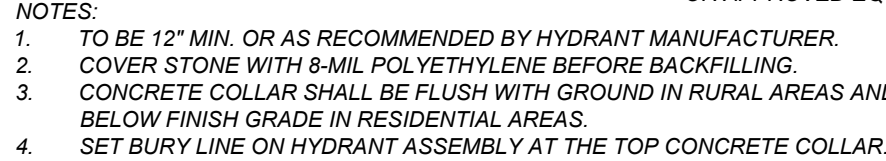


L & H DIMENSIONS ARE IN INCHES

NOTE: USE FILL CONCRETE. DESIGN BASED
ON A WORKING PRESSURE OF 125 PSI
AND A SOIL BEARING OF 3000 LB./SQ. FT.

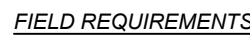
DETAIL

SCALE: NOT TO SCALE



DETAIL

SCALE: NOT TO SCALE



FIELD REQUIREMENTS

- A twenty-four (24) hour notice is required for inspection of all fittings, valves, and water main prior to installation.
- Water main or lateral installation may not begin until footings of building are installed.
- When installing a fireline only, a licensed sprinkler fitter is required to be on site.
- All valves to be operated by Water Utility personnel only.

TAPPING

- Forty-eight (48) hour notice is required prior to a tap. Contact the Water Utility at 262-532-4900 by 6:00 a.m. on day of tap to confirm tap date due to possible cancellation, and so saving and throttling of water mains can be done in a timely manner as to avoid any damage to the utility facilities.
 - The Water Utility requires a new tapping bit.
 - Tapping saddles of four inch (4") thru twenty inch (20") will require testing before tapping by filling test plug with water and pressurized with air to eighty (80) PSI.
 - All taps require tapping saddles. (See Material Specification List #9).
- NOTE:** Contractor to notify Water Utility for inspection before backfilling of all taps.

UNDERGROUND REQUIREMENTS

- All material must be inspected before backfilling. Failure to do so will require you to dig up for inspection.
- All water main and/or laterals must be installed at minimum six feet (6') bury depth.
- Plastic wrap on all fittings and valves boxes required.
- Fittings extending through a wall must be rodbed back to the last twenty foot (20') bell clamp or wall clamp required.
- (See Material Specification List #5).
- Risers must be ductile iron only.
- No extensions on risers below grade.
- Concrete buttress required behind all bends.
- Megalugs and rods are required on spool piece.
- Ten (10) gauge solid tracer wire required from point of connection to inside.

PRESSURE TESTING

- Twenty-four (24) hour prior notification for a pressure test.
 - A fireline test must be pumped up to test pressure by 12:45 p.m. the day of test.
 - All mains four inch (4") thru twenty inch (20") require a 200 PSI pressure test for two (2) hours.
 - No leakage test allowed.
 - Only hydrostatic tests will be accepted.
 - Only liquid filled gauge rated for over 200 PSI will be accepted. Gauge must be on tested portion separate from pump.
- NOTE: Water Utility personnel must be present to witness test.

FILLING OF WATER MAINS

- Call the Water Utility office at (262) 532-4800 to arrange for all valving.
- Water for filling, testing and flushing will be supplied only with permission of the Water Utility

FLUSHING

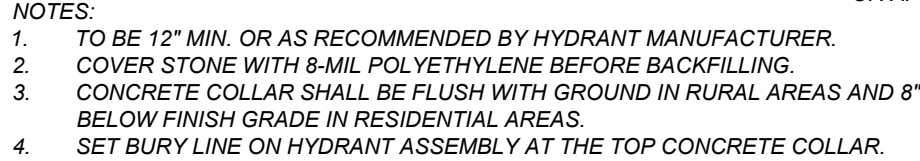
- Contact Water Utility to set up appointment time for flush. Water Utility will then coordinate with Fire Department.
- All water mains four (4") inch thru twenty (20") inch are required to have a line flush to remove debris from line per NFPA 24.
- No hook-up to the riser until a witnessed flush is completed and a safe sample has been returned.
- It is the contractor's responsibility for a water sample to be taken at time of flushing.
- Fire Department personnel must be present with Water Utility personnel during flushing.
- NFPA form 9-2.1 to be filled out and submitted at this time.

Hose Size requirements for flushing.

Per NFPA Table 9-1:

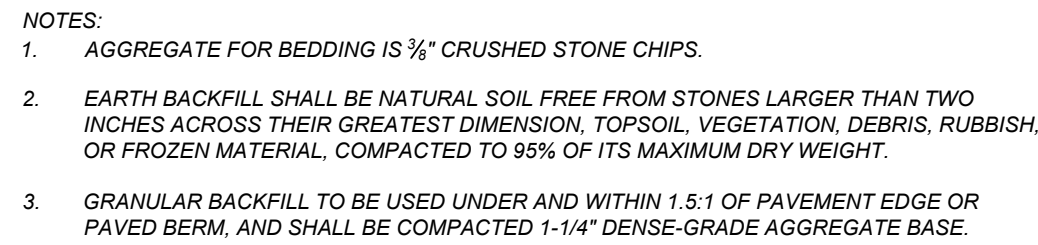
DETAIL

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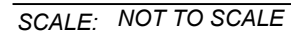
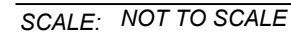
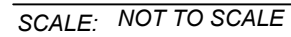


DETAIL

SCALE NOT TO SCALE



SCALE: NOT TO SCALE



15. FIRELINE DOUBLE CHECK VALVE

- Watts 706 DCDA

JOB NO:
ENG-1465

DOWNSPOUT ADAPTOR DETAIL

DETAIL

SCALE: NOT TO SCALE

1
C2.5

RIPRAP STONE OUTLET PROTECTION

DETAIL

SCALE: NOT TO SCALE

4
C2.5

TYPICAL 2' BASE RIP RAP CHANNEL

DETAIL

SCALE: NOT TO SCALE

6
C2.5

NOTES

1. AGGREGATE FOR BEDDING IS 3/4" CRUSHED STONE CHIPS.
2. EARTH BACKFILL SHALL BE NATURAL SOIL FREE FROM STONES LARGER THAN TWO INCHES ACROSS THEIR GREATEST DIMENSION, TOPSOIL, VEGETATION, DEBRIS, RUBBISH, OR FROZEN MATERIAL, COMPACTED TO 95% OF ITS MAXIMUM DRY WEIGHT.
3. GRANULAR BACKFILL TO BE USED UNDER AND WITHIN 1:1 OF PAVEMENT EDGE OR PAVED BERM, AND SHALL BE COMPACTED 1-1/4" DENSE-GRADE AGGREGATE BASE.

**PIPE BEDDING / BACKFILL DETAIL
FOR ALL STORM SEWER PIPE**

DETAIL

SCALE: NOT TO SCALE

2
C2.5

TYPICAL CATCH BASIN CONCRETE APRON

DETAIL

SCALE: NOT TO SCALE

TYPICAL CULVERT FLARED END SECTION

DETAIL

SCALE: NOT TO SCALE

7
C2.5

- NOTES:**
1. PRECAST CONCRETE CATCH BASINS ARE SHOWN AS NOTED HEREIN.
 2. ALL CONCRETE SHALL CONFORM TO DOT SECTION 602 CLASS 'C' (4000 PSI).
 3. CONCRETE CHANNEL SHALL BE POURED TO THE BOTTOM OF THE CATCH BASIN USING CLASS 'C' CONCRETE. THE CHANNEL SHALL TAPER FROM 9" THICKNESS TO 2" MIN. THICKNESS AT THE LOWEST SEWER INVERT AND SHALL BE FINISHED WITH A SMOOTH SURFACE.
 4. THE EXCAVATED AREA 4'x8'x18" SHALL BE BACKFILLED WITH DOT 608.2 COMPACTED IN 8" LIFTS. NO FOUNDRY SAND OR SLAG PERMITTED.
 5. WHERE CATCH BASIN WILL BE LOCATED WITHIN CROWSWALK, AT ADA RAMP, OR IN DESIGNATED BIKE LANE, CASTING SHALL BE EAST JORDAN (FROM WORKS (EJW) 5250 INLET WITH V-S62200 ADA GRATE OR NEEHAW (N) 3405 INLET WITH TYPICAL ADA GRATE OR SECTION 602 CLASS 'C' APPLICABLE GRATE. ALL CASTING SHALL BE SUCH THAT THE LONG OPENINGS ARE PERPENDICULAR TO NORMAL DIRECTION OF BICYCLE TRAFFIC FLOW. IN OTHER LOCATIONS, CASTING SHALL BE EJW 5250 OR NEEHAW R-3405 INLET AND STANDARD GRATE MAY BE USED. ALL CASTING SHALL BE FINISHED WITH A SMOOTH SURFACE.
 6. ALL CASTING SHALL BE FINISHED WITH A SMOOTH SURFACE. THE LETTERING AND LOGO SHALL BE RAISED OR RECESSED AND INTEGRAL WITH THE CASTING. ALTERNATE NOTATION OR LOGO IS SUBJECT TO CITY APPROVAL.
 7. ALL OPENINGS AND KNOCKOUTS FOR INLET AND OUTLET PIPINGS SHALL BE FASHIONED NEATLY. ALL ANGULAR SPACE SHALL BE FILLED WITH CEMENT GROUT, BRICK AND MORTAR, OR CLASS 'C' CONCRETE.

- PRECAST CONCRETE CATCH BASINS ARE ACCEPTABLE AND SHALL BE CONSTRUCTED PER THIS DRAWING AND THE FOLLOWING SPECIFICATIONS:
1. THE PRECAST UNIT SHALL CONFORM TO DOT SECTION 611.2.
 2. PRECAST WALLS AND BOTTOM SHALL HAVE A MINIMUM THICKNESS OF 6".
 3. STACKED PRECAST SECTIONS MUST HAVE A TONGUE/GROOVE JOINT AND A BUTYL SEALANT.

2x2 CATCH BASIN

DETAIL

SCALE: NOT TO SCALE

3
C2.5

STORM SEWER SPECIFICATIONS

1. ALL PROPOSED STORM SEWERS SHALL MEET THE REQUIREMENTS OF DOT SECTION 608 FOR CLASS IIIA STORM SEWERS. STORM SEWERS LOCATED WITHIN THE LIMITS OF OR WITHIN A 1:5 SLOPE OF EXISTING AND/OR PROPOSED ROADWAYS, PARKING AREAS, BUILDINGS, SIDEWALKS, AND/OR DRIVES SHALL HAVE GRANULAR BACKFILL. ALL OTHER STORM SEWERS MAY HAVE NON-GRANULAR BACKFILL.
2. THE CONTRACTOR SHALL SUBMIT THE WRITTEN INSTALLATION PLAN 15 DAYS BEFORE ANY CONDUIT OR DRAINAGE STRUCTURE WORK BEGINS.
3. ALL PROPOSED STORM SEWER MANHOLES SHALL BE PER DETAILS 1.2, SHEET C2.2.
4. ALL CATCH BASINS SHALL BE 2X2' PRE-CAST BASINS WITH E/CDC 5250 FRAME AND M3 GRATE

PART #	PIPE SIZE	A	B(MAX)	H	L	W
1015NP	10 in (250 mm)	3.8 in (95 mm)	10.0 in (254 mm)	6.5 in (165 mm)	28.0 in (711 mm)	34.5 in (876 mm)
1215NP	12 & 15 in (300 & 375 mm)	6.5 in (165 mm)	10.0 in (254 mm)	6.5 in (165 mm)	29.0 in (635 mm)	29.0 in (737 mm)
1810NP	18 in (450 mm)	7.5 in (191 mm)	15.0 in (381 mm)	6.5 in (165 mm)	32.0 in (813 mm)	35.0 in (889 mm)
2410NP	24 in (600 mm)	7.5 in (191 mm)	18.0 in (457 mm)	6.5 in (165 mm)	36.0 in (914 mm)	45.0 in (1143 mm)
3015NP	30 in (750 mm)	7.5 in (191 mm)	12.0 in (305 mm)	8.6 in (218 mm)	58.0 in (1473 mm)	63.0 in (1600 mm)
3615NP	36 in (900 mm)	7.5 in (191 mm)	25.0 in (635 mm)	8.6 in (218 mm)	58.0 in (1473 mm)	63.0 in (1600 mm)

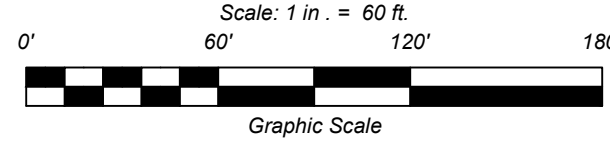
NOTE: ALL DIMENSIONS ARE NOMINAL

 4DS ADVANCED DRAINAGE SYSTEMS, INC.	DRAWING #:	6070	
	DRAWN BY:	JCB	01.17.01
	APPROVED BY:	JCB	06.28.01
	REVISIONS:	TJR	6/7/2011



- A. **STREET SWEEPING:** Streets directly adjacent to construction entrances and receiving traffic from the development area shall be cleaned daily to remove sediment tracked off-site.
- B. **INTERNAL INSPECTION AND MAINTENANCE:** All controls on the development shall be inspected at least once every seven (7) calendar days and within 24 hours after any storm event greater than one-half (0.5) inch of rain per 24 hour period by the Owner.
- C. **SEEDING AND MULCHING:** All disturbed areas shall be permanently seeded upon completion of grading activities.
- D. **All erosion and sediment control BMPs shown on plan are for reference and are to be field modified as required to meet, at minimum, all local, state, and federal regulations governing such operations.**

1. Minimize open area by phasing or sequencing construction and preserving existing vegetation where possible.
2. Divert storm water away from disturbed or exposed areas when possible.
3. Install BMPs to control erosion and sediment and manage storm water.
4. Inspect the site regularly and properly maintain BMPs, especially after rainstorms.
5. Revise the plan as site conditions change during construction and improve the plans if BMPs are not effectively controlling erosion and sediment.
6. Keep the construction site clean by putting trash in trash cans, keeping storage bins covered, and preventing or removing excess sediment on roads and other impervious surfaces.



 Drainage Area
 Longest Flow Path
 Overland Flow Path
 Wetland Boundary 25' Offset, per
 CSM performed by CQM, Inc.

ISSUE DATE	02/28/2020	SCALE	1" = 60'	CTR INT.	2'
SURVEYED BY	COM	CHECKED BY	NJB		
DRAWN BY	DSW	APPROVED BY	NJB		
REV	DATE	DESCRIPTION	DWN BY	ISS BY	CHK BY



WASTE MANAGEMENT

PROJECT: TRUCK MAINTENANCE FACILITY
GERMANTOWN, WI

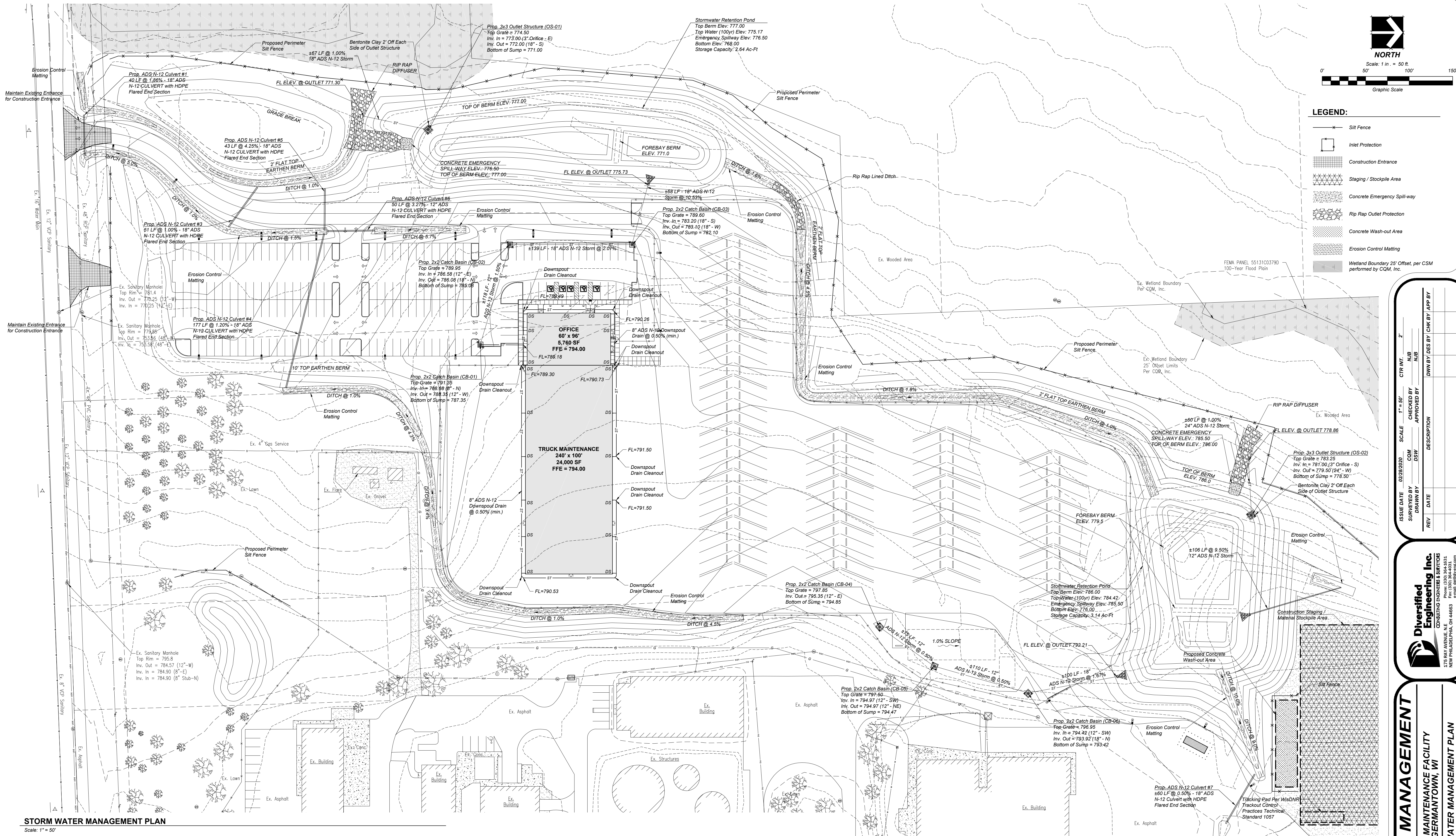
SHEET TITLE: STORM WATER MANAGEMENT
DRAINAGE MAP

SHEET NO:

C3.0

JOB NO:
ENG-1465

Z:\Projects\2023\Storm Water Management\DWG\Storm Water Management.dwg, 2/28/2023 10:17 AM



STORM WATER MANAGEMENT PLAN

Scale: 1" = 50'

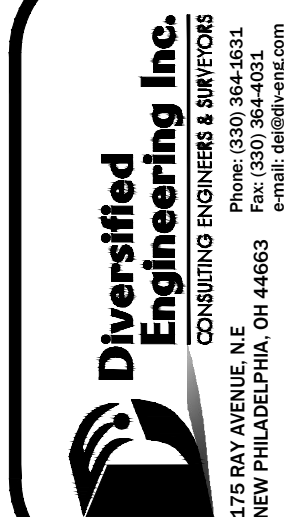
GENERAL NOTES:

- STREET SWEEPING:** Streets directly adjacent to construction entrances and receiving traffic from the development area shall be cleaned daily to remove sediment tracked off-site.
- INTERNAL INSPECTION AND MAINTENANCE:** All controls on the development shall be inspected at least once every seven (7) calendar days and within 24 hours after any storm event greater than one-half (0.5) inch of rain per 24 hour period by the Owner.
- SEEDING AND MULCHING:** All disturbed areas shall be permanently seeded upon completion of grading activities.
- All erosion and sediment control BMPs shown on plan are for reference and are to be field verified as required to meet, at minimum, all local, state, and federal regulations governing such operations.**

EROSION AND SEDIMENT CONTROL BASIC PRINCIPLES:

- Minimize open area by phasing or sequencing construction and preserving existing vegetation where possible.
- Divert storm water away from disturbed or exposed areas when possible.
- Install BMPs to control erosion and sediment and manage storm water.
- Inspect the site regularly and properly maintain BMPs, especially after rainstorms.
- Revise the plan as site conditions change during construction and improve the plans if BMPs are not effectively controlling erosion and sediment.
- Keep the construction site clean by putting trash in trash cans, keeping storage bins covered, and preventing or removing excess sediment on roads and other impervious surfaces.

ISSUE DATE	02/28/2023	SCALE	1" = 50'	CTR INT.	2'
SURVEYED BY	DSM	CHECKED BY	NJB	DWN BY	DES BY CHK BY APP BY
DRAWN BY	DSM	APPROVED BY			
REV	DATE	DESCRIPTION			



PROJECT:	TRUCK MAINTENANCE FACILITY GERMANTOWN, WI
SHEET TITLE:	STORM WATER MANAGEMENT PLAN

SHEET NO:
C3.1
JOB NO:
ENG-1465



- [illegible]

**In loose soil conditions, the use of staple or stake lengths greater than 6" (15cm) may be necessary to properly secure the RECP's.

Disclaimer:
The information presented herein is general design information only. For specific applications consult an independent professional for further design guidance.

Drawn on: 5-4-11



- 4:1 Slopes (A)
- 3:1 Slopes (B)
- 2:1 Slopes (C)
- 1:1 & Steeper Slopes (D)
- Medium/High Flow Channel (D)
- High Flow Channel And Shoreline (E)

NOTES:

- * Use ECMDS[®] for more accurate staple pattern selection.

Disclaimer: The information presented herein is general design information only. For specific applications consult an independent professional for further design guidance.

Drawn on: 5-4-11

EROSION CONTROL MATTING CHANNEL INSTALLATION & STAPLE PATTERN

DETAIL 4
SCALE: NOT TO SCALE **C3.2**



DETAIL
SCALE: NOT TO SCALE



1. The minimum water bar dimensions shall be:
 - Top width of berm/dike - 2 feet minimum.
 - Height/depth - 18 inches unless otherwise noted on plans
 - Side Slopes - Sufficiently flat to accommodate the expected traffic.
2. The field location shall be adjusted as needed to provide a stabilized safe outlet.
3. The diverted runoff shall be directed onto an undisturbed vegetative area.
4. Diversion ditches shall be compaction by traversing with equipment during construction.
5. The water bars shall be angled slightly downslope across the centerline of the travel lane.
6. Seed and Straw disturbance area around installed diversion immediately following installation.
7. Sediment accumulations reaching $\frac{1}{2}$ the height of the diversion shall be placed and stabilized in topsoil stockpiles.

TYPICAL DIVERSION DIKE

DETAIL 6
SCALE: NOT TO SCALE C3.2



DETAIL 7
SCALE: NOT TO SCALE C3.2

GENERAL

1. CONSTRUCTION MUST COMPLY WITH ALL LOCAL EROSION AND SEDIMENT CONTROL.
 2. CONTRACTOR IS RESPONSIBLE TO ENSURE THAT THE SEDIMENT CONTROL PLAN IS IMPLEMENTED AND INSPECTED DURING THE CONSTRUCTION PHASE IN ACCORDANCE WITH THE ALL LOCAL, STATE, AND FEDERAL REGULATION GOVERNING SUCH OPERATIONS.
 3. FAILURE TO IMPLEMENT THESE METHODS AND PRACTICES DESCRIBED CAN RESULT IN PENALTIES.
 4. A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN AND THE CONSTRUCTION DRAWINGS FOR THE PROSPECT ARE REQUIRED TO REMAIN AT ALL TIMES ON THE CONSTRUCTION SITE.
 5. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY ADDITIONAL SEDIMENTATION CONTROL PRACTICES THAT MAY OCCUR DURING THE CONSTRUCTION ACTIVITY. IT WILL BE THE ENGINEERS DISCRETION FOR ADDITIONAL SEDIMENTATION CONTROL AND THE RESPONSIBILITY OF THE CONTRACTOR TO IMPLEMENT ALL SEDIMENTATION CONTROL PRACTICES.
 6. WHEREVER PRACTICAL, IT IS RECOMMENDED THAT THE FINAL SITE GRADING BE ACCOMPLISHED AS SOON AS POSSIBLE. IMMEDIATELY AFTER THE FINAL GRADING IS COMPLETED, THE AREA SHALL BE PERMANENTLY SEEDING AND MULCHED.
 7. PROVIDE INLET PROTECTION FOR ALL EXISTING CATCH BASINS DURING CONSTRUCTION. THERE MAY BE EXISTING CATCH BASINS NOT SHOWN ON THESE PLANS.
 10. DISTURBED AREAS WHICH WILL REMAIN UNWORKED FOR A PERIOD OF 21 DAYS OR GREATER SHALL BE STABILIZED WITH SEEDING AND MULCHING OR OTHER APPROVED EQUAL.
- REGULATIONS:
11. NO SOLID OR LIQUID WASTE MUST BE DISCHARGED INTO STORM WATER RUNOFF.
 12. OFF-SITE TRACKING OF SEDIMENTS SHALL BE MINIMIZED.
 13. MUST SHOW COMPLIANCE WITH LOCAL WASTE DISPOSAL, SANITARY AND HEALTH REGULATIONS.
- MAINTENANCE AND INSPECTION:
14. PERMANENT RECORDS OF MAINTENANCE AND INSPECTION MUST BE MAINTAINED A MINIMUM OF ONCE EVERY 7 DAYS AND AFTER STORM EVENTS GREATER THAN 0.5 INCH IN A 24 HOUR PERIOD.
 15. NAME OF INSPECTOR, MAJOR OBSERVATIONS, DATE OF RECORDS MUST BE MAINTAINED FOR 3 YEARS AFTER DATE OF INTENT.

PROJECT:		DR. BY:
CITY/STATE:	DATE:	DR. NO:

ISSUE DATE 02/28/2020						SCALE	N.T.S.	CTR INT.	
SURVEYED BY	DRAWN BY	CQM	DSW	CHECKED BY	APPROVED BY		NUB		
REV	DATE	DESCRIPTION							
							DWN BY DES BY CHK BY APP BY		



**Diversified
Engineering Inc.**
CONSULTING ENGINEERS & SURVEYORS

1775 RAY AVENUE, N.E.
NEW PHILADELPHIA, OH 44663

Phone: (330) 364-4631
Fax: (330) 364-4031

WASTE MANAGEMENT
PROJECT: TRUCK MAINTENANCE FACILITY GERMANTOWN, WI
SHEET TITLE: SWM NOTES & TYPICAL DETAILS

SHEET NO:

C3.2

JOB NO:
ENG-1465



Scale: 1" = 50'

1. Verify all conditions and dimensions shown on the plans at the site prior to commencement of work. Notify Landscape architect of any discrepancies. Contractor shall notify utility companies and verify the exact location of utility lines and all utilities in the field prior to commencement of excavation or construction activities.
2. All work shall conform to the Village of Germantown and S.U.D.A.S. standards unless noted otherwise.
3. Underground utilities shown are for information only, locations have not been verified. Contractor shall contact Wisconsin One-Call and verify location of existing underground utilities before commencing any excavation to avoid damage. The contractor shall be responsible for any and all damage caused by construction activities. Exercise extreme care in excavating and working around existing site features and utilities. Verify location and condition of all utilities. Field adjust plant locations so as to avoid conflicts with utilities.
4. Verify plant counts. If quantities in planting schedule vary from landscape plan graphic, graphic shall prevail.
5. Locate plant material by measuring off of the drawing to the nearest 6" and state where trees will be located. The Landscape Architect will review where trees will be located.
6. Align and equally space in all directions tree, shrub and perennials designated per these drawing and typical details.
7. Backfill soil (planting soil) from tree pits shall consist of a mixture of two parts top soil and one part compost. Remove soil excavated from tree planting area and dispose of off site.
8. Remove existing topsoil and stockpile on site; topsoil to be incorporated into soils at a later date.
9. Finish grade of planter areas shall be 3 inches below adjacent curb or structure to allow for 3" of mulch depth.
10. All landscape beds shall be edged with DURAEDGE 5 1/2" steel lawn edging as manufactured by the J.D. Russell Company (800-888-9709) approved equal. Edging shall be hot rolled steel with an electrostatically applied powder coat surface paint, black in color.
11. New trees shall meet the minimum standards of ANSI Z60.1. Latest Edition. Trees shall be freshly dug or well-established in container as applicable; not root-bound in the container. Trees with broken or undefinable leader, broken or mushroomed barks, topped growth, or weak root structure (in the opinion of the landscape architect) will not be acceptable.
12. The contractor shall submit at least one nursery photograph of each type of tree species for approval by the landscape architect prior to shipping and installation. Most species are matched so the specimens must correspond between branching heights and habits within species. The landscape architect will use the submitted photographs as a standard of comparison for each tree species installed on site.
13. Wood mulch for tree rings and borders when indicated on the plan shall be 3" deep, composed of cedar or cypress wood of uniform color and long fibrous nature (2-4 inches in length). Do not use walnut. Do not use chips. Apply pre-emergence herbicide over the top of all wood mulch. Mulch shall be bound new trees shall be minimum 6" in diameter. Thoroughly water mulched areas, rake to a smooth finished surface.
14. Planting beds not to the building and parking lot islands shall be 3" deep, washed river rock over mulch over woven barrier fabric. Fabric shall be a woven polypropylene, 3.5 to 4.0 ounce products. Apply pre-emergence herbicide over the top of all rock mulch.
15. All plants shall be maintained and watered by the contractor through substantial completion.
16. No trees, bushes, or vegetation existing on site to remain.

WASTE MANAGEMENT

**BUCK MAINTENANCE FACILITY
GERMANTOWN, WI**

OBJECT:

SHEET NO:-

L1.0

JOB NO:
ENG-1465



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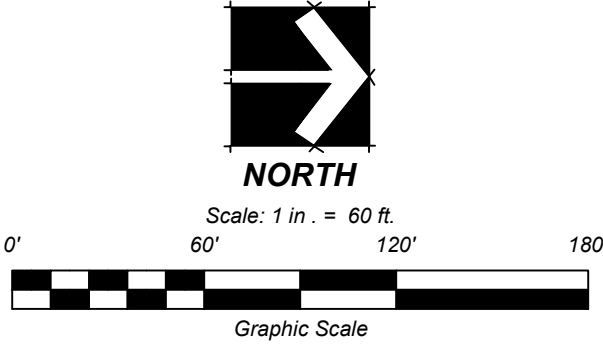
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Fax: (330) 364-4031
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Web: www.div-eng.com

SHEET NO:

L2.0

JOB NO:
ENG-1465



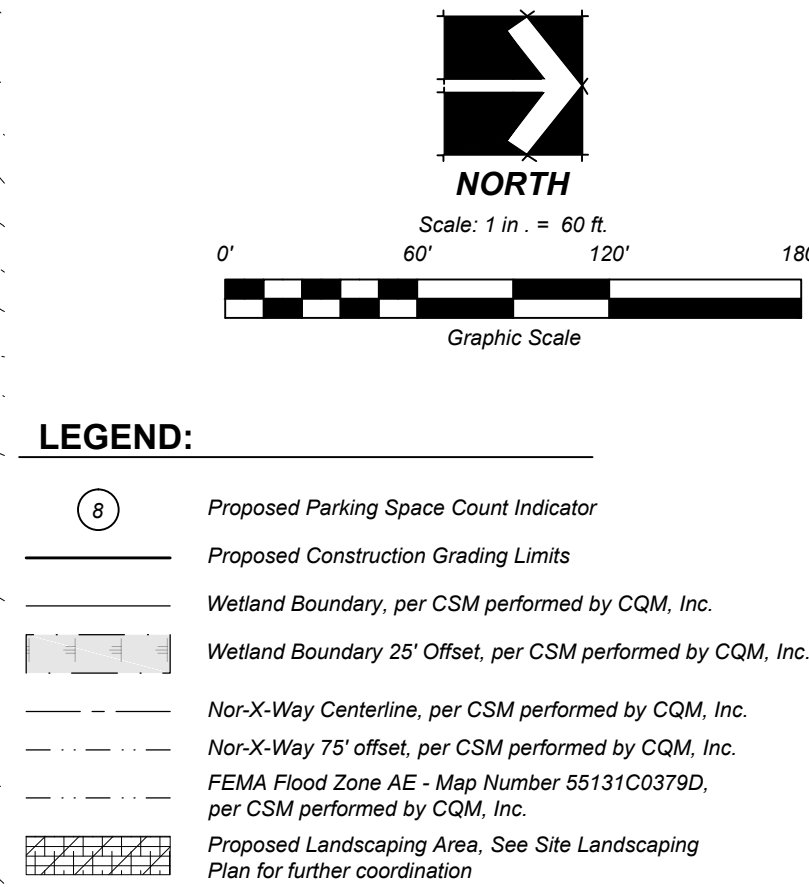
SCALE: 1" = 60'

[illegible]

WASTE MANAGEMENT

PROJECT: TRUCK MAINTENANCE FACILITY
GERMANTOWN, WI

SHEET TITLE: PROPOSED LIGHTING/PHOTOMETRIC SITE PLAN



BOUNDARY NOTE: Lots to be combined. Public hearing for discontinuing the 66' public right of way is scheduled for Monday, March 16, 2020, at 7p.m.

[illegible]

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WASTE MANAGEMENT

PROJECT:

TRUCK MAINTENANCE FACILITY
GERMANTOWN, WI

SHEET TITLE:

SITE ZONING MAP

SHEET NO:

X1.3

JOB NO:
ENG-1465

SITE ZONING MAP
Scale: 1" = 60'

LOT COVERAGE NOTES

Lot square footage total:	1,994,793 S.F.
Impervious surface percentage:	26.0%
Green space percentage:	74.0%
Percent permitted (over/under):	under 48.0%

*NOTE: Proposed Coverage includes existing development on the parcel where applicable.

PARKING BREAKDOWN

Total Parking Spaces (Public) = 160
Total Parking Spaces (Handicap) = 5
Typical Parking Space Dimension: 9' x 20' (Unless otherwise noted)

SETBACK NOTES:

Required Front yard Setback: 30'
Required Side yard Setback: 25'
Required Rear yard Setback: 25'
Required Lot Frontage Setback: 150'

PARKING CALCULATIONS:

- Professional Office Space:

Office Area:	5,760 S.F.
Office Employees:	132 Persons

Required parking one space per 200 S.F. + 1/2 space per employee
 - 5,760 S.F. / 200 S.F. = 29 Spaces
 - 132 Persons / 2 = 66 Spaces
 - Total Required Office Spaces = 95 Spaces

- Auto Repair Space:
Auto Repair Area: 24,000 S.F.
Auto Repair Employees: 12 Persons

Required parking one space per 250 S.F. + 1 space per employee
 - 24,000 S.F. / 250 S.F. = 96 Spaces
 - 12 Persons = 12 Spaces

- Total Required Auto Repair Spaces = 108 Spaces

Required Spaces:
Total required spaces = 203 Spaces per code

Provided Spaces:
160 Standard Spaces
5 Accessible Space
165 Total Spaces Provided

NOTE: Total anticipated employee count is 154 persons.

Scale: 1" = 50'

- A. **STREET SWEEPING.** Streets directly adjacent to construction entrances and receiving traffic from the development area shall be cleaned daily to remove sediment tracked off-site.
- B. **INTERNAL INSPECTION AND MAINTENANCE.** All controls on the development shall be inspected at least once every seven (7) calendar days and within 24 hours after any storm event greater than one-half (0.5) inch of rain per 24 hour period by the Owner.
- C. **SEEDING AND MULCHING.** All disturbed areas shall be permanently seeded upon completion of grading activities.
- D. All erosion and sediment control BMPs shown on plan are for reference and are to be field verified as required to meet, at minimum, all local, state, and federal regulations governing such operations.

1. Minimize open area by phasing or sequencing construction and preserving existing vegetation where possible.
2. Divert storm water away from disturbed or exposed areas when possible.
3. Install BMPs to control erosion and sediment and manage storm water.
4. Inspect the site regularly and properly maintain BMPs, especially after rainstorms.
5. Revise the plan as site conditions change during construction and improve the plans if BMPs are not effectively controlling erosion and sediment.
6. Keep the construction site clean by putting trash in trash cans, keeping storage bins covered, and preventing or removing excess sediment on roads and other impervious surfaces.

1. Utilize / maintain existing site entrances as construction entrances.
2. Establish construction staging areas / tracking pads.
3. Install perimeter silt fence.
4. Clearing and grubbing.
5. Minor demolition, fences, gates, etc.

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SHEET NO:

X2.0

JOB NO:
ENG-1465

Scale: 1" = 50'

- A. **STREET SWEEPING:** Streets directly adjacent to construction entrances and receiving traffic from the development area shall be cleaned daily to remove sediment tracked off-site.
- B. **INTERNAL INSPECTION AND MAINTENANCE:** All controls on the development shall be inspected at least once every seven (7) calendar days and within 24 hours after any storm event greater than one-half (0.5) inch of rain per 24-hour period by the Owner.
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1. Minimize open area by phasing or sequencing construction and preserving existing vegetation where possible.
2. Divert storm water away from disturbed or exposed areas when possible.
3. Install BMPs to control erosion and sediment and manage storm water.
4. Inspect the site regularly and properly maintain BMPs, especially after rainstorms.
5. Revise the plan as site conditions change during construction and improve the plans if BMPs are not effectively controlling erosion and sediment.
6. Keep the construction site clean by putting trash in trash cans, keeping storage bins covered, and preventing or removing excess sediment on roads and other impervious surfaces.

1. West retention pond construction and north retention pond expansion
2. Major demolition, hard surfaces, structures, utilities, etc.
3. Minor earthwork.
4. Seed and straw disturbed areas.



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175 BAY AVENUE, N.E.
NEW PHILADELPHIA, OH 44663

SHEET NO:

X2.1

JOB NO:
ENG-1465

Scale: 1" = 50'

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- B. **INTERNAL INSPECTION AND MAINTENANCE:** All controls on the development shall be inspected at least once every seven (7) calendar days and within 24 hours after any storm event greater than one-half (0.5) inch of rain per 24 hour period by the Owner.
- C. **SEEDING AND MULCHING:** All disturbed areas shall be permanently seeded upon completion of grading activities.
- D. All erosion and sediment control BMPs shown on plan are for reference and are to be field verified as required to meet, at minimum, all local, state, and federal regulations governing such operations.

1. Minimize open area by phasing or sequencing construction and preserving existing vegetation where possible.
2. Divert storm water away from disturbed or exposed areas when possible.
3. Install BMPs to control erosion and sediment and manage storm water.
4. Install the site regularly and properly maintain BMPs, especially after rainstorms.
5. Revise the plan as site conditions change during construction and improve the plans if BMPs are not effectively controlling erosion and sediment.
6. Keep the construction site clean by putting trash in trash cans, keeping storage bins covered, and preventing or removing excess sediment on roads and other impervious surfaces.

1. Field located and construct temporary erosion control BMPs, as required.
2. Begin topsoil stripping and stockpiling.
3. Begin major earthwork on the northwest portion of the site.
4. Seed and straw disturbed areas.

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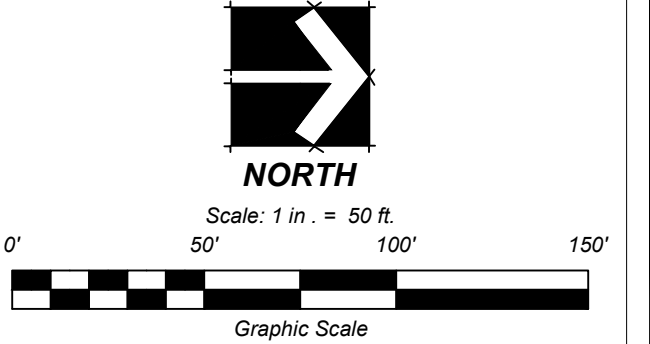
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Fax: (330) 364-4031
e-mail: deis@div-eng.com
Web: www.div-eng.com

EROSION CONTROL PLAN (PHASE III)

X2.2

DB NO:
G-1465



—x— Silt Fence

 Construction Entrance

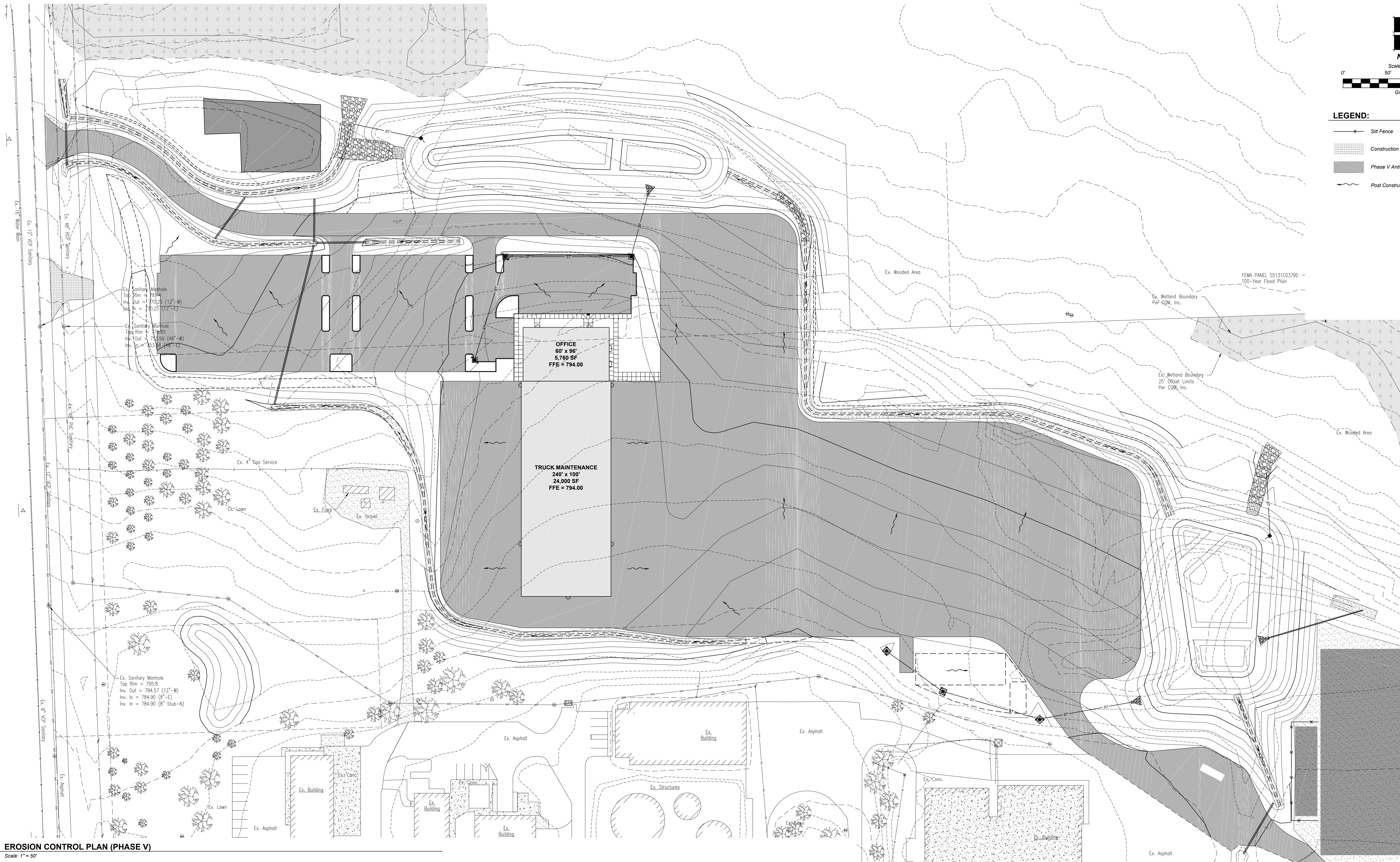
 Phase IV Anticipated Active Work Area

Scale: 1" = 50'

- A. **STREET SWEEPING:** Streets directly adjacent to construction entrances and receiving traffic from the development area shall be cleaned daily to remove sediment tracked off-site.
- B. **INTERNAL INSPECTION AND MAINTENANCE:** All controls on the development shall be inspected at least once every seven (7) calendar days and within 24 hours after any storm event greater than one-half (0.5) inch of rain per 24 hour period by the Owner.
- C. **SEEDING AND MULCHING:** All disturbed areas shall be permanently seeded upon completion of grading activities.
- D. **All erosion and sediment control BMPs shown on plan are for reference and are to be site specifically verified as required to meet, at minimum, all local, state, and federal regulations governing such operations.**

1. Minimize open area by phasing or sequencing construction and preserving existing vegetation where possible.
2. Divert storm water away from disturbed or exposed areas when possible.
3. Install BMPs to control erosion and sediment and manage storm water.
4. Inspect the site regularly and properly maintain BMPs, especially after rainstorms.
5. Revise the plan as site conditions change during construction and improve the plans if BMPs are not effectively controlling erosion and sediment.
6. Keep the construction site clean by putting trash in trash cans, keeping storage bins covered, and preventing or removing excess sediment on roads and other impervious surfaces.

1. Complete remaining ditches / berms and install storm water structures.
2. Grade building pad.
3. Re-spread topsoil on completed slopes and seed and straw.



EROSION CONTROL PLAN (PHASE V)

Scale: 1" = 50'

GENERAL NOTES:

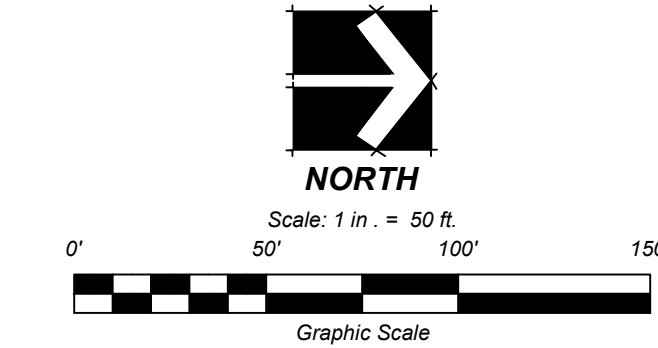
- STREET SWEEPING:** Streets directly adjacent to construction entrances and receiving traffic from the development area shall be cleaned daily to remove sediment tracked off-site.
- INTERNAL INSPECTION AND MAINTENANCE:** All controls on the development shall be inspected at least once every seven (7) calendar days and within 24 hours after any storm event greater than one-half (0.5) inch of rain per 24 hour period by the Owner.
- SEEDING AND MULCHING:** All disturbed areas shall be permanently seeded upon completion of grading activities.
- All erosion and sediment control BMPs shown on plan are for reference and are to be field verified as required to meet, at minimum, all local, state, and federal regulations governing such operations.**

EROSION AND SEDIMENT CONTROL BASIC PRINCIPLES:

- Minimize open area by phasing or sequencing construction and preserving existing vegetation where possible.
- Divert storm water away from disturbed or exposed areas when possible.
- Install BMPs to control erosion and sediment and manage storm water.
- Inspect the site regularly and properly maintain BMPs, especially after rainstorms.
- Revise the plan as site conditions change during construction and improve the plans if BMPs are not effectively controlling erosion and sediment.
- Keep the construction site clean by putting trash in trash cans, keeping storage bins covered, and preventing or removing excess sediment on roads and other impervious surfaces.

CONSTRUCTION SEQUENCING NOTES (PHASE V):

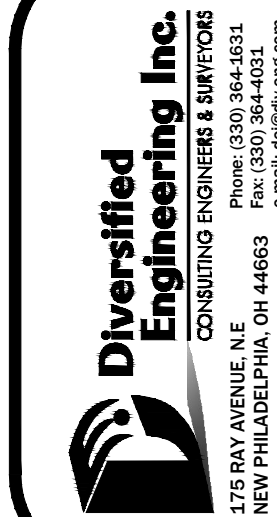
- Building Construction.
- Final grading and hard surfacing.
- Complete topsoil re-spread on remaining slopes and seed and straw.
- Reclaim staging areas and east construction entrance.



LEGEND:

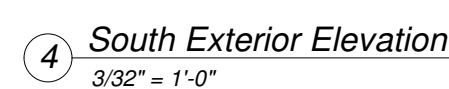
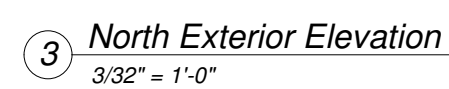
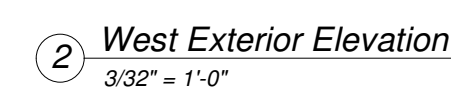
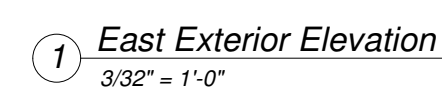
- Silt Fence
- Construction Entrance
- Phase V Anticipated Active Work Area
- Post Construction Flow Direction

ISSUE DATE	02/28/2020	SCALE	1" = 50'	CTR INT.	2'	
SURVEYED BY	COM	CHECKED BY	NJB			
DRAWN BY	DSW	APPROVED BY				
REV	DATE	DESCRIPTION	DWN BY	DES BY	CHK BY	APP BY



PROJECT:	TRUCK MAINTENANCE FACILITY GERMANTOWN, WI
SHEET TITLE:	EROSION CONTROL PLAN (PHASE V)

SHEET NO:	X2.4
JOB NO:	ENG-1465



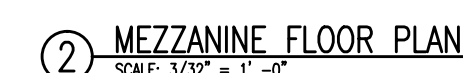
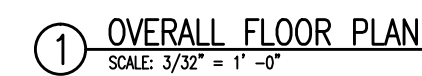
Diversified Engineering Inc.
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SHEET NO:

A1.0



- 1.) SURFACE-MOUNTED FIRE EXTINGUISHER - "COSMIC" 20# ABC
FIRE EXTINGUISHER w/WALL BRACKET.

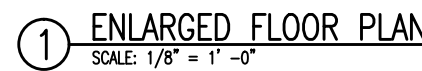
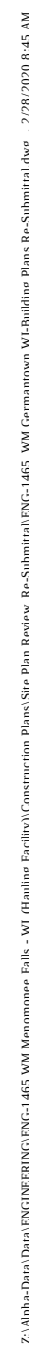
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101	OPS	317	117	DOM OFFICE	144
102	LAUNCH/BREAK ROOM	626	118	COORDINOR	99
103	FLEET MGR	117	119	DM OFFICE	130
104	FLEET MGR	120	120	EXTRA OFFICE	108
105	CORRIDOR	147	121	BREAK ROOM/TRAINING	695
106	JANITOR	59	122	MECH	292
107	MEN	165	200	MAINTENANCE BAYS	18,220
108	MEN'S LOCKERS	711	201	PARTS	1,107
109	CORRIDOR	308	202	CLEAN ROOM	120
110	WOMEN	158	203	TOOL ROOM	401
111	WOMEN'S LOCKERS	109	204	OPS	120
112	ROUTE MGRS	307	205	LUBE	840
113	CONFERENCE/TRAINING	275	206	WASH BAY	2,368
114	STORAGE ROOM	108	300	MEZZANINE	1,897
115	MEETING ROOM	70			

OFFICE/ADMINISTRATION	=	5,760 SF
MAINTENANCE SHOP/WASH BAY	=	24,000 SF
MEZZANINE	=	1,897 SF
CANOPY & AWNINGS	=	150 SF
<u>TOTAL</u>	=	<u>31,765 SF</u>

OVERALL FLOOR PLAN

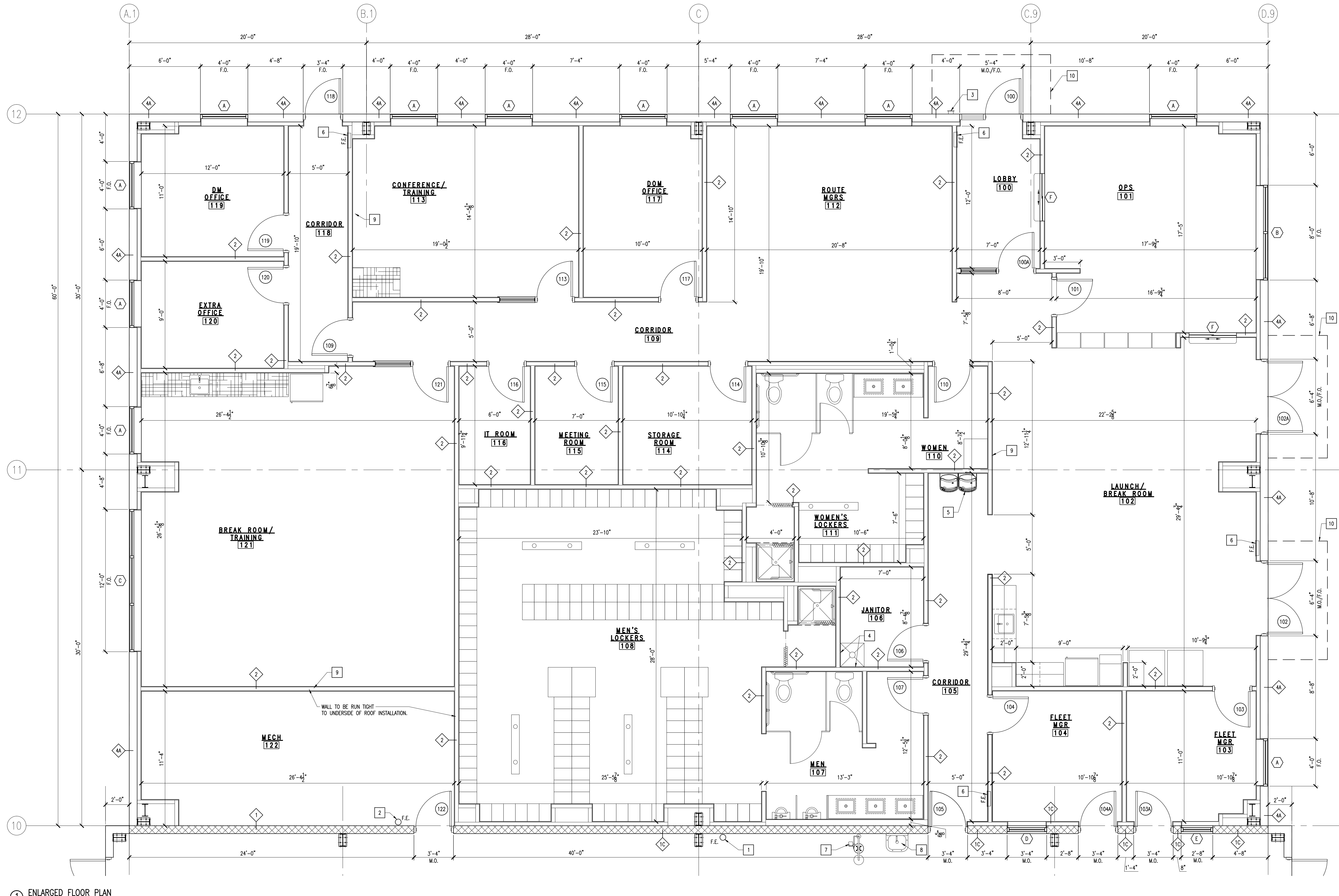
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OB NO:
NG-1465



B NO:
G-1465

Z:\Projects\Drawings\DWG\1463-1465-WM Maintenance Facility - 1463-1465-WM Maintenance Facility.dwg, 2/28/2020 10:45 AM



1 ENLARGED FLOOR PLAN
SCALE: 1/4" = 1'-0"

GENERAL NOTES:

1. ALL WORK MUST BE IN STRICT COMPLIANCE WITH THE INTERNATIONAL BUILDING CODE (IBC) - 2015.
2. ICC A117.1 - 2009 ACCESSIBLE AND USABLE, BUILDING AND FACILITIES.
3. EXIT DOORS SHALL MEET IBC 1010.1.9 & 1010.1.10.
4. THE BUILDING WILL BE EQUIPPED WITH AN AUTOMATIC FIRE SUPPRESSION SYSTEM THROUGHOUT.
5. DIMENSIONS ARE FROM FACE OF FINISHED WALL OR CMU TO FACE OF FINISHED WALL OR CMU (UNLESS OTHERWISE NOTED).
6. BULLNOSE ALL CMU CORNERS WHEN EXPOSED.
7. FRAMING AROUND PEMB FRAMES SHALL BE FIELD VERIFIED AND ADJUSTED AS NECESSARY.

CODED NOTES:

1. SURFACE-MOUNTED FIRE EXTINGUISHER - "COSMIC" 20# ABC FIRE EXTINGUISHER w/WALL BRACKET.
2. SURFACE-MOUNTED FIRE EXTINGUISHER - "COSMIC" 10# ABC FIRE EXTINGUISHER w/WALL BRACKET.
3. "KNOX-BOX" 3200 SERIES, SURFACE MOUNTED, HINGED DOOR.
4. FRP PANELS AT MOP BASIN. 48" HT x 12" BEYOND EDGE OF MOP BASIN.
5. BI-LEVEL, BARRIER FREE, ADA COMPLIANT WATER COOLER, WALL MOUNTED BY PLUMBING CONTRACTOR.
6. RECESSED FIRE EXTINGUISHER - "J.L. IND." PANORAMA 3015-Q-48 FLAT TRIM, IDENTITY H-WHITE AND RED SCORED BREAKOUT PANEL WITH LOCK MECHANISM AND "COSMIC" 10# ABC FIRE EXTINGUISHER.
7. WALL MOUNTED EMERGENCY SHOWER w/EYE/FACE WASH STATION, SEE PLUMBING DRAWINGS.
8. WALL MOUNTED SERVICE SINK, SEE PLUMBING DRAWINGS.
9. PROVIDE BLOCKING FOR TV MONITOR - COORDINATE MONITOR SIZE w/OWNER.
10. CANOPY LINE ABOVE.

WALL TYPES LEGEND:

(SEE FINISH SCHEDULE FOR FINISHES)

* DIMENSIONS ARE FROM FACE OF FINISHED WALL OR CMU TO FACE OF FINISHED WALL OR CMU (UNLESS OTHERWISE NOTED).

- 1 CMU PAINTED
- 1C 8" CMU PAINTED AND 3/8" METAL STUDS @ 16" O.C. w/3/8" GYP. BOARD.
- 2 3/8" METAL STUDS @ 16" O.C. w/3/8" GYP. BOARD ON EACH SIDE. 3/8" M.R. GYP. BOARD WILL OCCUR IN ALL SHOWER COMPARTMENTS.

4A PEMB METAL GRITS w/8" SPLIT FACE CMU UP TO 3'-4" AFF (FOAMED-IN-PLACE INSULATION IN EMPTY CORES), METAL EXTERIOR SIDING AND 3/8" METAL STUD @ 16" O.C. w/3/8" GYP. BOARD ON INSIDE (SEE FINISH SCHEDULE).

WASTE MANAGEMENT

PROJECT: TRUCK MAINTENANCE FACILITY

GERMANTOWN, WI

SHEET TITLE: ENLARGED FLOOR PLAN (OFFICE)

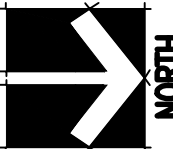
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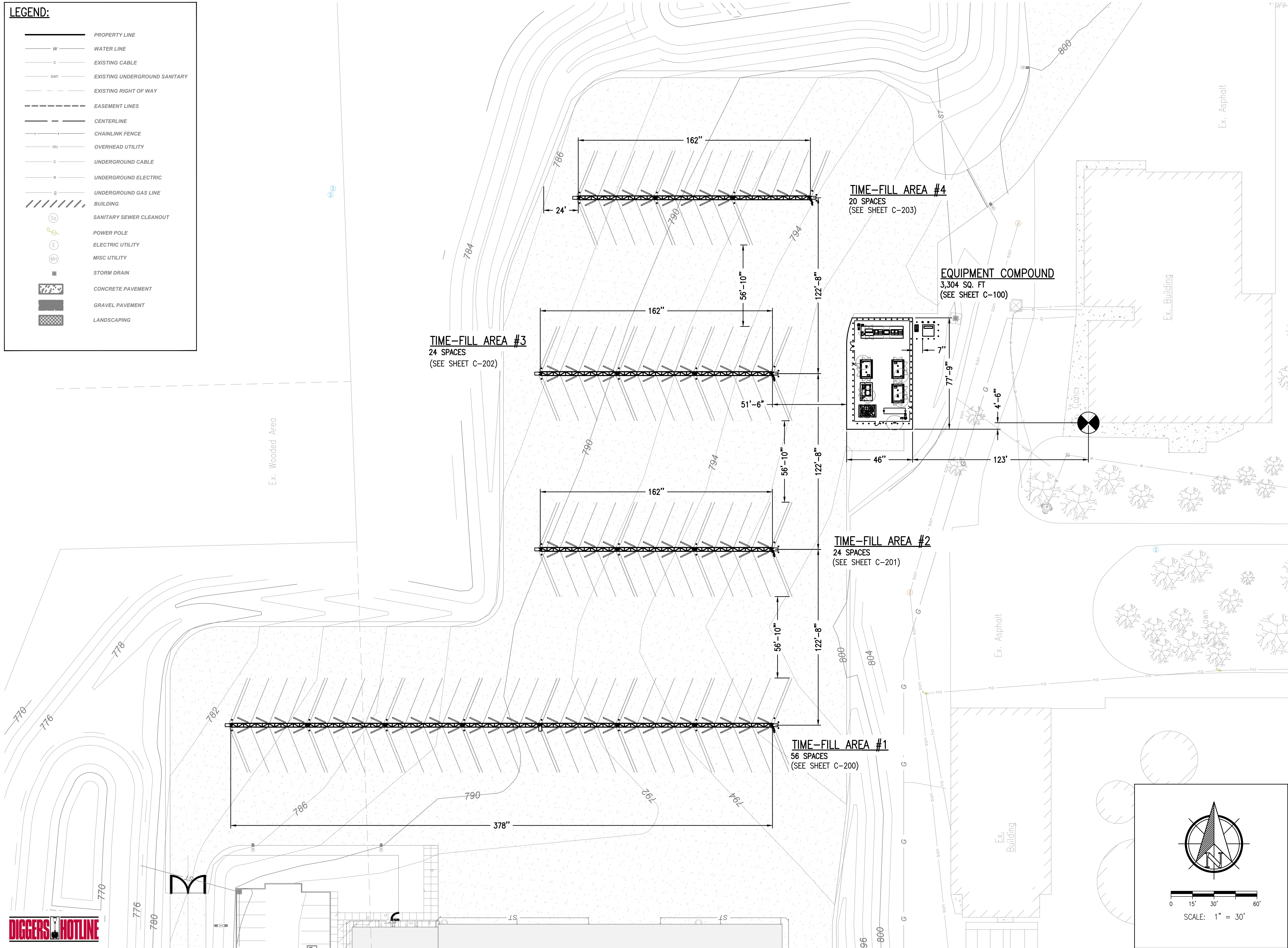
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JOB NO:
ENG-1465

ISSUE DATE: 02/28/2020 SCALE: 1/4" = 1'-0" CTR INT.
SURVEYED BY: COM CHECKED BY: NJB
DRAWN BY: APPROVED BY:
REV: DATE DESCRIPTION
DWG BY: DES BY: CHK BY: APP BY:

Diversified
Engineering Inc.
CONSULTING ENGINEERS & SURVEYORS
1250 HWY. 160, SUITE 200
NEW PAVEMENT, OH 44663
PH: 419.286.1111
FAX: 419.286.1111
WWW.DIVERSIFIED-ENG.COM



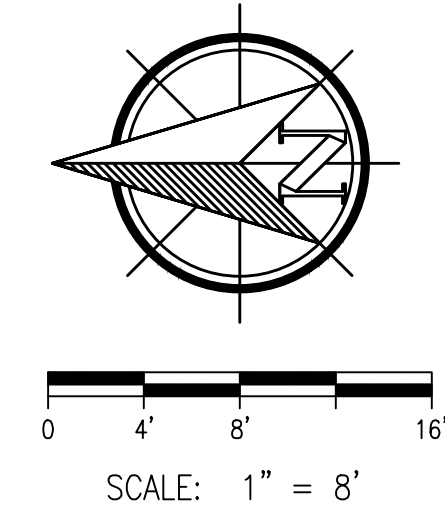


N96W13600 COUNTY LINE ROAD
GERMANTOWN, WI 53022
CNG FUEL FACILITY

[illegible]

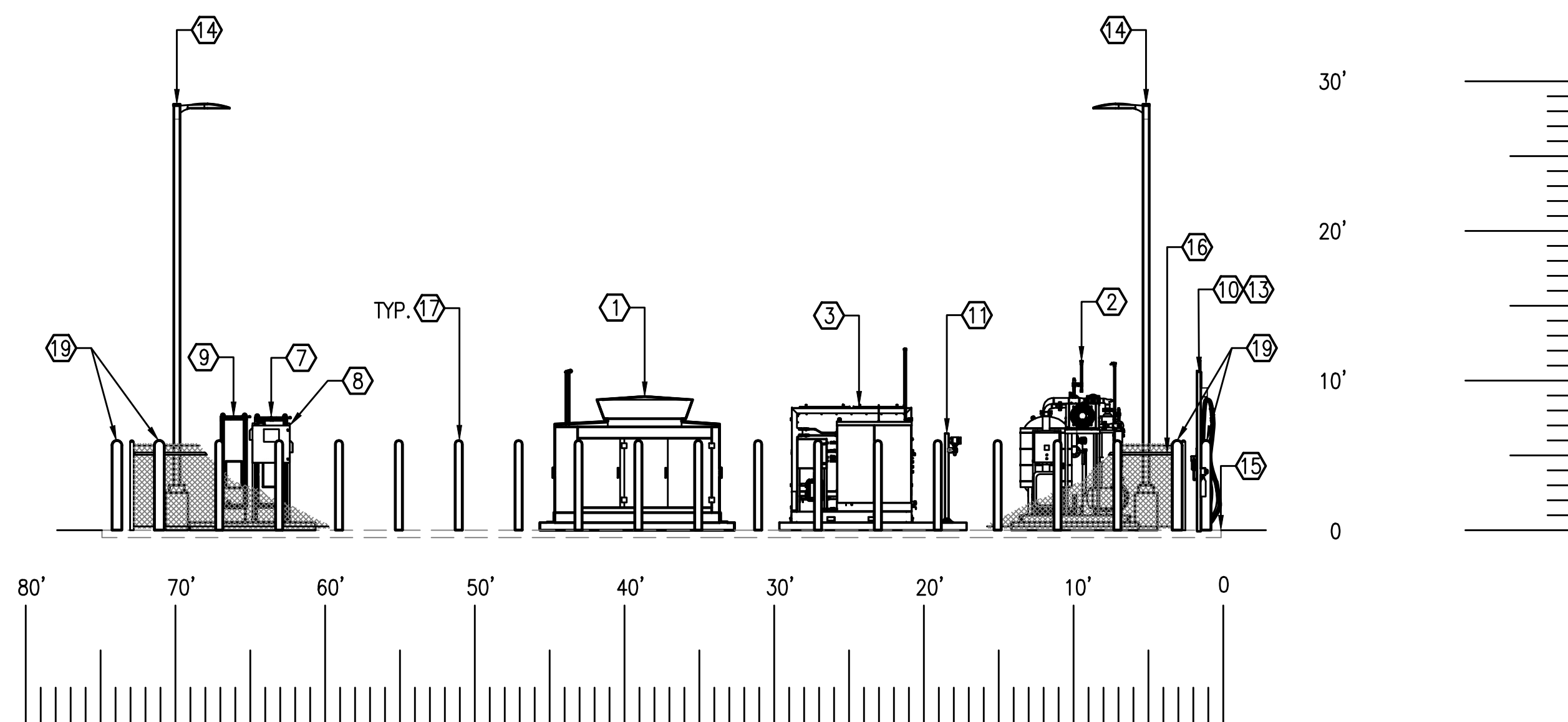
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CHECKED: SRR
DATE: 17/04/2020
SCALE: AS SHOWN
JOB NO: 20003

G-200

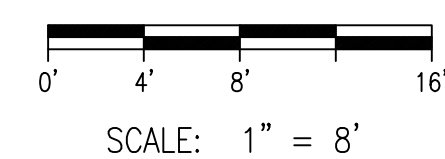


EQUIPMENT COMPOUND - PLAN VIEW

- * SEE SHEET C-200 THRU 204



EQUIPMENT COMPOUND - WEST ELEVATION

OWNER

WASTE MANAGEMENT
N96W13600 COUNTY LINE RD
GERMANTOWN, WI 53022
MATHEW MCGURN
906-235-9560

GENERAL CONTRACTOR:
TRUSTAR ENERGY
JEFF LUCERO (CA LIC # 942661)
10225 PHILADELPHIA CT.
RANCHO CUCAMONGA, CA. 91730
(909) 793-3700



WASTE MANAGEMENT

N96W13600 COUNTY LINE ROAD
GERMANTOWN, WI 53022

CNG FUEL FACILITY



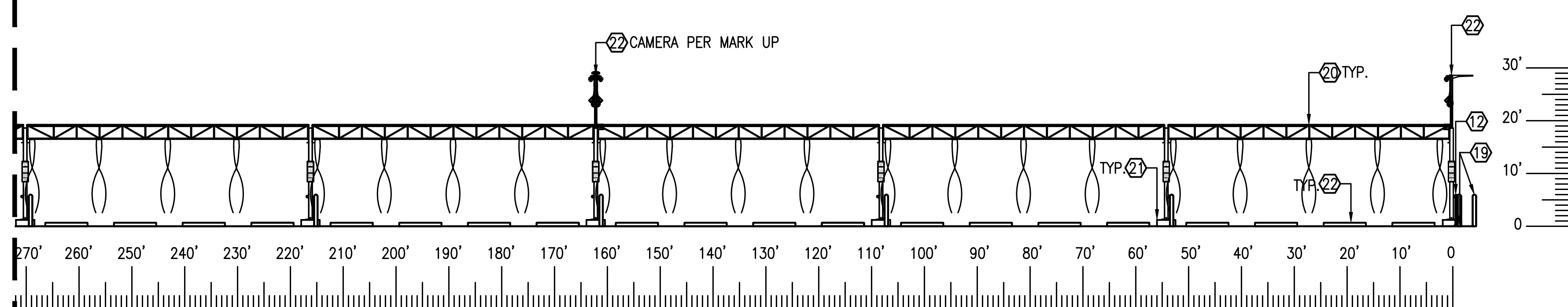
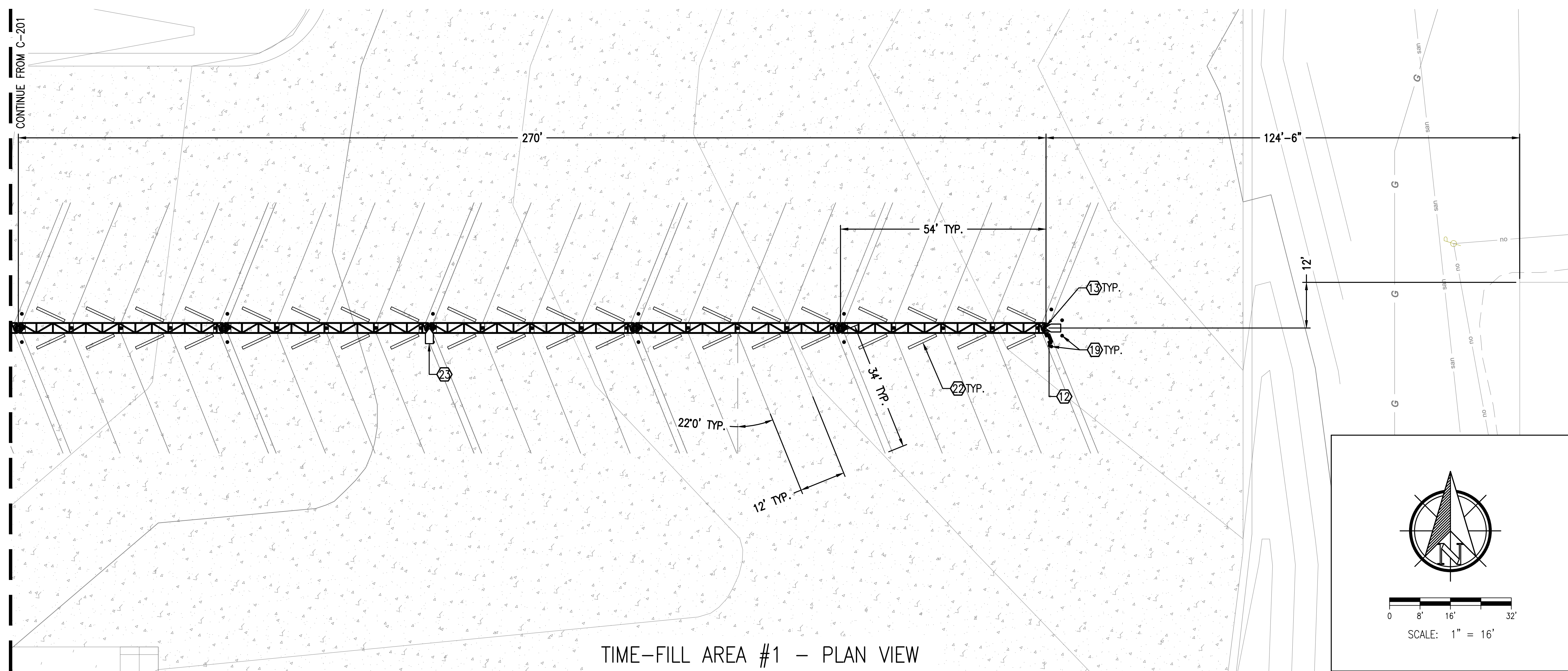
3553 CAMINO MIRA COSTA, SUITE E
SAN CLEMENTE, CA 92672

[illegible]

CIVIL – EQUIPMENT AREA

DRAWN: SBR
CHECKED: SRR
DATE: 14/04/2020
SCALE: AS SHOWN
JOB NO: 20003

C-100



EQUIPMENT LIST:

- ① ANGI NG300 COMPRESSOR (QTY. 3)*
- ② CNG DRYER GD-036-S-M-460-150-4*
- ③ TRUSTAR DE-FUELING SYSTEM*
- ④ SERVICE ENTRANCE RATED SWITCHBOARD - 1600 AMP*
- ⑤ 300 KVA XMF*
- ⑥ SWITCHBOARD 800 AMP*
- ⑦ TRIPLE MOTOR STARTER PANEL - 1200A*
- ⑧ TRUSTAR COMMUNICATIONS PANEL*
- ⑨ WASTE MANAGEMENT COMM. PANEL*
- ⑩ DE-FUELING/DIRECT FILL POST*
- ⑪ FLOW METER*
- ⑫ FILTER STAND (WM SPEC)
- ⑬ EMERGENCY SHUT-DOWN SWITCH
W/ FIRE EXTINGUISHER
- ⑭ 29" DUAL HEAD LED LIGHT*
- ⑮ 4" HOUSEKEEPING PAD*
- ⑯ 6' CHAIN LINK FENCE*
- ⑰ 6" FIXED BOLLARD*
- ⑱ 6" REMOVEABLE BOLLARD*
- ⑲ 8" FIXED BOLLARD
- ⑳ TIME-FILL TRUSS
- ㉑ CAISSON FOR TRUSS
- ㉒ TRUSS COLUMN EXTENSION W/ LIGHT
FLAME DETECTOR & CAMERA
- ㉓ WHEEL STOP
- ㉔ UTILITY GAS METER SET ASSEMBLY*
- ㉕ UTILITY TRANSFORMER*
- ㉖ CT CABINET & METER*

* SEE SHEET C-100

DIGGERS HOTLINE

TIME-FILL AREA - SOUTH ELEVATION

OWNER

WASTE MANAGEMENT
N96W13600 COUNTY LINE RD
GERMANTOWN, WI 53022

GENERAL CONTRACTOR:

TRUSTAR ENERGY
JEFF LUCERO (CA LIC # 942661)
10225 PHILADELPHIA CT.
RANCHO CUCAMONGA, CA. 91730
(909) 793-3700



WASTE MANAGEMENT

N96W13600 COUNTY LINE ROAD
GERMANTOWN, WI 53022

CNG FUEL FACILITY



3553 CAMINO MIRA COSTA, SUITE E
SAN CLEMENTE, CA 92672

[illegible]

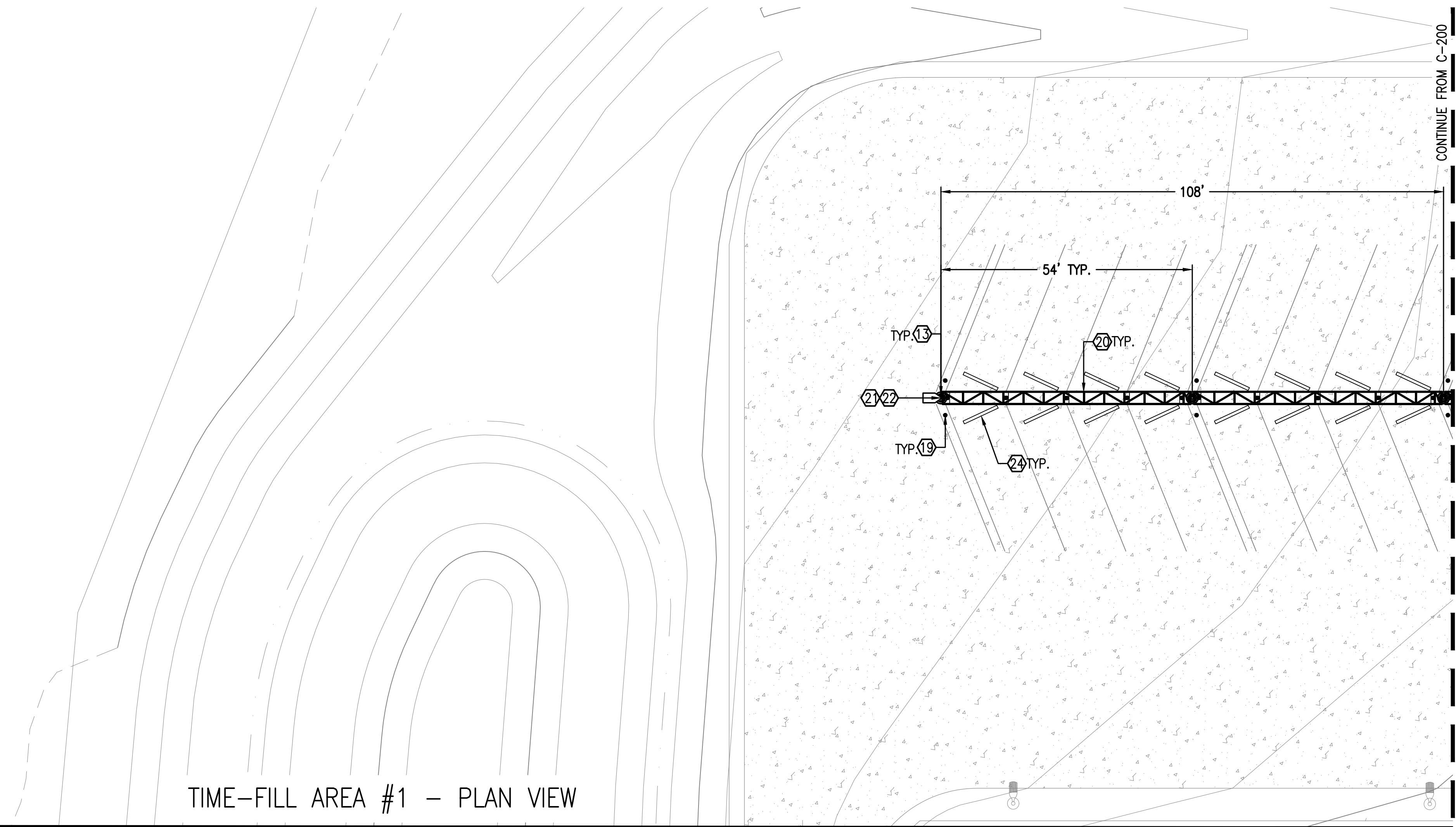
CIVIL - TIME-FILL AREA

DRAWN: SBR
CHECKED: SRR
DATE: 14/04/2020
SCALE: AS SHOWN
JOB NO: 20003

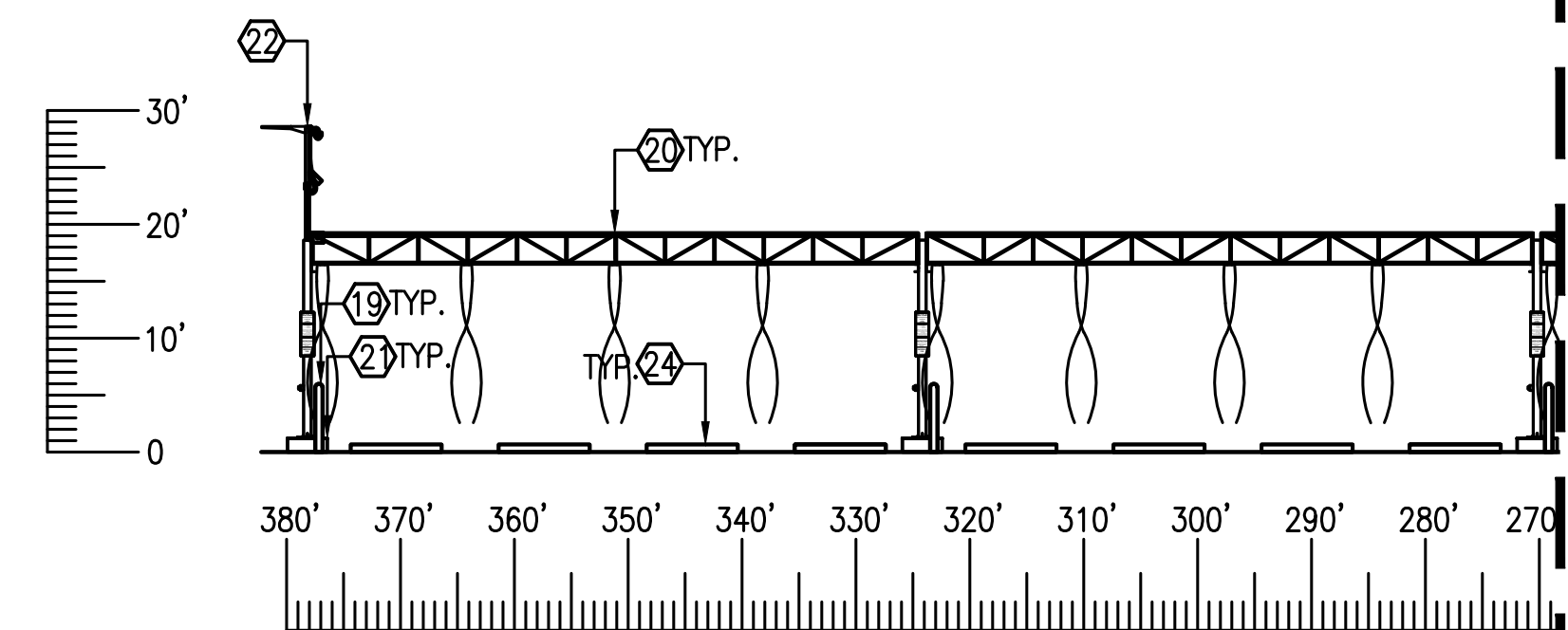
C-200

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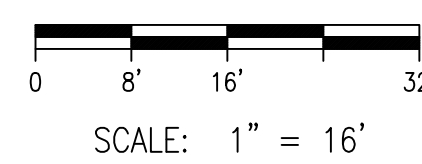
- ① ANGI NG300 COMPRESSOR (QTY. 3)*
- ② CNG DRYER GD-036-S-M-460-150-4*
- ③ TRUSTAR DE-FUELING SYSTEM*
- ④ SERVICE ENTRANCE RATED SWITCHBOARD - 1600 AMP*
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- ⑧ TRUSTAR COMMUNICATIONS PANEL*
- ⑨ WASTE MANAGEMENT COMM. PANEL*
- ⑩ DE-FUELING/DIRECT FILL POST*
- ⑪ FLOW METER*
- ⑫ FILTER STAND (WM SPEC)*
- ⑬ EMERGENCY SHUT-DOWN SWITCH W/ FIRE EXTINGUISHER
- ⑭ 29' DUAL HEAD LED LIGHT*
- ⑮ 4" HOUSEKEEPING PAD*
- ⑯ 6' CHAIN LINK FENCE*
- ⑰ 6" FIXED BOLLARD*
- ⑱ 6" REMOVEABLE BOLLARD*
- ⑲ 8" FIXED BOLLARD
- ⑳ TIME-FILL TRUSS
- ㉑ CAISSON FOR TRUSS
- ㉒ TRUSS COLUMN EXTENSION W/ LIGHT FLAME DETECTOR & CAMERA
- ㉓ WHEEL STOP
- ㉔ UTILITY GAS METER SET ASSEMBLY*
- ㉕ UTILITY TRANSFORMER*
- ㉖ CT CABINET & METER*



TIME-FILL AREA #1 - PLAN VIEW



TIME-FILL AREA #2 - SOUTH ELEVATION



DIGGERS HOTLINE

OWNER

WASTE MANAGEMENT
N96W13600 COUNTY LINE RD
GERMANTOWN, WI 53022
MATHEW MCGURN
906-235-9560

GENERAL CONTRACTOR:
TRUSTAR ENERGY
JEFF LUCERO (CA LIC # 942661)
10225 PHILADELPHIA CT.
RANCHO CUCAMONGA, CA. 91730
(909) 793-3700



WASTE MANAGEMENT

N96W13600 COUNTY LINE ROAD
GERMANTOWN, WI 53022

CNG FUEL FACILITY



3553 CAMINO MIRA COSTA, SUITE E
SAN CLEMENTE, CA 92672

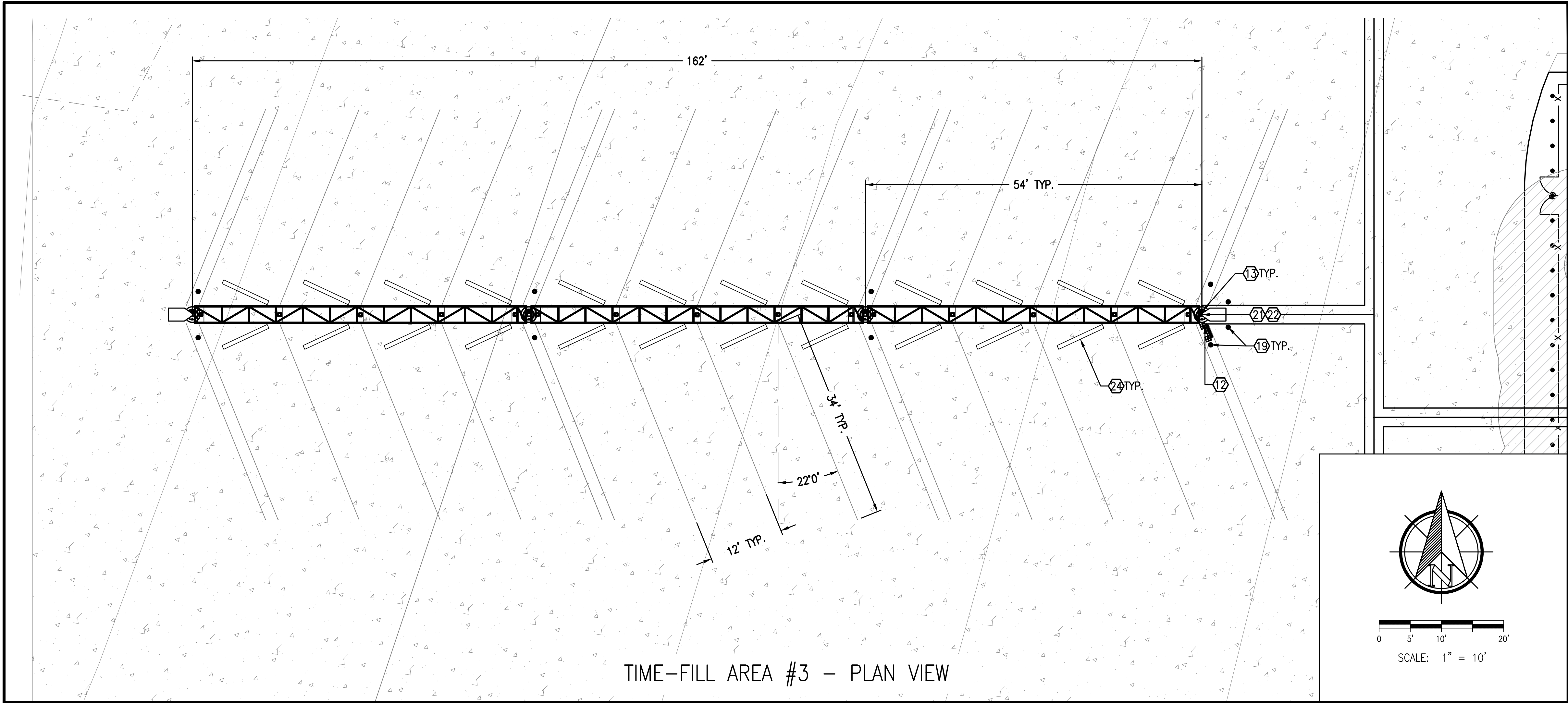
[illegible]

CIVIL - TIME-FILL AREA

DRAWN: SBR
CHECKED: SRR
DATE: 14/04/2020
SCALE: AS SHOWN
JOB NO: 20003

C-201

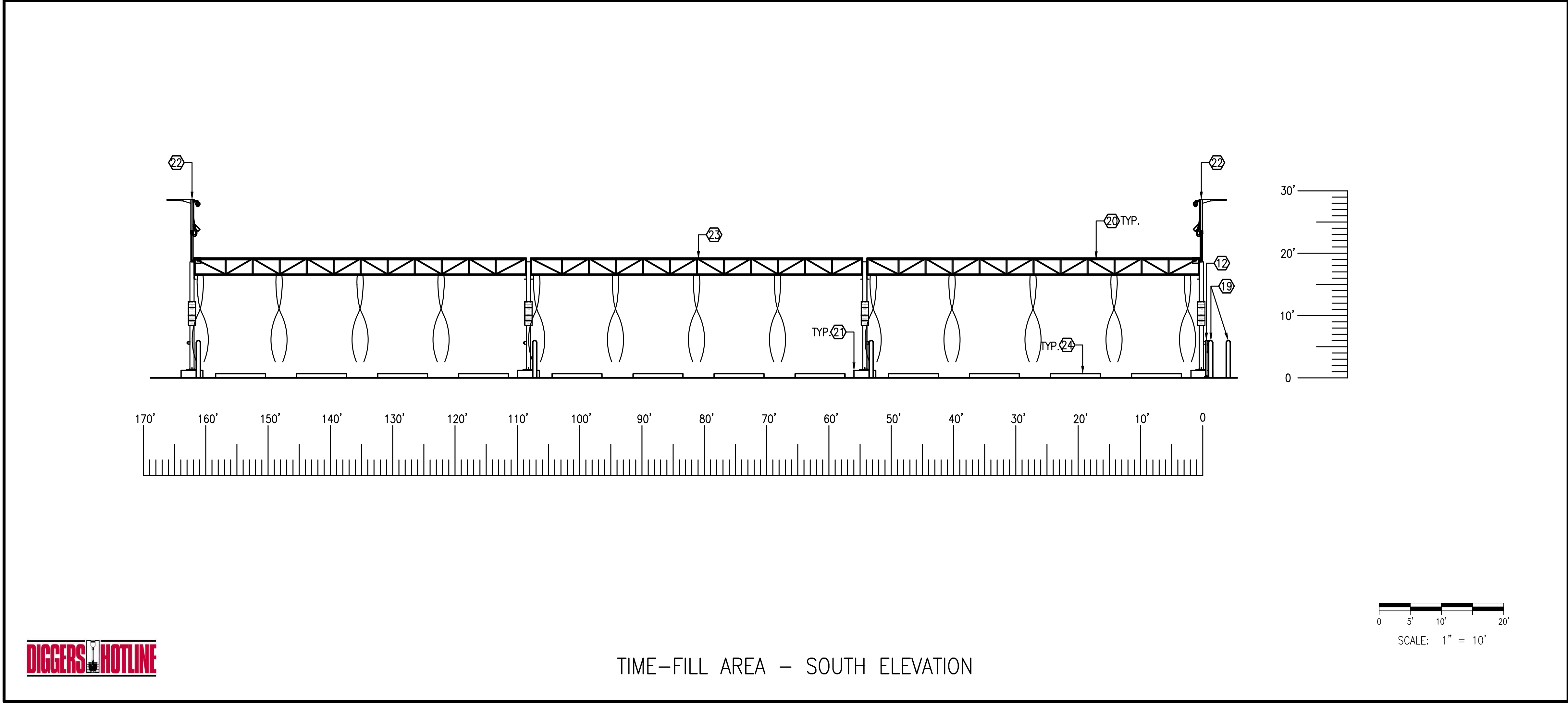
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TIME-FILL AREA #3 - PLAN VIEW

EQUIPMENT LIST:

- 1 ANGI NG300 COMPRESSOR (QTY. 3)*
 - 2 CNG DRYER GD-036-S-M-460-150-4*
 - 3 TRUSTAR DE-FUELING SYSTEM*
 - 4 SERVICE ENTRANCE RATED SWITCHBOARD - 1600 AMP*
 - 5 300 KVA XMFR*
 - 6 SWITCHBOARD 800 AMP*
 - 7 TRIPLE MOTOR STARTER PANEL - 1200A*
 - 8 TRUSTAR COMMUNICATIONS PANEL*
 - 9 WASTE MANAGEMENT COMM. PANEL*
 - 10 DE-FUELING/DIRECT FILL POST*
 - 11 FLOW METER*
 - 12 FILTER STAND (WM SPEC)
 - 13 EMERGENCY SHUT-DOWN SWITCH W/ FIRE EXTINGUISHER
 - 14 29' DUAL HEAD LED LIGHT*
 - 15 4" HOUSEKEEPING PAD*
 - 16 6' CHAIN LINK FENCE*
 - 17 6" FIXED BOLLARD*
 - 18 6" REMOVEABLE BOLLARD*
 - 19 8" FIXED BOLLARD
 - 20 TIME-FILL TRUSS
 - 21 CAISSON FOR TRUSS
 - 22 TRUSS COLUMN EXTENSION W/ LIGHT FLAME DETECTOR & CAMERA
 - 23 WHEEL STOP
 - 24 UTILITY GAS METER SET ASSEMBLY*
 - 25 UTILITY TRANSFORMER*
 - 26 CT CABINET & METER*
- * SEE SHEET C-100



TIME-FILL AREA - SOUTH ELEVATION

OWNER
WASTE MANAGEMENT
N96W13600 COUNTY LINE RD
GERMANTOWN, WI 53022
MATTHEW MCGUIRE
908-235-9560

GENERAL CONTRACTOR:
TRUSTAR ENERGY
JEFF LUCERO (CA LIC # 942661)
10225 PHILADELPHIA CT.
RANCHO CUCAMONGA, CA. 91730
(909) 793-3700

WASTE MANAGEMENT

N96W13600 COUNTY LINE ROAD
GERMANTOWN, WI 53022

CNG FUEL FACILITY

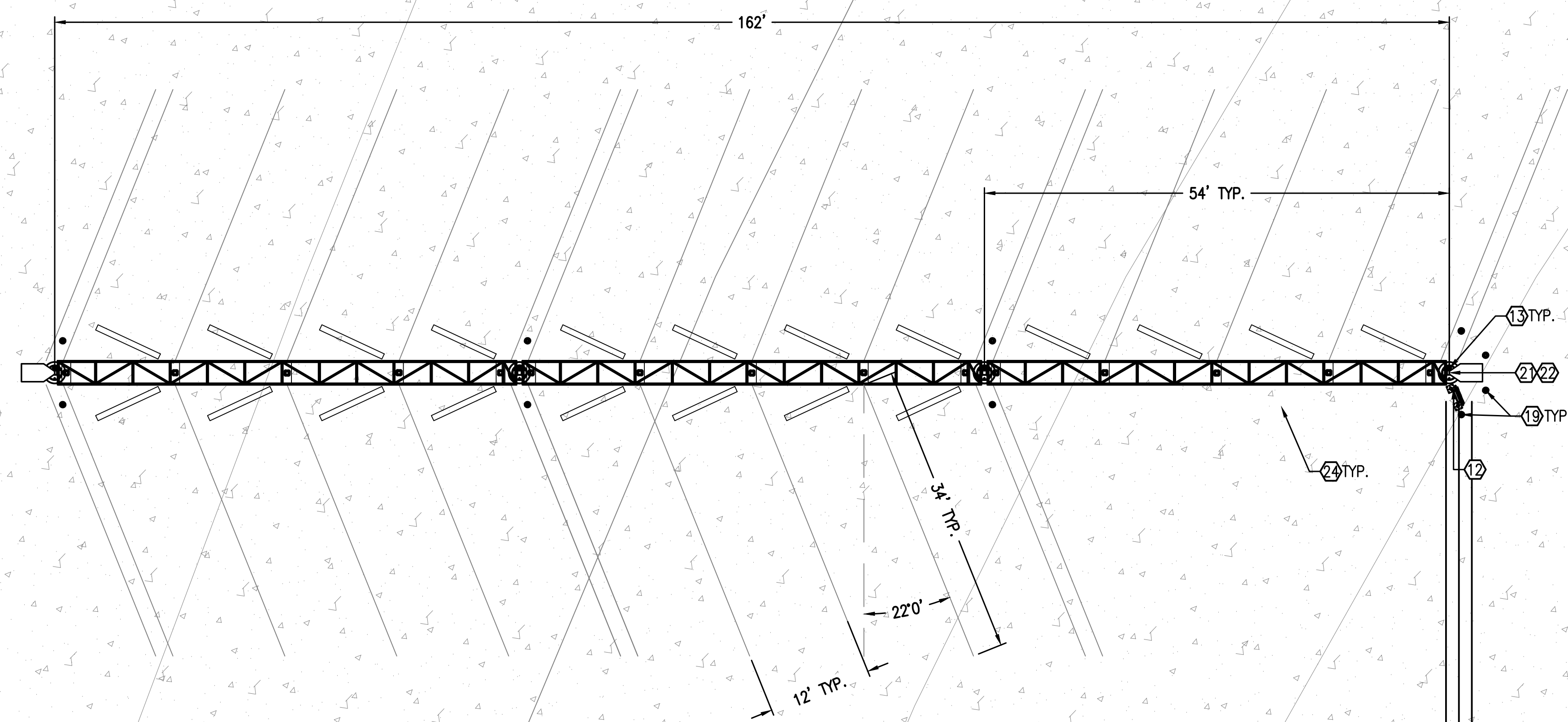
3553 CAMINO MIRA COSTA, SUITE E
SAN CLEMENTE, CA 92672

REVISIONS		BY	REMARK
No.	DATE		

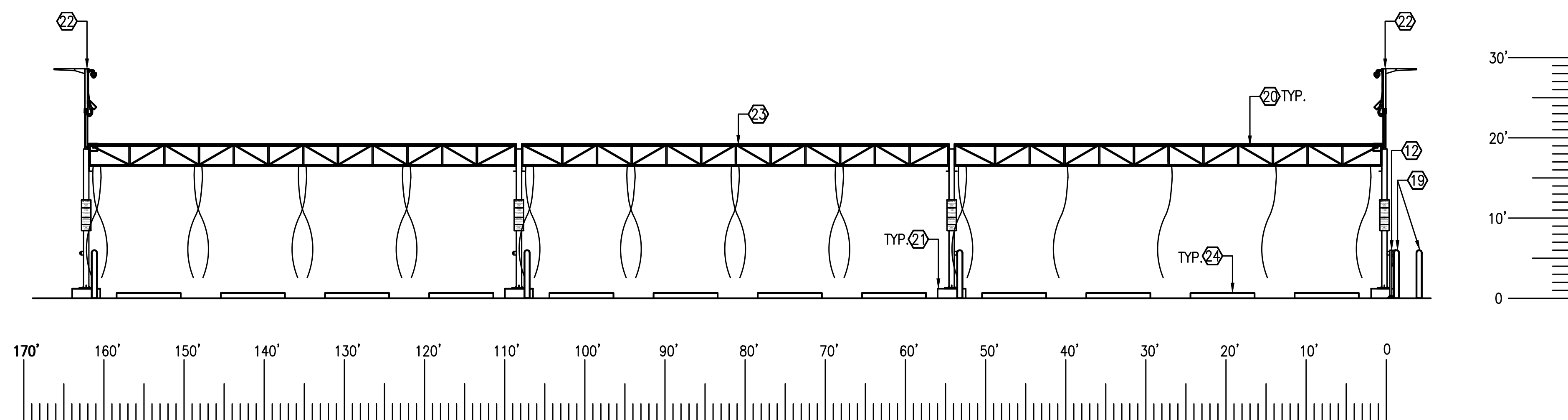
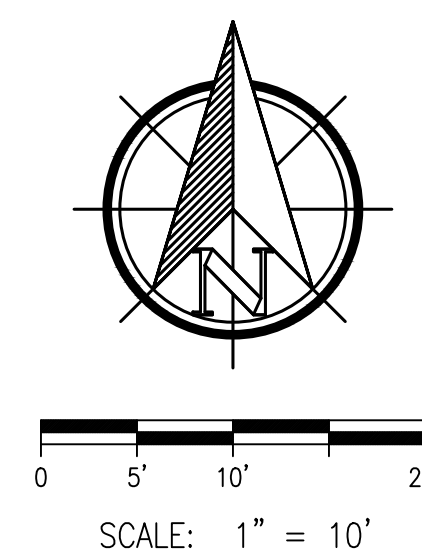
CIVIL - TIME FILL AREA

DRAWN: SBR
CHECKED: SRR
DATE: 14/04/2020
SCALE: AS SHOWN
JOB NO: 20003

C-203



TIME-FILL AREA #4 - PLAN VIEW



TIME-FILL AREA - SOUTH ELEVATION



EQUIPMENT LIST:

- ① ANGI NG300 COMPRESSOR (QTY. 3)*
 - ② CNG DRYER GD-036-S-M-460-150-4*
 - ③ TRUSTAR DE-FUELING SYSTEM*
 - ④ SERVICE ENTRANCE RATED SWITCHBOARD - 1600 AMP*
 - ⑤ 300 KVA XMFR*
 - ⑥ SWITCHBOARD 800 AMP*
 - ⑦ TRIPLE MOTOR STARTER PANEL - 1200A*
 - ⑧ TRUSTAR COMMUNICATIONS PANEL*
 - ⑨ WASTE MANAGEMENT COMM. PANEL*
 - ⑩ DE-FUELING/DIRECT FILL POST*
 - ⑪ FLOW METER*
 - ⑫ FILTER STAND (WM SPEC)
 - ⑬ EMERGENCY SHUT-DOWN SWITCH W/ FIRE EXTINGUISHER
 - ⑭ 29" DUAL HEAD LED LIGHT*
 - ⑮ 4" HOUSEKEEPING PAD*
 - ⑯ 6' CHAIN LINK FENCE*
 - ⑰ 6" FIXED BOLLARD*
 - ⑱ 6" REMOVEABLE BOLLARD*
 - ⑲ 8" FIXED BOLLARD
 - ⑳ TIME-FILL TRUSS
 - ㉑ CAISSON FOR TRUSS
 - ㉒ TRUSS COLUMN EXTENSION W/ LIGHT FLAME DETECTOR & CAMERA
 - ㉓ WHEEL STOP
 - ㉔ UTILITY GAS METER SET ASSEMBLY*
 - ㉕ UTILITY TRANSFORMER*
 - ㉖ CT CABINET & METER*
- * SEE SHEET C-100



WASTE MANAGEMENT

N96W13600 COUNTY LINE ROAD
GERMANTOWN, WI 53022
CNG FUEL FACILITY



3553 CAMINO MIRA COSTA, SUITE E
SAN CLEMENTE, CA 92672

[illegible]

CIVIL - TIME FILL AREA

DRAWN: SBR
CHECKED: SRR
DATE: 14/04/2020
SCALE: AS SHOWN
JOB NO: 20003

C-204



#

BUSINESS OF THE VILLAGE BOARD GERMANTOWN, WI

MEETING DATE: June 1, 2020

AGENDA ITEM: New Business (CONDITIONAL USE PERMITS)

ITEM TITLE: Tyler Edwards, Agent for Menard Inc., Property Owner, 34.8-acre located at W186 N9754 Appleton Avenue; Conditional Use Permit and Rezoning Applications for a Retail Store and Warehouse Addition, Storage Yard Expansion, Development within a 25' Wetland Setback and Rezoning of .914 acres from the Shoreland-Wetland Zoning District

SUBMITTED BY: Jeffrey W. Retzlaff, Director, Community Development Department

SUMMARY EXPLANATION:

Menard Inc., property owner, has submitted one rezoning and three conditional use permit applications in support of a retail store and warehouse addition and storage yard expansion to the home improvement store located at W186 N9754 Appleton Avenue.

