AGENDA

Grand Haven Charter Township Zoning Board of Appeals
Thursday, May 28, 2020 – 6:00 p.m.
Remote Electronic Meeting

According to the Attorney General, interrupting a public meeting in Michigan with hate speech or profanity could result in criminal charges under several State statutes relating to Fraudulent Access to a Computer or Network (MCL 752. 797) and/or Malicious Use of Electronics Communication (MCL 750.540). According to the US Attorney for Eastern Michigan, Federal charges may include disrupting a public meeting, computer intrusion, using a computer to commit a crime, hate crimes, fraud, or transmitting threatening communications. Public meetings are monitored, and violations of statutes will be prosecuted.

Please go to http://www.ght.org/boards/meeting-packets/ to view the complete packet for tonight's Zoning Board of Appeals meeting.

I. Call To Order

II. Roll Call

III. Approval of the November 26, 2019 ZBA Meeting Minutes

IV. New Business

A. ZBA Variance Application No. 20-01 – Grand Haven Custom Molding

If you would like to comment on Agenda Item Only, you may submit your comments via Facebook Live stream found at https://www.facebook.com/GHTownship/; email sfedewa@ght.org; or call (616) 260-4982 when prompted. Comments through the phone are limited to three (3) minutes.

V. Reports

VI. Extended Public Comments (*Limited To Four (4) Minutes Please*).

If you would like to comment on a Non-Agenda Item, you may now submit your comments via Facebook Live stream found at https://www.facebook.com/GHTownship/; email sfedewa@ght.org, or call (616) 260-4982 when prompted. Comments through the phone are limited to four (4) minutes.

VII. Adjournment

MEETING MINUTES
GRAND HAVEN CHARTER TOWNSHIP
ZONING BOARD OF APPEALS
TUESDAY NOVEMBER 26, 2019

I. CALL TO ORDER

The regular meeting of the Grand Haven Charter Township Zoning Board of Appeals was called to order at 7:00 p.m. by Chair Voss.

II. ROLL CALL

Board of Appeals members present:	Voss, Slater, Loftis, Behm, and Hesselsweet
Board of Appeals members absent:	Rycenga (alternate)

Also present: Assistant Zoning Administrator Hoisington, and Community Development Director Fedewa.

Without objection, Hoisington was instructed to record the minutes for the meeting.

III. APPROVAL OF MINUTES

Without objection, the minutes of the June 25, 2019 ZBA Meeting were approved.

IV. OLD BUSINESS

Motion by Voss, supported by Slater, to remove ZBA Case #19-01 from the table for reconsideration. **Which motion carried**.

1. ZBA Case #19-01 – Dimensional Variance – Rust

Party Requesting Variance:	Dale and Mary Jo Rust
Applicant Representative:	Curt Hall, LandTechwmi LLC
Address:	1939 Koehling Rd, Northbrook, IL 60052
Parcel Number:	70-03-32-331-017
Location:	18165 Shore Acres Rd

Dale and Mary Joe Rust, represented by Curt Hall, are seeking a variance to construct a series of retaining walls and decks that would violate Sections 21.02, 20.22.1, and 20.22.2 of the Zoning Ordinance.

Hoisington provided an overview of the application through a memorandum dated November 21st.

The applicant provided supplemental information pertaining to scope of the project.

The Board discussed the application and noted the following:

- Verified the information requested from the May meeting has been provided.

    - A simplified site plan and relevant height and setback details were provided.
    - An EGLE Permit has been issued for the project.
    - Based on further discussion the western most deck is no longer a concern.
- Confirmed the scope of work has not changed since the time the application was first presented.
    - The variance items have been identified and reduced from what was anticipated based on the initial application because of details provided.

Standard No. 1 – Exceptional or extraordinary circumstances:

- Exceptional changes in topography.
- Located within the Critical Dune Areas.

Ayes: Voss, Slater, Loftis, Behm, Hesselsweet
Nays: None

Standard No. 2 – Substantial property right:

- Many homes along Lake Michigan have a series of decks to provide views.
- The proposed retaining walls will help preserve and stabilize the house.

Ayes: Voss, Slater, Loftis, Behm, Hesselsweet
Nays: None

Standard No. 3 – Will not be a substantial detriment to adjacent parcels, or material impact on the intent and purpose of the Ordinance:

- The Board noted that no opposition was received from adjacent parcels.

Ayes: Voss, Slater, Loftis, Behm, Hesselsweet
Nays: None

Standard No. 4 – Request is not of such a recurrent nature as to make reasonably practical the formulation of a general regulation:

- Case is unique and does not present a concern that the situation will reoccur and make reasonable the formulation of a general regulation.

Ayes: Voss, Slater, Loftis, Behm, Hesselsweet
Nays: None

Motion by Slater, supported by Behm, to **approve** a dimensional variance from Sections 21.02, 20.22.1, and 20.22.2 of the Zoning Ordinance to construct a series of retaining walls and decks. The details are as follows:

1. Dimensional variance from Section 20.22.2 to allow a 4' tall retaining wall to be built to the property line that will result in setback variance of 2'.
2. Dimensional variance from Section 20.22.1 and 20.22.2 to allow a series of retaining walls totaling 11' in height that will result in a height variance of 3' and a side yard 2 setback variance of 6'.
3. Dimensional variance from Section 20.22.2 to allow a retaining wall (not to exceed 8' in height) to be built to the property line that will result in a front yard setback variance of 19' and a side yard 1 setback variance of 15'.
4. Dimensional variance from Section 21.02 to allow a deck that will result in a side yard 1 setback variance of 15'.
5. Dimensional variance from Section 21.02 to allow a deck that will result in a side yard 2 setback variance of 6'.

Approval of this variance is based upon this Board's findings that all four standards have been affirmatively met.
Which motion passed, as indicated by the following roll call vote:

Ayes: Slater, Loftis, Behm
Nays: Voss
Absent: Hesselsweet

V. NEW BUSINESS

1. Housekeeping Duties – Appointment of Officers & 2020 Meeting Schedule

Hoisington provided an overview of the topic in a memorandum dated November 21st.
Current appointments include:

- Chairperson Voss
- Vice Chair Slater
- Secretary Loftis

Motion by Hesselsweet, supported by Behm to reappoint current members.
Which motion carried unanimously.

The meeting calendar was reviewed and no conflicts were noted.

Motion by Slater, supported by Loftis to approve the 2020 Meeting Date Schedule as presented. **Which motion carried unanimously.**

2. 2018 ZBA Report

Hoisington provided an overview of the report in a memorandum dated November 21st.

It was requested that Staff seek out additional training opportunities for the Board.

The Board affirmed the findings and information provided in the report.

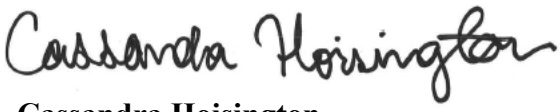
VI. REPORTS - None

VII. EXTENDED PUBLIC COMMENTS – None

VIII. ADJOURNMENT

Without objection, the meeting was adjourned at 7:17 p.m.

Respectfully submitted,



Cassandra Hoisington
Acting Recording Secretary

GRAND HAVEN CHARTER TOWNSHIP

Community Development Memo

DATE: May 22, 2020

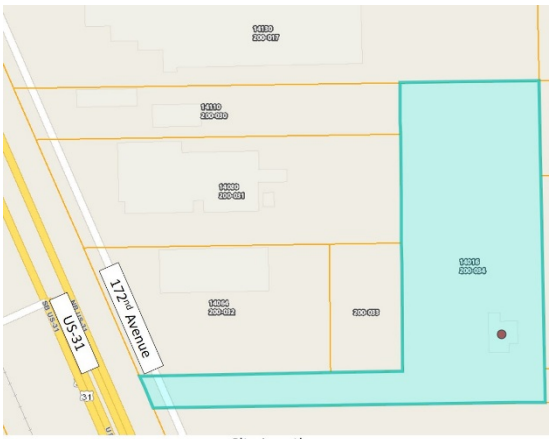
TO: Zoning Board of Appeals

FROM: Cassandra Hoisington, Associate Planner
Stacey Fedewa – AICP, Community Development Director