In 2003, the Germantown Menards home improvement & retail store opened following various approvals from the Village including two (2) conditional use permits: CUP #7-2002 for a retail store greater than 50,000 sqft (a total of 162,570 sqft was approved) and CUP #8-2002 to allow an enclosed storage yard 3.8 acres in area. At this time, Menards is seeking approval amendments to CUP #7-2002 and #8-2002 as a result of the proposed expansion. In addition, because the proposed expansion includes a proposal to fill .914 acres of wetland, Menards is seeking approval of a rezoning application to remove .914 acres from the Shoreland-Wetland Zoning District, and, a third CUP to allow development within a 25' wetland setback area.

PLAN COMMISSION RECOMMENDATIONS:

APPROVE request to rezone and remove 39,833 sqft (.914 acres) of filled wetland from the Shoreland-Wetland Zoning District subject to one (1) condition;

APPROVE Conditional Use Permit to allow development within the 25' wetland setback area pursuant to Section 24.04 of the Shoreland-Wetland Zoning Code as presented in the revised Site Plan set dated March 5, 2020;

APPROVE revision to Conditional Use Permit (CUP) #7-2002 to increase the size of retail building to 169,300 sqft with an additional warehouse area of 51,750 sqft consistent with the proposed facility expansion presented in the Site Plan set dated March 5, 2020;

APPROVE a revision to Conditional Use Permit (CUP) #8-2002 to increase the size of the enclosed storage yard to 3.85 acres as shown in the Site Plan set dated March 5, 2020;

APPLICATION, PLANS & RELATED DOCUMENTS:

All relevant documents, including applications, plans, supporting information, the staff report & recommendation, and Plan Commission meeting minutes (when available) are included in the PDF digital file distributed by the Village Clerk.

ORDINANCE NO. 07-2020

AN ORDINANCE TO AMEND THE OFFICIAL ZONING MAP
OF THE VILLAGE OF GERMANTOWN SHORELAND-WETLAND ZONING CODE
(Menard Inc.)

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

SECTION 1. The boundaries of the Village of Germantown Shoreland-Wetland Zoning District are amended to remove a 39,833 sqft area (.914 acres) on the following described property from the District as a result of wetland filling approved by the Wisconsin Department of Natural Resources (WisDNR) and the U.S. Army Corp of Engineers (USACE):

Being part of Lot 1 of Certified Survey Map No. 5517, Volume 39, Page 274, Document No. 944001, located in part of the Northwest quarter of the Southwest quarter, Section 33, Township 9 North, Range 20 East, Village of Germantown, Washington County, Wisconsin, more particularly described as follows:

Commencing at the Southwest ¼ of said Lot 1; Thence N10°53'39"E 728.39 feet along the East line of said Lot 1; Thence S79°06'21"E 4.90 feet to the point of beginning; Thence N14°11'36"W 15.90 feet; Thence N22°33'48"W 11.03 feet; Thence N47°55'23"W 413.08 feet; Thence N03°07'36"W 62.21 feet; Thence N33°13'11"W 230.84 feet; Thence N76°53'32"W 18.13 feet; Thence S48°46'06"W 27.40 feet; Thence S82°04'57"W 21.52 feet; Thence S49°11'02"W 43.68 feet; Thence S44°58'59"W 89.20 feet; Thence S56°10'50"W 26.54 feet; Thence S78°13'00"W 20.32 feet; Thence N79°56'58"W 25.00 feet; Thence N47°08'41"W 35.15 feet; Thence N50°14'51"W 25.11 feet; Thence S86°37'42"W 13.43 feet; Thence N41°51'51"E 249.85 feet; Thence S48°08'09"E 153.05 feet; Thence S33°13'11"E 230.84 feet; Thence S48°04'41"E 404.42 feet; Thence S18°25'38"W 41.69 feet; Thence S36°51'43"E 23.93 feet; Thence N81°14'48"E 16.32 feet; Thence N42°34'00"E 16.30 feet; Thence S12°29'52"W 51.34 feet to the point of beginning. Containing 39,833 sqft (.914 acres)

Property Address: W186 N9754 Appleton Avenue
Tax Parcel ID#: GTVN 321-970 & 321-971

SECTION 2. This ordinance shall take effect and be in full force the day after its passage and publication, as provided by law.

Introduced by Trustee: Date Adopted: Ayes: Nays:

Dean Wolter, Village President

APPROVED AS TO FORM:

ATTEST:

Brian C. Sajdak, Village Attorney
Published:

_____, Village Clerk

CUP # 01 – 20

Document No.

CONDITIONAL USE PERMIT

Document Title

**VILLAGE OF GERMANTOWN, WASHINGTON COUNTY, WISCONSIN
CONDITIONAL USE ZONING PERMIT**

Whereas the Applicant:

Menard Inc., Property Owners

agree to comply with applicable Codes and Ordinances of the Village of Germantown, Wisconsin, and further agrees that all work done pursuant to the permission granted herewith will conform with the applications and drawings filed with and approvals granted by officials of the Village for the purpose of obtaining this permit.

Now, therefore, this permit is issued to the Applicant to allow development within the 25' wetland setback area as presented in the Site Plan set dated March 5, 2020, pursuant to Section 24.04 of the Shoreland-Wetland Zoning Code.

Name & Return Address:

**Village of Germantown
P.O. Box 337
Germantown, WI 53022**

Parcel Identification No:

GTNV 333-963**On the following described property located in the Village of Germantown, Washington County, Wisconsin:**

Property Description: Lot 1 of Certified Survey Map No. 5517, recorded in the Washington County Registry in Volume 39 of Certified Survey Maps on Page 274 as Document No. 944001, being a part of the Northwest 1/4 of the Southwest 1/4, part of the Northeast 1/4 of the Southwest 1/4, part of the Southwest 1/4 of the Southwest 1/4, of Section 33, Township 9 North, Range 20 East, in the Village of Germantown, Washington County, Wisconsin. containing 34.8 acres.

Tax Key No: GTNV 333-963

Address: W186 N9754 Appleton Avenue

Pursuant to the following condition(s):

1. If the use, activities and/or operation subject of this permit falls out of conformity with the conditions herein, or, where there is a change in the nature, character, intensity or extent of the activities or uses which causes problems or harmful effects that were not anticipated at the time of approval of this CUP, the conditional use permit may be modified or terminated by the Village Board by the amendment to or addition of conditions after public hearing thereon.

Granted by the Village Board of the Village of Germantown, Washington County, Wisconsin
on the ____ day of _____, 2020.

ATTEST:

Dean Wolter, Village President

Deanna Braunschweig, Village Clerk

STATE OF WISCONSIN) SS
WASHINGTON COUNTY)
Personally came before me this ____ day of _____, 2020, the above
named Dean Wolter, Village President, and _____, Village Clerk, to me
known to be the persons who executed the foregoing instrument and acknowledged the same.

{type or print name of Notary on this line}

{signature of Notary on this line}

Notary Public, State of Wisconsin
My Commission Expires: _____

ACCEPTANCE OF TERMS AND CONDITIONS BY PROPERTY OWNER

The following named person, who is authorized to represent Menard Inc., Property Owner, hereby accepts the terms and conditions set forth in this Permit, and realize that non-adherence to the terms and conditions as stated hereon may result in the revocation of this Permit by the Village of Germantown.

Dated this ____ day of _____, 2020

{type or print name on this line}

{signature on this line}
Agent for Menard Inc.

STATE OF WISCONSIN) SS
_____ COUNTY)

Personally came before me this ____ day of _____, 2020, being the above named _____, to me known to be the person who executed the foregoing instrument and acknowledged the same.

{type or print name of Notary on this line}

{signature of Notary on this line}

Notary Public, State of Wisconsin
My Commission Expires: _____

This instrument was drafted by:
Jeffrey W. Retzlaff, AICP
Community Development Director/Zoning Administrator
Village of Germantown, Wisconsin

CUP #02-20

Document No.

CONDITIONAL USE PERMIT

Document Title

VILLAGE OF GERMANTOWN, WASHINGTON COUNTY, WISCONSIN
 CONDITIONAL USE ZONING PERMIT

Whereas the Applicant:

Menard Inc., Property Owners

agree to comply with applicable Codes and Ordinances of the Village of Germantown, Wisconsin, and further agrees that all work done pursuant to the permission granted herewith will conform with the applications and drawings filed with and approvals granted by officials of the Village for the purpose of obtaining this permit.

Now, therefore, this permit (an amendment to CUP #07-02) is issued to the Applicant to allow for: the construction/operation of a retail store larger than 50,000 sqft in accordance with Section 17.29(3)(r) of the Municipal Code (~~162,570~~ sqft).

Name & Return Address:

**Village of Germantown
 P.O. Box 337
 Germantown, WI 53022**

Parcel Identification No:

GTNV 333-963

On the following described property located in the Village of Germantown, Washington County, Wisconsin:

Property Description: Lot 1 of Certified Survey Map No. 5517, recorded in the Washington County Registry in Volume 39 of Certified Survey Maps on Page 274 as Document No. 944001, being a part of the Northwest 1/4 of the Southwest 1/4, part of the Northeast 1/4 of the Southwest 1/4, part of the Southwest 1/4 of the Southwest 1/4, of Section 33, Township 9 North, Range 20 East, in the Village of Germantown, Washington County, Wisconsin. containing 34.8 acres.

Tax Key No: GTNV 333-963

Address: W186 N9754 Appleton Avenue

Pursuant to the following condition(s):

- ~~1. The developer will be responsible for all public infrastructure improvements to facilitate the safe and efficient movement of people and goods from the store to County Line Road and Maple Road, including but not limited to the widening of Appleton Avenue to four lane divided highway.~~
2. The developer must be in compliance with all applicable B-2 Zoning Code requirements.
3. Aerators to be installed in the storm water ponds.
- ~~4. The developer agrees to construct at their expense, improvements to Appleton Avenue from County Line Road through Maple Road intersection to four lanes, subject to the Department of Transportation approval.~~
5. This permit allows the size of the retail building to be up to 169,300 sqft with an additional detached warehouse of up to 51,750 sqft consistent with the proposed facility expansion presented in the Site Plan set dated March 5, 2020 (Sheet C1.3)

The provisions of this permit shall be binding upon the owner unless and until amended by the Village of Germantown.

Granted by the Village Board of the Village of Germantown, Washington County, Wisconsin on the ____ day of _____, 2020.

ATTEST:

Dean Wolter, Village President

Deanna Braunschweig, Village Clerk

STATE OF WISCONSIN) SS
WASHINGTON COUNTY)

Personally came before me this ____ day of _____, 2020, the above named Dean Wolter, Village President, and Deanna Braunschweig, Village Clerk, to me known to be the persons who executed the foregoing instrument and acknowledged the same.

{type or print name of Notary on this line}

{signature of Notary on this line}

Notary Public, State of Wisconsin

My Commission Expires: _____

ACCEPTANCE OF TERMS AND CONDITIONS BY PROPERTY OWNER

The following named person, who is authorized to represent Menard Inc., Property Owner, hereby accepts the terms and conditions set forth in this Permit, and realize that non-adherence to the terms and conditions as stated hereon may result in the revocation of this Permit by the Village of Germantown.

Dated this ____ day of _____, 2020

{type or print name on this line}

{signature on this line}
Agent for Menard Inc.

STATE OF WISCONSIN) SS
_____ COUNTY)

Personally came before me this ____ day of _____, 2020, being the above named _____, to me known to be the person who executed the foregoing instrument and acknowledged the same.

{type or print name of Notary on this line}

{signature of Notary on this line}

Notary Public, State of Wisconsin
My Commission Expires: _____

This instrument was drafted by:
Jeffrey W. Retzlaff, AICP
Community Development Director/Zoning Administrator
Village of Germantown, Wisconsin

CUP #03-20

Document No.

CONDITIONAL USE PERMIT

Document Title

**VILLAGE OF GERMANTOWN, WASHINGTON COUNTY, WISCONSIN
CONDITIONAL USE ZONING PERMIT**

Whereas the Applicant:

Menard Inc., Property Owners

agree to comply with applicable Codes and Ordinances of the Village of Germantown, Wisconsin, and further agrees that all work done pursuant to the permission granted herewith will conform with the applications and drawings filed with and approvals granted by officials of the Village for the purpose of obtaining this permit.

Now, therefore, this permit (an amendment to CUP #08-02) is issued to the Applicant to allow for: a fenced yard (~~approximately 3.8~~ 3.85 acres in size) for the sale and storage of goods and materials directly related to a permitted use in accordance with Section 17.29(3)(q) of the Municipal Code.

Name & Return Address:

**Village of Germantown
P.O. Box 337
Germantown, WI 53022**

Parcel Identification No:

GTNV 333-963**On the following described property located in the Village of Germantown, Washington County, Wisconsin:**

Property Description: Lot 1 of Certified Survey Map No. 5517, recorded in the Washington County Registry in Volume 39 of Certified Survey Maps on Page 274 as Document No. 944001, being a part of the Northwest 1/4 of the Southwest 1/4, part of the Northeast 1/4 of the Southwest 1/4, part of the Southwest 1/4 of the Southwest 1/4, of Section 33, Township 9 North, Range 20 East, in the Village of Germantown, Washington County, Wisconsin. containing 34.8 acres.

Tax Key No: GTNV 333-963

Address: W186 N9754 Appleton Avenue

Pursuant to the following condition(s):

1. All outdoor sales must be confined to the fenced area.
2. No outdoor displays may be placed along the front of the building or in the parking lot without Plan Commission approval.
3. The development must be in compliance with all applicable B-2 Zoning Code requirements.
4. This permit allows the size of the enclosed storage yard to increase to 3.85 acres as shown in the Site Plan set dated March 5, 2020 (Sheet C1.3).

The provisions of this permit shall be binding upon the owner unless and until amended by the Village of Germantown.

Granted by the Village Board of the Village of Germantown, Washington County, Wisconsin on the ____ day of _____, 2020.

ATTEST:

Dean Wolter, Village President

Deanna Braunschweig, Village Clerk

STATE OF WISCONSIN) SS
WASHINGTON COUNTY)

Personally came before me this ____ day of _____, 2020, the above named Dean Wolter, Village President, and Deanna Braunschweig, Village Clerk, to me known to be the persons who executed the foregoing instrument and acknowledged the same.

{type or print name of Notary on this line}

{signature of Notary on this line}

Notary Public, State of Wisconsin

My Commission Expires: _____

ACCEPTANCE OF TERMS AND CONDITIONS BY PROPERTY OWNER

The following named person, who is authorized to represent Menard Inc., Property Owner, hereby accepts the terms and conditions set forth in this Permit, and realize that non-adherence to the terms and conditions as stated hereon may result in the revocation of this Permit by the Village of Germantown.

Dated this ____ day of _____, 2020

{type or print name on this line}

{signature on this line}
Agent for Menard Inc.

STATE OF WISCONSIN) SS
_____ COUNTY)

Personally came before me this ____ day of _____, 2020, being the above named _____, to me known to be the person who executed the foregoing instrument and acknowledged the same.

{type or print name of Notary on this line}

{signature of Notary on this line}

Notary Public, State of Wisconsin
My Commission Expires: _____

This instrument was drafted by:
Jeffrey W. Retzlaff, AICP
Community Development Director/Zoning Administrator
Village of Germantown, Wisconsin

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

8. WM shall revise the landscape plan to address the Village's street tree requirements. At a minimum, additional street trees in an amount equal to one (1) tree per 50 feet of road frontage of the existing Port-O-Let parcel shall be added to the plan and installed in addition to the site landscaping already shown in the landscape plan.
9. WM shall cooperate with the Menomonee Falls engineering and highway departments to ensure adequate road and intersection capacity and level of service is provided to the proposed maintenance facility and adjacent road system, including the driveway intersections onto County Line road and the Fond du Lac Ave/STH145 intersection. WM shall install and/or contribute to the cost of all road and intersection improvements deemed necessary as a result of or contribution of traffic generated to/from the proposed truck maintenance facility as required by the Menomonee Falls Village Engineer.
10. The paving options shown on Sheets C1.10 and C1.11 include an option for a crushed limestone aggregate surface course for the drive areas around the building and truck parking areas. The Village Code requires bituminous concrete or concrete pavement on non-residential parking areas and drive lanes. The crushed aggregate alternative shall not be installed. WM shall consult with the Village Engineer to investigate acceptable alternative paving options prior to installation of the parking areas and drive lanes if necessary.
11. The landscape plan shall be revised as recommended by the Village Forester to: (a) replace White Spruce with Norway Spruce; and (b) replace Balsam Fir with Concolor Fir.

MOTION carried unanimously.

Menard Inc. - W186 N9754 Appleton Avenue. The property owner has submitted Rezoning, Conditional Use Permit and Site Development and Building Plan applications in support of a proposed storage yard expansion, warehouse addition, building addition and exterior remodeling to the existing store. Planner Retzlaff summarized the proposal.

Public Hearing opened at 7:58 pm.

-Tyler Edwards, agent for Menard Inc., said they were excited to move forward with expanding the store and would answer any questions.

Public Hearing closed at 8:04 pm.

MOTION Baum second Laszewski to Approve the request to rezone and remove 39,833 sqft (.914 acres) of filled wetland from the Shoreland-Wetland Zoning District as shown in the detailed site plans subject to one (1) condition:

1. Menards shall provide a legal description of the wetland fill area to Village staff prior to scheduling the rezoning application for Village Board review.

MOTION carried unanimously.

MOTION Baum second Shadid to Approve a Conditional Use Permit to allow development within the 25' wetland setback area pursuant to Section 24.04 of the Shoreland-Wetland Zoning Code as presented in the revised Site Plan set dated March 5, 2020 (Sheet C1.3).

MOTION carried unanimously.

MOTION Baum second Shadid to Approve a revision to Conditional Use Permit (CUP) #7-2002 to increase the size of retail building to 169,300 sqft with an additional warehouse area of

51,750 sqft consistent with the proposed facility expansion presented in the Site Plan set dated March 5, 2020 (Sheet C1.3).

MOTION carried unanimously.

MOTION Baum second Shadid to Approve a revision to Conditional Use Permit (CUP) #8-2002 to increase the size of the enclosed storage yard to 3.85 acres as shown in the Site Plan set dated March 5, 2020 (Sheet C1.3).

MOTION carried unanimously.

MOTION Baum second Laszewski to Approve the site development and building plans for the proposed storage yard expansion, warehouse addition, building addition & exterior remodeling to the existing Menards home improvement and retail store located at W186 N9754 Appleton Avenue subject to the following conditions:

- 1. This approval is subject to all the conditions and requirements set forth herein and adopted by the Plan Commission. Approval is granted for the site development and building plan set dated as set forth below unless superseded by subsequent plan sheets approved by the Village Planner pursuant to revisions required herein and/or by the Plan Commission:**

Landscaping & Lighting Plans dated October 15, 2019

Architecture & Building Elevation Plans dated October 3, 2019

Engineering Plans dated February 24 & March 5, 2020

- 2. All landscaping, screening, grading, paving, storm water management, utility and other improvements that are not fire-safety related as shown on the approved site plans shall be installed as proposed prior to issuance of an occupancy permit unless a cash bond or letter of credit in an amount equal to 120 percent of the estimated installation and material costs reviewed and approved by the Village is submitted to the Village as necessary to ensure that installation of the proposed features and improvements will be completed within one (1) year after issuance of the occupancy permit.**
- 3. All exterior doors (except primary entrance) shall be clearly marked with reflective 5" or larger letters/numbers to aid emergency personnel access as required by the Police Department.**
- 4. All technical issues and plan corrections identified by the Public Works Department/Village Engineer in the November 11, 2019 review letter, including final approval of the engineering plans and stormwater management report, shall be addressed and reflected in revised plans and/or supplemental information reviewed and approved by the Public Works Department prior to issuance of a building permit (excluding "early start" site clearing and footing/foundation work approved by the Village and/or WI DSPS).**
- 5. State approved plans and a \$20,000 occupancy bond are required by the Building Inspection Department as part of the building permit application.**
- 6. Relocation of the storage yard access gate/canopy to the southeast side of the retail building requires the construction of a wall or fence between the existing building and the gate/canopy structure. Menards shall install the same 14' high wood "privacy" fence/wall that is installed around other portions of the storage yard. Menards shall be responsible for the installation and ongoing maintenance of the approved landscaping along the outside of the wall to ensure the appearance of the fence/wall does not become dilapidated or a visual eyesore (as a result of staining, mold, etc.).**

Trustee Baum stated he has a problem with accessing the rear lot on the east side of the property. He said that combined access to Appleton Avenue is the busiest access point and there are cars

backed up in all directions and now it will be compounded with cars waiting and staging to get to the back yard. He asked if there was another solution to access the back yard. Mr. Edwards explained how the new gate with three lanes would expedite entering the yard area. Trustee Baum said that won't help because most people use the shared entrance as the primary entrance and not the center one. He commented that on a Saturday people are cutting each other off and the left turn lane will queue up with people coming from Menards and Steins with 10 to 12 cars stacked up forming a Y. He said the issue needs to be resolved with this operation. Chairman Wolter agreed saying he frequents both retail outlets and it can be a congestion point. He said the middle entrance is not used as often as it should be and the heaviest entry point is coming in the far southern entrance. Mr. Edwards explained products will be in the approximate same locations. He explained they want to move the heavier truck and vehicle traffic away from the garden center to help with safety.

***MOTION to Amend Baum second Nilles that the fencing choice is the wood plank fence.
MOTION carried unanimously.***

Discussion continued. Mr. Edwards said yard traffic is significantly less than the general traffic to the parking lot and there will not be a significant increase of people coming in from the street driving into the gate. Trustee Baum said he has encountered traffic backed up going out and inbound and the tie up station in the parking lot creates more congestion. He said there is too much happening in one spot. Mr. Edwards offered to move the tie down area inside the yard with a dedicated space and not cause further congestion in the parking lot. Planner Retzlaff asked if there was a way to modify the island as it enters into the parking lot to separate traffic better with more queuing area. Mr. Edwards commented there may be an opportunity to connect the islands so there are not so many entrances converging on one.

***MOTION Baum second Laszewski to Postpone the Site Plan approval until Menards comes back with an alternative for the Steins shared entry and it is resolved to a satisfactory condition to allow better traffic flow.
MOTION carried 5-1 (Nilles).***

Planner Retzlaff said staff would work with Menards on alternatives. Chairman Wolter said he appreciates Menards coming forward and expanding their business in Germantown.

All Terrain Construction - N112 W14792 Mequon Road. Scott Morgan, property owner, is requesting approval of a Conditional Use Permit (CUP) to operate a Construction Services Contractor Shop. Associate Planner Zandt summarized the proposal.

Public Hearing opened at 8:38 pm

- Frederick Gierach, N128 W19157 Holy Hill Road, Richfield, WI - Chairman Wolter read his letter into the record. Mr. Gierach indicated he did not object to the proposed use but questioned the capability of the property being able to support the business.

Public Hearing closed at 8:45 pm

MOTION Baum second Shadid to Approve a conditional use permit (CUP) for Scott Morgan and All-Terrain Construction to allow the operation of a construction services contractor shop at the property located at N112W14792 Mequon Road subject to the following conditions:

- 1. The uses and activities allowed on the property shall be limited to those uses and activities and relative locations specified in the conditional use permit (CUP) application and supporting documents dated February 26, 2019. The size and relative location of those***

REVISED
**REZONING, CONDITIONAL USE PERMIT APPLICATIONS &
SITE PLAN REVIEW**

5/11/20 Plan Commission Meeting
Menard Inc.

Village Planner Report

Germantown, Wisconsin

Summary

Tyler Edwards, agent for Menard Inc., property owner, has submitted Rezoning, Conditional Use Permit, and Site Development and Building Plan applications in support of a proposed storage yard expansion, warehouse addition, building addition & exterior remodeling to the existing home improvement and retail store located on a 34.8-acre parcel at W186 N9754 Appleton Avenue.

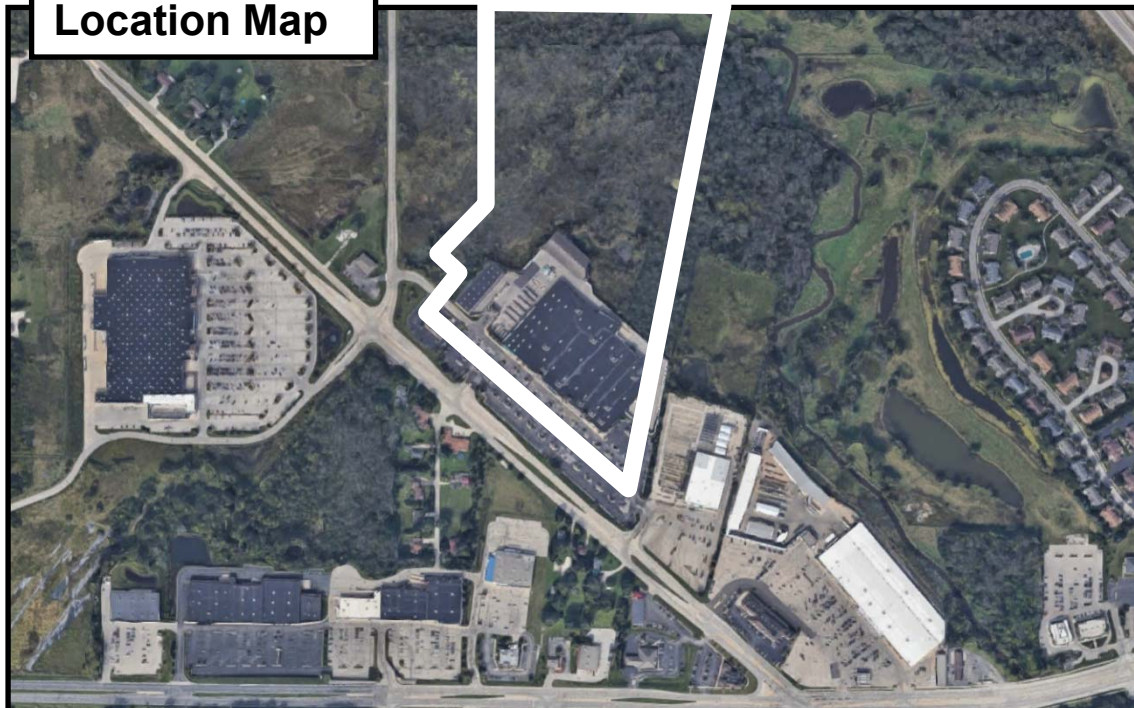
Location: W186 N9754 Appleton Avenue

Property Owner: Menard Inc.
5101 Menard Drive
Eau Claire, WI

Current Zoning: B-2: Community Business

Adjacent Land Uses		Zoning
North	Agricultural/Commercial	A-1
South	Commercial/Residential	B-1/B-3/Rs-3
East	Commercial (Stein's)	B-1
West	Commercial (Wal-Mart & bank)	B-1

Location Map



Background

Tyler Edwards, agent for Menard Inc., property owner, has submitted Rezoning, Conditional Use Permit, and Site Development and Building Plan applications in support of a proposed storage yard expansion, warehouse addition, building addition and exterior remodeling to the existing home improvement and retail store located at W186 N9754 Appleton Avenue. As discussed in the October, 2019 project description letter, the proposed improvements are intended to update the retail store in terms of the space needed to provide the type and quantity of products and amenities that other Menards stores across the country provide.

The Germantown Menards home improvement & retail store was originally approved in 2002 (with the store opening in 2003) after various prerequisite approvals were granted over a 3-year period from 1999 to 2002. A certified survey map (CSM) to combine parcels and rezoning approvals were granted in 1999. Two (2) separate conditional use permits were granted in 2002: CUP#7-2002 for a retail store up to 162,570 sqft in area and CUP#8-2002 for an enclosed storage yard 3.8 acres in area. Final site development and building plan approval was granted in June, 2002. The only change made to the original store requiring Plan Commission approval was the garden center remodeling in June, 2007.

Details of the various improvements currently proposed and the approvals required are detailed below.

Proposal: Site Development & Building Plans

As presented in the detailed site plans and other supporting information, the Menards expansion includes the following improvements:

- Storage yard area expansion from 2.6 to 3.85 acres (113,853 to 167,610 sqft)
 - o Expand area on north, east and south sides of retail building
 - o Remove/replace 14' high wood perimeter yard (privacy) fence
 - o Fill 39,833 sqft (.914 acres) of wetland
 - o Fill portions of existing storm water basin (north of & outside storage yard)
 - o Install two (2) Stormtech sub-surface storm water retention/detention chamber systems (under pavement in storage yard)
- Storage yard warehouse expansion to 51,736 sqft
 - o Existing warehouse #1 reduced to 7,621 sqft
 - o Existing warehouse #2 reduced to 18,691 sqft
 - o New warehouse connecting #1 to #2 with additional 25,424 sqft
- Storage yard access gate/canopy relocation & expansion (from northwest to southeast side of building)
 - o Relocate canopy & add 3rd controlled access gate for "order pickup"
 - o Install new 14' wood wall or wrought iron fence (alternative) between south side of building and "new" access gate/canopy
 - o convert "old" existing storage yard gate/canopy access to single-lane emergency access only (to provide 360⁰ accessibility for Fire/EMS services)

- Parking lot reconfiguration
 - o Remove islands and (83) parking stalls near shared access driveway w/ Stein's Garden Center to accommodate expanded storage yard & "new" relocated access gate
 - o Remove islands and add (13) parking stalls near "old" existing storage yard access gate
 - o Net reduction of (70) parking stalls from (531) to (461) stalls (almost all stalls to be removed are currently located in less-used, remote location south of store)
- Retail building expansion (10,445 sqft addition; 169,283 sqft total)
 - o Enclose portions of the existing garden center and receiving area located in rear (north) side of store into 8,269 sqft of heated "special order" storage and pick-up area, and, 2,176 sqft of additional unheated garden center storage area

Access & Parking. The Menards property will continue to be served by three (3) driveways: the primary driveway to/from Appleton Ave; a driveway shared with Stein's Garden Center further south along Appleton Ave; and a driveway shared with Waterstone Bank to/from Maple road. As summarized above, the storage yard expansion and access gate/canopy relocation will result in a net decrease of (70) parking stalls from (531) to (461). Menards indicates that this reduction in parking stalls will not impact the operation because of the increase in online orders & in-vehicle pick-up, as well as, the typical distribution of contractor (weekday-daytime) vs. homeowner (weekend-evening) customer traffic.

Storm Water Management. A total of approximately 17.87 acres (51.4%) of impervious area is proposed with the storage yard pavement expansion, warehouse expansion and retail building additions on the 34.8-acre site leaving 48.6% in open space. The site is currently served by one (1) storm water basin north of the enclosed storage yard and one (1) Stormtech sub-surface retention/detention chamber systems under the existing parking lot south of the retail building. Due to a reduction in the size of the existing storm water basin and increase in impervious area resulting from the storage yard expansion, warehouse expansion and building addition, two (2) additional Stormtech sub-surface chamber systems will be installed under the pavement in the expanded storage yard (see sheet C1.3).

Landscaping. Landscaping changes are limited to the relocation of existing and installation of new deciduous and evergreen trees & shrubs from the parking lot islands and foundation plantings where the "old" storage yard access/gate canopy will be removed, and, where the "new" gate/canopy will be constructed.

Lighting. Exterior lighting changes include replacing existing 400W metal-halide pole-mounted and building-mounted fixtures with 200W LED cut-off fixtures in the parking lot and storage yard areas, as well as, new 200W LED cut-off fixtures in the expanded storage yard and warehouse areas.

Signage. No new or additional signage is proposed.

Proposal: Rezoning (Wetland Fill & Shoreland-Wetland)

Like the original site development, the proposed storage yard expansion requires the filling of wetlands located on the north side of the property. As shown in the Wetland Permit application submitted to the Wis DNR and U.S. Army Corp (ACOE), on various sheets in the plan set, the area north and west of the enclosed storage yard contains a significant area of wetland and floodplain (including a 1.54-acre wetland restoration area constructed by Menards to compensate for the .77 acre wetland fill approved for the original development). The proposed storage yard expansion impacts an additional total of 39,833 sqft (.914 acres) of wetland north/west and adjacent to the existing storage yard enclosure.

Menards has obtained both WisDNR and ACOE approval to fill .914 acres of fresh wet meadow wetland. However, because the amount of wetland fill is greater than 10,000 sqft, wetland compensatory mitigation is required by the DNR under the DNR's permitting authority. To that end, Menards was required to provide compensation in the form of purchasing credits from the Wisconsin wetland Conservation Trust (WWCT) program in the southwestern Lake Michigan Service Area. Menards was required to compensate the filled wetland at a mitigation ratio of 1.45 to 1 ($1.45 \times .914 \text{ acres} = 1.32 \text{ credits}$). Menards completed the purchase of 1.32 credits in March, 2019 to satisfy the WisDNR's wetland fill "mitigation compensation" requirement.

Consequently, Menards is requesting that, since the .914 acres of filled wetland is no longer "eligible" to be included in the Village's Shoreland-Wetland Zoning District, it should be removed from the Village's Shoreland-Wetland District by rezoning.

Proposal: Conditional Use Permit (CUP)

Because the Village requires a 25' setback from all delineated wetlands under the Village's Shoreland-Wetland Zoning Code, Menards has included in their conditional use permit (CUP) application a request for an exemption from the requirement to provide and maintain a 25' setback from the new boundary of the wetland after the approved fill has taken place (which would effectively allow the expanded storage yard enclosure to be installed at or up to the new wetland boundary resulting from the approved wetland fill and NOT maintaining a 25' setback). Consequently, no plan to mitigate the requested encroachment into the 25' setback area has been proposed.

In addition to the CUP requirement for development encroaching into the 25' wetland setback, Menards is requesting that the two existing CUP's (CUP#7-2002 and CUP#8-2002) be amended to reflect the increased size of the retail building and increased size of the enclosed storage yard.

Staff CommentsWetland Fill & Shoreland-Wetland Rezoning

Staff agrees that, with respect to the Village's Shoreland-Wetland Zoning Code, the .914 acres of filled wetland is no longer "eligible" to be included in the Shoreland-Wetland Zoning District and, therefore, can/should be removed by rezoning. The underlying B-2: Community Business Zoning District will remain unchanged as it applies to the entire 34.8-acre parcel. A legal description of the fill area is needed and should be prepared and submitted to the Village.

25' Wetland Setback CUP

Although the Village's Shoreland-Wetland Code requires a 25' setback from all DNR-approved delineated wetlands (regardless of size or location), the Village does allow development within the 25' setback with a CUP. Section 24.04 of the Code permits development in the required setback to provide additional buffering and/or other compensation for the affected area at a 1:1 ratio for "horizontal" development and a 2:1 ratio for "vertical" development (example: impervious surface or a grade change greater than 3' height).

In the Menards case, because the WisDNR has approved filling a portion of the wetland up to a point abutting the expanded storage yard enclosure, requiring Menards to provide a minimum 25' setback around the remaining wetland would necessitate that Menards first fill an additional amount of wetland between the proposed storage yard expansion and a point 25' away. Moreover, with no other non-wetland or "upland" area available adjacent to the remaining wetland on the Menards property, there's no place for the type of wetland vegetation/buffer enhancements that the Village typically requires when approving 25' wetland setback CUP's under similar circumstances. For that reason, the only other form of compensation the Village has required of other property owners in situations like this has been to require the removal of invasive species from the actual wetland in an amount equal to the amount of development encroachment. As discussed above, in 2003, Menards has already constructed a compensatory mitigation area consisting of 1.54-acres of floodplain forest restoration (at a 2:1 ratio for .77 acres of filled wetland). For these reasons, Staff is of the opinion that no further compensation should be required for the proposed development encroachment within the now non-existent 25' setback area. If something more is recommended by the Plan Commission, Staff recommends a commensurate amount of invasive species removal from the remaining wetland areas north of the expanded storage yard enclosure.

Amendments to CUP #7-2002 and #8-2002

As a matter of procedure and because of the specific language contained in the previous CUP's granted to Menards, both CUP #7-2002 and #8-2002 should be amended to reflect the specific storage yard expansion and retail building addition.

As indicated in CUP#7-2002 (copy enclosed), the retail building was originally approved for up to 162,570 total sqft (*NOTE: in the B-2 Zoning District, any retail building 50,000 sqft or greater requires a CUP*). As a result of the proposed building expansion, the approved area should be increased to 169,300 sqft with an additional warehouse area of 51,750 sqft consistent with the proposed facility expansion.

As indicated in CUP#8-2002 (copy enclosed), the enclosed storage yard was originally approved for an area of 3.8 acres. As a result of the proposed storage yard expansion this area should be increased to 3.85 acres (*NOTE: it is unclear why CUP#8-2002 was granted for 3.8 acres at a time when the enclosed storage yard was only proposed to be 2.6 acres*).

Planning & Zoning

As shown on various sheets in the site plan set, the proposed storage yard and warehouse expansions are erroneously shown as encroaching into the 100-year floodplain. While a portion of the Menards property is located within the 100-year floodplain, that area is located further north and away from the proposed development expansion. The floodplain line shown on the site plans is actually the 500-year floodplain line (Zone "X" as presented on the FEMA FIRM maps adopted by the Village for this area as part of the Village's Floodplain Zoning Code). Because the Village does not regulate land within the 500-year floodplain (most communities do not), no restrictions or limitations contained in the Village's Floodplain Zoning Code apply to the Menards proposal.

Finally, the proposed relocation of the storage yard access gate & canopy from the northwest to the southeast side of the retail building also includes the construction of a wall or fence between the existing building and the gate/canopy structure. Menards is proposing to install either a: (1) 14' high wood "privacy" fence/wall that is the same as that already installed around other portions of the storage yard; or (2) wrought iron fencing mounted on a concrete base... the same as some sections already installed near the "old" existing access gate. Menards has indicated that they will install whatever alternative the Village prefers.

Because the area on the inside of the proposed wall or fence is intended to be used for additional storage of product and materials, including the installation of the same rack-mounted shelving that already exists within the storage yard, Staff recommends that the 14' high wood privacy fence/wall be installed provided that sufficient landscaping is also installed on the outside of the wall (as shown on the landscape plan), and, that the wall is continually maintained so as to not become dilapidated or a visual eyesore (as a result of staining, mold, etc.).

Inspection Services

Inspection Services has indicated that the submission of state-approved plans will be required prior to issuing a building permit along with the required \$20,000 occupancy bond.

Public Works Department/Engineering

The Public Works Department has identified a number of technical issues and plan corrections (see November 11, 2019 review memo from Public Works Director, Larry Ratayczak) that will need to be addressed in a revised plan set and/or supplemental information submitted for review and approval by the Public Works/Engineering prior to issuance of a building permit.

NOTE: Revised plans and supplemental information addressing these issues (February 24, 2020 letter from Menards) were submitted and are currently being reviewed by staff. We do not anticipate having a revised staff review completed before the May 11 Plan Commission meeting. Therefore, conditional approval is recommended subject to addressing all the issues and items in the November 11, 2019 staff review memo and any subsequent issues that are either outstanding or result from that subsequent staff review.

Utilities

Comments included in Public Works Department/Engineering review letter.

Fire Department/Police Department

All of the Fire Department's initial plan review comments and concerns have been addressed with the revised plan set, including the retention & conversion of the existing storage yard access gate as an emergency only access to provide 360° perimeter access for Fire/EMS equipment and staff.

Village Forester

The Village Forester recommends the following alternatives to the proposed landscape plan:

1. With respect to the new landscape border I and recommending substituting "Autumn Fantasy Maple" for the "Autumn Blaze Maple" and substituting "Little Princess Spirea" for "Anthony Waterer".

VILLAGE STAFF RECOMMENDATION*Rezoning Application*

APPROVE the request to rezone and remove 39,833 sqft (.914 acres) of filled wetland from the Shoreland-Wetland Zoning District as shown in the detailed site plans subject to one (1) condition:

1. Menards shall provide a legal description of the wetland fill area to Village staff prior to scheduling the rezoning application for Village Board review.

VILLAGE STAFF RECOMMENDATION*Conditional Use Permit: 25' Wetland Setback*

APPROVE a Conditional Use Permit to allow development within the 25' wetland setback area pursuant to Section 24.04 of the Shoreland-Wetland Zoning Code as presented in the revised Site Plan set dated March 5, 2020 (Sheet C1.3).

VILLAGE STAFF RECOMMENDATION*Conditional Use Permit: Amendment to CUP#7-2002*

APPROVE a revision to Conditional Use Permit (CUP) #7-2002 to increase the size of retail building to 169,300 sqft with an additional warehouse area of 51,750 sqft consistent with the proposed facility expansion presented in the Site Plan set dated March 5, 2020 (Sheet C1.3).

VILLAGE STAFF RECOMMENDATION*Conditional Use Permit: Amendment to CUP #8-2002*

APPROVE a revision to Conditional Use Permit (CUP) #8-2002 to increase the size of the enclosed storage yard to 3.85 acres as shown in the Site Plan set dated March 5, 2020 (Sheet C1.3).

VILLAGE STAFF RECOMMENDATION*Site Development & Building Plans ("Site Plans")*

APPROVE the site development and building plans for the proposed storage yard expansion, warehouse addition, building addition & exterior remodeling to the existing Menards home improvement and retail store located at W186 N9754 Appleton Avenue subject to the following conditions:

1. This approval is subject to all the conditions and requirements set forth herein and adopted by the Plan Commission. Approval is granted for the site development and building plan set dated as set forth below unless superseded by subsequent plan sheets approved by the Village Planner pursuant to revisions required herein and/or by the Plan Commission:
 - Landscaping & Lighting Plans dated October 15, 2019
 - Architecture & Building Elevation Plans dated October 3, 2019
 - Engineering Plans dated February 24 & March 5, 2020
2. All landscaping, screening, grading, paving, storm water management, utility and other improvements that are not fire-safety related as shown on the approved site plans shall be installed as proposed prior to issuance of an occupancy permit unless a cash bond or letter of credit in an amount equal to 120 percent of the estimated installation and material costs reviewed and approved by the Village is submitted to the Village as necessary to ensure that installation of the proposed features and improvements will be completed within one (1) year after issuance of the occupancy permit.
3. All exterior doors (except primary entrance) shall be clearly marked with reflective 5" or larger letters/numbers to aid emergency personnel access as required by the Police Department.
4. All technical issues and plan corrections identified by the Public Works Department/Village Engineer in the November 11, 2019 review letter, including final approval of the engineering plans and stormwater management report, shall be addressed and reflected in revised plans and/or supplemental information reviewed and approved by the Public Works Department prior to issuance of a building permit (excluding "early start" site clearing and footing/foundation work approved by the Village and/or WI DSPS).
5. State approved plans and a \$20,000 occupancy bond are required by the Building Inspection Department as part of the building permit application.
6. Relocation of the storage yard access gate/canopy to the southeast side of the retail building requires the construction of a wall or fence between the existing building and the gate/canopy structure. Menards shall install the same 14' high wood "privacy" fence/wall that is installed around other portions of the storage yard. Menards shall be responsible for the installation and ongoing maintenance of the approved landscaping along the outside of the wall to ensure the appearance of the fence/wall does not become dilapidated or a visual eyesore (as a result of staining, mold, etc.).

CUP # : 7-02
Document No

CONDITIONAL USE PERMIT
Document Title

DOC# : 939518



ORIGINAL

VILLAGE OF GERMANTOWN
CONDITIONAL USE ZONING PERMIT

Whereas, **MENARD, INC.**
applicant/owner

agrees to comply with applicable Codes and Ordinances of the Village of Germantown, Wisconsin, and further agrees that all work done pursuant to the permission granted herewith will conform with the applications and drawings filed with officials of the Village for the purpose of obtaining this permit.

Now, therefore, this permit is issued to:

MENARD. INC.

to allow for:

the construction/operation of a retail store larger than 50,000 sq. ft. In accordance with Section 17.29 (3)(r) of the Municipal Code (162,570 sq. ft.)

on the following described real estate in the Village of Germantown, Washington County, Wisconsin:

A part of the NW 1/4 of the SW 1/4 , part of the NE 1/4 of the SW 1/4 and part of the SW 1/4 of the SW 1/4 of Section 33, T9N, R20E, Village of Germantown, Washington County, WI, bounded and described as follows:

Commencing at the west 1/4 of said Section 33; thence N88°58'56" E. along the north line of the southwest 1/4 of said Section 33, 33.00 feet to the point of beginning; thence N88°58'56" E. along said north line, 1353.00 feet; thence S09°34'17" W, 2068.88 feet to the north line of S. T. H. 175; thence N49°29'17" W, along the north line of S. T. H. 175, 1298.46 feet to the east line of Maple Road; thence N01°03'26" W along said east line 1,172.56 feet to the point of beginning, subject to easements of records. Contains 44.65 +/- acres. Recorded in the Washington County Registry as warranty deeds: Document #857894 - June 7, 2000; Document No. 857896 June 7, 2000; Document No. 869235 - November 2, 2000; Document No. 874079 - January 15, 2001; and Document No. 884428 - May 2, 2001.

Also described as approximately W185 N9600 to 9800 Appleton Avenue.

pursuant to the following conditions:

Recorded
JULY 16, 2002 AT 09:00AM
DOROTHY C. GONNERING
REGISTER OF DEEDS
WASHINGTON COUNTY, WI
Fee Amount: \$15.00

15-3

Name & Return Address

Village of Germantown
P O Box 337

Germantown WI 53022

GTNV333-969.970 & 971

Parcel Identification Number (PIN)

1. The developer will be responsible for all public infrastructure improvements to facilitate the safe and efficient movement of people and goods from the store to County Line Road and Maple Road, including but not limited to, the widening of Appleton Avenue to four lane divided highway.
2. The development must be in compliance with all applicable B-2, Zoning Code requirements.
3. Aerators to be installed in the storm water ponds.
4. The developer agrees to construct at their expense, improvements to Appleton Avenue from County Line Road through Maple Road intersection to four lanes, subject to the Department of Transportation approval.

The provisions of this permit shall be binding upon the owner unless and until amended by the Village of Germantown.

Granted by action of the Village Board of the Village of Germantown this
20th day of August, 2001


Charles J. Hargan
Village President

ATTEST:


Jane A. Wilms, MMC
Village Clerk

STATE OF WISCONSIN)
)SS
WASHINGTON COUNTY)

Personally came before me this 5th day of July, 2002, ~~2001~~, the above named Charles J. Hargan, Village President, and Jane A. Wilms, Village Clerk, to me known to be the persons who executed the foregoing instrument and acknowledged the same.



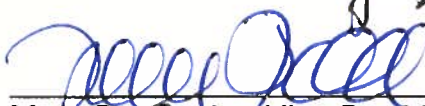
Christine M. Micka
Christine M. Micka, Notary
My Commission Expires: Sept. 14, 2003

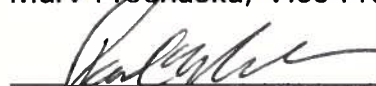
Menard Inc.

Page 3

ACCEPTANCE OF TERMS AND CONDITIONS BY PERMITTEE

I, Marv Prochaska, Vice President Real Estate and Paul Mahler, Corporate Counsel, of Menard Inc., do hereby accept the terms and conditions set forth in this Permit, and realize that non-adherence to the terms and conditions as stated hereon may result in the revocation of this Permit by the Village of Germantown.

Dated this 8 day of July, 2002

Marv Prochaska, Vice President Real Estate

Paul Mahler, Corporate Counsel

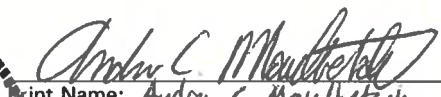
STATE OF WISCONSIN)

)SS

Eau Claire COUNTY)

Personally came before me this 8th day of July, 2002. the above named Marv Prochaska, Vice President Real Estate and Paul Mahler, Corporate Counsel of Menard Inc., to me known to be the person who executed the foregoing instrument and acknowledged the same.

This instrument was drafted by:
Jane A. Wilms, Village Clerk
Germantown, WI



Print Name: Andrew C. Maubetsch
Notary Public, State of Wisconsin
My Commission Expires: is permanent



Recorded
JULY 16, 2002 AT 09:00AM
DOROTHY C. GONNERING
REGISTER OF DEEDS
WASHINGTON COUNTY, WI
Fee Amount: \$15.00

ORIGINAL

VILLAGE OF GERMANTOWN
CONDITIONAL USE ZONING PERMIT

Whereas, **MENARD, INC.**
applicant/owner

agrees to comply with applicable Codes and Ordinances of the Village of Germantown, Wisconsin, and further agrees that all work done pursuant to the permission granted herewith will conform with the applications and drawings filed with officials of the Village for the purpose of obtaining this permit.

Now, therefore, this permit is issued to:

MENARD. INC.
to allow for:

15-3
Name & Return Address

Village of Germantown
P O Box 337
Germantown WI 53022
GTNV333-969,970 & 971

Parcel Identification Number (PIN)

for a fenced yard (approximately 3.8 acres in size) for the sale and storage of goods and materials directly related to a permitted use In accordance with Section 17.29 (3)(q) of the Municipal Code

on the following described real estate in the Village of Germantown, Washington County, Wisconsin:

A part of the NW 1/4 of the SW 1/4 , part of the NE 1/4 of the SW 1/4 and part of the SW 1/4 of the SW 1/4 of Section 33, T9N, R20E, Village of Germantown, Washington County, WI, bounded and described as follows:

 Commencing at the west 1/4 of said Section 33; thence N88°58'56" E. along the north line of the southwest 1/4 of said Section 33, 33.00 feet to the point of beginning; thence N88°58'56" E. along said north line, 1353.00 feet; thence S09°34'17" W, 2068.88 feet to the north line of S. T. H. 175; thence N49°29'17" W, along the north line of S. T. H. 175, 1298.46 feet to the east line of Maple Road; thence N01°03'26" W along said east line 1,172.56 feet to the point of beginning, subject to easements of records. Contains 44.65 +/- acres. Recorded in the Washington County Registry as warranty deeds: Document #857894 - June 7, 2000; Document No. 857896 June 7, 2000; Document No. 869235 - November 2, 2000; Document No. 874079 - January 15, 2001; and Document No. 884428 - May 2, 2001.

Also described as approximately W185 N9600 to 9800 Appleton Avenue.

pursuant to the following conditions:

CONDITIONAL USE PERMIT NO. 8-02

Menard Inc.

Page 2

1. All outdoor sales must be confined to the fenced area.
2. No outdoor displays may be placed along the front of the building or in the parking lot without Plan Commission approval.
3. The development must be in compliance with all applicable B-2, Zoning Code requirements.

The provisions of this permit shall be binding upon the owner unless and until amended by the Village of Germantown.

Granted by action of the Village Board of the Village of Germantown this 20th day of August, 2001


Charles J. Hargan
Village President

ATTEST:


Jane A. Wilms, MMC
Village Clerk

STATE OF WISCONSIN)
)SS
WASHINGTON COUNTY)

Personally came before me this 15th day of July 2002, ~~2001~~, the above named Charles J. Hargan, Village President, and Jane A. Wilms, Village Clerk, to me known to be the persons who executed the foregoing instrument and acknowledged the same.




Christine M. Micka, Notary
My Commission Expires: Sept. 14, 2003

CONDITIONAL USE PERMIT NO. 8.02

Menard Inc.

Page 3

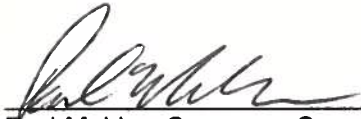
ACCEPTANCE OF TERMS AND CONDITIONS BY PERMITTEE

I, Marv Prochaska, Vice President Real Estate and Paul Mahler, Corporate Counsel, of Menard Inc., do hereby accept the terms and conditions set forth in this Permit, and realize that non-adherence to the terms and conditions as stated hereon may result in the revocation of this Permit by the Village of Germantown.

Dated this 8 day of July, 2002



Marv Prochaska, Vice President Real Estate



Paul Mahler, Corporate Counsel

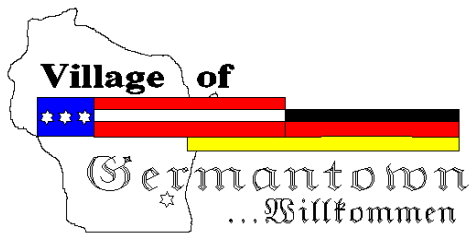
STATE OF WISCONSIN)
Eau Claire)SS
 COUNTY)

Personally came before me this 8th day of July, 2002, the above named Marv Prochaska, Vice President Real Estate and Paul Mahler, Corporate Counsel of Menard Inc., to me known to be the person who executed the foregoing instrument and acknowledged the same.

This instrument was drafted by:
 Jane A. Wilms, Village Clerk
 Germantown, WI



Print Name: Andrew C. Maubetsch
 Notary Public, State of Wisconsin
 My Commission Expires: is permanent



Engineering Department Memorandum

To : Jeffrey W. Retzlaff, AICP, Planning Director/Zoning Administrator
From : Lawrence Ratayczak, P.E., Director of Public Works
Date : November 11, 2019
Re : Menards Site Plan Review

Items Reviewed:

1. Civil Plan Set C1.0 – C1.8 (12 pages)
2. Stormwater Management Report

Dated: 10-09-2019

General Comments:

1. Please respond to each item below. **A written response addressing each item shall be included in your submittal.**
2. The submitted plans have been reviewed for general conformance with State and Village design guidelines. The electronic copies of the plans are blurry and difficult to read. This review is limited to the information provided. Additional comments could arise as a result of the plan completion and modifications. The items listed below will need to be fully resolved before the Engineering Dept. can recommend a formal approval of the plans and permit for construction.
3. This project will require a WRAPP/NOI from the DNR. Please submit a copy of the approved permit prior to final approval.
4. The project will require DSPS plumbing system review and approval. Please provide a copy of the DSPS approval prior to engineering approval
5. As-builts prepared to Village standards shall be prepared and provided to the Village post-construction (for all applicable items).
6. A professional engineer's original seal is to be affixed, signed and dated on the final set of construction plans.
7. Contact Ryan Ehlerding, 262-250-4723 for a utility permit.
8. As a guide to the review response: Items in *italics* are resolved or acknowledged, items in regular font are to be addressed yet, items in **Bold** are additional feedback to remaining original comment.

C-1.3 Site Plan

1. In general the site plan at 50 scale is difficult to review. Recommend providing additional plans at a smaller scale to ease reviews and construction.
2. New warehouse building appears to be in the floodplain. Please provide additional information on the flood elevation, building elevation, and compensatory storage volumes.
3. Add a site data table to the plans showing disturbance area and additional impervious area

C-1.4 Grading Plan

1. Electronic copy of the plan is blurry and difficult to read. For future submittals please provide legible electronic copies.
2. Provide additional details on the concrete drainage channel around the ware house building. Whats the purpose of the concrete channel?
3. Provide detailed retaining wall elevations

C-1.5 Erosion Control Plan

1. Add late season stabilization requirements to the plans.
2. Add a construction sequence to the plans.
3. Silt fence appears to stop short of the wetland. Please ensure the wetland areas is protected by silt fence.

C-1.6 Utility Plan

1. Two Village owned hydrants are shown for relocation. Please satisfy the comments below.
 - Where are the hydrants being moved to?
 - Will we be able to adequately flush our hydrants without disturbing or damaging materials or Menard infrastructure once the hydrants are relocated?
 - Add "any new water main used for relocating of hydrants will be C900".
 - Swab and chlorinate hydrant lead before reconnection.
 - Add "include rerouting tracer wire per hydrant branch detail".
 - Any Sleeves used for tying new pipe to old will be a HYMAX GRIP coupling.
 - Once Hydrant is pulled the utility will be called to verify its integrity before relocation. 262-253-8254 (office)
 - Water Utility will be the ones to operate the system valves. We will want a two day notice for water shut downs.
 - Provide photo documentation of hydrant relocates during open cut and reconnection phase of work to the water utility.
 - Once backfilled the Hydrants must be pressure tested by opening lead to system pressure and checked for leaks. Verify onsite with the Water Utility.
 - We will need the plan to reflect construction notes with any new laying lengths.
 - GPS new hydrant and valve locations.
 - Changes to our GIS will be paid for by Menards.
 - Survey and add to plan view new easement description.
 - Add Hydrant branch profile view to the construction plan set-Attached.

C-1.8 Site Details

1. Add tracking pad detail

2. Revise inlet protection detail to include round style grates.

Stormwater management plan

1. Provide additional details on the ADS systems on the construction plans. Show the system layout, access locations, outlet control structure, system elevation etc.
2. Stormtech systems are open bottom systems and considered infiltration systems. Provide soil borings in the locations of the system and provide information on the seasonal high groundwater and bedrock (if applicable) at the system locations. DSPS infiltration system review and approval of the systems is required.
3. Stormwater management plan is incomplete and does not contain enough information to review. Please provide a stormwater management plan for the site with a narrative describing the site modifications, existing site conditions, and how the site meets today's requirements. Include drainage exhibits showing the existing conditions and proposed conditions.



February 24, 2020

RE: Menards Expansion Engineering Response Letter

Dear Mr. Ratayczak,

Menard, Inc. and Cedar Corporation have reviewed your 11/11/19 review letter and we are providing the revised plans and attached reports to address the review comments.

General Comments

1. This letter is being submitted as a written response to the comments.
2. The revised site plans have been altered to be easier to read. If you have additional problems viewing the plans please let me know and I would be happy to try another method to make the plans easier to read.
3. Menards plans to apply for the WRAPP/NOI permit from the DNR prior to applying for any building permits. The DNR permit application will be submitted after the public hearings with the Village have been completed.
4. Menards will submit the final plans to DSPS for approval after the public hearing process has been completed and when the engineering revisions are approved by the Village.
5. Menards will provide as-built plans pose-construction as requested.
6. The revised plans have been stamped and sealed.
7. A utility permit will be requested prior to construction.
8. Noted.

C-1.3 Site Plan

1. The plans were revised to be easier to read. However if there are specific details that need to be magnified please let me know and we can submit additional pages in a larger form.
2. The expansion of the yard is outside of the 100 year floodplain.
3. The site data table has been added to the plans.

C-1.4 Grading Plan

1. The electronic copy of the plans has been cleaned up to be easier to read.
2. The concrete channels have been added to the plans to prevent discharge of stormwater from the roof of the warehouse into the wetlands before it is treated via the underground detention system.
3. The elevation of the walls have been noted on the plans.

C-1.5 Erosion Control Plan

1. The late season stabilization requirements have been added to the plans.
2. The construction sequence is noted on the plans.
3. The silt fence has been extended to protect all of the wetland area.

C-1.6 Utility Plan

1. Both hydrants that are being relocated are only moving a few feet. The hydrant on the north end of the yard is being moved further north to match the new fence line. The hydrant on the north corner of the building is being moved further north to be outside of the building footprint.
- The Village will be able to access and flush any hydrants without disturbing the Menards store operation.
- C900 will be used on new water main.
- Hydrant will be swabbed and chlorinated as noted
- The new hydrant details are on page C-1.8

C-1.8 Site Details

1. Tracking pad detail was added to the plans.
2. Inlet protection has been shown around the grates.

Stormwater Management Plan

1. The ADS is shown on the construction plans and detailed on the attached ADS sheets.
2. The soil boring report has been included in this submittal.
3. A revised stormwater management plan has been submitted.

Sincerely,
Menard, Inc.



Tyler Edwards

Real Estate Representative

Menard, Inc. 5101 Menard Drive Eau Claire, WI 54703

O: 715.876.2143 C: 715.579.6699 tedwards@menard-inc.com



October 4, 2019

RE: Menard, Inc. Site Plan Review Application

Dear Members of the Planning Commission,

Menard, Inc. is submitting a site plan review application for the expansion of the Germantown Menards store. The proposed expansion will allow the Menards store the space needed to grow and add the materials, storage space, and amenities that all Menards stores across the country now have. This project primarily involves the expansion of the yard area and warehouse building within the yard and further described in the letter below.

The Menards yard will grow from 2.6 acres to 3.9 acres to allow four exterior changes to the property. One of those changes involves adding heated storage space between the loading dock and the garden center. This storage space will hold the orders for guests that order materials online and pick them up at the store. The elevations submitted with this application show the finish materials of green steel to match the existing building. This area is contained behind the store building and within the yard in a way that is not visible from outside the Menards yard.

There is an existing warehouse building in the northwest corner of the yard and that building is being extended to become a 50,317 sq ft building. The exterior finish of that building will match the existing building. The elevation plan for that has been included with this submittal. This will continue to be a drive through covered material storage building.

The yard fence surrounding the expanded yard will be a replacement of the existing 14 foot tall treated wood fence on the north side of the yard. The fencing facing west and the parking lot will be the same black wrought iron fence found on the site today.

The yard gate is being relocated to the south side of the property. Yard gates at all Menards stores are being expanded to add a 2nd entrance lane for online order pickups. Guests scan a barcode from their order and enter the yard to pick up their materials without waiting for the gate guard to let them in. the program allows guests to pick up their orders without parking. This lessens the parking needs at the store when guests no longer have to park in a space in the lot and get out to pick up their materials. This part of the project will reduce the number of parking stall by 75 spaces. 13 spaces will be created on the north end of the lot where the drive for the yard gate used to be. Overall the existing parking 531 stalls will be reduced to 461 parking stalls. Please note that this reduction will not have any adverse impact on available parking stalls at Menards. As a reference I have included a list of new store locations and the number of parking stalls that were provided. Because half of Menards traffic is contractors that shop during the daytime hours and the other half is home owners that shop on nights and weekends the demand at a Menards is about half of a general retailer or grocery store that tends to see the bulk of its traffic at one time in the evening and on weekends.

A portion of the stormwater pond is being filled with the yard expansion and the existing underground stormwater treatment area will be expanded to accommodate the additional stormwater runoff. The new underground detention will be placed in the parking lot and in the yard area in front of the new warehouse building. The Army Corps of Engineers and the Wisconsin DNR have already issued wetland fill permits for the expansion project. The project being submitted is the expansion plan that has the smallest impact on the wetlands while still expanding the Menards store to fit our needs.



Menards appreciates your consideration of this request to expand the store and serve the community long into the future. If you have any questions during your review please let me know. Thank you.

Sincerely,
Menard, Inc.

A handwritten signature in black ink, appearing to read 'Tyler Edwards', is written over a horizontal line.

Tyler Edwards

Real Estate Representative

Menard, Inc. 5101 Menard Drive Eau Claire, WI 54703

O: 715.876.2143 C: 715.579.6699 tedwards@menard-inc.com



October 4, 2019

RE: Menard, Inc. Conditional Use Permit Application

Dear Members of the Planning Commission,

Menard, Inc. is submitting a conditional use permit application for the Germantown Menards store. Menards is in the process of updating and remodeling all Menards stores across the country to make sure that older stores offer the same services, products, and shopping experience as the new stores. In the competitive retail environment of today it is essential to invest in the store locations to remain successful.

The Menards store has operated in this location since it opened in 2003 and since that time there have been a couple of remodels and the proposed project is the next project that will expand the store into a store that matches all new Menards locations. This project will not change the purpose behind a Menards store. There will generally be the same number of employees, the same number of guests visiting the store and overall the same look to the store and yard.

There are three parts to the expansion of the yard and outdoor storage area. The first is an expansion of the overall footprint of the yard area. The yard will be increasing in size from 2.6 acres to 3.9 acres. This increase will allow the Germantown Menards to accommodate the second and third parts of this expansion and allow the creation of space to carry the same amount of materials that other Menards stores carry. The boundary of the yard will be expanded to the north and to the east. Menards has obtained wetland fill permits from both the DNR and the Army Corps for that expansion into the wetland area.

The second part of this project will be the expansion of the warehouse building. Along the north edge of the yard is a cold storage warehouse building that is not large enough to carry the full catalog of Menards materials. This building will be expanded to the east to create a 50,317 sq ft covered storage building. The exterior finish materials on the warehouse addition will match the existing warehouse building. Expanding the warehouse building will allow Menards to carry more materials and keep more materials onsite at any time to prevent running out or sending guests to other store locations to get what they need.

The third part of this yard expansion project is the relocation of the yard gate. Today the gate is located on the north side of the building between the garden center and the warehouse. This is not a good place to direct all of the heavy truck traffic for safety reasons. The garden center and warehouse is where the most people are walking around in the yard and all of the nearby heavy truck traffic can be dangerous. To fix that the gate will be relocated to the south side of the yard. The gate itself will be constructed using the same finish materials found on the existing gate. One additional entrance lane is being added to the gate for online order pickups. This is an automated entrance lane that allows guests to scan a barcode from their order and pick up their materials without waiting for the gate guard to let them in. There is a section of parking that will be removed as part of this project. Those 75 spaces are the least used spaces because they are tucked away from the front doors of the store. There is an access easement between Menards and the neighbor for use of the drive that connects the gate to Appleton Ave.



Menards does have a second CUP related to the size of the building. The existing Menards store is over 50,000 sq ft which requires a CUP in the ordinance. Menards will be adding a new overhang between the loading dock and garden center. This space will be heated storage space used to store online orders for guest pickup. The guest can enter through the order pickup lane at the new gate and pick up their order at this new section of the store. The exterior finishes of the building will match the existing building and those elevations are included in the submittal materials.

Thank you for your consideration of this request and the continued investment in the Germantown Menards store to ensure it is a successful part of the community long into the future. If you have any questions on the application and project please feel free to contact me directly.

Sincerely,
Menard, Inc.

A handwritten signature in black ink, appearing to read "Tyler Edwards", with a long horizontal flourish extending to the right.

Tyler Edwards

Real Estate Representative

Menard, Inc. 5101 Menard Drive Eau Claire, WI 54703

O: 715.876.2143 C: 715.579.6699 tedwards@menard-inc.com



May 8, 2020

RE: Menards CUP Application

Dear Mr. Retzlaff,

Menard, Inc. is requesting that as part of the Germantown Menards expansion CUP application the requirements for a 25' wetland setback from Section 24.04 of the Shoreland-Wetland Code ordinance is waived. The Menards store was originally constructed without any setbacks to the wetlands to minimize wetland fill. Adhering to the 25' setback requirement would require filling additional natural wetland area which is not in the best interest of Menards or the Village. The DNR and Army Corps wetland fill permits have been designed to minimize the impact to the existing wetlands and Menards has made sure that requirement was followed by minimizing the expansion area to only what is needed. Menards is also requesting relief from the requirement to add compensation for the affected area as there is onsite compensatory mitigation already and Menards paid the DNR for offsite mitigation of nearby wetlands for this expansion project as part of the approved wetland fill permit. If there are additional questions on this request please let me know. Thanks you.

Sincerely,
Menard, Inc.

A handwritten signature in black ink, appearing to read "Tyler Edwards", is written over a horizontal line.

Tyler Edwards

Real Estate Representative

Menard, Inc. 5101 Menard Drive Eau Claire, WI 54703

O: 715.876.2143 C: 715.579.6699 tedwards@menard-inc.com



Fee must accompany application

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

PAID _____ DATE _____

SITE PLAN REVIEW APPLICATION

Pursuant to Section 17.43 of the Municipal Code

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

1

APPLICANT OR AGENT

Menard, Inc.
Tyler Edwards - Real Estate Rep
5101 Menard Dr
Eau Claire WI 54703

Phone (715) 876-2143
E-Mail tedwards@menard-inc.com

PROPERTY OWNER

Menard, Inc.
5101 Menard Dr
Eau Claire WI 54703

Phone (715) 876-2143
E-Mail tedwards@menard-inc.com

2

PROPERTY ADDRESS

W186N 9754 Appleton Ave

3

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

North	South	East	West
<u>Vacant wetland</u>	<u>Commercial/Residential</u>	<u>Commercial - Stein Gardens</u>	<u>Vacant wetland</u>

4

READ AND INITIAL THE FOLLOWING:

- ☒ I am aware of the Village of Germantown ordinance requiring fire sprinklers in most new construction.
- ☒ I understand that all new development is subject to Impact and/or Connection Fees that must be paid before building permits will be issued.
- ☒ I understand that an incomplete application will be withdrawn from the Plan Commission agenda and that all resubmissions to the Plan Commission are subject to a new application fee.

5

SIGNATURES - ALL APPLICATION MUST BE SIGNED BY OWNER!

Applicant

Date

Tyler Edwards
Owner Real Estate Rep
Menard, Inc.

Date

10/15/19



Village of



Germantown

Willkommen

Fee must accompany application

☐ \$1460 Paid _____ Date _____

CONDITIONAL USE PERMIT APPLICATION

Pursuant to Section 17.42 of the Municipal Code

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

1 APPLICANT OR AGENT

Menard, Inc.
Tyler Edwards - Real Estate Rep
5101 Menard Dr
Eau Claire WI 54703
Phone (715) 876-2143
Fax ()
E-Mail tedwards@menard-inc.com

PROPERTY OWNER

Menard, Inc.
5101 Menard Dr
Eau Claire WI 54703
Phone (715) 876-2143

2 TO WHOM SHOULD THE PERMIT BE ISSUED?

Menard, Inc - owner

3 PROPERTY ADDRESS

W186N9754 Appleton Ave

TAX KEY NUMBER

GTNV-333963

4 DESCRIPTION OF EXISTING OPERATION

Briefly describe the use as it exists today, including use, size, number of employees, hours of operation, etc. If this permit involves new construction, describe the current status of the property, e.g. "vacant." Use additional pages as necessary.

Please see attached letter

5 DESCRIPTION OF PROPOSED OPERATION

Write the name of the proposed conditional use exactly as it appears in the Municipal Code.

Section 17.29 (3)(e) + Section 17.29 (3)(r)

Describe the proposed use, including size, number of employees, hours of operation and extent of any new construction/alterations.

Please see attached letter

METES AND BOUNDS LEGAL DESCRIPTION OF PROPERTY — REQUIRED

6

Attach pages as necessary.

SUPPORTING DOCUMENTATION:

7

☒ Site plan and elevations for new construction (can be conceptual)

☒ Photos of existing use and/or proposed use operating elsewhere

☒ Engineering Plans

☐ _____

READ AND INITIAL THE FOLLOWING:

8

☒ I understand that the Village is under no obligation to issue a Conditional Use Permit and will do so only if the applicant successfully demonstrates that the proposed use is harmonious with the neighborhood and the long range goals of the Village.

☒ I will notify the Village if any aspect of the conditional use changes. I understand that failure to do so may result in the revocation of the CUP.

☒ I understand that a Conditional Use Permit is valid only if the conditions and restrictions of the permit are met. I understand that failure to comply with any aspect of the permit may result in revocation.

SIGNATURES — ALL APPLICATIONS MUST BE SIGNED BY OWNER!

9

Applicant

Date

[Signature]
Owner Pen Estate Rep
McNair, Inc.

10/15/18
Date



FEES MUST BE PAID AT TIME OF APPLICATION

\$200 Plan Commission Consultation

\$1,085 Rezoning

\$1,240 PDD < 5 acres

\$2,095 PDD 5-20 acre site

\$3,460 PDD > 20 acre site

Date Paid: _____ Received by: _____

REZONING & PDD APPLICATION

Pursuant to Section 17.51 of the Municipal Code

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

1

APPLICANT OR AGENT

Menard, Inc.
Tyler Edwards - Real Estate Rep
5101 Menard Drive
Eau Claire WI 54703
Phone (715) 876 2143
E-Mail tedwards@menard-inc.com

PROPERTY OWNER

Menard, Inc.
5101 Menard Drive
Eau Claire WI 54703
Phone (715) 876-2143
E-Mail tedwards@menard-inc.com

2

PROPERTY ADDRESS OR GENERAL LOCATION

TAX KEY NUMBER

W186 N 9754 Appleton Ave

6TNV-333963

3

REZONING REQUEST

FROM

Shoreland/Wetland

TO

B2

4

METES AND BOUNDS LEGAL DESCRIPTION OF PROPERTY - REQUIRED

Attach pages as necessary

Description to be submitted
Please see Site Plan for general location

5

PURPOSE OF REZONING REQUEST

Briefly describe why the applicant is rezoning the property. Include a description of the proposed use, including any new construction and number of employees, if applicable.

Rezone wetland space to B2 as part of the Menards Expansion Project. The .414 acres will be filled as approved by the DNR and ACOE permits.

6

SUPPORTING DOCUMENTATION:

- ☐ Plat of Survey (1:100)
- ☐ Site Plan and elevations for new construction (can be conceptual)

7

READ AND INITIAL THE FOLLOWING:

X I understand that the Village is under no obligation to rezone property and that density and lot coverages provided in the Zoning Code are maximums. Actual build out will depend on myriad factors including topography and other natural conditions, surrounding neighborhood context and the detailed design of a project.

X I understand that Village Staff, Plan Commission and/or Village Board may request additional information to properly evaluate this request and failure to provide such information may in itself be sufficient cause to deny the petition.

X I am aware that this rezoning shall go into effect immediately upon the final approval of the Village Board and its execution of the rezoning ordinance

X I understand that Village Staff is required to post one or more signs along the street frontage of and/or on the property subject of this application that indicate to nearby property owners and the general public that a public hearing of my application will be held before the Village Plan Commission and/or Village Board prior to action taken on this application; I hereby grant Village Staff permission to enter onto the property for the expressed purpose of installing said sign(s) provided Village Staff is responsible for installing, maintaining and removing said signs in a reasonable manner and time frame.

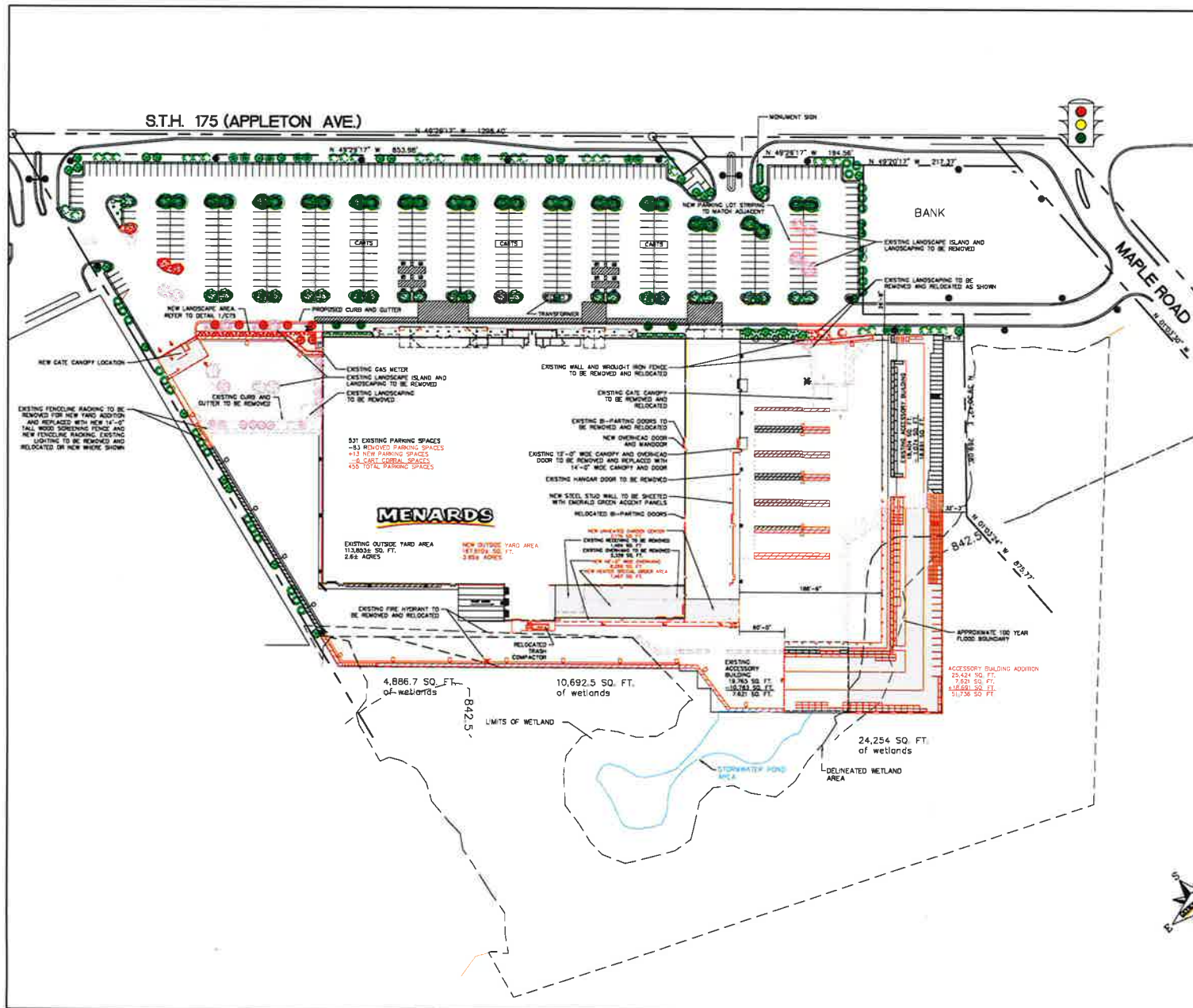
8

SIGNATURES – ALL APPLICATIONS MUST BE SIGNED BY OWNER!

Applicant

Date

[Signature] 5/7/20
 Owner Date
 Real Estate Rep
 Menard, Inc.



ELECTRICAL LEGEND		
15	RT1BL WASHINGTON LUMINAIRE C/W #1 FINAL AND K5/K9 CAPITAL 150W METAL HALIDE PULSE START BALLAST	
3	EXISTING RT1BL WASHINGTON LUMINAIRE C/W #1 FINAL AND K5/K9 CAPITAL 150W METAL HALIDE PULSE START BALLAST	
2	EXISTING RT1BL WASHINGTON LUMINAIRE C/W #1 FINAL AND K5/K9 CAPITAL 150W METAL HALIDE PULSE START BALLAST	
2	EXISTING RT1BL WASHINGTON LUMINAIRE C/W #1 FINAL AND K5/K9 CAPITAL 150W METAL HALIDE PULSE START BALLAST	
15	EXISTING 800W 277V M.H. CUTOFF LUMINAIRE PARKING LOT LIGHTING ON 25'-0" TALL POLES TO REMAIN	
2	EXISTING 800W 277V M.H. CUTOFF LUMINAIRE PARKING LOT LIGHTING ON 25'-0" TALL POLES TO MATCH EXISTING	
16	400W 277V M.H. CUTOFF LUMINAIRE BUILDING LIGHTS	
4	EXISTING 400W 277V M.H. CUTOFF LUMINAIRE BUILDING LIGHTS TO BE REMOVED AND RELOCATED	
16	RELOCATED OR NEW 400W 277V M.H. CUTOFF LUMINAIRE BUILDING LIGHTS TO MATCH EXISTING	
16	400W 277V M.H. CUTOFF LUMINAIRE YARD LIGHTS	
4	EXISTING 400W 277V M.H. CUTOFF LUMINAIRE YARD LIGHTS TO BE REMOVED AND RELOCATED	
19	RELOCATED OR NEW 400W 277V M.H. CUTOFF LUMINAIRE YARD LIGHTS TO MATCH EXISTING	
17	175W CANOPY LIGHTS	

LANDSCAPE LEGEND		
SYMBOL	SCIENTIFIC, COMMON NAME	QUANTITY
	EXISTING ACER SACCHARIN 'LEGACY', 'LEGACY' MAPLE	28
	EXISTING ACER SACCHARIN 'LEGACY', 'LEGACY' MAPLE TO BE REMOVED	3 REMOVED
	EXISTING ACER X FRIEMAN 'AUTUMN BLAZE', 'AUTUMN BLAZE' RED MAPLE TO REMAIN	39
	EXISTING ACER X FRIEMAN 'AUTUMN BLAZE', 'AUTUMN BLAZE' RED MAPLE TO BE REMOVED	8 REMOVED
	EXISTING MALUS AMERINA, WHITE FLOWERING CRABAPPLE TO BE REMOVED	31
	EXISTING MALUS AMERINA, WHITE FLOWERING CRABAPPLE TO BE REMOVED OR TRANSPLANTED	2 TRANSPLANTED
	EXISTING CELTIS OCCIDENTALIS, COMMON HACKBERRY TO REMAIN	28
	EXISTING CELTIS OCCIDENTALIS, COMMON HACKBERRY TO BE REMOVED	6
	EXISTING PINUS NIGRA, 'AUSTRIAN PINE' TO REMAIN	24
	EXISTING THUJA OCCIDENTALIS NIGRA, DARK GREEN ARBORVITAE TO REMAIN	2
	EXISTING RHUS ARNICA 'GRD-LW', 'GRD-LW' DWARF FRAGRANT SUMAC TO REMAIN	8
	EXISTING CUPRESSUS, SIBIRIAN CYPRESS TO REMAIN	98
	EXISTING CUPRESSUS, SIBIRIAN CYPRESS TO BE REMOVED	27
	EXISTING SPIRAEA JAPONICA 'ANTHONY WATERER', 'ANTHONY WATERER' SPIREA TO REMAIN	41
	EXISTING SPIRAEA JAPONICA 'ANTHONY WATERER', 'ANTHONY WATERER' SPIREA TO BE TRANSPLANTED	34 TRANSPLANTED OR NEW
	EXISTING COTONEASTER APICULATUS, CHANEBERRY COTONEASTER TO REMAIN	15
	EXISTING COTONEASTER APICULATUS, CHANEBERRY COTONEASTER TO BE TRANSPLANTED	10 TRANSPLANTED OR NEW
	EXISTING WIBURNUM LANTANA MOHICAN, MOHICAN WATKINS SHRUB TO REMAIN	12
	EXISTING WIBURNUM LANTANA MOHICAN, MOHICAN WATKINS SHRUB TO BE REMOVED	7
	EXISTING JUNIPERUS HORIZONTALIS 'BAR HARBOR', 'BAR HARBOR' JUNIPER TO REMAIN	143
	EXISTING JUNIPERUS HORIZONTALIS 'BAR HARBOR', 'BAR HARBOR' JUNIPER TO BE TRANSPLANTED	28 TRANSPLANTED OR NEW
	EXISTING JUNIPERUS PITCHERMAN COMPACT PITCHER, 'COMPACT PITCHER' JUNIPER TO REMAIN	8

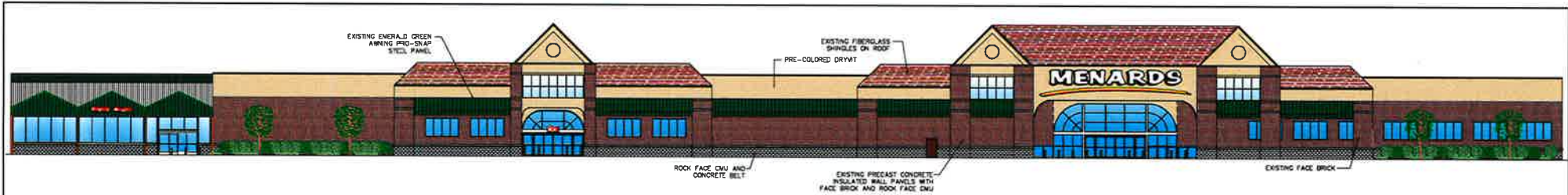
Tyler Edwards
Real Estate Representative
Menard, Inc.
5101 Menard Drive
Eau Claire, Wisconsin 54703



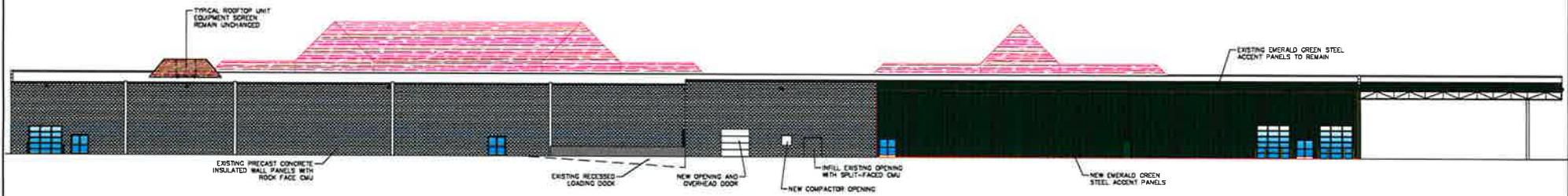
MENARDS

Germantown, Wisconsin
Menards Site Plan
October 15, 2019
Scale: 1" = 50'-0"

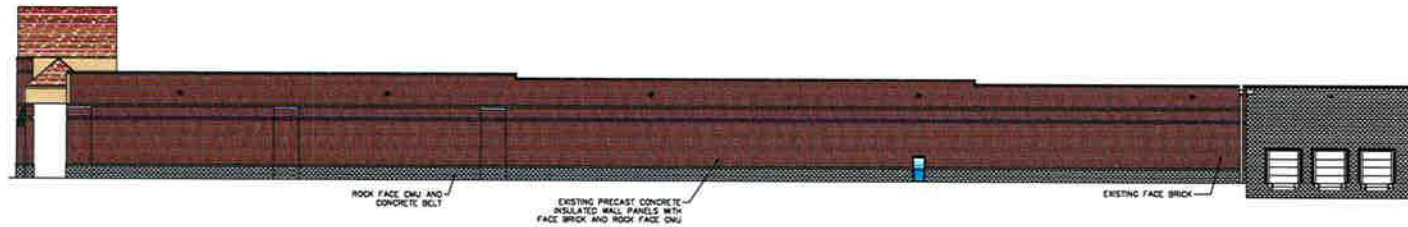
CT1



1 - EXISTING FRONT ELEVATION (TO REMAIN UNCHANGED)



2 - PROPOSED REAR ELEVATION



3 - EXISTING SIDE ELEVATION (TO REMAIN UNCHANGED)



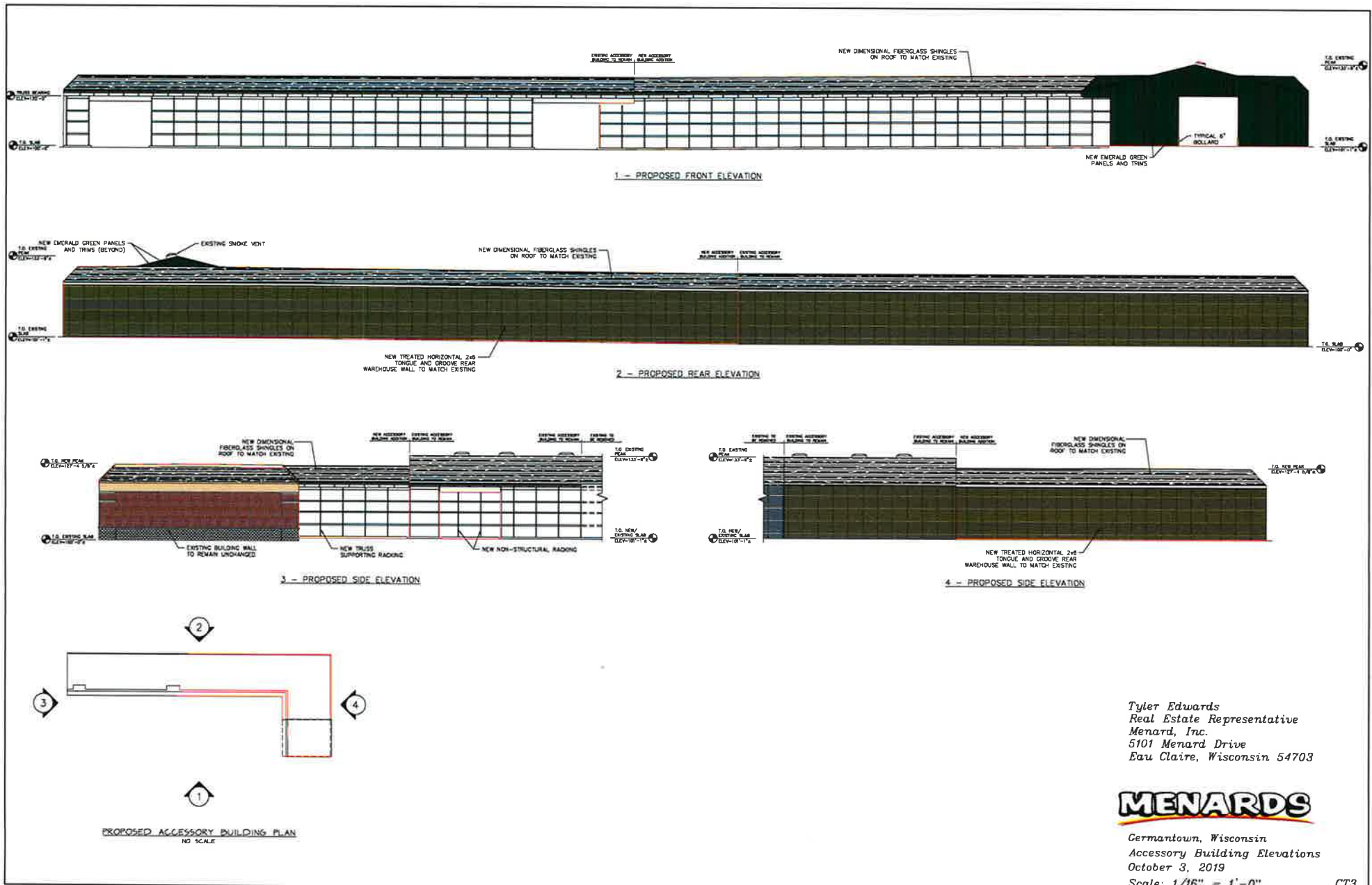
4 - PROPOSED SIDE ELEVATION

MENARDS

Tyler Edwards
Real Estate Representative
Menard, Inc.
5101 Menard Drive
Eau Claire, Wisconsin 54703

Germantown, Wisconsin
Building Elevations
October 3, 2019
Scale: 1/16" = 1'-0"

CT2



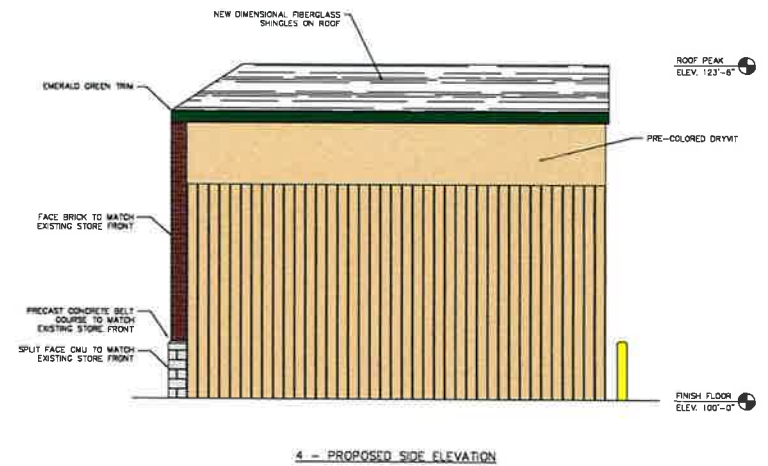
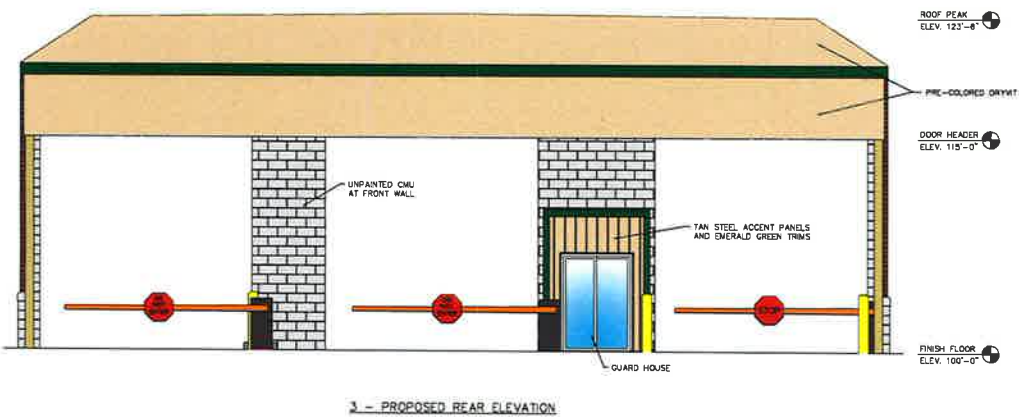
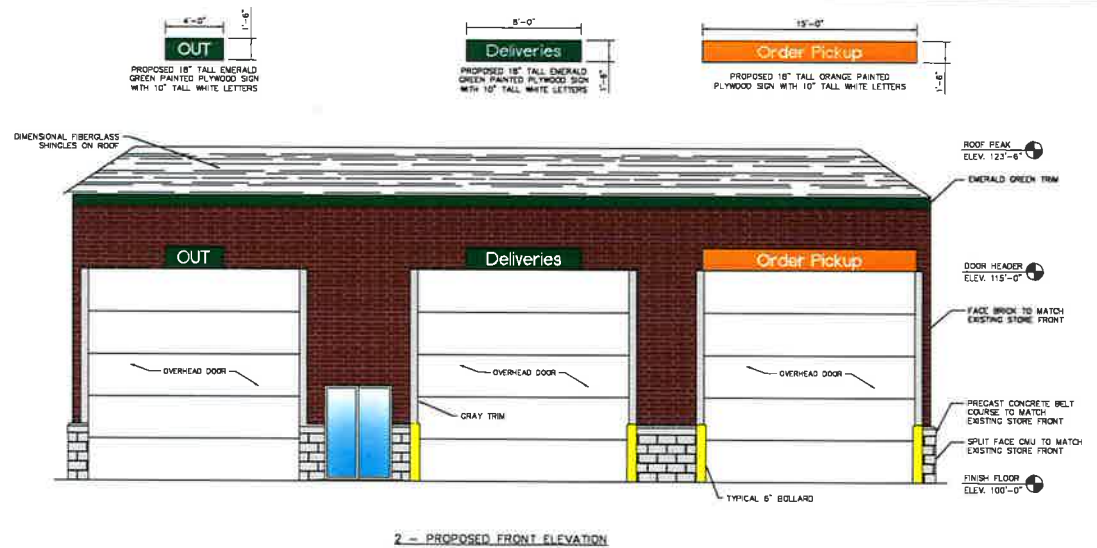
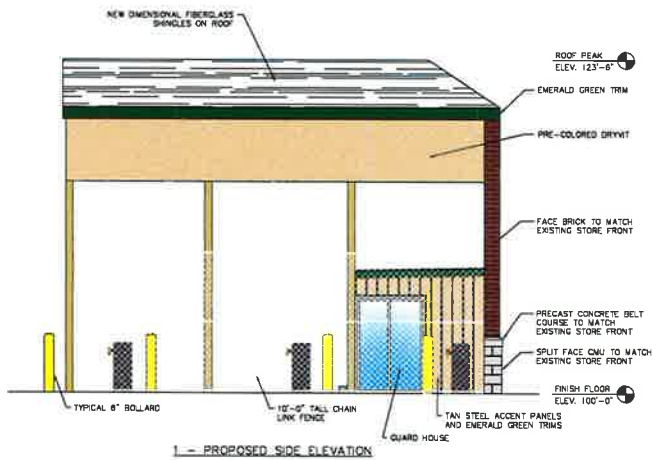
Tyler Edwards
Real Estate Representative
Menard, Inc.
5101 Menard Drive
Eau Claire, Wisconsin 54703

MENARDS

German town, Wisconsin
Accessory Building Elevations
October 3, 2019

Scale: 1/16" = 1'-0"

CT3

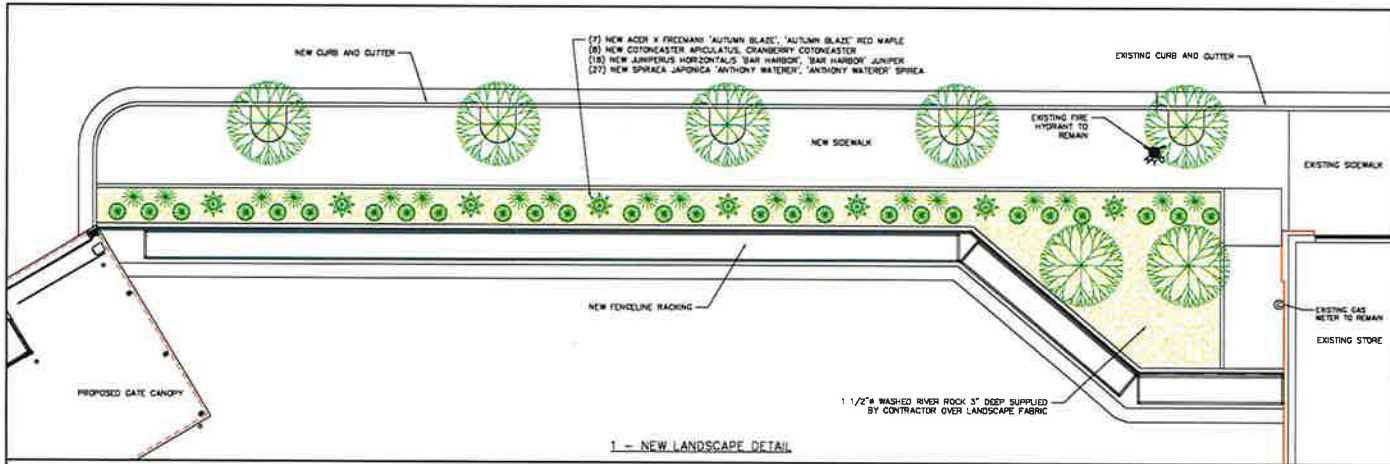


MENARDS

Tyler Edwards
Real Estate Representative
Menard, Inc.
5101 Menard Drive
Eau Claire, Wisconsin 54703

Germantown, Wisconsin
Gate Canopy Elevations
October 3, 2019
Scale: 1/4" = 1'-0"

CT4



Tyler Edwards
 Real Estate Representative
 Menard, Inc.
 5101 Menard Drive
 Eau Claire, Wisconsin 54703

MENARDS

Germanstown, Wisconsin
 Detail Sheet
 October 15, 2019
 Scale: as shown

CT5







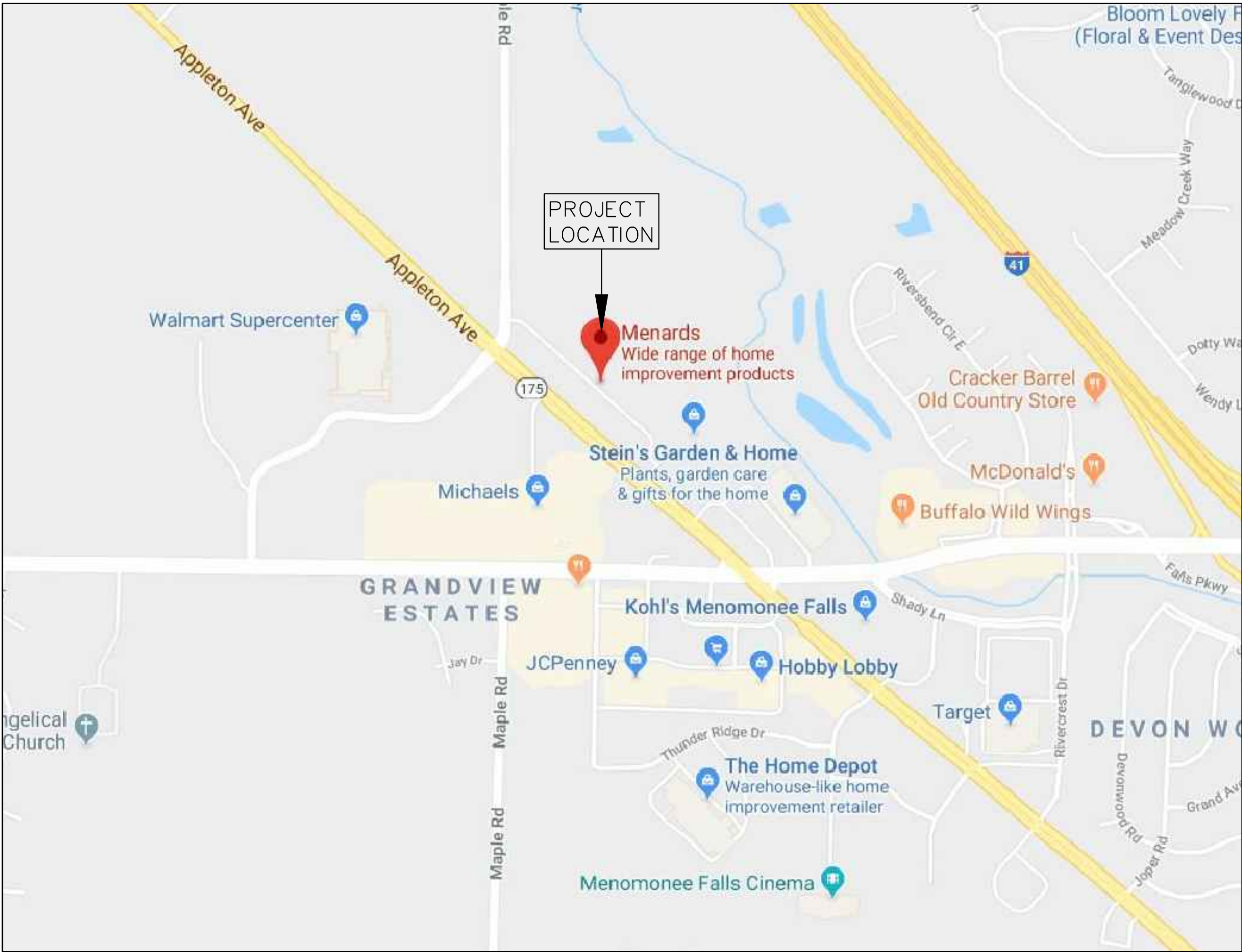
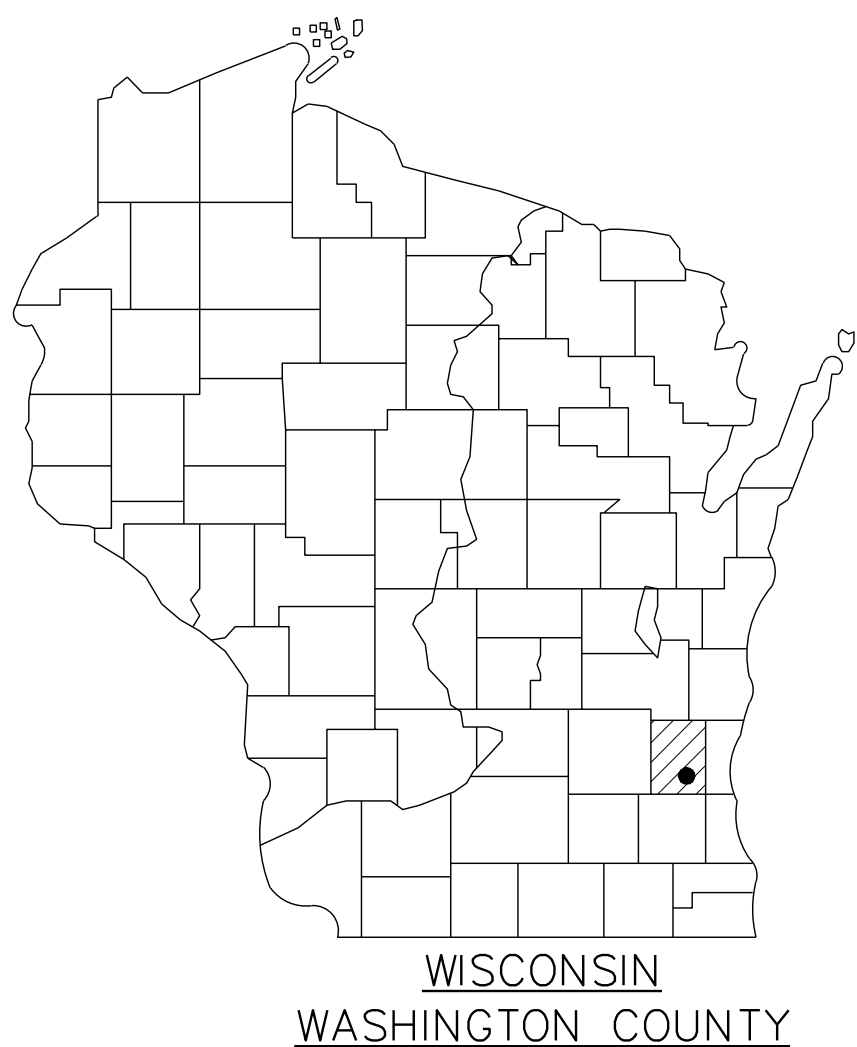


SITE AND BUILDING ADDITION

MENARDS, CITY GERMANTOWN

W186N9754 APPLETON AVENUE

GERMANTOWN, WI 53022



LOCATION MAP

NO SCALE

OWNER:
MENARD Inc.
5101 MENARD DRIVE
EAU CLAIRE, WI 54703
715-876-2532

CIVIL INDEX

SHEET	SHEET DESCRIPTION
C1.0	TITLE SHEET
C1.1	EXISTING SITE CONDITIONS
C1.2	REMOVAL PLAN
C1.3	SITE PLAN
C1.4	GRADING PLAN
C1.5	EROSION CONTROL PLAN
C1.6	SITE DETAILS
C1.7	SITE DETAILS
1-6	MENARDS EXPANSION SYSTEM # 1
1-6	MENARDS EXPANSION SYSTEM # 2

DIGGERS HOTLINE

Dial **811** or (800) 242-8511

www.DiggersHotline.com

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY PERSONAL DIRECTION AND CONTROL AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF WISCONSIN.

JOB NO.	1403-81
BOOK NO.	N/A
DRAWN BY	D B
CHECKED BY	R K
DATE	DEC. 2019
REVISIONS	
REFERENCE FILE	
DRAWING FILE	1403-81-TS.dwg

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Menomonie, Wisconsin 54751
715-235-9081
800-472-7372
FAX 715-235-2727
www.cedarcorp.com

SITE AND BUILDING ADDITION

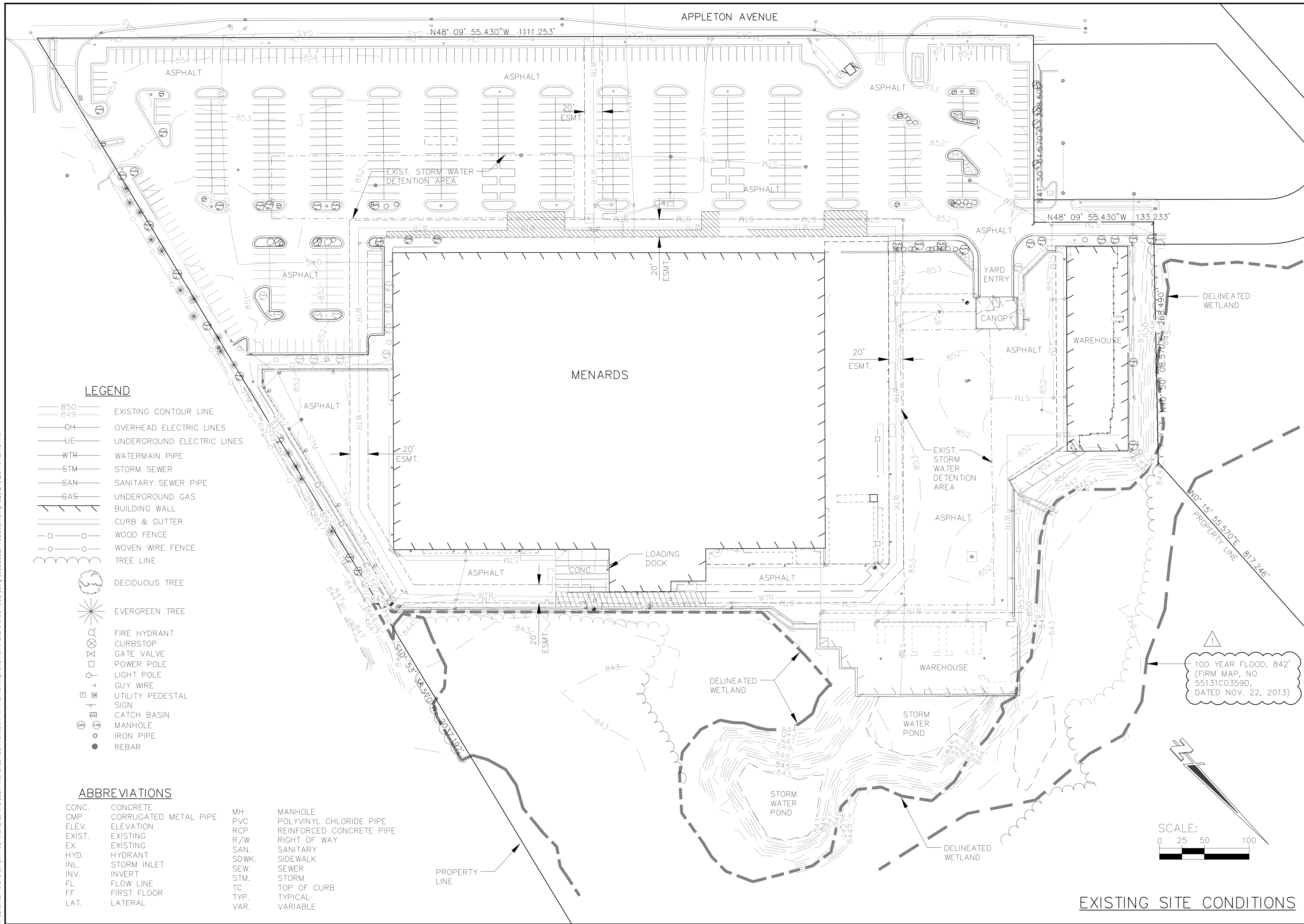
MENARDS, CITY GERMANTOWN

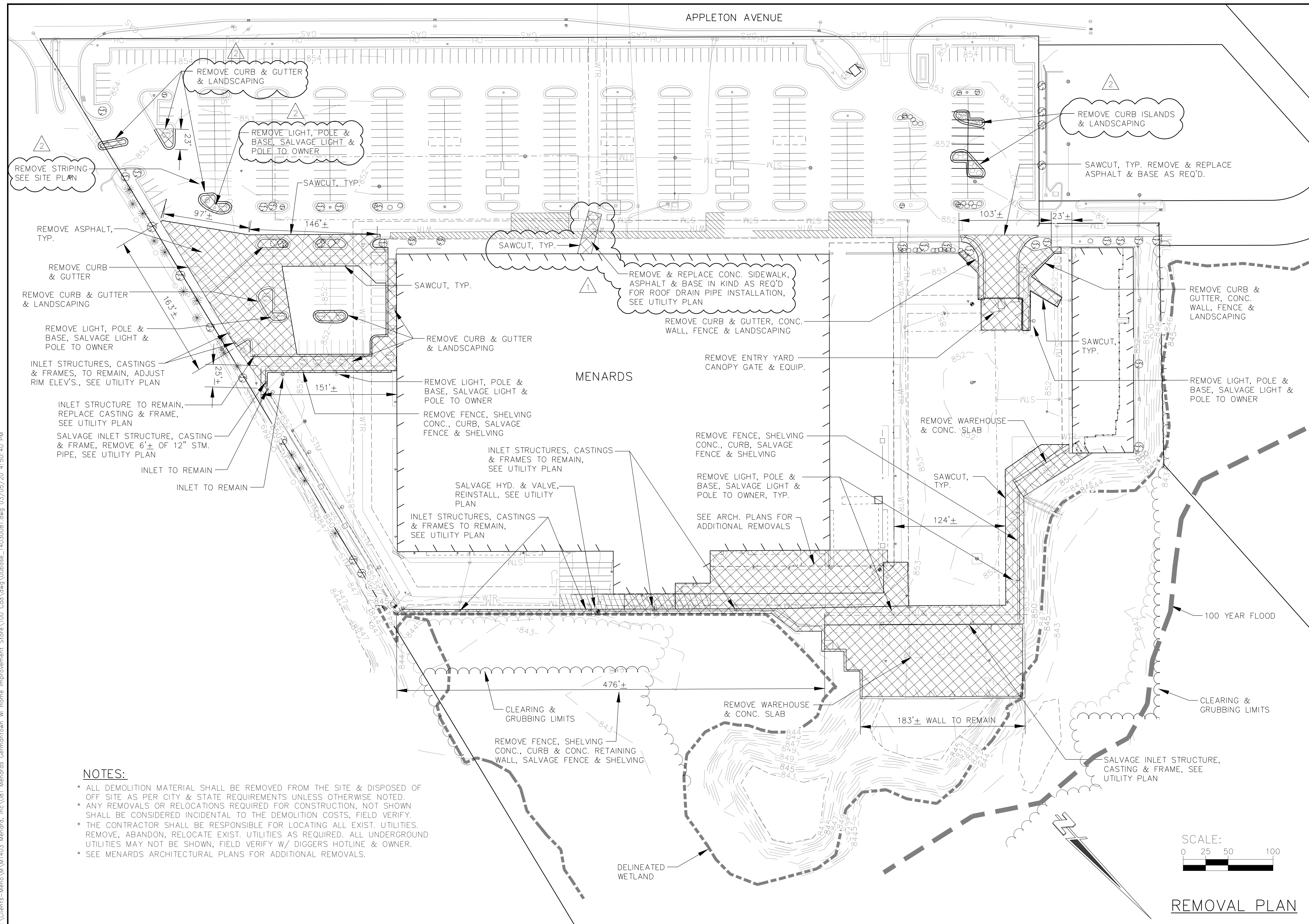
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GERMANTOWN, WI 53022

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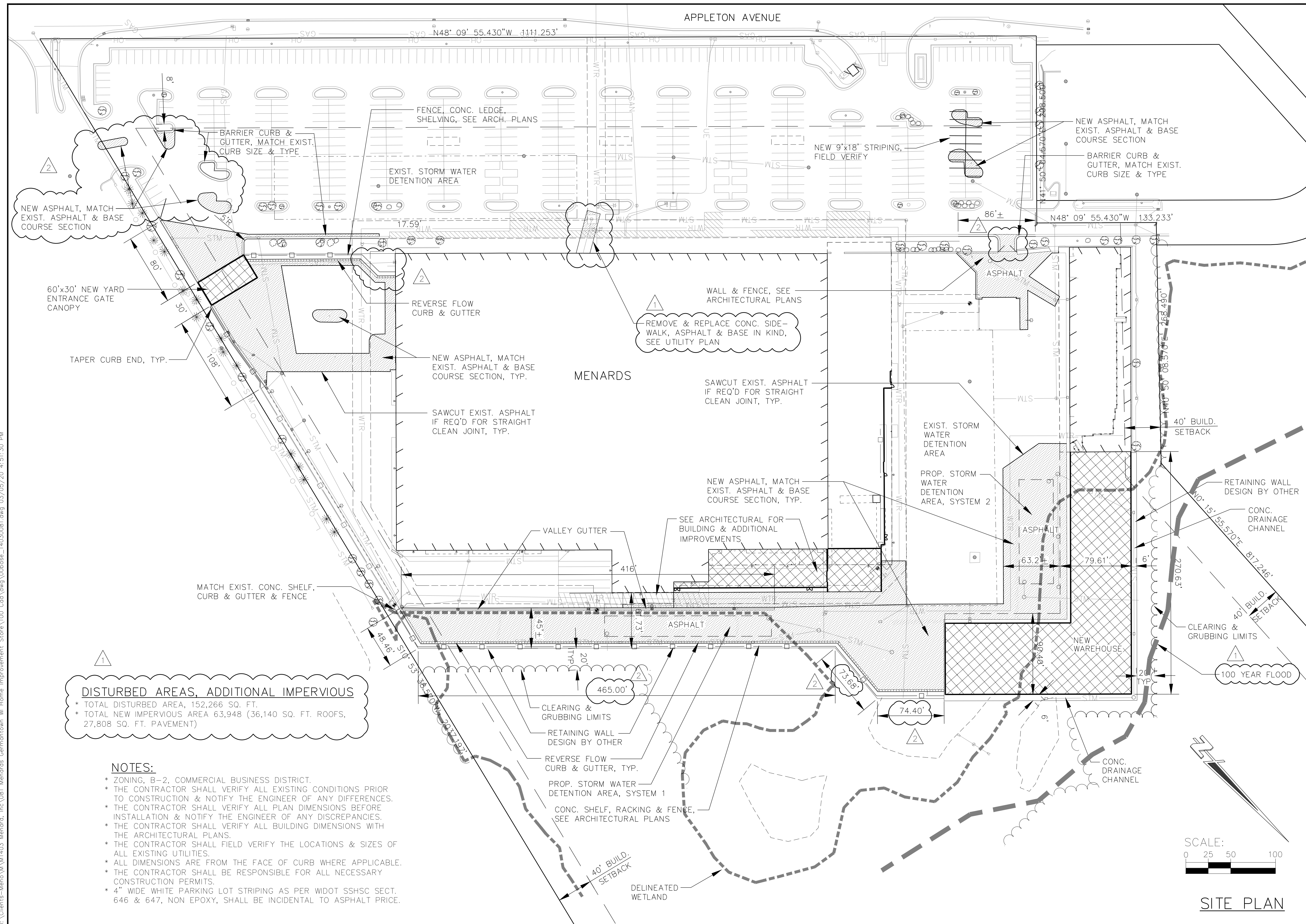
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2	MAR. 5, 20
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FAX 608-249-5824

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Green Bay, WI 54311
920-481-9081
FAX 920-481-9020

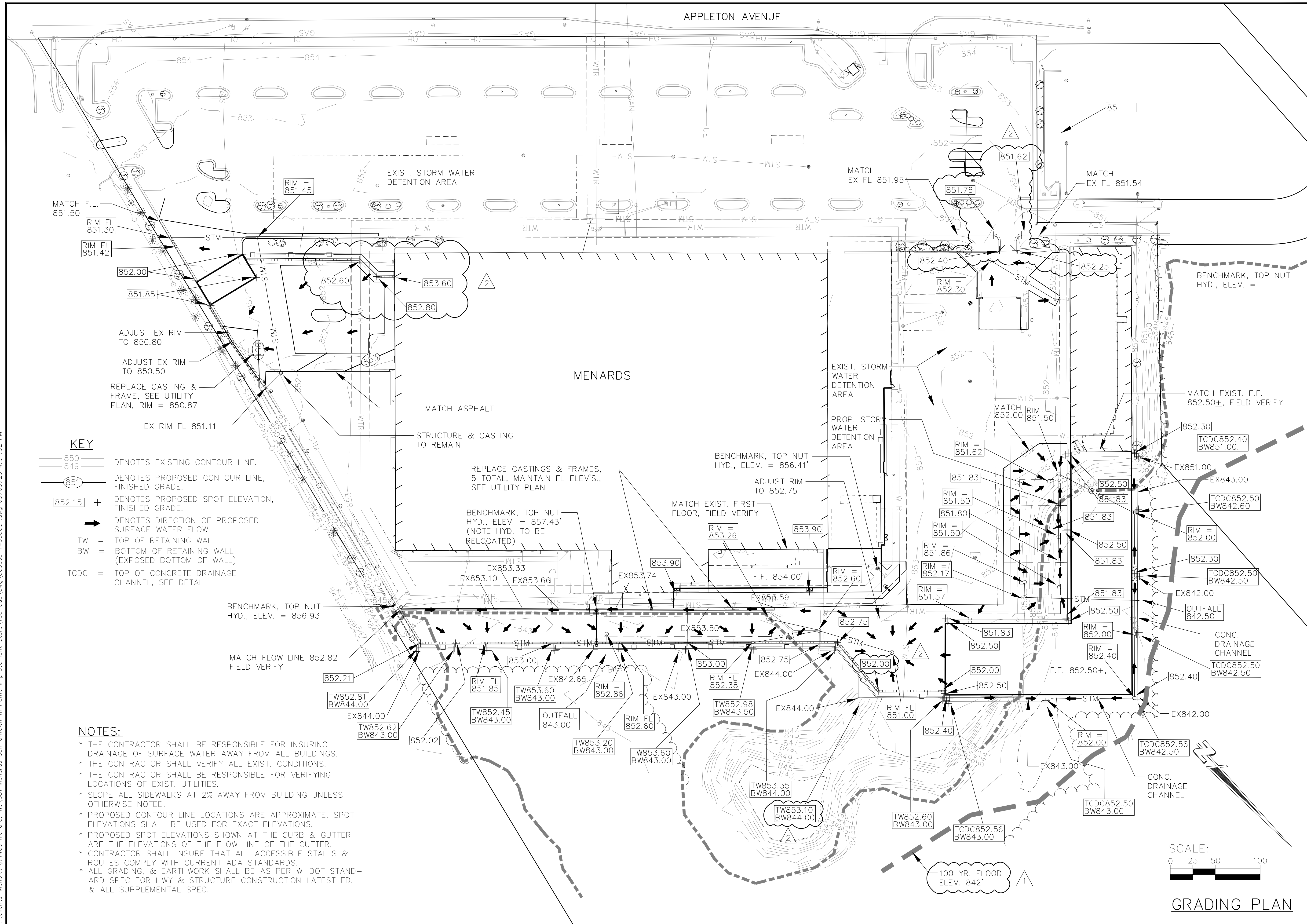
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Menomonee, WI 54751
715-235-9081
FAX 715-235-2727

SITE AND BUILDING ADDITION
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GERMANTOWN, WI 53022

SHEET NO.

C1.3

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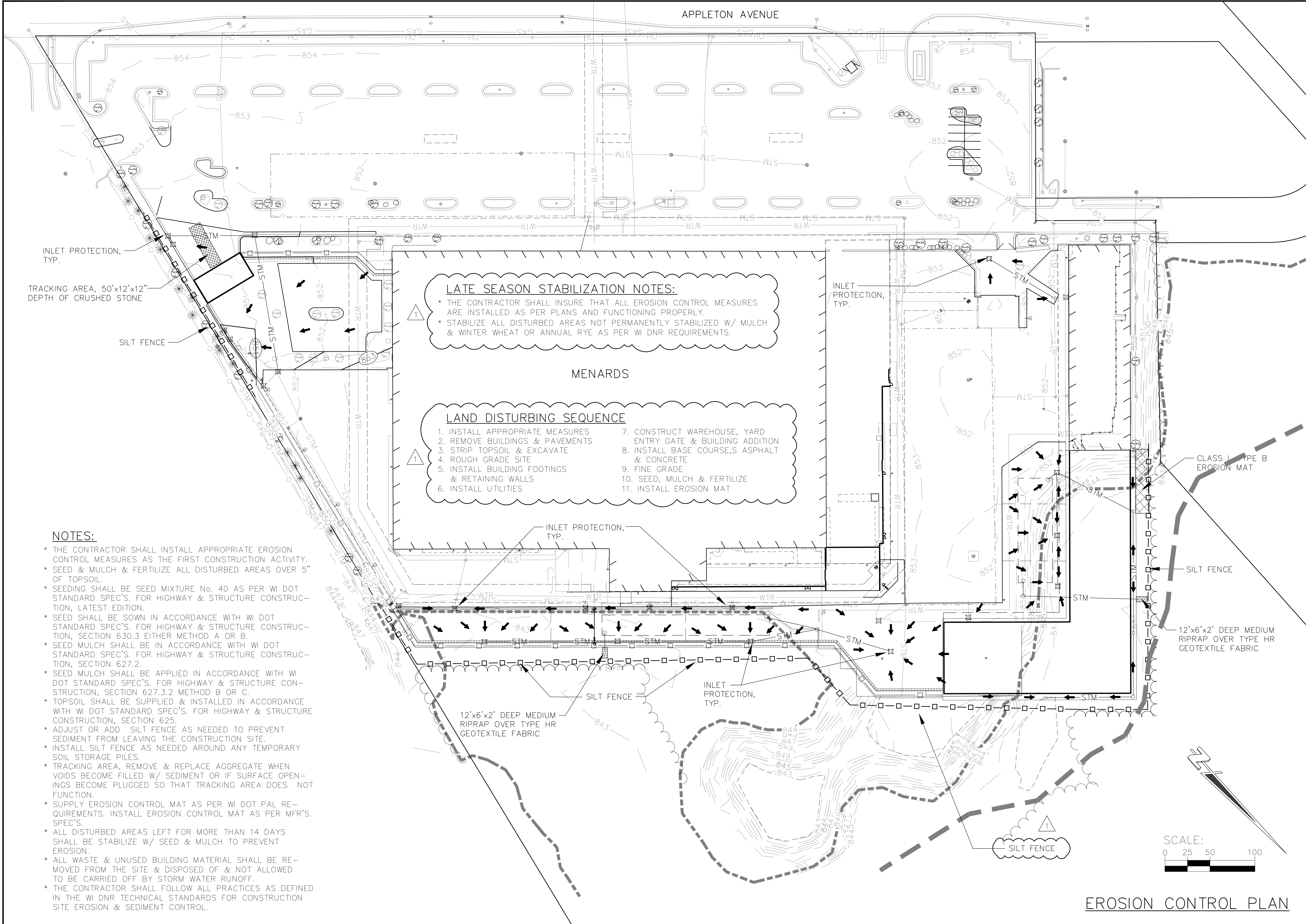
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FAX 715-235-2727

SITE AND BUILDING ADDITION
MENARDS, CITY GERMANTOWN
W186N9754 APPLETON AVENUE
GERMANTOWN, WI 53022

SHEET NO.

C1.4

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608-249-5045
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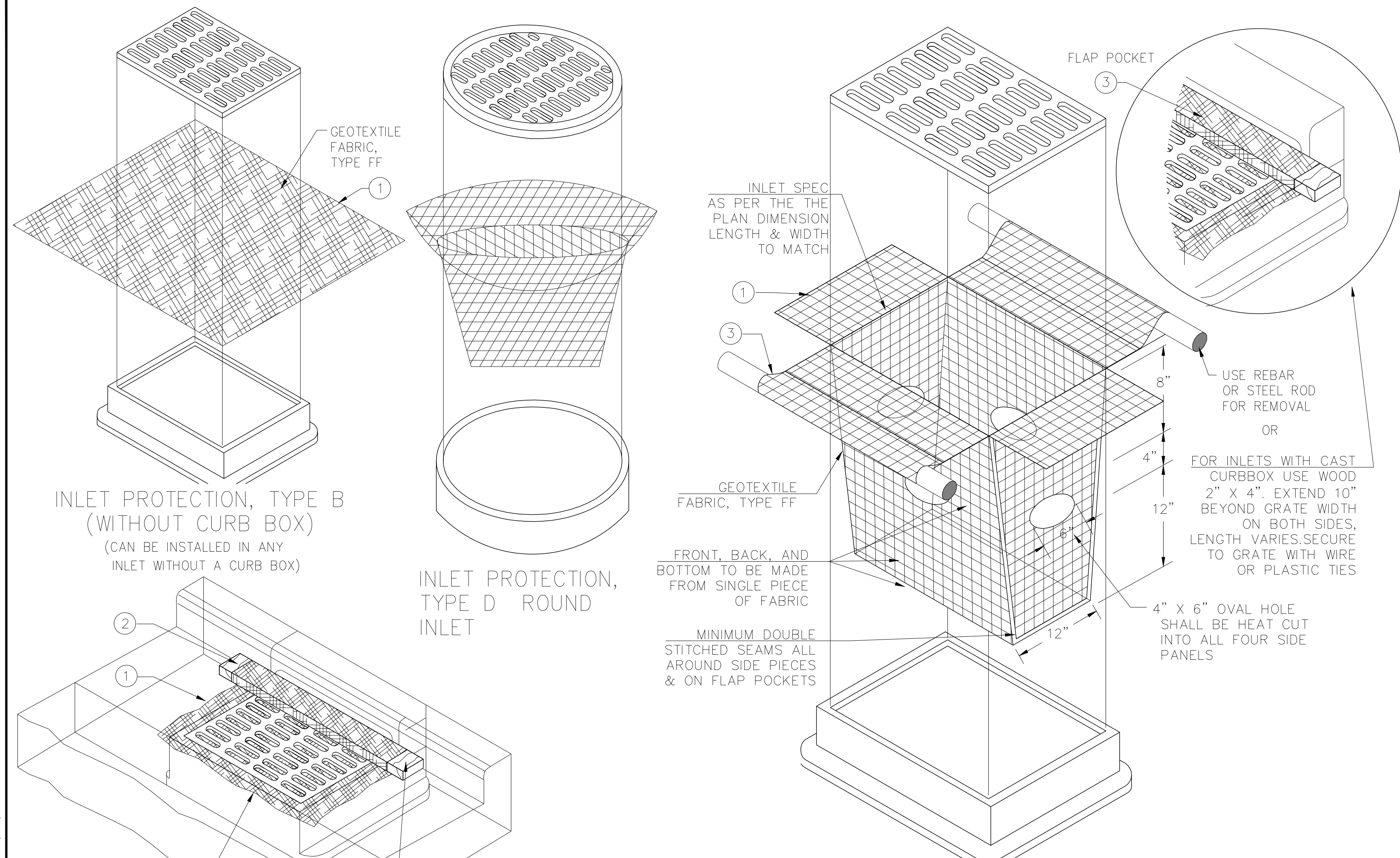
1655 Bellvue Street
Green Bay, WI 54311
920-481-0081
920-481-0020
FAX 920-481-0020

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715-235-0081
715-235-2727
FAX 715-235-2727

SITE AND BUILDING ADDITION
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W186N9754 APPLETON AVENUE
GERMANTOWN, WI 53022

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C1.5

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INSTALLATION NOTES

TYPE B & C

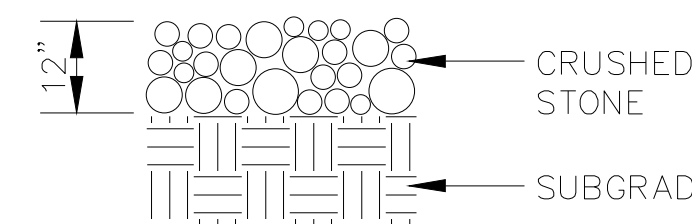
TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND
HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED
FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE , BETWEEN THE INLET WALL AND THE
BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CON-
TRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE
TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.



TRACKING AREA NO SCALE

NOTES: * SUPPLY CRUSHED STONE AS
PER WI DNR STANDARD, 1057, TRACKOUT
CONTROL PRACTICES.

* REMOVE & REPLACE STONE WHEN VOIDS
BECOME FILLED W/ SEDIMENT OR IF
SURFACE OPENINGS BECOME PLUGGED SO
THAT TRACKING AREA DOES NOT FUNCTION.

2" x 2" x 4' POSTS, 3' O.C. FOR
GEOTEXTILE FABRIC ONLY, 8' O.C.
FOR GEOTEXTILE FABRIC WITH
ALTERNATE SUPPORT COMPONENTS

STAPLE FILTER FABRIC TO POSTS

GEOTEXTILE FABRIC

GRADE

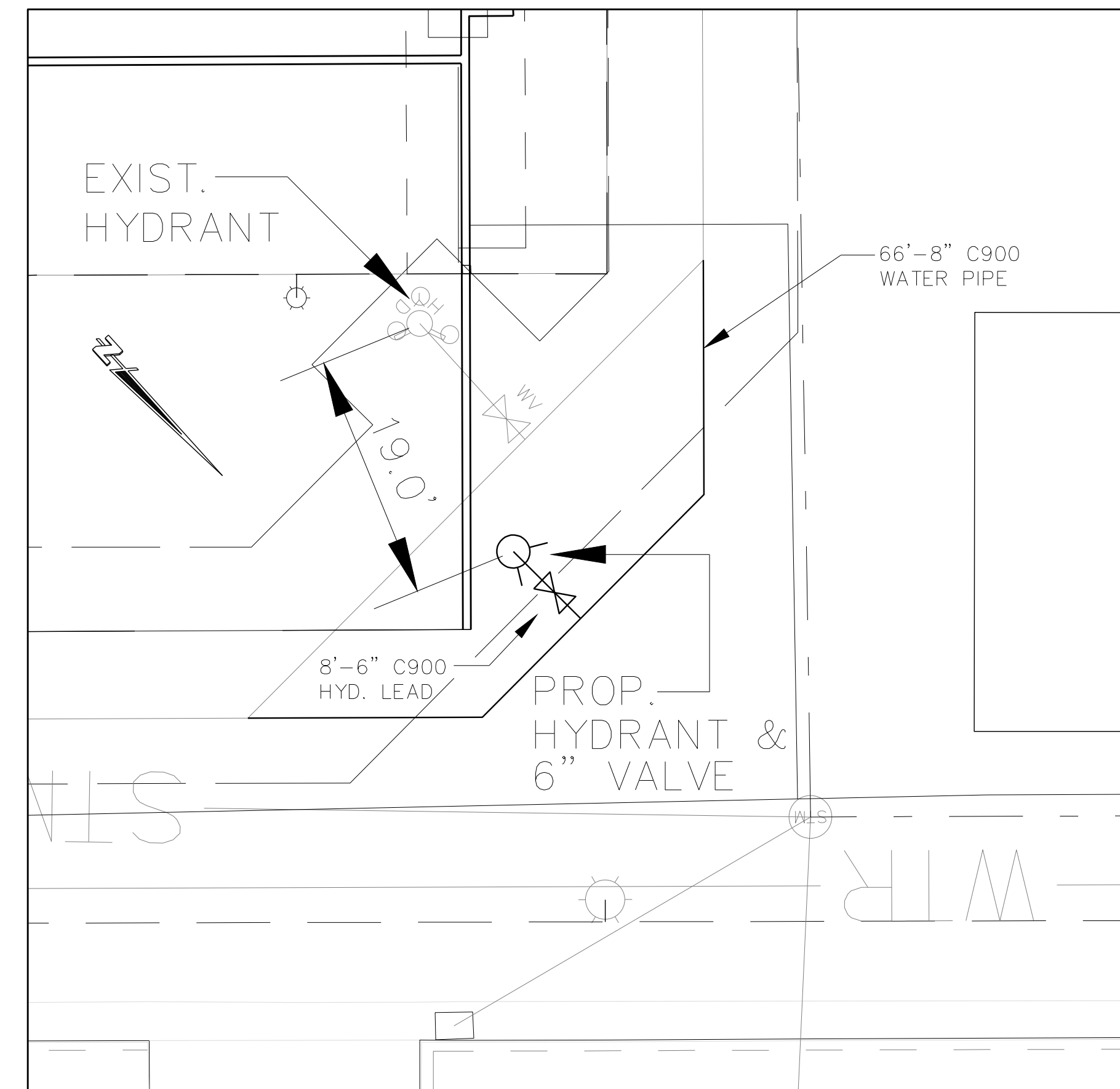
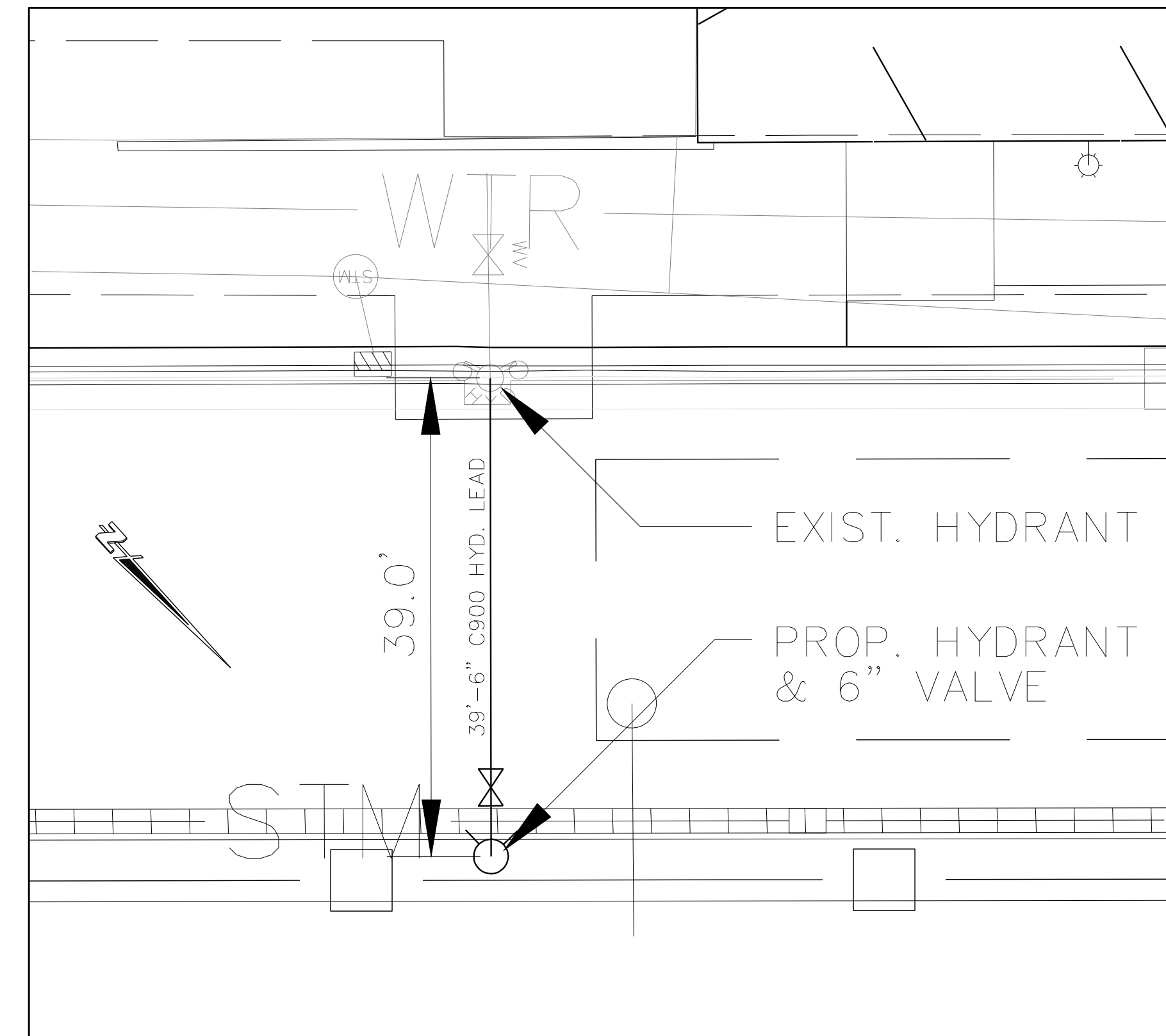
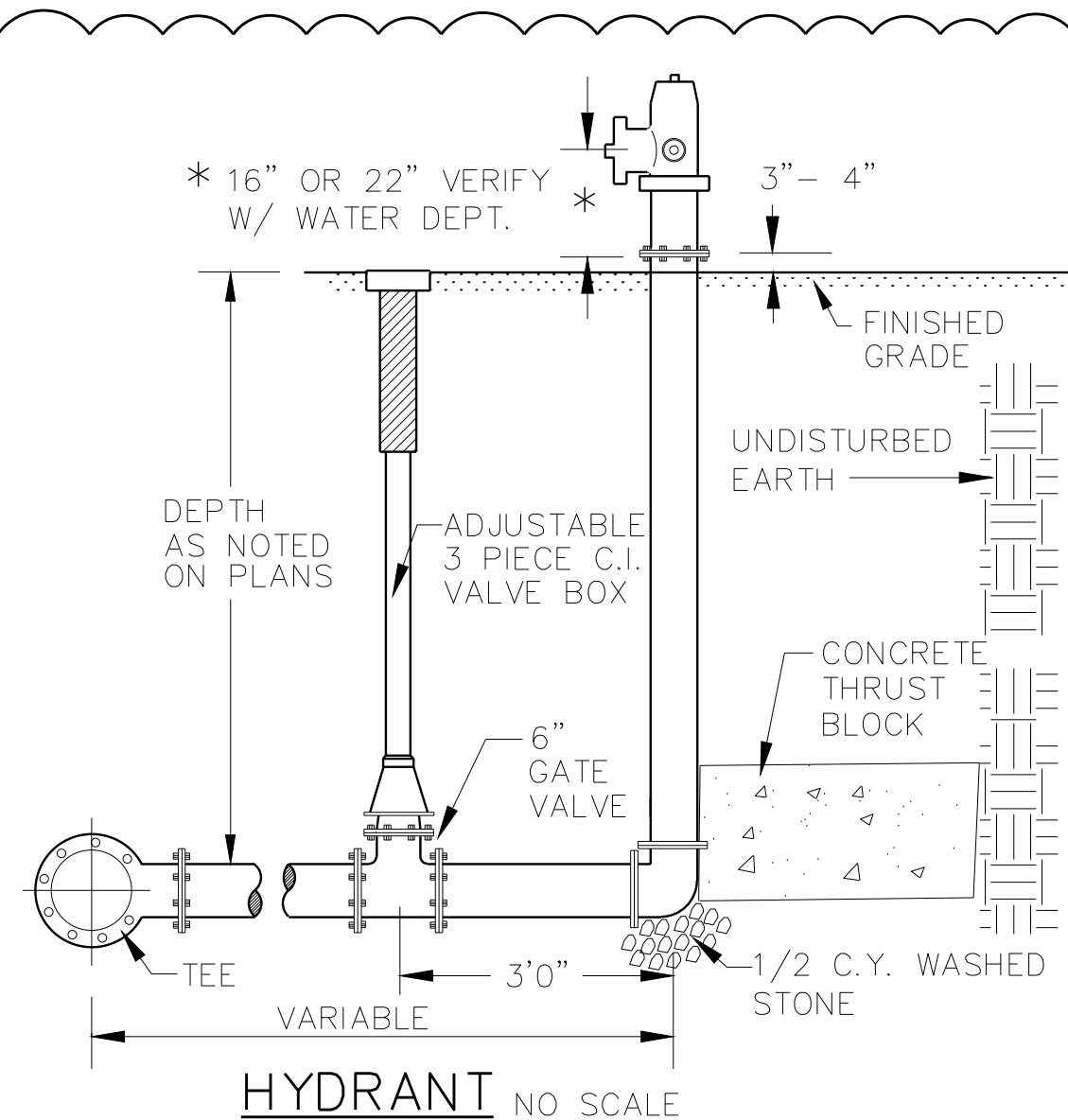
BURY FILTER FABRIC 6" BELOW

FINISHED GRADE, COMPACT

SILT FENCE DETAIL NO SCALE

NOTES:

* SILT FENCE SHALL BE SUPPLIED & INSTALLED
AS PER THE WI DOT STANDARD SPECIFICATIONS
FOR HIGHWAY & STRUCTURE CONSTRUCTION.



SITE DETAILS

JOB NO.	1430-81
BOOK NO.	N/A
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REFERENCE FILE	
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Cedar corporation

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Menards, WI 53022
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608-249-5046
FAX 608-249-5046

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Menards, WI 53022
920-481-9081
920-481-9081
FAX 920-481-9081

604 Wilson Ave.
Menards, WI 53022
715-235-3081
715-235-3081
FAX 715-235-3081

SITE AND BUILDING ADDITION
MENARDS, CITY GERMANTOWN
W186N9754 APPLETON AVENUE
GERMANTOWN, WI 53022

SHEET NO.
C1.8

PROJECT INFORMATION	
ENGINEERED PRODUCT MANAGER	EPM NAME EPM NUMBER EPM EMAIL
ADS SALES REP	SALES NAME SALES NUMBER SALES EMAIL
PROJECT NO.	



ADVANCED DRAINAGE SYSTEMS, INC.

SiteASSIST™
by StormTech
FOR STORMTECH
INSTRUCTIONS,
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INSTALLATION APP



MENARDS EXPANSION SYSTEM #1

GERMANTOWN, WI

MC-3500 STORMTECH CHAMBER SPECIFICATIONS

- CHAMBERS SHALL BE STORMTECH MC-3500.
- CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-16a, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45x76 DESIGNATION SS.
- CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
- THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
- CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 500 LBS/IN/IN. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
- ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
 - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
 - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
 - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
- CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF MC-3500 CHAMBER SYSTEM

- STORMTECH MC-3500 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
- STORMTECH MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
- CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
 - STONESHOOTER LOCATED OFF THE CHAMBER BED.
 - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
 - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
- THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
- JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
- MAINTAIN MINIMUM - 9" (230 mm) SPACING BETWEEN THE CHAMBER ROWS.
- INLET AND OUTLET MANIFOLDS MUST BE INSERTED A MINIMUM OF 12" (300 mm) INTO CHAMBER END CAPS.
- EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE MEETING THE AASHTO M43 DESIGNATION OF #3 OR #4.
- STONE MUST BE PLACED ON THE TOP CENTER OF THE CHAMBER TO ANCHOR THE CHAMBERS IN PLACE AND PRESERVE ROW SPACING.
- THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
- ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

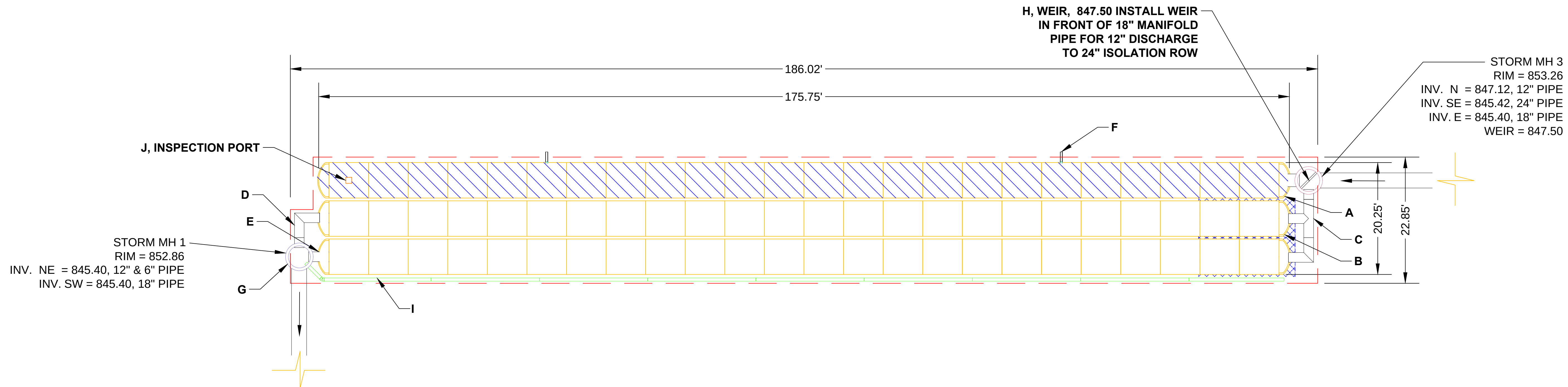
- STORMTECH MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
- THE USE OF EQUIPMENT OVER MC-3500 CHAMBERS IS LIMITED:
 - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
 - NO RUBBER Tired LOADER, DUMP TRUCK, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
 - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
- FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY USING THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.



**H, WEIR, 847.50 INSTALL WEIR
IN FRONT OF 18" MANIFOLD
PIPE FOR 12" DISCHARGE
TO 24" ISOLATION ROW**



- ## NOTES

- MANIFOLD SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECH SHEET #7 FOR MANIFOLD SIZING GUIDANCE.
- DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANIFOLD COMPONENTS IN THE FIELD.
- THE SITE DESIGN ENGINEER MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE CHAMBER COVER REQUIREMENTS ARE MET.
- THIS CHAMBER SYSTEM WAS DESIGNED WITHOUT SITE-SPECIFIC INFORMATION ON SOIL CONDITIONS OR BEARING CAPACITY. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR DETERMINING THE SUITABILITY OF THE SOIL AND PROVIDING THE BEARING CAPACITY OF THE INSITU SOILS. THE BASE STONE DEPTH MAY BE INCREASED OR DECREASED ONCE THIS INFORMATION IS PROVIDED.
- NOT FOR CONSTRUCTION

SYSTEM #1



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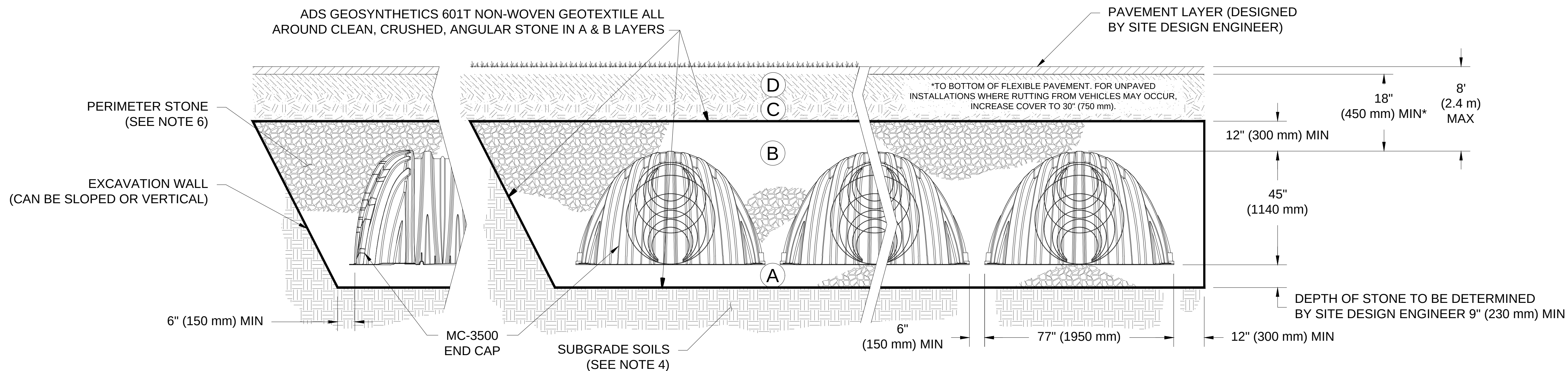
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ACCEPTABLE FILL MATERIALS: STORMTECH MC-3500 CHAMBER SYSTEMS

MATERIAL LOCATION		DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145 ¹ A-1, A-2-4, A-3 OR AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43 ¹ 3, 4	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43 ¹ 3, 4	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. ^{2,3}

PLEASE NOTE:

1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
4. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.



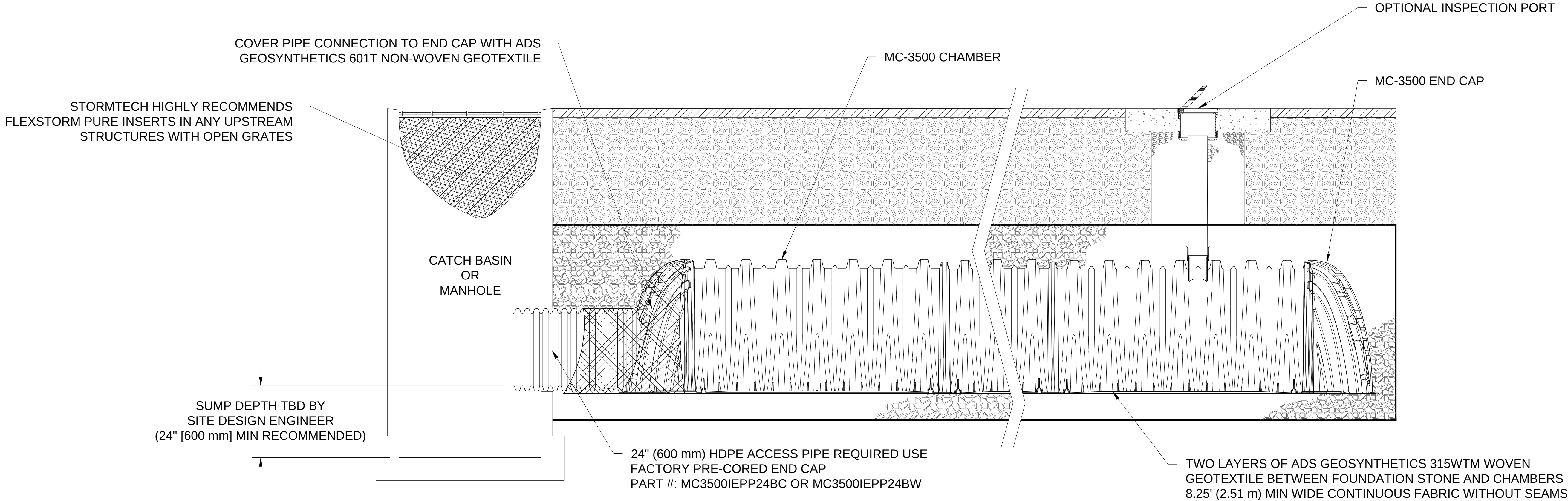
NOTES:

1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-16a, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45x76 DESIGNATION SS.
2. MC-3500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. REQUIREMENTS FOR HANDLING AND INSTALLATION:
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 500 LBS/IN/IN. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

SYSTEM #1

 ADVANCED DRAINAGE SYSTEMS, INC. 4640 TRUEMAN BLVD HILLIARD, OH 43026 1-800-733-7473	 StormTech® Detention • Retention • Water Quality 70 INWOOD ROAD, SUITE 3 ROCKY HILL, CT 06067 860-529-8188 888-892-2694 WWW.STORMTECH.COM				REV	DRW	CHK	DESCRIPTION
					DATE:	DRAWN: JB		
					PROJECT #:	CHECKED: N/A		
THIS DRAWING HAS BEEN PREPARED BASED ON INFORMATION PROVIDED TO ADS UNDER THE DIRECTION OF THE SITE DESIGN ENGINEER OR OTHER PROJECT REPRESENTATIVE. THE SITE DESIGN ENGINEER SHALL REVIEW THIS DRAWING PRIOR TO CONSTRUCTION. IT IS THE ULTIMATE RESPONSIBILITY OF THE SITE DESIGN ENGINEER TO ENSURE THAT THE PRODUCT(S) DEPICTED AND ALL ASSOCIATED DETAILS MEET ALL APPLICABLE LAWS, REGULATIONS, AND PROJECT REQUIREMENTS.								

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3 OF 6



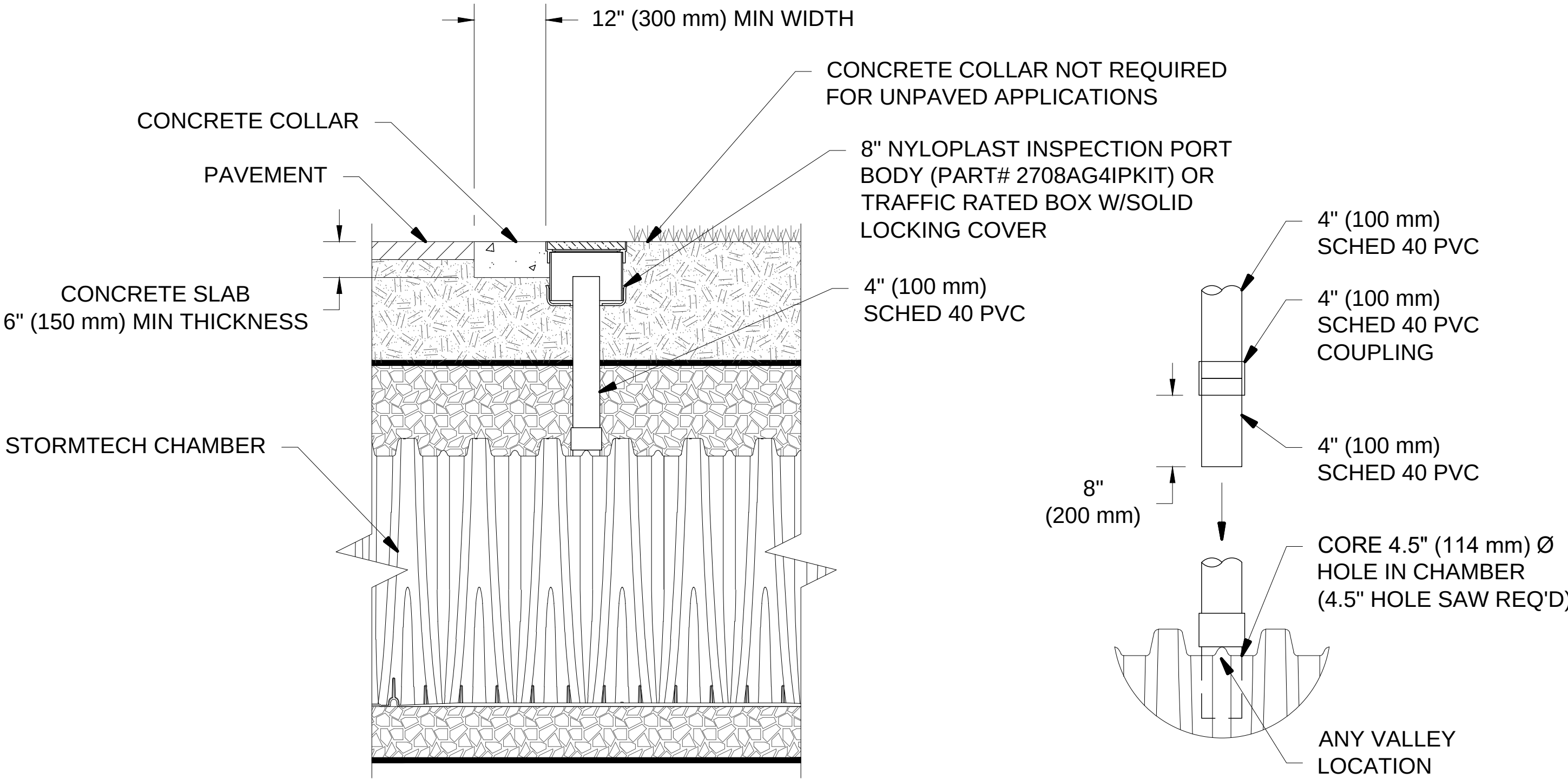
MC-3500 ISOLATOR ROW DETAIL
NTS

INSPECTION & MAINTENANCE

- STEP 1) INSPECT ISOLATOR ROW FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
 - A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
 - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
 - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
 - A.4. LOWER A CAMERA INTO ISOLATOR ROW FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
 - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
 - B. ALL ISOLATOR ROWS
 - B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW
 - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW THROUGH OUTLET PIPE
 - i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
 - ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
 - B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- STEP 2) CLEAN OUT ISOLATOR ROW USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45" (1.1 m) OR MORE IS PREFERRED
 - B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
 - C. VACUUM STRUCTURE SUMP AS REQUIRED
- STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.
- STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.



- NOTES:
1. INSPECTION PORTS MAY BE CONNECTED THROUGH ANY CHAMBER CORRUGATION VALLEY.
 2. ALL SCHEDULE 40 FITTINGS TO BE SOLVENT CEMENTED (4" PVC NOT PROVIDED BY ADS).

4" PVC INSPECTION PORT DETAIL
NTS

CONNECTION DETAIL
NTS

SYSTEM #1



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MENARDS EXPANSION SYSTEM #1
GERMANTOWN, WI

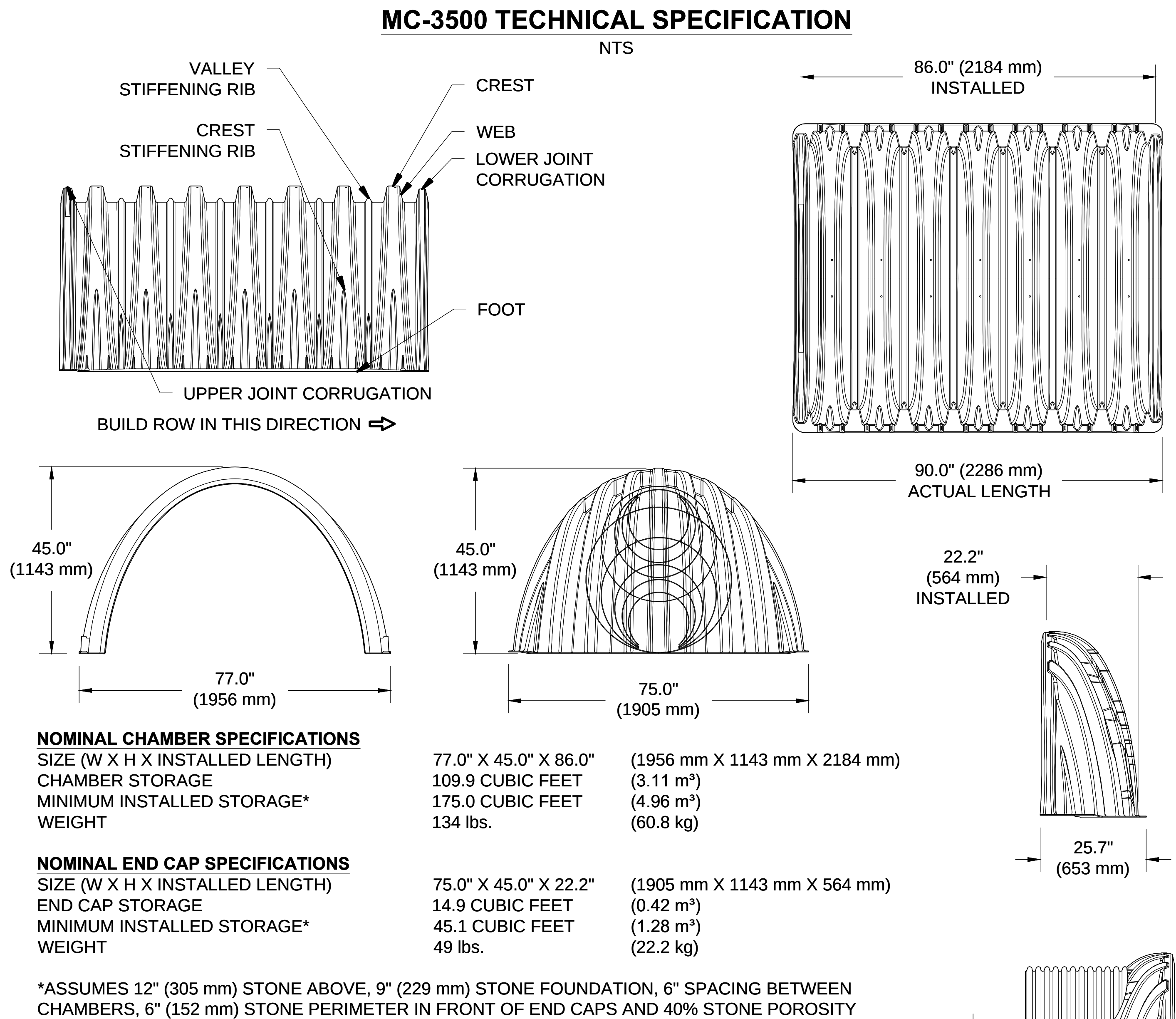
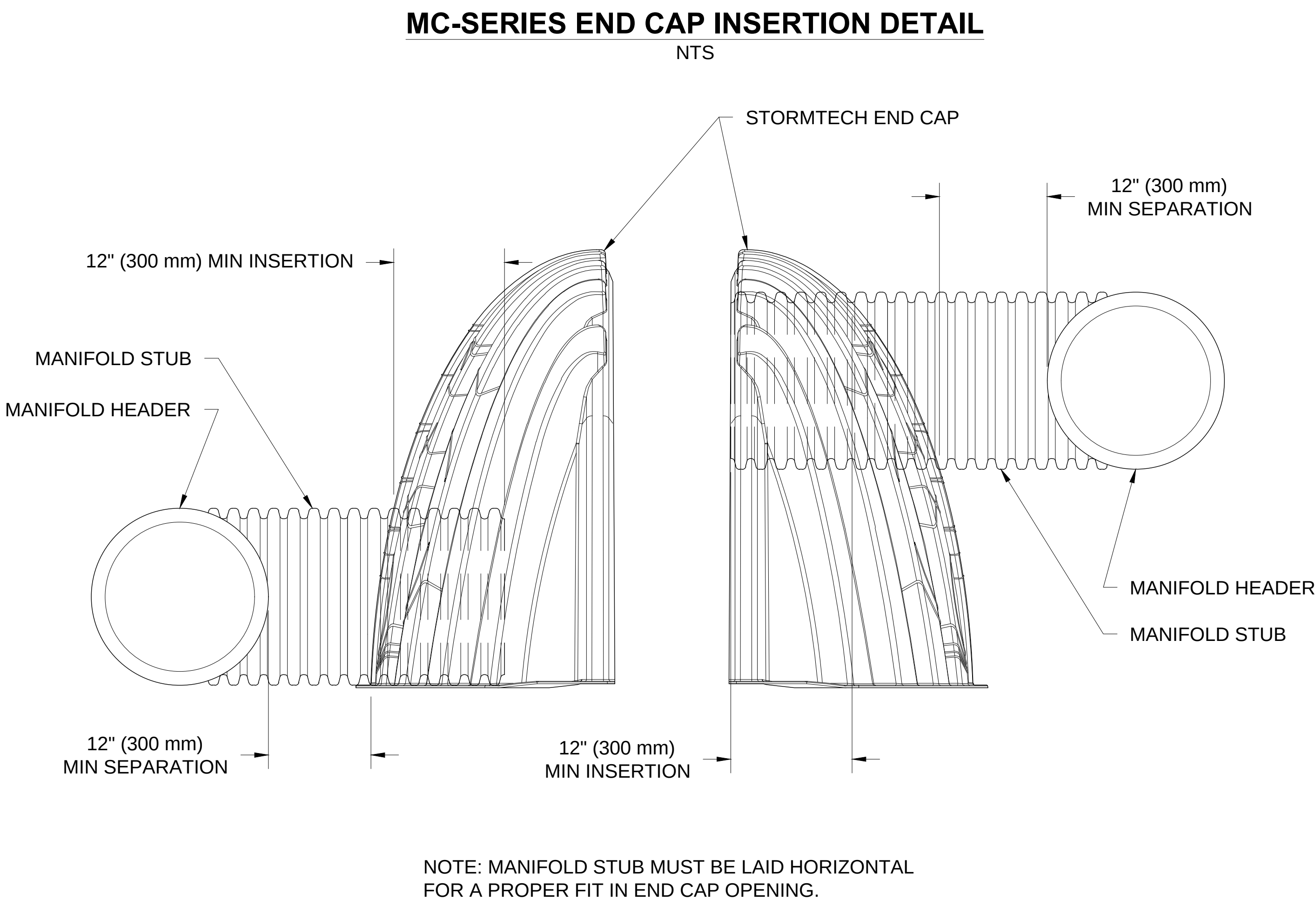
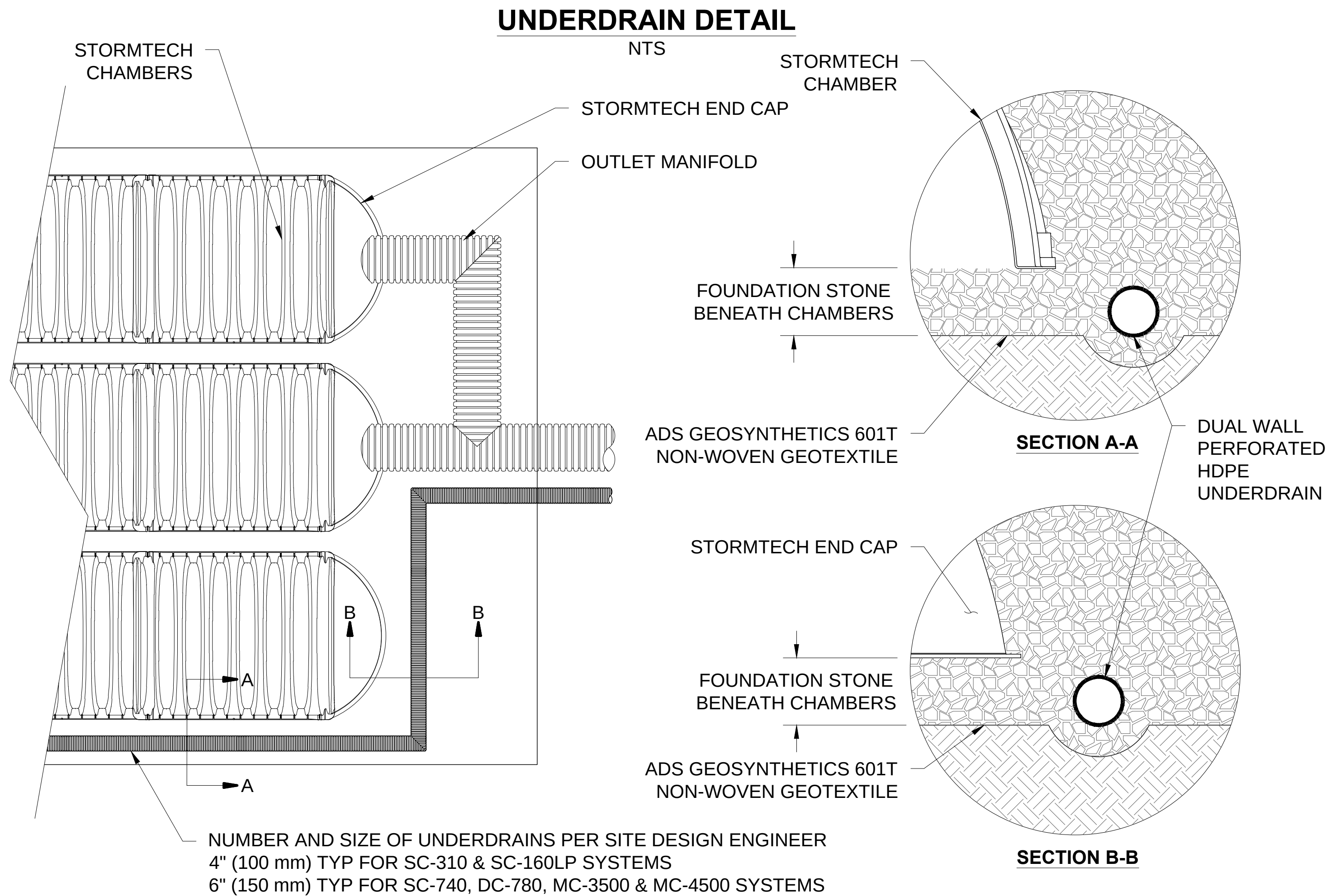
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REV	DRW	CHK	DESCRIPTION

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4 OF 6

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STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"

STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"

END CAPS WITH A WELDED CROWN PLATE END WITH "C"

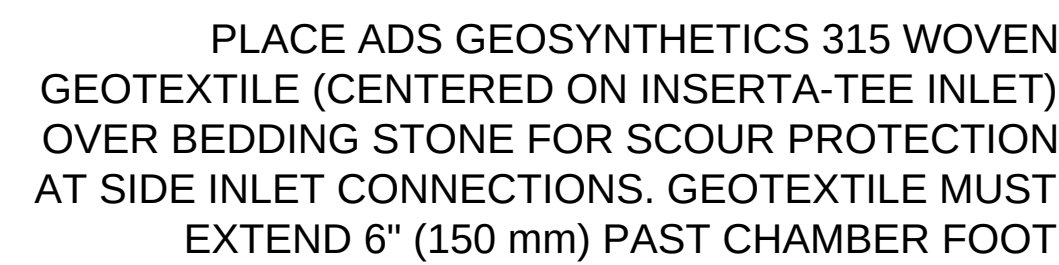
END CAPS WITH A PREFABRICATED WELDED STUB END WITH "W"

PART #	STUB	B	C
MC3500IEPP06T	6" (150 mm)	33.21" (844 mm)	---
MC3500IEPP06B		---	0.66" (17 mm)
MC3500IEPP08T	8" (200 mm)	31.16" (791 mm)	---
MC3500IEPP08B		---	0.81" (21 mm)
MC3500IEPP10T	10" (250 mm)	29.04" (738 mm)	---
MC3500IEPP10B		---	0.93" (24 mm)
MC3500IEPP12T	12" (300 mm)	26.36" (670 mm)	---
MC3500IEPP12B		---	1.35" (34 mm)
MC3500IEPP15T	15" (375 mm)	23.39" (594 mm)	---
MC3500IEPP15B		---	1.50" (38 mm)
MC3500IEPP18TC	18" (450 mm)	20.03" (509 mm)	---
MC3500IEPP18TW		---	1.77" (45 mm)
MC3500IEPP18BC			
MC3500IEPP18BW			
MC3500IEPP24TC	24" (600 mm)	14.48" (368 mm)	---
MC3500IEPP24TW		---	2.06" (52 mm)
MC3500IEPP24BC			
MC3500IEPP24BW			
MC3500IEPP30BC	30" (750 mm)	---	2.75" (70 mm)

CUSTOM PRECORED INVERTS ARE AVAILABLE UPON REQUEST. INVENTORIED MANIFOLDS INCLUDE 12-24" (300-600 mm) SIZE ON SIZE AND 15-48" (375-1200 mm) ECCENTRIC MANIFOLDS. CUSTOM INVERT LOCATIONS ON THE MC-3500 END CAP CUT IN THE FIELD ARE NOT RECOMMENDED FOR PIPE SIZES GREATER THAN 10" (250 mm). THE INVERT LOCATION IN COLUMN 'B' ARE THE HIGHEST POSSIBLE FOR THE PIPE SIZE.

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NTS



SECTION A-A

SIDE VIEW

CHAMBER	MAX DIAMETER OF INSERTA TEE	HEIGHT FROM BASE OF CHAMBER (X)
SC-310	6" (150 mm)	4" (100 mm)
SC-740	10" (250 mm)	4" (100 mm)
DC-780	10" (250 mm)	4" (100 mm)
MC-3500	12" (300 mm)	6" (150 mm)
MC-4500	12" (300 mm)	8" (200 mm)
INSERTA TEE FITTINGS AVAILABLE FOR SDR 26, SDR 35, SCH 40 IPS GASKETED & SOLVENT WELD, N-12, HP STORM, C-900 OR DUCTILE IRON		

NOTE:
PART NUMBERS WILL VARY BASED ON INLET PIPE MATERIALS.
CONTACT STORMTECH FOR MORE INFORMATION.

INSERTA TEE FITTINGS AVAILABLE FOR SDR 26, SDR 35, SCH 40 IPS
GASKETED & SOLVENT WELD, N-12, HP STORM, C-900 OR DUCTILE IRON

The logo for TIE INSERTA features the letters 'TIE' in a large, bold, black sans-serif font. A red arrow points upwards through the center of the 'I'. Below 'TIE', the word 'INSERTA' is written in white, bold, sans-serif capital letters, slanted upwards to the right, set against a red rectangular background.

INSERTA TEE | PO BOX 714
CORNELIUS, OR 97116
PH: (503) 357-2110 FAX: (503) 359-5417
SALES@INSERTATEE.COM

AD[®]
ADVANCED DRAINAGE SYSTEMS, INC.

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HILLIARD, OH 43026
1-800-733-7473

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MENARDS EXPANSION SYSTEM #1
GERMANTOWN, WI

DATE:	DRAWN: JB
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PROJECT #:	CHECKED: N/A
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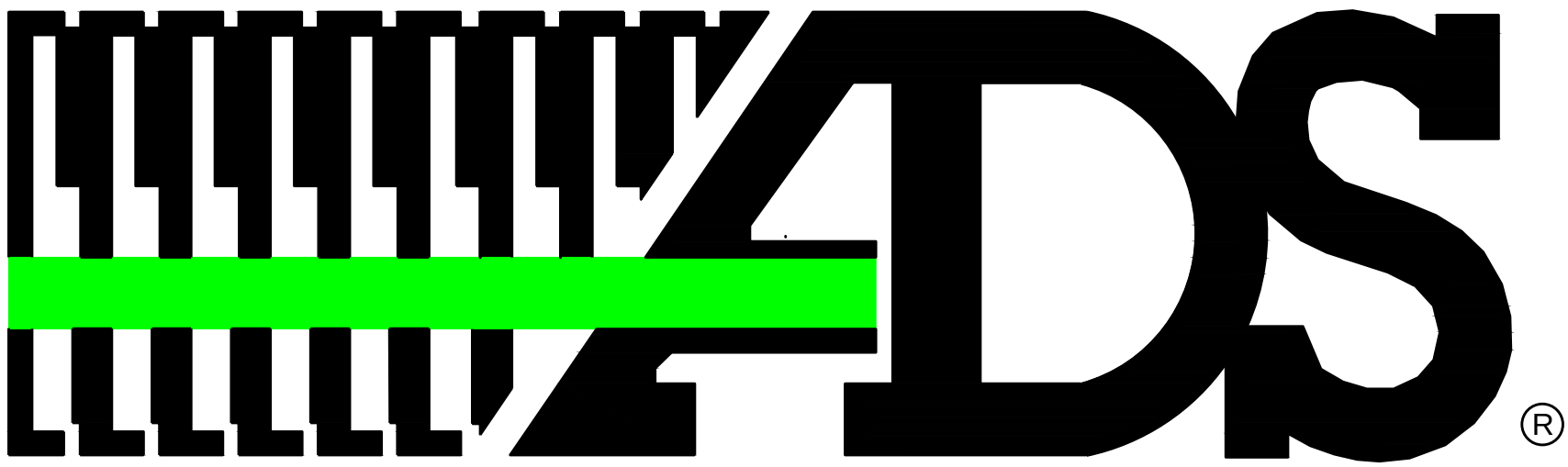
REVIEW THIS DRAWING PRIOR TO CONSTRUCTION. IT IS THE ULTIMATE

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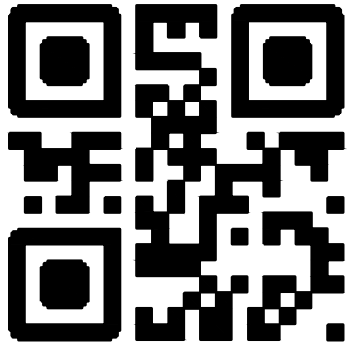
SYSTEM #1

PROJECT INFORMATION	
ENGINEERED PRODUCT MANAGER	EPM NAME EPM NUMBER EPM EMAIL
ADS SALES REP	SALES NAME SALES NUMBER SALES EMAIL
PROJECT NO.	



ADVANCED DRAINAGE SYSTEMS, INC.