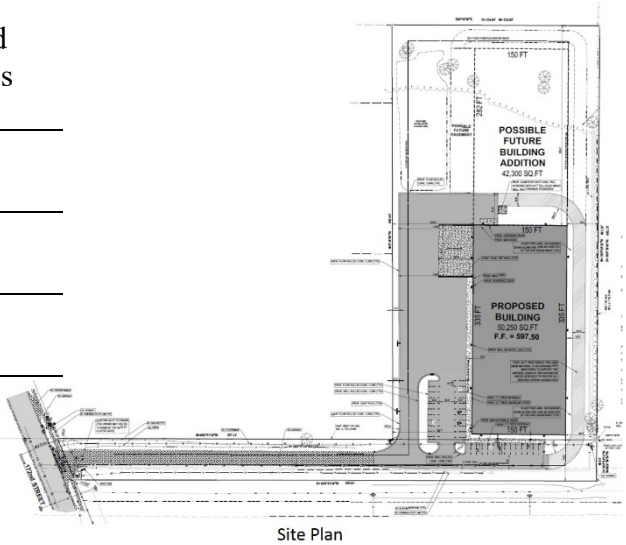
RE: 14016 172nd Avenue – Dimensional Variance Application No. 20-01

PARCEL INFORMATION

Owner	14016 172nd Avenue LLC *(i.e. Grand Haven Custom Molding)*
Applicant	Steve Witte Nederveld
Property Address	14016 172nd Avenue
Parcel Number	70-07-04-200-034
Lot Size	6.3 acres
Lot Type	Flag Lot
	Legal Lot of Record
Zoning	I-1, Industrial
Required Location for Loading Docks	Rear yard, side yard only allowed if no other location is possible and appropriate screening is provided.
Requested Location for Loading Docks	Front yard
Required Slope for a Stormwater Basin	5:1
Requested Slope for a Stormwater Basin	4:1



Site Location



Site Plan

REASON FOR ZBA APPLICATION

The owner is proposing to construct a new warehouse for storage of their products. The proposed building features 6 loading docks located in the front of the building. Additionally, the proposed layout includes a stormwater basin with a 5:1 slope.

Section 8.12.G of the Overlay Zone prohibits loading docks to face a public street and requires them to be located in the rear yard. Where that is not practical, they may be permitted in the side yard as long as walls, landscaping, and/or areas are recessed to minimize the negative visual impact. Section 5.08.C of the Parking Chapter, prohibits locating loading docks in the front yard of a property.

The applicant believes that due to the flag lot shape of the parcel, the area where the proposed docks would be located, could be considered a side yard. Staff have determined this area to be the front yard.

The applicant believes it would be more appropriate to place the loading docks in the proposed area for ease of access and suggested that the proposed building would not be highly visible from the road. The new building would be over 660 ft from 172nd Avenue with narrow frontage on the road itself.

The applicant has noted the existing non-conforming loading docks on adjacent properties. However, the purpose of the Overlay Zone is a long-term plan of improving the aesthetics of the US-31 corridor. One of the questions that arises—**does the distance from the road coupled with the proposed landscaping meet the spirit and intent of the ordinance?**

Precedent Considerations for Loading Docks

As you know, precedence is always one of the primary considerations for a variance. This case has enough specific circumstances for the ZBA to approve or deny the application.

First, as noted above, Section 8.12.G of the ordinance requires loading docks to be in the rear yard, and then gives a supplemental option of locating in a side yard if walls, landscaping, and/or a recessed area are provided. If the ZBA finds that it is not practical to locate the loading docks in the rear or side yard, staff strongly recommends requiring these specific enhancements to minimize the negative visual impact.

If approved, the precedence the ZBA is setting is two-fold, the flag lot and distance from the road coupled with the specific enhancements and landscaping would establish the threshold that other applicants would be tested against. A similar situation (*flag lot adjacent to residential property*) does not exist within the area

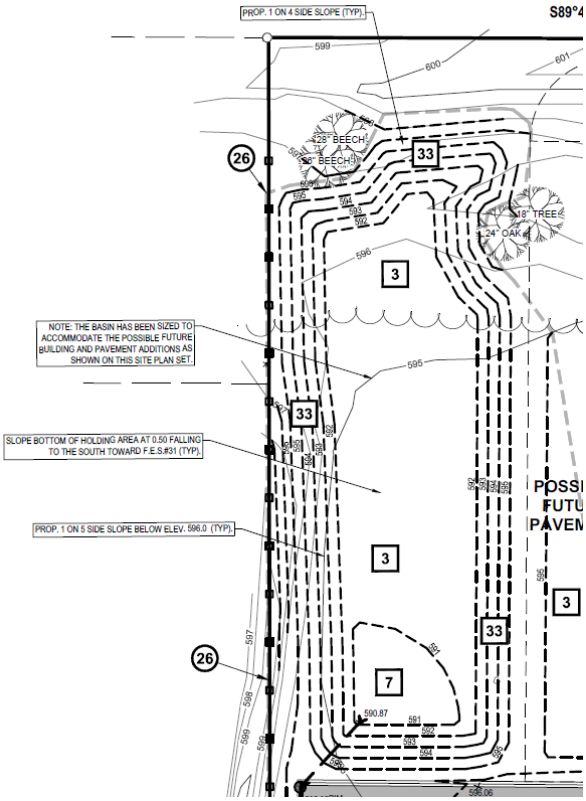
Second, because the site could comply with the ordinance the variance can be denied. The applicant would have to flip the site and move the building west and move the loading docks east behind the building. When this was discussed with the applicant, the rebuttal focused on the loading docks abutting a residential property. The lot does back up to a Rural Residential parcel (*compared to industrial on the other 3 sides*), but the dwelling is more than 1000 feet farther east, so it appears the impact would be minimal.

However, the ZBA would need to **determine the Township's prerogative—loading docks abutting residential, or loading docks in the front yard abutting other industrial yet still semi-visible from US-31?** Staff believes this decision on the Township's prerogative will set the greatest precedence.

There is an option that complies with the Zoning Ordinance - the applicant has the option to change the location of the loading docks to a side or rear yard. The parcel has been cleared, so the site is a blank canvas. The applicant has the option to revise the site plan to comply with the Ordinance. Staff have suggested revising the location of the warehouse to accommodate the loading docks in a compliant location. The applicant and owner were advised of this alternative but chose to proceed with the variance application.

Precedent Considerations for Basin Slope

Section 4.02.A.3 requires stormwater basins to have a slope of 5:1 or varying gentle slopes and must promote a natural shape. The gentle slopes are required for safety purposes by making it more difficult to drown or become stuck in a basin because it's not a quick drop-off at the top edge.



The applicant has indicated they would like to preserve the landmark trees but are unable to protect them AND create a natural shape with a 5:1 slope. To achieve those US-31 Overlay Zone goals the applicant is proposing a 4:1 slope, which will enable them to preserve the landmark trees and create a natural shape.

It should be noted, this basin design is intended to dispose of stormwater for an entirely built-out site, so it is larger than what is necessary for the first phase.

Staff and the applicant have been in contact with the OCWRC to discuss the natural shape and the impact on the stormwater calcs needed to issue a site drainage permit. There are no anticipated problems with obtaining such approvals with the redesigned basin.

VARIANCE STANDARDS

To authorize a dimensional variance from the strict applications of the provisions of this Ordinance, the ZBA shall apply the following standards and make an affirmative finding as to each of the matters set forth in the standards.

STANDARD 1

There are exceptional or extraordinary circumstances or conditions applying to the property that do not apply generally to other properties in the same zoning classification.

> **Loading Docks.** The subject property is a flag lot and a legal lot of record. The proposed building is setback over 660 ft from 172nd Avenue. The rear of the property abuts a Rural Residential parcel, compared to the front of the property which abuts other Industrial properties.
>
> **Basin Slope.** The steeper 4:1 slope would allow the basin to have a smaller footprint and retain existing landmark trees. The design of the basin encompasses a total build-out of the site.
>
> The ZBA will need to determine whether this standard is met.

STANDARD 2

The variance is necessary for the preservation and enjoyment of a substantial property right similar to that possessed by other properties in the same zoning district and in the vicinity, provided that possible increased financial return shall not of itself, be deemed sufficient to warrant a variance.