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INSTRUCTIONS,
DOWNLOAD THE
INSTALLATION APP



MENARDS EXPANSION SYSTEM #2

GERMANTOWN, WI

MC-4500 STORMTECH CHAMBER SPECIFICATIONS

- CHAMBERS SHALL BE STORMTECH MC-4500.
- CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-16a, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 60x101.
- CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
- THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
- CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 500 LBS/IN/IN. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
- ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
 - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
 - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
 - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
- CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF MC-4500 CHAMBER SYSTEM

- STORMTECH MC-4500 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
- STORMTECH MC-4500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
- CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
 - STONESHOOTER LOCATED OFF THE CHAMBER BED.
 - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
 - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
- THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
- JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
- MAINTAIN MINIMUM 9" (230 mm) SPACING BETWEEN THE CHAMBER ROWS.
- INLET AND OUTLET MANIFOLDS MUST BE INSERTED A MINIMUM OF 12" (300 mm) INTO CHAMBER END CAPS.
- EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE MEETING THE AASHTO M43 DESIGNATION OF #3 OR #4.
- STONE SHALL BE BROUGHT UP EVENLY AROUND CHAMBERS SO AS NOT TO DISTORT THE CHAMBER SHAPE. STONE DEPTHS SHOULD NEVER DIFFER BY MORE THAN 12" (300 mm) BETWEEN ADJACENT CHAMBER ROWS.
- STONE MUST BE PLACED ON THE TOP CENTER OF THE CHAMBER TO ANCHOR THE CHAMBERS IN PLACE AND PRESERVE ROW SPACING.
- THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIAL BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
- ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

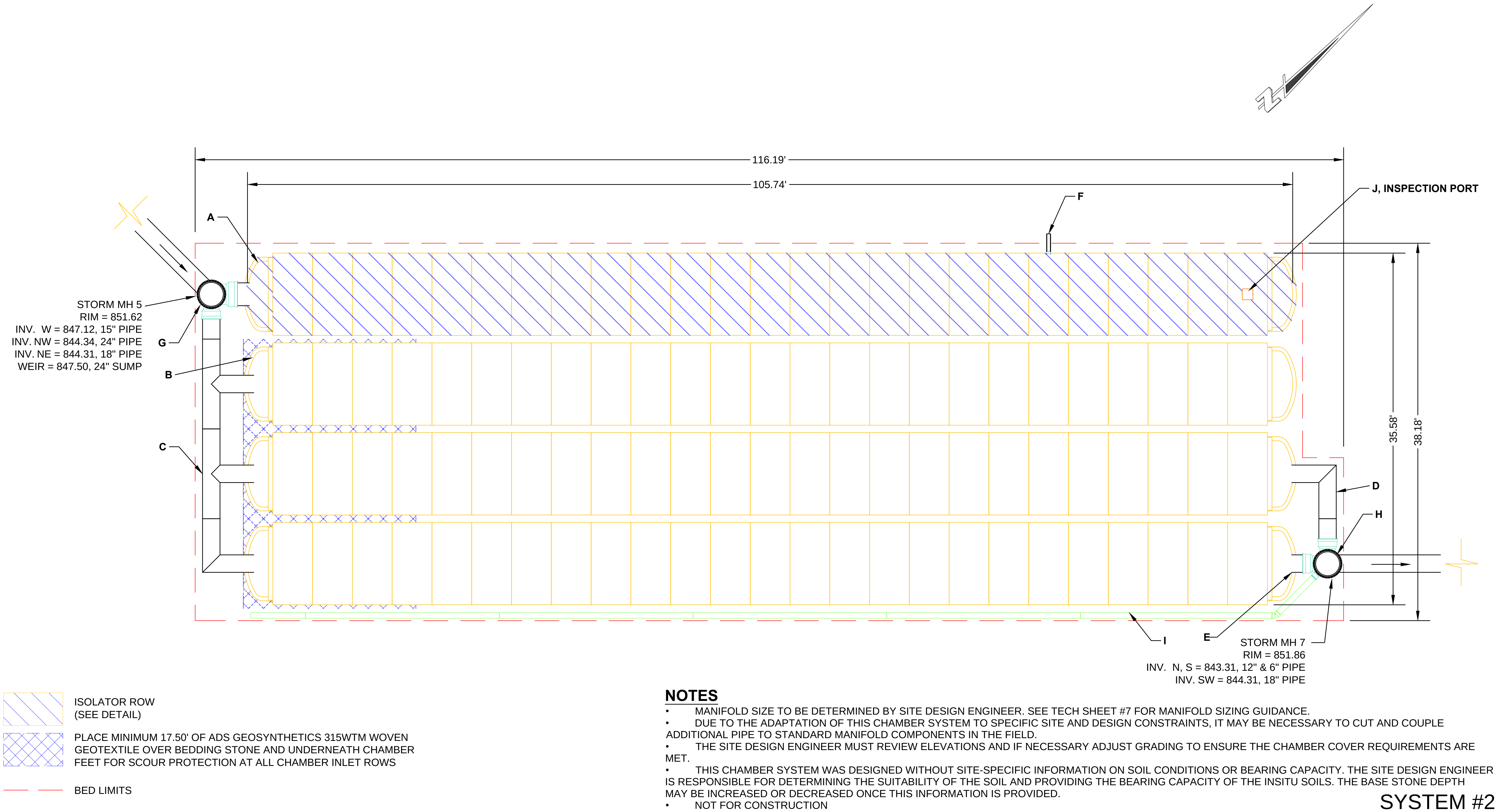
- STORMTECH MC-4500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
- THE USE OF EQUIPMENT OVER MC-4500 CHAMBERS IS LIMITED:
 - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
 - NO RUBBER TIRED LOADER, DUMP TRUCK, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
 - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
- FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY USING THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

PROPOSED LAYOUT		PROPOSED ELEVATIONS	
100	STORMTECH MC-4500 CHAMBERS	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED):	856.15
8	STORMTECH MC-4500 END CAPS	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC):	851.65
12	STONE ABOVE (in)	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC):	851.15
9	STONE BELOW (in)	MINIMUM ALLOWABLE GRADE (TOP OF RIGID CONCRETE PAVEMENT):	851.15
40	% STONE VOID	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT):	851.15
18295	INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED) (COVER STONE INCLUDED) (BASE STONE INCLUDED)	TOP OF STONE:	850.15
		TOP OF MC-4500 CHAMBER:	849.15
		4" INSERTA TEE INVERT:	844.82
		24" ISOLATOR ROW INVERT:	844.34
		18" x 18" BOTTOM MANIFOLD INVERT:	844.31
4346	SYSTEM AREA (SF)	18" x 18" BOTTOM MANIFOLD INVERT:	844.31
308.75	SYSTEM PERIMETER (ft)	18" BOTTOM CONNECTION INVERT:	844.31
		BOTTOM OF MC-4500 CHAMBER:	844.15
		UNDERDRAIN INVERT:	843.40
		BOTTOM OF STONE:	843.40

PART TYPE	ITEM ON LAYOUT	DESCRIPTION	*INVERT ABOVE BASE OF CHAMBER	
			INVERT*	MAX FLOW
PREFABRICATED END CAP	A	24" BOTTOM CORED END CAP/TYP OF ALL 24" BOTTOM CONNECTIONS AND ISOLATOR ROWS	2.26"	
PREFABRICATED END CAP	B	18" BOTTOM CORED END CAP/TYP OF ALL 18" BOTTOM CONNECTIONS	29.37"	
MANIFOLD	C	18" X 18" BOTTOM, ADS N-12	1.97"	
MANIFOLD	D	18" X 18" BOTTOM, ADS N-12	1.97"	
PIPE CONNECTION	E	18" BOTTOM CONNECTION	1.97"	
INSERTA TEE	F	4" DIAMETER	8.00"	
NYLOPLAST (INLET W/ ISO ROW)	G	30" DIAMETER (24" SUMP MIN)		16.5 CFS IN
NYLOPLAST (OUTLET)	H	30" DIAMETER (DESIGN BY ENGINEER)		8.0 CFS OUT
UNDERDRAIN	I	6" ADS N-12 DUAL WALL PERFORATED HDPE UNDERDRAIN		
INSPECTION PORT	J	4" SEE DETAIL		



NOTES

- MANIFOLD SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECH SHEET #7 FOR MANIFOLD SIZING GUIDANCE.
- DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANIFOLD COMPONENTS IN THE FIELD.
- THE SITE DESIGN ENGINEER MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE CHAMBER COVER REQUIREMENTS ARE MET.
- THIS CHAMBER SYSTEM WAS DESIGNED WITHOUT SITE-SPECIFIC INFORMATION ON SOIL CONDITIONS OR BEARING CAPACITY. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR DETERMINING THE SUITABILITY OF THE SOIL AND PROVIDING THE BEARING CAPACITY OF THE INSITU SOILS. THE BASE STONE DEPTH MAY BE INCREASED OR DECREASED ONCE THIS INFORMATION IS PROVIDED.
- NOT FOR CONSTRUCTION

SYSTEM #2

DESCRIPTION

info added

CHK

DRW

REV

2/24/20

20'

10'

0

4640 TRUEMAN BLVD
HILLIARD, OH 43026
1-800-733-7473

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MENARDS EXPANSION SYSTEM #2

GERMANTOWN, WI

DATE:

PROJECT #:

DRAWN: JB

CHECKED: N/A

SHEET

2 OF 6

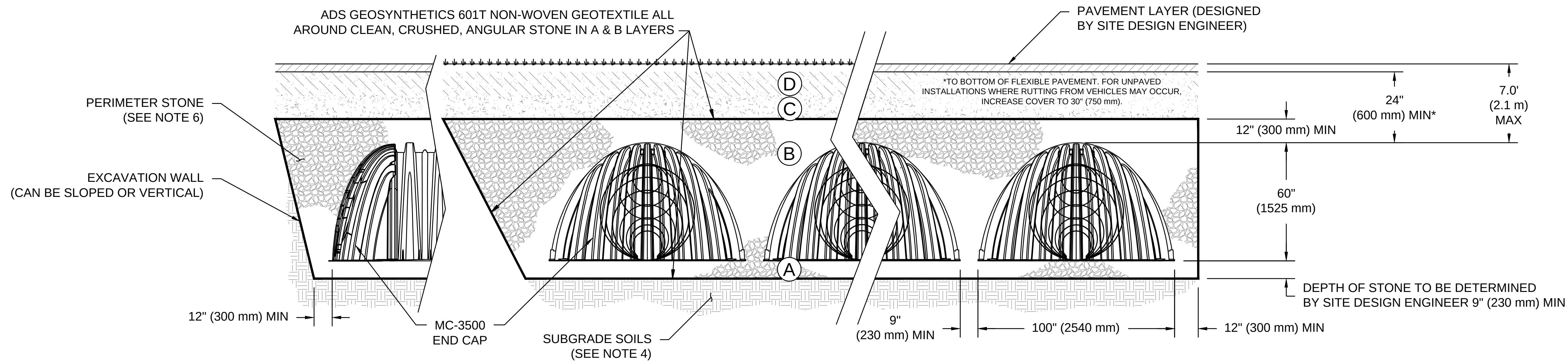
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ACCEPTABLE FILL MATERIALS: STORMTECH MC-4500 CHAMBER SYSTEMS

MATERIAL LOCATION		DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145 ¹ A-1, A-2-4, A-3 OR AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43 ¹ 3, 4	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43 ¹ 3, 4	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. ^{2,3}

PLEASE NOTE:

1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
4. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.



NOTES:

1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-16a, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 60x101
2. MC-4500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. REQUIREMENTS FOR HANDLING AND INSTALLATION:
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 500 LBS/IN/IN. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

SYSTEM #2

 ADVANCED DRAINAGE SYSTEMS, INC. 4640 TRUEMAN BLVD HILLIARD, OH 43026 1-800-733-7473	 StormTech® Detention-Retention-Water Quality 70 INWOOD ROAD, SUITE 3 ROCKY HILL CT 06067 860-529-8188 888-892-2694 WWW.STORMTECH.COM			REV	DRW	CHK	DESCRIPTION	MENARDS EXPANSION SYSTEM #2 GERMANTOWN, WI
		DATE:		DRAWN: JB				
		PROJECT #:		CHECKED: N/A				
THIS DRAWING HAS BEEN PREPARED BASED ON INFORMATION PROVIDED TO ADS UNDER THE DIRECTION OF THE SITE DESIGN ENGINEER OR OTHER PROJECT REPRESENTATIVE. THE SITE DESIGN ENGINEER SHALL REVIEW THIS DRAWING PRIOR TO CONSTRUCTION. IT IS THE ULTIMATE RESPONSIBILITY OF THE SITE DESIGN ENGINEER TO ENSURE THAT THE PRODUCT(S) DEPICTED AND ALL ASSOCIATED DETAILS MEET ALL APPLICABLE LAWS, REGULATIONS, AND PROJECT REQUIREMENTS.								

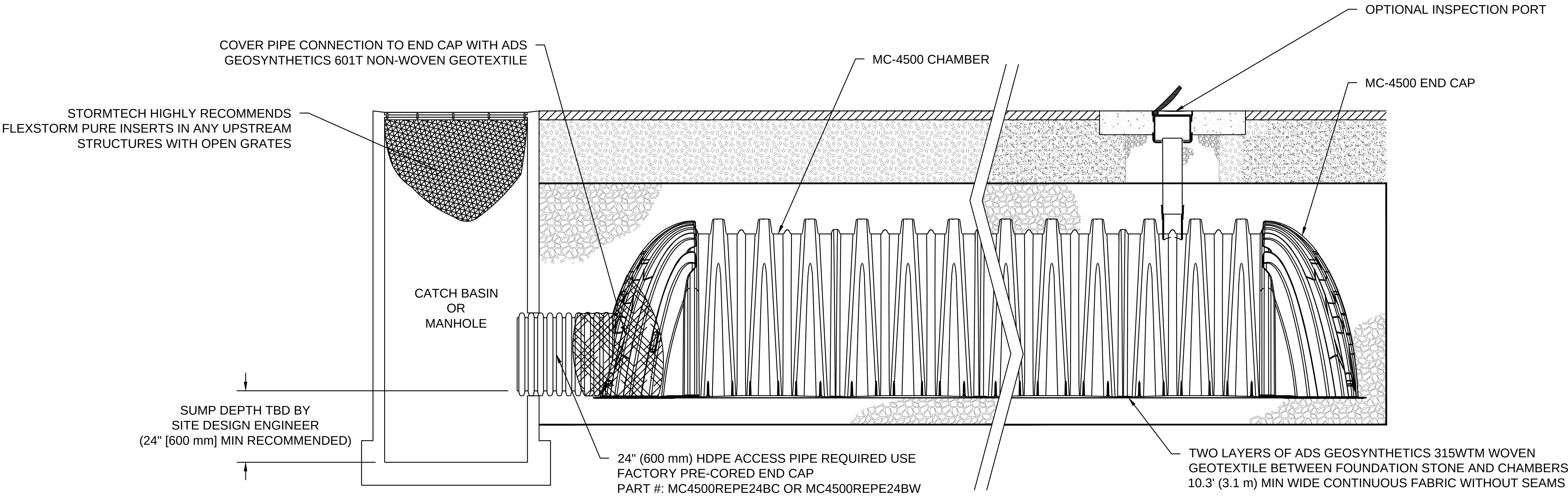
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SHEET

OF

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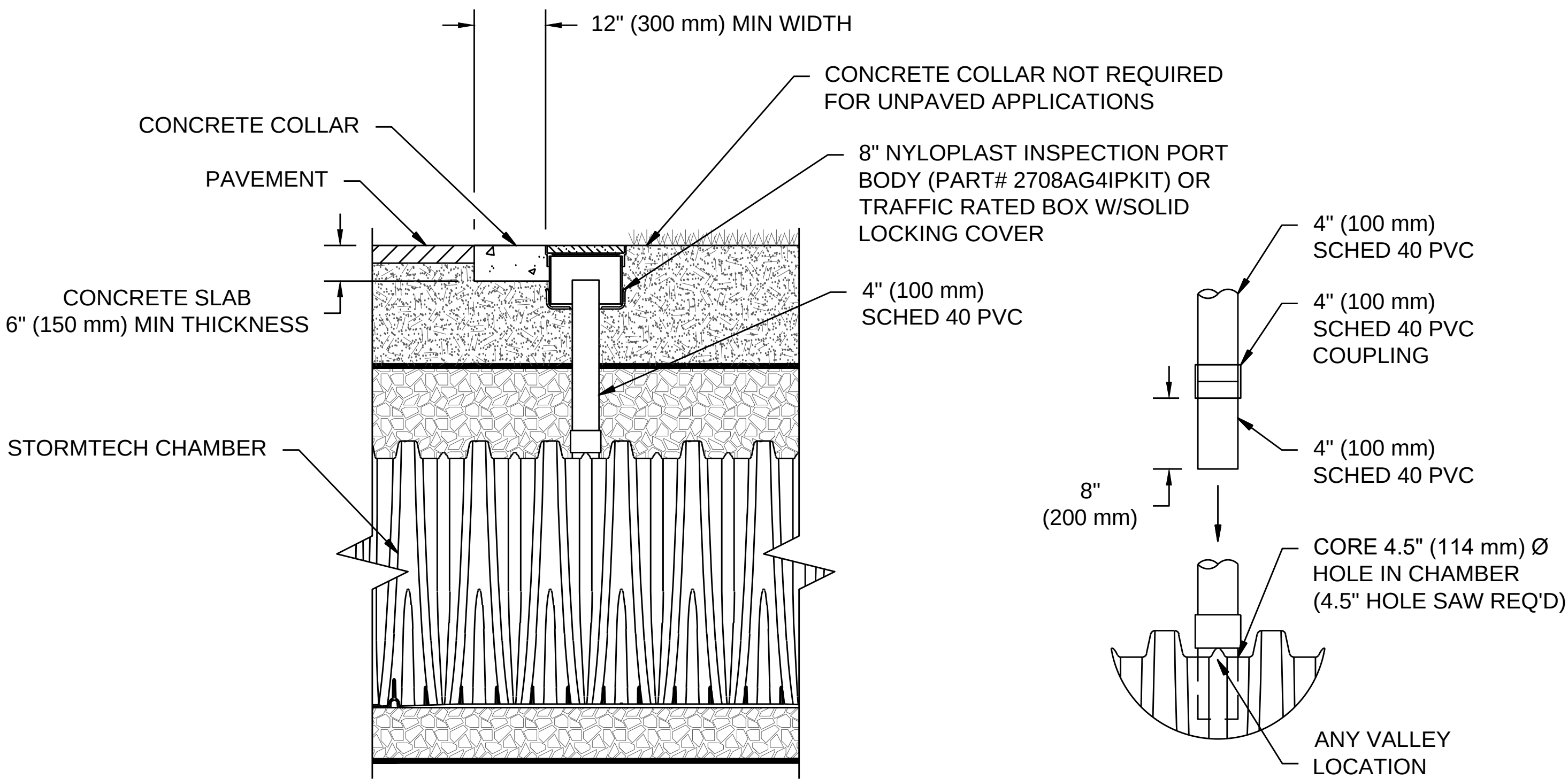
MC-4500 ISOLATOR ROW DETAIL
NTS

INSPECTION & MAINTENANCE

- STEP 1) INSPECT ISOLATOR ROW FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
 - A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
 - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
 - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
 - A.4. LOWER A CAMERA INTO ISOLATOR ROW FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
 - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
 - B. ALL ISOLATOR ROWS
 - B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW
 - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW THROUGH OUTLET PIPE
 - i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
 - ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
 - B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- STEP 2) CLEAN OUT ISOLATOR ROW USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45" (1.1 m) OR MORE IS PREFERRED
 - B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
 - C. VACUUM STRUCTURE SUMP AS REQUIRED
- STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.
- STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

- INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
- CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.



- NOTES:
- INSPECTION PORTS MAY BE CONNECTED THROUGH ANY CHAMBER CORRUGATION VALLEY.
 - ALL SCHEDULE 40 FITTINGS TO BE SOLVENT CEMENTED (4" PVC NOT PROVIDED BY ADS).

4" PVC INSPECTION PORT DETAIL
NTS

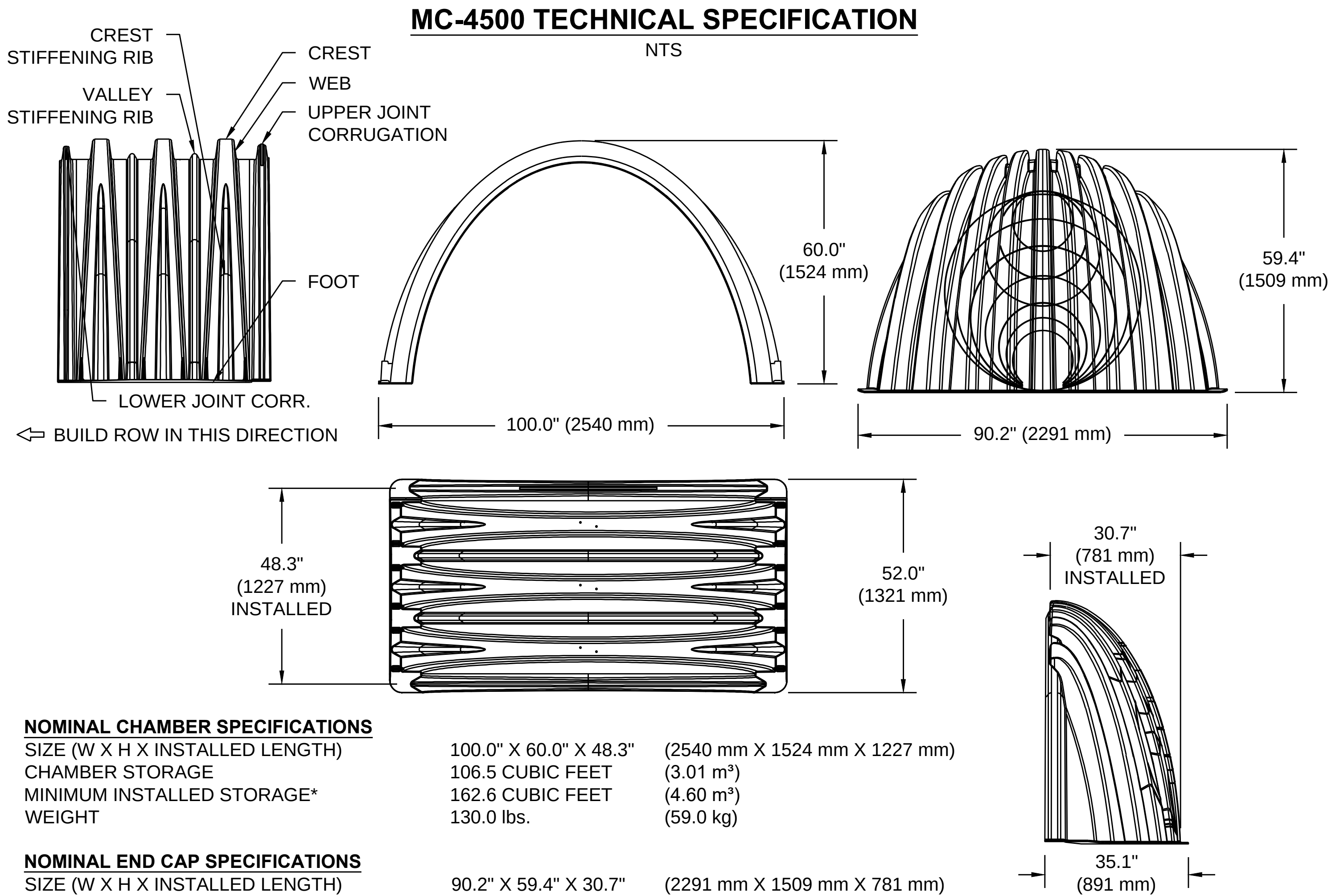
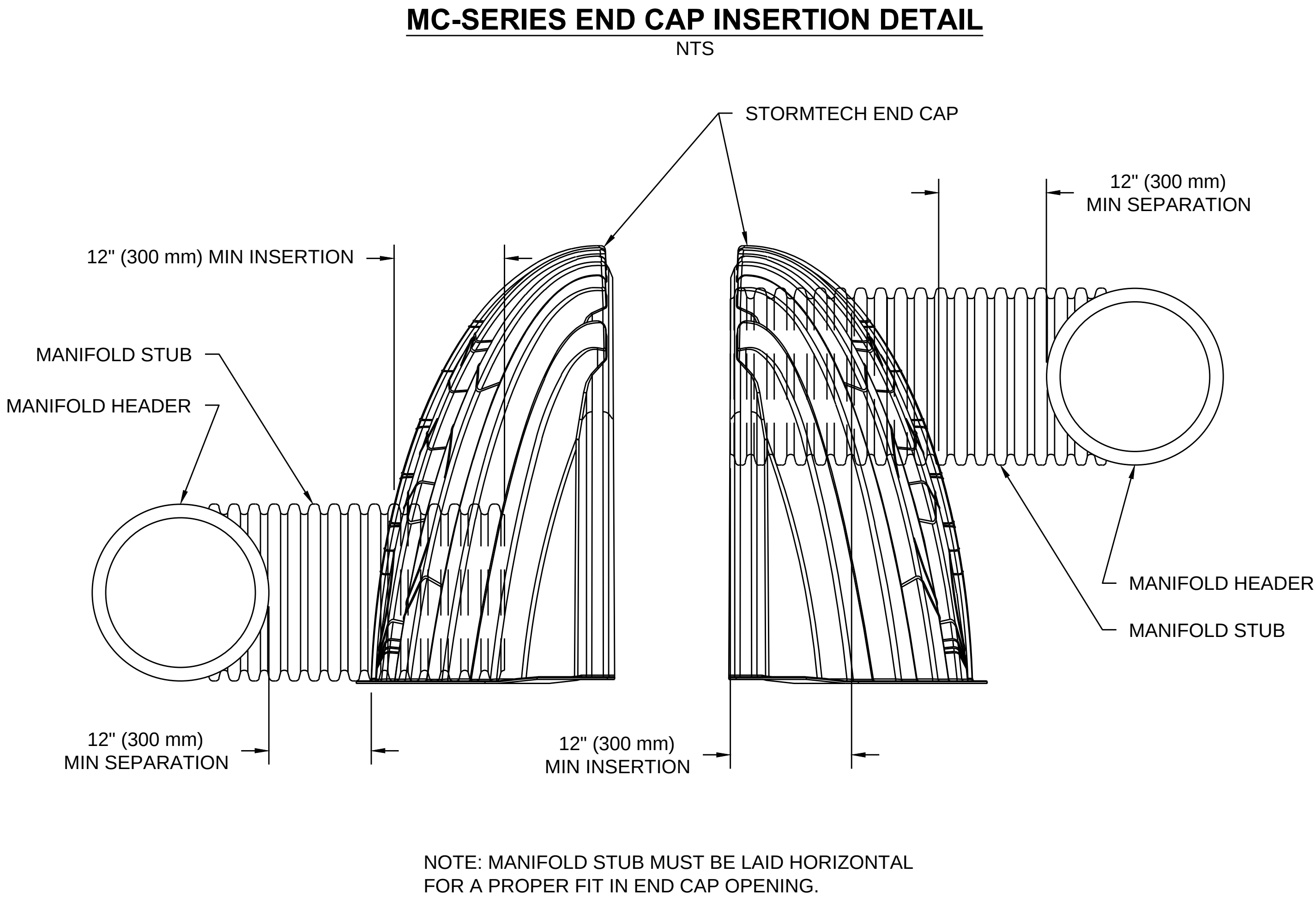
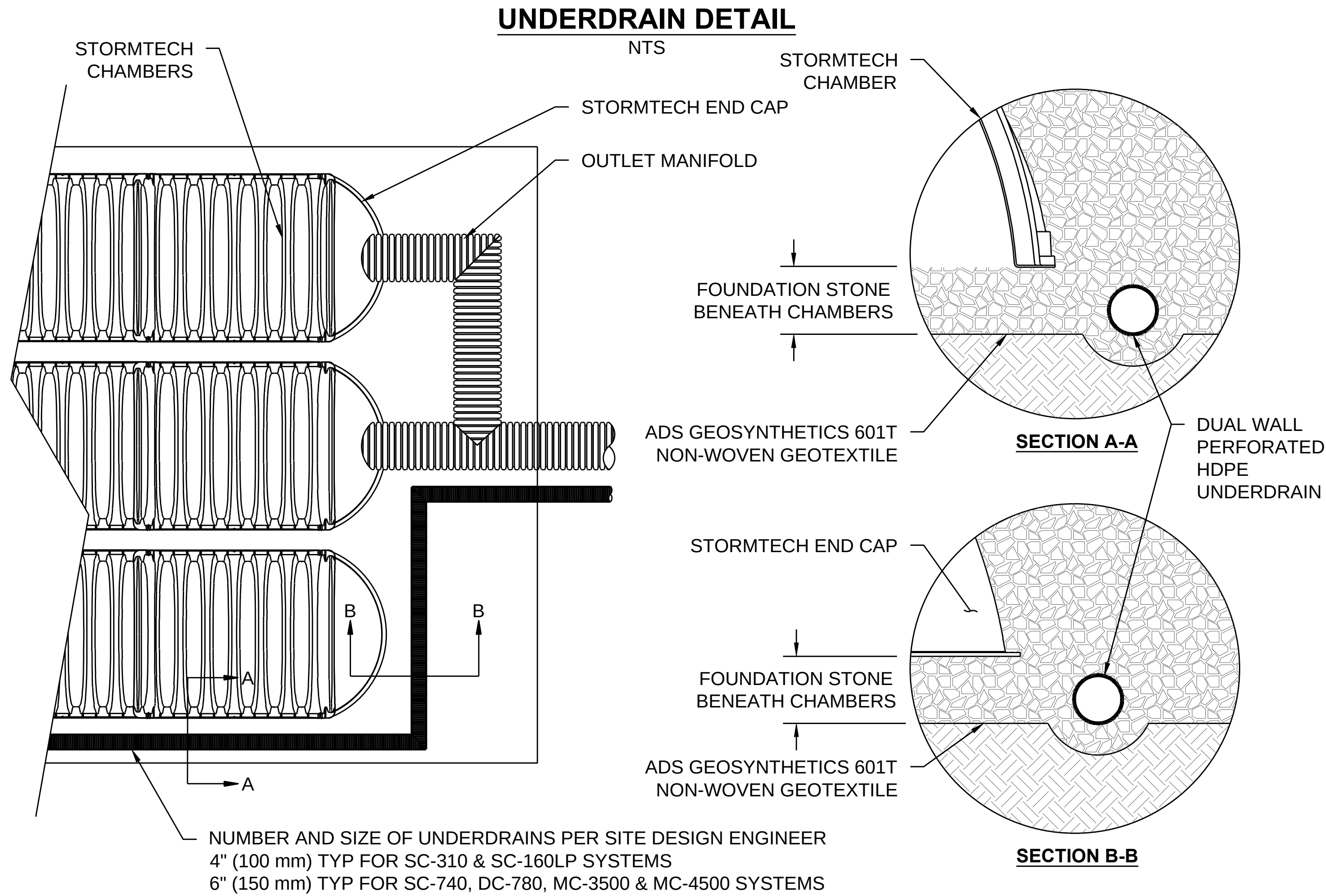
SYSTEM #2

MENARDS EXPANSION SYSTEM #2	
GERMANTOWN, WI	
DATE:	DRAWN: JB
PROJECT #:	CHECKED: N/A

REV	DRW	CHK	DESCRIPTION



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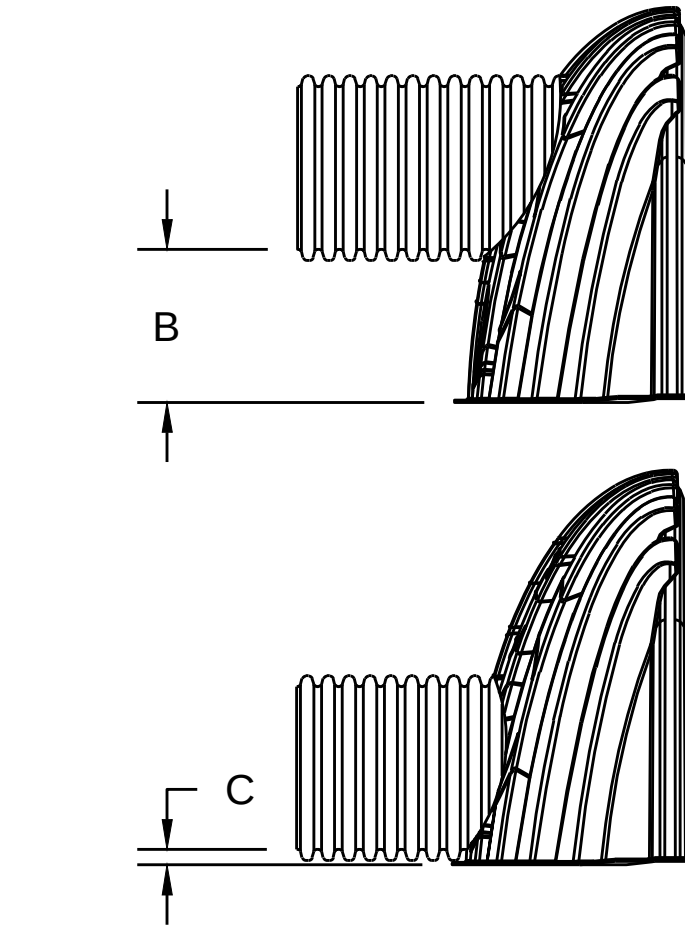


*ASSUMES 12" (305 mm) STONE ABOVE, 9" (229 mm) STONE FOUNDATION AND BETWEEN CHAMBERS, 12" (305 mm) STONE PERIMETER IN FRONT OF END CAPS AND 40% STONE POROSITY.

STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"
END CAPS WITH A WELDED CROWN PLATE END WITH "C"
END CAPS WITH A PREFABRICATED WELDED STUB END WITH "W"

PART #	STUB	B	C
MC4500REPE06T	6" (150 mm)	42.54" (1.081 m)	---
MC4500REPE06B		---	0.86" (22 mm)
MC4500REPE08T	8" (200 mm)	40.50" (1.029 m)	---
MC4500REPE08B		---	1.01" (26 mm)
MC4500REPE10T	10" (250 mm)	38.37" (975 mm)	---
MC4500REPE10B		---	1.33" (34 mm)
MC4500REPE12T	12" (300 mm)	35.69" (907 mm)	---
MC4500REPE12B		---	1.55" (39 mm)
MC4500REPE15T	15" (375 mm)	32.72" (831 mm)	---
MC4500REPE15B		---	1.70" (43 mm)
MC4500REPE18TC	18" (450 mm)	29.36" (746 mm)	---
MC4500REPE18TW		---	1.97" (50 mm)
MC4500REPE18BC			---
MC4500REPE18BW	24" (600 mm)	23.05" (585 mm)	---
MC4500REPE24TC		---	2.26" (57 mm)
MC4500REPE24TW			---
MC4500REPE24BC			---
MC4500REPE24BW	30" (750 mm)	---	2.95" (75 mm)
MC4500REPE30BC		---	---
MC4500REPE36BC	36" (900 mm)	---	3.25" (83 mm)
MC4500REPE42BC	42" (1050 mm)	---	3.55" (90 mm)

NOTE: ALL DIMENSIONS ARE NOMINAL



CUSTOM PRECORED INVERTS ARE AVAILABLE UPON REQUEST. INVENTORIED MANIFOLDS INCLUDE 12-24" (300-600 mm) SIZE ON SIZE AND 15-48" (375-1200 mm) ECCENTRIC MANIFOLDS. CUSTOM INVERT LOCATIONS ON THE MC-4500 END CAP CUT IN THE FIELD ARE NOT RECOMMENDED FOR PIPE SIZES GREATER THAN 10" (250 mm). THE INVERT LOCATION IN COLUMN 'B' ARE THE HIGHEST POSSIBLE FOR THE PIPE SIZE.

MENARDS EXPANSION SYSTEM #2

GERMANTOWN, WI

DESCRIPTION

CHK

DRW

REV

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HILLIARD, OH 43026

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ADVANCED DRAINAGE SYSTEMS, INC.

DRAWN: JB

CHECKED: N/A

DATE:

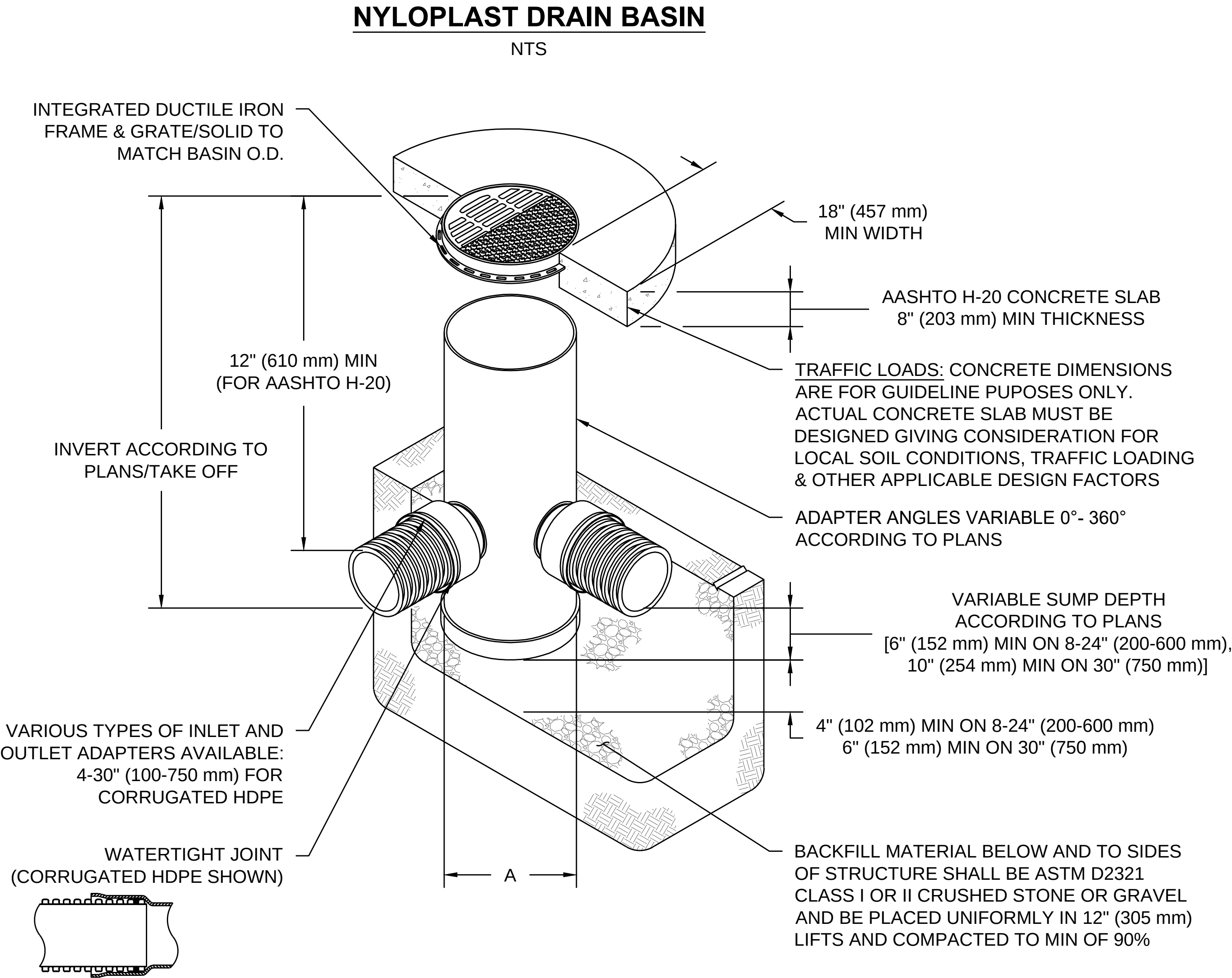
PROJECT #:

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5 OF 6

SYSTEM #2

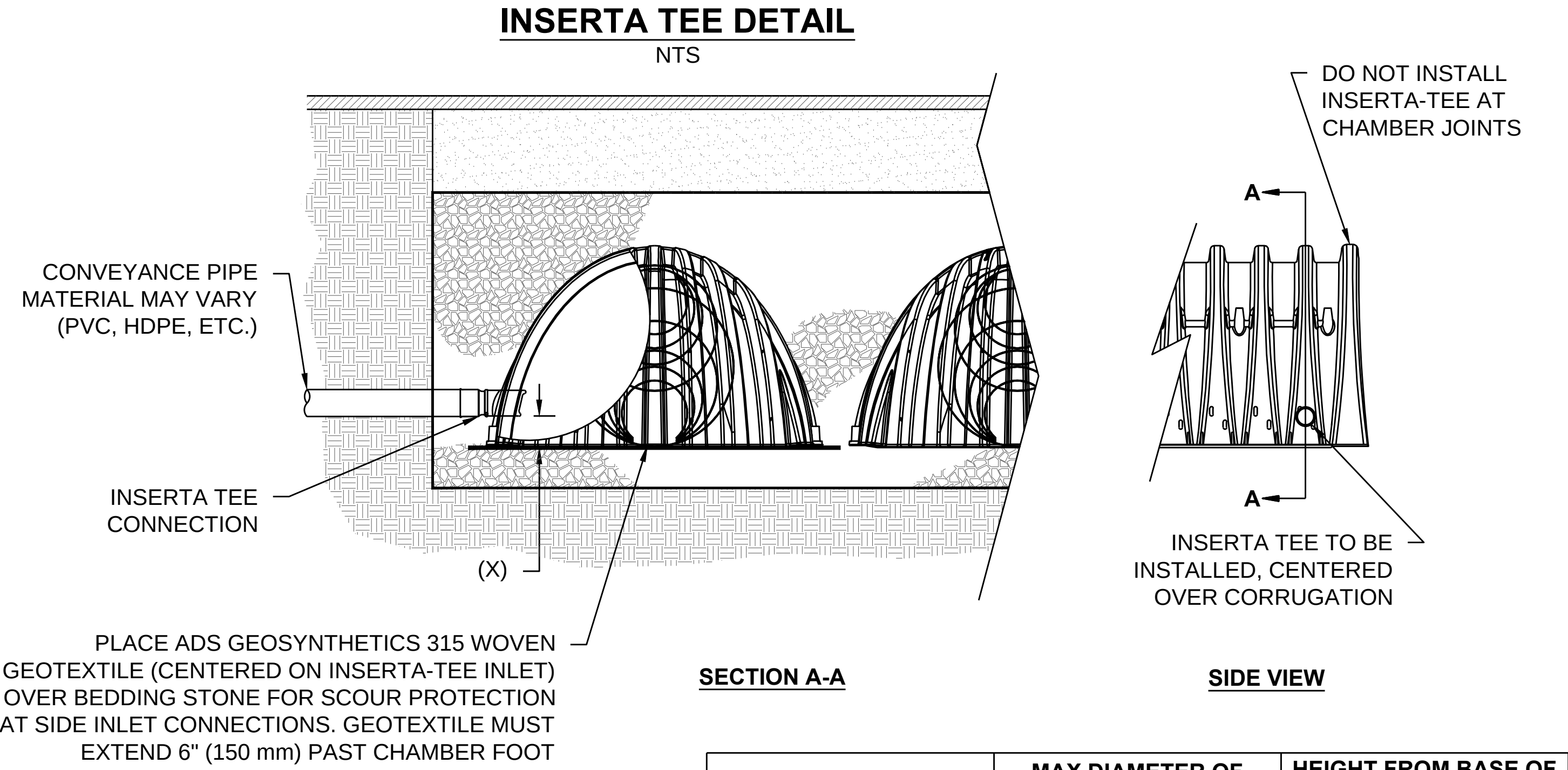
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NOTES

- 8-30" (200-750 mm) GRATES/SOLID COVERS SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05
- 12-30" (300-750 mm) FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05
- DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS
- DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS & HANCOR DUAL WALL) & SDR 35 PVC
- FOR COMPLETE DESIGN AND PRODUCT INFORMATION: **WWW.NYLOPLAST-US.COM**
- TO ORDER CALL: **800-821-6710**

A	PART #	GRATE/SOLID COVER OPTIONS		
8" (200 mm)	2808AG	PEDESTRIAN LIGHT DUTY	STANDARD LIGHT DUTY	SOLID LIGHT DUTY
10" (250 mm)	2810AG	PEDESTRIAN LIGHT DUTY	STANDARD LIGHT DUTY	SOLID LIGHT DUTY
12" (300 mm)	2812AG	PEDESTRIAN AASHTO H-10	STANDARD AASHTO H-20	SOLID AASHTO H-20
15" (375 mm)	2815AG	PEDESTRIAN AASHTO H-10	STANDARD AASHTO H-20	SOLID AASHTO H-20
18" (450 mm)	2818AG	PEDESTRIAN AASHTO H-10	STANDARD AASHTO H-20	SOLID AASHTO H-20
24" (600 mm)	2824AG	PEDESTRIAN AASHTO H-10	STANDARD AASHTO H-20	SOLID AASHTO H-20
30" (750 mm)	2830AG	PEDESTRIAN AASHTO H-20	STANDARD AASHTO H-20	SOLID AASHTO H-20



NOTE:
PART NUMBERS WILL VARY BASED ON INLET PIPE MATERIALS. CONTACT STORMTECH FOR MORE INFORMATION.

CHAMBER	MAX DIAMETER OF INSERTA TEE	HEIGHT FROM BASE OF CHAMBER (X)
SC-310	6" (150 mm)	4" (100 mm)
SC-740	10" (250 mm)	4" (100 mm)
DC-780	10" (250 mm)	4" (100 mm)
MC-3500	12" (300 mm)	6" (150 mm)
MC-4500	12" (300 mm)	8" (200 mm)
INSERTA TEE FITTINGS AVAILABLE FOR SDR 26, SDR 35, SCH 40 IPS GASKETED & SOLVENT WELD, N-12, HP STORM, C-900 OR DUCTILE IRON		

3130 VERONA AVE
BUFORD, GA 30518
PHN (770) 932-2443
FAX (770) 932-2490
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ADS
ADVANCED DRAINAGE SYSTEMS, INC.

4640 TRUEMAN BLVD
HILLIARD, OH 43026
1-800-733-7473

REV	DRW	CHK	DESCRIPTION

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EASEMENT AGREEMENT

Document Number

Document Title

DOC#: 856000

Recorded
MAY 16, 2000 AT 03:35PM

DOROTHY C. GONNERING
REGISTER OF DEEDS
WASHINGTON COUNTY, WI
Fee Amount: \$28.00



Recording Area

28-10

Name and Return Address

ALAN MARCOWITZ
700 N WATER ST #1500
MILWAUKEE WI 53202

Parcel Identification Number (PIN)

This information must be completed by submitter: document title, name & return address, and PIN (if required). Other information such as the granting clauses, legal description, etc. may be placed on this first page of the document or may be placed on additional pages of the document. Note: Use of this cover page adds one page to your document and \$2.00 to the recording fee. Wisconsin Statutes, 59.517. WRDA 2/96

EASEMENT AGREEMENT

THIS EASEMENT AGREEMENT (hereinafter referred to as the "Agreement"), made this 13 day of March, 2000, by and between L&D INVESTMENT CO., a Wisconsin partnership (hereinafter referred to as "L&D") and the ESTATE OF ALFRIEDA C. ROGERS, an estate pending in the Washington County, Wisconsin Circuit Court, as File No. 96-IN-153 (hereinafter referred to as "Rogers").

WITNESSETH:

WHEREAS, Rogers is the owner of certain real estate situated in the Village of Germantown, Washington County, Wisconsin, as more particularly described on EXHIBIT "A" attached hereto and incorporated herein by reference (the "Rogers Parcel"); and

WHEREAS, L&D is the owner of certain real estate located adjacent to the Rogers Parcel, which real estate is also situated in the Village of Germantown, Washington County, Wisconsin, as more particularly described on EXHIBIT "B" attached hereto and incorporated herein by reference (the "L&D Parcel"); and

WHEREAS, Rogers and L&D mutually desire to grant to the other certain easements for ingress and egress to and from their respective parcels and to set forth in detail their respective rights and obligations with respect to the use and maintenance of such easements, all in accordance with the terms and conditions hereinafter set forth;

NOW, THEREFORE, for and in consideration of the premises, the mutual covenants and promises contained herein, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

1. L&D hereby grants and conveys to Rogers a permanent, perpetual and non-exclusive easement for vehicular and pedestrian ingress and egress on, over and across that portion of the L&D Parcel equal to 6,464 square feet, as further described in EXHIBIT "C" attached hereto and made a part hereof.

2. Rogers hereby grants and conveys to L&D a permanent, perpetual and non-exclusive easement for vehicular and pedestrian ingress and egress on, over and across that portion of the Rogers Parcel equal to 6,145 square feet, as further described on EXHIBIT "C" attached hereto and made a part hereof.

3. The adjacent easements hereinabove granted together form a driveway approximately 45 feet in width, the location of which is set forth on said EXHIBIT "C."

4. It is understood and agreed by the parties hereto that each easement granted herein is a non-exclusive easement and that each grantor party reserves the right to use its easement area for ingress and egress to and from the balance of such grantor party's parcel.

5. L&D shall be responsible for the construction of the improvements within the area depicted in Exhibit "C." If Rogers conveys its parcel to anyone within six months of the date of this document, the party to whom the Rogers parcel is conveyed shall thereupon reimburse L&D in the amount of \$ 15,000. If there is no such conveyance, the obligation to reimburse L&D shall be null and void.

6. L&D shall also be responsible for the repair, replacement and maintenance, including snow removal of the area depicted in Exhibit "C." If and when the Rogers parcel is developed with one or more commercial uses, Rogers shall thereafter pay 50% of such costs each calendar quarter. Such amount shall be paid by Rogers to L&D, within 15 days after delivery of said bill. Fulfillment of the foregoing obligations by L&D shall not unreasonably interfere with

the rights of Rogers hereunder. Upon the failure of L&D to perform any of its obligations hereunder, and after reasonable notice to L&D, Rogers shall have the right to perform or cause to be performed the necessary repairs, replacements, and maintenance and to bill L&D for its allocable share of the full cost thereof. The party performing, or causing to be performed, the foregoing procedures shall substantiate to the other party, by means of invoices or other documentation, the costs incurred. Further, the party performing or causing to be performed such procedures shall indemnify and defend the other party from claims or suits arising from such activities. The responsibility of the party performing or causing such activities to be performed shall also be responsible for prompt and complete restoration.

7. Each party warrants and represents that it shall not construct any buildings or improvements over any portion of the easements so as not to interfere with the use of the same as herein provided and that the surface of the easements shall at all times be in such condition as to permit ingress and egress of trucks, trailers and automobiles. In connection therewith, each of the parties agrees to pay for any damages arising from its negligent use of the easements granted herein.

8. The rights and privileges granted herein shall accrue to the benefit of and be appurtenant to the parcel of each grantor and run with such party's parcel. The easements and rights granted herein shall constitute permanent, perpetual encumbrances on the parcel of each grantor. The rights, privileges and obligations hereunder shall inure to the benefit of and be binding upon the parties hereto, their successors and assigns.

Either party may enforce this instrument by appropriate action and, should it prevail in such litigation, that party shall be entitled to recover as part of its costs reasonable attorney's fees.

9. The address for notices to Rogers is c/o Harold L. Rogers, Personal Representative, 15 Windsor Court, Streamwood, Illinois 60107, and the address for notices to L&D is c/o Jack Stein, 5400 South 27th Street, Milwaukee, Wisconsin 53221. Either party may give written notice of change of address to the other party. All notices shall be sent by U.S. Mail to the address provided for and shall be deemed given when deposited in the mail.

10. None of the foregoing shall (i) unduly restrict or interfere with the rights of the respective parties hereto as granted herein, (ii) require the dedication of any further portion of the parcel of either party, or (iii) impose any cost or expense on either party except as provided hereinabove. In the event any action by the Village of Germantown, Washington County, or State of Wisconsin shall require widening, relocation or otherwise have an impact on the easements provided herein, the parties shall equitably share of the costs incurred, as a result thereof.

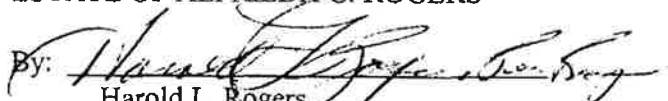
11. L&D and Rogers may terminate this instrument only by jointly executing and recording a mutual release in recordable form, whereupon all rights, duties, and liabilities hereby created shall terminate.

IN WITNESS WHEREOF, the parties hereto have executed this instrument as of the day and year first set forth above.

L&D INVESTMENT CO., a partnership

By: 
Jack Stein, Attorney in Fact

ESTATE OF ALFRIEDA C. ROGERS

By: 
Harold L. Rogers
Personal Representative

STATE OF WISCONSIN)
) ss
 COUNTY OF MILWAUKEE)

Personally came before me this 13 day of March, 2000, L&D Investment Co., by Jack Stein, Attorney-in-fact for its partners, to me known to be the person who executed the foregoing instrument and acknowledged that he executed the same as such.



Alan Marcumitz
 Notary Public, State of Wisconsin
 My commission (is) ~~(exp.)~~ permanent

STATE OF WISCONSIN)
) ss
 COUNTY OF WASHINGTON)

Personally came before me this 13th day of March, 2000, Harold L. Rogers, personal representative of the Estate of Alfrieda C. Rogers, to me known to be the person who executed the foregoing instrument and acknowledged that he executed the same as such.



Robert L. Wilkins
 Notary Public, State of Wisconsin
 My commission (is) ~~(exp.)~~ PERMANENT

This instrument was drafted by and following recording should be returned to Attorney Sherwin C. Peltin, Weiss Berzowski Brady & Donahue LLP, 700 North Water Street, Suite 1500, Milwaukee, WI 53202.

DOC#: 856000

National Survey & Engineering

16745 West Bluemound Road, Suite 200
Brookfield, Wisconsin 53005-5938
Phone 414-781-1000
Fax 414-781-8466
Website www.nsae.com

EXHIBIT A

THAT PART OF THE SOUTHWEST 1/4 OF SECTION 33, TOWN 9 NORTH, RANGE 22 EAST,
TOWN OF GERMANTOWN, WASHINGTON COUNTY, WISCONSIN, BOUNDED AND
DESCRIBED AS FOLLOWS:

COMMENCING AT THE WEST 1/4 CORNER, SECTION 33, TOWN 9 NORTH, RANGE 22 EAST;
THENCE NORTH 89°55' EAST ON THE WEST 1/4 LINE OF SAID SECTION 1182.00 FEET TO
THE POINT OF BEGINNING OF THIS DESCRIPTION; THENCE CONTINUING NORTH 89°55'
EAST 204.00 FEET; THENCE SOUTH 10°28' WEST 2109.90 FEET; THENCE NORTH 48°28'
WEST ON CENTER LINE OF STATE TRUNK HIGHWAY 175, 200.85 FEET; THENCE NORTH
09°38' EAST 1969.08 FEET TO THE POINT OF BEGINNING.

PREPARED BY: ERIC R STURM
DATE: JANUARY 14, 2000
SURVEY NO.: 5152853

W:\5152853\EXHIBIT-A

S I T E B A L A N C E



National Survey & Engineering

16745 West Bluemound Road, Suite 200
Brookfield, Wisconsin 53005-5938
Phone 414-781-1000
Fax 414-781-8466
Website www.nsae.com

EXHIBIT B

THAT PART OF THE SOUTHWEST 1/4 OF SECTION 33, TOWN 9 NORTH, RANGE 22 EAST, TOWN OF GERMANTOWN, WASHINGTON COUNTY, WISCONSIN, BOUNDED AND DESCRIBED AS FOLLOWS:

COMMENCING AT A POINT IN THE CENTER LINE OF THE MENOMONEE RIVER WHERE THE EAST AND WEST QUARTER LINE OF SECTION 33 CROSSES THE SAME (BEING 25.00 CHAINS EAST OF THE WEST QUARTER STONE OF SAID SECTION); THENCE WEST ALONG SAID QUARTER SECTION LINE, 4.00 CHAINS (BEING THE NORTHEAST CORNER OF FORMER PETER RUDOLPH LANDS); THENCE SOUTH 10-3/4 DEGREES WEST (ALONG SAID PETER RUDOLPH EAST LINE) TO A STAKE SET 13.50 CHAINS EAST OF THE SOUTHWEST CORNER OF SAID SECTION 33 AND ON THE SECTIONS AND COUNTY LINE; THENCE EAST ALONG SAID SECTION AND COUNTY LINE 4.50 CHAINS; THENCE NORTH 14° EAST 22.45 CHAINS TO A STAKE ON THE SOUTHWEST SIDE OF THE MENOMONEE RIVER; THENCE NORTH AND EAST TO THE CENTER OF SAID RIVER, 25 LINKS; THENCE NORTHERLY ALONG THE CENTER OF SAID RIVER TO THE PLACE OF BEGINNING.

EXCEPTING THEREFROM THAT PORTION THEREOF HERETOFORE CONVEYED TO KENNETH DUEHRING AND ELIZABETH DUEHRING, HIS WIFE, AS DESCRIBED BY DEED RECORDED IN THE WASHINGTON COUNTY REGISTRY IN VOLUME 341 OF RECORDS ON PAGE 435, AS DOCUMENT NO. 252890.

PREPARED BY: ERIC R STURM
DATE: JANUARY 14, 2000
SURVEY NO.: 5152853

W:\5152853\EXHIBIT-B

S I T E B A L A N C E



National Survey & Engineering

16745 West Bluemound Road, Suite 200

Brookfield, Wisconsin 53005-5938

Phone 262-781-1000

Fax 262-781-8466

Website www.nsae.com

*Exhibit C/1***INGRESS AND EGRESS EASEMENT
FOR THE BENEFIT OF ROGERS**

SITUATED ON WEST APPLETON AVENUE, VILLAGE OF GERMANTOWN, WISCONSIN

PART OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 33, TOWN 9 NORTH, RANGE 20 EAST, IN THE VILLAGE OF GERMANTOWN, WASHINGTON COUNTY, WISCONSIN. COMMENCING AT THE SOUTHEAST CORNER OF THE SOUTHWEST 1/4 OF SAID SECTION 33; THENCE SOUTH 89°20'48" WEST ALONG THE SOUTH LINE OF SAID SOUTHWEST 1/4 SECTION 1002.80 FEET TO A POINT ON THE CENTERLINE OF WEST APPLETON AVENUE; THENCE NORTH 49°53'22" WEST ALONG THE CENTERLINE OF WEST APPLETON AVENUE 868.30 FEET TO A POINT; THENCE NORTH 09°33'19" EAST 69.68 FEET TO A POINT ON THE NORTH LINE OF WEST APPLETON AVENUE AND THE POINT OF BEGINNING OF THE LANDS TO BE DESCRIBED; THENCE NORTH 09°33'19" EAST 182.05 FEET TO A POINT; THENCE SOUTH 77°09'43" EAST 45.59 FEET TO A POINT; THENCE SOUTH 13°00'57" WEST 121.40 FEET TO A POINT; THENCE SOUTH 39°54'39" WEST 44.68 FEET TO A POINT; THENCE SOUTHWESTERLY 29.45 FEET ALONG THE ARC OF A CURVE WHOSE CENTER LIES TO THE SOUTHEAST, WHOSE RADIUS IS 30.00 FEET AND WHOSE CHORD BEARS SOUTH 11°47'20" WEST 28.28 FEET TO A POINT ON THE NORTH RIGHT OF WAY LINE OF WEST APPLETON AVENUE; THENCE NORTH 49°53'22" WEST 16.84 FEET TO THE POINT OF BEGINNING.

SAID LAND CONTAINS 6,464 SQUARE FEET.

**INGRESS AND EGRESS EASEMENT
FOR THE BENEFIT OF L & D INVESTMENT COMPANY (STEINS)**

SITUATED ON WEST APPLETON AVENUE, VILLAGE OF GERMANTOWN, WISCONSIN

PART OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 33, TOWN 9 NORTH, RANGE 20 EAST, IN THE VILLAGE OF GERMANTOWN, WASHINGTON COUNTY, WISCONSIN. COMMENCING AT THE SOUTHEAST CORNER OF THE SOUTHWEST 1/4 OF SAID SECTION 33; THENCE SOUTH 89°20'48" WEST ALONG THE SOUTH LINE OF SAID SOUTHWEST 1/4 SECTION 1002.80 FEET TO A POINT ON THE CENTERLINE OF WEST APPLETON AVENUE; THENCE NORTH 49°53'22" WEST ALONG THE CENTERLINE OF WEST APPLETON AVENUE 868.30 FEET TO A POINT; THENCE NORTH 09°33'19" EAST 38.32 FEET TO THE NORTH LINE OF WEST APPLETON AVENUE AND THE POINT OF BEGINNING OF SAID LANDS TO BE DESCRIBED; THENCE NORTH 49°53'22" WEST ALONG SAID NORTH LINE 199.85 FEET TO A POINT; THENCE SOUTH 64°31'55" EAST 87.03 FEET TO A POINT; THENCE SOUTH 49°53'24" EAST 25.21 FEET TO A POINT; THENCE NORTHEASTERLY 47.12 FEET ALONG THE ARC OF A CURVE WHOSE CENTER LIES TO THE NORTHEAST, WHOSE RADIUS IS 30.00 FEET AND WHOSE CHORD BEARS NORTH 85°06'36" EAST 42.43 FEET TO A POINT; THENCE NORTH 40°06'36" EAST 29.92 FEET TO A POINT; THENCE NORTH 12°48'58" EAST 112.55 FEET TO A POINT; THENCE SOUTH 77°09'43" EAST 4.01 FEET TO A POINT; THENCE SOUTH 09°33'19" WEST 213.40 FEET TO THE POINT OF BEGINNING.

SAID LAND CONTAINS 6,145 SQUARE FEET

PREPARED BY: ERIC R. STURM
DATE: MARCH 8, 2000
SURVEY NO.: 152853

SITE BALANCE

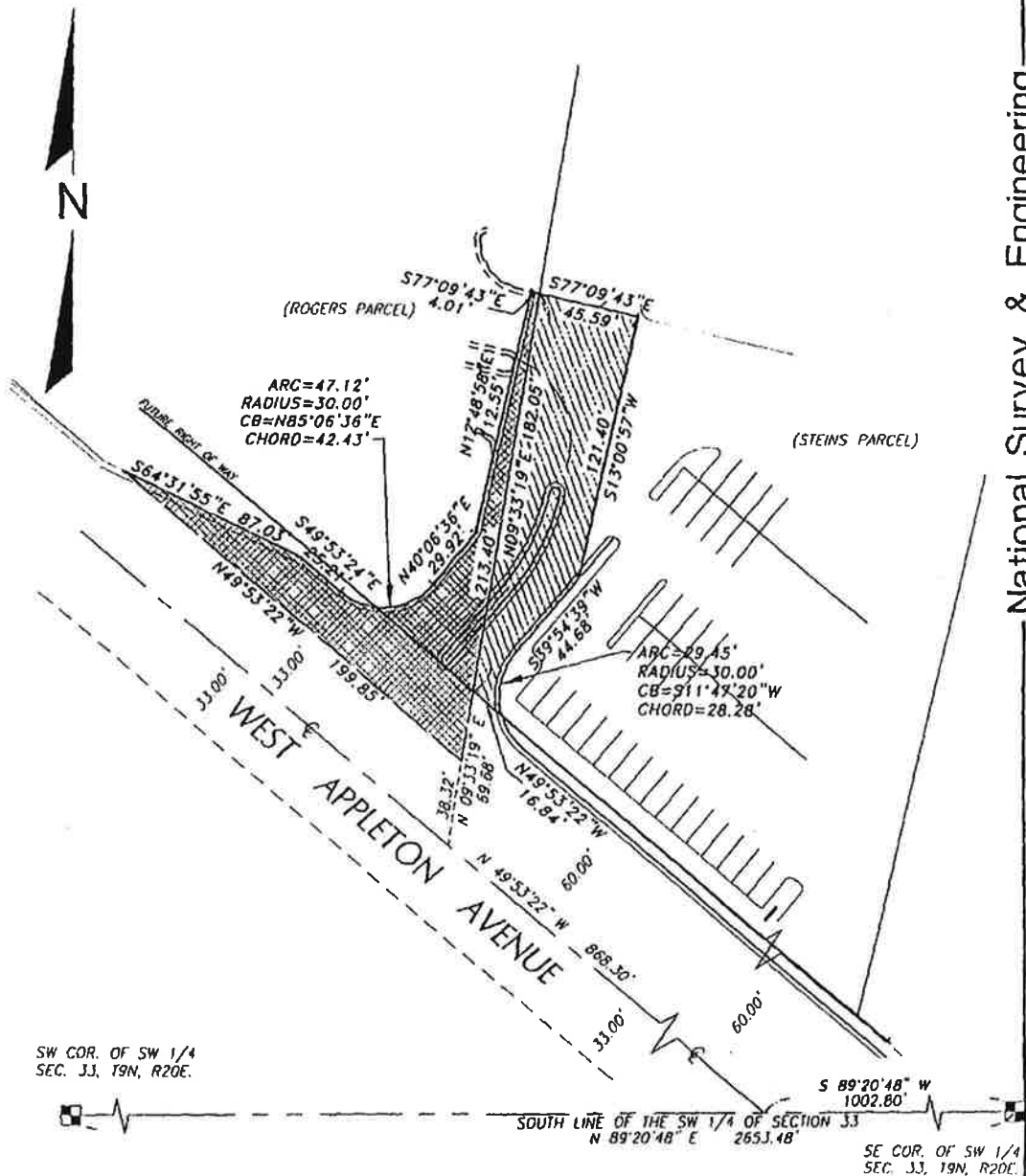


EASEMENT EXHIBIT "C" / 2

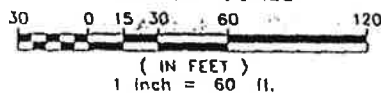
SITUATED ON WEST APPLETON AVENUE, VILLAGE OF GERMANTOWN, WISCONSIN.

MARCH 8, 2000

NSE NO. 5152853

SW COR. OF SW 1/4
SEC. 33, 19N, R20E.SE COR. OF SW 1/4
SEC. 33, 19N, R20E.

GRAPHIC SCALE



INDICATES INGRESS AND EGRESS EASEMENT
FOR THE BENEFIT OF L & D INVESTMENT CO.
(STEINS) AREA = 1,817 SQ. FT.

INDICATES INGRESS AND EGRESS EASEMENT
FOR THE BENEFIT OF ROGERS
AREA = 5,770 SQ. FT.

National Survey & Engineering

Telephone 262-781-1000
Facsimile 262-781-8480
18745 W. Bluemound Road
Suite 200
Brookfield, WI 53005-5938
www.nsee.com



NSE NO. 5152853 \ SPED0460 - ERS

National Survey & Engineering

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
141 NW Barstow, Room 180
Waukesha, WI 53188

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



June 10, 2019

IP-SE-2019-67-00209

Tyler Edwards
Menard Inc.
5101 Menard Drive
Eau Claire, WI 54703

Dear Mr. Edwards:

The Department has completed review of your proposal. We have determined that your project meets state standards. Enclosed is your state wetland permit which approves your project and lists the conditions which must be followed. Please read your permit carefully so that you are fully aware of what is expected of you.

Your enclosed state water quality certification confirms the state certification necessary for proceeding under an approval pursuant to a federal permit issued by the Army Corps of Engineers.

Please note you are required to submit photographs of the completed project within 7 days after you've finished construction. This helps both of us to document the completion of the project and compliance with the permit conditions.

Your next step will be to notify me of the date on which you plan to start construction and again after your project is complete.

If you have any questions about your permit, please call me at (262) 574-2136 or email Erin.Cox@wisconsin.gov.

Sincerely,

Erin Cox
Water Management Specialist

cc: U.S. Army Corps of Engineers
Washington County
Josie Lathrop and Tom Nedland, Mitigation Coordinators
Bob Lee, Conservation Warden
Michelle Scott, Supervisor
Kyle Brockman, Wisconsin Environmental Restorations LLC

**STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES**

**Wetland Individual Permit
IP-SE-2019-67-00209**

Tyler Edwards is hereby granted under Section 281.36, Wisconsin Statutes, and 33 U.S.C.S §1341 (CWA §401) a permit for wetland fill or disturbance near the Menomonee River and unnamed stream (WBIC 5034130), in the Village of Germantown, Washington County, also described as being in the NW1/4 of the SW1/4 of Section 33, Township 09 North, Range 20 East, subject to the following conditions:

PERMIT

1. You must notify Erin Cox at phone (262) 574-2136 or email Erin.Cox@wisconsin.gov before starting the discharge and again not more than 5 days after the discharge is complete.
2. You must complete the discharge as described on or before 06/10/2022. If you will not complete the discharge by this date, you must submit a written request for an extension prior to the expiration date of the permit. Your request must identify the requested extension date and the reason for the extension. A permit extension may be granted, for good cause, by the Department. You may not begin or continue construction after the original permit expiration date unless the Department grants a new permit or permit extension in writing.
3. This permit does not authorize any work other than what you specifically describe in your application and plans dated January 17th, 2019, and as modified by the conditions of this permit. If you wish to alter the project or permit conditions, you must first obtain written approval of the Department.
4. You are responsible for obtaining any permit or approval that may be required for your project by local zoning ordinances and by the U.S. Army Corps of Engineers before starting your project.
5. Upon reasonable notice, you shall allow access to your project site during reasonable hours to any Department employee who is investigating the project's construction, operation, maintenance or permit compliance.
6. The Department may modify or revoke this permit if the project is not completed according to the terms of the permit, or if the Department determines the activity results in significant adverse impact to wetland functional values, in significant adverse impact to water quality, or in other significant adverse environmental consequences.
7. You must post a copy of this permit at a conspicuous location on the project site, for at least five days prior to construction, and remaining at least five days after construction. You must also have a copy of the permit and approved plan available at the project site at all times until the project is complete.
8. Your acceptance of this permit and efforts to begin work on this project signify that you have read, understood and agreed to follow all conditions of this permit.
9. You must submit a series of photographs to the Department, within one week of completion of work on the site. The photographs must be taken from different vantage points and depict all work authorized by this permit.

10. You, your agent, and any involved contractors or consultants may be considered a party to the violation pursuant to Section 281.36 (13), Wis. Stats., for any violations of Section 281.36, Wisconsin Statutes, or this permit.
11. Construction shall be accomplished in such a manner as to minimize erosion and siltation into surface waters. Erosion control measures (such as silt fence and straw bales) must meet or exceed the technical standards of ch. NR 151, Wis. Adm. Code. The technical standards are found at: http://dnr.wi.gov/topic/stormwater/standards/const_standards.html.
12. Authorization hereby granted by the Department is transferable to any person upon prior written approval of the transfer by the Department.
13. All equipment used for the project including but not limited to tracked vehicles, barges, boats, hoses, sheet pile and pumps shall be de-contaminated for invasive and exotic viruses and species prior to use and after use.

The following steps must be taken every time you move your equipment to avoid transporting invasive and exotic viruses and species. To the extent practicable, equipment and gear used on infested waters shall not be used on other non-infested waters.

1. **Inspect and remove** aquatic plants, animals, and mud from your equipment.
2. **Drain all water** from your equipment that comes in contact with infested waters, including but not limited to tracked vehicles, barges, boats, hoses, sheet pile and pumps.
3. **Dispose** of aquatic plants, animals in the trash. Never release or transfer aquatic plants, animals or water from one waterbody to another.
4. **Wash your equipment** with hot (>140° F) and/or high pressure water,

- OR -

Allow your equipment to **dry thoroughly for 5 days**.

FINDINGS OF FACT

1. Tyler Edwards has filed an application for a permit for wetland fill/disturbance near the Menomonee River and unnamed stream (WBIC 5034130), in the Village of Germantown, Washington County, also described as being in the NW1/4 of the SW1/4 of Section 33, Township 09 North, Range 20 East.
2. The project will consist of an expansion to the existing Menard Inc. Germantown Store. The discharge will affect a total of 0.9140 acres of wetland, since the discharged material will cover 0.914 acres of wetland.
3. The applicant proposed to compensate for wetland losses through mitigation. The Department evaluated the wetland mitigation proposal and determined that mitigation credits could fulfill the compensation requirement. The mitigation plan proposed to purchase 1.32 credits from the WWCT program at the required 1.45:1 mitigation ratio. The credits were debited on March 19th

and an Affidavit of Credit Purchase was submitted to the Department certifying the debit and fulfilling the compensation requirement.

4. No practicable alternative exists which would avoid adverse impacts to wetlands, and the project will result in the least environmentally damaging practicable alternative taking into consideration practicable alternatives that avoid wetland impacts. Taking no action towards an expansion would have a negative impact on the Menards future business. The current layout could be utilized, but the existing store could not accept or store a larger volume of product in the future. This could cause a loss of future profit, and loss of potential customers to online retailers that have the desired stock readily available. A different parcel was explored as an option but would also have potential wetland impacts associated with it and would be much closer to the Menominee River. Different alternative layouts on existing Menards property were also explored but involved larger amounts of wetland impact or would cause greater operational and construction difficulties.
5. All practicable measures to minimize adverse impacts to the functional values of the wetland have been taken. The layout that causes the least amount of wetland impacts overall is the layout that has been pursued for this permit.
6. The proposed project will not result in significant adverse impacts to wetland functional values, significant impacts to water quality, or other significant adverse environmental consequences.
7. The direct impact of the proposed project to wetland functional values is 0.914 acres of permanent wetland fill.
8. If similar projects are pursued in this area, the result would be reduced natural areas for plant and animal communities, reduced water quality protection, and reduced groundwater integrity.
9. There are no significant secondary impacts expected to result from this project as proposed.
10. A net negative environmental impact would result from this project.
11. The Department has completed an investigation of the project site and has evaluated the project as described in the application and plans.
12. The Department of Natural Resources has determined that the agency's review of the proposed project constitutes an equivalent analysis action under s. NR 150.20(2), Wis. Adm. Code. The Department has considered the impacts on the human environment, alternatives to the proposed projects and has provided opportunities for public disclosure and comment. The Department has completed all procedural requirements of s. 1.11(2)(c), Wis. Stats., and NR 150, Wis. Adm. Code for this project.
13. The Department of Natural Resources has completed all procedural requirements and the project as permitted will comply with all applicable requirements of Sections 281.36, and 281.37, Wisconsin Statutes and Chapters NR 103, 299, 350, and 353 of the Wisconsin Administrative Code.

The applicant was responsible for fulfilling the procedural requirements for publication of notices under s. 281.36(3p)(d)1m., Stats., and was responsible for publication of the notice of pending application under s. 281.36(3p)(d)1m., Stats. or the notice of public informational hearing under s. 281.36(3p)(d)1m., Stats., or both. Section 281.36(3p)(d)1m., Stats., provides that if no public hearing is held, the Department must issue its decision within 30 days of the 30-day public comment period, and if

a public hearing is held, the Department must issue its decision within 20 days after the 10-day period for public comment after the public hearing. Section 281.36(3p)(d)1m., Stats, requires the Department to consider the date on which the department publishes a notice on its web site as the date of notice.

CONCLUSIONS OF LAW

1. The Department has authority under the above indicated Statutes and Administrative Codes, to issue a permit for the construction and maintenance of this project.

NOTICE OF APPEAL RIGHTS

If you believe that you have a right to challenge this decision, you should know that the Wisconsin statutes and administrative rules establish time periods within which requests to review Department decisions shall be filed. For judicial review of a decision pursuant to sections 227.52 and 227.53, Wis. Stats., you have 30 days after the decision is mailed, or otherwise served by the Department, to file your petition with the appropriate circuit court and serve the petition on the Department. Such a petition for judicial review shall name the Department of Natural Resources as the respondent.

To request a contested case hearing of any individual permit decision pursuant to section 281.36.(3q), Wis. Stats., you have 30 days after the decision is mailed, or otherwise served by the Department, to serve a petition for hearing on the Secretary of the Department of Natural Resources, P.O. Box 7921, Madison, WI, 53707-7921. The petition shall be in writing, shall be dated and signed by the petitioner, and shall include as an attachment a copy of the decision for which administrative review is sought. If you are not the applicant, you must simultaneously provide a copy of the petition to the applicant. If you wish to request a stay of the project, you must provide information, as outlined below, to show that a stay is necessary to prevent significant adverse impacts or irreversible harm to the environment. If you are not the permit applicant, you must provide a copy of the petition to the permit applicant at the same time that you serve the petition on the Department.

The filing of a request for a contested case hearing is not a prerequisite for judicial review and does not extend the 30-day period for filing a petition for judicial review.

A request for contested case hearing must meet the requirements of section 281.36 (3q), Wis. Stats., and section NR 2.03, Wis. Adm. Code, and if the petitioner is not the applicant, the petition must include the following information:

1. A description of the objection that is sufficiently specific to allow the department to determine which provisions of this section may be violated if the proposed discharge under the wetland individual permit is allowed to proceed.
2. A description of the facts supporting the petition that is sufficiently specific to determine how the petitioner believes the discharge, as proposed, may result in a violation of the provisions of this section.
3. A commitment by the petitioner to appear at the administrative hearing and present information supporting the petitioner's objection.
4. If the petition contains a request for a stay of the project, the petition must also include information showing that a stay is necessary to prevent significant adverse impacts or irreversible harm to the environment.

Dated at Waukesha Service Center, Wisconsin on June 10th, 2019.

STATE OF WISCONSIN DEPARTMENT OF NATURAL RESOURCES
For the Secretary

By



Erin Cox

Water Management Specialist



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, ST. PAUL DISTRICT
180 FIFTH STREET EAST, SUITE 700
ST. PAUL, MN 55101-1678

July 12, 2019

Regulatory File No. MVP-2019-00231-RJH

Tyler Edwards
Menard Inc.
5101 Menard Drive
Eau Claire, Wisconsin 54703

Dear Mr. Edwards:

This letter concerns your request for Department of the Army authorization to discharge dredged and fill material into 0.91 acre of wetlands adjacent to the Menomonee River for the purpose of constructing a warehouse and lumber yard associated with the expansion of the Menards-Germantown Store. The project site is in Section 33, Township 09 North, Range 20 East, Washington County, Wisconsin.

The discharge of dredged or fill material proposed within waters of the United States is authorized under the provisions of Letter of Permission LOP-06-WI, provided the work complies with the enclosed General Conditions and is constructed in accordance with the enclosed drawings labeled MVP-2019-00231-RJH, pages 1 of 2 through pages 2 of 2, which are hereby incorporated as part of this Letter of Permission.

The authorization is subject to the following special condition:

1. To compensate for unavoidable adverse impacts to 0.91 acre of fresh wet meadow wetlands, you shall purchase 1.32 advanced credits from the WI Wetland Conservation Trust (WWCT) SW Lake Michigan Service Area prior to conducting any authorized work. The credits purchased on March 19, 2019 fulfill this compensation requirement.

This Letter of Permission is issued under the provisions of Section 404 of the Clean Water Act (33 U.S.C. 1344). The time limit for completing this authorized work ends three years from the date of this letter. This Federal authorization does not obviate the need to obtain other Federal, state or local authorizations required by law.

This letter constitutes an initial proffered permit for your project. Also enclosed is a Notification of Administrative Appeal Options and Process (NAP) fact sheet and Request for Appeal (RFA) form which provides information regarding your right to object to these determinations.

If you object to the terms or conditions of this initial proffered permit, please see Section I-A, complete Section II of the RFA, and submit it to the **District Engineer** in accordance with 33 CFR 331. Your objections to the initial proffered permit must be received by the **St. Paul District Office** within 60 days of the date of the NAP or you will forfeit your right to challenge the terms or conditions of the permit.

Regulatory Branch (File No. MVP-2019-00231-RJH)

Before accepting the RFA, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR 331.5, and that it has been received by the District or Division Office within 60 days of the date of the NAP. It is not necessary to submit an RFA form to the Corps District or Division Office if you do not object to the initial proffered permit enclosed with this letter.

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

Sincerely,



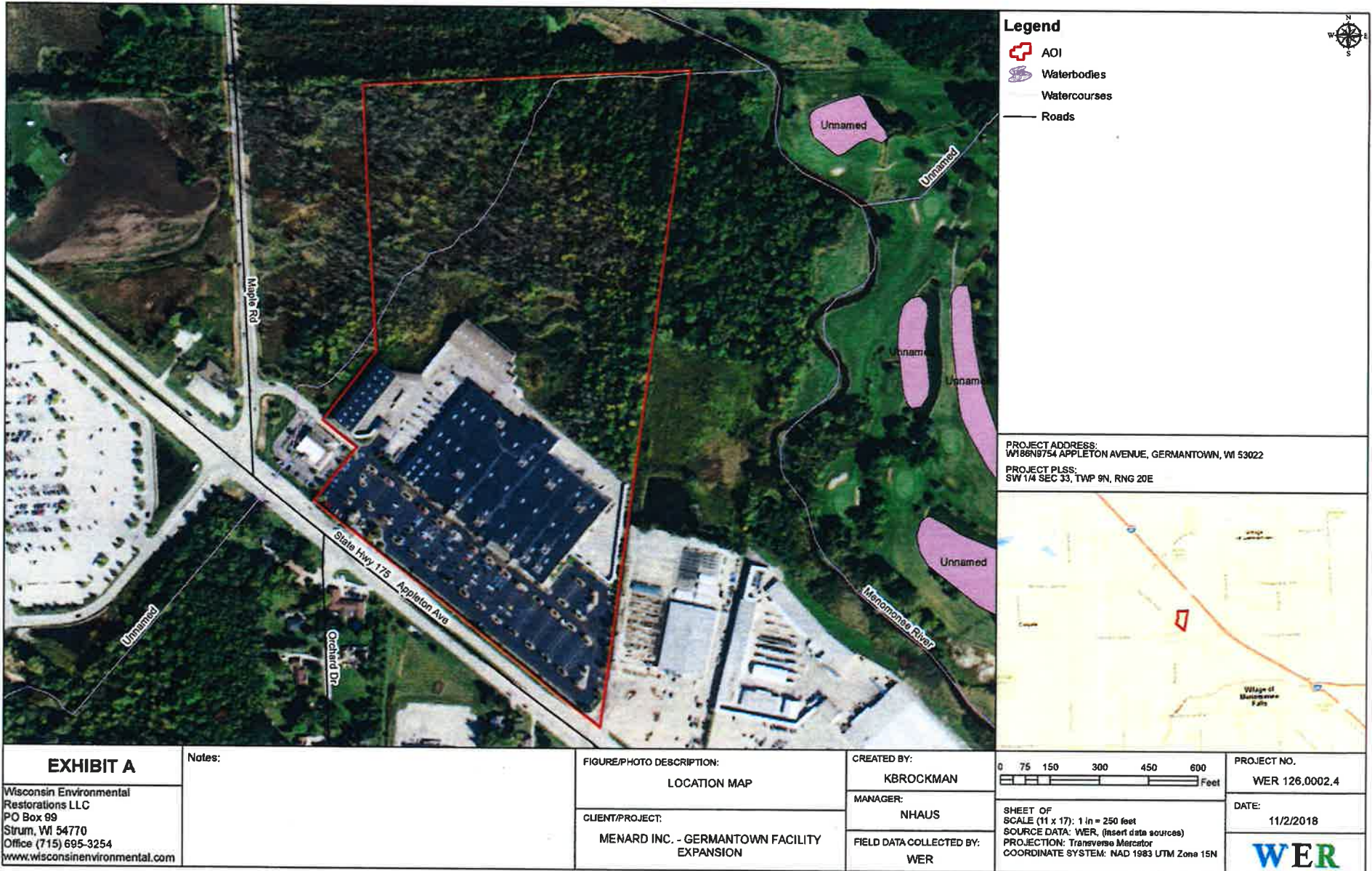
for Karl D. Jansen
Colonel, Corps of Engineers
District Engineer

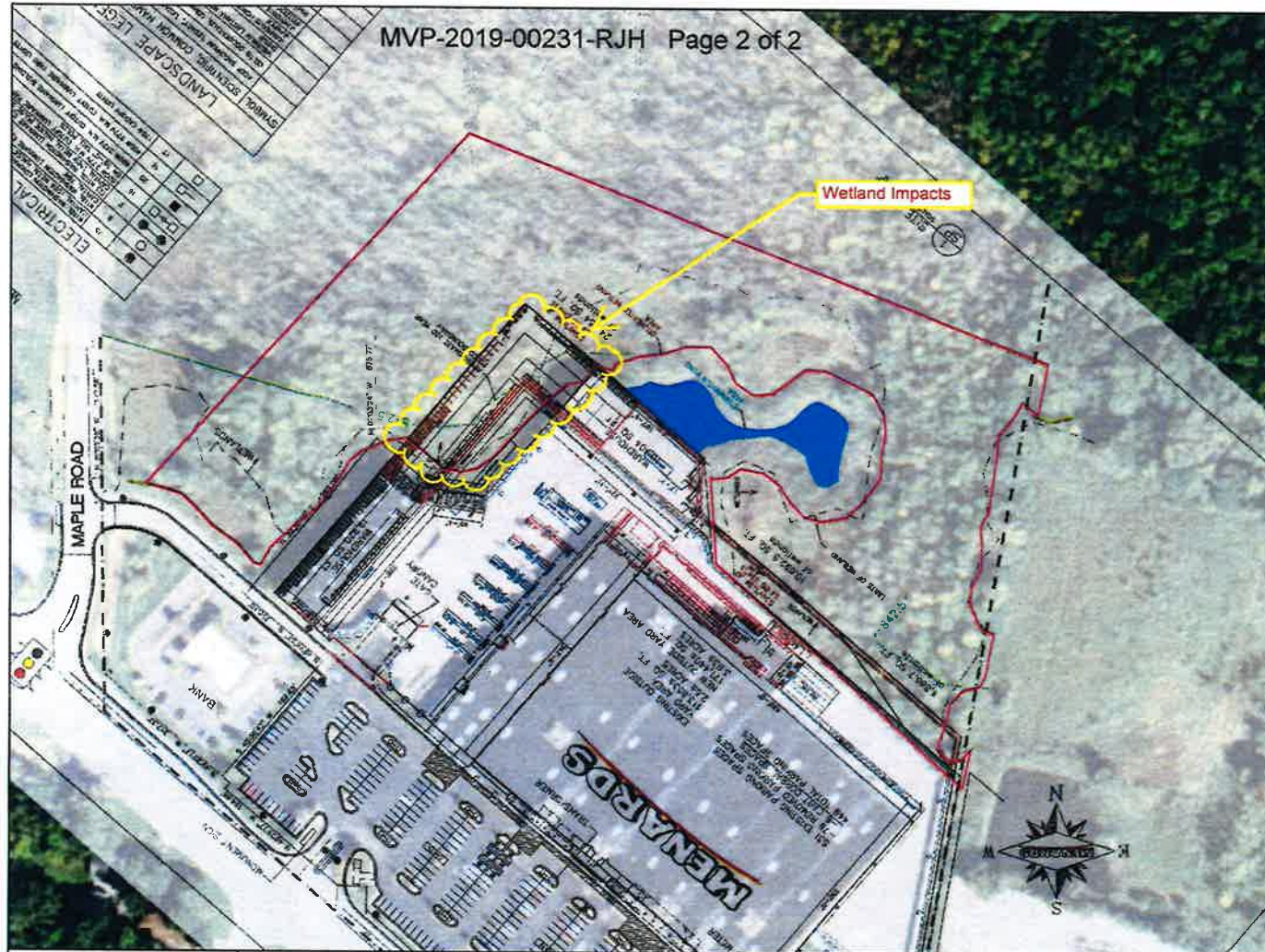
Enclosure(s)

cc:

WDNR- Erin Cox

Wisconsin Environmental Restorations LLC- Kyle Brockman





Legend

- Delineated Wetland
- Storm Water Pond



PROJECT ADDRESS:
W166N754 APPLETON AVENUE, GERMANTOWN, WI 53022
PROJECT PLSS:
S1W 1/4 SEC 33, TWP 9N, RNG 20E



EXHIBIT A

Wisconsin Environmental
Restorations LLC
PO Box 99
Strum, WI 54770
Office (715) 695-3254
www.wisconsinenvironmental.com

Notes:

FIGURE/PHOTO DESCRIPTION:

SITE PLAN OVERLAY

CLIENT/PROJECT:

MENARD INC. - GERMANTOWN FACILITY
EXPANSION

CREATED BY:

KBROCKMAN

MANAGER:

NHAUS

FIELD DATA COLLECTED BY:

WER

0 40 80 160 240 320
Feet
SHEET OF
SCALE (11 x 17): 1 in = 136.23 feet
SOURCE DATA: WER, (insert data sources)
PROJECTION: Transverse Mercator
COORDINATE SYSTEM: NAD 1983 2011 WISCRS
Washington Feet

PROJECT NO.

WER 126.0002.4

DATE:

3/26/2019

WER

**NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND
REQUEST FOR APPEAL**

Applicant: Tyler Edwards- Menard Inc		File No.: MVP-2019-00231-RJH	Date: JUL 12 2019
Attached is:			See Section below
X	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)		A
	PROFFERED PERMIT (Standard Permit or Letter of permission)		B
	PERMIT DENIAL		C
	APPROVED JURISDICTIONAL DETERMINATION		D
	PRELIMINARY JURISDICTIONAL DETERMINATION		E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at <http://usace.army.mil/inet/functions/cw/cecwo/reg> or Corps regulations at 33 CFR Part 331.

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

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

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

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

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

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

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

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

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

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

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:

U.S Army Corps of Engineers
Attn: Ryan Huber
211 North Broadway Street Ste. 221
Green Bay, Wisconsin 54303-2757

If you only have questions regarding the appeal process you may also contact the Division Engineer through:

Administrative Appeals Review Officer
Mississippi Valley Division
P.O. Box 80 (1400 Walnut Street)
Vicksburg, MS 39181-0080
601-634-5820 FAX: 601-634-5816

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

Signature of appellant or agent.

Date:

Telephone number:

LOP-06-WI CONDITIONS

GENERAL INFORMATION

Persons proposing to do work should note that, in ALL cases, LOP-06-WI requires that adverse impacts to water and wetland resources be avoided and minimized TO THE MAXIMUM EXTENT PRACTICABLE. Also, activities that would adversely affect Federal or State endangered plant or animal species or certain cultural or archaeological resources, or that would impair reserved Native American tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights, are not eligible for authorization under LOP-06-WI.

DEPARTMENT OF THE ARMY PERMIT GENERAL CONDITIONS

1. The time limit for completing work authorized by an LOP ends three years after the date of the Corps' authorization letter. If you find that you need more time to complete the authorized activity, submit your request for a time extension to the Corps for consideration at least three months before the expiration date is reached.

2. You must maintain the authorized activity in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you

abandon the permitted activity, although you may make a good faith transfer to a third party. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.

3. If you discover any previously unknown historic or archaeological remains while accomplishing the authorized activity you must immediately stop work and notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to the LOP-06-WI authorization. A copy of the certification will be attached to the LOP-06-WI authorization if it contains such conditions.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms

and conditions of LOP-06-WI.

Further Information.

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to Section 404 of the Clean Water Act (33 U.S.C. 1344).

2. Limits of this authorization.

a. This LOP does not obviate the need to obtain other Federal, state, or local authorizations required by law.

b. This LOP does not grant any property rights or exclusive privileges.

c. This LOP does not authorize any injury to the property or rights of others.

d. This LOP does not authorize interference with any existing or proposed Federal project.

3. Limits of Federal Liability. In authorizing work, the Federal Government does not assume any liability, including but not limited to the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

LOP-06-WI CONDITIONS

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

a. You fail to comply with the terms and conditions of this permit.

b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (see 4 above).

c. Significant new information surfaces which this office did not consider in reaching the original public interest decision. Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification,

and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. General condition 1., above, establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

OTHER INFORMATION

1. **FEDERAL TRUST RESPONSIBILITY TO INDIAN TRIBES.** Projects the District finds to have potential to affect tribal interests will be coordinated with the appropriate Indian

Tribal governments. The Tribe's views and the Federal trust responsibility will be considered in the District's evaluation. Throughout the state, including the treaty-ceded territories, the District review of all provisional LOP projects which impact more than 10,000 square feet of wetland/water area will include coordination with any potentially affected tribe(s). The District will provide, by facsimile transmission, project notifications to the concerned tribe(s) for a 30-day review period. The views of the tribe(s) will be considered in the District's evaluation of the activity and in the District's determination of whether the activity is in compliance with LOP-06-WI Standard Condition 18 that prohibits activities, or their operation, that may impinge or abrogate treaty rights, including, but not limited to, reserved treaty fishing and hunting rights.

2. PROJECT-SPECIFIC LOP-06-WI CONDITIONS.

The District evaluation will identify any need for project-specific special conditions and require such conditions to minimize adverse project impacts and/or protect the public interest.

3. **FORM AND CONFIRMATION OF AUTHORIZATION.** Every LOP-06-WI authorization will be confirmed in writing by the St. Paul District via a

LOP-06-WI CONDITIONS

letter of authorization to the project Applicant or authorized agent. The letter will identify any required special conditions.

4. FEDERAL AND STATE ENDANGERED SPECIES AND CULTURAL RESOURCES.

LOP-06-WI does not affect the Corps responsibility to insure that all Section 404 authorizations comply with Section 7 of the Federal Endangered Species Act, s. 29.604, Wisconsin Statutes and Section 106 of the National Historic Preservation Act. No Corps permit will be granted for projects found not to comply with these Acts.

5. GRANDFATHER PROVISION.

Regulated work for commenced activities that was authorized under the LOP provisions of GP/LOP-98-WI continues to be authorized under the terms of the original authorization

6. MODIFICATION OF PROCEDURES.

The St. Paul District has authority to modify, revoke, or suspend these procedures at any time it determines that circumstances concerning the public interest warrant such action.

STATE SECTION 401 CERTIFICATION. CONDITIONS AND LIMITATIONS OF SECTION 401 CERTIFICATION OF LOP-06-WI.

I. General Conditions

1. The applicant shall allow the WDNR reasonable entry and access to the discharge site to inspect the proposed discharge for compliance with this certification and applicable laws and to inspect permitted discharges for compliance with this certification and applicable laws.

2. If any conditions of this certification are found to be invalid or unenforceable, certification for all activities to which that condition applies is denied.

3. The following activities are not eligible for certification under this water quality certification action for LOP-06-WI.

A. Activities likely to jeopardize the continued existence of a state designated threatened or endangered species or a species proposed for such designation or which is likely to destroy or adversely modify the habitat of such species.

B. Activities that result in adverse impacts to fishery spawning habitat or adversely affect avifauna breeding areas or substantially disrupt the movement of those species that normally migrate from open water to upland or vice versa (i.e. amphibians, reptiles and mammals).

C. Activities detrimental to waters of the state, including wetlands, that would

adversely affect designated areas of special natural resource interest as defined in NR 103.04, Wis. Adm. Code.

D. Activities, individually or cumulatively, detrimental to waters of the state, including wetlands, that would further the substantial degradation of designated impaired waters of the state.

4. Applicants seeking authorization under the LOP-06-WI (Letter of Permission procedures) shall complete a Joint State/Federal Permit Application and submit two copies to each, the appropriate local COE office and the local WDNR Water Management Specialist. Applications for water quality certification must be complete as determined by the WDNR. Please note an application fee is required for state water quality certification activities identified under Section II below.

II. Water Quality Certification

1. The WDNR grants water quality certification for projects that satisfy all applicable conditions of LOP-06-WI subject to the General Conditions above, and:

2. The applicant receives written confirmation from the department that their proposed activity(s) is consistent with the requirements of NR 299 Water Quality Certification, Wis. Adm.

LOP-06-WI CONDITIONS

Code, and the Department confirms that the applicant has adequately demonstrated that no other practicable alternative exists which would not adversely impact wetlands and would not result in other significant adverse environmental consequences and the Department confirms that the activity is consistent with the requirements of NR 103.08, Wis. Adm. Code.

NOTE: If additional information is needed, or if heavy snow or ice cover prevents WDNR from completing their review, the normal processing time for confirming activities eligible for authorization under this certification may be extended (by written notice from WDNR to the applicant.)

therefore is incorporated as a permit condition of LOP-06-WI. Applicants will be notified of this condition in the District's LOP provisional authorization for projects in these areas.

WISCONSIN COASTAL MANAGEMENT PROGRAM (WCMP) CONDITIONS.

The WCMP's Federal consistency determination for LOP-06-WI provides that no LOP-06-WI authorization for an activity taking place in coastal wetlands identified as ridge and swale complexes and/or wetlands adjacent to the Mink River, Door County, and the Kakagon and Bad Rivers, Ashland County will be valid unless and until a Federal consistency determination is granted or waived by the WCMP. This requirement



Professional Service Industries, Inc.
821 Corporate Court, Waukesha, WI 53189
Phone: (262) 521-2125
Fax: (262) 521-2471

February 1, 2020

Menard, Inc.
501 Menard Drive
Eau Claire, Wisconsin 54703

Mr. Tyler Edwards
Real Estate Representative

SUBJECT: Preliminary Subsurface Exploration and Site Feasibility Evaluation
Proposed Menards Germantown Expansion
W186 N9754 Appleton Avenue
Germantown, Wisconsin
PSI Project No. 00522495

Dear Mr. Edwards:

The preliminary subsurface exploration and site feasibility evaluation for the referenced project has been completed. An electronic copy of the report is being provided via email. Hard copies can be issued upon request. After you have had the opportunity of reading the report, please call at any time with any questions or comments you may have. Professional Service Industries, Inc. (PSI), an Intertek Company, appreciates the opportunity to be of service on this project and looks forward to continuing as your geotechnical consultant during the design and construction phases, as well as your upcoming projects.

Sincerely,

PROFESSIONAL SERVICE INDUSTRIES, INC.

A handwritten signature in black ink, appearing to read "Stephan M. Regenfass".

Stephan M. Regenfass
Project Geologist
Geotechnical Services

A handwritten signature in blue ink, appearing to read "Bradley J. Broback".

Bradley J. Broback, P.E.
Department Manager
Geotechnical Services



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INTRODUCTION

General

This report presents the results of the preliminary subsurface exploration and site feasibility evaluation for the proposed expansion at Menards Germantown in Germantown, Wisconsin. The work was performed for Menard, Inc. at the request of Mr. Tyler Edwards.

Purpose

The purpose of this preliminary study was to evaluate the subsurface conditions at specific boring locations on the site, and to provide subsurface information for general site feasibility and preliminary design planning. A comprehensive foundation evaluation and recommendations for specific structures were beyond the scope of this preliminary site evaluation but are recommended as part of design planning.

Scope

The scope of services included a site reconnaissance, the subsurface exploration, a determination of soil characteristics by field and laboratory testing, and an evaluation of the data obtained. The scope of the field work, including the number, depth and locations of the borings, was determined by the client. Borings were originally requested to the northwest and northeast of the existing retaining wall. However, due to existing trees and water in these areas, these boring locations were not accessible at this time. Therefore, the exploration was limited to the existing parking lot areas to the south of the retaining wall.

Authorization

The description of services and authorization to perform this subsurface exploration and evaluation were in the form of a signed Professional Service Agreement (dated December 13, 2019) and proposal (PSI Proposal No. 297597, dated December 13, 2019). The general conditions for the performance of the work were referenced in the proposal. This report has been prepared on behalf of, and exclusively for the use of Menard, Inc. The information contained in this report may not be relied upon by any other parties without the express written consent of PSI, and acceptance by such parties of PSI's General Conditions.

SITE AND PROJECT DESCRIPTION

Site Features

The project site is located at the existing Menards store, at W186 N9754 Appleton Avenue, in Germantown, Wisconsin. At the time of the exploration, the overall site was occupied by the existing asphalt-paved outside yard area, outdoor accessory buildings and main store building. The north side of the project area consists of an existing approximately 10 feet high retaining wall which retains the drive area and existing accessory buildings above adjacent wetlands

and forested land to the north. The southwest side of the site consisted of the store parking lot and the southeast side consisted of an asphalt paved outside yard area.

Project Description

Based on information provided by the client, it is understood that the proposed project will consist of an expansion of the outside yard area to the northwest and northeast, including new pavement areas and an addition to the existing accessory buildings. The expansion will extend beyond the existing retaining wall to the north into the area below the wall. As such, it is estimated that significant grading as well as a new retaining wall will be necessary to accommodate the new construction. The accessory building perimeter wall along the northwest and northeast sides will likely act as a retaining wall in most areas. The foundation for the expanded accessory building is estimated to be placed at frost depth within new structural fill or down at the existing grade on the northwest and northeast sides where the new retaining wall will be present. The proposed project also includes an expansion to the existing below grade stormwater management area.

The type, height, and bearing grade of any new retaining walls; and the bottom elevation, size, and type of stormwater management expansion area have not been provided. No other design details of the project such as planned grades or foundation types have been provided.

This preliminary exploration has been commissioned to evaluate the subsurface conditions across the existing pavement of the subject site and to provide subsurface information for general site feasibility and preliminary design planning for the proposed development. However, no borings were performed to the north of the existing retaining wall at the bottom side of the wall. Additional borings or test pit excavations are necessary and recommended below the retaining wall to the north to evaluate the soil conditions in this area and provide subsequent recommendations. In addition, when finished floor, foundation, and other elevations are determined, and an additional exploration has been performed, PSI must be provided an opportunity to review this and determine if a redirection or re-evaluation of recommendations contained herein is warranted.

EXPLORATION AND LABORATORY PROCEDURES

Scope Summary

The field and laboratory data utilized in the evaluation of the subsurface materials was obtained by drilling exploratory test borings, securing soil samples by the split-spoon sampling method, and subjecting the samples to laboratory testing.

With respect to the stormwater management areas, the field and laboratory work for classification of the subgrade soils was performed to provide information for use by the basin design personnel when considering requirements of Chapter NR151 of the Wisconsin Administrative Code, and of WDNR Technical Standard 1002, "Site Evaluation for Stormwater

Infiltration” guidelines. The design of the proposed stormwater management area was beyond the scope of services for this project.

Field Exploration

Three (3) soil borings were performed for this project to a planned depth of about 20 feet below existing grade. The number, depth, and locations of the borings were determined by the client. The borings were performed in the outside paved yard area directly to the northeast and northwest of the existing building. It was originally requested to perform the borings in the wetland and forested area within the footprint of the proposed expanded outside yard area. However, due to access constraints, this was not possible with PSI’s drilling equipment. The borings were located in the field by the drill crew utilizing conventional taping procedures referenced to existing site features. They are estimated to be accurate to within several feet. The surface elevations shown on the logs were determined by the drill crew utilizing conventional leveling techniques and are estimated to be accurate to within several feet. The asphalt surface at the fire hydrant at the north corner of the store building was utilized as a benchmark and was given a reference elevation of EL. 100.

The soil test borings were performed with a truck-mounted rotary drilling rig utilizing continuous flight hollow stem augers to advance the holes. Representative samples were obtained by the Standard Penetration Test (SPT) method using split-spoon sampling in general accordance with ASTM D-1586 procedures. Samples were generally secured at 2-foot intervals to the end of the borings. The standard penetration value (N) is defined as the number of blows of a 140-pound hammer, falling thirty (30) inches, required to advance the split-spoon sampler one (1) foot into the soil. The sampler is lowered to the bottom of the drill hole and the number of blows recorded for each of the three (3) successive increments of six (6) inches penetration. The “N” value is obtained by adding the second and third incremental numbers. The SPT provides a means of estimating the relative density of granular soils and comparative consistency of cohesive soils, thereby providing a method of evaluating the relative strength and compressibility characteristics of the subsoils.

The SPT samples were transferred to clean glass jars immediately after retrieval and returned to the laboratory upon completion of the field operations. Samples will be discarded unless other instructions are received. The soil samples were visually classified by a soils engineer in general accordance with the Unified Soil Classification System (ASTM D-2488-75), as well as by the USDA Textural Soil Classification system for evaluation of the subsoils for use in stormwater management. A description of the subsurface conditions encountered at each boring location is shown on the enclosed Soil Boring Logs. After completion of the borings, the auger holes were backfilled with bentonite chips and the surface was patched with asphalt.

A copy of the Soil Boring Logs and Boring Location Plan are enclosed in the Appendix. The soil stratification shown on the logs represents the approximate soil conditions in the actual boring locations at the time of the exploration. The terms and symbols used on the logs are described in the General Notes found in the Appendix.

Laboratory Physical Testing

Soil samples obtained from the exploration were visually classified in the laboratory, and subjected to testing, which included moisture content determinations. Selected cohesive soil samples were tested in unconfined compression with a calibrated hand penetrometer to aid in evaluating the soil strength characteristics. The values of strength tests performed on soil samples obtained by the Standard Penetration Test Method (SPT) are considered approximate, recognizing that the SPT method provides a representative but somewhat disturbed soil sample.

The laboratory testing was performed in general accordance with the respective ASTM methods, as applicable, and the results are shown on the boring logs in the Appendix.

DESCRIPTION OF SUBSURFACE CONDITIONS

General

A description of the subsurface conditions encountered at the test boring locations is shown on the Soil Boring Logs. The lines of demarcation shown on the logs represent approximate boundaries between the various soil classifications. It must be recognized that the soil descriptions are considered representative estimates for the specific test hole locations, but that variations may occur between and beyond the sampling intervals and boring locations. Soil depths, topsoil, and layer thicknesses, and demarcation lines utilized for preconstruction planning should not be expected to yield exact and final quantities. A summary of the major soil profile components is described in the following paragraphs.

Soil Conditions

The surface materials present at the borings consisted of about 5 to 6 inches of asphalt pavement underlain by about 6 inches of aggregate base material consisting of sand and gravel.

Below the pavement sections at the borings, fill materials consisting of brown lean clay or sandy clay with gravel, silty sand and gravel, or fine sand were encountered extending to depths of 7 to 11 feet (EL. 93.8 to EL. 84.3) below existing grade. The cohesive fill soils were soft to very hard in consistency, with estimated unconfined compressive strengths ranging from about 1.25 to 2.75 tons per square foot (tsf). The granular fill soils were loose to dense, with N-values ranging from about 5 to 48 bpf.

The fill materials encountered at the borings were classified as such based on their varied visual characteristics and composition. However, it must be recognized that in the absence of foreign substances and/or debris within the soil samples obtained, it is difficult to distinguish between natural soils and clean soil fill.

Natural silt, sandy silt, fine sand, and sandy/lean clay soils were encountered below the fill, extending to the boring termination depths. The native granular soils were loose to dense in relative density with N-values ranging from about 5 to 31 bpf. The natural cohesive soils were very stiff in consistency with estimated unconfined compressive strengths ranging from about 2.5 to 3 tsf.

The foregoing discussion of soil conditions on this site represents a generalized soil profile as determined at the test boring locations. A more detailed description and supporting data for each test location can be found on the individual Soil Boring Logs.

Groundwater Observations

Groundwater was encountered during auger advancement in all borings, at depths ranging from 11 to 13 feet (EL. 87.8 to EL. 84.3) below the ground surface. Upon completion and removal of the augers, groundwater was present at boring B-3 above the caved soils at a depth of about 15 feet (EL. 85.8).

The groundwater observations reported herein are considered approximate. It must be recognized that groundwater levels fluctuate with time due to variations in seasonal precipitation, lateral drainage conditions, and soil permeability characteristics. Longer term monitoring would be required to better evaluate groundwater levels on this site.

EVALUATION AND RECOMMENDATIONS

General Development Considerations

In view of the subsurface conditions encountered in the test borings, together with the development grades estimated, conventional spread footings founded on new structural fill or suitable bearing natural materials can be used to support the proposed structures. However, it should be noted that the soil conditions beyond the existing retaining wall are unknown and could vary dramatically from the conditions encountered in the borings. Additional test pits or borings must be performed in the area north of the retaining wall to evaluate the subsurface conditions in these areas to help determine the necessary measures to properly develop this area to support the proposed construction. However, major difficulty with preparation of the subgrade is anticipated in low lying wetland areas. Thick topsoil, subgrade instability, and comprehensive groundwater control measures will likely be encountered.

A discussion of the preliminary foundation, floor slab, pavement, and stormwater management area design parameters are included in the following sections.

Site Preparation

The presence of organic topsoil and vegetation in the subgrade can adversely affect the serviceability of structural fills, foundations, floor slabs, pavements, and other structures placed

upon them. All topsoil, vegetation, trees, roots and other organic matter must be stripped from the areas of proposed fill and other structures.

Topsoil depths may increase substantially within and encroaching upon wetland areas. It is generally recommended that development within wetland areas not be performed due to the typical presence of highly organic soils and shallow groundwater. If such development is contemplated, special permits will likely be required from the Army Corps of Engineers, the WDNR, or other government agencies.

Comprehensive dewatering with the use of well points or a series of sumps, along with high capacity pumps will likely be necessary in the wetland area in order to properly prepare the subgrade for structural fill placement. Care must be taken during any dewatering to prevent possible settlement of adjacent structures due to rapid and/or severe drawdown related effects. Major difficulty is anticipated in this area, in creating a stable subgrade necessary for proper structural fill placement. A specialty dewatering firm should be consulted to provide the appropriate measures necessary for dewatering.

Where the new construction extends beyond the existing retaining wall, the retaining wall, along with any loose, soft, wet, or otherwise unsuitable backfill must also be removed to expose suitable natural soils. The existing slope must then be properly benched to create a suitable bond between the existing fill soils and the new structural fill. Where undermining of the existing pavement, utilities, and building is a concern, the existing retaining wall could be removed to a minimum depth of 2 feet below planned finished grade, to help retain the existing structures. The removal to a minimum depth of 2 feet below subgrade is recommended to help provide a more uniform subgrade condition. It should be noted however, that where the retaining wall is left in-place, it may create obstructions during utility installation.

After stripping the topsoil and prior to the placement of new fill which may be placed to raise grades, the subgrade must be thoroughly proofrolled to detect unstable, yielding soils, which must be removed or improved by appropriate preparation and compaction techniques. Proofrolling should consist of overlapping passes in a perpendicular grid pattern of a fully-loaded tandem-axle dump truck, or other equipment of similar size and weight. However, care must be used on this site to avoid disturbing the near surface fine-grained soils during the proofrolling, especially during periods of precipitation or spring thaw. Proofrolling with rubber tired equipment may be preferable, but should be performed in consultation with the geotechnical engineer at the time of construction. **Major subgrade instability is anticipated in the existing wetlands areas to the north of the existing retaining wall and may be encountered in other areas of the site as well, at least on an isolated basis.** When encountered, unstable soils must be improved in place (if possible) or removed and replaced. Scarification, drying and recompaction of wet soils or removal and replacement with suitable fill, are two methods, which can be considered, but this must be determined by the soils engineer at the time of construction. Low areas may then be raised to the planned grades with suitable properly compacted fill. It must be recognized that the silt and lean clay soils present on the site are highly moisture sensitive, and substantial difficulty with subgrade preparation can be expected if the soils are wet during construction. In the wetland area, over-excavation

along with the placement of a geogrid and coarse aggregate crushed stone (such as breaker run materials) will likely be necessary.

Cohesive soils are considered highly moisture sensitive and subject to substantial softening. Therefore, equipment and worker traffic must be kept to a minimum on subgrade bearing surfaces, especially during periods of precipitation or following spring thaw. Some difficulty with subgrade preparation can be expected in wet or cold weather conditions. Removal of unsuitable portions of the near surface soils and replacement with structural fill may be required, on at least an isolated basis, especially if earthwork is not carried out during periods of relatively warm, dry weather, which provide more favorable conditions for drying of these soils. Any soft zones, which cannot be improved by scarification and aeration, must be removed and replaced with compacted structural fill, such as clean crushed stone, possibly in conjunction with the use of a geotextile fabric. Lime and fly ash modification are two additional remedial measures which can be considered. However, this must only be performed at the direction and under the supervision of the geotechnical engineer. A proper mix design must be performed prior to the performance of any modification. Substantial construction delays and difficulty with subgrade stabilization should be expected during periods of wet and/or cool weather. Consideration should be given to installing construction roads to reduce disturbance to the sensitive subgrade soils.

Every effort must be made to keep excavations dry. If construction proceeds during wet weather, some additional overexcavation may be necessary. If weather permits, the soil could be dried and recompacted. A crushed stone working mat, possibly in conjunction with a geotextile fabric may also be feasible to help stabilize subgrades. Site grading runoff should be directed to catch basins, so that the potential for the softening of the foundation, floor slab, and pavement subgrade soils is reduced.

Where the removal of unsuitable bearing material is performed beneath proposed footings, the excavation must extend laterally beyond the perimeter of the foundation for a distance at least equal to the thickness of the fill below the footing bottom. This general guideline also applies to instances where a raised structural fill pad is constructed to achieve a bearing elevation greater than existing grades. The influence zone of footing stresses can be represented as an imaginary 45° line extending downward and outward from the footing bottom. All fill placed within this zone after cutting to firm soil must be properly engineered, from the bottom of the cut, up to the planned subgrade elevation.

If site grades are raised in excess of 2 feet, the first lift of new fill must be placed so as to extend a minimum lateral distance of 5 feet beyond the planned top building pad dimension (for fills less than 5 feet in thickness), or for a distance equal to at least 1 foot laterally beyond the top pad dimension for every foot of fill thickness (for fills greater than 5 feet in depth). Subsequent lifts can then be placed on an approximate 1H:1V slope back up to the planned top perimeter dimension of the pad. Proper moisture control is essential to reduce the amount of compactive effort necessary to achieve the desired densities.

When a firm and stable subgrade is established, low areas may be raised to planned grades with properly compacted structural fill. Any new fill should be a clean granular soil, such as

those materials meeting the gradations outlined in Section 209 or 305 of the State of Wisconsin Standard Specification for Highway and Structure Construction. If fine-grained soils, such as those encountered on site, with high silt or clay content are used, they should generally be placed over large open areas, where conditions are more favorable for the proper placement and compaction of such materials. It must be recognized that high silt or clay content materials are difficult to compact when placed at moisture contents beyond a few percent of their optimum moisture content. In addition, the near surface soils across the site are considered moisture sensitive; therefore, some difficulty with subgrade preparation should be expected, especially if they become wet during construction. Where fill depths are less than 10 feet, fill must be placed in layers of not more than nine (9) inches in thickness, at moisture contents at or near optimum, and be compacted to a minimum density of 95 percent of the maximum dry density as determined by ASTM designation D-698. Where fill depths are greater than 10 feet, fill must be compacted to a minimum of 98 percent of the maximum dry density as determined by the Standard Proctor (ASTM D-698) to help reduce the amount of settlement resulting from the self-weight of the fill materials. Silt, clay, and wet granular soils are not suitable for reuse as compacted fill in trenches, or adjacent to retaining walls.

Proper moisture control is essential to reduce the amount of compactive effort necessary to achieve the desired densities. This is especially true of clayey soils, where scarification and aeration may be required to achieve near-optimum moisture levels prior to compaction. A sheepfoot roller is generally required for compaction of clayey soils, whereas a vibratory smooth drum roller is preferred for granular material. Small hand-operated compactors should be used in confined areas; granular fills are generally more readily compacted to the required densities in such applications.

It is recommended that well-graded granular soils be utilized as backfill in new utility trenches and alongside below grade walls and retaining walls to reduce the potential for consolidation and settlement of the fill. All fill soils must be placed and compacted under engineering controlled conditions, to provide suitable support for overlaying structures, and pavements. Additional guidance can be provided at the time of construction in the selection process for grade-raising fill and trench backfill.

The selection of fill materials for various applications should be done in consultation with the soils engineer. Similarly, the evaluation of the subgrade and placement and compaction of fill for structural applications should be monitored and tested by a qualified representative of the soils engineer.

Preliminary Foundation Recommendations

The following is a general overview of the subsurface conditions for the site, as it relates to foundation evaluation, and can be used in preliminary site planning.

The foundation for the expanded accessory building is estimated to be placed at frost depth within new structural fill or down at the existing grade on the northwest and northeast sides where the retaining wall is present. However, no planned foundation bearing grades have been provided. New retaining walls are anticipated to the east as well, where the pavement will be

extended northeast. The proposed accessory building addition and retaining walls may be supported by conventional spread foundation systems, bearing on suitable naturally occurring soils, or upon properly prepared new structural fill. Spread and continuous wall footings bearing upon suitable natural soils similar to those encountered within the soil borings, or upon compacted structural fill, may be designed for a net allowable soil bearing pressure of 2,000 to 3,000 psf, depending upon bearing grade. However, due to the possibility of varying conditions between the borings and the locations of new foundations, the actual bearing capacity must be determined at each foundation member subgrade during construction by a representative of the geotechnical engineer. At least some isolated undercutting of lower strength natural soils will likely be necessary to utilize the allowable bearing capacity. Additional exploration with test pits or borings must be performed beyond the existing retaining wall to the north to evaluate the soils in this area. The subsurface conditions in this area may vary significantly from those encountered in the borings performed in this preliminary exploration. Upon completion of this additional exploration, and provision of structural plans, a redirection or re-evaluation of the recommendations herein may be necessary.

Very moist to wet lean clay or silt soils may be encountered at the footing bearing elevations, especially within the natural soils in the wetland areas. These soils are susceptible to a substantial loss in strength when the confining effect of the overburden is removed. A significantly softened subgrade may develop. To stabilize and protect these soils during construction, where the lean clay and silt soils are in a very moist condition, undercutting on the order of about 12 to 18 inches and the placement a crushed stone working mat (along with a geogrid where necessary) can be performed to establish a stable bearing grade. The need for over-excavation and placement of a protective mat of clean crushed stone should be determined by a representative of the geotechnical engineer at the time of construction.

Where new foundations are planned adjacent to existing foundations, the effects of overlapping soil stresses must be considered. The net allowable soil bearing pressure of must not be exceeded. It should be noted that backfill materials may be encountered within existing utility trenches and adjacent to existing foundation walls. Over-excavation of unsuitable trench backfill and replacement with structural fill may be necessary for proper foundation support. All foundations must bear upon suitable natural soils or properly placed and compacted structural fill.

Excavations must be performed with caution and utilize methods which will prevent undermining of existing foundations and destabilizing the existing structure. Any new foundations should be stepped to match the bearing elevation of existing foundations to avoid lateral loading of existing walls, and bear on suitable natural soils or structural fill. The use of properly designed shoring and bracing or sheet piling, or underpinning of the existing foundations, must be used as necessary to properly protect buildings, pavement, sidewalks, utilities, and other structures, especially if excavation is performed within the influence zone of existing foundations. This must be performed by an experienced specialty contractor. Additionally, if sheet piling or other bracing is planned to be installed using driving or vibratory techniques, extreme care must be used during installation to avoid damaging existing buildings, utilities, and other structures.

The suitability of the existing soils for support of the proposed foundation must be determined by testing by a qualified geotechnical engineer during construction, utilizing static cone penetrometer tests or dynamic cone penetrometer tests for cohesive and granular soils, respectively. Soft, loose, or otherwise unsuitable materials, not disclosed by the borings, may be encountered in the foundation excavations at the bearing elevation. If unsuitable existing soil is present, it must be removed throughout a zone extending one foot laterally for each two feet removed below the foundation, on either side of the planned footing. The over-excavated area must be backfilled with structural compacted fill.

All perimeter footings must be placed at a depth of at least four (4) feet (or deeper if required by local code or in accordance with customary practice) below the finished exterior grade for frost protection. All footings must be protected from the effects of frost if construction is carried out during winter months. Interior footings not subject to frost action may be placed at a shallower depth of at least eighteen (18) inches below the floor slab, provided they bear on suitable natural soils or engineered fills.

It is recommended that the footings supporting individual columns have a minimum dimension of 30 inches, and continuous footings have a minimum width of 24 inches, even if the maximum recommended allowable bearing pressure is not fully utilized. In order to minimize the effects of any slight differential movement that may occur due to variations in the character of the supporting soils and any variations in seasonal moisture contents, it is recommended that all foundations be suitably reinforced to make them as rigid as needed.

General Retaining Wall Recommendations

Walls with unbalanced backfill levels on opposite sides such as retaining walls, must be designed to resist lateral earth pressures. Earth pressures will be influenced by the structural design of the walls, conditions of wall restraint, methods of construction and/or compaction, and the strength of the materials being restrained. Lateral earth pressure is developed from the soils present within a wedge-shaped geometry formed by the vertical below-grade wall and an imaginary line extending up and away from the bottom of the wall at an approximate 45° angle. The lateral earth pressures are determined by multiplying the vertical applied pressure by the appropriate lateral earth pressure coefficient K. Walls that are permitted to rotate and deflect at the top can be designed for the active lateral earth pressure condition using K_a . Passive pressure can be determined using K_p , with a factor of safety of 2.0. Recommended parameters for use in the retaining wall design where imported select materials are used as backfill are shown in the following table.

MATERIAL TYPE	DRAINED FRICTION ANGLE (ϕ')	TOTAL UNIT WEIGHT (PCF)
1. Well-Graded, Well-Draining Granular Soils	35°	135
2. Clean Crushed Stone (such as No.1 or No.2 Crushed Limestone)	32°	115
PARAMETERS SPECIFIC TO SOIL TYPE	1	2
Coefficient of Active Pressure (K_a)	0.27	0.31
Coefficient of Passive Pressure (K_p)	3.69	3.25
Coefficient of At-Rest Pressure (K_0)	0.43	0.47

Notes: ¹ Ultimate passive pressure typically requires large strains to be fully mobilized, therefore, PSI recommends using 50% or less of the

ultimate passive pressure to limit the strain on the structure.

² Earth pressure coefficients valid for level backfill conditions with no surcharge.

If surface loads are placed near the walls, such as foundation or traffic loads, the walls should be designed to resist an additional uniform lateral load of one-half of the vertical surface loads. An “equivalent fluid” pressure can be obtained from the above chart by multiplying the appropriate K-factor times the total unit weight of the soil. This applies to unsaturated conditions only. If a saturated “equivalent fluid” pressure is needed, the effective unit weight (total unit weight minus unit weight of water) should be multiplied times the appropriate K-factor and the unit weight of water added to that resultant. However, it is recommended that the retaining walls be designed with drainage where possible to relieve the hydrostatic pressure.

Passive resistance should be neglected to a depth of four feet below exterior grade due to seasonal softening from freeze-thaw. Where materials other than those indicated above are used for backfilling, revised coefficients may be necessary. Where several soil types are present within a lateral distance from the wall equal to the height of the wall (based on the 45° angle extending up and out from the bottom of the wall), a weighted average of these various materials must be calculated to determine the lateral pressure on the walls.

Wall structural backfill is recommended to consist of well-draining granular soils with a free-draining layer directly adjacent to the wall, as described below. The backfill materials must be placed in layers that are less than eight inches (measured loose) and at a moisture content within three percent of the optimum moisture content determined by the Standard Proctor compaction test (ASTM D698). The backfill material should be compacted to a minimum of 95 percent of the maximum dry density as determined by the Standard Proctor test.

In order to intercept groundwater and limit lateral earth pressures, free draining (less than 5 percent fines) gravel or crushed stone backfill is recommended to be placed as a drainage course directly adjacent to the walls for a minimum width of 12 inches. The gravel or crushed stone backfill should have less than five percent passing the No. 200 sieve and a maximum particle size less than three inches. If a material with a fines content greater than 5 percent is used within this 12-inch width adjacent to the wall, water-related and structural problems may develop, and the walls will have to be designed for an undrained condition which will result in higher lateral pressures on the wall due to the added hydrostatic pressure. A one-foot-thick layer of relatively impervious clay is recommended to be placed above the backfill that will be exposed to precipitation to minimize surface water infiltration. In addition, the ground surface should be sloped to drain surface water away from the structures.

Drain tiles should be placed behind the walls near the bottom, but above the static groundwater or perched water level. The drain tile should have a minimum diameter of four inches and should be wrapped with an appropriate filter fabric. Drainage pipes should be surrounded by clean gravel and should be discharged to an appropriate area of the site. A procedure should be used to discharge water from the collecting point, which would not allow reverse flow into the system.

The wall design should include the influence of any traffic surcharge at the top of the wall due

to the adjacent parking/drive areas. Heavy equipment should not operate within a distance closer than the exposed height of the wall to prevent lateral pressures more than those provided.

CONSTRUCTION CONSIDERATIONS

Groundwater Control

Groundwater was encountered during auger advancement in all borings, at depths ranging from 11 to 13 feet (EL. 87.8 to EL. 84.3) below the ground surface. Upon completion and removal of the augers, groundwater was present at boring B-3 above the caved soils at a depth of about 15 feet (EL. 85.8). On the basis of the observations in the borings and the standing water within the wetland area to the north of the existing retaining wall encountered during the exploration, and the estimated footing bearing elevations, major difficulty with groundwater is expected during excavation work on this site. If excavations extend only a few inches or so below the groundwater, filtered sump pumps or other conventional means may suffice to control the groundwater. However, for deeper excavations, or for substantial perched zones, prolonged dewatering with a series of sumps or well points and high capacity sump pumps, or other more comprehensive means may be necessary to facilitate construction. Care must be taken during any dewatering to prevent possible settlement of adjacent structures due to rapid and/or severe drawdown related effects. A specialty dewatering firm should be consulted to provide the appropriate measures necessary for dewatering.

Since the foundation materials are subject to softening when exposed to free moisture, every effort should be made to keep excavations dry. Discharge water from roof drains should be directed away from the building, and the site grading direct runoff to catch basins, so that the potential for the softening of the foundation and pavement subgrade soils is reduced.

Seasonal variations in precipitation, site drainage conditions, and other factors can cause groundwater to be present in the upper soils at other times, including during construction.

Excavations and Site Drainage

Sloping, shoring or bracing of the excavation sidewalls will be necessary. Excavating may be difficult due to the instability of vertical slopes, and will therefore require a flattening of trench sides, or some other means of protection, to facilitate construction and to protect life and property. Substantial sloughing and caving should be expected within unprotected excavations. The degree of excavation instability problems is dependent upon the depth and length of time that excavations remain open, excavation bank slopes, water levels and the effectiveness of any dewatering systems. However, severe instability may occur within granular or soft clay soils, especially encroaching upon and extending below the groundwater or perched zones. All excavation work must be performed in accordance with OSHA and local building code requirements.

All excavations must be performed with caution and utilize methods which will prevent undermining or destabilization of existing slopes, buildings, utilities, pavements, sidewalks or other structures. This is especially critical in areas where the existing retaining wall may be removed. The use of a properly designed shoring and bracing, sheet piling, or underpinning system must be utilized as necessary to adequately protect buildings, utilities, pavements, and other structures. This must be performed by an experienced specialty contractor. Additionally, extreme care must be used during the installation of any bracing system, especially those using driven or vibratory methods, in order to avoid damaging existing buildings, utilities, and other structures. Consideration should be given to the performance of video and/or photographic documentation of the condition of nearby buildings, utilities, and other structures prior to installation.

Where undermining of the existing pavement, utilities, and building is a concern, the existing retaining wall could be removed to a minimum depth of 2 feet below planned finished grade, to help retain the existing structures. The removal to a minimum depth of 2 feet below subgrade is recommended to help provide a more uniform subgrade condition. It should be noted however, that where the retaining walls are left in-place, they may create obstructions during utility installation.

It is mandated that excavations be constructed in accordance with current Occupational Safety and Health Administration (OSHA) guidelines to protect workers and others during construction. PSI recommends that these regulations be strictly enforced; otherwise, workers could be in danger and the owner(s) and the contractor(s) could be liable for substantial penalties. The contractor is solely responsible for designing and constructing stable, temporary excavations and should shore, slope, or bench the sides of the excavations as required to maintain stability of both the excavation sides and bottom. The contractor's "responsible person", as defined in 29 CFR Part 1926, should evaluate the soil exposed in the excavations as part of the contractor's safety procedures. In no case should slope height, slope inclination, or excavation depth, including utility trench excavation depth, exceed those specified in local, state, and federal safety regulations. PSI is providing this information solely as a service to our client. PSI does not assume responsibility for construction site safety or the contractor's or other parties' compliance with local, state, and federal safety or other regulations.

Seismic Design Considerations

The on-site natural soils are considered to meet the criteria for Site Class D in accordance with Table 1613.5.2 of the International Building Code-2015.

STORMWATER MANAGEMENT AREA CONSIDERATIONS

As requested by the client, the subgrade soils encountered at the boring locations have been visually classified in general accordance with the USDA textural soil classification system. They consisted of sandy clay loam (scl), silt loam (sil), loamy sand (ls), silty clay (sic), and silty clay loam (sicl). Groundwater was encountered during auger advancement in all borings, at depths ranging from 11 to 13 feet (EL. 87.8 to EL. 84.3) below the ground surface. Upon

completion and removal of the augers, groundwater was present at boring B-3 above the caved soils at a depth of about 15 feet (EL. 85.8).

With regard to the above soil and groundwater conditions encountered at the borings, NR 151.124(4)(c)1 and 2 – *Infiltration rate exemptions* indicates that infiltration practices located in an area where the infiltration rate of the soil measured at the proposed bottom of the infiltration system is less than 0.6 inches per hour using a scientifically credible field test method; or an area where the least permeable soil horizon to 5 feet below the proposed bottom of the infiltration system using the USDA method of soils analysis consists of sandy clay loam, clay loam, silty clay loam, sandy clay, silty clay or clay may be credited toward meeting the requirements, but the decision to infiltrate under these conditions is optional. In addition, NR 151.124(4)(b)1 – *Separation distances* indicates that infiltration practices shall be located so that the characteristics of the soil and the separation distance between the bottom of the infiltration system and the elevation of seasonal high groundwater or the top of bedrock are in accordance with the following Table (reproduced from NR 151.124):

Table 3. Separation Distances and Soil Characteristics		
Source Area	Separation Distance	Soil Characteristics
Industrial, Commercial, Institutional Parking Lots and Roads	5 feet or more	Filtering Layer*
Residential Arterial Roads	5 feet or more	Filtering Layer*
Roofs Draining to Surface Infiltration Practices	1 foot or more	Native or Engineered Soil with Particles Finer than Coarse Sand
Roofs Draining to Surface Infiltration Practices	Not Applicable	
All Other Impervious Source Areas	3 feet or more	Filtering Layer*

*Defined in NR 151.002(14r) as a “soil that has at least a 3-foot deep layer with at least 20 percent fines; or at least a 5-foot deep layer with at least 10 percent fines; or an engineered soil with an equivalent level of protection as determined by the regulatory authority for the site.”

The information shown above is a selected excerpt from NR151 that is intended only as general guidance for considering stormwater management in conjunction with the encountered subsurface conditions at the borings. Basin design must be performed by a qualified and experienced firm. In addition, the entirety of Chapter NR151 of the Wisconsin Administrative Code, the Site Evaluation for Stormwater Infiltration (1002) document, and other applicable references; along with appropriate state, local or other municipal requirements must be consulted as part of site-specific stormwater design.

Stormwater management basins are not recommended to be placed in close proximity to basements or other below grade structures. Proper and careful consideration of soils and

subsurface conditions must be given during site and design planning, and extreme care must be exercised during construction. Lateral migration of water may result in substantially increased sump pump activity and can quickly overcome the ability of such pumps to maintain a desirable water level, resulting in significant flooding. The potential for such conditions to occur can greatly increase when basement floors are below the elevation of basin bottoms and/or when basins are placed in close proximity to structures (strongly not recommended). In addition, the presence of granular or other generally permeable soils, which is typically necessary in the areas of structures for utility backfill, alongside basement walls, or within other development excavations/trenches can act as extensive migration channels to rapidly carry large volumes of water from basins and into nearby basements. Building codes or municipal regulations may require that basement floor elevations be a specified distance above the water level of nearby basins or other stormwater features. It is therefore recommended that the design engineer (or other appropriate representative) review applicable municipal or other regulatory requirements and verify the design normal and design high water elevations of stormwater basins/features with respect to planned basement slab elevations.

PRELIMINARY PAVEMENT DESIGN RECOMMENDATIONS

The new pavements for this project will include yard areas and drive lanes where truck traffic will be present. Additionally, it is estimated that substantial fill placement will be required along the northwest and northeast portions of the project. Therefore, the existing surficial soils encountered at the borings may not be indicative of the actual pavement subgrade soils.

However, the near surface subgrade soils encountered within the borings predominantly consisted of lean or sandy clay. It is therefore anticipated that at least some of the pavement subgrade soils will consist of these clay soils. The clayey subgrade soils have been assigned an estimated visual classification of A-6 by the AASHTO classification method. They are generally rated as poor for pavement subgrade support due to their moderate to high frost susceptibility, poor drainage characteristics, and moderate to high susceptibility to strength loss when exposed to free water. Provided that the subgrade soils are prepared as outlined in the Site Preparation and Grading section of this report, the in-place subgrade soils and any new structural fill can be used for standard flexible or rigid pavement construction.

Analysis of the visual soil classifications has been made in estimating pertinent subgrade design coefficients as described in the Wisconsin Soils Manual for Pavement Design. Based on the soils encountered, and with proper subgrade preparation and drainage, the following pavement subgrade design parameters are recommended for the pavement section design. However, if soils with support characteristics different from the estimated clay materials are encountered or are used to raise grades in new pavement areas, revised coefficients will need to be provided.

PAVEMENT SUBGRADE DESIGN COEFFICIENTS

AASHTO Soil Classification	A-6
Design Frost Index	F-3
Design Group Index	14
Soil Support Value	4.0
Estimated Subgrade Modulus (k)	125 pci

These values are representative of the cohesive soils, which are the poorer soils present across this site. Some variations may be encountered and should be expected due to the widely spaced borings. In order to use the above values, all new fill used to raise low areas or replace unsuitable material must have pavement support characteristics that are equal to or better than the existing soils. The final design should be performed by a qualified engineer based on the intended pavement use, anticipated loading and subgrade conditions, and desired service life.

The subject site is located in an area that experiences annual freezing cycles and the subgrade soils encountered have been classified as highly susceptible to frost action when free water is present. In order to reduce the potential for frost action, it will be necessary to control surface runoff and water seepage, because complete removal and replacement of the frost susceptible subgrade soils is not considered economically feasible. It is recommended that underdrains be placed within the subgrade, just below the granular base, to help reduce the potential for trapping water within the aggregate base layer. Sufficient drain tiles extending radially outward an adequate distance from each interior catch basin must be installed. In addition, drain tiles should extend along curb lines, up the slope from curb inlets. The drain tile should be directly connected to the storm sewer manholes or catch basins (if permissible by local municipal or other applicable code). The drain tile should consist of perforated PVC pipe of adequate diameter placed beneath the base layer, extending a sufficient distance into the subgrade. The pipe should be surrounded by appropriately sized clean stone, with the pipe and stone being wrapped with a geotextile filter fabric to reduce the potential for soils to migrating into and obstruct the pipe. It is also recommended that roof drains be connected to the stormwater collection system to minimize the potential for this water to enter the base and subgrade.

GENERAL COMMENTS

This geotechnical exploration and foundation evaluation has been prepared to aid in the evaluation of the foundation conditions on this site. The recommendations presented herein are based on the available soil information and the design information provided. Any changes in the design information or building locations should be brought to the attention of the soils engineer to determine if modifications in the recommendations are required. The final design plans and specifications should also be reviewed by the soils engineer to determine that the recommendations presented herein have been interpreted and implemented as intended.

This geotechnical study has been conducted in a manner consistent with that level of care ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions. The findings, recommendations and opinions contained herein have been promulgated in accordance with generally accepted practice in the fields of foundation engineering, soils mechanics, and engineering geology. No other representations expressed or implied, and no warranty or guarantee is included or intended in this report.

It is recommended that the earthwork and foundation operations be monitored by the soils engineer, to test and evaluate the bearing capacities, and the selection, placement and compaction of controlled fills.

DATE STARTED: 1/9/20 DATE COMPLETED: 1/9/20 COMPLETION DEPTH: 20.0 ft BENCHMARK: N/A ELEVATION: 95.3 ft LATITUDE: LONGITUDE: STATION: N/A OFFSET: N/A REMARKS:		DRILL COMPANY: PSI, Inc. DRILLER: TE LOGGED BY: NC DRILL RIG: Truck-Mounted - Rig #431 DRILLING METHOD: Hollow Stem Auger SAMPLING METHOD: 2-in SS HAMMER TYPE: Automatic EFFICIENCY: N/A REVIEWED BY:		BORING B-01 Water ☐ While Drilling ☒ Upon Completion ☐ Delay 11 feet Not Obsvd N/A BORING LOCATION:	
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Elevation (feet)	Depth, (feet)	Graphic Log	Sample No.	Recovery (inches)	MATERIAL DESCRIPTION	USCS Classification	SPT Blows per 6-inch (SS)	Moisture, %	STANDARD PENETRATION TEST DATA N in blows/ft @	Additional Remarks		
									X Moisture PL LL 0 25 50 ▲ Qu * Qp 0 2.0 4.0			
95	0				Asphalt (5"± Thick)	ASPH BASE		1	X			
					Base Course, Grayish Brown Silty Sand With Gravel, Damp (6"± Thick)		9-5-5-4 N=10	8	X			
			1	2	Fill, Light Brown Sandy Clay With Gravel, Moist		3-2-2-3 N=4	19	X	*		
			2	6		FILL	2-2-4-0 N=6	23	X	*		
90	5		3	7			3-5-6-8 N=11	9	X			
			4	2			4-3-4-4 N=7	14	X			
85	10		5	2	Grayish Brown Silt, Wet	ML	1-2-3-4 N=5	23	X			
			6	9	Brown Fine Sand, Wet	SP	2-3-5-13 N=8	18	X			
			7	0	Gray Silt, Wet	ML	10-8-6-7 N=14	20	X			
80	15		8	5			1-2-5-6 N=7	18	X			
		9	8			2-4-6-7 N=10	22	X	*			
		10	0		Very Pale Brown Very Fine Sandy Clay, Wet	CL						
20	20				End of Boring at 20'					Q _r = 2.5 tsf		
					Cave-In at 9'							

	Professional Service Industries, Inc. 821 Corporate Court, Suite 100 Waukesha, WI 53189 Telephone: (262) 521-2125	PROJECT NO.: 00522495 PROJECT: Menards Store Expansion LOCATION: W186N9754 Appleton Ave. Germantown, WI 53022 Washington County
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Water		While Drilling	11 feet
		Upon Completion	Not Obsvd
		Delay	N/A

STANDARD PENETRATION TEST DATA						Additional Remarks
N in blows/ft ◎						
×	Moisture		▣	PL		
			⬛	LL		
0	25		50			
STRENGTH, tsf						
▲	Qu		*	Qp		
0	2.0		4.0			
×						
	×		◎			
	×			◎		
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	×					
		×				



DATE STARTED: 1/9/20 DATE COMPLETED: 1/9/20 COMPLETION DEPTH: 20.0 ft BENCHMARK: N/A ELEVATION: 100.8 ft LATITUDE: LONGITUDE: STATION: N/A OFFSET: N/A REMARKS:		DRILL COMPANY: PSI, Inc. DRILLER: TE LOGGED BY: NC DRILL RIG: Truck-Mounted - Rig #431 DRILLING METHOD: Hollow Stem Auger SAMPLING METHOD: 2-in SS HAMMER TYPE: Automatic EFFICIENCY: N/A REVIEWED BY:		BORING B-03 Water ▽ While Drilling ▼ Upon Completion ▽ Delay 13 feet 15 feet N/A BORING LOCATION:	
---	--	--	--	--	--

Elevation (feet)	Depth, (feet)	Graphic Log	Sample No.	Recovery (inches)	MATERIAL DESCRIPTION	USCS Classification	SPT Blows per 6-inch (SS)	Moisture, %	STANDARD PENETRATION TEST DATA N in blows/ft @	Additional Remarks
100	0				Asphalt (6"± Thick)	ASPH				
					Base Course (6"± Thick), Light Brown Silty Sand With Gravel, Moist	BASE				
			1	7	Fill, Yellowish Brown Silty Sand With Gravel, Moist	FILL	14-26-22-48 N=48	4	×	
			2	2	Fill, Yellowish Brown Sandy Lean Clay, Wet	FILL	50/0"	16		×
95	5		3	10	Fill, Light Brown Fine Sand, Moist	FILL	16-14-12-12 N=26	7	×	
			4	8	Gray Lean Clay, Moist		5-2-4-7 N=6	19		×
			5	0		CL	5-5-6-6 N=11			
90	10		6	4			3-4-4-4 N=8	19		×
			7	18	Light Gray Silt, Wet	ML	2-3-5-9 N=8	18		×
85	15		8	0	Light Brown Fine Sand, Trace Gravel, Wet	SM	9-8-12-14 N=20	15		×
			9	14	Gray Silt, Wet	ML	3-5-7-9 N=12	20		×
20	20		10	5			2-8-7-12 N=15	19		×
					End of Boring at 20'					
					Cave-In at 17'					

	Professional Service Industries, Inc. 821 Corporate Court, Suite 100 Waukesha, WI 53189 Telephone: (262) 521-2125	PROJECT NO.: 00522495 PROJECT: Menards Store Expansion LOCATION: W186N9754 Appleton Ave. Germantown, WI 53022 Washington County
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SOIL EVALUATION - STORM

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

Attach complete site plan on paper not less than 8 ½ x 11 inches in size. Plan must include, but not be limited to: vertical and horizontal reference point (BM), direction and percent slope, scale or dimensions, north arrow, and BM referenced to nearest road.

Please print all information

Personal information you provide may be used for secondary purposes (Privacy Law, s. 15.04 (1) (m)).

County Washington
Parcel I.D. 333963
Reviewed by _____ Date _____

Property Owner Menard Inc				Property Location Govt. Lot ¼ SW ¼ S 33 T9 N20 E			
Property Owner's Mailing Address 4777 Menard Drive				Lot # 1	Block #	CSM# 5517	
City Eau Claire	State WI	Zip Code 54703	Phone Number ()	☐ City	☒ Village	☐ Town	Nearest Road W186N9754 Appleton Ave

Drainage area _____ ☐ sq. ft. ☐ acres Optional: Test Site Suitable for (check all that apply) ☐ Irrigation ☐ Bioretention trench ☐ Trench(es) ☐ Rain garden ☐ Infiltration Pond ☐ Reuse ☐ infiltration trench ☐ Retention Pond ☐ Other _____	Hydraulic Application Test Method: ☒ Morphological Evaluation ☐ Double-Ring Infiltrometer ☐ Other (specify) _____	Soil Moisture Date of Soil Borings: 1/9/2020 USDA-NRCS WETS Value: ☐ Dry = 1 ☐ Normal = 2 ☒ Wet = 3
--	--	--

1	Obs. #	☒ Boring B-01 ☐ Pit	Ground surface elev: 95.3 ft.	Depth to limiting factor: 132 in.	Table 2 Infiltration Rate					
Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frag.**	% Fines**1	Inches/Hr
1	0-12	Pavement								-
2	12-132	10YR 5/6		scl ¹	0	mfi	-	15-35	20-55	0.11 ²
3	132-156	10Y 5/2		sil	1, m, abk	mfi	-	0	50-100	0.13
4	156-180	10YR 5/4		lfs	0	ml	-	0	10-30	0.50
5	180-204	10YR 5/2		sil	2, m, abk	mvfr	-	0	50-100	0.13
6	204-228	10YR 5/1		sil	2, m, abk	mvfr	-	0	50-100	0.13
7	228-240	7.5YR 4/4		sic	2, m, abk	mfi	-	0	80-100	0.07

2	Obs. #	☒ Boring B-02 ☐ Pit	Ground surface elev: 97.6 ft.	Depth to limiting factor: 132 in.	Table 2 Infiltration Rate					
Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frag.**	% Fines**1	Inches/Hr
1	0-12	Pavement								-
2	12-36	10YR 4/3		scl ¹	0	mfi	-	15-35	20-55	0.11 ²
3	36-132	10YR 6/3		fls ¹	0	ml	-	0	10-30	1.63 ²
4	132-156	10YR 6/2		sicl	0	ml	-	0	80-100	0.04
5	156-180	10YR 5/4		lfs	0	ml	-	0	15-55	0.50
6	180-228	10YR 5/2		lfs	0	ml	-	0	15-55	0.50
7	228-240	10YR 4/1		sil	0	mfi	-	0	50-100	0.13

SOIL EVALUATION - STORM

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

3

Obs. #

☒ Boring B-03

☐ Pit

Ground surface elev: 100.8 ft.

Depth to limiting factor: 84 in.

										Table 2 Infiltration Rate
Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frag.**	% Fines** ¹	Inches/Hr
1	0-12	Pavement								-
2	12-36	10YR 5/4		sl	0	mvfr	-	15-35	15-55	0.50 ²
3	36-60	10YR 5/4		sicl	0	mfi	-	0	80-100	0.04 ²
4	60-84	10YR 6/4		lfs	0	ml	-	0	15-55	0.50 ²
5	84-156	GLE Y 2 4/1		sic	1, m, abk	mfi	-	0	80-100	0.07
6	156-180	10YR 6/4		sil	1, m, abk	mfr	-	0	50-100	0.13
7	180-204	10YR 5/4		ls	0	mfi	-	0	15-55	1.63
8	204-240	10YR 6/2		sicl	1, m, abk	mfi	-	0	80-100	0.04

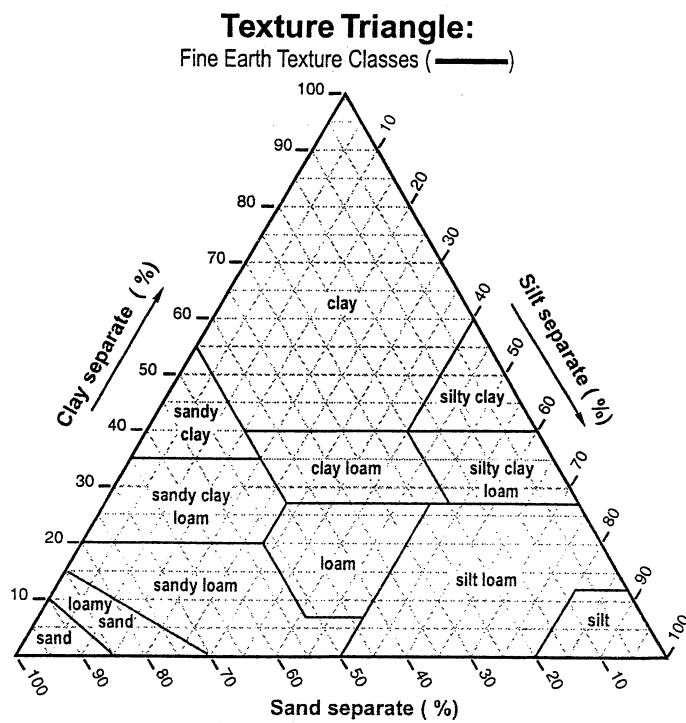
** Estimated based upon the visual classification and not based upon laboratory testing

¹ Fill soils

² Actual infiltration rates of fill soils may vary significantly from Table 2 estimated values due to inherent variability in the composition and density of fill materials

CST/PSS Name (Please Print)	Signature	WI-CST Number
Bradley J. Broback, P.E.		1411511
Address	Date Evaluation Conducted	Telephone Number
821 Corporate Court, Waukesha, Wisconsin 53189		262-521-2125

SBD-10793 (R.01/17)



TEXTURE MODIFIERS - Conventions for using "Rock Fragment Texture Modifiers" and for using textural adjectives that convey the "% volume" ranges for Rock Fragments - Size and Quantity.

Fragment Content % By Volume	Rock Fragment Modifier Usage
< 15	No texture adjective is used (noun only; e.g., <i>loam</i>).
15 to < 35	Use adjective for appropriate size; e.g., <i>gravelly</i> .
35 to < 60	Use "very" with the appropriate size adjective; e.g., <i>very gravelly</i> .
60 to < 90	Use "extremely" with the appropriate size adjective; e.g., <i>extremely gravelly</i> .
≥ 90	No adjective or modifier. If ≤ 10% fine earth, use the appropriate noun for the dominant size class; e.g., <i>gravel</i> . Use Terms in Lieu of Texture .

(SOIL) TEXTURE

This is the numerical proportion (percent by weight) of sand, silt, and clay in a soil. Sand, silt, and clay content is estimated in the field by hand (or quantitatively measured in the office/lab by hydrometer or pipette) and then placed within the texture triangle to determine **Texture Class**. Estimate the **Texture Class**; e.g., *sandy loam*; or **Subclass**; e.g., *fine sandy loam* of the fine earth (≤ 2 mm) fraction, or choose a **Term in Lieu of Texture**; e.g., *gravel*. If appropriate, use a **Textural Class Modifier**; e.g., *gravelly silt loam*.

NOTE: Soil Texture encompasses only the fine earth fraction (≤ 2 mm). **Particle Size Distribution (PSD)** encompasses the whole soil, including both the fine earth fraction (≤ 2 mm; weight %) and rock fragments (> 2 mm; volume %).

TEXTURE CLASS

Texture Class or Subclass	Code	
	Conv.	NASIS
Coarse Sand	cos	COS
Sand	s	S
Fine Sand	fs	FS
Very Fine Sand	vfs	VFS
Loamy Coarse Sand	lcos	LCOS
Loamy Sand	ls	LS
Loamy Fine Sand	lfs	LFS
Loamy Very Fine Sand	lvfs	LVFS
Coarse Sandy Loam	cosl	COSL
Sandy Loam	sl	SL
Fine Sandy Loam	fsl	FSL
Very Fine Sandy Loam	vfsl	VFSL
Loam	l	L
Silt Loam	sil	SIL
Silt	si	SI
Sandy Clay Loam	scl	SCL
Clay Loam	cl	CL
Silty Clay Loam	sicl	SICL
Sandy Clay	sc	SC
Silty Clay	sic	SIC
Clay	c	C

TEXTURE MODIFIERS - (adjectives)

ROCK FRAGMENTS: Size & Quantity ¹	Code		Criteria: Percent (By Volume) of Total Rock Fragments and Dominated By (name size): ¹
	Conv.	PDP/ NASIS	
ROCK FRAGMENTS (> 2 mm; ≥ Strongly Cemented)			
Gravelly	GR	GR	≥ 15% but < 35% gravel
Fine Gravelly	FGR	GRF	≥15% but < 35% fine gravel
Medium Gravelly	MGR	GRM	≥15% but < 35% med. gravel
Coarse Gravelly	CGR	GRC	≥ 15% but < 35% coarse gravel
Very Gravelly	VGR	GRV	≥ 35% but < 60% gravel
Extremely Gravelly	XGR	GRX	≥ 60% but < 90% gravel
Cobbly	CB	CB	≥ 15% but < 35% cobbles
Very Cobbly	VCB	CBV	≥ 35% but < 60% cobbles
Extremely Cobbly	XCB	CBX	≥ 60% but < 90% cobbles
Stony	ST	ST	≥ 15% but < 35% stones
Very Stony	VST	STV	≥ 35% but < 60% stones
Extremely Stony	XST	STX	≥ 60% but < 90% stones
Bouldery	BY	BY	≥ 15% but < 35% boulders
Very Bouldery	VBY	BYV	≥ 35% but < 60% boulders
Extremely Bouldery	XBY	BYX	≥ 60% but < 90% boulders
Channery	CN	CN	≥ 15% but < 35% channers
Very Channery	VCN	CNV	≥ 35% but < 60% channers
Extremely Channery	XCN	CNX	≥ 60% but < 90% channers
Flaggy	FL	FL	≥ 15% but < 35% flagstones
Very Flaggy	VFL	FLV	≥ 35% but < 60% flagstones
Extremely Flaggy	XFL	FLX	≥ 60% but < 90% flagstones
PARAROCK FRAGMENTS (> 2 mm; < Strongly Cemented) ^{2, 3}			
Parabouldery	PBY	PBY	(same criteria as bouldery)
Very Parabouldery	VPBY	PBYV	(same criteria as very bouldery)
Extr. Parabouldery	XPBY	PBYX	(same criteria as ext. bouldery)
etc.	etc.	etc.	(same criteria as non-para)

¹ The "Quantity" modifier (e.g., *very*) is based on the total rock fragment content. The "Size" modifier (e.g., *cobbly*) is independently based on the largest, dominant fragment size. For a mixture of sizes (e.g., *gravel and stones*), a smaller size-class is named only if its quantity (%) sufficiently exceeds that of a larger size-class. For field texture determination, a smaller size-class must exceed 2 times the quantity (vol. %) of a larger size class before it is named (e.g., 30% gravel and 14% stones = *very gravelly*, but 20% gravel and 14% stones = *stony*). For more explicit naming criteria see NSSH-Part 618, Exhibit 618.11 (Soil Survey Staff, 2001b).

GENERAL NOTES

SAMPLE IDENTIFICATION

The Unified Soil Classification System (USCS), AASHTO 1988 and ASTM designations D2487 and D-2488 are used to identify the encountered materials unless otherwise noted. Coarse-grained soils are defined as having more than 50% of their dry weight retained on a #200 sieve (0.075mm); they are described as: boulders, cobbles, gravel or sand. Fine-grained soils have less than 50% of their dry weight retained on a #200 sieve; they are defined as silts or clay depending on their Atterberg Limit attributes. Major constituents may be added as modifiers and minor constituents may be added according to the relative proportions based on grain size.

DRILLING AND SAMPLING SYMBOLS

SFA: Solid Flight Auger - typically 4" diameter flights, except where noted.	 SS: Split-Spoon - 1 3/8" I.D., 2" O.D., except where noted.
HSA: Hollow Stem Auger - typically 3 1/4" or 4 1/4" I.D. openings, except where noted.	 ST: Shelby Tube - 3" O.D., except where noted.
M.R.: Mud Rotary - Uses a rotary head with Bentonite or Polymer Slurry	 RC: Rock Core
R.C.: Diamond Bit Core Sampler	 TC: Texas Cone
H.A.: Hand Auger	 BS: Bulk Sample
P.A.: Power Auger - Handheld motorized auger	 PM: Pressuremeter
	CPT-U: Cone Penetrometer Testing with Pore-Pressure Readings

SOIL PROPERTY SYMBOLS

N: Standard "N" penetration: Blows per foot of a 140 pound hammer falling 30 inches on a 2-inch O.D. Split-Spoon.
N ₆₀ : A "N" penetration value corrected to an equivalent 60% hammer energy transfer efficiency (ETR)
Q _u : Unconfined compressive strength, TSF
Q _p : Pocket penetrometer value, unconfined compressive strength, TSF
w%: Moisture/water content, %
LL: Liquid Limit, %
PL: Plastic Limit, %
PI: Plasticity Index = (LL-PL), %
DD: Dry unit weight, pcf
 Apparent groundwater level at time noted

RELATIVE DENSITY OF COARSE-GRAINED SOILS

Relative Density	N - Blows/foot
Very Loose	0 - 4
Loose	4 - 10
Medium Dense	10 - 30
Dense	30 - 50
Very Dense	50 - 80
Extremely Dense	80+

ANGULARITY OF COARSE-GRAINED PARTICLES

Description	Criteria
Angular:	Particles have sharp edges and relatively plane sides with unpolished surfaces
Subangular:	Particles are similar to angular description, but have rounded edges
Subrounded:	Particles have nearly plane sides, but have well-rounded corners and edges
Rounded:	Particles have smoothly curved sides and no edges

GRAIN-SIZE TERMINOLOGY

Component	Size Range
Boulders:	Over 300 mm (>12 in.)
Cobbles:	75 mm to 300 mm (3 in. to 12 in.)
Coarse-Grained Gravel:	19 mm to 75 mm (3/4 in. to 3 in.)
Fine-Grained Gravel:	4.75 mm to 19 mm (No.4 to 3/4 in.)
Coarse-Grained Sand:	2 mm to 4.75 mm (No.10 to No.4)
Medium-Grained Sand:	0.42 mm to 2 mm (No.40 to No.10)
Fine-Grained Sand:	0.075 mm to 0.42 mm (No. 200 to No.40)
Silt:	0.005 mm to 0.075 mm
Clay:	<0.005 mm

PARTICLE SHAPE

Description	Criteria
Flat:	Particles with width/thickness ratio > 3
Elongated:	Particles with length/width ratio > 3
Flat & Elongated:	Particles meet criteria for both flat and elongated

RELATIVE PROPORTIONS OF FINES

Descriptive Term	% Dry Weight
Trace:	< 5%
With:	5% to 12%
Modifier:	>12%

GENERAL NOTES

(Continued)

CONSISTENCY OF FINE-GRAINED SOILS

<u>Q_u - TSF</u>	<u>N - Blows/foot</u>	<u>Consistency</u>
0 - 0.25	0 - 2	Very Soft
0.25 - 0.50	2 - 4	Soft
0.50 - 1.00	4 - 8	Firm (Medium Stiff)
1.00 - 2.00	8 - 15	Stiff
2.00 - 4.00	15 - 30	Very Stiff
4.00 - 8.00	30 - 50	Hard
8.00+	50+	Very Hard

MOISTURE CONDITION DESCRIPTION

<u>Description</u>	<u>Criteria</u>
Dry:	Absence of moisture, dusty, dry to the touch
Moist:	Damp but no visible water
Wet:	Visible free water, usually soil is below water table

RELATIVE PROPORTIONS OF SAND AND GRAVEL

<u>Descriptive Term</u>	<u>% Dry Weight</u>
Trace:	< 15%
With:	15% to 30%
Modifier:	>30%

STRUCTURE DESCRIPTION

<u>Description</u>	<u>Criteria</u>	<u>Description</u>	<u>Criteria</u>
Stratified:	Alternating layers of varying material or color with layers at least ¼-inch (6 mm) thick	Blocky:	Cohesive soil that can be broken down into small angular lumps which resist further breakdown
Laminated:	Alternating layers of varying material or color with layers less than ¼-inch (6 mm) thick	Lensed:	Inclusion of small pockets of different soils
Fissured:	Breaks along definite planes of fracture with little resistance to fracturing	Layer:	Inclusion greater than 3 inches thick (75 mm)
Slickensided:	Fracture planes appear polished or glossy, sometimes striated	Seam:	Inclusion 1/8-inch to 3 inches (3 to 75 mm) thick extending through the sample
		Parting:	Inclusion less than 1/8-inch (3 mm) thick

SCALE OF RELATIVE ROCK HARDNESS

<u>Q_u - TSF</u>	<u>Consistency</u>
2.5 - 10	Extremely Soft
10 - 50	Very Soft
50 - 250	Soft
250 - 525	Medium Hard
525 - 1,050	Moderately Hard
1,050 - 2,600	Hard
>2,600	Very Hard

ROCK BEDDING THICKNESSES

<u>Description</u>	<u>Criteria</u>
Very Thick Bedded	Greater than 3-foot (>1.0 m)
Thick Bedded	1-foot to 3-foot (0.3 m to 1.0 m)
Medium Bedded	4-inch to 1-foot (0.1 m to 0.3 m)
Thin Bedded	1¼-inch to 4-inch (30 mm to 100 mm)
Very Thin Bedded	½-inch to 1¼-inch (10 mm to 30 mm)
Thickly Laminated	1/8-inch to ½-inch (3 mm to 10 mm)
Thinly Laminated	1/8-inch or less "paper thin" (<3 mm)

ROCK VOIDS

<u>Voids</u>	<u>Void Diameter</u>
Pit	<6 mm (<0.25 in)
Vug	6 mm to 50 mm (0.25 in to 2 in)
Cavity	50 mm to 600 mm (2 in to 24 in)
Cave	>600 mm (>24 in)

GRAIN-SIZED TERMINOLOGY

<u>(Typically Sedimentary Rock)</u>	
<u>Component</u>	<u>Size Range</u>
Very Coarse Grained	>4.76 mm
Coarse Grained	2.0 mm - 4.76 mm
Medium Grained	0.42 mm - 2.0 mm
Fine Grained	0.075 mm - 0.42 mm
Very Fine Grained	<0.075 mm

ROCK QUALITY DESCRIPTION

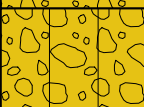
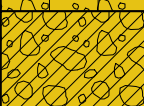
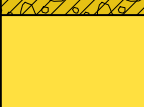
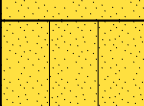
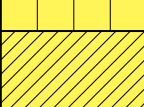
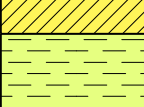
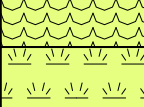
<u>Rock Mass Description</u>	<u>RQD Value</u>
Excellent	90 - 100
Good	75 - 90
Fair	50 - 75
Poor	25 - 50
Very Poor	Less than 25

DEGREE OF WEATHERING

Slightly Weathered:	Rock generally fresh, joints stained and discoloration extends into rock up to 25 mm (1 in), open joints may contain clay, core rings under hammer impact.
Weathered:	Rock mass is decomposed 50% or less, significant portions of the rock show discoloration and weathering effects, cores cannot be broken by hand or scraped by knife.
Highly Weathered:	Rock mass is more than 50% decomposed, complete discoloration of rock fabric, core may be extremely broken and gives clunk sound when struck by hammer, may be shaved with a knife.

SOIL CLASSIFICATION CHART

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

MAJOR DIVISIONS			SYMBOLS		TYPICAL DESCRIPTIONS
			GRAPH	LETTER	
COARSE GRAINED SOILS MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
				GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS LIQUID LIMIT LESS THAN 50			ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS LIQUID LIMIT GREATER THAN 50			MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

STORMWATER MANAGEMENT PLAN REPORT

Menards Germantown- Yard Expansion

Village of Germantown, WI

Washington County

Located at: W186N9754 Appleton Ave

October 2019

PREPARED BY:

CEDAR CORPORATIO

604 WILSON AVENUE

MENOMONIE, WI 54751

(715)-235-9081

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WisDNR Requirements: 4

Appendix

- Appendix A- Existing Site Conditions
- Appendix B- NRCS Soil Report
- Appendix C- Pre-Developed HydroCAD Report
- Appendix D- Existing HydroCAD Report
- Appendix E- Proposed HydroCAD Report
- Appendix F- WinSLAMM Summary

Introduction:

Menards Germantown Store is a commercial home improvement store located at W186N9754 Appleton Ave, Germantown, WI. The site consists of mainly impervious pavement parking lots, and an impervious warehouse and holding yard. Menards is proposing an expansion to its current site which will also include an expansion to the existing stormwater holding facilities. Currently the site is split into two stormwater holding facilities, one facility is located off of the southeast corner of the building and another is located to the northwest of the building within the existing yard.

Site Description:

The Menards Store is constructed on approximately 34 acres. The existing stormwater facilities serves the impervious area of the site which equates to approximately 16.5 acres of impervious area. See [Appendix A](#) for the existing site conditions and drainage areas from a previously submitted stormwater report. All of the stormwater from the existing parking lot is directed and treated in the stormwater holding tank located in the parking lot. Well the runoff from the building and all of the other impervious areas is directed to the second stormwater holding tanks located under the existing holding yard. The existing soils around the site where found to be primarily silt loam soils. See [Appendix B](#) for the NRCS Soils Report.

Existing Stormwater Runoff Analysis:

Stormwater runoff of the existing project site was evaluated with HydroCAD v10.0 stormwater modeling software. The table below summarizes existing stormwater runoff amounts from the stormwater drainage ares for the 1-year, 2-year, 10-year, 25-year, and 100-year storm events. The HydroCAD report for the pre-developed site can be seen below in [Appendix C](#) and the existing site conditions HydroCAD report can also be found in [Appendix D](#).

Storm Event	1-year	2-year	10-year	25-year	100-year
Rainfall Amount (in)	2.35"	2.65"	3.82"	4.73"	6.41"
Existing Runoff (cfs)	1.91	2.28	3.29	4.03	30.61
Pre-developed Runoff (cfs)	17.52	21.91	40.24	55.34	83.57

Table 1 – Existing Stormwater Runoff Rates (Cubic Feet per Second)

Site Improvements:

The proposed project is construction of a warehouse addition, building additions, and yard expansion behind and existing Menards Store, in Germantown, WI. Construction activities will include demolition and removals of existing structures and pavement, earthwork, grading, utility installation, asphalt paving, curb and gutter, sidewalk, stormwater pond construction, and building construction. The site will be 50% impervious.

Proposed Stormwater Runoff Analysis:

The proposed site will be split into 4 different drainage areas. The existing pavement parking lot located in front of the store will drain to the existing storm sewer holding system and discharge into the second storm sewer holding system. The second drainage area consist of the existing yard, the existing building and some paved parking areas within the site. The second area will drain into the second stormwater holding system and be discharged from there. The second storm sewer holding system was designed to provide rate control for the existing site. The third drainage area includes the warehouse addition and some of the pavement additions located to the northwest of the existing building along with approximately 20,350 square feet of the existing second drainage area will be directed to the third drainage system, lessening the load on the second system. And the fourth area will be the new pavement that is located to the north of the existing loading dock. Both of the new systems will be produced by ADS Stromtech and will be installed under the proposed expansion and will meet both rate control and provide water quality for the addition. Details of the proposed systems can be found attached to the plans. The table below shows the runoff amounts for the proposed site compared to the pre-developed site. The HydroCAD report for this evaluation can also be found in [Appendix E](#).

Storm Event	1-year	2-year	10-year	25-year	100-year
Rainfall Amount (in)	2.35"	2.65"	3.82"	4.73"	6.41"
Pre-developed Runoff (cfs)	17.52	21.91	40.24	55.34	83.57
Proposed Runoff (cfs)	1.95	2.32	3.32	4.08	48.37

Table 2 – Proposed Stormwater Runoff Rates

Stormwater runoff quality of the proposed project site was evaluated with WinSLAMM v10.3.4 model. The findings of this evaluation can be found in [Appendix F](#) and are summarized in Table 3 below.

	Load (lbs)	Removed (lbs)	Discharge (lbs)	Removal Efficiency (%)
Menards Germantown Expansion	798.90	478.00	320.90	56.55

Table 3 – Proposed Stormwater Water Quality Results

WisDNR Requirements:

Sections NR 151.122 to 151.128 outline post construction performance standards for the project. The Village of Germantowns Stormwater Management Requirements, and the Milwaukee Metropolitan Sewerage District requirements have also been consulted. The following standards have been addressed:

WisDNR NR 151.122 requires 40% TSS removal for a "Re-Development" site. As stated Table 3, above, the proposed stormwater holding system will provide 59.93 % TSS removal for the proposed menards expansion area.

WisDNR NR 151.123 requires proposed peak discharge rates to be less than or equal to existing peak discharge rates for the 1- and 2-year storm events. As stated in Table 2, above, the proposed stormwater holding system will reduce the peak discharge rates from the 1-year, 2-year, 10-year, 50-year, and 100-year storm events. And meet the MMSD requirements for discharge of the 2-year and 100-year event.

WisDNR NR 151.124 requires infiltration of the post-construction site. For moderate imperviousness, the post construction site shall infiltrate atleast 75% of the infiltration volume of the predevelopment infiltration volume. No more than 2 percent of the post construction site is required to meet this requirement.

Appendix A

**GERMANTOWN MENARDS SITE
DRAINAGE REPORT**

**CLIENT:
MENARDS**

**PREPARED BY:
TEC DESIGN, INC.
5828 ARNDT LANE
EAU CLAIRE, WI 54701**

APRIL 2001
(Revised June 14, 2001)
(Revised July 25, 2001)
(Revised February 7, 2002)
(Revised June 6, 2002)
(Revised February 6, 2003)
(Revised March 12, 2003)



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STORMWATER REQUIREMENTS AND METHODOLOGY

The Menards site being developed has to satisfy stringent stormwater detention requirements. Per the Milwaukee Metropolitan Sewerage District (MMSD), the post-developed release rate from the site may not exceed 0.15 cfs/acre during the 2-year storm event. During the 100-year storm event, the release rate must not exceed 0.50 cfs/acre. A detention pond with an outlet control structure will be used to control the peak flows that are discharged from the site. HydroCad (Version 6) Stormwater Modeling System was utilized for modeling of the stormwater management for this site.

STORMWATER DETENTION DESIGN

Using HydroCad modeling it was determined that post-developed peak flows for the 2-year and 100-year storm event are 41.9 cfs and 107.1 cfs, respectively. Per the requirements of the MMSD, the peak flows must be reduced to 0.15 cfs/acre for the 2-year storm event and 0.50 cfs/acre for the 100-year storm event. The proposed Menards site is 16.6 acres. The allowable release rates for the 2-year and 100-year storm events are 2.5 cfs and 7.9 cfs, respectively. Based on the post-developed peak inflows and the allowable outflows, a considerable storage volume will be required to reduce the peak flows to the allowable. Due to constraints with availability of land for the required detention pond and existing subsurface conditions, combined detention facilities composed of underground storage and the traditional detention pond has been proposed for the Menards site.

The volume of the traditional detention pond and the underground storage system (consisting of 60-inch diameter storm pipe), referred to as Pond 2, were calculated on

Page B-20. The volume of the combined system was considered to be inadequate to control the post-developed inflow and release at the required rates. Therefore a preliminary pond, referred to as Pond 1, was designed to reduce the peak-developed flows from the upper portion of the site. This pond will be an underground system consisting of a series of 48-inch diameter storm pipe. The peak discharge from this stormwater detention facility will be conveyed to the combination detention facility where the peak post-developed inflows will be reduced to the required release rates.

Two (2) 2-stage outlet structures, with a 4.5-inch and a 5.75-inch orifices cored into a 6-inch thick concrete divider within a storm manhole, were designed to control release rates from the stormwater detention facility. The 2-year post-developed peak inflow was routed through the detention pond system. The peak outflow during this event is 2.5 cfs, which is equal to the allowable 2.5 cfs. The 100-year post-developed peak inflow was routed through the detention pond system. The peak outflow during this event is 7.9 cfs, which is less than the allowable 8.3 cfs. The highwater level during the 100-year storm event was determined to be 848.75. This will allow for a freeboard depth of 0.95 feet.

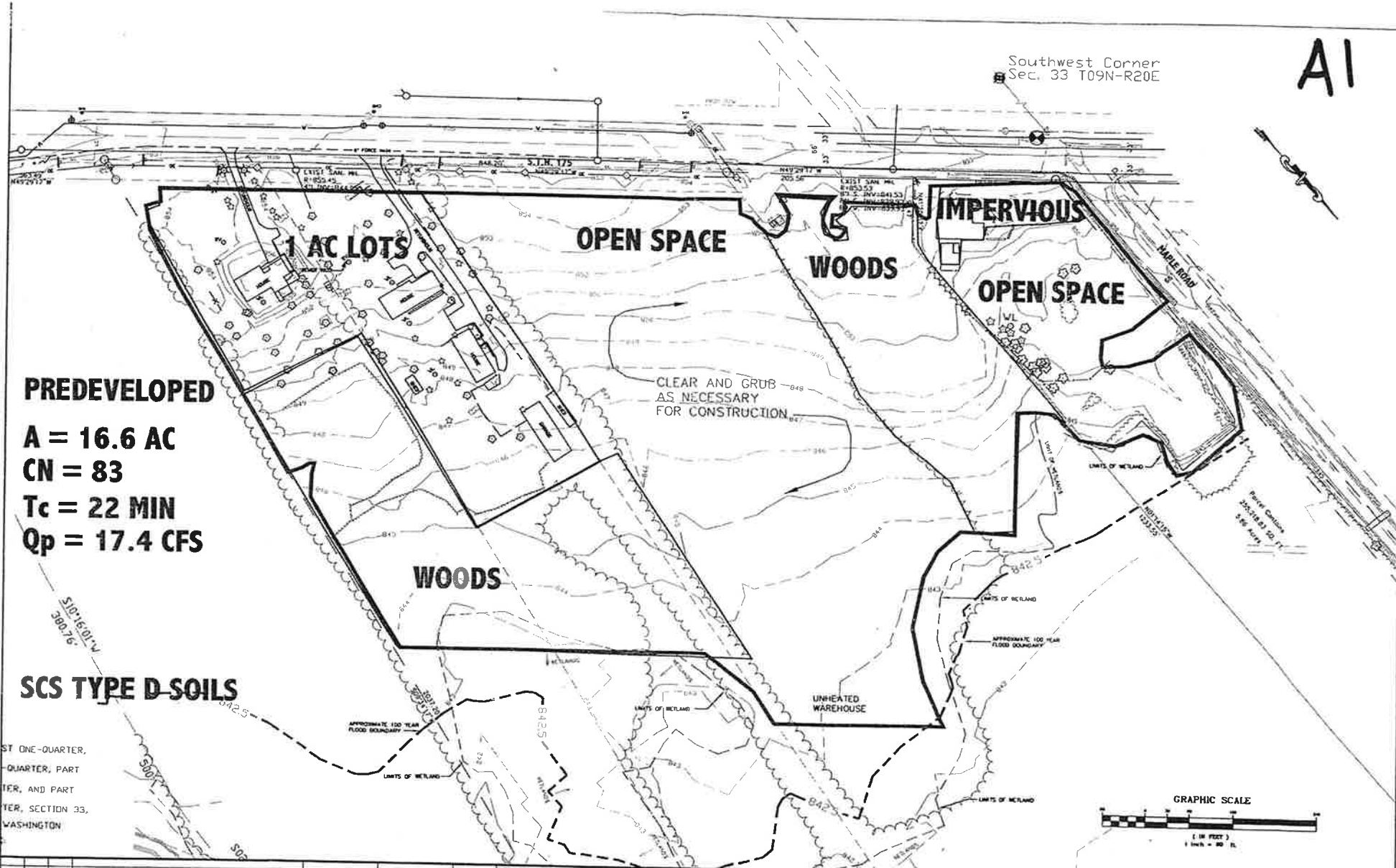
SUMMARY

The stormwater requirements of the City of Germantown have been met through creative stormwater management practices. The system will achieve the stormwater management objectives set forth in Germantown's ordinances.

APPENDIX 'A'

A1

Southwest Corner
Sec. 33 T09N-R20E



PREDEVELOPED

A = 16.6 AC

CN = 83

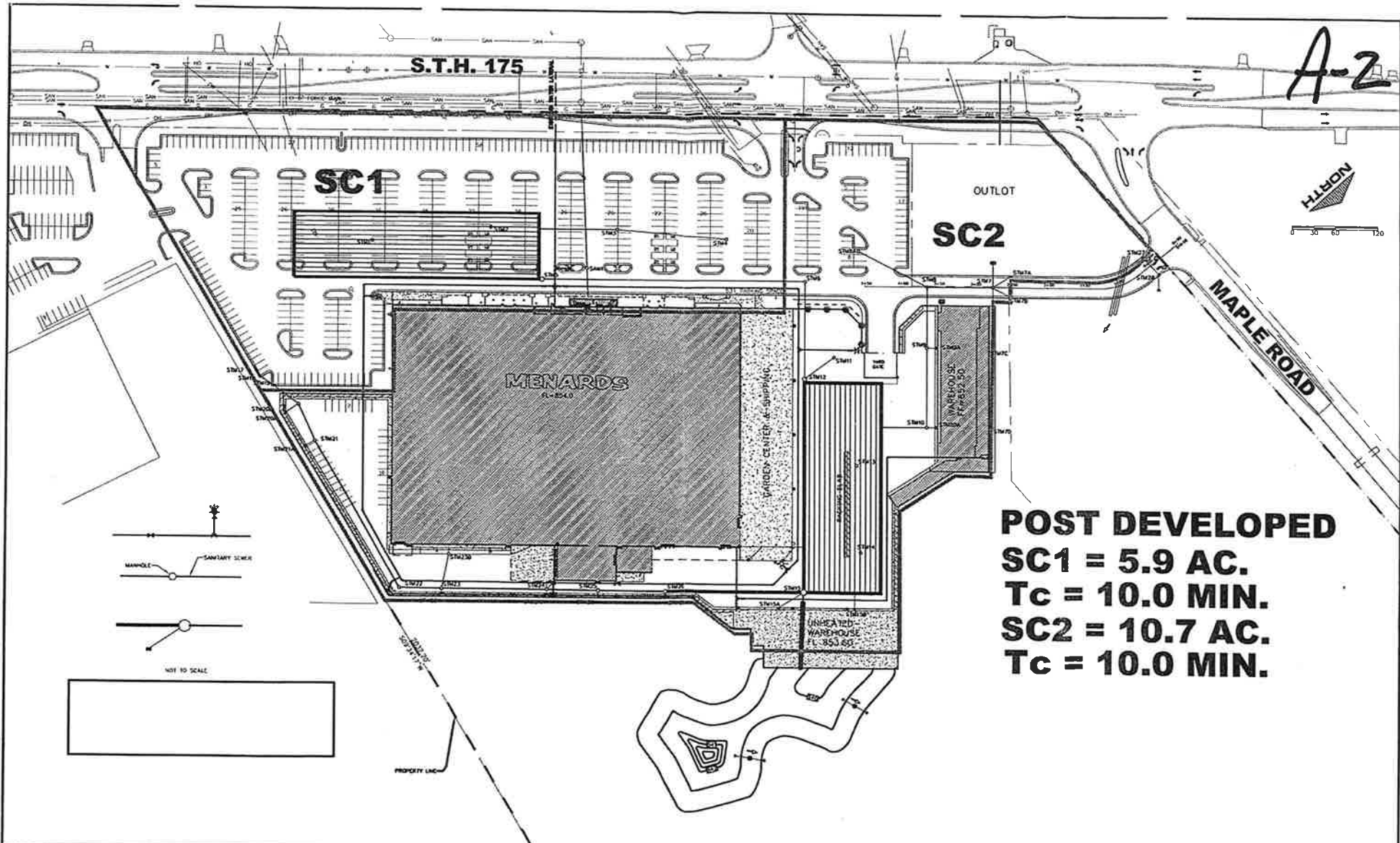
Tc = 22 MIN

Qp = 17.4 CFS

SCS TYPE D SOILS

ST ONE-QUARTER,
-QUARTER, PART
TER, AND PART
TER, SECTION 33,
WASHINGTON

				PROJ. NO. 0117	TEC DESIGN YOUR SITE SPECIALIST TECHNICAL ENGINEERING CONCEPTS & DESIGN	COMPANY 3478 ARNDT LANE EAU CLAIRE, WI 54601 PH 715-822-0218 FX 715-822-0532	METRO AREA 3830 HARBOR LANE SUITE 124 PLUMCROFT, WI 53447 PH 612-577-2234 FX 612-577-3758	EXISTING SITE	MENARDS SITE IMPROVEMENT PLANS -- 2001 GERMANTOWN, WISCONSIN	DWG. NAME 0117ERIS1	1
NO.	BY	DATE	REVISIONS	DESIGN						CHECKED	DATE 7/01



POST DEVELOPED
SC1 = 5.9 AC.
T_c = 10.0 MIN.
SC2 = 10.7 AC.
T_c = 10.0 MIN.

2	3/03	UPDATED UNDER GROUND STORM STORAGE AREA #2	RJS	RJR	RJR
1	02/21	MOVED POND	WLF	RJR	
110	04/11	REVISIONS	DRAFT	DESIGN	CHECK

PROJ. NO.
0117

TEC DESIGN
 YOUR SITE SPECIALIST
 TECHNICAL ENGINEERING CONCEPTS & DESIGN

5818 ARNDT LANE
 LAKE CLAIR, WI 54701
 PH 715-552-0339
 FX 715-552-0332
 EMAIL: TEC@TECDSIGNINC.COM

POST DEV SITE PLAN

MENARDS SITE IMPROVEMENT PLANS-2002
 GERMANTOWN, WISCONSIN

DWG NAME
0117
 DATE
03/03

1
1

APPENDIX 'B'

PRE-DEVELOPED



Drainage Diagram for 0117-PRE
Prepared by TEC Design, Inc. 2/5/03
HydroCAD® 6.00 3/1 002094 © 1986-2001 Applied Microcomputer Systems

0117-PRE

Type II 24-hr Rainfall=2.60" (Pre-developed 2-year Recurrence)

Prepared by TEC Design, Inc.

Page 2

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2/5/03

Subcatchment 1S: SC1

Runoff = 19.40 cfs @ 12.16 hrs, Volume= 1.423 af

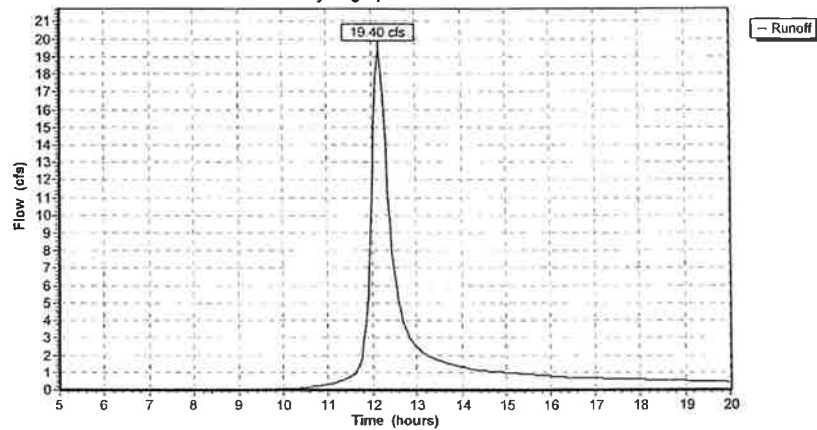
Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=2.60"

Area (ac)	CN	Description
3.000	84	1 acre lots, 20% imp, HSG D
8.200	84	50-75% Grass cover, Fair, HSG D
5.100	79	Woods, Fair, HSG D
0.300	98	Paved parking & roofs
16.600	83	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.9	300	0.0220	0.3		Sheet Flow, Sheet Flow n= 0.100 P2= 2.70"
4.2	500	0.0150	2.0		Shallow Concentrated Flow, Shallow Unpaved Kv= 16.1 fps
22.1	800	Total			

Subcatchment 1S: SC1

Hydrograph Plot



B-2

0117-PRE

Type II 24-hr Rainfall=7.20" (Pre-developed 100-year Recurrence)

Prepared by TEC Design, Inc.

Page 2

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2/5/03

Subcatchment 1S: SC1

Runoff = 89.11 cfs @ 12.15 hrs, Volume= 6.725 af

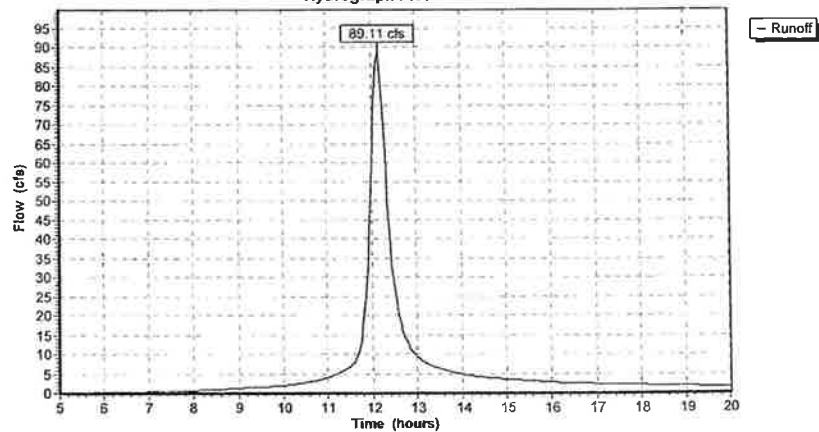
Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=7.20"

Area (ac)	CN	Description
3.000	84	1 acre lots, 20% imp, HSG D
8.200	84	50-75% Grass cover, Fair, HSG D
5.100	79	Woods, Fair, HSG D
0.300	98	Paved parking & roofs
16.600	83	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.9	300	0.0220	0.3		Sheet Flow, Sheet Flow n= 0.100 P2= 2.70"
4.2	500	0.0150	2.0		Shallow Concentrated Flow, Shallow Unpaved Kv= 16.1 fps
22.1	800	Total			

Subcatchment 1S: SC1

Hydrograph Plot



POST-DEVELOPED

0117-post

Type II 24-hr Rainfall=2.60" (Post-developed 2-year Recurrence)

Prepared by TEC Design, Inc.

Page 2

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3/12/03

Subcatchment 1S: SC1

Runoff = 18.99 cfs @ 12.01 hrs, Volume= 1,165 af

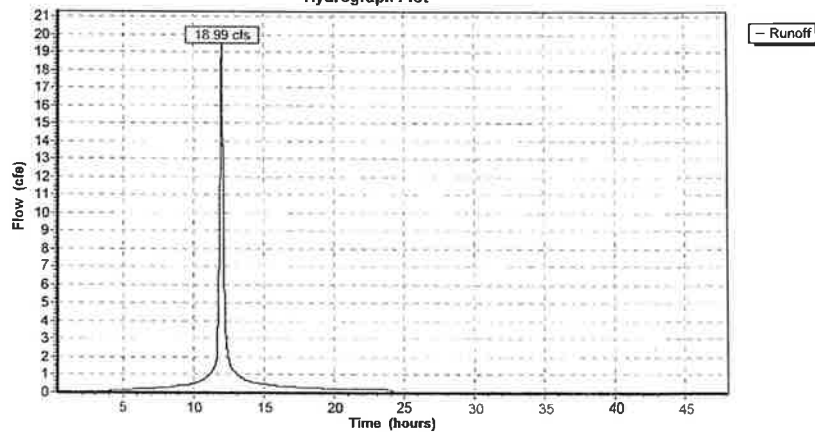
Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.25-48.00 hrs, dt= 0.01 hrs
Type II 24-hr Rainfall=2.60"

Area (ac)	CN	Description
5.900	98	Paved parking & roofs

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					Direct Entry, Base Time

Subcatchment 1S: SC1

Hydrograph Plot



B-5

0117-post

Type II 24-hr Rainfall=2.60" (Post-developed 2-year Recurrence)

Prepared by TEC Design, Inc.

Page 4

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3/12/03

Pond 1P: Pond 1

Inflow = 18.99 cfs @ 12.01 hrs, Volume= 1.165 af
 Outflow = 8.95 cfs @ 12.10 hrs, Volume= 1.165 af, Atten= 53%, Lag= 5.6 min
 Primary = 8.95 cfs @ 12.10 hrs, Volume= 1.165 af

Routing by Sim-Route method, Time Span= 0.25-48.00 hrs, dt= 0.01 hrs

Peak Elev= 846.22' Storage= 13,234 cf

Plug-Flow detention time= 52.6 min calculated for 1.165 af (100% of inflow)

Elevation (feet)	Cum.Store (cubic-feet)
844.60	0
845.00	944
846.00	9,801
847.00	25,165
848.00	40,550
849.00	50,084
849.41	50,491

Primary OutFlow (Dynamic Tailwater)

↑=Culvert

#	Routing	Invert	Outlet Devices
1	Primary	844.60'	24.0" x 514.0' long Culvert RCP, sq.cut end projecting, Ke= 0.500 Outlet Invert= 843.47' S= 0.0022 'ft n= 0.010 Cc= 0.900

0117-post

Type II 24-hr Rainfall=2.60" (Post-developed 2-year Recurrence)

Prepared by TEC Design, Inc.

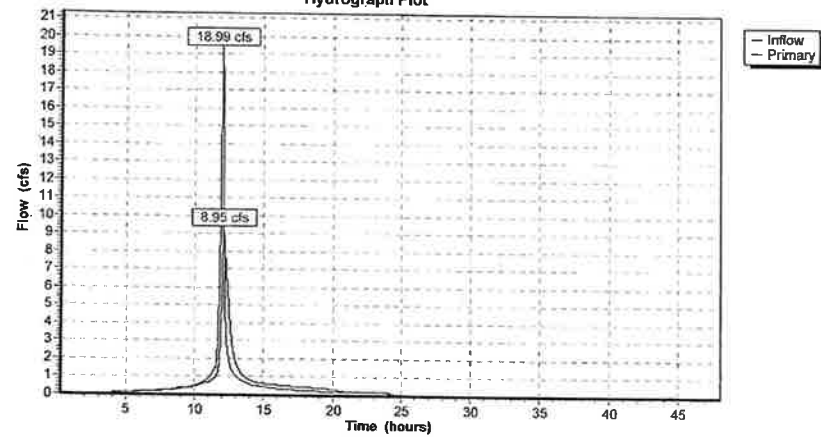
Page 5

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3/12/03

Pond 1P: Pond 1

Hydrograph Plot



0117-post

Type II 24-hr Rainfall=2.60" (Post-developed 2-year Recurrence)

Prepared by TEC Design, Inc.

Page 3

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3/12/03

Subcatchment 2S: SC2

Runoff = 34.45 cfs @ 12.01 hrs, Volume= 2.113 af

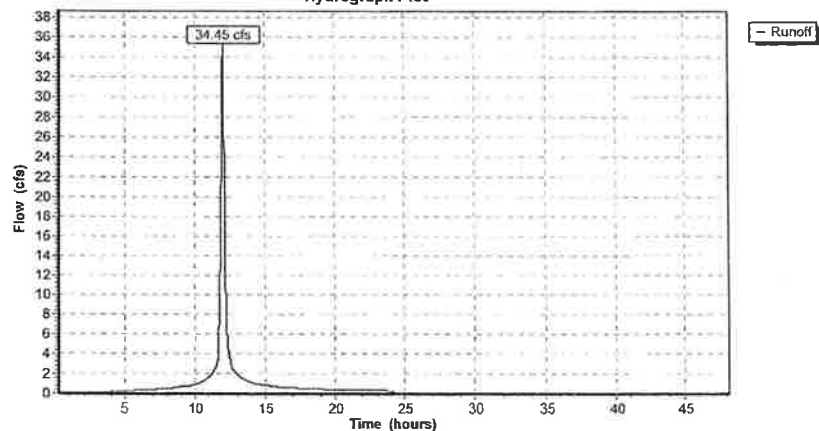
Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.25-48.00 hrs, dt= 0.01 hrs
Type II 24-hr Rainfall=2.60"

Area (ac)	CN	Description
9.400	98	Paved parking & roofs
1.300	95	Urban commercial, 85% imp, HSG D
10.700	98	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					Direct Entry, Base Time

Subcatchment 2S: SC2

Hydrograph Plot



0117-post

Type II 24-hr Rainfall=2.60" (Post-developed 2-year Recurrence)

Prepared by TEC Design, Inc.

Page 6

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3/12/03

Pond 2P: Pond 2

Inflow = 41.91 cfs @ 12.01 hrs, Volume= 3.278 af
 Outflow = 2.49 cfs @ 13.52 hrs, Volume= 3.304 af, Atten= 94%, Lag= 90.5 min
 Primary = 2.49 cfs @ 13.52 hrs, Volume= 3.304 af

Routing by Sim-Route method, Time Span= 0.25-48.00 hrs, dt= 0.01 hrs

Peak Elev= 845.39' Storage= 73,283 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)

Elevation (feet)	Cum.Store (cubic-feet)
842.50	0
843.00	5,579
844.00	25,375
845.00	58,382
846.00	96,687
847.00	136,565
848.00	173,130
849.00	199,843
850.00	226,720

Primary OutFlow (Dynamic Tailwater)

1=Orifice/Grate
 2=Orifice/Grate

#	Routing	Invert	Outlet Devices
1	Primary	842.42'	4.5" Vert. Orifice/Grate X 2.00 C= 0.820
2	Primary	845.30'	5.8" Vert. Orifice/Grate X 2.00 C= 0.820

0117-post

Type II 24-hr Rainfall=2.60" (Post-developed 2-year Recurrence)

Prepared by TEC Design, Inc.