> **Loading Docks.** The applicant noted the land to the west side of the subject property are in the same zoning district. Industrial properties are required to have loading docks, but are required to be in the rear yard, unless it is not practical, in which case site enhancements can be required to minimize the negative visual impact.
>
> **Basin Slope.** Stormwater basins are required to receive site drainage approval from the OCWRC. The 5:1 slope is intended to improve the safety by creating a gentle slope into the basin, but this slope would result in landmark trees to be removed, but the spirit and intent of the Overlay Zone is to preserve said trees.
>
> The ZBA will need to make a determination whether this standard is met given the circumstances of this case.

STANDARD 3

Authorization of such variance will not be of substantial detriment to adjacent property and will not materially impair the intent and purpose of this Ordinance or the public health, safety, and general welfare of the community.

> **Loading Docks.** Would locating the docks in the rear yard be a detriment to the adjacent property zoned Rural Residential? Would locating the docks in the front yard be an aesthetic detriment or impair the intent and purpose of the Overlay Zone? Would requiring site enhancements like landscaping, walls, or recesses resolve potential detriments?
>
> **Basin Slope.** Would allowing a steeper slope be a detriment to adjacent property or impair the safety of the community? The basin does not appear to be in a location

that is traveled by foot or vehicle, so it seems unlikely that a steeper slope would result in safety concerns.

No correspondence was received for this application (*as of May 22).*

The ZBA will need to make the determination whether this standard is met given the circumstances of this case and the findings on standards 1 and 2.

STANDARD 4

The condition or situation of the specific piece of property or the intended use of said property for which the variance is sought, is not of so general or recurrent a nature as to make reasonably practical the formulation of a general regulation for such condition or situation, a part of this Ordinance.

Loading Docks. Staff is aware of 1 other ZBA case where there was a request to locate the loading docks in a side yard. The variance was approved, but not built, so the approval expired and becomes moot on precedence. That said, the variance was approved for a multi-tenant commercial building because the loading docks in the rear yard would have required business owners in the suites to pick-up from the rear yard and walk their deliveries back up to the suites.

Basin Slope. Staff is not aware of any other variance applications related to the slope of a stormwater basin, and this is the first case staff is aware of to request a steeper slope. Other sites have not had an issue complying with the gentler slope.

The ZBA will need to make the determination whether this standard is met.

SAMPLE MOTIONS

If the ZBA determines each standard has been affirmative met, one of the following motions can be offered:

Motion to **conditionally approve** a dimensional variance from Section 8.12.G and Section 5.08.C to construct loading docks in the front yard of a new warehouse building at 14016 172nd Avenue.

Motion to **approve** a dimensional variance from Section 4.02.A.3 to construct a retention basin with a slope of 4:1 for the parcel located at 14016 172nd Avenue.

Approval of this variance is based upon this Board's findings that all four standards have been affirmatively met.

However, if the ZBA determines each standard has not been affirmatively met, the following motion can be offered:

Motion to **deny** the Section 8.12.G and Section 5.08.C to construct loading docks in the front yard of a new warehouse building located at 14016 172nd Avenue because an alternative exists that does not violate the Grand Haven Charter Township Zoning Ordinance.

Motion to **deny** a dimensional variance from Section 4.02.A.3 to construct a stormwater basin with a slope of 4:1 because an alternative exists that does not violate the Grand Haven Charter Township Zoning Ordinance.

Denial of this variance is based upon this Board's findings that all four standards have not been affirmatively met.

If the ZBA determines that more information is needed to make an affirmative finding, the following motion can be offered:

Motion to **table** the dimensional variance application for 14016 172nd Avenue, and direct the applicant and/or staff to provide the following information:

1. *List items.*

Please contact me with questions or concerns.

Clear Form

Print

GRAND HAVEN CHARTER TOWNSHIP

ZONING BOARD OF APPEALS APPLICATION

Application Type	Fee	Escrow*
Variance or Appeal	$250	$300
Special Meeting	$425	n/a
Interpretation	$125	n/a

** To cover cost of legal and consulting fees, may be increased as necessary*

Applicant/Appellant Information

Name GH Custom Molding

Phone (616) 935-3160 Fax

Address 1500 S Beechtree, Grand Haven, MI 49417

Email Address

Owner Information *(If different from applicant/appellant)*

Name 14016 - 172nd Avenue, LLE (same as GH Molding)

Phone (616) 935-3160 Fax

Address 1500 S Beechtree, Grand Haven, MI 49417

Email Address

Property Information *(Include a survey or scaled drawing)*

Address 14016 - 172nd Avenue

Parcel No. 70 - 07 - 04 - 200 - 034 Current Zoning I-1 Industrial

Lot Width 71.56 feet Lot Depth approx 849.89 feet

Parcel Size +/- 6.5 acres Parcel Size approx 275,807 sq. ft.

Lot Type Typical Lot X - flag lot Corner Lot Interior Lot

General Information *(Check one)*

(X) Application for Variance

( ) Request for Interpretation

( ) Notice of Appeal

NOTE: Please provide a scaled drawing with details of your proposed work including the dimensions of any structure(s) (*i.e. height, width & length*), building materials, the setbacks to ALL property lines, and other existing structures on the parcel, and any other relevant information, as needed.

VARIANCE REQUESTED *(If applicable)*

1. Attach a Narrative: Description of Request; Why it is needed; and Addresses each of the 4 Standards
2. Variance Requested From the Requirements of Section Number(s) Section 15A.10.6, Section 15.2405.3 & Section 15A.04
3. Relating to truck dock location and side slope of storm water holding area
4. Structure/Land Use *(After Variance)* storage building for Grand Haven Custom Molding
5. Overall Building Size *(After Variance)* 50,250 s.f.
6. Setbacks from lot lines *(After Variance)*:
   a. Front Yard +/- 26 feet (off west yard)
   b. Rear Yard 50 feet
   c. Side Yard #1 +/- 74 feet
   d. Side Yard #2 +/- 320 feet

INTERPRETATION REQUEST *(If applicable)*

Description of requested interpretation(s) and relevant Section number(s):

See Attached.

APPEALS AND OTHER APPLICATIONS *(If applicable)*

Description of action being appealed or other matter which is basis of application.

See Attached.

GROUNDS FOR APPEAL OR OTHER APPLICATION *(If applicable)*

See Attached.

IF THE SPACE PROVIDED ON THIS APPLICATION IS INADEQUATE
PLEASE ATTACH ADDITIONAL SHEETS AS NEEDED

I hereby attest the information on this application is, to the best of my knowledge, true and accurate.

Signature of applicant — March 4, 2020 *Date*

Signature of Zoning Administrator — March 4, 2020 *Date*

For Office Use Only

Date Received _____ Fee Paid? _____

RELEASE FORM

The undersigned has applied to the Grand Haven Charter Township Zoning Board of Appeals for a variance. The undersigned hereby authorizes the members of the Zoning Board of Appeals and appropriate Township staff members to inspect the property (*address stated below*) at reasonable times, in regards to the consideration of my request for a variance.

Signature of applicant — *Date*: March 4, 2020

Owner's Signature (if different from applicant) — *Date*: March 4, 2020

Property Address: 14016 - 172nd Avenue

ACTION TAKEN BY TOWNSHIP BOARD OF APPEALS

( ) Application Approved

( ) Application Denied

Description of variance granted or other action taken including conditions imposed, if any:

Grounds for Board action including findings as to standards and requirements prerequisite to imposition of conditions under ordinance:

Signature of ZBA Chairperson — *Date*

NEDERVELD

Grand Haven Custom Molding

14016 172nd Avenue

Grand Haven Township, Michigan

Zoning Board of Appeals Review

Overview

Grand Haven Custom Molding (GHCM) is in the process of purchasing property at 14016 172nd Avenue. The property covers approximately 6.33 acres (excluding ROW) and is zoned I-1 Industrial.

GHCM is proposing to construct a 50,250 sf industrial building and related drives/parking areas on the property. The building will be used to store their product.

In order to develop the property properly, GHCM is requesting two variances as follows:

1). Variance from Section 15A.10.6 and Section 15.2405.3 to allow the truck docks to be located between the proposed building and 172nd Avenue.
2). Variance from Section 15A.04 to allow the storm water holding area to have a side slope of 1 on 4 instead of the 1 on 5 mentioned in the ordinance.

Note that the standard for approval of variances have all been met for the request. Please note the following:

A. There are exception or extraordinary circumstances or conditions applying to the property that do not apply generally to other properties in the same zoning district.