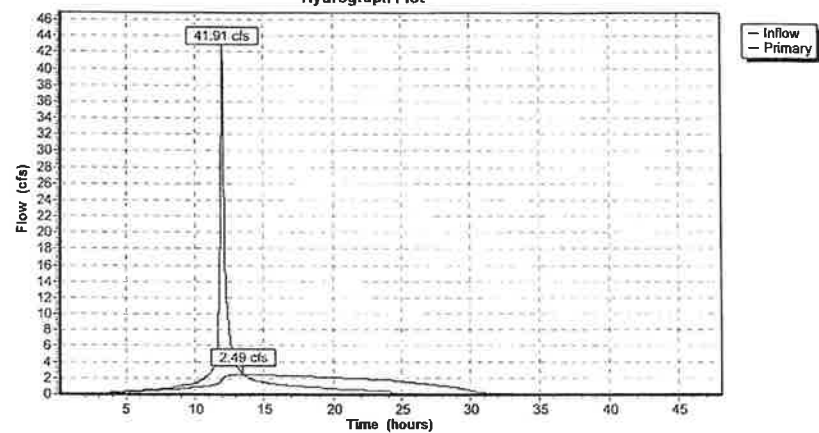
Page 7

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3/12/03

Pond 2P: Pond 2

Hydrograph Plot



B-10

0117-post

Type II 24-hr Rainfall=7.20" (Post-developed 100-year Recurrence)

Prepared by TEC Design, Inc.

Page 2

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3/12/03

Subcatchment 1S: SC1

Runoff = 53.46 cfs @ 12.01 hrs, Volume= 3.422 af

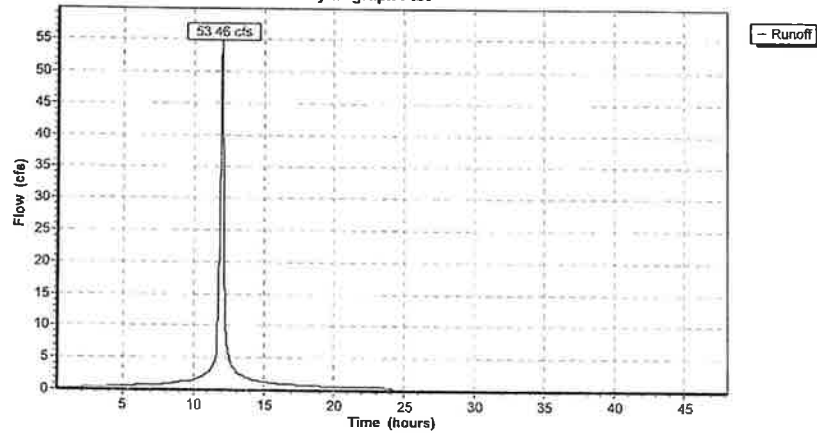
Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.25-48.00 hrs, dt= 0.01 hrs
Type II 24-hr Rainfall=7.20"

Area (ac)	CN	Description
5.900	98	Paved parking & roofs

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					Direct Entry, Base Time

Subcatchment 1S: SC1

Hydrograph Plot



0117-post

Type II 24-hr Rainfall=7.20" (Post-developed 100-year Recurrence)

Prepared by TEC Design, Inc.

Page 4

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3/12/03

Pond 1P: Pond 1

Inflow = 53.46 cfs @ 12.01 hrs, Volume= 3.422 af
 Outflow = 11.16 cfs @ 12.14 hrs, Volume= 3.422 af, Atten= 79%, Lag= 7.6 min
 Primary = 11.16 cfs @ 12.14 hrs, Volume= 3.422 af

Routing by Sim-Route method, Time Span= 0.25-48.00 hrs, dt= 0.01 hrs

Peak Elev= 848.92' Storage= 49,325 cf

Plug-Flow detention time= 164.9 min calculated for 3.422 af (100% of inflow)

Elevation (feet)	Cum.Store (cubic-feet)
844.60	0
845.00	944
846.00	9,801
847.00	25,165
848.00	40,550
849.00	50,084
849.41	50,491

Primary OutFlow (Dynamic Tailwater)

1=Culvert

#	Routing	Invert	Outlet Devices
1	Primary	844.60'	24.0" x 514.0' long Culvert RCP, sq.cut end projecting, Ke= 0.500 Outlet Invert= 843.47' S= 0.0022 ' / ' n= 0.010 Cc= 0.900

B-12

0117-post

Type II 24-hr Rainfall=7.20" (Post-developed 100-year Recurrence)

Prepared by TEC Design, Inc.

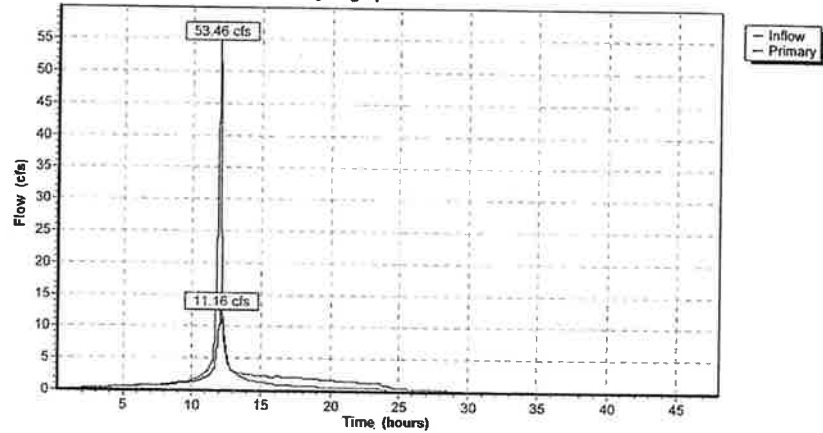
Page 5

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3/12/03

Pond 1P: Pond 1

Hydrograph Plot



0117-post

Type II 24-hr Rainfall=7.20" (Post-developed 100-year Recurrence)

Prepared by TEC Design, Inc.

Page 3

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3/12/03

Subcatchment 2S: SC2

Runoff = 96.95 cfs @ 12.01 hrs, Volume= 6.207 af

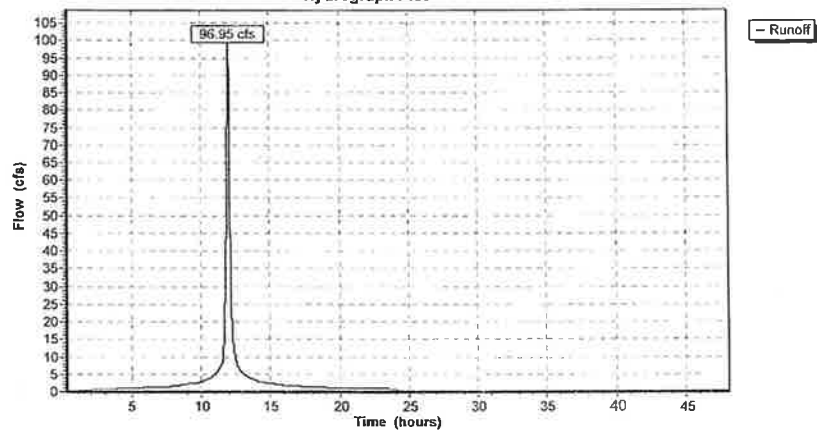
Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.25-48.00 hrs, dt= 0.01 hrs
Type II 24-hr Rainfall=7.20"

Area (ac)	CN	Description
9.400	98	Paved parking & roofs
1.300	95	Urban commercial, 85% imp. HSG D
10.700	98	Weighted Average

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					Direct Entry, Base Time

Subcatchment 2S: SC2

Hydrograph Plot



B-14

0117-post

Type II 24-hr Rainfall=7.20" (Post-developed 100-year Recurrence)

Prepared by TEC Design, Inc.

Page 6

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3/12/03

Pond 2P: Pond 2

Inflow = 107.12 cfs @ 12.01 hrs, Volume= 9.628 af
 Outflow = 7.93 cfs @ 13.08 hrs, Volume= 9.638 af, Atten= 93%, Lag= 64.1 min
 Primary = 7.93 cfs @ 13.08 hrs, Volume= 9.638 af

Routing by Sim-Route method, Time Span= 0.25-48.00 hrs, dt= 0.01 hrs

Peak Elev= 848.75' Storage= 193,195 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)

Elevation (feet)	Cum.Store (cubic-feet)
842.50	0
843.00	5,579
844.00	25,375
845.00	58,382
846.00	96,687
847.00	136,565
848.00	173,130
849.00	199,843
850.00	226,720

Primary OutFlow (Dynamic Tailwater)

1=Orifice/Grate
 2=Orifice/Grate

#	Routing	Invert	Outlet Devices
1	Primary	842.42'	4.5" Vert. Orifice/Grate X 2.00 C= 0.820
2	Primary	845.30'	5.8" Vert. Orifice/Grate X 2.00 C= 0.820

B-15

0117-post

Type II 24-hr Rainfall=7.20" (Post-developed 100-year Recurrence)

Prepared by TEC Design, Inc.

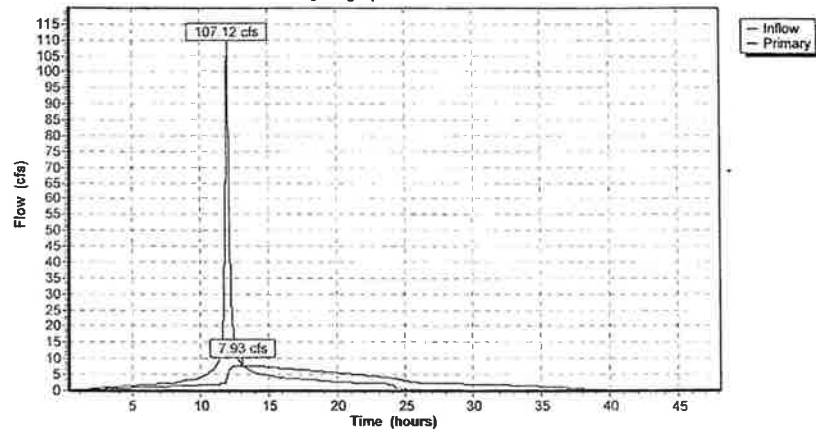
Page 7

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3/12/03

Pond 2P: Pond 2

Hydrograph Plot



B-16

PIPE DETERMINATION - POND 1

Dia (ft) 4
 Area (sq ft) 12.56
 N pipes 201.0
 L (ft) 20.00
 volume(ft^3) 50491.20
 ac-ft 1.16

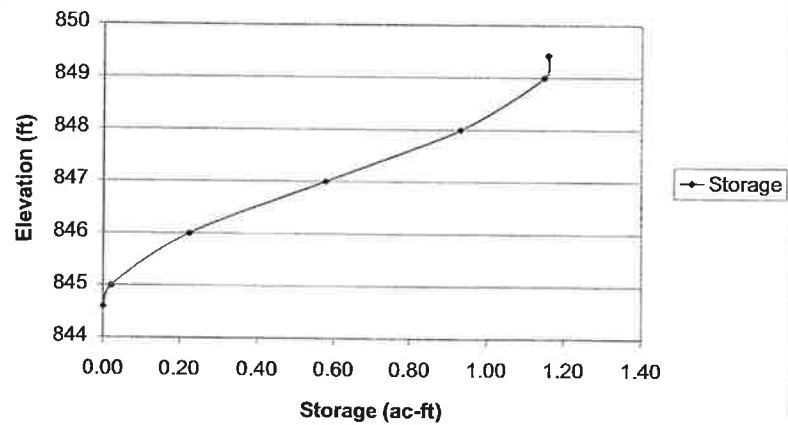
STAGE	D1	D2	Dave	d/D	a/A	Vfull	Vpipe	Vac-ft
844.6	0	0						0.00
845	0.4	0	0.2	0.05	0.01869	50491.20	943.7	0.02
846	1.4	0.59	0.995	0.24875	0.194128	50491.20	9801.7	0.23
847	2.4	1.59	1.995	0.49875	0.498408	50491.20	25165.2	0.58
848	3.4	2.59	2.995	0.74875	0.803118	50491.20	40550.4	0.93
849	4	3.59	3.795	0.94875	0.991935	50491.20	50084.0	1.15
849.41	4	4	4	1	1	50491.20	50491.2	1.16

Project:	Germanstown Menards (Underground 1)
Client:	Menards, Inc.
Date:	08/2002 (Revised 3-12-03)
By:	JDH

Stage-Storage Curve Pond 1

Elevation ft	Area sq ft	Ave Pond Area	Incremental Depth	Incremental Volume	Total Vol (ft ³)	Total Vol (ac-ft)
→ 844.6					0	0.00
→ 845		0	0.4	0	943	0.02
→ 846		0	1	0	9801	0.23
→ 847		0	1	0	25105	0.58
→ 848		0	1	0	40550	0.93
→ 849		0	1	0	50084	1.15
→ 849.41		0	0.41	0	50491	1.16

Stage Storage Curve



0117-post

Prepared by TEC Design, Inc.

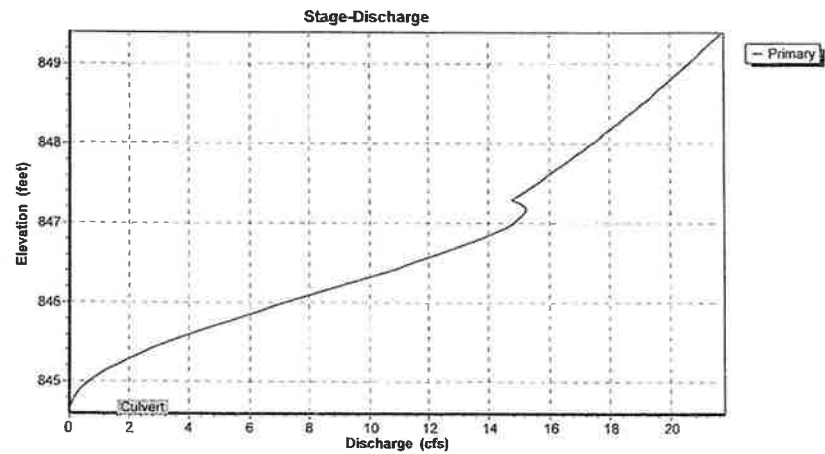
HydroCAD® 6.00 s/n 002094 © 1986-2001 Applied Microcomputer Systems

Type II 24-hr Rainfall=2.60"

Page 1

3/12/03

Pond 1P: Pond 1



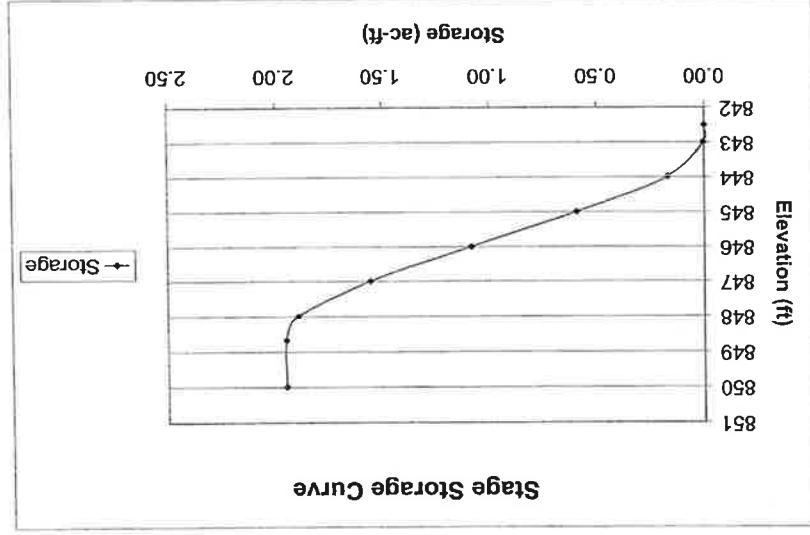
PIPE DETERMINATION - POND 2

Dia (ft) 5
 Area (sq ft) 19.63
 N pipes 216.8
 L (ft) 20.00
 volume(ft³) 85074.38
 ac-ft 1.95

STAGE	D1	D2	Dave	d/D	a/A	Vfull	Vpipe	Vpond	Vtotal	Vac-ft
842.5	0	0						0	0	0.0
843	0.1	0	0.05	0.01	0.00169	85074.38	143.8	5435	5578.8	0.1
844	1.1	0.33	0.715	0.143	0.087766	85074.38	7466.6	17908	25374.6	0.6
845	2.1	1.33	1.715	0.343	0.30344	85074.38	25815.0	32567	58382.0	1.3
846	3.1	2.33	2.715	0.543	0.554684	85074.38	47189.4	49498	96687.4	2.2
847	4.1	3.33	3.715	0.743	0.796742	85074.38	67782.3	68783	136565.3	3.1
848	5	4.33	4.665	0.933	0.971144	85074.38	82619.5	90510	173129.5	4.0
848.67	5	5	5	1	1	85074.38	85074.4	114769	199843.4	4.6
849	5	5	5	1	1	85074.38	85074.4	141646	226720.4	5.2

Project:	Germanstown Monorail (Underground)
Client:	Martinez, Inc.
Date:	04/20/02 (Revised 2-12-03)
By:	JCH

Stage-Storage Curve - Underground 2						
Elevation	Area	Ave Pond	Incremental	Incremental	Total Vol	Total Vol
ft	sq ft	Area	Depth	Volume	(ft ³)	(ac-ft)
842.5			0	0	0	0.00
843			0	0	144	0.00
844			0	0	7467	0.17
845			0	0	25815	0.59
846			0	0	47189	1.08
847			0	0	67782	1.56
848			0	0	82620	1.90
848.67			0	0	85075	1.95
850			0	0	85075	1.95

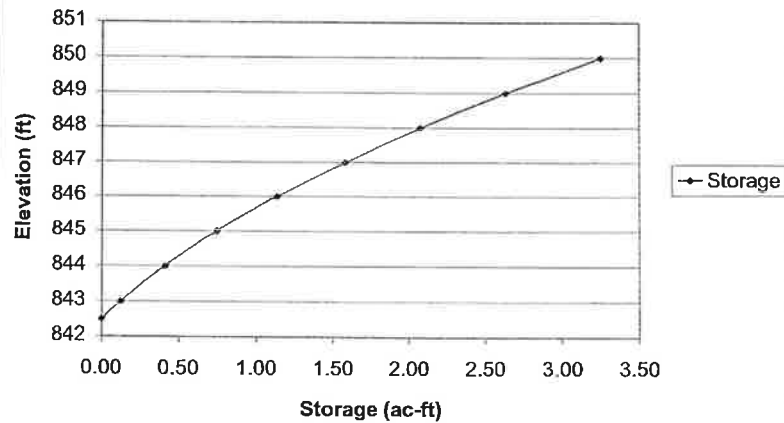


Project:	Germanstown Menards (Surface Pond)
Client:	Menards, Inc.
Date:	3/23/2001
By:	SKC

Stage-Storage Curve (Pond)

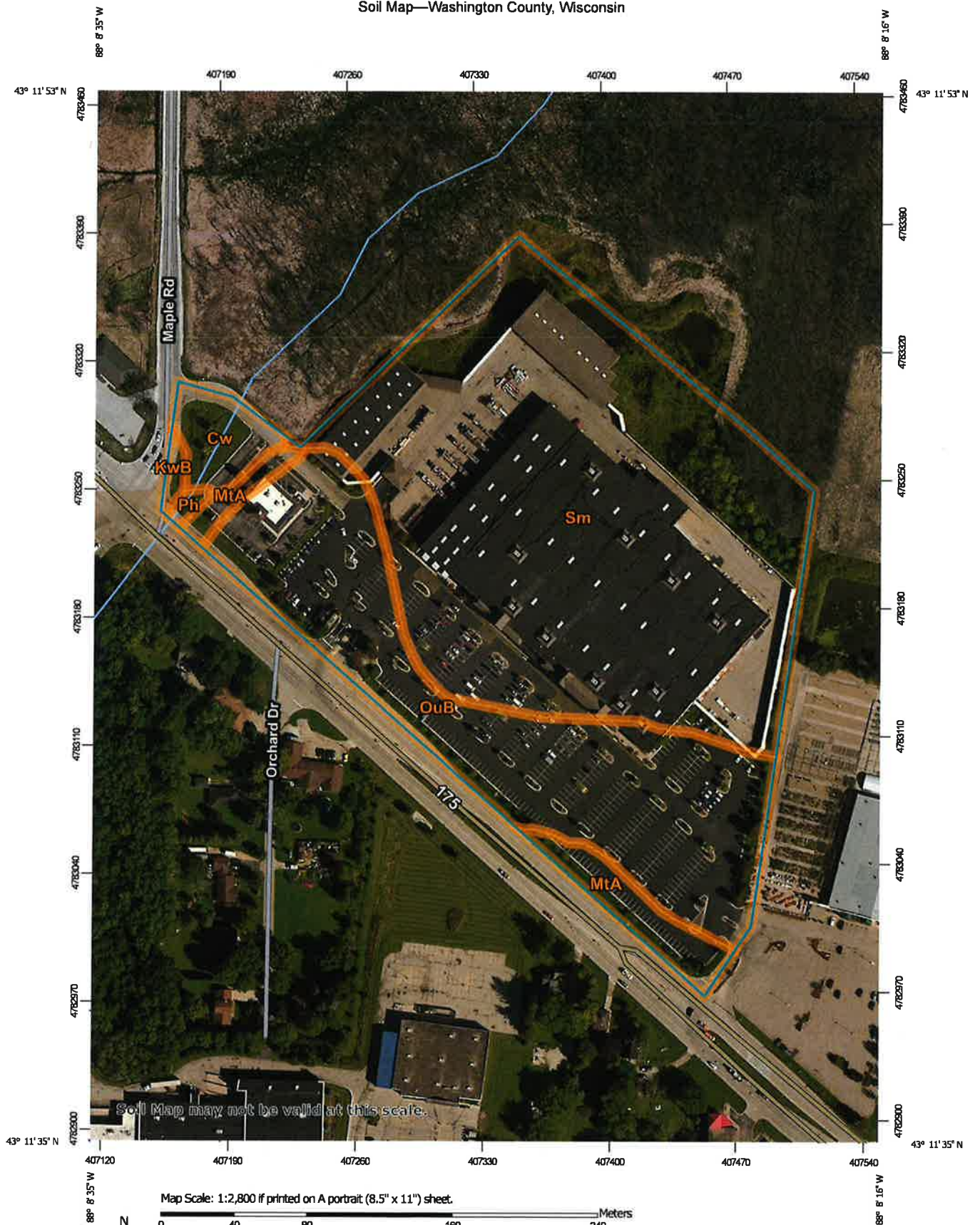
Elevation ft.	Area sq ft	Ave Pond Area	Incremental Depth	Incremental Volume	Total Vol (ft ³)	Total Vol (ac-ft)
842.5	10351				0	0.00
843	11388	10869.5	0.5	5434.75	5435	0.12
844	13058	12473	1	12473	17908	0.41
845	15760	14659	1	14659	32567	0.75
846	18103	16931.5	1	16931.5	49508	1.14
847	20467	19285	1	19285	68783	1.58
848	22986	21726.5	1	21726.5	90510	2.08
849	25533	24259.5	1	24259.5	114769	2.63
850	28220	26876.5	1	26876.5	141646	3.25

Stage Storage Curve



Appendix B

Soil Map—Washington County, Wisconsin



**Natural Resources
Conservation Service**

Web Soil Survey
National Cooperative Soil Survey

9/23/2019
Page 1 of 3

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

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

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

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

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: Washington County, Wisconsin

Survey Area Data: Version 18, Sep 12, 2018

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

Date(s) aerial images were photographed: Apr 29, 2011—Sep 22, 2014

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

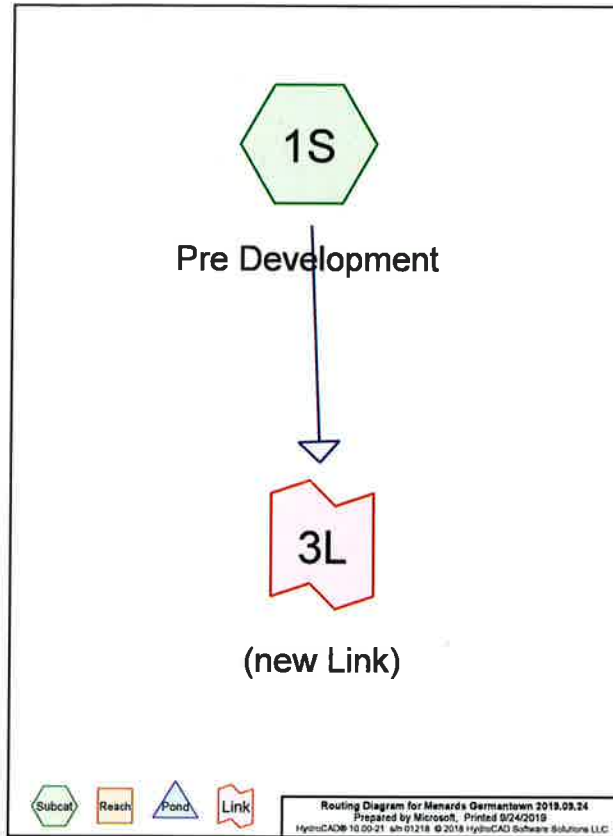
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Cw	Colwood silt loam, 0 to 2 percent slopes	0.6	3.0%
KwB	Knowles silt loam, 1 to 6 percent slopes	0.1	0.5%
MtA	Mequon silt loam, 1 to 3 percent slopes	0.9	4.4%
OuB	Ozaukee silt loam, high carbonate substratum, 2 to 6 percent slopes	5.8	30.0%
Ph	Pella silt loam, 0 to 2 percent slopes	0.1	0.3%
Sm	Sebewa silt loam, 0 to 2 percent slopes	12.0	61.7%
Totals for Area of Interest		19.5	100.0%

Appendix C

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
3.000	84	1 acre lots, 20% imp, HSG D (1S)
9.500	84	50-75% Grass cover, Fair, HSG D (1S)
0.300	98	Paved parking, HSG D (1S)
5.100	79	Woods, Fair, HSG D (1S)
17.900	83	TOTAL AREA



Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
17.900	HSG D	1S
0.000	Other	
17.900		TOTAL AREA

Ground Covers (selected nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	3.000	0.000	3.000	1 acre lots, 20% imp	1S
0.000	0.000	0.000	9.500	0.000	9.500	50-75% Grass cover, Fair	1S
0.000	0.000	0.000	0.300	0.000	0.300	Paved parking	1S
0.000	0.000	0.000	5.100	0.000	5.100	Woods, Fair	1S
0.000	0.000	0.000	17.900	0.000	17.900	TOTAL AREA	

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: Pre Development Runoff Area=17.900 ac 5.03% Impervious Runoff Depth>0.94"
 Flow Length=800' Tc=22.1 min CN=83 Runoff=17.52 cfs 1.406 af

Link 3L: (new Link) Inflow=17.52 cfs 1.406 af
 Primary=17.52 cfs 1.406 af

Total Runoff Area = 17.900 ac Runoff Volume = 1.406 af Average Runoff Depth = 0.94"
 94.97% Pervious = 17.000 ac 5.03% Impervious = 0.900 ac

Summary for Subcatchment 1S: Pre Development

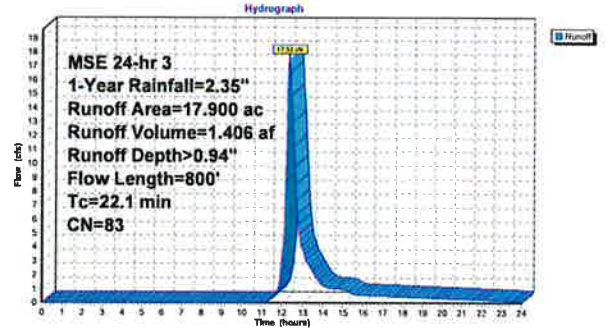
Runoff = 17.52 cfs @ 12.34 hrs, Volume= 1.406 af, Depth> 0.94"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 1-Year Rainfall=2.35"

Area (ac)	CN	Description
3.000	84	1 acre lots, 20% imp, HSG D
8.500	84	50-75% Grass cover, Fair, HSG D
5.100	79	Woods, Fair, HSG D
0.300	98	Paved parking, HSG D
17.900	83	Weighted Average
17.000		94.97% Pervious Area
0.900		5.03% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
22.1	800		0.60		Direct Entry,

Subcatchment 1S: Pre Development

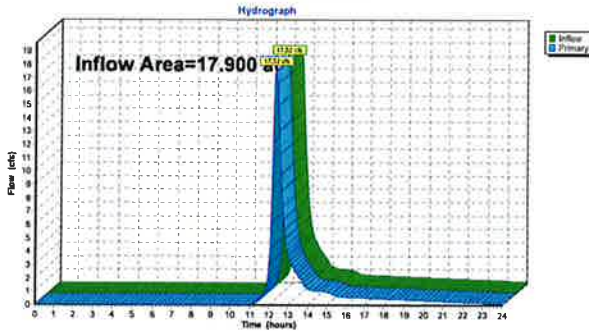


Summary for Link 3L: (new Link)

Inflow Area = 17.900 ac, 5.03% Impervious, Inflow Depth > 0.94" for 1-Year event
 Inflow = 17.52 cfs @ 12.34 hrs, Volume= 1.406 af
 Primary = 17.52 cfs @ 12.34 hrs, Volume= 1.406 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 3L: (new Link)



Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: Pre Development Runoff Area=17.900 ac 5.03% Impervious Runoff Depth>1.17"
 Flow Length=800' Tc=22.1 min CN=83 Runoff=21.91 cfs 1.743 af

Link 3L: (new Link) Inflow=21.91 cfs 1.743 af
 Primary=21.91 cfs 1.743 af

Total Runoff Area = 17.900 ac Runoff Volume = 1.743 af Average Runoff Depth = 1.17"
 94.97% Pervious = 17.000 ac 5.03% Impervious = 0.900 ac

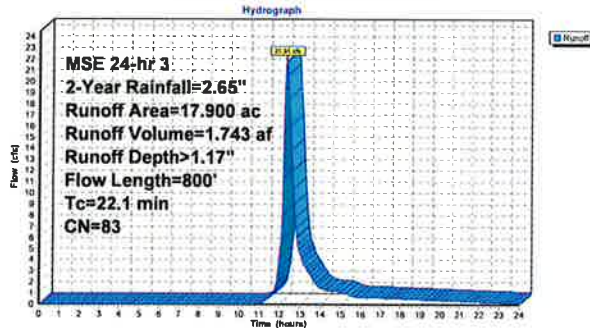
Summary for Subcatchment 1S: Pre Development

Runoff = 21.91 cfs @ 12.33 hrs, Volume= 1.743 af, Depth> 1.17"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 2-Year Rainfall=2.65"

Area (ac)	CN	Description
3.000	84	1 acre lots, 20% imp, HSG D
9.500	84	50-75% Grass cover, Fair, HSG D
5.100	70	Woods, Fair, HSG D
0.300	98	Paved parking, HSG D
17.900	83	Weighted Average
17.000		94.97% Pervious Area
0.900		5.03% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
22.1	800		0.60		Direct Entry,

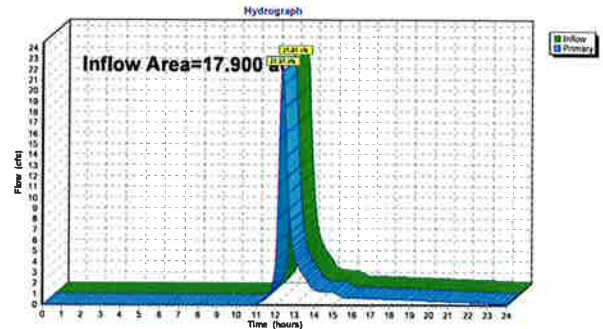
Subcatchment 1S: Pre Development



Summary for Link 3L: (new Link)

Inflow Area = 17.900 ac, 5.03% Impervious, Inflow Depth > 1.17" for 2-Year event
 Inflow = 21.91 cfs @ 12.33 hrs, Volume= 1.743 af
 Primary = 21.91 cfs @ 12.33 hrs, Volume= 1.743 af, Attenu= 0%, Lag= 0.0 min
 Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 3L: (new Link)



Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Pre Development Runoff Area=17.900 ac 5.03% Impervious Runoff Depth>2.13"
 Flow Length=800' Tc=22.1 min CN=83 Runoff=40.24 cfs 3.174 af

Link 3L: (new Link) Inflow=40.24 cfs 3.174 af
 Primary=40.24 cfs 3.174 af

Total Runoff Area = 17.900 ac Runoff Volume = 3.174 af Average Runoff Depth = 2.13"
 94.97% Pervious = 17.000 ac 5.03% Impervious = 0.900 ac

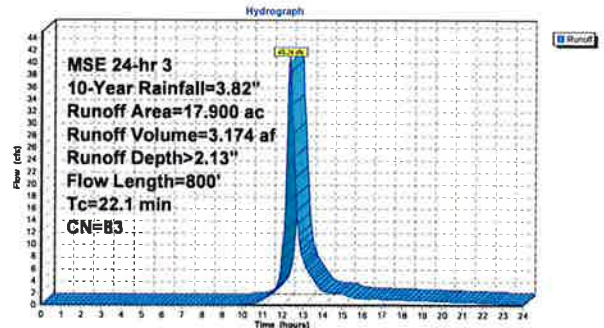
Summary for Subcatchment 1S: Pre Development

Runoff = 40.24 cfs @ 12.33 hrs, Volume= 3.174 af, Depth> 2.13"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 10-Year Rainfall=3.82"

Area (ac)	CN	Description
3.000	84	1 acre lots, 20% imp, HSG D
9.500	84	50-75% Grass cover, Fair, HSG D
5.100	70	Woods, Fair, HSG D
0.300	98	Paved parking, HSG D
17.900	83	Weighted Average
17.000		94.97% Pervious Area
0.900		5.03% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
22.1	800		0.60		Direct Entry,

Subcatchment 1S: Pre Development

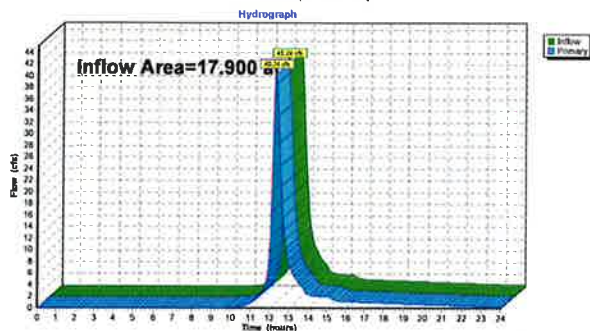


Summary for Link 3L: (new Link)

Inflow Area = 17,900 ac, 5.03% Impervious, Inflow Depth > 2.13" for 10-Year event
 Inflow = 40.24 cfs @ 12.33 hrs, Volume= 3,174 af
 Primary = 40.24 cfs @ 12.33 hrs, Volume= 3,174 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 3L: (new Link)



Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Pre Development Runoff Area=17,900 ac 5.03% Impervious Runoff Depth>2.93"
 Flow Length=800' Tc=22.1 min CN=83 Runoff=55.34 cfs 4,366 af

Link 3L: (new Link)

Inflow=55.34 cfs 4,366 af
 Primary=55.34 cfs 4,366 af

Total Runoff Area = 17,900 ac Runoff Volume = 4,366 af Average Runoff Depth = 2.93"
 94.97% Pervious = 17,000 ac 5.03% Impervious = 0.900 ac

Summary for Subcatchment 1S: Pre Development

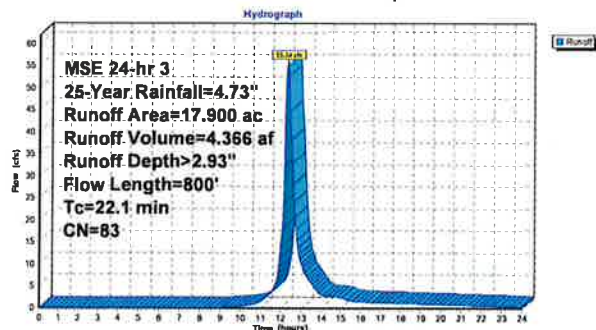
Runoff = 55.34 cfs @ 12.32 hrs, Volume= 4,366 af, Depth> 2.93"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 25-Year Rainfall=4.73"

Area (ac)	CN	Description
3.000	84	1 acre lots, 20% Imp, HSG D
9.500	84	50-75% Grass cover, Fair, HSG D
5.100	79	Woods, Fair, HSG D
0.300	98	Paved parking, HSG D
17.900	83	Weighted Average
17.000		94.97% Pervious Area
0.900		5.03% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
22.1	800		0.60		Direct Entry,

Subcatchment 1S: Pre Development

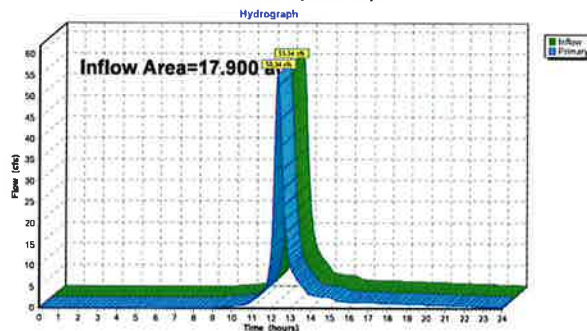


Summary for Link 3L: (new Link)

Inflow Area = 17,900 ac, 5.03% Impervious, Inflow Depth > 2.93" for 25-Year event
 Inflow = 55.34 cfs @ 12.32 hrs, Volume= 4,366 af
 Primary = 55.34 cfs @ 12.32 hrs, Volume= 4,366 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 3L: (new Link)



Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Pre Development Runoff Area=17,900 ac 5.03% Impervious Runoff Depth=4.47"
 Flow Length=800' Tc=22.1 min CN=83 Runoff=83.57 cfs 6.664 af

Link 3L: (new Link)

Inflow=83.57 cfs 6.664 af
 Primary=83.57 cfs 6.664 af

Total Runoff Area = 17,900 ac Runoff Volume = 6.664 af Average Runoff Depth = 4.47"
 94.97% Pervious = 17,000 ac 5.03% Impervious = 0.900 ac

Summary for Subcatchment 1S: Pre Development

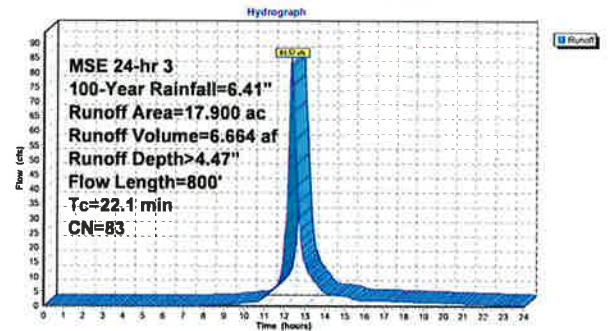
Runoff = 83.57 cfs @ 12.32 hrs, Volume= 6.664 af, Depth= 4.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 100-Year Rainfall=6.41"

Area (ac)	CN	Description
3.000	84	1 acre lots, 20% imp, HSG D
9.500	84	50-75% Grass cover, Fair, HSG D
5.100	79	Woods, Fair, HSG D
0.300	98	Paved parking, HSG D
17.900	83	Weighted Average
17.000		94.97% Pervious Area
0.900		5.03% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
22.1	800		0.60		Direct Entry,

Subcatchment 1S: Pre Development

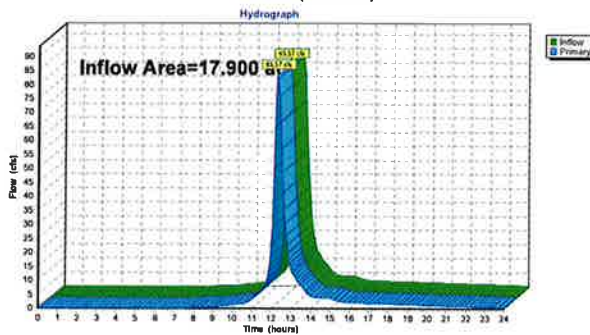


Summary for Link 3L: (new Link)

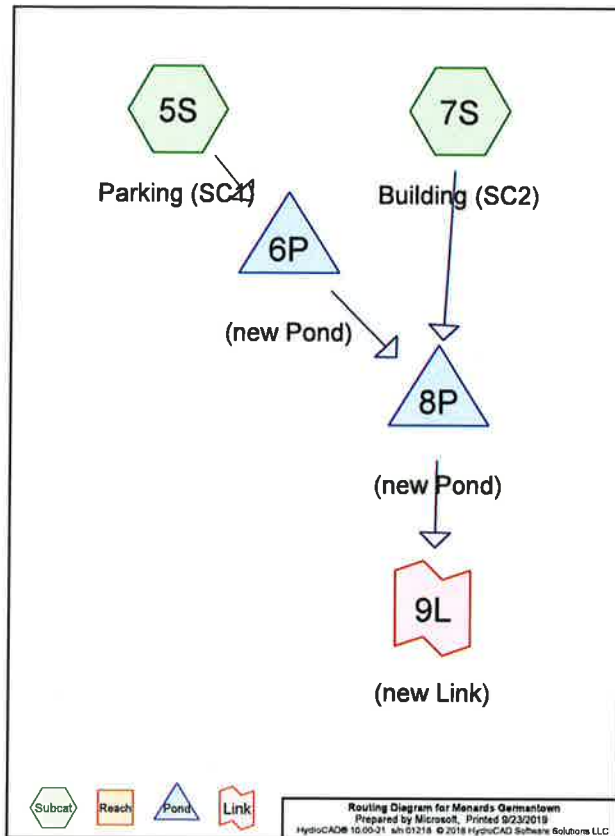
Inflow Area = 17,900 ac, 5.03% Impervious, Inflow Depth > 4.47" for 100-Year event
 Inflow = 83.57 cfs @ 12.32 hrs, Volume= 6.664 af
 Primary = 83.57 cfs @ 12.32 hrs, Volume= 6.664 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 3L: (new Link)



Appendix D



Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.300	84	50-75% Grass cover, Fair, HSG D (7S)
15.300	98	Paved parking, HSG D (5S, 7S)
1.300	95	Urban commercial, 85% imp, HSG D (7S)
17.900	97	TOTAL AREA

Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
17.900	HSG D	5S, 7S
0.000	Other	
17.900		TOTAL AREA

Ground Covers (selected nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	1.300	0.000	1.300	50-75% Grass cover, Fair	7S
0.000	0.000	0.000	15.300	0.000	15.300	Paved parking	5S, 7S
0.000	0.000	0.000	1.300	0.000	1.300	Urban commercial, 85% imp	7S
0.000	0.000	0.000	17.900	0.000	17.900	TOTAL AREA	

Pipe Listing (selected nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	6P	844.60	843.47	514.0	0.0022	0.010	24.0	0.0	0.0

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind*Trans method - Pond routing by Stor-Ind method

Subcatchment 5S: Parking (SC1) Runoff Area=5,900 ac 100.00% Impervious Runoff Depth>2.12"
Tc=10.0 min CN=98 Runoff=16.99 cfs 1.043 af

Subcatchment 7S: Building (SC2) Runoff Area=12,000 ac 87.54% Impervious Runoff Depth>1.91"
Tc=10.0 min CN=96 Runoff=32.71 cfs 1.914 af

Pond 6P: (new Pond) Peak Elev=846.15' Storage=12,136 cf Inflow=16.99 cfs 1.043 af
24.0" Round Culvert n=0.010 L=514.0' S=0.0022' Outflow=8.50 cfs 1.036 af

Pond 8P: (new Pond) Peak Elev=845.80' Storage=88,856 cf Inflow=39.59 cfs 2.950 af
Outflow=1.81 cfs 1.567 af

Link 9L: (new Link) Inflow=1.91 cfs 1.567 af
Primary=1.81 cfs 1.567 af

Total Runoff Area = 17,900 ac Runoff Volume = 2.957 af Average Runoff Depth = 1.98"
8.35% Pervious = 1.495 ac 91.65% Impervious = 16.405 ac

Summary for Subcatchment 5S: Parking (SC1)

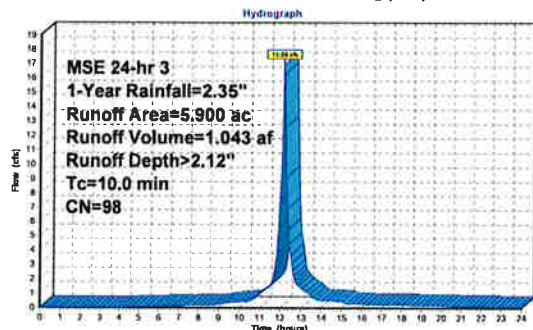
Runoff = 16.99 cfs @ 12.17 hrs, Volume= 1.043 af, Depth> 2.12"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 1-Year Rainfall=2.35"

Area (ac)	CN	Description
5.900	98	Paved parking, HSG D
5.900		100.00% Impervious Area

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

Subcatchment 5S: Parking (SC1)



Summary for Subcatchment 7S: Building (SC2)

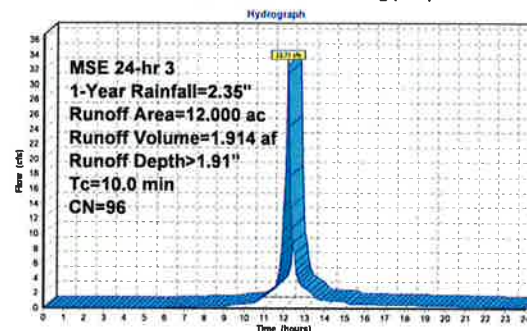
Runoff = 32.71 cfs @ 12.17 hrs, Volume= 1.914 af, Depth> 1.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 1-Year Rainfall=2.35"

Area (ac)	CN	Description
9.400	98	Paved parking, HSG D
1.300	95	Urban commercial, 85% imp, HSG D
1.300	84	50-75% Grass cover, Fair, HSG D
12.000	96	Weighted Average
1.495		12.46% Pervious Area
10.505		87.54% Impervious Area

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

Subcatchment 7S: Building (SC2)



Summary for Pond 6P: (new Pond)

Inflow Area = 5.900 ac, 100.00% Impervious, Inflow Depth > 2.12" for 1-Year event
 Inflow = 16.99 cfs @ 12.17 hrs, Volume= 1,043 af
 Outflow = 8.50 cfs @ 12.32 hrs, Volume= 1,036 af, Atten= 50%, Lag= 8.8 min
 Primary = 8.50 cfs @ 12.32 hrs, Volume= 1,036 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 846.15' @ 12.32 hrs Surf.Area= 0 sf Storage= 12,136 cf

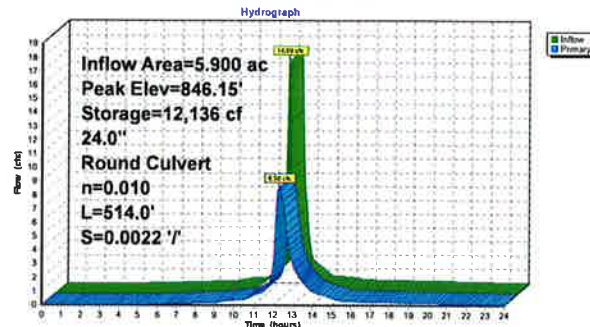
Plug-Flow detention time= 29.4 min calculated for 1,034 af (98% of inflow)
 Center-of-Mass det. time= 25.6 min (786.3 - 760.7)

Volume	Invert	Avail.Storage	Storage Description
#1	844.60'	50,491 cf	Custom Stage Data Listed below
Elevation (feet)	Cum.Store (cubic-feet)		
844.60	0		
845.00	944		
846.00	9,801		
847.00	25,165		
848.00	40,550		
849.00	50,084		
849.41	50,491		

Device	Routing	Invert	Outlet Devices
#1	Primary	844.60'	24.0" Round Culvert L= 514.0' RCP, sq cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 844.60' / 843.47' S= 0.0022' / n= 0.010, Flow Area= 3.14 sf

Primary OutFlow Max= 8.47 cfs @ 12.32 hrs HW= 846.15' (Free Discharge)
 1= Culvert (Barrel Controls 8.47 cfs @ 4.48 fps)

Pond 6P: (new Pond)



Summary for Pond 8P: (new Pond)

[81] Warning: Exceeded Pond 6P by 0.86' @ 15.50 hrs

Inflow Area = 17.900 ac, 91.65% Impervious, Inflow Depth > 1.98" for 1-Year event
 Inflow = 39.59 cfs @ 12.18 hrs, Volume= 2,850 af
 Outflow = 1.91 cfs @ 14.19 hrs, Volume= 1,567 af, Atten= 95%, Lag= 120.3 min
 Primary = 1.91 cfs @ 14.19 hrs, Volume= 1,567 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 845.80' @ 14.19 hrs Surf.Area= 0 sf Storage= 88,856 cf

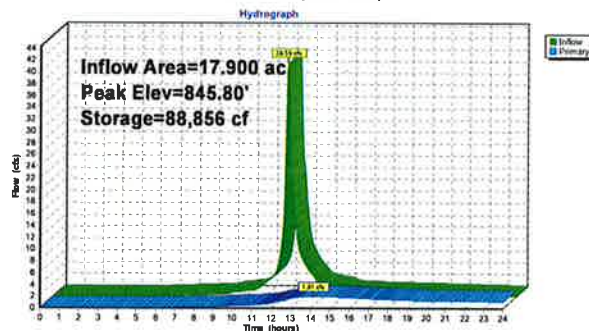
Plug-Flow detention time= 318.0 min calculated for 1,564 af (53% of inflow)
 Center-of-Mass det. time= 235.9 min (1,015.2 - 779.3)

Volume	Invert	Avail.Storage	Storage Description
#1	842.50'	226,720 cf	Custom Stage Data Listed below
Elevation (feet)	Cum.Store (cubic-feet)		
842.50	0		
843.00	5,579		
844.00	25,375		
845.00	58,382		
846.00	86,687		
847.00	136,565		
848.00	173,130		
849.00	199,843		
850.00	226,720		

Device	Routing	Invert	Outlet Devices
#1	Primary	842.42'	4.5" Vert. Orifice/Grate C= 0.820
#2	Primary	845.30'	5.8" Vert. Orifice/Grate C= 0.820

Primary OutFlow Max= 1.91 cfs @ 14.19 hrs HW= 845.80' (Free Discharge)
 1= Orifice/Grate (Orifice Controls 1.30 cfs @ 11.75 fps)
 2= Orifice/Grate (Orifice Controls 0.61 cfs @ 3.32 fps)

Pond 8P: (new Pond)

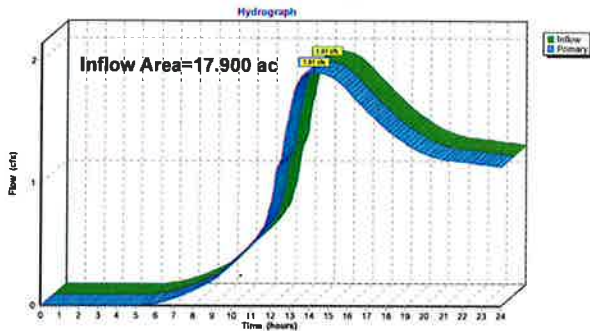


Summary for Link 9L: (new Link)

Inflow Area = 17.900 ac, 81.65% Impervious, Inflow Depth > 1.05" for 1-Year event
 Inflow = 1.91 cfs @ 14.19 hrs, Volume= 1.567 af
 Primary = 1.81 cfs @ 14.19 hrs, Volume= 1.567 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 9L: (new Link)



Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 6S: Parking (SC1) Runoff Area=5.900 ac 100.00% Impervious Runoff Depth>2.42"
 Tc=10.0 min CN=98 Runoff=19.25 cfs 1.189 af
 Subcatchment 7S: Building (SC2) Runoff Area=12.000 ac 87.54% Impervious Runoff Depth>2.21"
 Tc=10.0 min CN=96 Runoff=37.40 cfs 2.207 af
 Pond 6P: (new Pond) Peak Elev=846.26' Storage=13,786 cf Inflow=19.25 cfs 1.189 af
 24.0' Round Culvert n=0.010 L=514.0' S=0.0022' Outflow=9.44 cfs 1.182 af
 Pond 8P: (new Pond) Peak Elev=846.12' Storage=101,390 cf Inflow=45.06 cfs 3.390 af
 Outflow=2.28 cfs 1.869 af
 Link 9L: (new Link) Inflow=2.28 cfs 1.869 af
 Primary=2.28 cfs 1.869 af

Total Runoff Area = 17.900 ac Runoff Volume = 3.397 af Average Runoff Depth = 2.28"
 8.35% Pervious = 1.495 ac 91.65% Impervious = 16.405 ac

Summary for Subcatchment 6S: Parking (SC1)

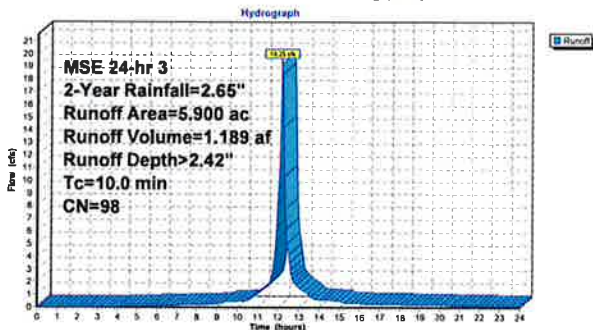
Runoff = 19.25 cfs @ 12.17 hrs, Volume= 1.189 af, Depth> 2.42"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 2-Year Rainfall=2.65"

Area (ac)	CN	Description
5.900	98	Paved parking, HSG D
5.900		100.00% Impervious Area

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

Subcatchment 6S: Parking (SC1)



Summary for Subcatchment 7S: Building (SC2)

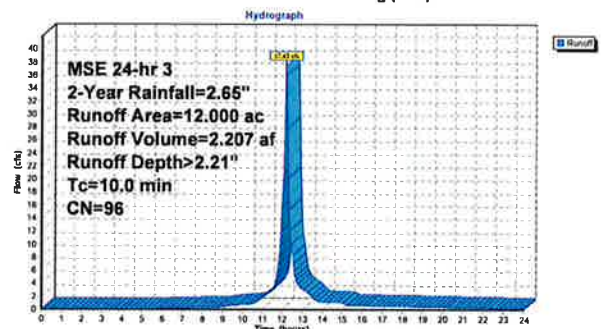
Runoff = 37.40 cfs @ 12.17 hrs, Volume= 2.207 af, Depth> 2.21"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 2-Year Rainfall=2.65"

Area (ac)	CN	Description
8.400	98	Paved parking, HSG D
1.300	95	Urban commercial, 85% imp, HSG D
1.300	84	50-75% Grass cover, Fair, HSG D
12.000	96	Weighted Average
1.495		12.46% Pervious Area
10.505		87.54% Impervious Area

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

Subcatchment 7S: Building (SC2)



Summary for Pond 6P: (new Pond)

Inflow Area = 5,900 ac, 100.00% Impervious, Inflow Depth > 2.42" for 2-Year event
 Inflow = 19.25 cfs @ 12.17 hrs, Volume= 1,189 af
 Outflow = 9.44 cfs @ 12.32 hrs, Volume= 1,182 af, Atten= 51%, Lag= 9.0 min
 Primary = 9.44 cfs @ 12.32 hrs, Volume= 1,182 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 846.26' @ 12.32 hrs Surf.Area= 0 sf Storage= 13,786 cf

Plug-Flow detention time= 28.9 min calculated for 1,180 af (98% of inflow)
 Center-of-Mass det. time= 25.3 min (783.8 - 758.5)

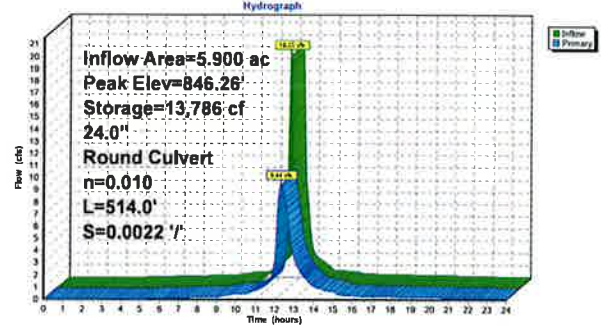
Volume	Invert	Avail. Storage	Storage Description
#1	844.60'	50,491 cf	Custom Stage Data Listed below

Elevation (feet)	Cum. Store (cubic-feet)
844.60	0
845.00	944
846.00	9,801
847.00	25,165
848.00	40,550
849.00	50,084
849.41	50,491

Device	Routing	Invert	Outlet Devices
#1	Primary	844.60'	24.0" Round Culvert L= 514.0' RCP, sq. cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 844.60' / 843.47' S= 0.0022' /' Cc= 0.900 n= 0.010, Flow Area= 3.14 sf

Primary OutFlow Max=9.40 cfs @ 12.32 hrs HW=846.25' (Free Discharge)
 1=Culvert (Barrel Controls 9.40 cfs @ 4.59 fps)

Pond 6P: (new Pond)



Summary for Pond 8P: (new Pond)

[81] Warning: Exceeded Pond 6P by 1.14' @ 15.50 hrs

Inflow Area = 17,900 ac, 81.65% Impervious, Inflow Depth > 2.27" for 2-Year event
 Inflow = 45.06 cfs @ 12.18 hrs, Volume= 3,390 af
 Outflow = 2.28 cfs @ 14.03 hrs, Volume= 1,869 af, Atten= 95%, Lag= 111.1 min
 Primary = 2.28 cfs @ 14.03 hrs, Volume= 1,869 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 846.12' @ 14.03 hrs Surf.Area= 0 sf Storage= 101,390 cf

Plug-Flow detention time= 311.2 min calculated for 1,865 af (55% of inflow)
 Center-of-Mass det. time= 230.3 min (1,006.9 - 776.7)

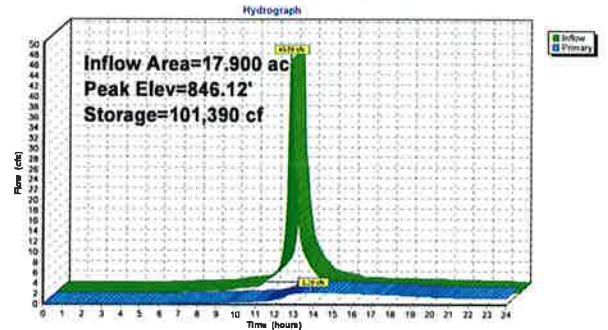
Volume	Invert	Avail. Storage	Storage Description
#1	842.50'	226,720 cf	Custom Stage Data Listed below

Elevation (feet)	Cum. Store (cubic-feet)
842.50	0
843.00	5,579
844.00	25,375
845.00	58,382
846.00	98,687
847.00	136,565
848.00	173,130
849.00	199,843
850.00	226,720

Device	Routing	Invert	Outlet Devices
#1	Primary	842.42'	4.5" Vert. Orifice/Grate C= 0.820
#2	Primary	845.30'	5.8" Vert. Orifice/Grate C= 0.820

Primary OutFlow Max=2.28 cfs @ 14.03 hrs HW=846.12' (Free Discharge)
 1=Orifice/Grate (Orifice Controls 1.38 cfs @ 12.33 fps)
 2=Orifice/Grate (Orifice Controls 0.92 cfs @ 5.00 fps)

Pond 8P: (new Pond)

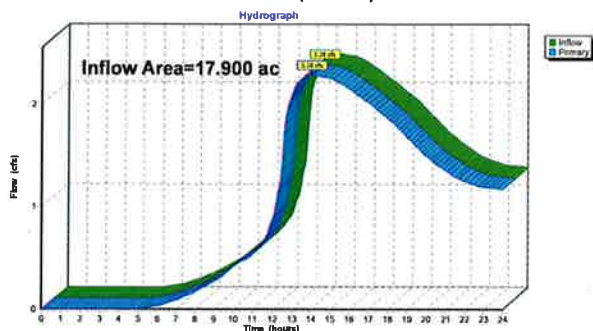


Summary for Link 9L: (new Link)

Inflow Area = 17.900 ac, 91.65% Impervious, Inflow Depth > 1.25" for 2-Year event
Inflow = 2.28 cfs @ 14.03 hrs, Volume= 1.869 af
Primary = 2.28 cfs @ 14.03 hrs, Volume= 1.869 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 9L: (new Link)



Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 5S: Parking (SC1) Runoff Area=5.900 ac 100.00% Impervious Runoff Depth>3.58"
Tc=10.0 min CN=98 Runoff=28.00 cfs 1.762 af

Subcatchment 7S: Building (SC2) Runoff Area=12.000 ac 87.54% Impervious Runoff Depth>3.36"
Tc=10.0 min CN=96 Runoff=55.53 cfs 3.360 af

Pond 6P: (new Pond) Peak Elev=846.69' Storage=20,353 cf Inflow=28.00 cfs 1.762 af
24.0" Round Culvert n=0.010 L=514.0' S=0.0022' Outflow=12.93 cfs 1.754 af

Pond 8P: (new Pond) Peak Elev=847.48' Storage=154,141 cf Inflow=65.82 cfs 5.115 af
Outflow=3.29 cfs 3.002 af

Link 9L: (new Link) Inflow=3.29 cfs 3.002 af
Primary=3.29 cfs 3.002 af

Total Runoff Area = 17.900 ac Runoff Volume = 5.123 af Average Runoff Depth = 3.43"
8.35% Pervious = 1.495 ac 91.65% Impervious = 16.405 ac

Summary for Subcatchment 5S: Parking (SC1)

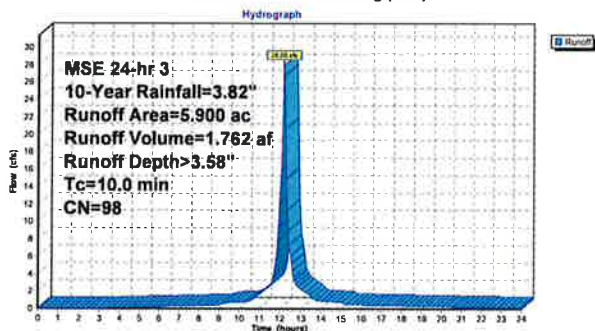
Runoff = 28.00 cfs @ 12.17 hrs, Volume= 1.762 af, Depth> 3.58"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-Year Rainfall=3.82"

Area (ac)	CN	Description
5.900	98	Paved parking, HSG D
5.900		100.00% Impervious Area

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

Subcatchment 5S: Parking (SC1)



Summary for Subcatchment 7S: Building (SC2)

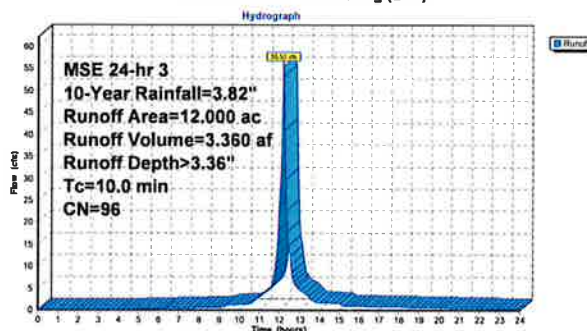
Runoff = 55.53 cfs @ 12.17 hrs, Volume= 3.360 af, Depth> 3.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-Year Rainfall=3.82"

Area (ac)	CN	Description
9.400	98	Paved parking, HSG D
1.300	95	Urban commercial, 85% Imp, HSG D
1.300	84	50-75% Grass cover, Fair, HSG D
12.000	96	Weighted Average
1.495		12.46% Pervious Area
10.505		87.54% Impervious Area

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

Subcatchment 7S: Building (SC2)



Summary for Pond 6P: (new Pond)

Inflow Area = 5.900 ac, 100.00% Impervious, Inflow Depth > 3.58" for 10-Year event
 Inflow = 28.00 cfs @ 12.17 hrs, Volume= 1.762 af
 Outflow = 12.83 cfs @ 12.33 hrs, Volume= 1.754 af, Atten= 54%, Lag= 9.6 min
 Primary = 12.83 cfs @ 12.33 hrs, Volume= 1.754 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 846.69' @ 12.33 hrs Surf.Area= 0 sf Storage= 20,353 cf

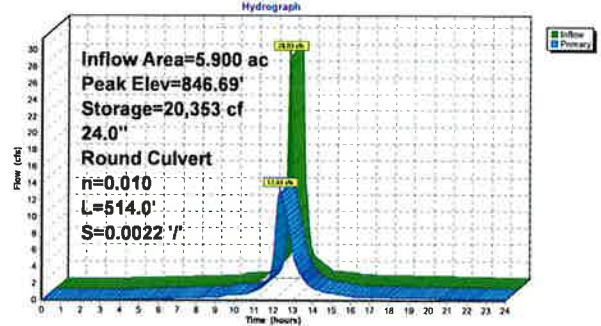
Plug-Flow detention time= 27.8 min calculated for 1.754 af (100% of inflow)
 Center-of-Mass det. time= 24.9 min (777.3 - 752.5)

Volume	Invert	Avail.Storage	Storage Description
#1	844.60'	50,491 cf	Custom Stage Data Listed below
Elevation (feet)	Cum.Store (cubic-feet)		
844.60	0		
845.00	944		
846.00	9,801		
847.00	25,165		
848.00	40,550		
849.00	50,084		
849.41	50,491		

Device	Routing	Invert	Outlet Devices
#1	Primary	844.60'	24.0" Round Culvert L= 514.0' RCP, sq. cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 844.60' / 843.47' S= 0.0022 ' /' Cc= 0.900 n= 0.010, Flow Area= 3.14 sf

Primary OutFlow Max=12.80 cfs @ 12.33 hrs HW=846.68' (Free Discharge)
 1=Culvert (Barrel Controls 12.80 cfs @ 4.90 fps)

Pond 6P: (new Pond)



Summary for Pond 8P: (new Pond)

[B1] Warning: Exceeded Pond 6P by 2.36' @ 14.85 hrs

Inflow Area = 17.900 ac, 91.65% Impervious, Inflow Depth > 3.43" for 10-Year event
 Inflow = 65.82 cfs @ 12.18 hrs, Volume= 5.115 af
 Outflow = 3.29 cfs @ 13.98 hrs, Volume= 3.002 af, Atten= 95%, Lag= 108.1 min
 Primary = 3.29 cfs @ 13.98 hrs, Volume= 3.002 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 847.48' @ 13.98 hrs Surf.Area= 0 sf Storage= 154,141 cf

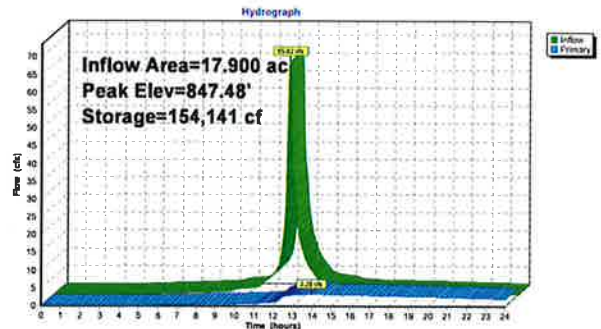
Plug-Flow detention time= 331.7 min calculated for 2.996 af (59% of inflow)
 Center-of-Mass det. time= 252.2 min (1,021.5 - 769.3)

Volume	Invert	Avail.Storage	Storage Description
#1	842.50'	226,720 cf	Custom Stage Data Listed below
Elevation (feet)	Cum.Store (cubic-feet)		
842.50	0		
843.00	5,579		
844.00	25,375		
845.00	58,382		
846.00	96,687		
847.00	136,565		
848.00	173,130		
849.00	199,843		
850.00	226,720		

Device	Routing	Invert	Outlet Devices
#1	Primary	842.42'	4.5" Vert. Orifice/Grate C= 0.820
#2	Primary	845.30'	5.8" Vert. Orifice/Grate C= 0.820

Primary OutFlow Max=3.29 cfs @ 13.98 hrs HW=847.48' (Free Discharge)
 1=Orifice/Grate (Orifice Controls 1.80 cfs @ 14.53 fps)
 2=Orifice/Grate (Orifice Controls 1.68 cfs @ 9.16 fps)

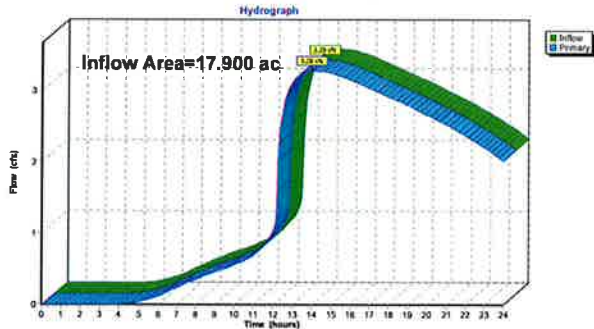
Pond 8P: (new Pond)



Summary for Link 9L: (new Link)

Inflow Area = 17.900 ac, 91.65% Impervious, Inflow Depth > 2.01" for 10-Year event
 Inflow = 3.29 cfs @ 13.88 hrs, Volume= 3.002 af
 Primary = 3.29 cfs @ 13.88 hrs, Volume= 3.002 af, Atten= 0%, Lag= 0.0 min
 Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 9L: (new Link)



Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 5S: Parking (SC1) Runoff Area=5.900 ac 100.00% Impervious Runoff Depth>4.49"
 Tc=10.0 min CN=98 Runoff=34.78 cfs 2.209 af
 Subcatchment 7S: Building (SC2) Runoff Area=12.000 ac 87.54% Impervious Runoff Depth>4.26"
 Tc=10.0 min CN=96 Runoff=69.51 cfs 4.263 af
 Pond 6P: (new Pond) Peak Elev=847.04' Storage=25,815 cf Inflow=34.78 cfs 2.209 af
 24.0" Round Culvert n=0.010 L=514.0' S=0.0022' Outflow=14.98 cfs 2.200 af
 Pond 8P: (new Pond) Peak Elev=848.88' Storage=196,600 cf Inflow=81.73 cfs 6.462 af
 Outflow=4.03 cfs 3.711 af
 Link 9L: (new Link) Inflow=4.03 cfs 3.711 af
 Primary=4.03 cfs 3.711 af

Total Runoff Area = 17.900 ac Runoff Volume = 6.471 af Average Runoff Depth = 4.34"
 8.35% Pervious = 1.495 ac 91.65% Impervious = 16.405 ac

Summary for Subcatchment 5S: Parking (SC1)

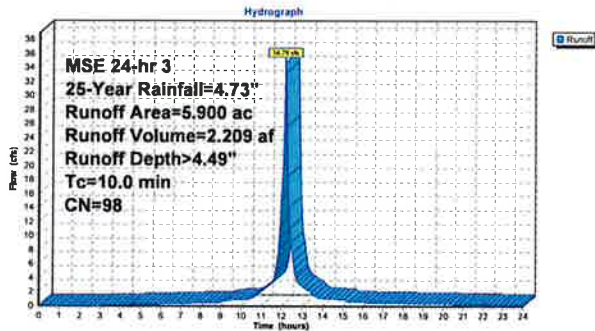
Runoff = 34.78 cfs @ 12.17 hrs, Volume= 2.209 af, Depth> 4.49"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 25-Year Rainfall=4.73"

Area (ac)	CN	Description
5.900	98	Paved parking, HSG D
5.900		100.00% Impervious Area

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

Subcatchment 5S: Parking (SC1)



Summary for Subcatchment 7S: Building (SC2)

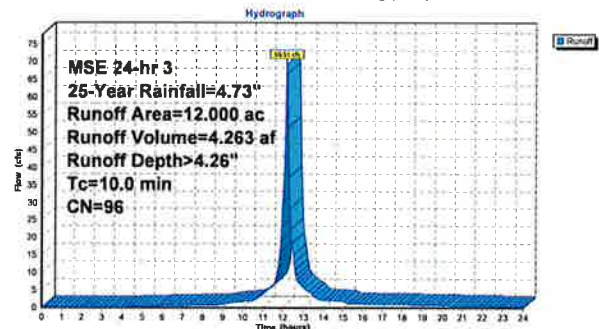
Runoff = 69.51 cfs @ 12.17 hrs, Volume= 4.263 af, Depth> 4.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 25-Year Rainfall=4.73"

Area (ac)	CN	Description
8.400	98	Paved parking, HSG D
1.300	95	Urban commercial, 85% imp, HSG D
1.300	84	50-75% Grass cover, Fair, HSG D
12.000	96	Weighted Average
1.495		12.46% Pervious Area
10.505		87.54% Impervious Area

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

Subcatchment 7S: Building (SC2)



Summary for Pond 6P: (new Pond)

Inflow Area = 5,900 ac, 100.00% Impervious, Inflow Depth > 4.49" for 25-Year event
 Inflow = 34.78 cfs @ 12.17 hrs, Volume= 2,209 af
 Outflow = 14.98 cfs @ 12.34 hrs, Volume= 2,200 af, Atten= 57%, Lag= 10.4 min
 Primary = 14.98 cfs @ 12.34 hrs, Volume= 2,200 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 847.04' @ 12.34 hrs Surf.Area= 0 sf Storage= 25,815 cf

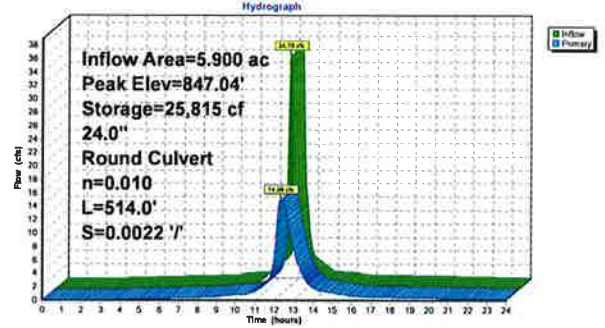
Plug-Flow detention time= 27.7 min calculated for 2,200 af (100% of inflow)
 Center-of-Mass det. time= 25.1 min (774.5 - 749.4)

Volume	Invert	Avail.Storage	Storage Description
#1	844.60'	50,491 cf	Custom Stage Data Listed below
Elevation (feet)	Cum.Store (cubic-feet)		
844.60	0		
845.00	944		
846.00	9,801		
847.00	25,165		
848.00	40,550		
849.00	50,084		
849.41	50,491		

Device	Routing	Invert	Outlet Devices
#1	Primary	844.60'	24.0" Round Culvert L= 514.0' RCP, sq. cut end projecting, K _e = 0.500 Inlet / Outlet Invert= 844.60' / 843.47' S= 0.0022 ' S= 0.0022 ' C _c = 0.900 n= 0.010, Flow Area= 3.14 sf

Primary OutFlow Max=14.98 cfs @ 12.34 hrs HW=847.04' (Free Discharge)
 1=Culvert (Barrel Controls 14.98 cfs @ 4.97 fps)

Pond 6P: (new Pond)



Summary for Pond 8P: (new Pond)

[81] Warning: Exceeded Pond 6P by 3.69' @ 14.65 hrs

Inflow Area = 17,900 ac, 81.65% Impervious, Inflow Depth > 4.33" for 25-Year event
 Inflow = 81.73 cfs @ 12.18 hrs, Volume= 6,462 af
 Outflow = 4.03 cfs @ 13.99 hrs, Volume= 3,711 af, Atten= 95%, Lag= 108.6 min
 Primary = 4.03 cfs @ 13.99 hrs, Volume= 3,711 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 848.88' @ 13.99 hrs Surf.Area= 0 sf Storage= 196,600 cf

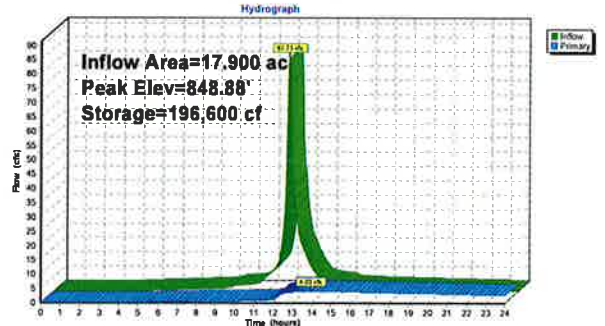
Plug-Flow detention time= 339.1 min calculated for 3,703 af (57% of inflow)
 Center-of-Mass det. time= 257.1 min (1,022.7 - 765.6)

Volume	Invert	Avail.Storage	Storage Description
#1	842.50'	226,720 cf	Custom Stage Data Listed below
Elevation (feet)	Cum.Store (cubic-feet)		
842.50	0		
843.00	5,579		
844.00	25,375		
845.00	58,382		
846.00	86,687		
847.00	136,565		
848.00	173,130		
849.00	199,843		
850.00	226,720		

Device	Routing	Invert	Outlet Devices
#1	Primary	842.42'	4.5" Vert. Orifice/Grate C= 0.820
#2	Primary	845.30'	5.8" Vert. Orifice/Grate C= 0.820

Primary OutFlow Max=4.03 cfs @ 13.99 hrs HW=848.88' (Free Discharge)
 1=Orifice/Grate (Orifice Controls 1.82 cfs @ 16.48 fps)
 2=Orifice/Grate (Orifice Controls 2.21 cfs @ 12.02 fps)

Pond 8P: (new Pond)

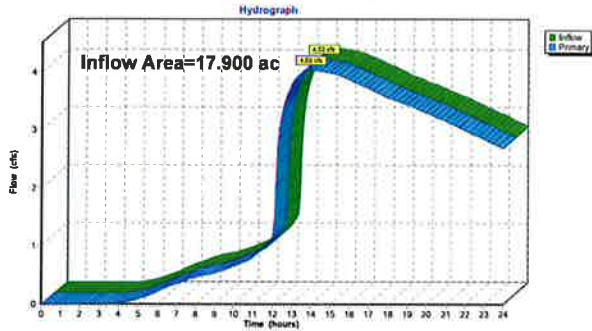


Summary for Link 9L: (new Link)

Inflow Area = 17.900 ac, 61.65% Impervious, Inflow Depth > 2.49" for 25-Year event
Inflow = 4.03 cfs @ 13.99 hrs, Volume= 3.711 af
Primary = 4.03 cfs @ 13.99 hrs, Volume= 3.711 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 9L: (new Link)



Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 5S: Parking (SC1) Runoff Area=5.900 ac 100.00% Impervious Runoff Depth>6.17"
Tc=10.0 min CN=98 Runoff=47.26 cfs 3.033 af
Subcatchment 7S: Building (SC2) Runoff Area=12.000 ac 87.54% Impervious Runoff Depth>5.93"
Tc=10.0 min CN=96 Runoff=95.15 cfs 5.933 af
Pond 6P: (new Pond) Peak Elev=847.82' Storage=37,735 cf Inflow=47.26 cfs 3.033 af
24.0" Round Culvert n=0.010 L=514.0' S=0.0022'/ Outflow=16.79 cfs 3.023 af
Pond 8P: (new Pond) Peak Elev=1,077.72' Storage=226,720 cf Inflow=110.01 cfs 8.956 af
Outflow=30.61 cfs 5.585 af
Link 9L: (new Link) Inflow=30.61 cfs 5.585 af
Primary=30.61 cfs 5.585 af

Total Runoff Area = 17.900 ac Runoff Volume = 8.967 af Average Runoff Depth = 6.01"
8.35% Pervious = 1.495 ac 91.65% Impervious = 16.405 ac

Summary for Subcatchment 5S: Parking (SC1)

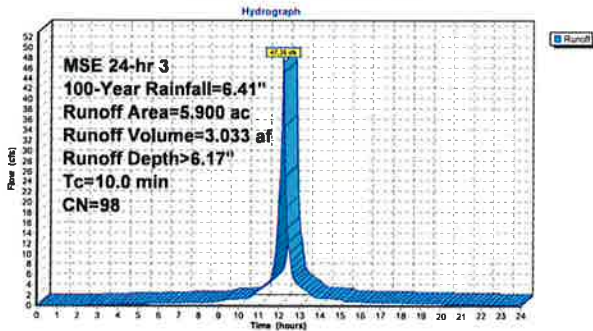
Runoff = 47.26 cfs @ 12.17 hrs, Volume= 3.033 af, Depth> 6.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-Year Rainfall=6.41"

Area (ac)	CN	Description
5.900	98	Paved parking, HSG D
5.900		100.00% Impervious Area

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

Subcatchment 5S: Parking (SC1)



Summary for Subcatchment 7S: Building (SC2)

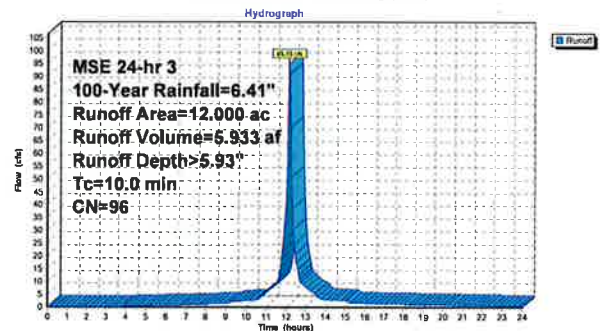
Runoff = 95.15 cfs @ 12.17 hrs, Volume= 5.933 af, Depth> 5.93"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-Year Rainfall=6.41"

Area (ac)	CN	Description
9.400	98	Paved parking, HSG D
1.300	95	Urban commercial, 85% imp, HSG D
1.300	84	50-75% Grass cover, Fair, HSG D
12.000	96	Weighted Average
1.495		12.46% Pervious Area
10.505		87.54% Impervious Area

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

Subcatchment 7S: Building (SC2)



Summary for Pond 6P: (new Pond)

Inflow Area = 5.900 ac, 100.00% Impervious, Inflow Depth > 6.17" for 100-Year event
 Inflow = 47.26 cfs @ 12.17 hrs, Volume= 3.033 af
 Outflow = 16.79 cfs @ 12.38 hrs, Volume= 3.023 af, Atten= 64%, Lag= 12.6 min
 Primary = 16.79 cfs @ 12.38 hrs, Volume= 3.023 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 847.82' @ 12.38 hrs Surf.Area= 0 sf Storage= 37,735 cf

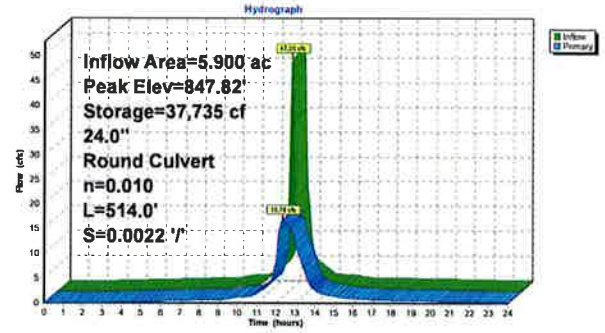
Plug-Flow detention time= 29.3 min calculated for 3.017 af (98% of inflow)
 Center-of-Mass del. time= 27.2 min (772.7 - 745.5)

Volume	Invert	Avail.Storage	Storage Description
#1	844.60'	50,491 cf	Custom Stage Data Listed below
Elevation (feet)	Cum.Store (cubic-feet)		
844.60	0		
845.00	944		
846.00	9,801		
847.00	25,165		
848.00	40,550		
849.00	50,084		
849.41	50,491		

Device	Routing	Invert	Outlet Devices
#1	Primary	844.60'	24.0" Round Culvert L= 514.0' RCP, sq cut and projecting, Ke= 0.500 Inlet / Outlet Invert= 844.60' / 843.47' S= 0.0022' / C= 0.900 n= 0.010, Flow Area= 3.14 sf

Primary OutFlow Max= 16.78 cfs @ 12.38 hrs HW= 847.81' (Free Discharge)
 1= Culvert (Barrel Controls 16.78 cfs @ 5.34 fps)

Pond 6P: (new Pond)



Summary for Pond 8P: (new Pond)

[93] Warning: Storage range exceeded by 227.72'
 [95] Warning: Oscillations may require smaller dt or Finer Routing (severity=15)
 [81] Warning: Exceeded Pond 6P by 219.03' @ 12.65 hrs

Inflow Area = 17.900 ac, 91.85% Impervious, Inflow Depth > 6.00" for 100-Year event
 Inflow = 110.01 cfs @ 12.17 hrs, Volume= 8.856 af
 Outflow = 30.61 cfs @ 12.67 hrs, Volume= 5.585 af, Atten= 72%, Lag= 29.8 min
 Primary = 30.61 cfs @ 12.67 hrs, Volume= 5.585 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 1,077.72' @ 12.66 hrs Surf.Area= 0 sf Storage= 226,720 cf

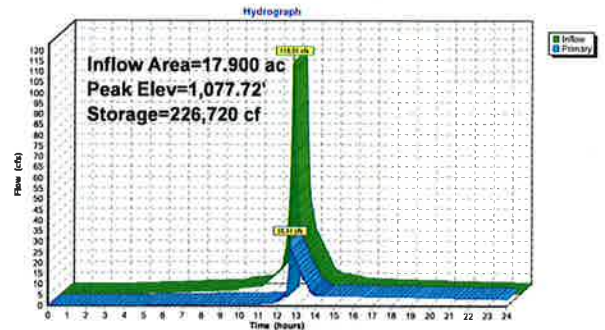
Plug-Flow detention time= 282.4 min calculated for 5.573 af (62% of inflow)
 Center-of-Mass del. time= 203.8 min (965.1 - 761.4)

Volume	Invert	Avail.Storage	Storage Description
#1	842.50'	226,720 cf	Custom Stage Data Listed below
Elevation (feet)	Cum.Store (cubic-feet)		
842.50	0		
843.00	5,579		
844.00	25,375		
845.00	58,382		
846.00	96,687		
847.00	136,585		
848.00	173,130		
849.00	199,843		
850.00	226,720		

Device	Routing	Invert	Outlet Devices
#1	Primary	842.42'	4.5" Vert. Orifice/Grate C= 0.820
#2	Primary	845.30'	5.8" Vert. Orifice/Grate C= 0.820

Primary OutFlow Max= 27.43 cfs @ 12.67 hrs HW= 1,045.51' (Free Discharge)
 1= Orifice/Grate (Orifice Controls 10.35 cfs @ 93.74 fps)
 2= Orifice/Grate (Orifice Controls 17.07 cfs @ 93.06 fps)

Pond 8P: (new Pond)



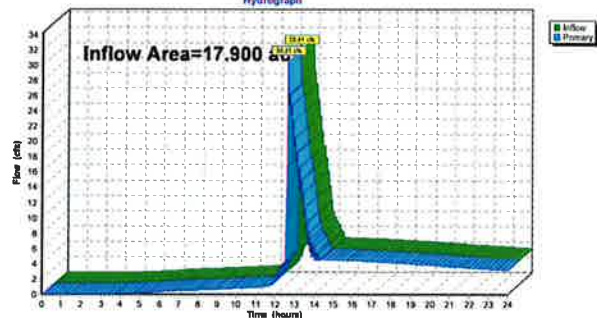
Summary for Link 9L: (new Link)

Inflow Area = 17.900 ac, 91.65% Impervious, Inflow Depth > 3.74" for 100-Year event
Inflow = 30.61 cfs @ 12.67 hrs, Volume= 5.585 af
Primary = 30.61 cfs @ 12.67 hrs, Volume= 5.585 af, Atten= 0%, Lag= 0.0 min

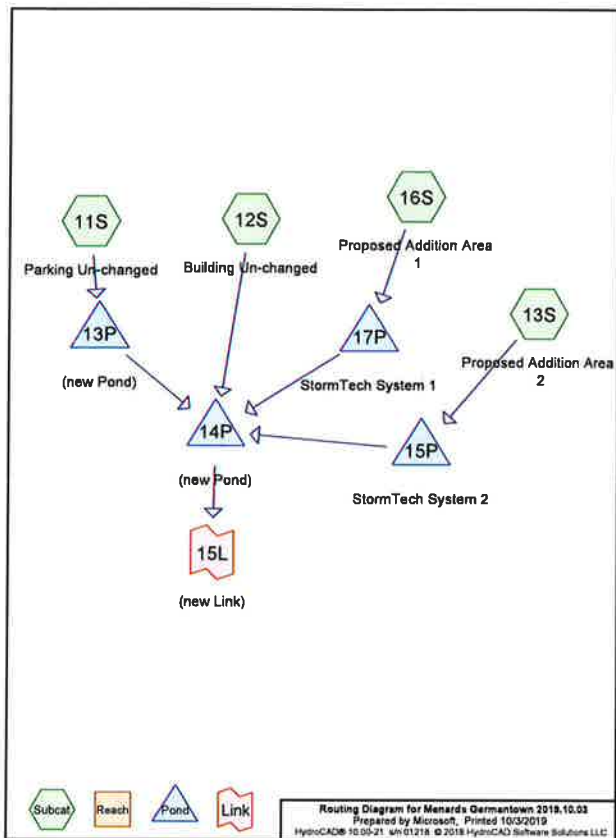
Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 9L: (new Link)

Hydrograph



Appendix E



Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.300	84	50-75% Grass cover, Fair, HSG D (12S)
16.400	88	Paved parking, HSG D (11S, 12S, 13S, 16S)
0.734	98	Roofs, HSG D (13S)
1.300	95	Urban commercial, 85% imp, HSG D (12S)
19.734	97	TOTAL AREA

Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
19.734	HSG D	11S, 12S, 13S, 16S
0.000	Other	
19.734		TOTAL AREA

Ground Covers (selected nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	1.300	0.000	1.300	50-75% Grass cover, Fair	12S
0.000	0.000	0.000	16.400	0.000	16.400	Paved parking	11S, 12S, 13S, 16S
0.000	0.000	0.000	0.734	0.000	0.734	Roofs	13S
0.000	0.000	0.000	1.300	0.000	1.300	Urban commercial, 85% imp	12S
0.000	0.000	0.000	19.734	0.000	19.734	TOTAL AREA	

Pipe Listing (selected nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Wdth (inches)	Height (inches)	Inside-Fill (inches)
1	13P	844.60	843.47	514.0	0.0022	0.010	24.0	0.0	0.0
2	15P	0.00	-1.00	10.0	0.1000	0.012	12.0	0.0	0.0
3	17P	0.00	-1.00	10.0	0.1000	0.012	12.0	0.0	0.0

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 11S: Parking Un-changed Runoff Area=5.900 ac 100.00% Impervious Runoff Depth>2.12"
Tc=10.0 min CN=98 Runoff=16.99 cfs 1.043 af

Subcatchment 12S: Building Un-changed Runoff Area=12.000 ac 87.54% Impervious Runoff Depth>1.91"
Tc=10.0 min CN=96 Runoff=32.71 cfs 1.914 af

Subcatchment 13S: Proposed Addition Runoff Area=1.052 ac 100.00% Impervious Runoff Depth>2.12"
Tc=10.0 min CN=98 Runoff=3.03 cfs 0.186 af

Subcatchment 16S: Proposed Addition Runoff Area=0.782 ac 100.00% Impervious Runoff Depth>2.12"
Tc=10.0 min CN=98 Runoff=2.25 cfs 0.138 af

Pond 13P: (new Pond) Peak Elev=846.15' Storage=12,136 cf Inflow=16.99 cfs 1.043 af
24.0" Round Culvert n=0.010 L=514.0' S=0.0022' Outflow=8.50 cfs 0.506 af

Pond 14P: (new Pond) Peak Elev=845.83' Storage=90,261 cf Inflow=39.71 cfs 3.124 af
Outflow=1.95 cfs 0.1636 af

Pond 15P: StormTech System 2 Peak Elev=2.15' Storage=0.138 af Inflow=3.03 cfs 0.186 af
Outflow=0.13 cfs 0.106 af

Pond 17P: StormTech System 1 Peak Elev=1.74' Storage=0.105 af Inflow=2.25 cfs 0.138 af
Outflow=0.09 cfs 0.069 af

Link 15L: (new Link) Inflow=1.95 cfs 0.1636 af
Primary=1.95 cfs 0.1636 af

Total Runoff Area = 19.734 ac Runoff Volume = 3.281 af Average Runoff Depth = 1.99"
7.58% Pervious = 1.495 ac 92.42% Impervious = 10.239 ac

Summary for Subcatchment 11S: Parking Un-changed

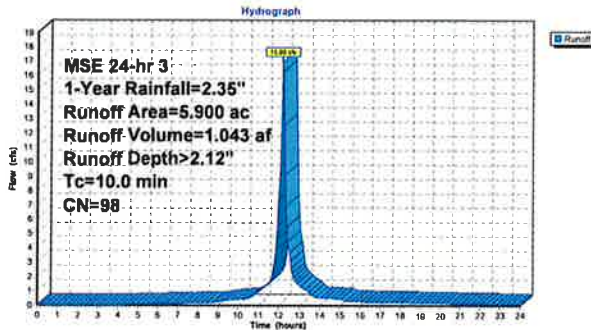
Runoff = 16.99 cfs @ 12.17 hrs, Volume= 1.043 af, Depth> 2.12"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 1-Year Rainfall=2.35"

Area (ac)	CN	Description
5.900	98	Paved parking, HSG D
5.900		100.00% Impervious Area

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

Subcatchment 11S: Parking Un-changed



Summary for Subcatchment 12S: Building Un-changed

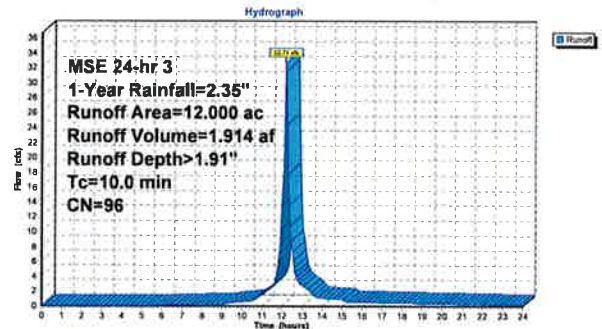
Runoff = 32.71 cfs @ 12.17 hrs, Volume= 1.914 af, Depth> 1.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 1-Year Rainfall=2.35"

Area (ac)	CN	Description
8.400	98	Paved parking, HSG D
1.300	95	Urban commercial, 85% imp, HSG D
1.300	84	50-75% Grass cover, Fair, HSG D
12.000	96	Weighted Average
1.495		12.46% Pervious Area
10.505		87.54% Impervious Area

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

Subcatchment 12S: Building Un-changed



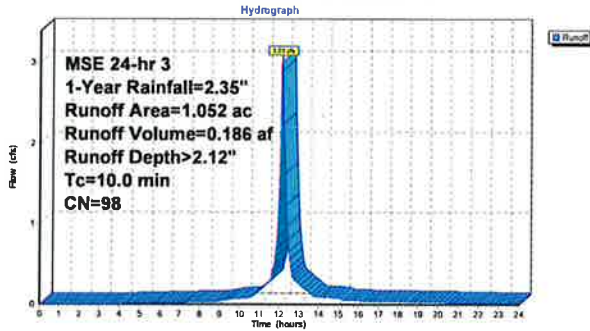
Summary for Subcatchment 13S: Proposed Addition Area 2