The property is a flag lot. In a different setting, the west yard/setback in question could arguably be considered the side of the building as opposed to the front. The proposed building is approximate 670 ft off 172nd Avenue (at closet point). The proposed building is behind two large industrial buildings and one smaller building, and parking areas. The view of the property and building are greatly screened. – which greatly screen the view of the property. The property to the north and west is zoned industrial, while the property to the east is zoned residential.

For the 1 on 4 side slope for the storm water holding area, the basin is in the middle of an industrial setting. Therefore there will be little to no people visiting the holding area. The Ottawa County Water Resource Commission's standard is a 1 on 4 slope, which will be held. The steeper side slopes will allow existing trees in the area to be preserved, while still allowing the required storage volume to be provided.

B. The variance is necessary for the preservation and enjoyment of a substantial property right similar to that possessed by other properties in the same zoning district and in the vicinity, provided that possible increased financial return shall not of itself, be deemed sufficient to warrant a variance.

The industrial businesses to the west of the site have parking and truck docks located west of where GHCM's docks would be located. Allowing the docks to be located west of the proposed building protects the residential property to the east, while keeping the proposed truck docks internal to the industrial district and in the vicinity of existing truck docks.

Allowing the 1 on 4 side slope for the storm water holding area allows existing trees to be preserved, while still providing the required storage volume. No other businesses in the area have on-site detention, but the county has indicated that the GHCM property does have to provide on-site detention.

The variance requests do not provide GHCM with an increased financial return.

C. The authorization of such variance will not be of substantial detriment to adjacent property, and will not materially impair the intent and purpose of this Ordinance or the public health, safety, and general welfare of the community.

If the variance were NOT approved it would be a detriment to the adjacent properties to the east, as it would force the truck docks and parking to be adjacent to residential as opposed to being adjacent to industrial.

The existing businesses to the west have truck docks in the immediate vicinity, so the proposed location of the truck docks would not be detriment to those properties.

And the truck docks/building is over 700 ft off 172nd Avenue, behind existing buildings and parking areas that front 172nd. Therefore, the view of the property from 172nd will be very minimal.

The 1 on 4 side slope of the holding area is per OCWRC standards and is in line with other holding areas in different municipalities. The holding area will not be visible from 172nd at all, and with this being an industrial lot, there will be little to no one to ever 'visit' the holding area.

D. That the conditions or situation of the specific piece of property or the intended use of said property for which the variance is sought, is not of so general or recurrent a nature as to make reasonably practical the formulation of a general regulation for such condition or situation, a part of this Ordinance.

The property is very unique. The property is a flag lot, with the buildable area being located substantially off the public roadway. There are existing buildings/businesses located between the buildable area of the site and the public roadway. The property is zoned Industrial, with Industrial to the west/north/south, but residential to the east.

BENCHMARKS

BENCHMARK #200 ELEV. = 598.91 (NAVD88)
Top of NE flange bolt on hydrant (under "USA") 23' N. of NW property corner.

BENCHMARK #526 ELEV. = (NAVD88)
Top of NE flange bolt on hydrant 59' N. & 9' W. of SE property corner.

LEGAL DESCRIPTION

Land situated in the Township of Grand Haven, Ottawa County, Michigan:
Part of the South 1/2 of the South 1/2 of the Northeast 1/4 of Section 4, Town 7 North, Range 16 West, described as commencing at the East 1/4 comer of said Section 4; thence North 89 degrees 51 minutes 45 seconds West 1323.35 feet along the East and West 1/4 line for point of beginning; thence continuing North 89 degrees 51 minutes 45 seconds West 326.61 feet; thence North 00 degrees 06 minutes 00 seconds West 663.68 feet; thence South 89 degrees 48 minutes 00 seconds East 334.04 feet; thence South 00 degrees 29 minutes 41 seconds West 663.38 feet along the East 1/8 line to the point of beginning. ALSO, that part of the Southeast 1/4, Section 4, Town 7 North, Range 16 West, described as beginning at a point on the East and West 1/4 line of said Section 4 being North 89 degrees 51 minutes 24 seconds West 1323.34 feet from the East 1/4 comer of said Section 4; thence on the East 1/8 line of said Section 4 South 00 degrees 14 minutes 35 seconds West 66.03 feet; thence on a line 66 feet South and parallel to said East and West 1/4 line North 89 degrees 51 minutes 24 seconds West 836.02 feet; thence on the Easterly right-of-way line of 172nd Avenue North 22 degrees 35 minutes 02 seconds West 71.56 feet; thence on said East and West 1/4 line of Section 4 South 89 degrees 51 minutes 24 seconds East 863.80 feet to the point of beginning.