Runoff = 3.03 cfs @ 12.17 hrs, Volume= 0.186 af, Depth> 2.12"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 1-Year Rainfall=2.35"

Area (ac)	CN	Description
0.318	98	Paved parking, HSG D
0.734	98	Roofs, HSG D
1.052	98	Weighted Average
1.052		100.00% Impervious Area

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

Subcatchment 13S: Proposed Addition Area 2



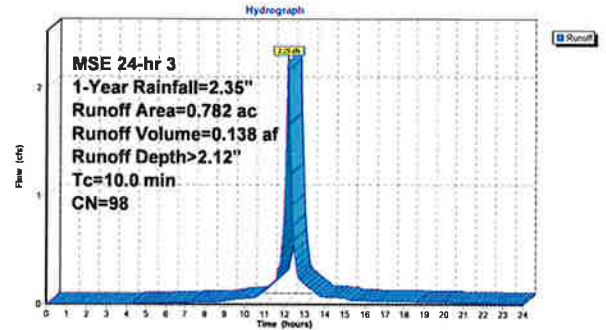
Summary for Subcatchment 16S: Proposed Addition Area 1

Runoff = 2.25 cfs @ 12.17 hrs, Volume= 0.138 af, Depth> 2.12"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 1-Year Rainfall=2.35"

Area (ac)	CN	Description
0.782	98	Paved parking, HSG D
0.782		100.00% Impervious Area

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

Subcatchment 16S: Proposed Addition Area 1



Summary for Pond 13P: (new Pond)

Inflow Area = 5.900 ac, 100.00% Impervious, Inflow Depth > 2.12" for 1-Year event
 Inflow = 16.89 cfs @ 12.17 hrs, Volume= 1.043 af
 Outflow = 8.50 cfs @ 12.32 hrs, Volume= 1.036 af, Atten= 50%, Lag= 8.8 min
 Primary = 8.50 cfs @ 12.32 hrs, Volume= 1.036 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 846.15' @ 12.32 hrs Surf.Area= 0 sf Storage= 12,136 cf

Plug-Flow detention time= 29.4 min calculated for 1.034 af (99% of inflow)
 Center-of-Mass det. time= 25.6 min (786.3 - 760.7)

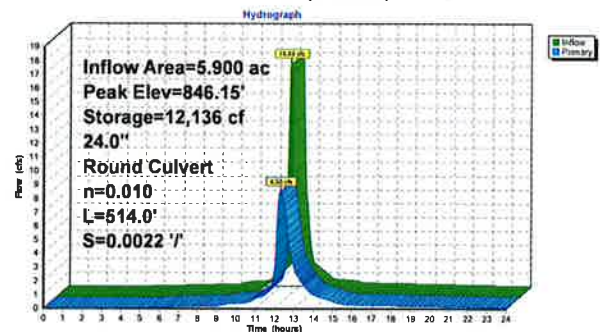
Volume	Invert	Avail.Storage	Storage Description
#1	844.60'	50,491 cf	Custom Stage Data Listed below

Elevation (feet)	Cum.Store (cubic-feet)
844.60	0
845.00	944
846.00	9,801
847.00	25,165
848.00	40,550
849.00	50,084
849.41	50,491

Device	Routing	Invert	Outlet Devices
#1	Primary	844.60'	24.0" Round Culvert L= 514.0' RCP, sq. cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 844.60' / 843.47' S= 0.0022' /' Cc= 0.800 n= 0.010, Flow Area= 3.14 sf

Primary OutFlow Max=8.47 cfs @ 12.32 hrs HW=846.15' (Free Discharge)
 1=Culvert (Barrel Controls 8.47 cfs @ 4.48 fps)

Pond 13P: (new Pond)



Summary for Pond 14P: (new Pond)

[81] Warning: Exceeded Pond 13P by 0.91' @ 15.55 hrs
 [81] Warning: Exceeded Pond 15P by 843.78' @ 22.10 hrs
 [81] Warning: Exceeded Pond 17P by 844.11' @ 14.90 hrs

Inflow Area = 19,734 ac, 92.42% Impervious, Inflow Depth > 1.90" for 1-Year event
 Inflow = 39.71 cfs @ 12.18 hrs, Volume= 3,124 af
 Outflow = 1.85 cfs @ 14.44 hrs, Volume= 1,636 af, Atten= 85%, Lag= 135.8 min
 Primary = 1.85 cfs @ 14.44 hrs, Volume= 1,636 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 845.83' @ 14.44 hrs Surf.Area= 0 sf Storage= 90,261 cf

Plug-Flow detention time= 319.6 min calculated for 1,636 af (52% of inflow)
 Center-of-Mass det. time= 223.3 min (1,017.9 - 794.6)

Volume Invert Avail. Storage Storage Description

#1 842.50' 226,720 cf Custom Stage Data Listed below

Elevation (feet)	Cum. Store (cubic-feet)
842.50	0
843.00	5,579
844.00	25,375
845.00	58,382
846.00	96,687
847.00	136,565
848.00	173,130
849.00	189,843
850.00	226,720

Device Routing Invert Outlet Devices

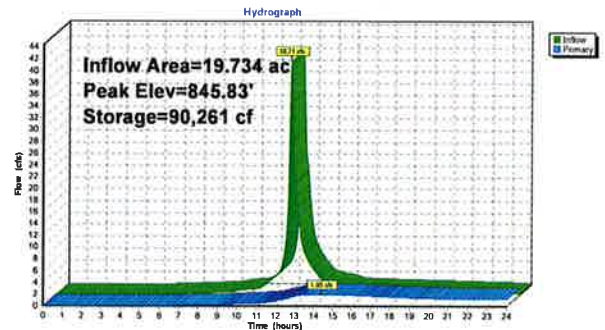
#1 Primary 842.42' 4.5" Vert. Orifice/Gate C= 0.820
 #2 Primary 845.30' 5.8" Vert. Orifice/Gate C= 0.820

Primary Outflow Max=1.96 cfs @ 14.44 hrs HW=845.83' (Free Discharge)

1=Orifice/Gate (Orifice Controls 1.31 cfs @ 11.82 fps)

2=Orifice/Gate (Orifice Controls 0.65 cfs @ 3.55 fps)

Pond 14P: (new Pond)



Summary for Pond 16P: StormTech System 2

Inflow Area = 1,052 ac, 100.00% Impervious, Inflow Depth > 2.12" for 1-Year event
 Inflow = 3.03 cfs @ 12.17 hrs, Volume= 0.186 af
 Outflow = 0.13 cfs @ 13.62 hrs, Volume= 0.106 af, Atten= 96%, Lag= 86.7 min
 Primary = 0.13 cfs @ 13.62 hrs, Volume= 0.106 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 2.15' @ 13.62 hrs Surf.Area= 0.093 ac Storage= 0.138 af

Plug-Flow detention time= 369.7 min calculated for 0.106 af (57% of inflow)
 Center-of-Mass det. time= 290.8 min (1,051.5 - 760.7)

Volume Invert Avail. Storage Storage Description

Volume	Invert	Avail. Storage	Storage Description
#1A	0.00'	0.151 af	37.58'W x 107.74'L x 6.75'H Field A
#2A	0.75'	0.251 af	0.627 af Overall - 0.251 af Embedded = 0.376 af x 40.0% Voids
			ADS StormTech MC-4500 +Capx 100 Inside #1
			Effective Size= 90.4"W x 60.0"H => 26.46 sf x 4.03'L = 106.5 cf
			Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap
			4 Rows of 25 Chambers
			Cap Storage= +35.7 cf x 2 x 4 rows = 285.6 cf
		0.402 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	0.00'	12.0" Round Culvert
			L= 10.0' RCP, groove and projecting, Ke= 0.200
			Inlet / Outlet Inverts= 0.00' / -1.00' S= 0.1000 /' Cc= 0.900
			n= 0.012, Flow Area= 0.79 sf
#2	Device 1	1.00'	2.2" Vert. Orifice/Gate C= 0.600
#3	Device 1	6.25'	3.0' long Sharp-Crested Rectangular Weir 2 End Contractions)

Primary Outflow Max=0.13 cfs @ 13.62 hrs HW=2.15' (Free Discharge)

1=Culvert (Passes 0.13 cfs of 6.08 cfs potential flow)

2=Orifice/Gate (Orifice Controls 0.13 cfs @ 4.96 fps)

3=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 16P: StormTech System 2 - Chamber Wizard Field A

Chamber Model= ADS StormTechMC-4500+Cap (ADS StormTechMC-4500 with cap volume)

Effective Size= 90.4"W x 60.0"H => 26.46 sf x 4.03'L = 106.5 cf

Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap

Cap Storage= +35.7 cf x 2 x 4 rows = 285.6 cf

100.0" Wide + 8.0" Spacing = 108.0" C-C Row Spacing

25 Chambers/Row x 4.02' Long +2.56' Cap Length x 2 = 105.74' Row Length +12.0" End Stone x 2 = 107.74' Base Length

4 Rows x 100.0" Wide + 9.0" Spacing x 3 + 12.0" Side Stone x 2 = 37.56' Base Width

9.0" Base + 60.0" Chamber Height + 12.0" Cover = 6.75' Field Height

100 Chambers x 106.5 cf + 35.7 cf Cap Volume x 2 x 4 Rows = 10,934.6 cf Chamber Storage

27,332.7 cf Field - 10,934.6 cf Chambers = 16,398.1 cf Stone x 40.0% Voids = 6,559.2 cf Stone Storage

Chamber Storage + Stone Storage = 17,493.8 cf = 0.402 af

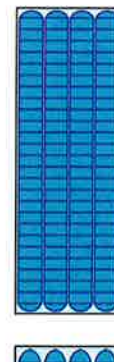
Overall Storage Efficiency = 64.0%

Overall System Size = 107.74' x 37.56' x 6.75'

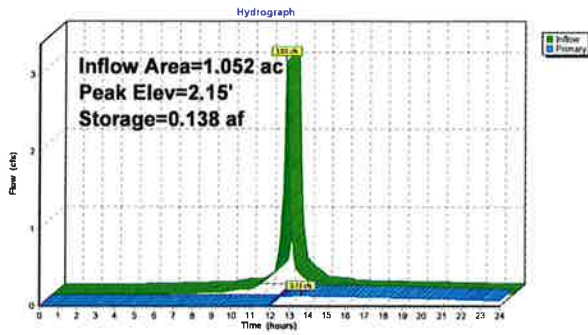
100 Chambers

1,012.3 cy Field

607.3 cy Stone



Pond 15P: StormTech System 2



Summary for Pond 17P: StormTech System 1

Inflow Area = 0.782 ac, 100.00% Impervious, Inflow Depth > 2.12" for 1-Year event
 Inflow = 2.25 cfs @ 12.17 hrs, Volume = 0.138 af
 Outflow = 0.09 cfs @ 13.67 hrs, Volume = 0.069 af, Atten = 96%, Lag = 90.0 min
 Primary = 0.09 cfs @ 13.67 hrs, Volume = 0.069 af

Routing by Stor-Ind method, Time Span = 0.00-24.00 hrs, dt = 0.05 hrs
 Peak Elev = 1.74' @ 13.67 hrs Surf Area = 0.093 ac Storage = 0.105 af
 Plug-Flow detention time = 379.9 min calculated for 0.069 af (50% of inflow)
 Center-of-Mass det. time = 294.1 min (1,054.8 - 760.7)

Volume	Invert	Avail. Storage	Storage Description
#1A	0.00'	0.131 af	22.75'W x 177.78'L x 5.50'H Field A
#2A	0.75'	0.184 af	0.511 af Overall - 0.184 af Embedded = 0.327 af x 40.0% Voids
			ADS StormTech MC-3500 d + Cap x 72 Inside #1
			Effective Size = 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf
			Overall Size = 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap
			3 Rows of 24 Chambers
			Cap Storage = +14.9 cf x 2 x 3 rows = 89.4 cf
		0.315 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	0.00'	12.0" Round Culvert
			L = 10.0' RCP, groove end projecting, K _e = 0.200
			Inlet / Outlet Invert = 0.00' / -1.00' S = 0.1000' / C _c = 0.900
			n = 0.012, Flow Area = 0.79 sf
#2	Device 1	1.00'	2.0" Vert. Orifice/Grate C = 0.600
#3	Device 1	5.25'	3.0' long Sharp-Crested Rectangular Weir 2 End Contractions(s)

Primary Outflow Max = 0.09 cfs @ 13.67 hrs HW = 1.74' (Free Discharge)
 1 = Culvert (Passes 0.09 cfs of 5.26 cfs potential flow)
 2 = Orifice/Grate (Orifice Controls 0.09 cfs @ 3.90 fps)
 3 = Sharp-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 17P: StormTech System 1 - Chamber Wizard Field A

Chamber Model = ADS StormTech MC-3500 d + Cap (ADS StormTech MC-3500 d rev 03/14 with Cap volume)
 Effective Size = 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf
 Overall Size = 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap
 Cap Storage = +14.9 cf x 2 x 3 rows = 89.4 cf

77.0" Wide x 9.0" Spacing = 86.0" C-C Row Spacing

24 Chambers/Row x 7.17' Long + 1.85' Cap Length x 2 = 175.78' Row Length + 12.0" End Stone x 2 = 177.78' Base Length
 3 Rows x 77.0" Wide x 9.0" Spacing x 2 + 12.0" Side Stone x 2 = 22.75' Base Width
 9.0" Base + 45.0" Chamber Height + 12.0" Cover = 5.50' Field Height

72 Chambers x 110.0 cf + 14.9 cf Cap Volume x 2 x 3 Rows = 8,005.9 cf Chamber Storage

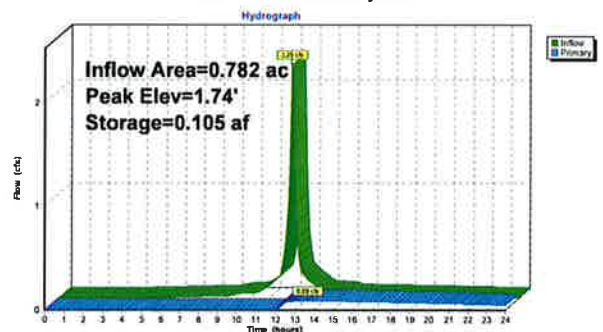
22,244.7 cf Field - 8,005.9 cf Chambers = 14,238.8 cf Stone x 40.0% Voids = 5,695.5 cf Stone Storage

Chamber Storage + Stone Storage = 13,701.5 cf = 0.315 af
 Overall Storage Efficiency = 61.6%
 Overall System Size = 177.78' x 22.75' x 5.50'

72 Chambers
 823.9 cy Field
 527.4 cy Stone



Pond 17P: StormTech System 1

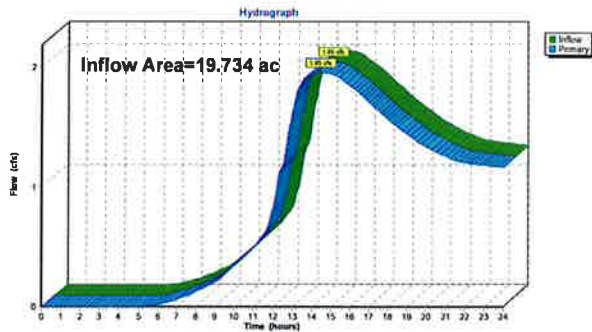


Summary for Link 15L: (new Link)

Inflow Area = 19.734 ac, 82.42% Impervious, Inflow Depth > 0.99" for 1-Year event
 Inflow = 1.95 cfs @ 14.44 hrs, Volume= 1.636 af
 Primary = 1.95 cfs @ 14.44 hrs, Volume= 1.636 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 15L: (new Link)



Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment11S: Parking Un-changed Runoff Area=5.900 ac 100.00% Impervious Runoff Depth>2.42"
 Tc=10.0 min CN=98 Runoff=18.25 cfs 1.189 af

Subcatchment12S: Building Un-changed Runoff Area=12.000 ac 87.54% Impervious Runoff Depth>2.21"
 Tc=10.0 min CN=96 Runoff=37.40 cfs 2.207 af

Subcatchment13S: Proposed Addition Runoff Area=1.052 ac 100.00% Impervious Runoff Depth>2.42"
 Tc=10.0 min CN=98 Runoff=3.43 cfs 0.212 af

Subcatchment16S: Proposed Addition Runoff Area=0.782 ac 100.00% Impervious Runoff Depth>2.42"
 Tc=10.0 min CN=98 Runoff=2.55 cfs 0.158 af

Pond 13P: (new Pond) Peak Elev=846.26' Storage=13,786 cf Inflow=19.25 cfs 1.189 af
 24.0" Round Culvert n=0.010 L=514.0' S=0.0022' Outflow=9.44 cfs 1.182 af

Pond 14P: (new Pond) Peak Elev=846.16' Storage=102,939 cf Inflow=45.21 cfs 3.591 af
 Outflow=2.32 cfs 1.968 af

Pond 15P: StormTech System 2 Peak Elev=2.41' Storage=0.158 af Inflow=3.43 cfs 0.212 af
 Outflow=0.15 cfs 0.121 af

Pond 17P: StormTech System 1 Peak Elev=1.93' Storage=0.119 af Inflow=2.55 cfs 0.158 af
 Outflow=0.10 cfs 0.080 af

Link 15L: (new Link) Inflow=2.32 cfs 1.968 af
 Primary=2.32 cfs 1.968 af

Total Runoff Area = 19.734 ac Runoff Volume = 3.766 af Average Runoff Depth = 2.29"
 7.58% Pervious = 1.495 ac 92.42% Impervious = 18.239 ac

Summary for Subcatchment 11S: Parking Un-changed

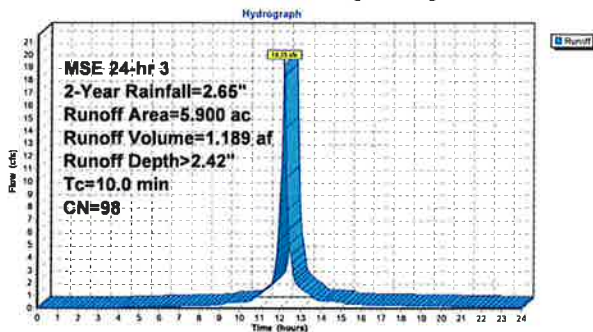
Runoff = 19.25 cfs @ 12.17 hrs, Volume= 1.189 af, Depth> 2.42"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 2-Year Rainfall=2.65"

Area (ac)	CN	Description
5.900	98	Paved parking, HSG D
5.900		100.00% Impervious Area

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

Subcatchment 11S: Parking Un-changed



Summary for Subcatchment 12S: Building Un-changed

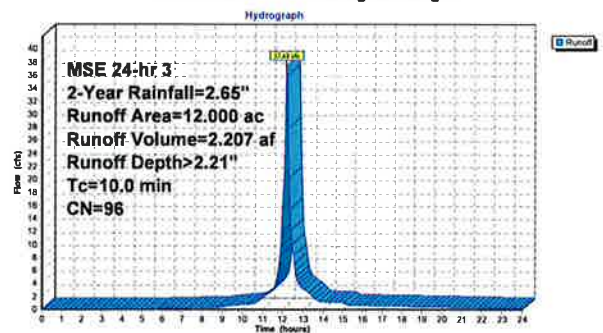
Runoff = 37.40 cfs @ 12.17 hrs, Volume= 2.207 af, Depth> 2.21"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 2-Year Rainfall=2.65"

Area (ac)	CN	Description
9.400	98	Paved parking, HSG D
1.300	95	Urban commercial, 85% imp, HSG D
1.300	84	50-75% Grass cover, Fair, HSG D
12.000	96	Weighted Average
1.485		12.46% Pervious Area
10.505		87.54% Impervious Area

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

Subcatchment 12S: Building Un-changed



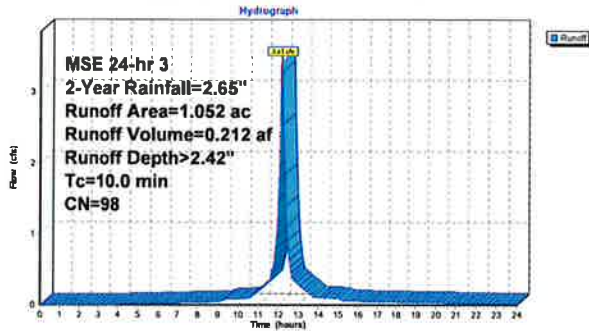
Summary for Subcatchment 13S: Proposed Addition Area 2

Runoff = 3.43 cfs @ 12.17 hrs, Volume= 0.212 af, Depth> 2.42"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 2-Year Rainfall=2.65"

Area (ac)	CN	Description
0.318	98	Paved parking, HSG D
0.734	98	Roofs, HSG D
1.052	98	Weighted Average
1.052		100.00% Impervious Area

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

Subcatchment 13S: Proposed Addition Area 2



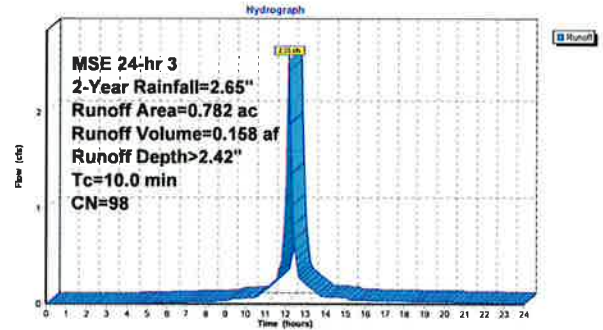
Summary for Subcatchment 16S: Proposed Addition Area 1

Runoff = 2.55 cfs @ 12.17 hrs, Volume= 0.158 af, Depth> 2.42"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 2-Year Rainfall=2.65"

Area (ac)	CN	Description
0.782	98	Paved parking, HSG D
0.782		100.00% Impervious Area

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

Subcatchment 16S: Proposed Addition Area 1



Summary for Pond 13P: (new Pond)

Inflow Area = 5.900 ac, 100.00% Impervious, Inflow Depth > 2.42" for 2-Year event
 Inflow = 18.25 cfs @ 12.17 hrs, Volume= 1.189 af
 Outflow = 9.44 cfs @ 12.32 hrs, Volume= 1.182 af, Atten= 51%, Lag= 9.0 min
 Primary = 9.44 cfs @ 12.32 hrs, Volume= 1.182 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 846.26' @ 12.32 hrs Surf.Area= 0 sf Storage= 13,786 cf

Plug-Flow detention time= 28.9 min calculated for 1.180 af (99% of inflow)
 Center-of-Mass det. time= 25.3 min (783.8 - 758.5)

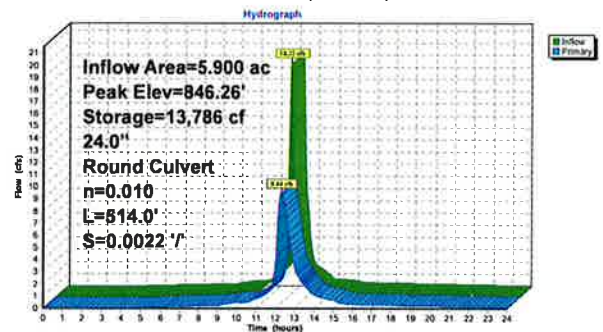
Volume	Invert	Avail.Storage	Storage Description
#1	844.60'	50,491 cf	Custom Stage Data Listed below

Elevation (feet)	Cum.Store (cubic-feet)
844.60	0
845.00	944
846.00	9,801
847.00	25,165
848.00	40,550
849.00	50,084
849.41	50,491

Device	Routing	Invert	Outlet Devices
#1	Primary	844.60'	24.0" Round Culvert L= 514.0' RCP, sq. cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 844.60' / 843.47' S= 0.0022' /' Cc= 0.900 n= 0.010, Flow Area= 3.14 sf

Primary Outflow Max=9.40 cfs @ 12.32 hrs HW=846.25' (Free Discharge)
 1=Culvert (Barrel Controls 9.40 cfs @ 4.59 (ps)

Pond 13P: (new Pond)



Summary for Pond 14P: (new Pond)

[81] Warning: Exceeded Pond 13P by 1.20' @ 15.55 hrs
 [81] Warning: Exceeded Pond 15P by 843.80' @ 15.45 hrs
 [81] Warning: Exceeded Pond 17P by 844.24' @ 14.85 hrs

Inflow Area = 19,734 ac, 82.42% Impervious, Inflow Depth > 2.18" for 2-Year event
 Inflow = 45.21 cfs @ 12.18 hrs, Volume= 3,591 af
 Outflow = 2.32 cfs @ 14.25 hrs, Volume= 1,966 af, Atten= 95%, Lag= 124.5 min
 Primary = 2.32 cfs @ 14.25 hrs, Volume= 1,966 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 846.16' @ 14.25 hrs Surf.Area= 0 sf Storage= 102,939 cf

Plug-Flow detention time= 315.8 min calculated for 1.961 af (55% of inflow)
 Center-of-Mass det. time= 221.7 min (1,014.0 - 782.3)

Volume	Invert	Avail.Storage	Storage Description
#1	842.50'	226,720 cf	Custom Stage Data Listed below

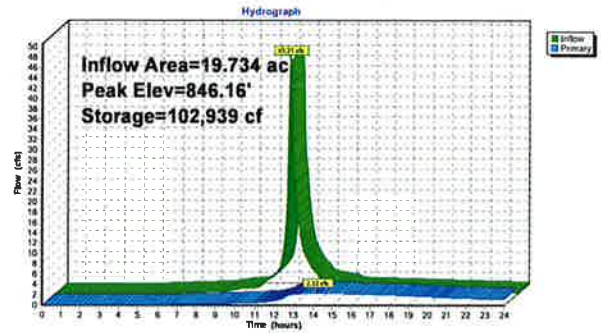
Elevation (feet)	Cum.Store (cubic-feet)
842.50	0
843.00	5,579
844.00	25,375
845.00	58,382
846.00	96,697
847.00	136,565
848.00	173,130
849.00	199,843
850.00	226,720

Device	Routing	Invert	Outlet Devices
#1	Primary	842.42'	4.5" Vert. Orifice/Grate C= 0.820
#2	Primary	845.30'	5.8" Vert. Orifice/Grate C= 0.820

Primary OutFlow Max=2.32 cfs @ 14.25 hrs HW=846.16' (Free Discharge)

1=Orifice/Grate (Orifice Controls 1.37 cfs @ 12.40 fps)
 2=Orifice/Grate (Orifice Controls 0.95 cfs @ 5.16 fps)

Pond 14P: (new Pond)



Summary for Pond 15P: StormTech System 2

Inflow Area = 1,052 ac, 100.00% Impervious, Inflow Depth > 2.42" for 2-Year event
 Inflow = 3.43 cfs @ 12.17 hrs, Volume= 0.212 af
 Outflow = 0.15 cfs @ 13.62 hrs, Volume= 0.121 af, Atten= 96%, Lag= 87.1 min
 Primary = 0.15 cfs @ 13.62 hrs, Volume= 0.121 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 2.41' @ 13.62 hrs Surf.Area= 0.093 ac Storage= 0.158 af

Plug-Flow detention time= 375.1 min calculated for 0.121 af (57% of inflow)
 Center-of-Mass det. time= 295.5 min (1,054.0 - 758.5)

Volume	Invert	Avail.Storage	Storage Description
#1A	0.00'	0.151 af	37.58'W x 107.74'L x 6.75'H Field A
#2A	0.75'	0.251 af	0.627 af Overall - 0.251 af Embedded = 0.376 af x 40.0% Voids
			ADS StormTech MC-4500 +Cap x 100 Inside #1
			Effective Size= 90.4"W x 60.0"H => 26.46 sf x 4.03'L = 106.5 cf
			Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap
			4 Rows of 25 Chambers
			Cap Storage= +35.7 cf x 2 x 4 rows = 285.6 cf
		0.402 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	0.00'	12.0" Round Culvert
			L= 10.0' RCP, groove end projecting, Ke= 0.200
			Inlet / Outlet Inverts: 0.00' / -1.00' S= 0.1000' /' Cc= 0.800
			n= 0.012, Flow Area= 0.79 sf
#2	Device 1	1.00'	2.2" Vert. Orifice/Grate C= 0.600
#3	Device 1	6.25'	3.0" long Sharp-Crested Rectangular Weir 2 End Contractions

Primary OutFlow Max=0.15 cfs @ 13.62 hrs HW=2.41' (Free Discharge)

1=Culvert (Passes 0.15 cfs of 6.54 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 0.15 cfs @ 5.53 fps)
 3=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 15P: StormTech System 2 - Chamber Wizard Field A

Chamber Model= ADS StormTech MC-4500 +Cap (ADS StormTech MC-4500 with cap volume)
 Effective Size= 90.4"W x 60.0"H => 26.46 sf x 4.03'L = 106.5 cf
 Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap
 Cap Storage= +35.7 cf x 2 x 4 rows = 285.6 cf

100.0' Wide x 9.0" Spacing = 109.0" C-C Row Spacing

25 Chambers/Row x 4.02' Long +2.56' Cap Length x 2 = 105.74' Row Length +12.0" End Stone x 2 = 107.74' Base Length
 4 Rows x 100.0' Wide x 9.0" Spacing x 3 + 12.0" Side Stone x 2 = 37.58' Base Width
 9.0" Base + 60.0" Chamber Height + 12.0" Cover = 6.75' Field Height

100 Chambers x 106.5 cf + 35.7 cf Cap Volume x 2 x 4 Rows = 10,934.6 cf Chamber Storage

27,332.7 cf Field - 10,934.6 cf Chambers = 16,398.1 cf of Stone x 40.0% Voids = 6,559.2 cf Stone Storage

Chamber Storage + Stone Storage = 17,493.8 cf = 0.402 af

Overall Storage Efficiency = 64.0%

Overall System Size = 107.74' x 37.58' x 6.75'

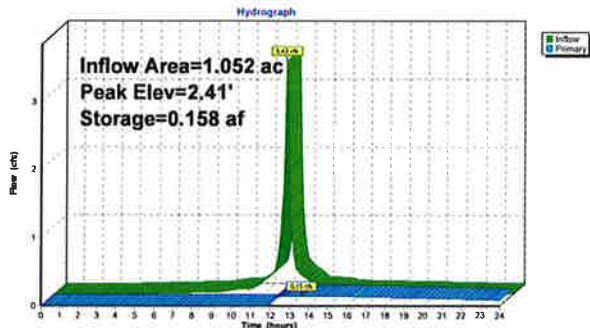
100 Chambers

1,012.3 cy Field

607.3 cy Stone



Pond 15P: StormTech System 2



Summary for Pond 17P: StormTech System 1

Inflow Area = 0.782 ac, 100.00% Impervious, Inflow Depth > 2.42" for 2-Year event
 Inflow = 2.55 cfs @ 12.17 hrs, Volume = 0.158 af
 Outflow = 0.10 cfs @ 13.67 hrs, Volume = 0.080 af, Atten= 96%, Lag= 89.9 min
 Primary = 0.10 cfs @ 13.67 hrs, Volume = 0.080 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 1.93' @ 13.67 hrs Surf.Area= 0.093 ac Storage= 0.119 af

Plug-Flow detention time= 385.3 min calculated for 0.080 af (51% of inflow)
 Center-of-Mass det. time= 299.0 min (1,057.5 - 758.5)

Volume	Invert	Avail. Storage	Storage Description
#1A	0.00'	0.131 af	22.75'W x 177.78'L x 5.50'H Field A
			0.511 af Overall - 0.184 af Embedded = 0.327 af x 40.0% Voids
#2A	0.75'	0.184 af	ADS_StormTech MC-3500 d +Cap x 72 Inside #1
			Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf
			Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap
			3 Rows of 24 Chambers
			Cap Storage= +14.9 cf x 2 x 3 rows = 89.4 cf
		0.315 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	0.00'	12.0" Round Culvert
			L= 10.0' RCP, groove end projecting, Ke= 0.200
			Inlet / Outlet Inverts 0.00' / -1.00' S= 0.1000 / Cc= 0.900
			n= 0.012, Flow Area= 0.79 sf
#2	Device 1	1.00'	2.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	5.25'	3.0' long Sharp-Crested Rectangular Weir 2 End Contractions(s)

Primary OutFlow Max=0.10 cfs @ 13.67 hrs HW=1.93' (Free Discharge)

- 1=Culvert (Passes 0.10 cfs of 5.66 cfs potential flow)
- 2=Orifice/Grate (Orifice Controls 0.10 cfs @ 4.44 fps)
- 3=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 17P: StormTech System 1 - Chamber Wizard Field A

Chamber Model= ADS_StormTechMC-3500 d +Cap (ADS StormTechMC-3500 d rev 03/14 with Cap volume)

Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf
 Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap
 Cap Storage= +14.9 cf x 2 x 3 rows = 89.4 cf

77.0" Wide + 9.0" Spacing = 86.0" C-C Row Spacing

24 Chambers/Row x 7.17' Long +1.85' Cap Length x 2 = 175.78' Row Length +12.0" End Stone x 2 = 177.78' Base Length
 3 Rows x 77.0" Wide + 9.0" Spacing x 2 + 12.0" Side Stone x 2 = 22.75' Base Width
 9.0" Base + 45.0" Chamber Height + 12.0" Cover = 5.50' Field Height

72 Chambers x 110.0 cf + 14.9 cf Cap Volume x 2 x 3 Rows = 8,005.9 cf Chamber Storage

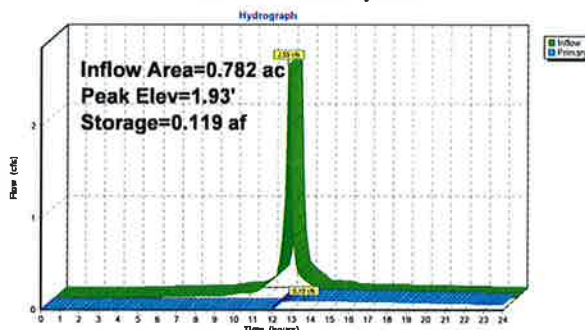
22,244.7 cf Field - 8,005.9 cf Chambers = 14,238.8 cf Stone x 40.0% Voids = 5,695.5 cf Stone Storage

Chamber Storage + Stone Storage = 13,701.5 cf = 0.315 af
 Overall Storage Efficiency = 61.6%
 Overall System Size = 177.78' x 22.75' x 5.50'

72 Chambers
 823.9 cy Field
 527.4 cy Stone



Pond 17P: StormTech System 1

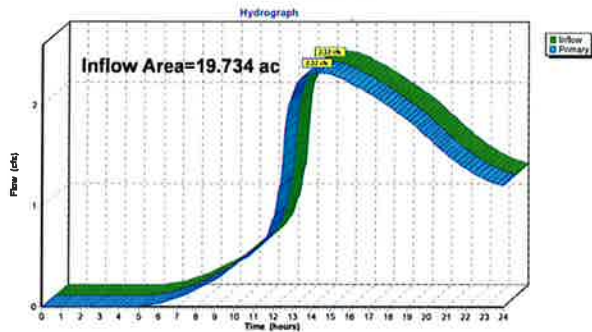


Summary for Link 15L: (new Link)

Inflow Area = 19.734 ac, 92.42% Impervious, Inflow Depth > 1.20" for 2-Year event
 Inflow = 2.32 cfs @ 14.25 hrs, Volume= 1,966 af
 Primary = 2.32 cfs @ 14.25 hrs, Volume= 1,966 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 15L: (new Link)



Time span=0.00-24.00 hrs, dt=0.05 hrs, 461 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment11S: Parking Un-changed Runoff Area=5.900 ac 100.00% Impervious Runoff Depth>3.58"
 Tc=10.0 min CN=98 Runoff=28.00 cfs 1.762 af

Subcatchment12S: Building Un-changed Runoff Area=12.000 ac 87.54% Impervious Runoff Depth>3.36"
 Tc=10.0 min CN=96 Runoff=55.53 cfs 3.360 af

Subcatchment13S: Proposed Addition Runoff Area=1.052 ac 100.00% Impervious Runoff Depth>3.58"
 Tc=10.0 min CN=98 Runoff=4.99 cfs 0.314 af

Subcatchment16S: Proposed Addition Runoff Area=0.782 ac 100.00% Impervious Runoff Depth>3.58"
 Tc=10.0 min CN=98 Runoff=3.71 cfs 0.234 af

Pond 13P: (new Pond) Peak Elev=846.69' Storage=20,353 cf Inflow=28.00 cfs 1.762 af
 24.0" Round Culvert n=0.010 L=514.0' S=0.0022' Outflow=12.83 cfs 1.754 af

Pond 14P: (new Pond) Peak Elev=847.54' Storage=156,418 cf Inflow=66.05 cfs 5.405 af
 Outflow=3.32 cfs 3.105 af

Pond 15P: StormTech System 2 Peak Elev=3.47' Storage=0.235 af Inflow=4.99 cfs 0.314 af
 Outflow=0.20 cfs 0.172 af

Pond 17P: StormTech System 1 Peak Elev=2.73' Storage=0.177 af Inflow=3.71 cfs 0.234 af
 Outflow=0.13 cfs 0.118 af

Link 15L: (new Link) Inflow=3.32 cfs 3.105 af
 Primary=3.32 cfs 3.105 af

Total Runoff Area = 19.734 ac Runoff Volume = 5.570 af Average Runoff Depth = 3.45"
 7.58% Pervious = 1.495 ac 92.42% Impervious = 18.239 ac

Summary for Subcatchment 11S: Parking Un-changed

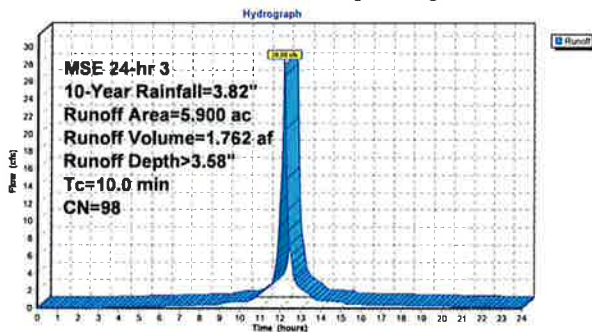
Runoff = 28.00 cfs @ 12.17 hrs, Volume= 1.762 af, Depth> 3.58"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 10-Year Rainfall=3.82"

Area (ac)	CN	Description
5.900	98	Paved parking, HSG D
5.900		100.00% Impervious Area

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

Subcatchment 11S: Parking Un-changed



Summary for Subcatchment 12S: Building Un-changed

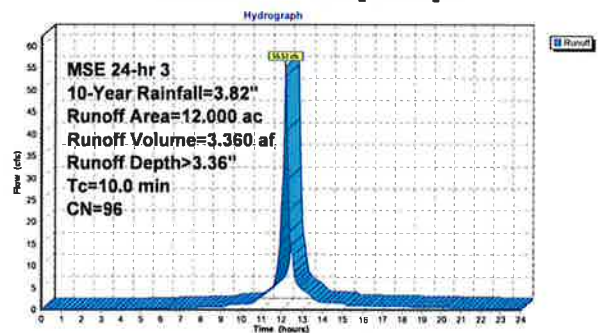
Runoff = 55.53 cfs @ 12.17 hrs, Volume= 3.360 af, Depth> 3.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 10-Year Rainfall=3.82"

Area (ac)	CN	Description
9.400	98	Paved parking, HSG D
1.300	95	Urban commercial, 85% imp, HSG D
1.300	84	50-75% Grass cover, Fair, HSG D
12.000	96	Weighted Average
1.495		12.46% Pervious Area
10.505		87.54% Impervious Area

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

Subcatchment 12S: Building Un-changed



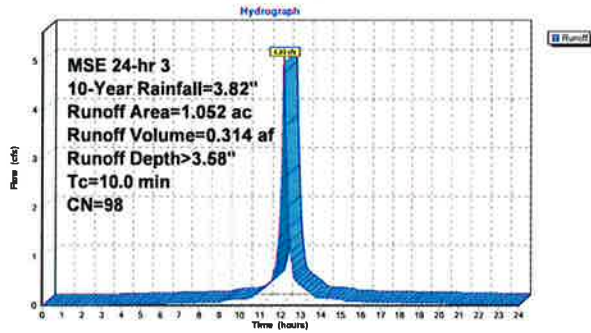
Summary for Subcatchment 13S: Proposed Addition Area 2

Runoff = 4.88 cfs @ 12.17 hrs, Volume= 0.314 af, Depth> 3.58"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 10-Year Rainfall=3.82"

Area (ac)	CN	Description
0.318	98	Paved parking, HSG D
0.734	98	Roofs, HSG D
1.052	98	Weighted Average
1.052		100.00% Impervious Area

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

Subcatchment 13S: Proposed Addition Area 2



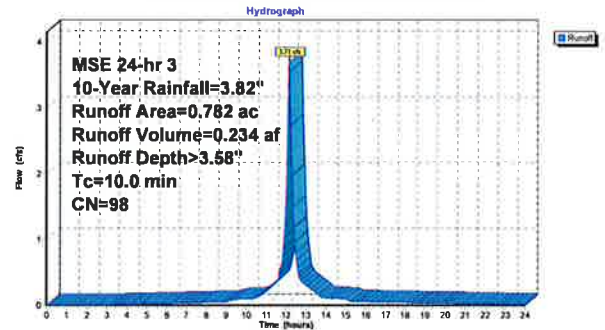
Summary for Subcatchment 16S: Proposed Addition Area 1

Runoff = 3.71 cfs @ 12.17 hrs, Volume= 0.234 af, Depth> 3.58"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 10-Year Rainfall=3.82"

Area (ac)	CN	Description
0.782	98	Paved parking, HSG D
0.782		100.00% Impervious Area

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

Subcatchment 16S: Proposed Addition Area 1



Summary for Pond 13P: (new Pond)

Inflow Area = 5.900 ac, 100.00% Impervious, Inflow Depth > 3.58" for 10-Year event
 Inflow = 28.00 cfs @ 12.17 hrs, Volume= 1.762 af
 Outflow = 12.93 cfs @ 12.33 hrs, Volume= 1.754 af, Altten= 54%, Lag= 9.6 min
 Primary = 12.93 cfs @ 12.33 hrs, Volume= 1.754 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 846.69' @ 12.33 hrs Surf.Area= 0 sf Storage= 20,353 cf

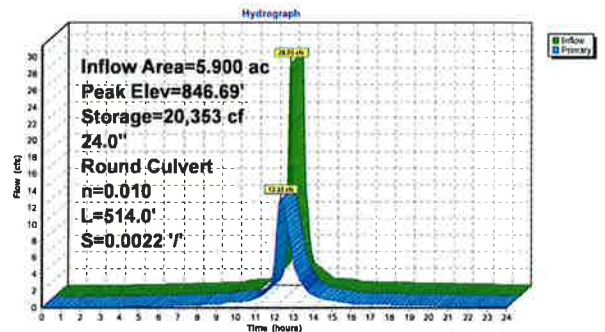
Plug-Flow detention time= 27.8 min calculated for 1.754 af (100% of inflow)
 Center-of-Mass det. time= 24.9 min (777.3 - 752.5)

Volume	Invert	Avail. Storage	Storage Description
#1	844.60'	50,491 cf	Custom Stage Data Listed below
Elevation (feet)	Cum. Store (cubic-feet)		
844.60	0		
845.00	844		
846.00	9,801		
847.00	25,165		
848.00	40,550		
849.00	50,084		
849.41	50,491		

Device	Routing	Invert	Outlet Devices
#1	Primary	844.60'	24.0" Round Culvert L= 514.0' RCP, sq. cut end projecting, K= 0.500 Inlet / Outlet Inverts= 844.60' / 843.47' S= 0.0022' /' Cc= 0.900 n= 0.010, Flow Area= 3.14 sf

Primary OutFlow Max=12.90 cfs @ 12.33 hrs HW=846.68' (Free Discharge)
 1=Culvert (Barrel Controls 12.90 cfs @ 4.90 fps)

Pond 13P: (new Pond)



Summary for Pond 14P: (new Pond)

[81] Warning: Exceeded Pond 13P by 2.46' @ 15.80 hrs
 [81] Warning: Exceeded Pond 15P by 844.13' @ 15.40 hrs
 [81] Warning: Exceeded Pond 17P by 844.83' @ 14.60 hrs

Inflow Area = 19,734 ac, 92.42% Impervious, Inflow Depth > 3.28" for 10-Year event
 Inflow = 66.05 cfs @ 12.18 hrs, Volume= 5,405 af
 Outflow = 3.32 cfs @ 14.18 hrs, Volume= 3,105 af, Atten= 95%, Lag= 120.5 min
 Primary = 3.32 cfs @ 14.18 hrs, Volume= 3,105 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 847.54' @ 14.18 hrs Surf.Area= 0 sf Storage= 156,418 cf

Plug-Flow detention time= 336.5 min calculated for 3,105 af (57% of inflow)
 Center-of-Mass det. time= 242.7 min (1,027.5 - 784.8)

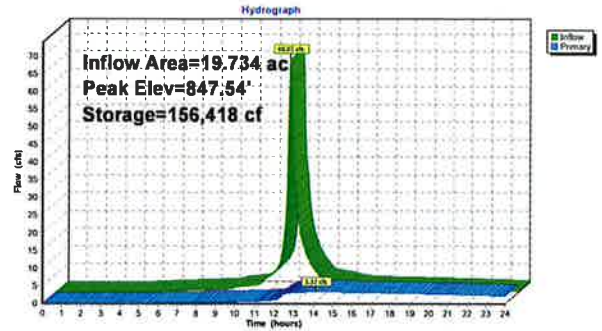
Volume Invert Avail.Storage Storage Description
 #1 842.50' 226,720 cf Custom Stage Data Listed below

Elevation (feet)	Cum.Store (cubic-feet)
842.50	0
843.00	5,579
844.00	25,375
845.00	58,382
846.00	96,897
847.00	136,565
848.00	173,130
849.00	198,643
850.00	226,720

Device	Routing	Invert	Outlet Devices
#1	Primary	842.42'	4.5" Vert. Orifice/Grate C= 0.820
#2	Primary	845.30'	5.8" Vert. Orifice/Grate C= 0.820

Primary Outflow Max=3.32 cfs @ 14.18 hrs HW=847.54' (Free Discharge)
 1=Orifice/Grate (Orifice Controls 1.61 cfs @ 14.62 fps)
 2=Orifice/Grate (Orifice Controls 1.71 cfs @ 9.31 fps)

Pond 14P: (new Pond)



Summary for Pond 15P: StormTech System 2

Inflow Area = 1,052 ac, 100.00% Impervious, Inflow Depth > 3.58" for 10-Year event
 Inflow = 4.99 cfs @ 12.17 hrs, Volume= 0.314 af
 Outflow = 0.20 cfs @ 13.65 hrs, Volume= 0.172 af, Atten= 96%, Lag= 89.0 min
 Primary = 0.20 cfs @ 13.65 hrs, Volume= 0.172 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 3.47' @ 13.65 hrs Surf.Area= 0.093 ac Storage= 0.235 af

Plug-Flow detention time= 388.5 min calculated for 0.172 af (55% of inflow)
 Center-of-Mass det. time= 304.2 min (1,058.7 - 752.5)

Volume	Invert	Avail.Storage	Storage Description
#1A	0.00'	0.151 af	37.58'W x 107.74'L x 6.75'H Field A 0.627 af Overall - 0.251 af Embedded = 0.376 af x 40.0% Voids
#2A	0.75'	0.251 af	ADS_StormTech MC-4500 +Cap x 100 Inside #1 Effective Size= 90.4"W x 60.0"H => 26.46 sf x 4.03'L = 106.5 cf Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap 4 Rows of 25 Chambers Cap Storage= +35.7 cf x 2 x 4 rows = 285.6 cf
		0.402 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	0.00'	12.0" Round Culvert L= 10.0' RCP, groove end projecting, Ke= 0.200 Inlet/Outlet Invert= 0.00' / -1.00' S= 0.1000' /' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Device 1	1.00'	2.2" Vert. Orifice/Grate C= 0.600
#3	Device 1	6.25'	3.0' long Sharp-Crested Rectangular Weir 2 End Contractions

Primary Outflow Max=0.20 cfs @ 13.65 hrs HW=3.47' (Free Discharge)
 1=Culvert (Passes 0.20 cfs of 8.15 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 0.20 cfs @ 7.42 fps)
 3=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 15P: StormTech System 2 - Chamber Wizard Field A

Chamber Model= ADS_StormTechMC-4500 +Cap (ADS StormTech®MC-4500 with cap volume)
 Effective Size= 90.4"W x 60.0"H => 26.46 sf x 4.03'L = 106.5 cf
 Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap
 Cap Storage= +35.7 cf x 2 x 4 rows = 285.6 cf

100.0" Wide + 6.0" Spacing = 108.0" C-C Row Spacing

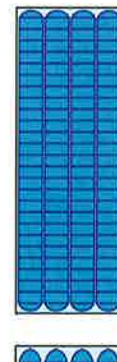
25 Chambers/Row x 4.02' Long +2.56' Cap Length x 2 = 105.74' Row Length +12.0" End Stone x 2 = 107.74' Base Length
 4 Rows x 100.0" Wide + 9.0" Spacing x 3 + 12.0" Side Stone x 2 = 37.58' Base Width
 9.0" Base + 60.0" Chamber Height + 12.0" Cover = 8.75' Field Height

100 Chambers x 106.5 cf + 35.7 cf Cap Volume x 2 x 4 Rows = 10,834.6 cf Chamber Storage

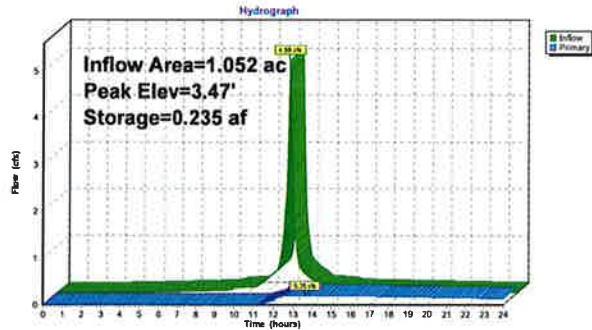
27,332.7 cf Field - 10,834.6 cf Chambers = 16,398.1 cf Stone x 40.0% Voids = 6,559.2 cf Stone Storage

Chamber Storage + Stone Storage = 17,493.9 cf = 0.402 af
 Overall Storage Efficiency = 64.0%
 Overall System Size = 107.74' x 37.58' x 8.75'

100 Chambers
 1,012.3 cy Field
 607.3 cy Stone



Pond 16P: StormTech System 2



Summary for Pond 17P: StormTech System 1

Inflow Area = 0.782 ac, 100.00% Impervious, Inflow Depth > 3.58" for 10-Year event
 Inflow = 3.71 cfs @ 12.17 hrs, Volume = 0.234 af
 Outflow = 0.13 cfs @ 13.69 hrs, Volume = 0.118 af, Atten= 96%, Lag= 81.0 min
 Primary = 0.13 cfs @ 13.69 hrs, Volume = 0.118 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 2.73' @ 13.69 hrs Surf.Area= 0.093 ac Storage= 0.177 af

Plug-Flow detention time= 398.4 min calculated for 0.118 af (50% of inflow)
 Center-of-Mass del. time= 309.3 min (1,061.8 - 752.5)

Volume	Invert	Avail. Storage	Storage Description
#1A	0.00'	0.131 af	22.75'W x 177.78'L x 5.50'H Field A 0.511 af Overall - 0.184 af Embedded = 0.327 af x 40.0% Voids
#2A	0.75'	0.184 af	ADS_StormTech MC-3500 d +Capr 72 Inside #1 Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap 3 Rows of 24 Chambers Cap Storage= +14.9 cf x 2 x 3 rows = 89.4 cf
			0.315 af Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	0.00'	12.0" Round Culvert L= 10.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 0.00' / -1.00' S= 0.1000 /' Cc= 0.800 n= 0.012, Flow Area= 0.78 sf
#2	Device 1	1.00'	2.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	5.25'	3.0' long Sharp-Crested Rectangular Weir 2 End Contractions

Primary OutFlow Max=0.13 cfs @ 13.69 hrs HW=2.73' (Free Discharge)
 1=Culvert (Passes 0.13 cfs of 7.07 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 0.13 cfs @ 6.19 fps)
 3=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 17P: StormTech System 1 - Chamber Wizard Field A

Chamber Model= ADS_StormTechMC-3500 d +Cap (ADS StormTech®MC-3500 d rev 03/14 with Cap volume)
 Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf
 Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap
 Cap Storage= +14.9 cf x 2 x 3 rows = 89.4 cf

77.0" Wide + 9.0" Spacing = 86.0" C-C Row Spacing

24 Chambers/Row x 7.17' Long +1.85' Cap Length x 2 = 175.78' Row Length +12.0" End Stone x 2 = 177.78' Base Length
 3 Rows x 77.0" Wide + 8.0" Spacing x 2 + 12.0" Side Stone x 2 = 22.75' Base Width
 9.0" Base + 45.0" Chamber Height + 12.0" Cover = 5.50' Field Height

72 Chambers x 110.0 cf + 14.9 cf Cap Volume x 2 x 3 Rows = 8,005.9 cf of Chamber Storage

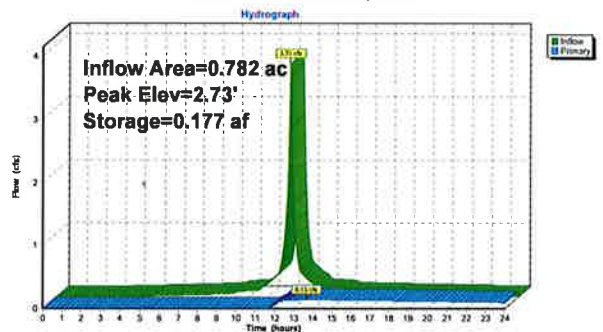
22,244.7 cf Field - 8,005.9 cf Chambers = 14,238.8 cf of Stone x 40.0% Voids = 5,695.5 cf Stone Storage

Chamber Storage + Stone Storage = 13,701.5 cf = 0.315 af
 Overall Storage Efficiency = 61.8%
 Overall System Size = 177.78' x 22.75' x 5.50'

72 Chambers
 823.9 cy Field
 527.4 cy Stone



Pond 17P: StormTech System 1

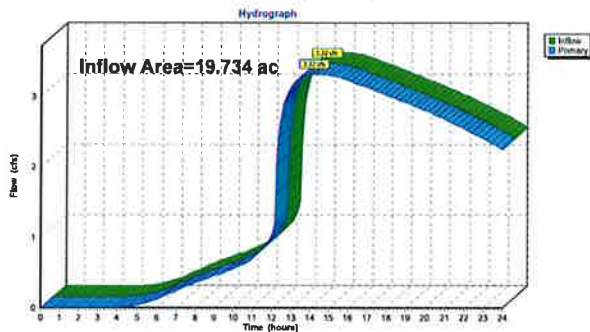


Summary for Link 15L: (new Link)

Inflow Area = 19.734 ac, 92.42% Impervious, Inflow Depth > 1.89" for 10-Year event
 Inflow = 3.32 cfs @ 14.18 hrs, Volume= 3.105 af
 Primary = 3.32 cfs @ 14.18 hrs, Volume= 3.105 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 15L: (new Link)



Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment11S: Parking Un-changed Runoff Area=5.900 ac 100.00% Impervious Runoff Depth>4.49"
 Tc=10.0 min CN=98 Runoff=34.78 cfs 2.209 af

Subcatchment12S: Building Un-changed Runoff Area=12.000 ac 87.54% Impervious Runoff Depth>4.26"
 Tc=10.0 min CN=96 Runoff=69.51 cfs 4.263 af

Subcatchment13S: Proposed Addition Runoff Area=1.052 ac 100.00% Impervious Runoff Depth>4.49"
 Tc=10.0 min CN=98 Runoff=6.20 cfs 0.394 af

Subcatchment16S: Proposed Addition Runoff Area=0.782 ac 100.00% Impervious Runoff Depth>4.49"
 Tc=10.0 min CN=98 Runoff=4.61 cfs 0.293 af

Pond 13P: (new Pond) Peak Elev=847.04' Storage=25,815 cf Inflow=34.78 cfs 2.209 af
 24.0" Round Culvert n=0.010 L=514.0' S=0.0022' Outflow=14.98 cfs 2.200 af

Pond 14P: (new Pond) Peak Elev=848.98' Storage=189,421 cf Inflow=82.01 cfs 6.814 af
 Outflow=4.08 cfs 3.621 af

Pond 15P: StormTech System 2 Peak Elev=4.37' Storage=0.295 af Inflow=6.20 cfs 0.394 af
 Outflow=0.23 cfs 0.208 af

Pond 17P: StormTech System 1 Peak Elev=3.42' Storage=0.223 af Inflow=4.61 cfs 0.293 af
 Outflow=0.16 cfs 0.144 af

Link 15L: (new Link) Inflow=4.08 cfs 3.621 af
 Primary=4.08 cfs 3.621 af

Total Runoff Area = 19.734 ac Runoff Volume = 7.158 af Average Runoff Depth = 4.35"
 7.58% Pervious = 1.495 ac 92.42% Impervious = 18.239 ac

Summary for Subcatchment 11S: Parking Un-changed

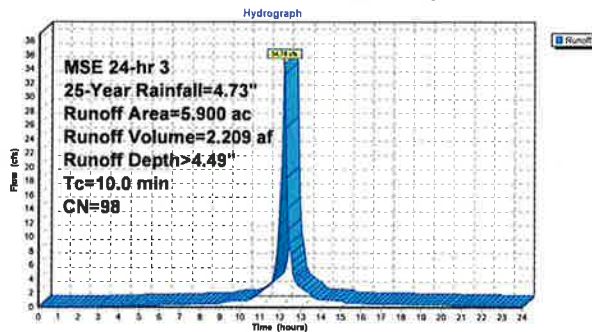
Runoff = 34.78 cfs @ 12.17 hrs, Volume= 2.209 af, Depth> 4.49"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 25-Year Rainfall=4.73"

Area (ac)	CN	Description
5.900	98	Paved parking, HSG D
5.900		100.00% Impervious Area

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

Subcatchment 11S: Parking Un-changed



Summary for Subcatchment 12S: Building Un-changed

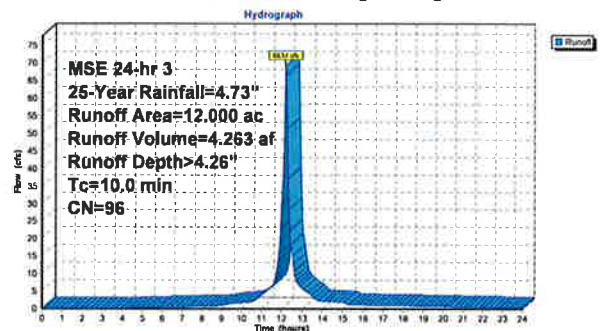
Runoff = 69.51 cfs @ 12.17 hrs, Volume= 4.263 af, Depth> 4.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 25-Year Rainfall=4.73"

Area (ac)	CN	Description
9.400	98	Paved parking, HSG D
1.300	85	Urban commercial, 85% imp, HSG D
1.300	84	50-75% Grass cover, Fair, HSG D
12.000	96	Weighted Average
1.495		12.46% Pervious Area
10.505		87.54% Impervious Area

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

Subcatchment 12S: Building Un-changed



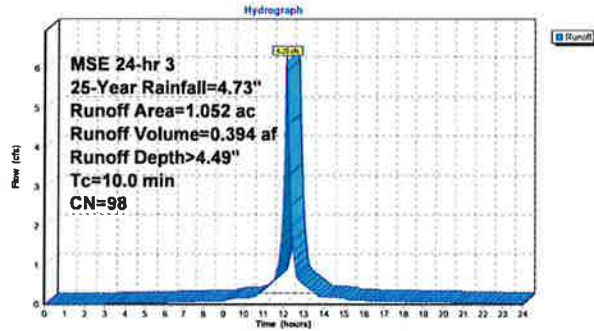
Summary for Subcatchment 13S: Proposed Addition Area 2

Runoff = 6.20 cfs @ 12.17 hrs, Volume= 0.394 af, Depth> 4.49"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 25-Year Rainfall=4.73"

Area (ac)	CN	Description
0.318	98	Paved parking, HSG D
0.734	98	Roofs, HSG D
1.052	98	Weighted Average
1.052		100.00% Impervious Area

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

Subcatchment 13S: Proposed Addition Area 2



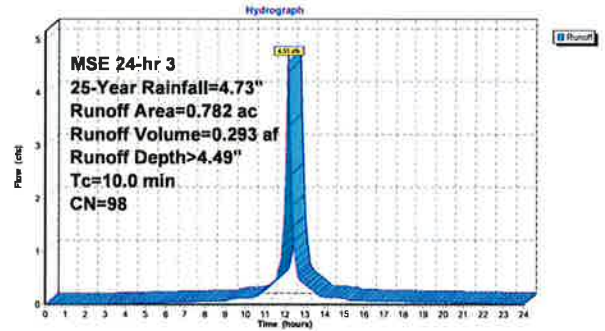
Summary for Subcatchment 16S: Proposed Addition Area 1

Runoff = 4.61 cfs @ 12.17 hrs, Volume= 0.293 af, Depth> 4.49"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 25-Year Rainfall=4.73"

Area (ac)	CN	Description
0.782	98	Paved parking, HSG D
0.782		100.00% Impervious Area

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

Subcatchment 16S: Proposed Addition Area 1



Summary for Pond 13P: (new Pond)

Inflow Area = 5.900 ac, 100.00% Impervious, Inflow Depth > 4.49" for 25-Year event
 Inflow = 34.78 cfs @ 12.17 hrs, Volume= 2.209 af
 Outflow = 14.98 cfs @ 12.34 hrs, Volume= 2.200 af, Atten= 57%, Lag= 10.4 min
 Primary = 14.98 cfs @ 12.34 hrs, Volume= 2.200 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 847.04' @ 12.34 hrs Surf.Area= 0 sf Storage= 25,815 cf

Plug-Flow detention time= 27.7 min calculated for 2.200 af (100% of inflow)
 Center-of-Mass det. time= 25.1 min (774.5 - 749.4)

Volume	Invert	Avail.Storage	Storage Description
#1	844.60'	50,491 cf	Custom Stage Data Listed below

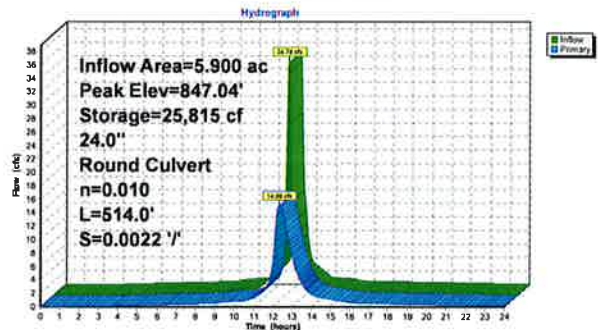
Elevation (feet)	Cum.Store (cubic-feet)
844.60	0
845.00	944
846.00	9,801
847.00	25,165
848.00	40,550
849.00	50,084
849.41	50,491

Device	Routing	Invert	Outlet Devices
#1	Primary	844.60'	24.0" Round Culvert

L= 514.0' RCP, sq. cut end projecting, Ke= 0.500
 Inlet / Outlet Inverts= 844.60' / 843.47' S= 0.0022' /' Cc= 0.900
 n= 0.010, Flow Area= 3.14 sf

Primary Outflow Max=14.98 cfs @ 12.34 hrs HW=847.04' (Free Discharge)
 1=Culvert (Barrel Controls 14.98 cfs @ 4.97 fps)

Pond 13P: (new Pond)



Summary for Pond 14P: (new Pond)

[81] Warning: Exceeded Pond 13P by 3.83' @ 14.85 hrs
[81] Warning: Exceeded Pond 15P by 844.85' @ 14.75 hrs
[81] Warning: Exceeded Pond 17P by 845.58' @ 14.40 hrs

Inflow Area = 19,734 ac, 92.42% Impervious, Inflow Depth > 4.14" for 25-Year event
Inflow = 82.01 cfs @ 12.18 hrs, Volume= 6,814 af
Outflow = 4.08 cfs @ 14.17 hrs, Volume= 3,821 af, Atten= 95%, Lag= 119.8 min
Primary = 4.08 cfs @ 14.17 hrs, Volume= 3,821 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 848.98' @ 14.17 hrs Surf.Area= 0 sf Storage= 199,421 cf

Plug-Flow detention time= 341.8 min calculated for 3,813 af (56% of inflow)
Center-of-Mass det. time= 246.4 min (1,027.1 - 780.6)

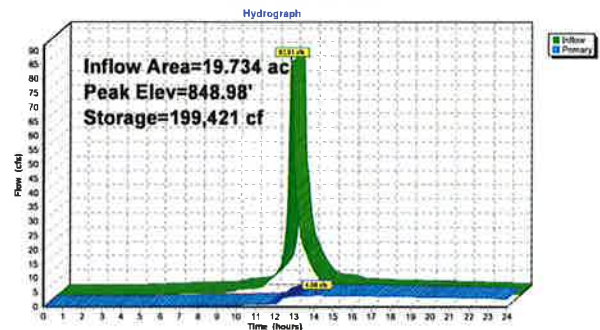
Volume	Invert	Avail. Storage	Storage Description
#1	842.50'	226,720 cf	Custom Stage Data Listed below
Elevation (feet)	Cum. Store (cubic-feet)		
842.50	0		
843.00	5,579		
844.00	25,375		
845.00	58,382		
846.00	98,687		
847.00	136,565		
848.00	173,130		
849.00	198,843		
850.00	226,720		

Device	Routing	Invert	Outlet Devices
#1	Primary	842.42'	4.5" Vert. Orifice/Grate C= 0.820
#2	Primary	845.30'	5.8" Vert. Orifice/Grate C= 0.820

Primary OutFlow Max=4.08 cfs @ 14.17 hrs HW=848.98' (Free Discharge)

1=Orifice/Grate (Orifice Controls 1.84 cfs @ 16.62 fps)
2=Orifice/Grate (Orifice Controls 2.24 cfs @ 12.21 fps)

Pond 14P: (new Pond)



Summary for Pond 16P: StormTech System 2

Inflow Area = 1,052 ac, 100.00% Impervious, Inflow Depth > 4.49" for 25-Year event
Inflow = 6.20 cfs @ 12.17 hrs, Volume= 0.394 af
Outflow = 0.23 cfs @ 13.67 hrs, Volume= 0.208 af, Atten= 96%, Lag= 90.2 min
Primary = 0.23 cfs @ 13.67 hrs, Volume= 0.208 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 4.37' @ 13.67 hrs Surf.Area= 0.093 ac Storage= 0.295 af

Plug-Flow detention time= 393.5 min calculated for 0.207 af (53% of inflow)
Center-of-Mass det. time= 305.6 min (1,055.0 - 749.4)

Volume	Invert	Avail. Storage	Storage Description
#1A	0.00'	0.151 af	37.58'W x 107.74'L x 6.75'H Field A
#2A	0.75'	0.251 af	0.627 af Overall - 0.251 af Embedded = 0.376 af x 40.0% Voids ADS StormTech MC-4500 +Capx 100 Inside #1 Effective Size= 90.4"W x 60.0"H => 26.46 sf x 4.03'L = 106.5 cf Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap 4 Rows of 25 Chambers Cap Storage= +35.7 cf x 2 x 4 rows = 285.6 cf
		0.402 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	0.00'	12.0" Round Culvert L= 10.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 0.00' / -1.00' S= 0.1000' / Cc= 0.800 n= 0.012, Flow Area= 0.78 sf
#2	Device 1	1.00'	2.2" Vert. Orifice/Grate C= 0.600
#3	Device 1	6.25'	3.0' long Sharp-Crested Rectangular Weir 2 End Contractions(s)

Primary OutFlow Max=0.23 cfs @ 13.67 hrs HW=4.37' (Free Discharge)

1=Culvert (Passes 0.23 cfs of 9.30 cfs potential flow)
2=Orifice/Grate (Orifice Controls 0.23 cfs @ 8.72 fps)
3=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 16P: StormTech System 2 - Chamber Wizard Field A

Chamber Model= ADS StormTechMC-4500+Cap (ADS StormTechMC-4500 with cap volume)
Effective Size= 90.4"W x 60.0"H => 26.46 sf x 4.03'L = 106.5 cf
Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap
Cap Storage= +35.7 cf x 2 x 4 rows = 285.6 cf

100.0' Wide x 9.0' Spacing = 109.0" C-C Row Spacing

25 Chambers/Row x 4.02' Long +2.56' Cap Length x 2 = 105.74' Row Length +12.0" End Stone x 2 = 107.74' Base Length
4 Rows x 100.0' Wide x 9.0' Spacing x 3 + 12.0" Side Stone x 2 = 37.58' Base Width
9.0' Base + 60.0" Chamber Height + 12.0" Cover = 6.75' Field Height

100 Chambers x 106.5 cf + 35.7 cf Cap Volume x 2 x 4 Rows = 10,934.6 cf Chamber Storage

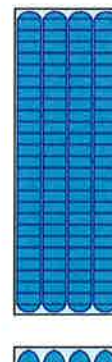
27,332.7 cf Field - 10,934.6 cf Chambers = 16,398.1 cf Stone x 40.0% Voids = 6,558.2 cf Stone Storage

Chamber Storage + Stone Storage = 17,493.8 cf = 0.402 af

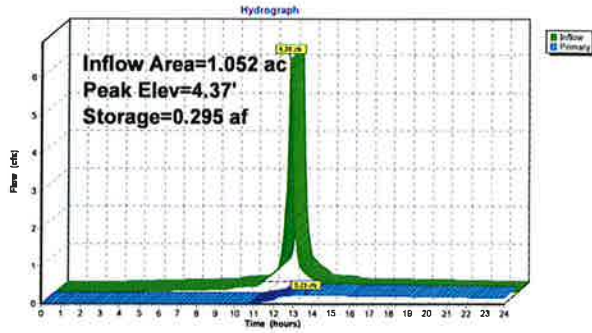
Overall Storage Efficiency = 64.0%

Overall System Size = 107.74' x 37.58' x 6.75'

100 Chambers
1,012.3 cy Field
607.3 cy Stone



Pond 15P: StormTech System 2



Summary for Pond 17P: StormTech System 1

Inflow Area = 0.782 ac, 100.00% Impervious, Inflow Depth > 4.49" for 25-Year event
 Inflow = 4.61 cfs @ 12.17 hrs, Volume= 0.283 af
 Outflow = 0.16 cfs @ 13.71 hrs, Volume= 0.144 af, Atten= 97%, Lag= 92.4 min
 Primary = 0.16 cfs @ 13.71 hrs, Volume= 0.144 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 3.42' @ 13.71 hrs Surf.Area= 0.093 ac Storage= 0.223 af

Plug-Flow detention time= 404.8 min calculated for 0.144 af (49% of inflow)
 Center-of-Mass det. time= 311.8 min (1,061.2 - 749.4)

Volume	Invert	Avail Storage	Storage Description
#1A	0.00'	0.131 af	22.75'W x 177.78'L x 5.50'H Field A
			0.511 af Overall - 0.184 af Embedded = 0.327 af x 40.0% Voids
#2A	0.75'	0.184 af	ADS StormTech MC-3500 d +Capx 72 Inside #1
			Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf
			Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap
			3 Rows of 24 Chambers
			Cap Storage= +14.9 cf x 2 x 3 rows = 89.4 cf
		0.315 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	0.00'	12.0" Round Culvert
			L= 10.0' RCP, groove end projecting, K _e = 0.200
			Inlet / Outlet Invert= 0.00' / -1.00' S= 0.1000' / C _c = 0.900
			n= 0.012, Flow Area= 0.79 sf
#2	Device 1	1.00'	2.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	5.25'	3.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)

Primary Outflow Max=0.16 cfs @ 13.71 hrs HW=3.42' (Free Discharge)

- 1=Culvert (Passes 0.16 cfs of 8.07 cfs potential flow)
- 2=Orifice/Grate (Orifice Controls 0.16 cfs @ 7.36 fps)
- 3=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 17P: StormTech System 1 - Chamber Wizard Field A

Chamber Model= ADS StormTechMC-3500 d +Cap (ADS StormTechMC-3500 d rev 03/14 with Cap volume)
 Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf
 Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap
 Cap Storage= +14.9 cf x 2 x 3 rows = 89.4 cf

77.0" Wide + 9.0" Spacing = 86.0" C-C Row Spacing

24 Chambers/Row x 7.17' Long +1.85' Cap Length x 2 = 175.78' Row Length +12.0" End Stone x 2 = 177.78' Base Length
 3 Rows x 77.0" Wide + 9.0" Spacing x 2 + 12.0" Side Stone x 2 = 22.75' Base Width
 9.0" Base + 45.0" Chamber Height + 12.0" Cover = 5.50' Field Height

72 Chambers x 110.0 cf + 14.9 cf Cap Volume x 2 x 3 Rows = 8,005.9 cf Chamber Storage

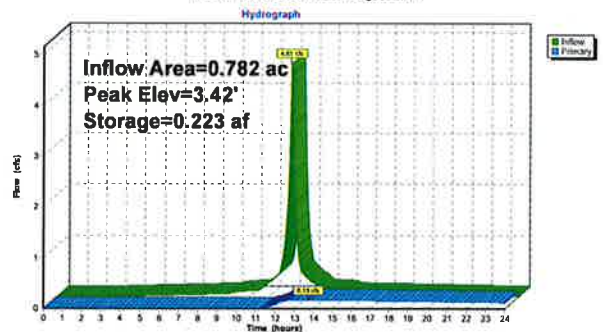
22,244.7 cf Field - 8,005.9 cf Chambers = 14,238.8 cf Stone x 40.0% Voids = 5,695.5 cf Stone Storage

Chamber Storage + Stone Storage = 13,701.5 cf = 0.315 af
 Overall Storage Efficiency = 81.6%
 Overall System Size = 177.78' x 22.75' x 5.50'

72 Chambers
 823.9 cy Field
 527.4 cy Stone



Pond 17P: StormTech System 1

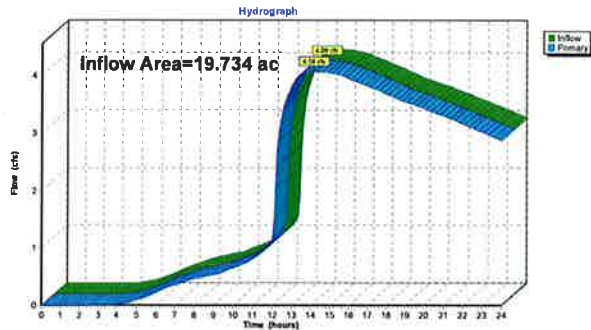


Summary for Link 15L: (new Link)

Inflow Area = 19.734 ac, 82.42% Impervious, Inflow Depth > 2.32" for 25-Year event
 Inflow = 4.08 cfs @ 14.17 hrs, Volume = 3.821 af
 Primary = 4.08 cfs @ 14.17 hrs, Volume = 3.821 af, Atten = 0%, Lag = 0.0 min

Primary outflow = Inflow, Time Span = 0.00-24.00 hrs, dt = 0.05 hrs

Link 15L: (new Link)



Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 11S: Parking Un-changed Runoff Area=5.900 ac 100.00% Impervious Runoff Depth>6.17"
 Tc=10.0 min CN=98 Runoff=47.26 cfs 3.033 af

Subcatchment 12S: Building Un-changed Runoff Area=12.000 ac 87.54% Impervious Runoff Depth>5.93"
 Tc=10.0 min CN=96 Runoff=95.15 cfs 5.933 af

Subcatchment 13S: Proposed Addition Runoff Area=1.052 ac 100.00% Impervious Runoff Depth>6.17"
 Tc=10.0 min CN=98 Runoff=6.43 cfs 0.541 af

Subcatchment 16S: Proposed Addition Runoff Area=0.782 ac 100.00% Impervious Runoff Depth>6.17"
 Tc=10.0 min CN=98 Runoff=6.26 cfs 0.402 af

Pond 13P: (new Pond) Peak Elev=847.82' Storage=37,735 cf Inflow=47.26 cfs 3.033 af
 24.0' Round Culvert n=0.010 L=514.0' S=0.0022' Outflow=16.79 cfs 3.023 af

Pond 14P: (new Pond) Peak Elev=1,469.66' Storage=226,720 cf Inflow=110.35 cfs 9.433 af
 Outflow=48.37 cfs 5.811 af

Pond 15P: StormTech System 2 Peak Elev=6.36' Storage=0.387 af Inflow=8.43 cfs 0.541 af
 Outflow=0.88 cfs 0.285 af

Pond 17P: StormTech System 1 Peak Elev=5.24' Storage=0.305 af Inflow=6.26 cfs 0.402 af
 Outflow=0.21 cfs 0.191 af

Link 15L: (new Link) Inflow=48.37 cfs 5.811 af
 Primary=48.37 cfs 5.811 af

Total Runoff Area = 19.734 ac Runoff Volume = 9.909 af Average Runoff Depth = 6.03"
 7.58% Pervious = 1.495 ac 92.42% Impervious = 18.239 ac

Summary for Subcatchment 11S: Parking Un-changed

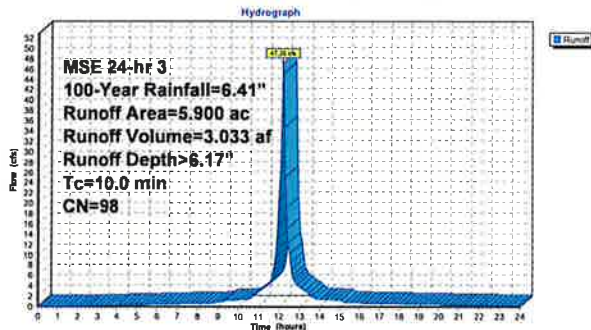
Runoff = 47.26 cfs @ 12.17 hrs, Volume = 3.033 af, Depth > 6.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span = 0.00-24.00 hrs, dt = 0.05 hrs
 MSE 24-hr 3 100-Year Rainfall=6.41"

Area (ac)	CN	Description
5.900	98	Paved parking, HSG D
5.900		100.00% Impervious Area

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

Subcatchment 11S: Parking Un-changed



Summary for Subcatchment 12S: Building Un-changed

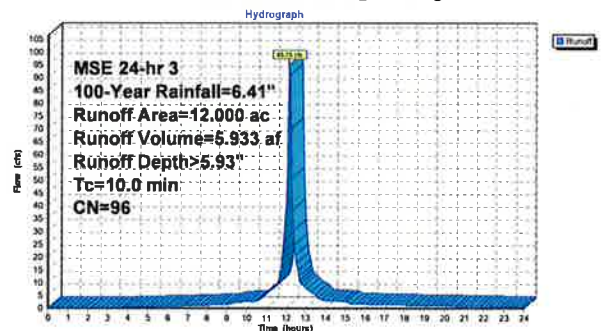
Runoff = 95.15 cfs @ 12.17 hrs, Volume = 5.933 af, Depth > 5.93"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span = 0.00-24.00 hrs, dt = 0.05 hrs
 MSE 24-hr 3 100-Year Rainfall=6.41"

Area (ac)	CN	Description
9.400	98	Paved parking, HSG D
1.300	95	Urban commercial, 85% imp, HSG D
1.300	84	50-75% Grass cover, Fair, HSG D
12.000	96	Weighted Average
1.495		12.46% Pervious Area
10.505		87.54% Impervious Area

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

Subcatchment 12S: Building Un-changed



Summary for Subcatchment 13S: Proposed Addition Area 2

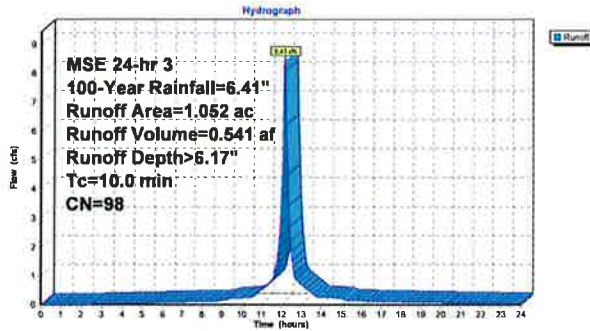
Runoff = 8.43 cfs @ 12.17 hrs, Volume= 0.541 af, Depth> 6.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 100-Year Rainfall=6.41"

Area (ac)	CN	Description
0.318	98	Paved parking, HSG D
0.734	98	Roofs, HSG D
1.052	98	Weighted Average
1.052		100.00% Impervious Area

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

Subcatchment 13S: Proposed Addition Area 2



Summary for Subcatchment 16S: Proposed Addition Area 1

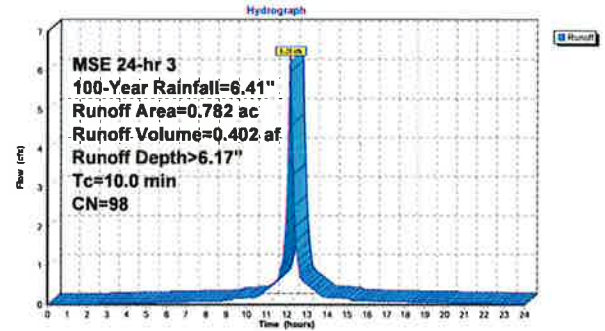
Runoff = 8.26 cfs @ 12.17 hrs, Volume= 0.402 af, Depth> 6.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 100-Year Rainfall=6.41"

Area (ac)	CN	Description
0.782	98	Paved parking, HSG D
0.782		100.00% Impervious Area

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

Subcatchment 16S: Proposed Addition Area 1



Summary for Pond 13P: (new Pond)

Inflow Area = 5,900 ac, 100.00% Impervious, Inflow Depth > 6.17" for 100-Year event
 Inflow = 47.26 cfs @ 12.17 hrs, Volume= 3.033 af
 Outflow = 16.79 cfs @ 12.38 hrs, Volume= 3.023 af, Atten= 84%, Lag= 12.6 min
 Primary = 16.79 cfs @ 12.38 hrs, Volume= 3.023 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 847.82' @ 12.38 hrs Surf.Area= 0 af Storage= 37,735 cf

Plug-Flow detention time= 29.3 min calculated for 3.017 af (99% of inflow)
 Center-of-Mass det. time= 27.2 min (772.7 - 745.5)

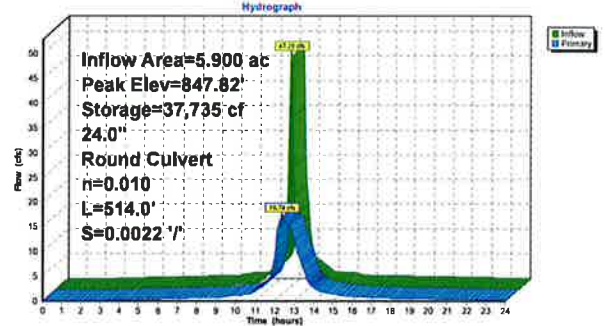
Volume	Invert	Avail. Storage	Storage Description
#1	844.60'	50,491 cf	Custom Stage Data Listed below

Elevation (feet)	Cum. Store (cubic-feet)
844.60	0
845.00	844
846.00	9,801
847.00	25,165
848.00	40,550
849.00	50,084
849.41	50,491

Device	Routing	Invert	Outlet Devices
#1	Primary	844.60'	24.0" Round Culvert
			L= 514.0' RCP, sq cut and projecting, Ke= 0.500
			Inlet / Outlet Invert= 844.60' / 843.47' S= 0.0022' / Cc= 0.900
			n= 0.010, Flow Area= 3.14 sf

Primary OutFlow Max=16.78 cfs @ 12.38 hrs HW=847.81' (Free Discharge)
 1=Culvert (Barrel Controls 16.78 cfs @ 5.34 fps)

Pond 13P: (new Pond)



Summary for Pond 14P: (new Pond)

[93] Warning: Storage range exceeded by 619.66'
 [85] Warning: Oscillations may require smaller dt or Finer Routing (seventy=19)
 [81] Warning: Exceeded Pond 13P by 622.22' @ 12.65 hrs
 [81] Warning: Exceeded Pond 15P by 1,463.61' @ 12.65 hrs
 [81] Warning: Exceeded Pond 17P by 1,465.00' @ 12.65 hrs

Inflow Area = 19.734 ac, 62.42% Impervious, Inflow Depth > 5.74" for 100-Year event
 Inflow = 110.35 cfs @ 12.17 hrs, Volume= 9,433 af
 Outflow = 48.37 cfs @ 12.65 hrs, Volume= 5,811 af, Atten= 56%, Lag= 28.8 min
 Primary = 48.37 cfs @ 12.65 hrs, Volume= 5,811 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 1,469.66' @ 12.65 hrs Surf.Area= 0 sf Storage= 226,720 cf

Plug-Flow detention time= 279.7 min calculated for 5.789 af (61% of inflow)
 Center-of-Mass det. time= 189.7 min (965.0 - 775.3)

Volume	Invert	Avail.Storage	Storage Description
#1	842.50'	226,720 cf	Custom Stage Data Listed below

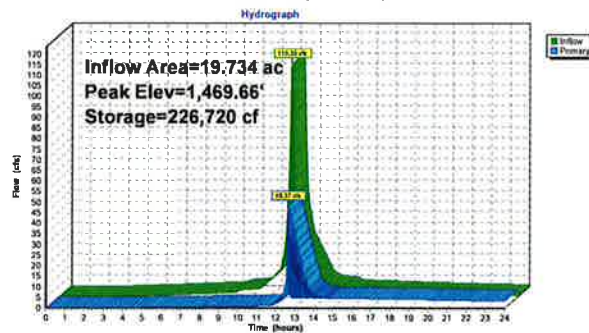
Elevation (feet)	Cum.Store (cubic-feet)
842.50	0
843.00	5,579
844.00	25,375
845.00	58,382
846.00	96,687
847.00	136,585
848.00	173,130
849.00	198,843
850.00	226,720

Device	Routing	Invert	Outlet Devices
#1	Primary	842.42'	4.5" Vert. Orifice/Grate C= 0.820
#2	Primary	845.30'	5.8" Vert. Orifice/Grate C= 0.820

Primary OutFlow Max=48.14 cfs @ 12.65 hrs HW=1,463.93' (Free Discharge)

1=Orifice/Grate (Orifice Controls 18.12 cfs @ 164.03 fps)
 2=Orifice/Grate (Orifice Controls 30.02 cfs @ 163.64 fps)

Pond 14P: (new Pond)



Summary for Pond 15P: StormTech System 2

Inflow Area = 1.052 ac, 100.00% Impervious, Inflow Depth > 6.17" for 100-Year event
 Inflow = 8.43 cfs @ 12.17 hrs, Volume= 0.541 af
 Outflow = 0.68 cfs @ 13.06 hrs, Volume= 0.285 af, Atten= 92%, Lag= 53.3 min
 Primary = 0.68 cfs @ 13.06 hrs, Volume= 0.285 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 6.36' @ 13.06 hrs Surf.Area= 0.093 ac Storage= 0.387 af

Plug-Flow detention time= 372.5 min calculated for 0.285 af (53% of inflow)
 Center-of-Mass det. time= 261.8 min (1,027.3 - 745.5)

Volume	Invert	Avail.Storage	Storage Description
#1A	0.00'	0.151 af	37.58'W x 107.74'L x 6.75'H Field A
#2A	0.75'	0.251 af	0.827 af Overall - 0.251 af Embedded = 0.376 af x 40.0% Voids ADS StormTech MC-4500 +Cap x 100 Inside #1 Effective Size= 80.4"W x 60.0"H => 28.48 sf x 4.03'L = 106.5 cf Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap 4 Rows of 25 Chambers Cap Storage= +35.7 cf x 2 x 4 rows = 285.6 cf
			0.402 af Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	0.00'	12.0" Round Culvert L= 10.0' RCP, groove and projecting, Ke= 0.200 Inlet / Outlet Invert= 0.00' / -1.00' S= 0.1000' / Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Device 1	1.00'	2.2" Vert. Orifice/Grate C= 0.600
#3	Device 1	6.25'	3.0' long Sharp-Crested Rectangular Weir 2 End Contractions

Primary OutFlow Max=0.67 cfs @ 13.06 hrs HW=6.36' (Free Discharge)

1=Culvert (Passes 0.67 cfs of 11.45 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 0.29 cfs @ 11.05 fps)
 3=Sharp-Crested Rectangular Weir (Weir Controls 0.37 cfs @ 1.10 fps)

Pond 15P: StormTech System 2 - Chamber Wizard Field A

Chamber Model= ADS StormTechMC-4500 +Cap (ADS StormTechMC-4500 with cap volume)

Effective Size= 80.4"W x 60.0"H => 28.48 sf x 4.03'L = 106.5 cf

Overall Size= 100.0"W x 60.0"H x 4.33'L with 0.31' Overlap

Cap Storage= +35.7 cf x 2 x 4 rows = 285.6 cf

100.0" Wide x 8.0" Spacing = 109.0" C-C Row Spacing

25 Chambers/Row x 4.02' Long +2.56' Cap Length x 2 = 105.74' Row Length +12.0" End Stone x 2 = 107.74' Base Length

4 Rows x 100.0" Wide + 9.0" Spacing x 3 + 12.0" Side Stone x 2 = 37.58' Base Width
 9.0" Base + 60.0" Chamber Height + 12.0" Cover = 6.75' Field Height

100 Chambers x 106.5 cf + 35.7 cf Cap Volume x 2 x 4 Rows = 10,934.6 cf Chamber Storage

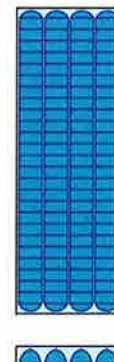
27,332.7 cf Field - 10,934.6 cf Chambers = 16,398.1 cf Stone x 40.0% Voids = 6,559.2 cf Stone Storage

Chamber Storage + Stone Storage = 17,493.9 cf = 0.402 af

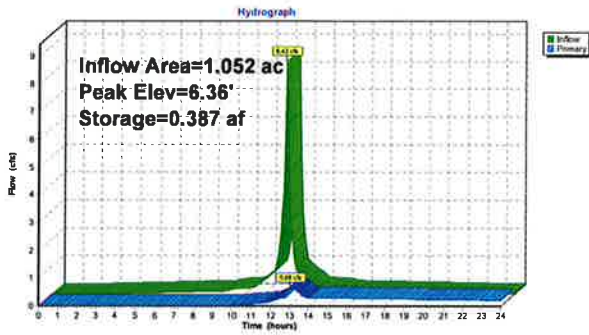
Overall Storage Efficiency = 64.0%

Overall System Size = 107.74' x 37.58' x 6.75'

100 Chambers
 1,012.3 cy Field
 607.3 cy Stone



Pond 15P: StormTech System 2



Summary for Pond 17P: StormTech System 1

Inflow Area = 0.782 ac, 100.00% Impervious, Inflow Depth > 6.17" for 100-Year event
 Inflow = 6.26 cfs @ 12.17 hrs, Volume= 0.402 af
 Outflow = 0.21 cfs @ 13.72 hrs, Volume= 0.191 af, Atten= 97%, Lag= 93.0 min
 Primary = 0.21 cfs @ 13.72 hrs, Volume= 0.191 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 5.24' @ 13.72 hrs Surf.Area= 0.093 ac Storage= 0.305 af

Plug-Flow detention time= 407.0 min calculated for 0.181 af (48% of inflow)
 Center-of-Mass det. time= 308.1 min (1,053.7 - 745.5)

Volume	Invert	Avail Storage	Storage Description
#1A	0.00'	0.131 af	22.75'W x 177.78'L x 5.50'H Field A 0.511 af Overall - 0.184 af Embedded = 0.327 af x 40.0% Voids
#2A	0.75'	0.184 af	ADS_StormTech MC-3500 d +Cap x 72 Inside #1 Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap 3 Rows of 24 Chambers Cap Storage= +14.9 cf x 2 x 3 rows = 88.4 cf
		0.315 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	0.00'	12.0" Round Culvert L= 10.0' RCP, groove end projecting, K= 0.200 Inlet / Outlet Invert= 0.00' / -1.00' S= 0.1000' / Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Device 1	1.00'	2.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	5.25'	3.0' long Sharp-Crested Rectangular Weir 2 End Contractions(s)

Primary OutFlow Max=0.21 cfs @ 13.72 hrs HW=5.24' (Free Discharge)
 1=Culvert (Passes 0.21 cfs of 10.30 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 0.21 cfs @ 9.82 fps)
 3=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 17P: StormTech System 1 - Chamber Wizard Field A

ChamberModel= ADS_StormTechMC-3500 d +Cap (ADS StormTechMC-3500 d rev 03/14 with Cap volume)
 Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf
 Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap
 Cap Storage= +14.9 cf x 2 x 3 rows = 88.4 cf

77.0" Wide + 9.0" Spacing = 86.0" C-C Row Spacing

24 Chambers/Row x 7.17' Long +1.85' Cap Length x 2 = 175.78' Row Length +12.0" End Stone x 2 = 177.78' Base Length
 3 Rows x 77.0" Wide + 9.0" Spacing x 2 + 12.0" Side Stone x 2 = 22.75' Base Width
 9.0" Base + 45.0" Chamber Height + 12.0" Cover = 5.50' Field Height

72 Chambers x 110.0 cf + 14.9 cf Cap Volume x 2 x 3 Rows = 8,005.9 cf of Chamber Storage

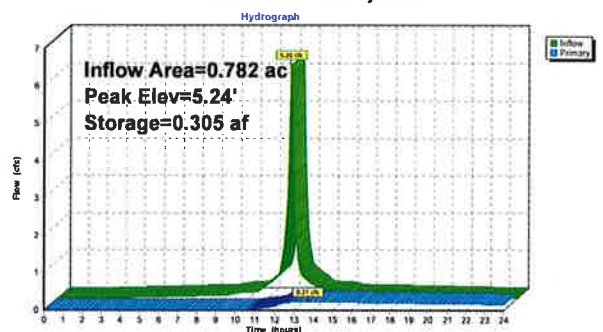
22,244.7 cf Field - 8,005.9 cf Chambers = 14,238.8 cf Stone x 40.0% Voids = 5,695.5 cf Stone Storage

Chamber Storage + Stone Storage = 13,701.5 cf = 0.315 af
 Overall Storage Efficiency = 61.6%
 Overall System Size = 177.78' x 22.75' x 5.50'

72 Chambers
 823.9 cy Field
 527.4 cy Stone



Pond 17P: StormTech System 1



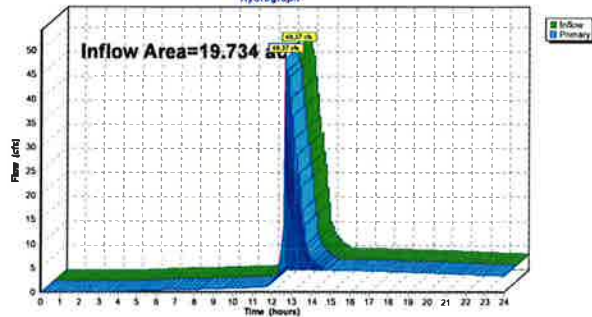
Summary for Link 16L: (new Link)

Inflow Area = 19.734 ac, 92.42% Impervious, Inflow Depth > 3.53" for 100-Year event
Inflow = 48.37 cfs @ 12.65 hrs, Volume= 5.811 af
Primary = 48.37 cfs @ 12.65 hrs, Volume= 5.811 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

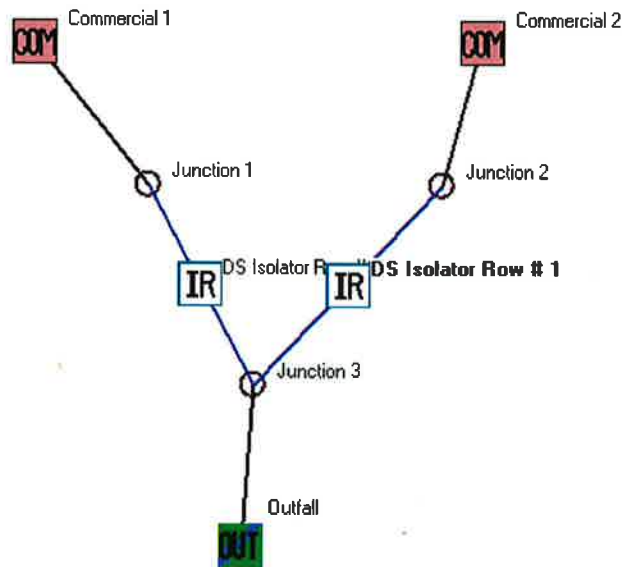
Link 16L: (new Link)

Hydrograph



Appendix F

WinSLAMM Model



File Name:

C:\Users\Brandon Whipple\Desktop\WinSLAMM\Germantown Menards.mdb

Outfall Output Summary

	Runoff Volume (cu. ft.)	Percent Runoff Reduction	Runoff Coefficient (Rv)	Particulate Solids Conc. (mg/L)	Particulate Solids Yield (lbs)	Percent Particulate Solids Reduction
Total of All Land Uses without Controls	142378		0.67	89.88	798.9	
Outfall Total with Controls	142755	-0.26 %	0.67	38.94	347.1	56.55 %
Current File Output: Annualized Total After Outfall Controls	143147					
		Years in Model Run:	1.00		348.0	

Print Output Summary to .csv File

Print Output Summary to Text File

Print Output Summary to Printer

Total Area Modeled (ac)

1.834

Total Control Practice Costs

Capital Cost	N/A
Land Cost	N/A
Annual Maintenance Cost	N/A
Present Value of All Costs	N/A
Annualized Value of All Costs	N/A

Perform Outfall
Flow Duration
Curve Calculations

Receiving Water Impacts Due To Stormwater Runoff

(CWP Impervious Cover Model)

	Calculated Rv	Approximate Urban Stream Classification
Without Controls	0.67	Poor
With Controls	0.67	Poor

INPUT DATA:

Data file name: C:\Users\jbrunoehler\Documents\StormTech\Projects\Menards - Germantown\Menards Germantown 2019.09.30.mdb

WinSLAMM Version 10.4.102

Rain file name: C:\WinSLAMM Files\Rain Files\WisReg - Madison WI 1981.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: 01/01/81 Study period ending date: 12/31/81

Start of Winter Season: 12/02 End of Winter Season: 03/12

Date: 10-02-2019 Time: 22:30:13

Site information:

LU# 1 - Commercial: Commercial 1 Total area (ac): 0.782

13 - Paved Parking 1: 0.782 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 2 - Commercial: Commercial 2 Total area (ac): 1.052

1 - Roofs 1: 0.734 ac. Flat Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

13 - Paved Parking 1: 0.318 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

Control Practice 1: Isolator Row CP# 1 (DS) - DS Isolator Row # 1

Total available system length (ft) = 185

Total available system width (ft) = 24

Available height from chamber base to surface (ft) = 7.00

Number of isolator rows = 1

Native soil infiltration rate (in/hr) = 0.00

Assumed stone porosity (ϕ) = 0.40
Sizing option: Use all available area
Selected Chamber Information
Chamber type: MC-3500
Chamber height (in): 45.00
Chamber width (in): 86.00
Chamber segment length (in): 86.00
Final storage volume (cf): 13800.4
Number of rows: 3
Row length (ft): 174.0
Total system length (ft): 516.0
Total system width (ft): 21.5
Number of chambers: 72
Overflow weir invert elevation (ft) = 5.50
Orifice 1 invert elevation (ft) = 0.00
Orifice 1 diameter (ft) = 0.20
Orifice 2 invert elevation (ft) = 0.00
Orifice 2 diameter (ft) = 0.00

Control Practice 2: Isolator Row CP# 2 (DS) - DS Isolator Row # 2

Total available system length (ft) = 110
Total available system width (ft) = 40
Available height from chamber base to surface (ft) = 7.00
Number of isolator rows = 1
Native soil infiltration rate (in/hr) = 0.00
Assumed stone porosity (ϕ) = 0.40
Sizing option: Use all available area
Selected Chamber Information
Chamber type: MC-4500
Chamber height (in): 60.00
Chamber width (in): 109.00
Chamber segment length (in): 48.30
Final storage volume (cf): 17070
Number of rows: 4
Row length (ft): 102.1
Total system length (ft): 402.5
Total system width (ft): 36.3
Number of chambers: 100
Overflow weir invert elevation (ft) = 5.50
Orifice 1 invert elevation (ft) = 0.00
Orifice 1 diameter (ft) = 0.20
Orifice 2 invert elevation (ft) = 0.00
Orifice 2 diameter (ft) = 0.00

OUTPUT DATA:

SLAMM for Windows Version 10.4.102

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All Rights Reserved

Data file name: C:\Users\jbrunoehler\Documents\StormTech\Projects\Menards -
Germantown\Menards Germantown 2019.09.30.mdb

Data file description:

Rain file name: C:\WinSLAMM Files\Rain Files\WisReg - Madison WI 1981.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_GEO03.ppdX

Start of Winter Season: 12/02 End of Winter Season: 03/12

Model Run Start Date: 01/01/81 Model Run End Date: 12/31/81

Date of run: 10-02-2019 Time of run: 22:30:04

Total Area Modeled (acres): 1.834

Years in Model Run: 1.00

	Runoff Volume (cu ft) Reduction	Percent Runoff Volume (mg/L)	Particulate Solids Conc. (mg/L)	Particulate Solids Yield (lbs)	Percent Particulate Solids Reduction
Total of all Land Uses without Controls:	142378	-	89.88	798.9	-
Outfall Total with Controls:	142755	-0.26%	38.94	347.1	56.55%
Annualized Total After Outfall Controls:	143147			348.0	

#

BUSINESS OF THE VILLAGE BOARD GERMANTOWN, WI

MEETING DATE: June 1, 2020

AGENDA ITEM: New Business (CONDITIONAL USE PERMIT)

ITEM TITLE: Scott Morgan, Property owner and Agent for All Terrain Construction, N112W14972 Mequon Road; Conditional Use Permit (CUP) to operate a Construction Services Contractor Shop

SUBMITTED BY: Jeffrey W. Retzlaff, Director, Community Development Department

SUMMARY EXPLANATION:

Scott Morgan, agent for All Terrain Construction and property owner, is requesting approval of a Conditional Use Permit (CUP) to operate a Construction Services Contractor Shop on the 1.14-acre property located at N112W14972 Mequon Road.