REMOVAL / DEMOLITION NOTES

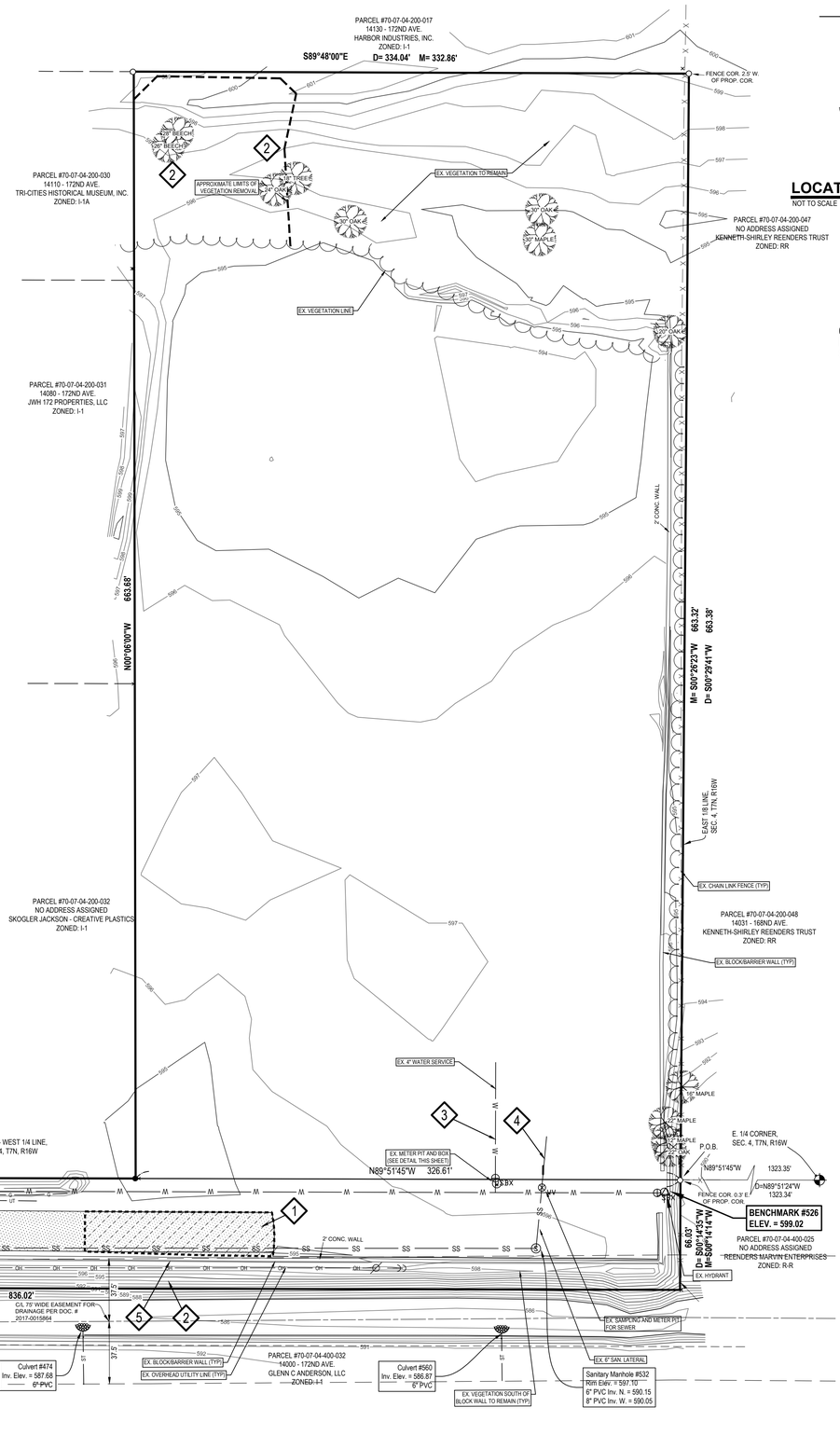
1) THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES AT LEAST THREE WEEKS PRIOR TO THE BEGINNING OF CONSTRUCTION OPERATIONS. THERE ARE EXISTING UNDERGROUND UTILITIES WHICH CROSS THE PROPOSED REPLACEMENT WORK AREAS. ALTHOUGH THEIR EXACT LOCATION CANNOT BE DETERMINED, IT IS KNOWN THESE UTILITIES ARE LOCATED WHERE DIGGING IS REQUIRED. THE CONTRACTOR SHALL CONDUCT THE REQUIRED EXCAVATION IN THESE AREAS WITH EXTREME CAUTION.
2) ALL EXISTING UTILITY INFORMATION SHOWN IS TAKEN FROM EXISTING RECORDS, AND FIELD VERIFIED WHERE ACCESSIBLE ONLY. INFORMATION OBTAINED FROM EXISTING RECORDS MAY NOT BE COMPLETE OR ACCURATE. THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THIS PLAN HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY. THE CONTRACTOR SHALL FIELD VERIFY FOR ACCURACY, LOCATION AND CONDITION.
3) BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE TOWNSHIP AND BY THE OWNER, REPRESENTATIVES OF THE TOWNSHIP, THE OWNER AND THE CONTRACTOR SHALL MAKE AN INSPECTION OF THE EXISTING SEWERS WITHIN THE WORK LIMITS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING UTILITIES AND THEIR APPURTENANCES SHALL BE DETERMINED FROM FIELD OBSERVATIONS AND EXISTING VIDEO TAPES. RECORDS OF THE INSPECTIONS SHALL BE KEPT IN WRITING BY THE CONTRACTOR.
4) THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FOR DEMOLITION WORK.
5) ALL EXISTING UTILITIES, SEWERS AND WATER LINES ARE TO REMAIN UNDISTURBED UNLESS OTHERWISE NOTED ON THE PLANS. THE CONTRACTOR SHALL CONTACT AND COORDINATE WITH ALL APPLICABLE UTILITY COMPANIES, MUNICIPALITIES AND AGENCIES BEFORE COMMENCING ANY WORK.
6) THE CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES REGARDING REMOVAL OF EXISTING POLES, OVERHEAD WIRES, UNDERGROUND UTILITIES, GUY WIRES, GAS LINES, ETC. ALL ADJUSTMENT OR RECONSTRUCTION WORK, EXCEPT FOR THOSE STRUCTURES OTHERWISE NOTED ON THE PLANS, SHALL BE PERFORMED BY THE CONTRACTOR. EXISTING APPURTENANCES SUCH AS UTILITY POLES AND VALVES BOX SHALL NOT BE DISTURBED BY THE CONTRACTOR DURING CONSTRUCTION.
7) THE CONTRACTOR SHALL MAINTAIN EXISTING UTILITY SERVICE TO ALL ADJOINING PROPERTIES.
8) ALL DEBRIS SHALL BE REMOVED FROM THE SITE, AND NO STOCKPILING ON SITE SHALL BE ALLOWED UNLESS APPROVED BY THE OWNER OR THEIR REPRESENTATIVES.
9) THE CONTRACTOR SHALL LIMIT SAWCUT AND PAVEMENT REMOVAL TO ONLY THOSE AREAS WHERE REQUIRED OR AS SHOWN. ALL PAVEMENTS TO BE REMOVED SHALL BE SAWCUT AND REMOVED TO FULL DEPTH AT ALL PAVEMENT LIMITS OR EXISTING JOINTS. IF ANY DAMAGE IS INCURRED TO ANY OF THE SURROUNDING PAVEMENT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ITS REMOVAL AND REPAIR AT NO ADDITIONAL COST TO ANYONE ELSE, INCLUDING THE CITY OR OWNER.
10) ASPHALT AREAS SHOWN TO BE SAWCUT AND REMOVED FULL DEPTH ARE ACTUAL FACE OF PROPOSED CURBS. IT WILL BE NECESSARY TO MAKE OFF-SET SAWCUTS TO PROVIDE CLEARANCE FOR PROPOSED CURBS: THE CONTRACTOR SHALL DETERMINE THE AMOUNT OF OFF-SET NECESSARY TO CONSTRUCT THE PROPOSED CURBS. ADDITIONAL CUTS MAY BE DESIRED TO FACILITATE THE REMOVAL OF THE EXISTING PAVEMENT, BUT THERE WILL BE NO EXTRA PAYMENT FOR ADDITIONAL CUTS. PAVEMENT SHALL BE REMOVED WITHOUT DAMAGING OR UNDERMINING THE REMAINING PAVEMENT. IF ADJACENT PAVEMENT IS DAMAGED, THE CONTRACTOR SHALL MAKE ADDITIONAL FULL DEPTH SAWCUTS AND REMOVE THE DAMAGE AREAS AS NECESSARY.
11) ALL PAVEMENT REMOVAL AREAS SHALL BE FULL PAVEMENT CROSS-SECTION REMOVAL DOWN TO NATIVE SOIL LAYER .
12) ALL TREES AND VEGETATION WITHIN THE GRADING LIMITS SHALL BE REMOVED UNLESS OTHERWISE NOTED.

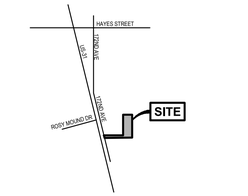
LEGEND

- Benchmark
- Catch Basin - Square
- Deciduous Tree
- Guy Anchor
- Hydrant
- Iron - Set
- Iron - Found
- Phone Riser
- Stop Box (SBX)
- Sign
- Sanitary Sewer Manhole
- Utility Pole
- Water Manhole
- Water Valve (WV)
- G — Gas
- OH — Overhead Utility
- SS — Sanitary
- ST — Storm
- UT — Underground Telephone
- W — Watermain
- X — X — Fence
- Asphalt
- Concrete
- Gravel
- Existing Building

REMOVAL / DEMOLITION NOTES

1. SAWCUT AND REMOVE EXISTING CONCRETE AS NECESSARY FOR DRIVEWAY IMPROVEMENTS
2. REMOVE EXISTING TREES/VEGETATION AS NECESSARY
3. REMOVE EX. 4" WATER SERVICE AND METER PIT AND BOX. THE EXISTING CONNECTION(S) SHALL REQUIRE PROPER ABANDONMENT SATISFACTORY TO TEH TOWNSHIP BEFORE CONSTRUCTION OF THE PROPOSED CONNECTIONS WILL BE PERMITTED. THE CONTRACTOR SHALL COORDINATE ALL OF THIS WORK WITH THE TOWNSHIP PUBLIC SERVICE DEPARTMENT.
4. REMOVE AND REPLACE EX. 6" SAN. LATERAL AS NECESSARY TO PROVIDE SERVICE TO NEW BUILDING
5. REMOVE AND REPLACE EX. CONCRETE BARRIERS AS NECESSARY FOR CONSTRUCTION OF STORM SEWER / CATCHBASIN.
6. EX. LANDSCAPE AREA/BLOCKS TO BE CLEANED UP/REMOVED
7.

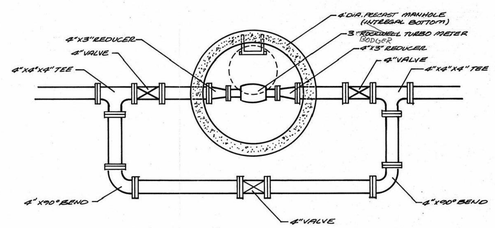




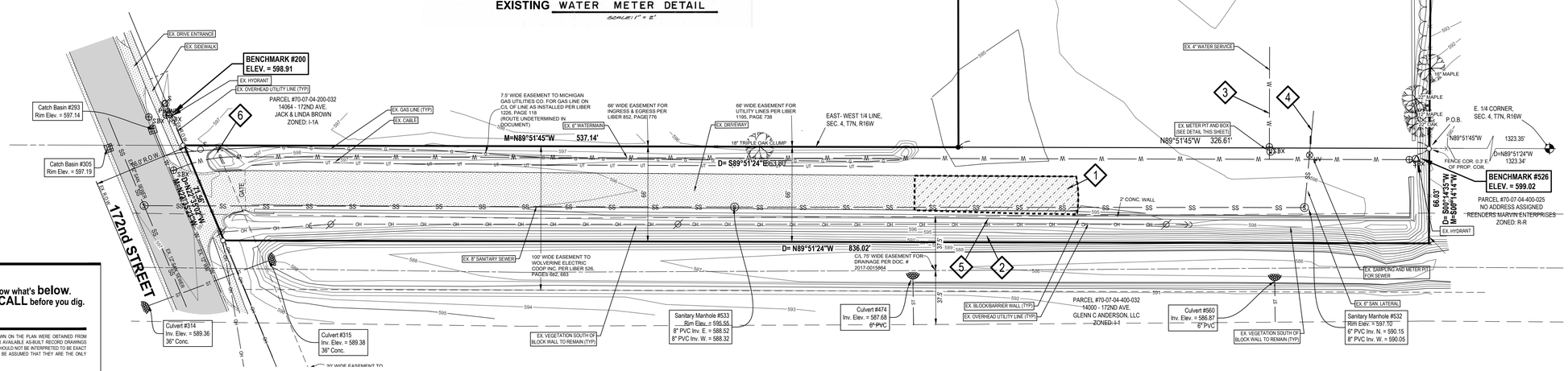
LOCATION MAP

NOT TO SCALE

0' 20' 40' 80'
SCALE: 1" = 40'



EXISTING WATER METER DETAIL
SCALE: 1" = 2'



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PREPARED FOR:
CopperRock Construction Inc.
Attention: Brandon Hartel

601 5th Street NW, Suite 300
Grand Rapids, MI 49504
Phone: 616.920.1655

REVISIONS:

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Drawn: SW	Checked: SW	Date: 01/22/20
Title: Site Plan Resubmittal		
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GH Custom Molding

Existing Conditions and Demolition Plan

14016 172nd Street

PART OF THE NORTHEAST 1/4 OF SECTION 4, T7N, R16W, GRAND HAVEN TOWNSHIP, OTTAWA COUNTY, MICHIGAN

STAMP:
STATE OF MICHIGAN
STEVEN L. WITTE
ENGINEER
No. 46769
LICENSED PROFESSIONAL ENGINEER

PROJECT NO:
19201738

SHEET NO:
C-201

SHEET: 1 OF 5

19201738-CPS.dwg SW 3-4-2020 14:30

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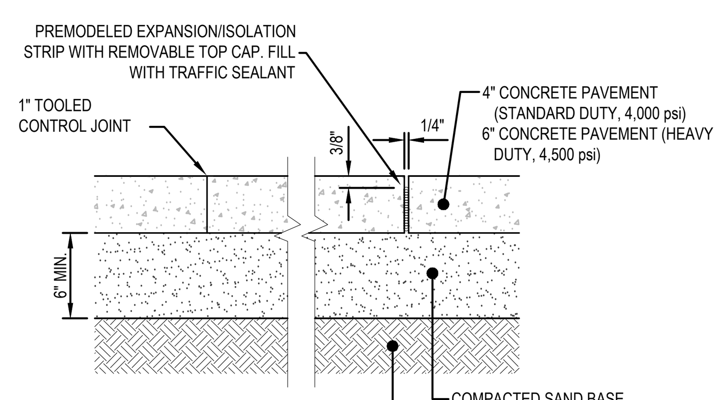
BENCHMARKS

BENCHMARK #200 ELEV. = 598.91 (NAVD88)
Top of NE flange bolt on hydrant (under "USA") 23' N. of NW property corner.

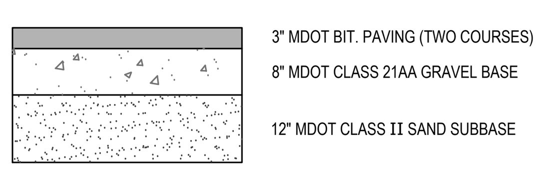
BENCHMARK #526 ELEV. = (NAVD88)
Top of NE flange bolt on hydrant 59' N. & 9' W. of SE property corner.



NOTE:
1. LIGHT BROOM FINISH
2. LOCATE CONTROL JOINTS AND EXPANSION JOINTS PER ACI STANDARDS
3. PANEL SIZE SHALL NOT EXCEED 8 FEET
4. PANELS SHALL BE KEPT AS SQUARE AS POSSIBLE WITH THE LENGTH NEVER EXCEEDING 1.25X THE WIDTH
5. 1.0#/CU.YD. FIBER REINFORCEMENT
6. AIR ENTRAINMENT - 6% ± 1%
7. SLUMP 4"±1"

CONCRETE PAVEMENT DETAIL

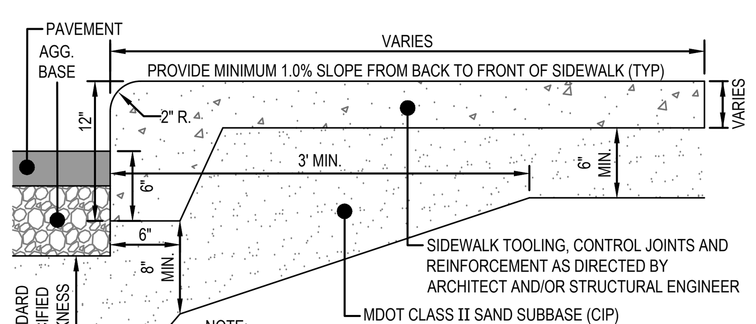
N.T.S.



NOTE:
1. REFER TO GEOTECHNICAL REPORT FOR FINAL PAVEMENT DESIGN SPECIFICATION
2. HMA MIXTURE TO BE TIER I OR TIER II
3. BINDER GRADE TO BE A MINIMUM OF PG 58-28

STANDARD DUTY BITUMINOUS PAVEMENT CROSS SECTION DETAIL

N.T.S.



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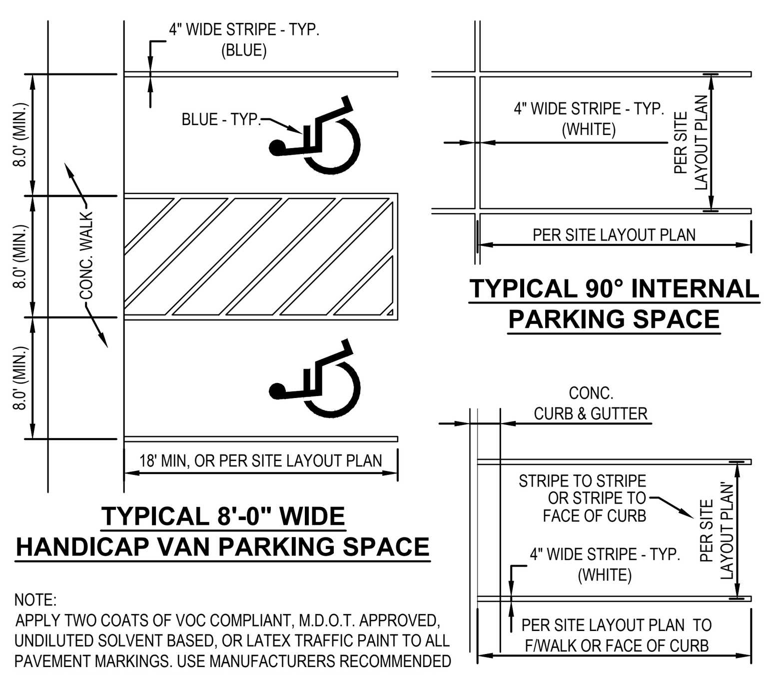
5. 1.0#/CU.YD. FIBER REINFORCEMENT
6. AIR ENTRAINMENT - 6% ± 1%
7. SLUMP 4"±1"

INTEGRAL CURB AND WALK DETAIL

N.T.S.