The applicant plans to live in the dwelling and is proposing to run the offices of All Terrain Construction from the commercial area of the building. All Terrain Construction provides concrete flatwork services for residential and commercial properties (driveway sidewalks, patios, steps, garages and more). All Terrain Construction currently has a total of six employees. Hours of operation are planned to be 7am to 7pm Monday – Saturday, March through mid-November. Winter would include office work only with no set hours. All work is performed off site. The business equipment would be stored in the rear of the property on a proposed concrete area (see site plan sketch). The applicant is also proposing the construction of an accessory building in the future, in which the equipment could be stored. A driveway to the rear of the property is proposed on the east side of the dwelling. Site Plan approval by the Plan Commission will be required for these improvements.

PLAN COMMISSION RECOMMENDATIONS:

APPROVE a conditional use permit (CUP) for Scott Morgan and All-Terrain Construction to allow the operation of a construction services contractor shop at the property located at N112W14972 Mequon Road subject to nine (9) conditions.

APPLICATION, PLANS & RELATED DOCUMENTS:

All relevant documents, including applications, plans, supporting information, the staff report & recommendation, and Plan Commission meeting minutes (when available) are included in the PDF digital file distributed by the Village Clerk.

CUP #06-20

Document No.

CONDITIONAL USE PERMIT

Document Title

VILLAGE OF GERMANTOWN, WASHINGTON COUNTY, WISCONSIN
 CONDITIONAL USE ZONING PERMIT

Whereas the Applicant:

Scott Morgan, Property Owner/Business Operator

agrees to comply with applicable Codes and Ordinances of the Village of Germantown, Wisconsin, and further agrees that all work done pursuant to the permission granted herewith will conform with the applications and drawings filed with and approvals granted by officials of the Village for the purpose of obtaining this permit.

Now, therefore, this permit is issued to the Applicant to allow the operation of a Construction Services Contractor Shop from the property located at N112W14972 Mequon Road pursuant to Section 17.32(3)(d) & (s) of the Village Zoning Code.

Name & Return Address:

**Village of Germantown
 P.O. Box 337
 Germantown, WI 53022**

Parcel Identification No:

GTNV 233-997

On the following described property located in the Village of Germantown, Washington County, Wisconsin:

That part of the Southwest $\frac{1}{4}$ of Section 23, Township 9 North, Range 20 East, Village of Germantown, Washington County, Wisconsin, described as follows:

Commencing at the South $\frac{1}{4}$ corner of said Section 23; thence West along the South line of said Section 589.10 feet to the point of beginning of this description; thence continuing West on said South line 110.00 feet; thence North 478.66 feet to the Southerly Right of Way of C&NW Railroad; thence S61°44'E on said Right of Way line 124.89 feet; thence South 419.52 feet to said South line and the point of beginning of this description. Excepting therefrom that part conveyed to the State of Wisconsin Department of Transportation by Warranty Deed recorded June 25th, 1990 in Volume 1077, Page 256, as Document No. 561873.

N112W14972 Mequon Road; Tax Key: GTNV 233-997

Pursuant to the following condition(s):

1. The uses and activities allowed on the property shall be limited to those uses and activities and relative locations specified in the conditional use permit (CUP) application and supporting documents dated February 26, 2020. The size and relative location of those areas within the property from which said uses and activities are permitted are limited to that presented in the detailed site plan and description submitted with the supporting documents. Days and hours of operation shall be limited to those specified in the CUP application and supporting documents submitted to the Village. The Owner/Operator is responsible for reporting any significant changes in the type, intensity, amount or location of the land uses and activities, days and hours of operation, size or location or other operational characteristics of said uses and activities authorized under this CUP to the Village Planner.

2. A Site Plan shall be reviewed and approved by the Plan Commission for a paved driveway and parking area, accessory building in the rear of the existing building, and the modified front paved area/driveway modifications within three (3) months of CUP approval. This approval shall include all items deemed necessary by the Village Public Works Department as outlined in the memo dated March 25, 2020 and any other information requested by Village Staff. The paved driveway and parking area shall be installed no later than six (6) months from the date of site plan approval. The accessory building shall be constructed within one (1) year of site plan approval.
3. The existing pavement in the front yard shall be reduced in size to come into conformance with current driveway width (maximum 40' at road right-of-way) and residential setback requirements from a residential district (50'). Subsequently, the number of driveways shall be reduced to one, which meets current Village Public Works Department and/or WI Department of Transportation (WisDOT) driveway requirements. Pavement for the existing sidewalk shall also be extended and/or replaced at that time. All listed improvements included in this condition shall be completed no later than two (2) years from the date of site plan approval in accordance with Village Code (Chapter 17.43 Site Plan Approval Requirements).
4. The outdoor storage of construction vehicles, equipment and materials between the front of the existing residential dwelling and Mequon Road shall be prohibited. All storage of construction vehicles, equipment and materials shall be limited to the rear and/or side yards of the property, and, be enclosed and screened from view by adjacent properties.
5. In the event the Village receives complaints regarding outdoor storage, noise, dust, odor, vibration or other negative impacts on surrounding neighborhood and properties, the Owner/Operator shall work cooperatively with the Village to mitigate and resolve the issue.
6. Temporary company vehicle parking may be permitted in the front of the property for up to six (6) months from the date of Site Plan Approval by the Village Plan Commission to accommodate the construction of the proposed driveway and parking area in the rear of the property. Temporary company vehicle parking may also be permitted during construction of the accessory structure in the rear of the property. Once completed, there shall be no parking of company vehicles or other storage in the front of the property.
7. All nonconforming signage shall be removed from the property. All temporary and permanent exterior signs require a permit and shall comply with all current sign regulations.
8. Site improvements, buildings, signage, exterior lighting and any other improvements on the property that are necessary for the land uses and activities authorized under this CUP shall be reviewed and approved by the Village through the Zoning Permit or Site Plan application process as determined by the Village Zoning Administrator. If required, Site Plan review and approval will include Plan Commission review and approval.
9. If the use, activities and/or operation subject of this permit falls out of conformity with the conditions herein, or where there is a change in the nature, character, intensity or extent of the permitted conditional uses and activities which cause special problems or harmful effects associated with the permitted uses and activities that were not revealed or anticipated at the time this CUP was granted, or, where conditions imposed by this CUP that were anticipated to mitigate or eliminate harmful effects associated with the

uses and activities but are subsequently insufficient to do so, or, for similar cause based upon consideration for the public comfort, safety, and welfare, this conditional use permit may be terminated or modified by the Village Board by the amendment to or addition of conditions after public hearing thereon.

Granted by the Village Board of the Village of Germantown, Washington County, Wisconsin on the _____ day of _____, 2020.

Dean Wolter, Village President

ATTEST:

Deanna B. Braunschweig, WCMC/CMC, Village Clerk

STATE OF WISCONSIN) SS

WASHINGTON COUNTY)

Personally came before me this _____ day of _____, 2020, the above named Dean Wolter, Village President, and Deanna B. Braunschweig, Village Clerk, to me known to be the persons who executed the foregoing instrument and acknowledged the same.

{type or print name of Notary on this line}

{signature of Notary on this line}

Notary Public, State of Wisconsin

My Commission Expires: _____

ACCEPTANCE OF TERMS AND CONDITIONS BY OPERATOR

As property owner and business operator, Scott Morgan, I hereby accept the terms and conditions set forth herein and realize that non-adherence to the terms and conditions as stated herein may result in the revocation of this Permit by the Village of Germantown.

Dated this ____ day of _____, 2020

(type or print name on this line)

Scott Morgan, Property Owner/Business Operator All Terrain Adventure Company LLC

STATE OF WISCONSIN) SS
_____ COUNTY)

Personally came before me this ____ day of _____, 2020, being the above named _____, to me known to be the person who executed the foregoing instrument and acknowledged the same.

{type or print name of Notary on this line}

{signature of Notary on this line}

Notary Public, State of Wisconsin
My Commission Expires: _____

backed up in all directions and now it will be compounded with cars waiting and staging to get to the back yard. He asked if there was another solution to access the back yard. Mr. Edwards explained how the new gate with three lanes would expedite entering the yard area. Trustee Baum said that won't help because most people use the shared entrance as the primary entrance and not the center one. He commented that on a Saturday people are cutting each other off and the left turn lane will queue up with people coming from Menards and Steins with 10 to 12 cars stacked up forming a Y. He said the issue needs to be resolved with this operation. Chairman Wolter agreed saying he frequents both retail outlets and it can be a congestion point. He said the middle entrance is not used as often as it should be and the heaviest entry point is coming in the far southern entrance. Mr. Edwards explained products will be in the approximate same locations. He explained they want to move the heavier truck and vehicle traffic away from the garden center to help with safety.

***MOTION to Amend Baum second Nilles that the fencing choice is the wood plank fence.
MOTION carried unanimously.***

Discussion continued. Mr. Edwards said yard traffic is significantly less than the general traffic to the parking lot and there will not be a significant increase of people coming in from the street driving into the gate. Trustee Baum said he has encountered traffic backed up going out and inbound and the tie up station in the parking lot creates more congestion. He said there is too much happening in one spot. Mr. Edwards offered to move the tie down area inside the yard with a dedicated space and not cause further congestion in the parking lot. Planner Retzlaff asked if there was a way to modify the island as it enters into the parking lot to separate traffic better with more queuing area. Mr. Edwards commented there may be an opportunity to connect the islands so there are not so many entrances converging on one.

***MOTION Baum second Laszewski to Postpone the Site Plan approval until Menards comes back with an alternative for the Steins shared entry and it is resolved to a satisfactory condition to allow better traffic flow.
MOTION carried 5-1 (Nilles).***

Planner Retzlaff said staff would work with Menards on alternatives. Chairman Wolter said he appreciates Menards coming forward and expanding their business in Germantown.

All Terrain Construction - N112 W14972 Mequon Road. Scott Morgan, property owner, is requesting approval of a Conditional Use Permit (CUP) to operate a Construction Services Contractor Shop. Associate Planner Zandt summarized the proposal.

Public Hearing opened at 8:38 pm

- Frederick Gierach, N128 W19157 Holy Hill Road, Richfield, WI - Chairman Wolter read his letter into the record. Mr. Gierach indicated he did not object to the proposed use but questioned the capability of the property being able to support the business.

Public Hearing closed at 8:45 pm

MOTION Baum second Shadid to Approve a conditional use permit (CUP) for Scott Morgan and All-Terrain Construction to allow the operation of a construction services contractor shop at the property located at N112W14972 Mequon Road subject to the following conditions:

- 1. The uses and activities allowed on the property shall be limited to those uses and activities and relative locations specified in the conditional use permit (CUP) application and supporting documents dated February 26, 2019. The size and relative location of those***

- areas within the property from which said uses and activities are permitted are limited to that presented in the detailed site plan and description submitted with the supporting documents. Days and hours of operation shall be limited to those specified in the CUP application and supporting documents submitted to the Village. The Owner/Operator is responsible for reporting any significant changes in the type, intensity, amount or location of the land uses and activities, days and hours of operation, size or location or other operational characteristics of said uses and activities authorized under this CUP to the Village Planner.**
- 2. A Site Plan shall be reviewed and approved by the Plan Commission for a paved driveway and parking area, accessory building in the rear of the existing building, and the modified front paved area/driveway modifications within three (3) months of CUP approval. This approval shall include all items deemed necessary by the Village Public Works Department as outlined in the memo dated March 25, 2020 and any other information requested by Village Staff. The paved driveway and parking area shall be installed no later than six (6) months from the date of site plan approval. The accessory building shall be constructed within one (1) year of site plan approval.**
 - 3. The existing pavement in the front yard shall be reduced in size to come into conformance with current driveway width (maximum 40' at road right-of-way) and residential setback requirements from a residential district (50'). Subsequently, the number of driveways shall be reduced to one, which meets current Village Public Works Department and/or WI Department of Transportation (WisDOT) driveway requirements. Pavement for the existing sidewalk shall also be extended and/or replaced at that time. All listed improvements included in this condition shall be completed no later than two (2) years from the date of site plan approval in accordance with Village Code (Chapter 17.43 Site Plan Approval Requirements).**
 - 4. The outdoor storage of construction vehicles, equipment, and materials between the front of the existing residential dwelling and Mequon Road shall be prohibited. All storage of construction vehicles, equipment and materials shall be limited to the rear and/or side yards of the property and be enclosed and screened from view by adjacent properties.**
 - 5. In the event the Village receives complaints regarding outdoor storage, noise, dust, odor, vibration or other negative impacts on surrounding neighborhood and properties, the Owner/Operator shall work cooperatively with the Village to mitigate and resolve the issue.**
 - 6. Temporary company vehicle parking may be permitted in the front of the property for up to six (6) months from the date of Site Plan Approval by the Village Plan Commission to accommodate the construction of the proposed driveway and parking area in the rear of the property. Temporary company vehicle parking may also be permitted and during construction of the accessory structure in the rear of the property. Once completed, there shall be no parking of company vehicles or other storage in the front of the property.**
 - 7. All nonconforming signage shall be removed from the property. All temporary and permanent exterior signs require a permit and shall comply with all current sign regulations.**
 - 8. Site improvements, buildings, signage, exterior lighting and any other improvements on the property that are necessary for the land uses and activities authorized under this CUP shall be reviewed and approved by the Village through the Zoning Permit or Site Plan application process as determined by the Village Zoning Administrator. If required, Site Plan review and approval will include Plan Commission review and approval.**
 - 9. If the use, activities and/or operation subject of this permit falls out of conformity with the conditions herein, or where there is a change in the nature, character, intensity or extent of the permitted conditional uses and activities which cause special problems or harmful effects associated with the permitted uses and activities that were not revealed or**

anticipated at the time this CUP was granted, or, where conditions imposed by this CUP that were anticipated to mitigate or eliminate harmful effects associated with the uses and activities but are subsequently insufficient to do so, or, for similar cause based upon consideration for the public comfort, safety, and welfare, this conditional use permit may be terminated or modified by the Village Board by the amendment to or addition of conditions after public hearing thereon.

Discussion followed. Trustee Baum stated he did not have a problem with the use and indicated it would be better if the accessory building was constructed sooner than later to avoid the backyard getting cluttered with junk. Associate Planner Zandt commented that staff tried to address outdoor storage in condition #4 by stating no vehicles can be stored in the front yard. Chairman Wolter asked if there were plans to remove any trees on the lot. Mr. Morgan said a majority of the trees would need to be removed to provide enough room for parking. He said he may not be able to complete the driveway before winter because the front of the property needs to be redone including removing a large section of asphalt, eliminating one entrance, repaving everything in the front including the sidewalk and curb and extending the watermain. He stated he would be willing to put shrubs in along the apartment line as a privacy screen that would be located on an earth berm on the apartment property to create more separation and privacy. He would also install a berm along the back of the property on the east. He explained his business is seasonal and plans to construct the accessory building in fall when his season is over.

MOTION carried 5-1 (Nilles)

Redline Canine Training Center - W188 N11786 Maple Road. Lynne Luckow, operator, is seeking an amendment to the existing Conditional Use Permit (CUP #01-19) for the dog training and education facility. Associate Planner Zandt summarized the proposal. She explained Ms. Luckow had spoken with her about increasing the occupancy limit in the building and said staff believes that is addressed in Conditions #4 and #5 in the existing CUP, per the requirements of the fire department. Chief Delain said he had spoken to Ms. Luckow about changing use of the building to a class b kennel that would change the occupancy limit to up to 130 people ratio and that would be allowed with the conditions in place.

Lynne Luckow explained she had reached out to the fire department to discuss adding the additional space and if he had any additional concerns. Associate Planner Zandt stated Condition #4 and #5 do not limit the number of people allowed to 49 people but allow the option to work with the Fire Department regarding maximum capacity. She added there was nothing in the existing conditions that would limit the ability to do so. Chief Delain stated a change in capacity would be approved at staff level to reclassify the occupancy from class B to kennel.

Public Hearing opened at 9:16 pm.

Public Hearing closed at 9:18 pm.

MOTION Baum second Williams to Approve a conditional use permit amendment for the operation of a dog training and education facility in the existing building located at W188 N11786 Maple Road (Alpine Business Center Suite 2, 3 & 4) to include the space in Suite 1, expand hours of operation to 24 hours/day 7 days/week and to add canine massage to the list of available services subject to all conditions of CUP #01-19 and the addition of the following condition:

- 1. This permit authorizes limited uses and activities as set forth in the conditional use***

CONDITIONAL USE PERMIT (CUP) APPLICATION

5/11/20 Plan Commission Meeting

Scott Morgan / All Terrain Construction

Village Planner Report

Germantown, Wisconsin

Summary

Scott Morgan, agent for All Terrain Construction and property owner, is requesting approval of a Conditional Use Permit (CUP) to operate a Construction Services Contractor Shop on the 1.14-acre property located at N112W14972 Mequon Road.

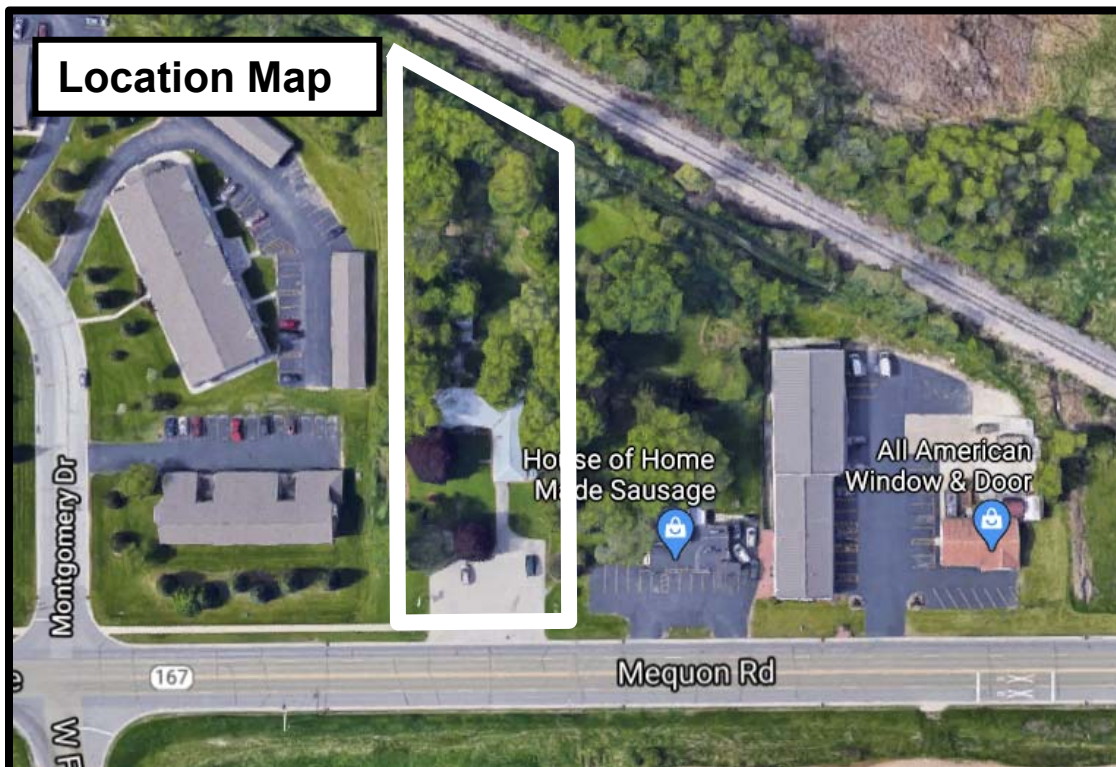
Location: N112W14972 Mequon Road

Applicant/

Property Owner: Scott Morgan
5355 N Milwaukee River Parkway
Milwaukee, WI 53209

Zoning: B-3: General Business

Adjacent Land Uses		Zoning
North	Open Space	A-1
South	Commercial	B-1
East	Commercial	B-3
West	Residential	Rm-3



History/Proposal

Scott Morgan, agent for All Terrain Construction and property owner, is requesting approval of a Conditional Use Permit (CUP) to operate a Construction Services Contractor Shop on the 1.14-acre property located at N112W14972 Mequon Road. This property is both a residence and a commercial space. The B-3 General Business district allows for a residence as a principal use or as an accessory use to the commercial use.

The applicant plans to live in the dwelling and is proposing to run the offices of All Terrain Construction from the commercial area of the property. All Terrain Construction provides concrete flatwork services for residential and commercial (driveway sidewalks, patios, steps, garages and more.) All Terrain Construction currently has a total of six employees. All work is performed off site. The business equipment (4 pick-up trucks, 4 trailers and 2 skid steer loaders) would be stored in the rear of the property on a proposed concrete area (see site plan sketch). The applicant is also proposing the construction of an accessory building in the future, in which the equipment could be stored. A driveway to the rear of the property is proposed on the east side of the dwelling. Site Plan approval by the Plan Commission will be required for these improvements. This has been added as a condition of approval.

Hours of operation for the commercial business will be 7am to 7pm Monday through Saturday, March through mid-November. Winter months would include office work only with no set hours.

Staff Comments**Planning and Zoning**

The main concern, from a staff perspective, of this proposed use at this site is the potential for outdoor storage. Staff recommends that business related vehicles and equipment be stored in the rear yard only. This, of course, cannot take place until the driveway and the paved area in the rear of the building are installed. For this reason, staff recommends adding a three (3)-month maximum timeframe for the Site Plan application to be approved by the Plan Commission. Subsequently, the driveway/paved area in the rear of the building shall be installed within six (6) months of Site Plan approval. Within one (1) year of site plan approval, staff recommends requiring the completion of the accessory building in the rear of the property.

The existing paved driveway and parking area in the front of the property does not meet current Village Code with regard to the maximum width of commercial driveways (40 feet at the right-of-way line) nor the minimum required setback from a residential zoning district (minimum 50 feet). The existing configuration, including the width of the driveway at the right-of-way line and excessive paved area in the front of the property, is likely to encourage the storage of company vehicles and other equipment in front of the primary structure. It is staff's recommendation to require the applicant reduce the driveway width and amount of pavement in the front of the property to meet the maximum 40' driveway width at the right-of-way line and minimum required 50' setback from the residential zoning district to the west.

The applicant shall coordinate with Village Public Works and/or WisDOT to meet current code requirements for driveway width and separation from other existing driveways. A landscape buffer around the parking area adjacent to Mequon Road shall also be required. These improvements shall be included in the Site Plan Application subject to review and approval by the Plan Commission and shall be completed within 2 years of site plan approval pursuant to Chapter 17.43 Site Plan Approval Requirements.

Staff recommends that the Plan Commission also provide guidance regarding the storage of company vehicles in the front of the property while site improvements are being completed and the accessory structure constructed. Staff recommends that company vehicles may only be parked in the front area of the property for a maximum of six (6) months from Site Plan Approval, until the installation of the rear paved area is complete, and then again while the accessory structure is being constructed. Once the accessory structure is complete, the parking of company vehicles in the front of the property shall not be permitted.

The existing pole-mounted sign cabinet on the property is nonconforming to the existing sign regulations in the Village Code. Staff recommends this signage be removed and, if desired, replaced with signage that meets current Village Code requirements.

Public Works

A site plan will be required to be approved by the Plan Commission in conformance with the requirements outlined in the memo dated March 25, 2020 and any other information requested by Village Staff.

VILLAGE STAFF RECOMMENDATION

APPROVE a conditional use permit (CUP) for Scott Morgan and All-Terrain Construction to allow the operation of a construction services contractor shop at the property located at N112W14972 Mequon Road subject to the following conditions:

1. The uses and activities allowed on the property shall be limited to those uses and activities and relative locations specified in the conditional use permit (CUP) application and supporting documents dated February 26, 2019. The size and relative location of those areas within the property from which said uses and activities are permitted are limited to that presented in the detailed site plan and description submitted with the supporting documents. Days and hours of operation shall be limited to those specified in the CUP application and supporting documents submitted to the Village. The Owner/Operator is responsible for reporting any significant changes in the type, intensity, amount or location of the land uses and activities, days and hours of operation, size or location or other operational characteristics of said uses and activities authorized under this CUP to the Village Planner.
2. A Site Plan shall be reviewed and approved by the Plan Commission for a paved driveway and parking area, accessory building in the rear of the existing building, and the modified front paved area/driveway modifications within three (3) months of CUP approval. This approval shall include all items deemed necessary by the Village Public Works Department as outlined in the memo dated March 25, 2020 and any other information requested by Village Staff. The paved driveway and parking area shall be installed no later than six (6) months from the date of site plan approval. The accessory building shall be constructed within one (1) year of site plan approval.
3. The existing pavement in the front yard shall be reduced in size to come into conformance with current driveway width (maximum 40' at road right-of-way) and residential setback requirements from a residential district (50'). Subsequently, the number of driveways shall be reduced to one, which meets current Village Public Works Department and/or WI Department of Transportation (WisDOT) driveway requirements. Pavement for the existing sidewalk shall also be extended and/or replaced at that time. All listed improvements included in this condition shall be completed no later than two (2) years from the date of site plan approval in accordance with Village Code (Chapter 17.43 Site Plan Approval Requirements).
4. The outdoor storage of construction vehicles, equipment and materials between the front of the existing residential dwelling and Mequon Road shall be prohibited. All storage of construction vehicles, equipment and materials shall be limited to the rear and/or side yards of the property, and, be enclosed and screened from view by adjacent properties.
5. In the event the Village receives complaints regarding outdoor storage, noise, dust, odor, vibration or other negative impacts on surrounding neighborhood and properties, the Owner/Operator shall work cooperatively with the Village to mitigate and resolve the issue.
6. Temporary company vehicle parking may be permitted in the front of the property for up to six (6) months from the date of Site Plan Approval by the Village Plan Commission to accommodate the construction of the proposed driveway and parking area in the rear of the property. Temporary company vehicle parking may also be permitted and during construction of the accessory structure in the rear of the property. Once completed,

there shall be no parking of company vehicles or other storage in the front of the property.

7. All nonconforming signage shall be removed from the property. All temporary and permanent exterior signs require a permit and shall comply with all current sign regulations.
8. Site improvements, buildings, signage, exterior lighting and any other improvements on the property that are necessary for the land uses and activities authorized under this CUP shall be reviewed and approved by the Village through the Zoning Permit or Site Plan application process as determined by the Village Zoning Administrator. If required, Site Plan review and approval will include Plan Commission review and approval.
9. If the use, activities and/or operation subject of this permit falls out of conformity with the conditions herein, or where there is a change in the nature, character, intensity or extent of the permitted conditional uses and activities which cause special problems or harmful effects associated with the permitted uses and activities that were not revealed or anticipated at the time this CUP was granted, or, where conditions imposed by this CUP that were anticipated to mitigate or eliminate harmful effects associated with the uses and activities but are subsequently insufficient to do so, or, for similar cause based upon consideration for the public comfort, safety, and welfare, this conditional use permit may be terminated or modified by the Village Board by the amendment to or addition of conditions after public hearing thereon.

Frederick Gierach
N128 W19157 Holy Hill Road
Richfield, Wisconsin 53076

May 7, 2020

Village of Germantown
Community Development Department
Mr. Jeffrey W. Retzlaff
N112 W17001 Mequon Rd. P.O. Box 337
Germantown, WI 53022-0337

Via: Personal Delivery Village Hall Lobby

RE: Public Hearing for
All Terrain Construction Inc.

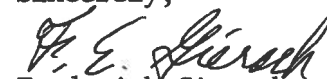
Mr. Jeffrey W. Retzlaff:

As one of the owners of the 10 plus acres directly across the street from the property which is subject to this public hearing, I have a few questions and/or comments. First of all, please understand that I have no objection to the proposed use. I do question the capability of the property being able to support the magnitude of the business in question. To locate 4 Pickup sized trucks, 4 Trailers, 2 Skid Steer Loaders and tools on site in the back yard, plus other unspecified material needed to operate this type of business all in the open, could very well be detrimental to the tenants in the apartment project located immediately to the West as well as to the "House of Homemade Sausage" business to the East.

If a Conditional Use Permit is granted, my suggestion would be that the "FUTURE" building as specified in the Notice of Public Hearing be constructed prior to occupancy. Furthermore, a restriction should be included that would prevent the overflow of the operation into the front yard.

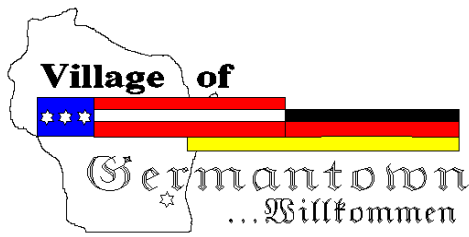
I thank you for listening to my concerns. I would like this letter read into the minutes of the Public Hearing.

Sincerely,


Frederick Gierach

cc: Weyer 3 Ltd Prtnrship





Engineering Department Memorandum

To : Jeffrey W. Retzlaff, AICP, Planning Director/Zoning Administrator

From : Lawrence Ratayczak, P.E., Director of Public Works

Date : March 25, 2020

Re : All Terrain Construction

Items Reviewed:

1. Conditional use permit application Dated: 03-02-20

General Comments:

1. Please respond to each item below. **A written response addressing each item shall be included in your submittal.**
2. The submitted plans have been reviewed for general conformance with State and Village design guidelines. Additional comments could arise as a result of the plan completion and modifications. The items listed below will need to be fully resolved before the Engineering Dept. can recommend a formal approval of the plans and permit for construction.
3. A professional engineer's original seal is to be affixed, signed and dated on the final set of construction plans.
4. Please provide the following plans prepared by a professional engineer for review.
 - a. Dimensioned site plan showing proposed improvements
 - b. Grading plan showing existing and proposed topography
 - c. Erosion control plan
 - d. Construction Details
5. Provide site calculations showing additional impervious area and disturbed area.
6. If the proposed improvements will add over 5,000SF of impervious area provide a stormwater management plan meeting chapter 13 of MMSD requirements.



Village of



Germantown

Willkommen

Fee must accompany application

☒ \$1460 Paid ☒ Date 3/2/20

CONDITIONAL USE PERMIT APPLICATION

Pursuant to Section 17.42 of the Municipal Code

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

1 APPLICANT OR AGENT

Scott Morgan
5355 N Milwaukee
River Parkway
Milwaukee, WI 53209

Phone (414) 807-2146

Fax ()

E-Mail scmorgan@msn.com

PROPERTY OWNER

Scott Morgan

Same

Phone ()

2 TO WHOM SHOULD THE PERMIT BE ISSUED?

Scott Morgan / All Terrain Construction

3 PROPERTY ADDRESS

112 W 14972
Hwy 14972 Megan Rd.

TAX KEY NUMBER

GT 233997

4 DESCRIPTION OF EXISTING OPERATION

Briefly describe the use as it exists today, including use, size, number of employees, hours of operation, etc. If this permit involves new construction, describe the current status of the property, e.g. "vacant." Use additional pages as necessary.

Former heating and cooling business now vacant.

Attached single family residence now vacant.

5 DESCRIPTION OF PROPOSED OPERATION

Write the name of the proposed conditional use exactly as it appears in the Municipal Code.

(-) Construction Services Contractor Shop

Describe the proposed use, including size, number of employees, hours of operation and extent of any new construction/alterations.

All Terrain currently has 6 employees.
Office and parking/storage for All Terrain
Construction Inc. Hours of operation:
Summer months 7am - 7pm winter office use

METES AND BOUNDS LEGAL DESCRIPTION OF PROPERTY — REQUIRED

Attach pages as necessary.

see survey

SUPPORTING DOCUMENTATION:

7

- ☐ Site plan and elevations for new construction (can be conceptual)
- ☐ Photos of existing use and/or proposed use operating elsewhere

☐

☐

READ AND INITIAL THE FOLLOWING:

8

S.M

I understand that the Village is under no obligation to issue a Conditional Use Permit and will do so only if the applicant successfully demonstrates that the proposed use is harmonious with the neighborhood and the long range goals of the Village.

S.M

I will notify the Village if any aspect of the conditional use changes. I understand that failure to do so may result in the revocation of the CUP.

S.M

I understand that a Conditional Use Permit is valid only if the conditions and restrictions of the permit are met. I understand that failure to comply with any aspect of the permit may result in revocation.

SIGNATURES — ALL APPLICATIONS MUST BE SIGNED BY OWNER!

9

[Signature] 3-2-2020
Applicant Date

Jason Becker 3-3-2020
Owner Date
Trustee Dorothy
D Byrd Revocable
Trust Currently
owner/seller.

Cornerstone Land Surveying, Inc.
Plat of Survey

Surveyor:
Richard Simon
5080 Fairy Chasm
West Bend, WI 53095
(262) 424-5630

Address:
N112 W14972 Mequon Road
Germantown, WI 53022

Scale 1"= 40'



Description: As described on Document No. 1428315

That part of the Southwest 1/4 of Section 23, Township 9 North, Range 20 East, Village of Germantown, Washington County, Wisconsin.

Described as follows: Commencing at the South 1/4 Corner of said Section 23, Thence West along the South line of said Section, 589.10 feet to the point of beginning of this description, thence continuing West on said South line, 110.00 feet, thence North, 478.66 feet to the Southerly Right of Way of C&NW Railroad; thence S61°44'E on said Right of Way line 124.89 feet; thence South, 419.52 feet to said South line and the point of beginning of this description.

Excepting therefrom that part conveyed to the State of Wisconsin, Department of Transportation by Warranty Deed recorded June 25th, 1990 in Volume 1077, Page 256, as Document No. 561873.

Legend:

- Denotes Iron Pipe Found
- Denotes Iron Rod Set
- ⊕ Denotes Hydrant

Montgomery Square II

Well
Located along Property Line

Propane Tank
Located along Property Line

Montgomery Square

Area
42254 Sq. Ft.
0.970 Acres

CSM # 2217

Southwest corner of the
Southwest 1/4 of Section 23-9-20

South Line of the Southwest 1/4 of Section 23-9-20
Mequon Road / S.T.H. "167"

Southeast corner of the
Southwest 1/4 of Section 23-9-20
Elevation - 878.66'

Notes:

- 1) Bearings or Distances in () are Recorded Measurements
- 2) In providing this boundary survey no attempt has been made to obtain or show data concerning the existence of any utility on the site, whether private, municipal, or public owned.
- 3) No Title Policy furnished therefore completeness of easements is not warranted.
- 4) Elevations are referenced to the Southeast corner of the Southwest 1/4 of Section 23-9-20, Benchmark Elevation = 878.66', NGVD 1929

STATE OF WISCONSIN) SS
COUNTY OF WASHINGTON)
I, RICHARD SIMON, SURVEYOR, HAVE SURVEYED THE ABOVE DESCRIBED PROPERTY ACCORDING TO OFFICIAL RECORDS AND THE ABOVE MAP IS A TRUE REPRESENTATION THEREOF. THIS SURVEY IS MADE FOR THE EXCLUSIVE USE OF THE PRESENT OWNERS OF THE PROPERTY AND ALSO THOSE WHO PURCHASE, MORTGAGE OR GUARANTEE THE TITLE THERE TO, WITHIN ONE YEAR FROM THE DATE HERETO.

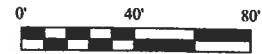
Survey For: Scott Morgan
Dated this 25th day of February, 2020.

Cornerstone Land Surveying, Inc.
Plat of Survey

Surveyor:
Richard Simon
5080 Fairy Chasm
West Bend, WI 53095
(262) 424-5630

Address:
N112 W14972 Mequon Road
Germantown, WI 53022

Scale 1" = 40'



Description: As described on Document No. 1428315

That part of the Southwest $\frac{1}{4}$ of Section 23, Township 9 North, Range 20 East, Village of Germantown, Washington County, Wisconsin, Described as follows: Commencing at the South $\frac{1}{4}$ Corner of said Section 23, Thence West along the South line of said Section, 589.10 feet to the point of beginning of this description, thence continuing West on said South line, 110.00 feet, thence North, 478.66 feet to the Southerly Right of Way of C&NW Railroad; thence S61°44'E on said Right of Way line 124.89 feet; thence South, 419.52 feet to said South line and the point of beginning of this description. Excepting therefrom that part conveyed to the State of Wisconsin, Department of Transportation by Warranty Deed recorded June 25th, 1990 in Volume 1077, Page 256, as Document No. 561873.

Legend:

- Denotes Iron Pipe Found
- Denotes Iron Rod Set
- ⊕ Denotes Hydrant

Montgomery Square II

Well
Located along Property Line

Propane Tank
Located along Property Line

Montgomery Square

Area
42254 Sq. Ft.
0.970 Acres

Vent
Ø 877.62

CSM # 2217

Proposed Drive

Storm Inlet
875.43

Exception Volume 1077, Page 256,
as Document No. 561873.

South Line of the Southwest $\frac{1}{4}$ of Section 23-9-20
Mequon Road / S.T.H. "167"

Southwest corner of the
Southwest $\frac{1}{4}$ of Section 23-9-20

Southeast corner of the
Southwest $\frac{1}{4}$ of Section 23-9-20
Elevation - 878.66'

Notes:

- 1) Bearings or Distances in () are Recorded Measurements
- 2) In providing this boundary survey no attempt has been made to obtain or show data concerning the existence of any utility on the site, whether private, municipal, or public owned.
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STATE OF WISCONSIN) SS
COUNTY OF WASHINGTON)

"I HAVE SURVEYED THE ABOVE DESCRIBED PROPERTY ACCORDING TO OFFICIAL RECORDS AND THE ABOVE MAP IS A TRUE REPRESENTATION THEREOF. THIS SURVEY IS MADE FOR THE EXCLUSIVE USE OF THE PRESENT OWNERS OF THE PROPERTY AND ALSO THOSE WHO PURCHASE, MORTGAGE OR GUARANTEE THE TITLE THERETO, WITHIN ONE YEAR FROM THE DATE HERETO.

Survey For: Scott Morgan
Dated this 25th day of February, 2020.

I plan to live in the residence and use the commercial space for offices for my company All Terrain Construction Inc.

Our company provides concrete flatwork services for residential and commercial (driveways sidewalks, patios, steps, garages and more.

Our work is performed offsite.

We have six employees including myself.

We have 4 pickup sized trucks, 4 trailers and 2 skid steer loaders we would park there.

We plan to install a driveway (with 5-foot setback from property line on east side of property) to the rear of the building and park our company trucks and trailers on a concrete parking area, and would like to build an accessory building in the future.

BUSINESS OF THE VILLAGE BOARD GERMANTOWN, WI

MEETING DATE: June 1, 2020

AGENDA ITEM: New Business (CONDITIONAL USE PERMIT AMENDMENT)

ITEM TITLE: D. Lynne Luckow, Agent for Ozaukee Development Corp., Property Owner, W188 N11786 Maple Road; Amendment to Conditional Use Permit (CUP#01-19) for a Dog Training & Education Facility

SUBMITTED BY: Jeffrey W. Retzlaff, Director, Community Development Department

SUMMARY EXPLANATION:

D. Lynne Luckow, agent for Redline Canine Training Center & Behavioral Consultation LLC, operator and Ozaukee Development Corp., property owner, is seeking an amendment to an existing Conditional Use Permit (CUP#01-19) for the dog training and education facility in the building located at W188 N11786 Maple Road in the Germantown Industrial Park.

The applicant is proposing three major changes to the Conditional Use Permit. These include:

1. Expansion of the facility to use Suite 1, in addition to Suites 2, 3, & 4 of the multi-tenant building, for additional office space and space for competitors to crate their dogs during competitions,
2. Add canine massage to the list of services provided, and
3. Extend hours of operation from 6:00am to 10:00pm (existing) to 24 hours/day, 7 days/week in order to accommodate customers wishing to use the turf area later at night (i.e. 9-11pm or 10pm-2am)

The applicant has also been working with the Village of Germantown Fire Department to increase the maximum occupancy by re-classifying the facility from “business” to “kennel”, requiring the modification of existing condition #5 of CUP #01-19.

PLAN COMMISSION RECOMMENDATIONS:

APPROVE a conditional use permit amendment for the operation of a dog training and education facility in the existing building located at W188 N11786 Maple Road (Alpine Business Center Suite 2, 3 & 4) to include the space in Suite 1, expand hours of operation to 24 hours/day 7 days/week and to add canine massage to the list of available services subject to all conditions of CUP #01-19 and the addition of the following condition:

1. This permit authorizes limited uses and activities as set forth in the conditional use permit amendment application dated February 3, 2020 and in the supporting documents made part of the application on file with the Village. All of the operational characteristics and services as described, as well as any commitments made by the Applicant as set forth in the application, supporting documents, and made during

presentations to the Village Plan Commission, Village Board and Village staff are deemed to be conditions of approval.

Also, to **REVISE** Condition #5 of the existing CUP #01-19 to “re-classify the occupancy type from business to ~~assembly~~ kennel”.

APPLICATION, PLANS & RELATED DOCUMENTS:

All relevant documents, including applications, plans, supporting information, the staff report & recommendation, and Plan Commission meeting minutes (when available) are included in the PDF digital file distributed by the Village Clerk.

CUP # 05-20

Document No.

CONDITIONAL USE PERMIT

Document Title

VILLAGE OF GERMANTOWN, WASHINGTON COUNTY, WISCONSIN
 CONDITIONAL USE ZONING PERMIT

Whereas the Applicants:

**D. Lynne Luckow, Redline Canine Owner/Operator, and
 Douglas R. Lane, Agent for Ozaukee Development
 Corporation, Property Owner**

agree to comply with applicable Codes and Ordinances of the Village of Germantown, Wisconsin, and further agrees that all work done pursuant to the permission granted herewith will conform with the applications and drawings filed with and approvals granted by officials of the Village for the purpose of obtaining this permit.

Now, therefore, this permit (an amendment to CUP #01-19) is issued to allow the operation of a dog training and education facility (Redline Canine Training Center & Behavioral Consultation LLC) from the property located at W188 N11786 Maple Road pursuant to Section 17.33(3)(h) of the Village Zoning Code.

Name & Return Address:

**Village of Germantown
 P.O. Box 337
 Germantown, WI 53022**

Parcel Identification No:

GTNV 212-960

**On the following described property located in the Village of Germantown,
 Washington County, Wisconsin:**

Lot 1 of Certified Survey Map (CSM) 3184; a 2.88-acre parcel of Section 21, Town 9 North, Range 20 East, in the Village of Germantown, County of Washington, State of Wisconsin.

Tax Key No: 212-960

Address: W188 N11786 Maple Road, Suites 1,2,3,4

Pursuant to the following condition(s):

1. This permit authorizes limited uses and activities as set forth in the conditional use permit application dated December 5, 2018 and in the supporting documents made part of the application on file with the Village. All of the operational characteristics and services as described, as well as any commitments made by the Applicant as set forth in the application, supporting documents, and made during presentations to the Village Plan Commission, Village Board and Village staff are deemed to be conditions of approval.
2. This permit authorizes limited uses and activities as set forth in the conditional use permit amendment application dated February 3, 2020 and in the supporting documents made part of the application on file with the Village. All of the operational characteristics and services as described, as well as any commitments made by the Applicant as set forth in the application, supporting documents, and made during presentations to the Village Plan Commission, Village Board and Village staff are deemed to be conditions of approval.
3. If the use, activities and/or operation subject of this permit falls out of conformity with the conditions herein, or, where there is a change in the nature, character, intensity or extent of the activities and/or uses which cause problems or harmful effects not anticipated at the time of approval of this CUP or where conditions imposed were anticipated to ameliorate or eliminate such problems or harmful effects but are subsequently insufficient to do so, or, for similar cause based upon consideration for

the public comfort, safety, and welfare, the conditional use permit may be terminated or modified by the Village Board by the amendment to or addition of conditions after public hearing thereon.

4. All interior and exterior building modifications (including exterior lighting) and/or site improvements may require permits and/or other approvals from the Village. State-approved plans may be required for any proposed improvements or remodeling. Detailed plans for any interior or exterior improvements shall be submitted to the Village as part of a building permit application.
5. If the proposed use constitutes the type of change in occupancy that requires interior and/or exterior remodeling or additional fire safety features to comply with current building, fire safety and other applicable codes and regulations, the operator shall coordinate the preparation and submittal of state-approved plans to and approved by the Village Fire Department and Inspection Services prior to occupancy.
6. The owner/operator shall coordinate with the Fire Department to properly post the tenant space with a maximum occupancy of 49 persons. In the event that the maximum capacity of 49 persons is exceeded on a regular basis as determined by the Fire Department, the owner/operator will be required to re-classify the occupancy type from "business" to "kennel" and, as a result, install any additional, necessary fire-safety measures required by the Fire Department, or, discontinue operation.
7. The owner/operator shall contact the Fire Department and Inspection Services for a pre-occupancy inspection prior to commencing operations.
8. All exterior signage, including temporary signs, require a permit from the Village.
9. If the Village receives any complaints regarding noise generated from barking dogs, the owner/operator shall install sound-deadening materials, e.g. sound absorbing acoustic panels, or implement other sound-proofing measures within the tenant space.

Granted by the Village Board of the Village of Germantown, Washington County, Wisconsin on the ____ day of _____, 2020.

Dean Wolter, Village President

ATTEST:

Deanna Braunschweig, Village Clerk

STATE OF WISCONSIN) SS
WASHINGTON COUNTY)

Personally came before me this ____ day of _____, 2020, the above named Dean Wolter, Village President, and Deanna Braunschweig, Village Clerk, to me known to be the persons who executed the foregoing instrument and acknowledged the same.

{type or print name of Notary on this line}

{signature of Notary on this line}

Notary Public, State of Wisconsin

My Commission Expires: _____

ACCEPTANCE OF TERMS AND CONDITIONS BY OPERATOR

As the business owner/operator, D. Lynne Luckow, I hereby accept the terms and conditions set forth in this Permit, and realize that non-adherence to the terms and conditions as stated hereon may result in the revocation of this Permit by the Village of Germantown.

Dated this ____ day of _____, 2020

D. Lynne Luckow, Business Owner/Operator, Redline Canine Training Center and Behavioral Consultation, LLC

STATE OF WISCONSIN) SS
_____) COUNTY)

Personally came before me this ____ day of _____, 2020, being the above named _____, to me known to be the person who executed the foregoing instrument and acknowledged the same.

{type or print name of Notary on this line}

{signature of Notary on this line}

Notary Public, State of Wisconsin My Commission Expires: _____

ACCEPTANCE OF TERMS AND CONDITIONS BY PROPERTY OWNER

As property owner, Ozaukee Development Corporation, I hereby accept the terms and conditions set forth in this Permit and realize that non-adherence to the terms and conditions as stated hereon may result in the revocation of this Permit by the Village of Germantown.

Dated this ____ day of _____, 2020

Ozaukee Development Corporation, Property Owner

STATE OF WISCONSIN) SS
_____) COUNTY)

Personally came before me this ____ day of _____, 2020, being the above named _____, to me known to be the person who executed the foregoing instrument and acknowledged the same.

{type or print name of Notary on this line}

(signature of Notary on this line)
Notary Public, State of Wisconsin
My Commission Expires: _____

This instrument was drafted by:
Jeffrey W. Retzlaff, AICP
Community Development Director/Zoning Administrator
Village of Germantown, Wisconsin

anticipated at the time this CUP was granted, or, where conditions imposed by this CUP that were anticipated to mitigate or eliminate harmful effects associated with the uses and activities but are subsequently insufficient to do so, or, for similar cause based upon consideration for the public comfort, safety, and welfare, this conditional use permit may be terminated or modified by the Village Board by the amendment to or addition of conditions after public hearing thereon.

Discussion followed. Trustee Baum stated he did not have a problem with the use and indicated it would be better if the accessory building was constructed sooner than later to avoid the backyard getting cluttered with junk. Associate Planner Zandt commented that staff tried to address outdoor storage in condition #4 by stating no vehicles can be stored in the front yard. Chairman Wolter asked if there were plans to remove any trees on the lot. Mr. Morgan said a majority of the trees would need to be removed to provide enough room for parking. He said he may not be able to complete the driveway before winter because the front of the property needs to be redone including removing a large section of asphalt, eliminating one entrance, repaving everything in the front including the sidewalk and curb and extending the watermain. He stated he would be willing to put shrubs in along the apartment line as a privacy screen that would be located on an earth berm on the apartment property to create more separation and privacy. He would also install a berm along the back of the property on the east. He explained his business is seasonal and plans to construct the accessory building in fall when his season is over.

MOTION carried 5-1 (Nilles)

Redline Canine Training Center - W188 N11786 Maple Road. Lynne Luckow, operator, is seeking an amendment to the existing Conditional Use Permit (CUP #01-19) for the dog training and education facility. Associate Planner Zandt summarized the proposal. She explained Ms. Luckow had spoken with her about increasing the occupancy limit in the building and said staff believes that is addressed in Conditions #4 and #5 in the existing CUP, per the requirements of the fire department. Chief Delain said he had spoken to Ms. Luckow about changing use of the building to a class b kennel that would change the occupancy limit to up to 130 people ratio and that would be allowed with the conditions in place.

Lynne Luckow explained she had reached out to the fire department to discuss adding the additional space and if he had any additional concerns. Associate Planner Zandt stated Condition #4 and #5 do not limit the number of people allowed to 49 people but allow the option to work with the Fire Department regarding maximum capacity. She added there was nothing in the existing conditions that would limit the ability to do so. Chief Delain stated a change in capacity would be approved at staff level to reclassify the occupancy from class B to kennel.

Public Hearing opened at 9:16 pm.

Public Hearing closed at 9:18 pm.

MOTION Baum second Williams to Approve a conditional use permit amendment for the operation of a dog training and education facility in the existing building located at W188 N11786 Maple Road (Alpine Business Center Suite 2, 3 & 4) to include the space in Suite 1, expand hours of operation to 24 hours/day 7 days/week and to add canine massage to the list of available services subject to all conditions of CUP #01-19 and the addition of the following condition:

- 1. This permit authorizes limited uses and activities as set forth in the conditional use***

permit amendment application dated February 3, 2020 and in the supporting documents made part of the application on file with the Village. All of the operational characteristics and services as described, as well as any commitments made by the Applicant as set forth in the application, supporting documents, and made during presentations to the Village Plan Commission, Village Board and Village staff are deemed to be conditions of approval.

MOTION to Amend Baum second Shadid to revise Condition #5 of the existing CUP #01-19 to “re-classify the occupancy type from business to kennel”.

MOTION to Amend carried unanimously.

MOTION to Approve as amended carried unanimously.

Enviro-Safe Consulting - W130 N10500 Washington Drive. The request is for approval of site development and building plans for a 29,746 sqft expansion to the existing hazardous/non-hazardous processing, transfer, storage and recycling facility. Planner Retzlaff summarized the proposal.

MOTION Baum second Shadid to Approve the site development & building plans for a 29,746 sqft expansion to the existing Enviro-Safe facility located on the 5.6-acre parcel at W130 N10500 Washington Drive in the Germantown Business Park subject to the following (11) conditions:

- 1. This approval is subject to all the conditions and requirements set forth herein and adopted by the Plan Commission. Approval is granted for the architectural and engineering plan set dated February 4, 2020 and supporting documents including a February 3, 2019 letter from Michael Krenz, Skyline Development Corp., unless superseded by subsequent plan sheets approved by the Village Planner or Engineer pursuant to revisions required herein and/or by the Plan Commission.***
- 2. All landscaping, screening, grading, paving, storm water management, utility and other improvements that are not fire-safety related as shown on the approved site plans shall be installed as proposed prior to issuance of an occupancy permit unless a cash bond or letter of credit in an amount equal to 120 percent of the estimated installation and material costs reviewed and approved by the Village is submitted to the Village as necessary to ensure that installation of the proposed features and improvements will be completed within one (1) year after issuance of the occupancy permit.***
- 3. All technical issues, corrections and plan requirements identified by the Public Works Department staff (see April 9, 2020 letter from Troy Hartjes, RA Smith, and an April 3, 2020 Village Surveyor Engineer memo) shall be addressed and reflected in revised plans and/or supplemental information reviewed and approved by Village staff prior to issuance of a building permit or as may be mutually agreed to with the Public Works Director (excluding “early start” site clearing and footing/foundation work approved by the Village and/or WI DSPS).***
- 4. Enviro-Safe shall re-evaluate and update the Closure Plan required under Condition #5 in Conditional Use Permit #6-15 given the significantly larger amount of storage capability for both hazardous and non-hazardous material and adjust the financial surety amount accordingly. Results of said re-evaluation shall be submitted to the Village Planner for review and approval within six (6) months after the date the occupancy permit is used for the proposed building expansion.***
- 5. Enviro-Safe shall re-evaluate and update the Spill Prevention, Control and Countermeasure Plan (SPCC) required under Condition #1 in Conditional Use Permit #6-15 given the significantly larger amount of storage capability for both hazardous and non-hazardous material. Results of said re-evaluation and updated SPCC shall be submitted to the Village Fire Chief for review and approval within six (6) months after the date the occupancy permit is used for the proposed building expansion.***

CONDITIONAL USE PERMIT AMENDMENT APPLICATION

5/11/20 Plan Commission Meeting

Redline Canine Training Center / D. Lynne Luckow

Village Planner Report

Germantown, Wisconsin

Summary

D. Lynne Luckow, agent for Redline Canine Training Center & Behavioral Consultation LLC, operator and Ozaukee Development Corporation, property owner, is seeking an amendment to the existing Conditional Use Permit (CUP# 01-19) for the dog training and education facility in the building located at W188 N11786 Maple Road in the Germantown Industrial Park.

Property Location: W188 N11786 Maple Road

Applicant/

Property Owner:

D. Lynne Luckow
RCTC LLC
W157 N10822 Catskill Ln
Germantown, WI

Ozaukee Development Corp.
PO Box 893
Cedarburg, WI 53912

Current Zoning: M-1: Limited Industrial District

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



Proposal

Lynne Luckow, agent for Redline Canine Training Center & Behavioral Consultation LLC (RCTC), operator and Ozaukee Development Corporation, property owner, is seeking an amendment to the existing Conditional Use Permit (CUP# 01-19) for the dog training and education facility in the building located at W188 N11786 Maple Road in the Germantown Industrial Park.

The operation currently occupies Suites 2,3 & 4 comprising approximately 9,600 gross square feet of the 25,600 square foot multi-tenant building. Under this amendment application, the applicant is proposing to expand the facility to also use Suite 1 (approximately 3,200 square feet), which is currently vacant. The additional space will allow for more office space, as well as the space for competitors to crate their dogs during competitions. No interior modifications are proposed for the space at this time.

As discussed in the application materials, RCTC provides a variety of dog training, exercise and educational services to dog owners and the general public at the facility and throughout the community. All activities and services will be provided on-site and inside the building. With this amendment application, the applicant is also requesting to add canine massage to the “menu” of services provided.

The current hours of operation are Monday through Sunday, 6:00am to 10:00pm. The applicant is requesting to expand the hours of operation to 24 hours/day, 7 days/week in order to accommodate customers wishing to use the turf area later at night (i.e. 9-11pm or 10pm-2am). The expanded services and hours may allow the current number of employees to increase by 1-2 employees in the future (total 4-5 employees).

Staff Comments

Fire Department

If in the future the interior space is modified to connect into one large space, the maximum occupancy of 49 may be able to increase at that time. Additional occupants would be allowed in the new area (Suite 1) as it is separate from the rest of the facility.

Planning & Zoning

Staff support the proposed amendments to the existing Conditional Use Permit and believe that the proposed changes in the area, hours, and services can be added to the existing CUP with one additional condition which points to the CUP amendment application materials (community impact statement).

Village Planner Recommendation

APPROVE a conditional use permit amendment for the operation of a dog training and education facility in the existing building located at W188 N11786 Maple Road (Alpine Business Center Suite 2, 3 & 4) to include the space in Suite 1, expand hours of operation to 24 hours/day 7 days/week and to add canine massage to the list of available services subject to all conditions of CUP #01-19 and the addition of the following condition:

1. This permit authorizes limited uses and activities as set forth in the conditional use permit amendment application dated February 3, 2020 and in the supporting documents made part of the application on file with the Village. All of the operational characteristics and services as described, as well as any commitments made by the Applicant as set forth in the application, supporting documents, and made during presentations to the Village Plan Commission, Village Board and Village staff are deemed to be conditions of approval.



Village of



Germantown

Willkommen

Fee must accompany application

~~\$1380~~ \$730 Paid g Date 2-3-20
Amendment

CONDITIONAL USE PERMIT APPLICATION

Pursuant to Section 17.42 of the Municipal Code

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

- 1 APPLICANT OR AGENT**
D. Lynne Luckow
W157 N10822 Catskill Lane
GERMANTOWN, WI 53022
Phone (414) 694-7727
Fax (262) 252-9109
E-Mail Redline.Lynne@hotmail.com

PROPERTY OWNER
Douglas R. Lane Real Estate
PO BOX 893
7612A Hwy 60
Cedarburg, WI 53012
Phone (262) 377-8597
- 2 TO WHOM SHOULD THE PERMIT BE ISSUED?**
Redline Canine Training Center and Behavioral Consultation, LLC
- 3 PROPERTY ADDRESS**
W188 N11786 Maple Road
GERMANTOWN, WI 53022

TAX KEY NUMBER
(1), 2, 3, 4
- 4 DESCRIPTION OF EXISTING OPERATION**
Briefly describe the use as it exists today, including use, size, number of employees, hours of operation, etc. If this permit involves new construction, describe the current status of the property, e.g. "vacant." Use additional pages as necessary.
(Currently Vacant) - Will use Unit #1 (3,200 sq ft)
for additional office space as well as space for competitors
to crate their dogs during competitions.
- 5 DESCRIPTION OF PROPOSED OPERATION**
Write the name of the proposed conditional use exactly as it appears in the Municipal Code.
See CUP # 01-19
Describe the proposed use, including size, number of employees, hours of operation and extent of any new construction/alterations.
Employee's 1-2 growth dependent
Hours - 24 / 7 days a week - currently 6am to 10pm 7 days
NO new construction, - AS IS - will stay in place
See attached community impact document
Additional space will allow for Agility competitions

METES AND BOUNDS LEGAL DESCRIPTION OF PROPERTY — REQUIRED

6

Attach pages as necessary.

Lot 1-CMS 3/84 Doc 958719
Sec 21-9-20 2.88Ac

SUPPORTING DOCUMENTATION:

7

☐ Site plan and elevations for new construction (can be conceptual)

☒ Photos of existing use and/or proposed use operating elsewhere

x See www.RCTC Clicker training.com
x Alpine Business Center Proposal: Community Impact

READ AND INITIAL THE FOLLOWING:

8

[Signature] I understand that the Village is under no obligation to issue a Conditional Use Permit and will do so only if the applicant successfully demonstrates that the proposed use is harmonious with the neighborhood and the long range goals of the Village.

[Signature] I will notify the Village if any aspect of the conditional use changes. I understand that failure to do so may result in the revocation of the CUP.

[Signature] I understand that a Conditional Use Permit is valid only if the conditions and restrictions of the permit are met. I understand that failure to comply with any aspect of the permit may result in revocation.

SIGNATURES — ALL APPLICATIONS MUST BE SIGNED BY OWNER!

9

Applicant

Date

Owner

Date

CUP # 01-19
Document No.

CONDITIONAL USE PERMIT
Document Title

VILLAGE OF GERMANTOWN, WASHINGTON COUNTY, WISCONSIN
CONDITIONAL USE ZONING PERMIT

Document # **1466929**
WASHINGTON COUNTY WISCONSIN
02-11-2019 03:55 PM

Sharon A. Martin
SHARON A MARTIN
WASHINGTON COUNTY
REGISTER OF DEEDS
Fee: \$30.00

Pages: 4

Whereas the Applicants:

**D. Lynne Luckow, Redline Canine Owner/Operator, and
Douglas R. Lane, Agent for Ozaukee Development
Corporation, Property Owner**

agree to comply with applicable Codes and Ordinances of the Village of Germantown, Wisconsin, and further agrees that all work done pursuant to the permission granted herewith will conform with the applications and drawings filed with and approvals granted by officials of the Village for the purpose of obtaining this permit.

Now, therefore, this permit is issued to allow the operation of a dog training and education facility (Redline Canine Training Center & Behavioral Consultation LLC) from the property located at W188 N11786 Maple Road pursuant to Section 17.33(3)(h) of the Village Zoning Code.

Name & Return Address:

**Village of Germantown
P.O. Box 337
Germantown, WI 53022**

Parcel Identification No:

GTVN 212-960

**On the following described property located in the Village of Germantown,
Washington County, Wisconsin:**

**Lot 1 of Certified Survey Map (CSM) 3184; a 2.88-acre parcel of Section 21, Town 9 North,
Range 20 East, in the Village of Germantown, County of Washington, State of Wisconsin.**

Tax Key No: 212-960

Address: W188 N11786 Maple Road, Suites 2,3,4

Pursuant to the following condition(s):

1. This permit authorizes limited uses and activities as set forth in the conditional use permit application dated December 5, 2018 and in the supporting documents made part of the application on file with the Village. All of the operational characteristics and services as described, as well as any commitments made by the Applicant as set forth in the application, supporting documents, and made during presentations to the Village Plan Commission, Village Board and Village staff are deemed to be conditions of approval.
2. If the use, activities and/or operation subject of this permit falls out of conformity with the conditions herein, or, where there is a change in the nature, character, intensity or extent of the activities and/or uses which cause problems or harmful effects not anticipated at the time of approval of this CUP or where conditions imposed were anticipated to ameliorate or eliminate such problems or harmful effects but are subsequently insufficient to do so, or, for similar cause based upon consideration for the public comfort, safety, and welfare, the conditional use permit may be terminated or modified by the Village Board by the amendment to or addition of conditions after public hearing thereon.
3. All interior and exterior building modifications (including exterior lighting) and/or site improvements may require permits and/or other approvals from the Village. State-approved plans may be required for any proposed improvements or remodeling.

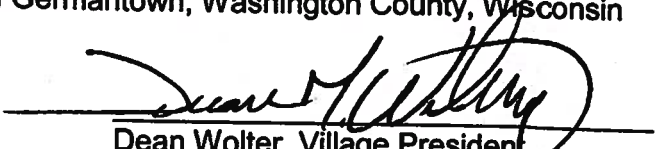
Conditional Use Permit (CUP) # 01-19

D. Lynne Luckow, Owner/Operator and Ozaukee Development Corporation, Property Owner
Page 2 of 4

Detailed plans for any interior or exterior improvements shall be submitted to the Village as part of a building permit application.

4. If the proposed use constitutes the type of change in occupancy that requires interior and/or exterior remodeling or additional fire safety features to comply with current building, fire safety and other applicable codes and regulations, the operator shall coordinate the preparation and submittal of state-approved plans to and approved by the Village Fire Department and Inspection Services prior to occupancy.
5. The owner/operator shall coordinate with the Fire Department to properly post the tenant space with a maximum occupancy of 49 persons. In the event that the maximum capacity of 49 persons is exceeded on a regular basis as determined by the Fire Department, the owner/operator will be required to re-classify the occupancy type from "business" to "assembly" and, as a result, install any additional, necessary fire-safety measures required by the Fire Department, or, discontinue operation.
6. The owner/operator shall contact the Fire Department and Inspection Services for a pre-occupancy inspection prior to commencing operations.
7. All exterior signage, including temporary signs, require a permit from the Village.
8. If the Village receives any complaints regarding noise generated from barking dogs, the owner/operator shall install sound-deadening materials, e.g. sound absorbing acoustic panels, or implement other sound-proofing measures within the tenant space.

Granted by the Village Board of the Village of Germantown, Washington County, Wisconsin on the 22nd day of January, 2019.


Dean Wolter, Village President

ATTEST:

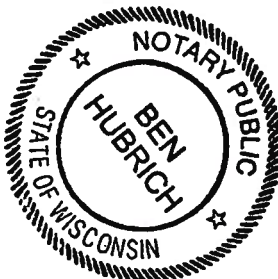

Deanna Braunschweig, Village Clerk

STATE OF WISCONSIN) SS
WASHINGTON COUNTY)

Personally came before me this 22 day of January, 2019, the above named Dean Wolter, Village President, and Deanna Braunschweig, Village Clerk, to me known to be the persons who executed the foregoing instrument and acknowledged the same.

Ben Hubrich
(type or print name of Notary on this line)

Ben Hubrich
(signature of Notary on this line)



Notary Public, State of Wisconsin
My Commission Expires: 5/25/21

Conditional Use Permit (CUP) # 01-19

D. Lynne Luckow, Owner/Operator and Ozaukee Development Corporation, Property Owner
Page 3 of 4

ACCEPTANCE OF TERMS AND CONDITIONS BY OPERATOR

As the business owner/operator, D. Lynne Luckow, I hereby accept the terms and conditions set forth in this Permit, and realize that non-adherence to the terms and conditions as stated hereon may result in the revocation of this Permit by the Village of Germantown.

Dated this 7 day of February, 2019

[Signature]
D. Lynne Luckow, Business Owner/Operator, Redline Canine Training Center and Behavioral Consultation, LLC

STATE OF WISCONSIN) SS
Washington COUNTY)

Personally came before me this 7 day of February, 2019, being the above named D. Lynne Luckow, to me known to be the person who executed the foregoing instrument and acknowledged the same.

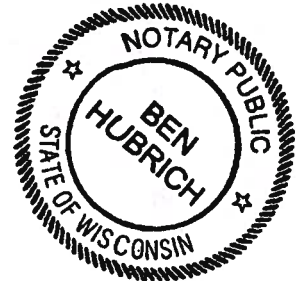
Ben Hubrich

(type or print name of Notary on this line)

[Signature]

(signature of Notary on this line)

Notary Public, State of Wisconsin
My Commission Expires: 8/25/2021



Conditional Use Permit (CUP) # 01-19

D. Lynne Luckow, Owner/Operator and Ozaukee Development Corporation, Property Owner
Page 4 of 4

ACCEPTANCE OF TERMS AND CONDITIONS BY PROPERTY OWNER

As property owner, Ozaukee Development Corporation, I hereby accept the terms and conditions set forth in this Permit, and realize that non-adherence to the terms and conditions as stated hereon may result in the revocation of this Permit by the Village of Germantown.

Dated this 25 day of JAN., 2019

D. Lynne Luckow
Ozaukee Development Corporation, Property Owner

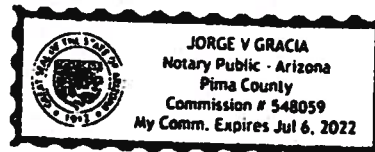
Arizona
STATE OF ~~WISCONSIN~~ SS
Pima COUNTY)

Personally came before me this 25th day of January, 2019, being the above named Douglas R. Lane, to me known to be the person who executed the foregoing instrument and acknowledged the same.

Jorge V. Gracia
(type or print name of Notary on this line)
Jorge V. Gracia
(signature of Notary on this line)

This instrument was drafted by:
Jeffrey W. Retzlaff, AICP
Community Development Director/Zoning Administrator
Village of Germantown, Wisconsin

Notary Public, State of Arizona
My Commission Expires: July 6, 2022



Redline Canine Training Center and Behavioral Consultation, LLC

Alpine Business Center Proposal: *Community Impact*

Redline Canine Training Center is excited to be an active member of the greater Germantown community and is eagerly looking forward to sharing our expertise and passion for dog training in a variety of ways that will positively contribute to its citizens and visitors.

We intend to have a significant footprint in the Germantown community by actively participating in numerous ways that will support businesses, schools, and civic efforts.

With input and collaboration from the community, Redline Canine Training Center will offer a vast array of unique and innovative programs for the citizens of Germantown. These will be planned and coordinated throughout the year and can take place on-site at our facility or at locations throughout the community. Redline Canine Training Center is prepared to include the following opportunities:

Civic Engagement

Promoting Responsible Dog Ownership: Redline Canine Training Center will offer a wide range of classes and seminars for dog owners, while we are primarily focused on agility, we will offer additional topics such as new puppy classes, manners, leash walking, and more. Our facility will offer both the new and the seasoned dog owner a state-of-the-art facility to exercise and train their dogs. Redline Canine Training Center will be a wonderful place for families to visit and enjoy!

Supporting Education: Redline Canine Training Center will serve as a resource for public and private schools by delivering educational presentations that meet the needs and education outcomes of the schools. (For more information on youth programs, see below.) These programs can be delivered on-site at our facility or in the classroom.

Supporting Local Business and Government: Redline Canine Training Center eagerly looks forward to supporting the efforts of the police department, Chamber of Commerce, and government entities.

Supporting Civic and Non-Profit Organizations: Redline Canine Training Center plans to support the Germantown community in a variety of ways, including through in-kind and monetary contributions as well as through collaborations, partnerships, and programs.

Youth and Community Programming

Redline Canine Training Center is extremely excited to deliver youth and community programming to Germantown. We have a humane educator on staff who has over two decades of youth and community engagement experience and is thrilled to bring her expertise and passion for community programming to Redline. A sample of the programming we are prepared to implement includes the following:

Community Open Houses: Redline Canine Training Center will feature a state-of-the-art competitive agility turf. We will provide a wonderful array of thrilling agility demonstrations that will engage and entertain the community! We will also provide on-site demos and “fun agility” areas for the community to come try at charity events such as 5K’s, non-profit events, and school events.

Therapy Dog Programs: Redline Canine Training Center will train and provide certified therapy dogs for visits at our facility or on-site at schools or organizations such as convalescent and rehabilitation centers, adult day centers, retirement homes, schools, libraries, scout meetings, and after-school programs.

Reading Programs: Redline Canine Training Center will coordinate Reading Programs where young people read to certified therapy dogs. These acclaimed programs have shown to improve reading skills, school attendance, and self-esteem for students of all backgrounds and grade levels.

Educational Programs: Redline Canine Training Center will deliver a wide range of lessons, seminars, and workshops for young people and community members on the following topics:

- Dog Bite Prevention
- Staying Safe Around Dogs
- How to Care for Dogs
- How to Interact with Dogs (i.e. How Dogs Communicate)
- Careers in the Dog Industry
- How to Help Dogs in Need
- The Keys to Responsible Dog Ownership
- Dog Training 101
- Teach Your Dog Tricks
- Ask the Trainer!

We look forward to delivering these lessons and presentations to the following:

- Scouting Groups
- 4H Groups
- Church Groups
- Senior-Aged Groups
- Non-Profit Groups (YMCA’s, etc.)
- Schools, Day Care Centers, and After-School Programs
- Police Department and Civic Groups (National Night Out, Safety Town, etc.)
- Special Needs Programming (any of our lessons can be tailored to meet the goals and objectives of special needs groups)

We are thrilled to set our sights on the Village of Germantown. With a population of 19,749 and a median household income of \$ \$68,975, it is the perfect location for our training center.

We know that Germantown is a growing and robust community with a rich history and bright future. We believe that Redline Canine Training Center will be an invaluable asset to the pet owners of Germantown! Dog ownership in the United States has grown to 89.7 million dogs in households with \$5.24 billion spent annually on pet services. Redline Canine Training Center will offer a convenient, unique, and fun training experience for individuals and families to enjoy year-round.

In conclusion, Redline Canine Training Center will serve the citizens of Germantown through dynamic and innovative programming and will make a significant and positive impact through our unique presence. We are eagerly looking forward to being actively involved, to contributing to the wellness of the community, and to supporting educational and civic efforts. Our facility will be a popular place for everyone to enjoy; we would be honored to share our expertise and passion, along with our invaluable resources, with the entire community.

We believe that Redline Canine Training Center will serve the community in countless ways, becoming an invaluable asset to the community of Germantown and its surrounding neighborhoods.

Sponsorship Opportunities

We will actively seek out opportunities to engage sponsors to support the facility in a variety of ways which will offset building and programming costs. Sponsors will receive significant acknowledgement and recognition via banners, social media, and website features. We will strive to have a strong community presence in our facility. Redline Canine Training Center staff have vast experience in sponsorship development as well as relationships with numerous businesses and organizations. Some of the many we will seek to include are:

- Harley Davidson
- Friends of Nature
- Minuteman Press
- Heartlaub Heating and Cooling
- Nimmer Fence Company
- Bentley's Pet Stuff
- Kohl's and Harley Davidson
- Dog Food Companies (Numerous)
- Veterinary Clinics (Numerous)
- Karen's K9 Pet Care
- Floor Coverings International
- Kari the Painter
- Techteriors
- Elmbrook Humane Society

REDLINE CANINE TRAINING CENTER PROPOSED PHOTO EXAMPLES



The Above photo is an agility space that is 100 x 60 with a carpeted flooring. The photo below is a slightly larger space most likely 80 x 120.

These photos would resemble the interior of the space at the Alpine Business Center Location. The Proposed flooring will be an artificial turf as seen below.



From: [Lori Johnson](#)
To: [Jeff Retzlaff](#); [Emily Zandt](#)
Subject: FW: Additional services at Redline
Date: Wednesday, April 22, 2020 12:30:30 PM

See email below.

Lori Johnson

Planning Assistant
Village of Germantown
N112 W17001 Mequon Road
Germantown, WI 53022
(262) 250-4735
ljohnson@village.germantown.wi.us

From: Lynne Luckow <redlinelynne@hotmail.com>
Sent: Wednesday, April 22, 2020 12:27 PM
To: Lori Johnson <ljohnson@village.germantown.wi.us>
Subject: Additional services at Redline

Hello Planning Commission.

Perviously I had been human Massage Therapist (I am still currently licensed and insured) and went back to school to become Certified in Canine Massage. I would love to add this service to the "menu" at Redline Canine Training Center and Behavioral Consultation. My hope is that I can become a valued member of the Veterinary Community to help aide in post surgical surgeries or Injuries that involve soft tissue and would be pithing my scope of practice!!

Sincerely,
D Lynne Luckow

D. Lynne Luckow LMT, NMT, OSCT, KPA-CTP
OneMind Dogs Instructor
Redline Canine Training Center & Behavioral Consultation, LLC
Healing Hands and Paws, K-9 CMT

"A unique training experience"

RCTCclickertraining.com

OneMindDogs.com

TAGteach Certified
Operation Socialization Certified Trainer
FitPaws Master Trainer

*Pedigree indicates what the animal should be.
Conformation indicates what the animal appears to be.*

**VILLAGE OF GERMANTOWN
GENERAL GOVERNMENT & FINANCE COMMITTEE
MEETING MINUTES
May 18, 2020**

CALL TO ORDER: The meeting was called to order at 6:00 p.m. by Chairperson Zabel.

ROLL CALL: Present: Chairperson Zabel, Trustee Members: Kaminski, Myers, Wing. Also present: Attorney Sajdak, Clerk Braunschweig, Finance Director Rath, Administrator Kreklow, Manager Tucker, Trustees Pieper, and Baum.

APPROVAL OF MINUTES: April 20, 2020 – **MOTION (Kaminski/Wing) to approve the April 20, 2020 minutes. Motion carried unanimously.**

PUBLIC COMMENT: No public comment.

NEW BUSINESS:

- A. Resolution 40-2020 Salary Budget Amendment.
Director Rath reported on the item. This is a journal entry for previously approved salary adjustments. Motion (Kaminski/Wing) to recommend the Resolution 40-2020 Salary Budget Amendment. Motion Carried Unanimously.
- B. 2019 Public Service Commission Report.
Motion (Kaminski/Wing) to Accept the 2019 Public Service Commission Report. Director Rath reviewed the report and the associated Water Cash Flow Report. Motion Carried Unanimously.
- C. Vacation Carry Over Policy Change.
Administrator Kreklow reported on the item. The current policy allows staff to carry up to five days vacation time from one year to the next with written approval from the Administrator, and the carried vacation time must be used in the first quarter.

Prior to the COVID Pandemic, there has been exceptions to the policy due to bad weather or unexpected circumstances. For the first seven years of employment, most employees have only two weeks of vacation time. The COVID Pandemic has created additional issues, because the closures started prior to the end of the first quarter. The Village extended the deadline for using the carried vacation time. Because we are not able to allow many of our staff including police and fire departments to use vacation time until the pandemic crisis has passed; it is possible we will have issues at the end of the year with so many people trying to take vacation time. Employees have used about 300 less vacation hours this year than last year or about 10% less. The proposal is to allow staff to carry no more than eight weeks of vacation at any one time and use the time with Supervisor Approval. Discussion ensued of managing the time off, tracking, and practicability. Discussion ensued that the banked vacation time would be at a different rate of pay than earned.

Motion (Zabel/Kaminski) to recommend forty hours to be carried over and used by the end of the year instead of first quarter. Motion carried unanimously.

OLD BUSINESS:

None.

REPORTS:

- A. **Monthly Year to Date Financials:**
1. Revenue and Expense Report All Funds: The reports were reviewed. Director Rath reported that the revenues and expenses are being closely watched. The Hotel Motel and Park and Rec Revenues are down. Expenses are running true.
 2. Health and Dental Plans: Director Rath reviewed the reports. Dental is trending less due to the COVID-19; however, it may level out by the end of the year. Health is trending consistent.
- B. **Impact Fees Financial Reports:** The report was reviewed. There is single family growth.
- C. **Accounts Payable:** April 25, 2020 and May 10, 2020 payables were reviewed.
- D. **Code Violation Reports:** The report was reviewed.
- E. **C.I.P. PROJECTS:** The reports were reviewed. Director Rath commented on the use of existing funds.
- F. **Letter of Credit Summaries:** The reports were reviewed. Nothing New.
1. Building Inspection Department – Reviewed.
 2. Public Works Department– Reviewed.
 3. Planning Department – Reviewed.
- G. **Summary of all Village Contracts:** The summary of contracts were reviewed. The road salt had been added and the Carlson engineering software had been renewed.
- H. **SCHEDULE NEXT MEETING:** **The next meeting will be on May 18, 2020 at 6:00 pm.**

ADJOURNMENT: Chairman Zabel adjourned the meeting at 6:34 p.m.

Respectfully Submitted,

Deanna Braunschweig

Deanna Braunschweig
Village Clerk

**BUSINESS OF THE VILLAGE BOARD
GERMANTOWN, WI**

MEETING DATE: June 1, 2020, 2020

AGENDA ITEM: New Business

ITEM TITLE: Easement for We-energies / Well #7

SUBMITTED BY: Lawrence W Ratayczak, P.E., Public Works Director

SUMMARY EXPLANATION:

The Village of Germantown Water Utility has requested We-energies to install additional electric service to Well #7. The new cables would create a “loop” in the electrical system for redundancy. This configuration can eliminate some of the future planned outages and shorten future outages caused by cable faults. This work requires an easement for We-energies to install the cables and giving access to the Well site.

ATTACHMENT: ORDINANCE_____ RESOLUTION_____ OTHER X

- Easement Document w/ exhibit “A”

RECOMMENDATION:

Staff is requesting Village Board approve the easement to We-energies.

**DISTRIBUTION EASEMENT
UNDERGROUND**

Document Number

WR NO. **4480045** IO NO. **CR0767**

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, **VILLAGE OF GERMANTOWN**, hereinafter referred to as "Grantor", owner of land, hereby grants and warrants to **WISCONSIN ELECTRIC POWER COMPANY**, a Wisconsin corporation doing business as **We Energies**, hereinafter referred to as "Grantee", a permanent easement upon, within, beneath, over and across a part of Grantor's land hereinafter referred to as "easement area".

The easement area is described as the Southerly 60 feet of the Easterly 18 feet of **Lot 1 of Certified Survey Map No. 3375** as recored in the office of the Register of Deeds in Volume 20 of Certified Survey Maps on Pages 150, 151, and 152, as Document No. 541474 and being located in the **Southwest ¼ of Section 22**, Township 9 North, Range 20 East, Village of Germantown, Washington County, Wisconsin.

The location of the easement area with respect to Grantor's land is as shown on the attached drawing, marked Exhibit "A", and made a part of this document.

RETURN TO:
We Energies
PROPERTY RIGHTS & INFORMATION GROUP
231 W. MICHIGAN STREET, ROOM P129
PO BOX 2046
MILWAUKEE, WI 53201-2046

GTNV 223983
(Parcel Identification Number)

1. **Purpose:** The purpose of this easement is to construct, install, operate, maintain, repair, replace and extend underground utility facilities, conduit and cables, electric pad-mounted transformers, manhole, electric pad-mounted vacuum fault interrupter, concrete slabs, power pedestals, riser equipment, terminals and markers, together with all necessary and appurtenant equipment under and above ground as deemed necessary by Grantee, all to transmit electric energy, including the customary growth and replacement thereof. Trees, bushes, branches and roots may be trimmed or removed so as not to interfere with Grantee's use of the easement area.
2. **Access:** Grantee or its agents shall have the right to enter and use Grantor's land with full right of ingress and egress over and across the easement area and adjacent lands of Grantor for the purpose of exercising its rights in the easement area.
3. **Buildings or Other Structures:** Grantor agrees that no structures will be erected in the easement area or in such close proximity to Grantee's facilities as to create a violation of all applicable State of Wisconsin electric codes or any amendments thereto.
4. **Elevation:** Grantor agrees that the elevation of the ground surface existing as of the date of the initial installation of Grantee's facilities within the easement area will not be altered by more than 4 inches without the written consent of Grantee.
5. **Restoration:** Grantee agrees to restore or cause to have restored Grantor's land, as nearly as is reasonably possible, to the condition existing prior to such entry by Grantee or its agents. This restoration, however, does not apply to any trees, bushes, branches or roots which may interfere with Grantee's use of the easement area.
6. **Exercise of Rights:** It is agreed that the complete exercise of the rights herein conveyed may be gradual and not fully exercised until some time in the future, and that none of the rights herein granted shall be lost by non-use.
7. **Binding on Future Parties:** This grant of easement shall be binding upon and inure to the benefit of the heirs, successors and assigns of all parties hereto.
8. **Easement Review:** Grantor acknowledges receipt of materials which describe Grantor's rights and options in the easement negotiation process and furthermore acknowledges that Grantor has had at least 5 days to review this easement document or voluntarily waives the five day review period.

Grantor:

VILLAGE OF GERMANTOWN

By: _____

(Print name and title): _____

By: _____

(Print name and title): _____

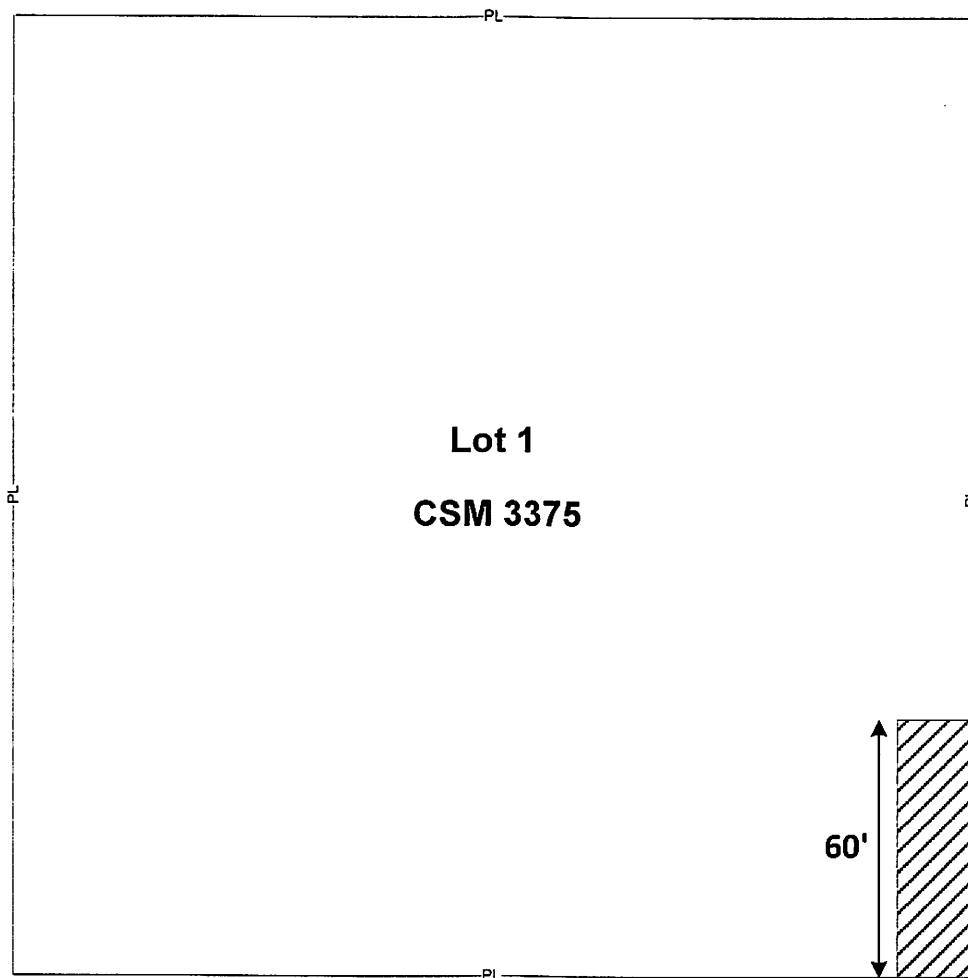
Acknowledged before me in Washington County, State of Wisconsin, on _____, 2020,
by _____, the _____,
and by _____, the _____,
of the VILLAGE OF GERMANTOWN, for the municipal corporation, by its authority, and pursuant to Resolution File No.
adopted by its Village Board on _____, 2020.

Notary Public Signature, State of Wisconsin

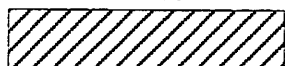
Notary Public Name (Typed or Printed)

(NOTARY STAMP/SEAL)

My commission expires _____



KEY:



**18 Foot Wide
Easement Area**

EXHIBIT "A"
NOT TO SCALE

IDO	Part of Lot 1 of CSM 3375, being a part of the SW ¼ of Section 22, T9N, R20E, Village of Germantown, Washington County, Wisconsin.	DRAWN BY
4480045		Douglas J. Hartmann
REVISIONS		DATE
		5/20/2020

VACATION

All regular full-time employees, (see exception below), are eligible for vacation as such:

- After one (1) year of service 10 working days
- After seven (7) years of service 15 working days
- After fifteen (15) years of service 20 working days
- After twenty (20) years of service 25 working days

Police Lieutenants, promoted from patrol officer status and receiving the schedule of benefits listed below, are eligible for vacation as such:

- After one (1) year of service 10 working days
- After seven (7) years of service 16 working days
- After fifteen (15) years of service 20 working days
- After twenty (20) years of service 25 working days

Regular part-time employees who work less than 40, but more than 20 hours per week, or at least 1040 hours per year, and who have completed five (5) years of continuous service for the Village are eligible for vacation on a pro-rated basis based on the benefits outlined for full time employees.

Years of service are calculated on the basis of an employee's anniversary date of employment. Breaks in continuous service of two weeks or more of unpaid time will not be a part of any vacation accrual. An employee who terminates employment prior to completing one year of continuous service shall not be eligible for any payment of accrued vacation.

~~Vacation time must be taken in the year in the calendar year in which it is allotted. Upon prior approval from the Village Administrator and department director, up to five (5) days of vacation may be carried over, but must be used before the end of the first quarter of the next year. These requests shall be in writing to the Administrator by November 1.~~

Vacation time may be carried over into a new year, but once an employee's vacation time balance reaches eight weeks (40 days), the employee will no longer accumulate additional vacation time until the balance falls below the limit.