TYPICAL 8'-0" WIDE HANDICAP VAN PARKING SPACE

TYPICAL 90° INTERNAL PARKING SPACE

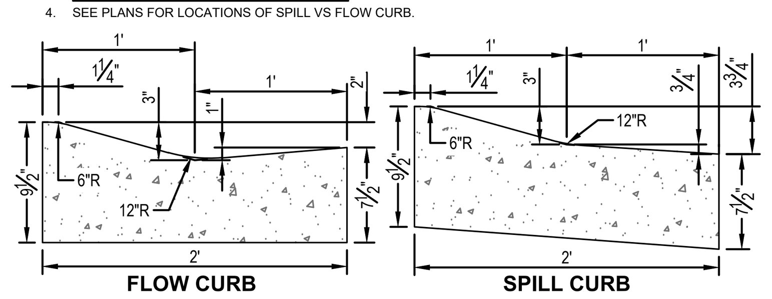
TYPICAL 90° PERIMETER PARKING SPACE

NOTE:
APPLY TWO COATS OF VOC COMPLIANT, M.D.O.T. APPROVED, UNDILUTED SOLVENT BASED, OR LATEX TRAFFIC PAINT TO ALL PAVEMENT MARKINGS. USE MANUFACTURERS RECOMMENDED APPLICATION RATE, WITHOUT ADDITION OF THINNER, WITH A MAXIMUM OF 100 SFT PER GALLON, OR MINIMUM 15 MILS WET FILM THICKNESS, AND 7.5 MILS DRY FILM THICKNESS PER COAT, WITH MINIMUM 30 DAYS BETWEEN APPLICATIONS. SECOND COAT MUST NOT BE APPLIED EARLIER THAN 7 DAYS BEFORE OCCUPANCY.

PARKING SPACE MARKING DETAILS

N.T.S.

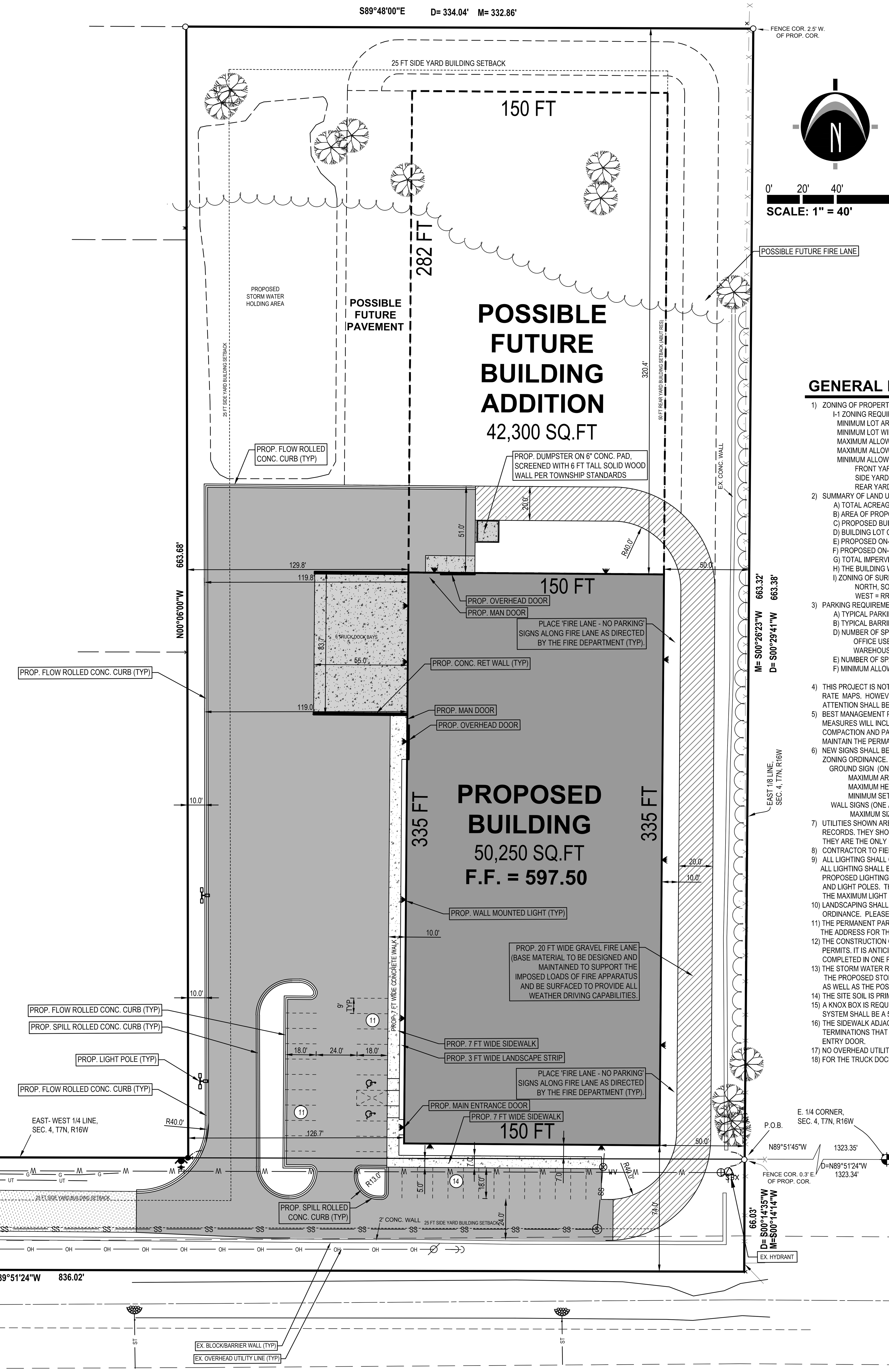
GRADING NOTES:
1. ESTABLISH PERMANENT BENCH MARK ON-SITE PRIOR TO GRADING.
2. PROPOSED SPOT GRADES ARE TO EDGE OF METAL/TOP OF PAVEMENT UNLESS OTHERWISE NOTED. THE VERTICAL DIFFERENCE BETWEEN PAVEMENT GRADES AND TOP OF CURB GRADES VARY FOR FLOW AND SPILL CURB (SEE DETAIL-THIS SHEET).
3. PROPOSED ADA ROUTE SHALL MEET THE STANDARDS SET FORTH IN THE MOST RECENT ADDITION OF ADA STANDARDS FOR ACCESSIBLE DESIGN - APPENDIX A TO PART 1191, AS AMENDED
4. SEE PLANS FOR LOCATIONS OF SPILL VS FLOW CURB.

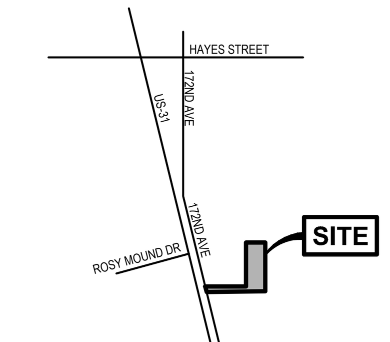


SPILL CURB IS NOTED BY HATCH IN PLAN VIEW=
FLOW CURB NOT HATCHED IN PLAN VIEW

24" CONCRETE ROLLED CURB DETAIL

N.T.S.





LOCATION MAP
NOT TO SCALE

0' 20' 40' 80'
SCALE: 1" = 40'

LEGEND

	EXISTING BITUMINOUS
	EXISTING CONCRETE
	PROPOSED BITUMINOUS (STANDARD DUTY)
	PROPOSED CONCRETE (STANDARD DUTY)
	PROPOSED CONCRETE (HEAVY DUTY)
	PROPOSED BUILDING

GENERAL NOTES

1) ZONING OF PROPERTY: I-1 = INDUSTRIAL
   I-1 ZONING REQUIREMENTS
   MINIMUM LOT AREA = 1 ACRE
   MINIMUM LOT WIDTH = 110 FT
   MAXIMUM ALLOWED BUILDING HEIGHT = 2½ STORIES / 35 FT
   MAXIMUM ALLOWED BUILDING COVERAGE = NOT APPLICABLE
   MINIMUM ALLOWED BUILDING SETBACKS:
   FRONT YARD = 75 FT (NO PARKING ALLOWED)
   SIDE YARD = 20 FT (50 FT ABUTTING RESIDENTIAL)
   REAR YARD = 25 FT (50 FT ABUTTING RESIDENTIAL)
2) SUMMARY OF LAND USE:
   A) TOTAL ACREAGE = 6.33 ACRES (APPROX. 275,807 SF) (EXCLUDING ROAD R.O.W.)
   B) AREA OF PROPOSED BUILDING FOOTPRINT = APPROXIMATELY 50,250 SF
   C) PROPOSED BUILDING HEIGHT = APPROXIMATELY 30 FT
   D) BUILDING LOT COVERAGE = APPROXIMATELY 18.2%
   E) PROPOSED ON-SITE ASPHALT/CONCRETE AREA = APPROX. 69,400 SF (INCLUDES EX. DRIVEWAY)
   F) PROPOSED ON-SITE GRAVEL AREA = APPROX. 11,260 SF
   G) TOTAL IMPERVIOUS PERCENTAGE = APPROXIMATELY 47.5% (130,910 SF)
   H) THE BUILDING WILL BE USED AS INDUSTRIAL SPACE, WITH APPROXIMATELY 2,500 SF OFFICE.
   I) ZONING OF SURROUNDING PARCELS
   NORTH, SOUTH & EAST = INDUSTRIAL (I-1 AND I-1A)
   WEST = RR RESIDENTIAL
3) PARKING REQUIREMENTS:
   A) TYPICAL PARKING SPACE = 9' x 18' (24' TWO-WAY DRIVE AISLES)
   B) TYPICAL BARRIER FREE SPACE = 8' x 18' (WITH 8' WIDE VAN ACC. AISLES)
   D) NUMBER OF SPACES REQUIRED = 36 SPACES
   OFFICE USE = 12.5 SPACES (BASED ON 1 PER 200 SF OFFICE; +/- 2,500 SF OFFICE AREA)
   WAREHOUSE USE = 23.875 SPACES (BASED ON 1 PER 2,000 SF; +/-47,750 SF WAREHOUSE)
   E) NUMBER OF SPACES PROVIDED = 36 (WITH ROOM FOR MORE IF NEEDED)
   F) MINIMUM ALLOWED PARKING SETBACK = NO PARKING ALLOWED IN FRONT YARD
   SIDE / REAR YARD = 10 FT SETBACK.
4) THIS PROJECT IS NOT IN THE 100 YEAR FLOOD PLAIN, BASED ON THE NATIONAL FLOOD INSURANCE PROGRAM RATE MAPS. HOWEVER, THE FLOODPLAIN IS VERY CLOSE TO THE EAST PROPERTY LINE. SPECIAL CARE AND ATTENTION SHALL BE PROVIDED IN THAT AREA SO THAT IT IS NOT AFFECTED BY POTENTIAL FLOODING.
5) BEST MANAGEMENT PRACTICES WILL BE UTILIZED DURING AND AFTER CONSTRUCTION OF THE PROJECT. MEASURES WILL INCLUDE THE USE OF SILT FENCING, SEEDING AND MULCHING, SEDIMENT INLET FILTERS, COMPACTION AND PAVING. THE OWNER OF THE SUBJECT PARCEL SHALL HAVE THE RESPONSIBILITY TO MAINTAIN THE PERMANENT SOIL EROSION PROTECTION MEASURES.
6) NEW SIGNS SHALL BE CONSTRUCTED TO THE STANDARDS SET FORTH BY THE GRAND HAVEN TOWNSHIP ZONING ORDINANCE.
   GROUND SIGN (ONE ALLOWED PER PARCEL):
   MAXIMUM AREA = 50 SF
   MAXIMUM HEIGHT = 6 FT
   MINIMUM SETBACK = 5 FT FROM FRONT PROPERTY LINE; 15 FT FROM ALL OTHER LOT LINES
   WALL SIGNS (ONE ALLOWED PER STREET FRONTAGE):
   MAXIMUM SIZE = 10% OF THE WALL AREA TO WHICH THE SIGN IS AFFIXED.
7) UTILITIES SHOWN ARE APPROXIMATE LOCATIONS DERIVED FROM ACTUAL MEASUREMENTS OR AVAILABLE RECORDS. THEY SHOULD NOT BE INTERPRETED TO BE EXACT LOCATIONS NOR SHOULD IT BE ASSUMED THAT THEY ARE THE ONLY UTILITIES IN THIS AREA.
8) CONTRACTOR TO FIELD VERIFY ALL INVERTS.
9) ALL LIGHTING SHALL COMPLY WITH CHAPTER 20A OF THE GRAND HAVEN TOWNSHIP ZONING ORDINANCE. ALL LIGHTING SHALL BE FULLY SHIELDED FROM ALL ADJACENT PROPERTIES. PROPOSED LIGHTING SHALL CONSIST OF SOFFIT LIGHTS AT BUILDING ENTRANCES, WALL MOUNTED LIGHTS, AND LIGHT POLES. THE FIXTURES WILL BE SHOEBOX TYPE FIXTURES THAT DIRECT THE LIGHT DOWNWARD. THE MAXIMUM LIGHT FIXTURE HEIGHT SHALL BE 30 FT.
10) LANDSCAPING SHALL COMPLY WITH THE REQUIREMENTS OF THE GRAND HAVEN TOWNSHIP ZONING ORDINANCE. PLEASE REFER TO THE LANDSCAPE PLAN INCLUDED IN THIS PLAN SET.
11) THE PERMANENT PARCEL NUMBER FOR THE SITE IS 70-07-04-200-034. THE ADDRESS FOR THE SITE IS 14016 - 172ND AVENUE.
12) THE CONSTRUCTION OF THE SITE WILL BEGIN IMMEDIATELY PENDING TOWNSHIP/AGENCY APPROVALS AND PERMITS. IT IS ANTICIPATED THAT THE PROJECT WILL BE COMPLETED IN 2020. THE PROJECT WILL BE COMPLETED IN ONE PHASE.
13) THE STORM WATER RUNOFF FROM THE SITE WILL BE COLLECTED AND DETAINED PER OCWRC REQUIREMENTS. THE PROPOSED STORM WATER HOLDING AREA HAS BEEN SIZED TO ACCOMMODATE THE PROPOSED PROJECT AS WELL AS THE POSSIBLE FUTURE BUILDING AND PAVEMENT ADDITIONS.
14) THE SITE SOIL IS PRIMARILY GRANBY LOAMY SAND, BASED ON THE USDA SOIL SURVEY MAP INFORMATION.
15) A KNOX BOX IS REQUIRED FOR THE BUIILDING. THE FIRE DEPARTMENT CONNECTION FOR THE SPRINKLING SYSTEM SHALL BE A 5" STORZ COUPLING.
16) THE SIDEWALK ADJACENT TO THE BUILDING IS 7 FT WIDE. SIDEWALKS MUST HAVE APPROPRIATE TERMINATIONS THAT SLOPE TO GRADE. OR IN OTHER CASES WHERE THE SIDEWALK TERMINATES INTO AN ENTRY DOOR.
17) NO OVERHEAD UTILITY LINES WILL BE REPLACED OR ADDED TO THE SITE.
18) FOR THE TRUCK DOCK, THE BAYS SHALL HAVE AT LEAST 14 FT OF OVERHEAD CLEARANCE.

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GH Custom Molding

Site Layout Plan

14016 172nd Street
PART OF THE NORTHEAST 1/4 OF SECTION 4, T7N, R16W, GRAND HAVEN TOWNSHIP, OTTAWA COUNTY, MICHIGAN

STAMP:
STATE OF MICHIGAN
STEVEN L. WITTE
ENGINEER
No. 46769
LICENSED PROFESSIONAL ENGINEER

PROJECT NO: 19201738

SHEET NO: C-205

SHEET: 2 OF 5

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CONSTRUCTION NOTES

STORM SEWER

1. ALL CATCH BASINS SHOULD BE PROVIDED WITH A MINIMUM 2' SUMP UNLESS OTHERWISE STATED.
2. ALL STORM SEWER SHALL BE PERFORATED SMOOTH LINED CORRUGATED POLYETHYLENE PIPE (SLCPP) WITH SOCK, UNLESS OTHERWISE NOTED.
3. 6" UNDERDRAIN SHALL BE PERFORATED PIPE WITH SOCK, MEETING THE REQUIREMENTS OF AASHTO M-252 AND THE GEOTEXTILE SHALL MEET AASHTO M-288 REQUIREMENTS
4. ALL FLARED END SECTIONS SHALL BE CONCRETE.
5. ALL CATCH BASINS AND MANHOLES SHALL BE CONCRETE, CONFORMING TO ASTM C-478 WITH BUTYL RUBBER GASKETED JOINTS WITH BOOT TYPE PIPE CONNECTIONS CONFORMING TO ASTM C-923 FOR ALL PIPE CONNECTIONS 24" DIAMETER AND SMALLER.
6. ALL CATCH BASINS ARE DRAWN AND WILL BE STAKED AT CENTER OF CASTING.

WATERMAIN AND SANITARY SEWER

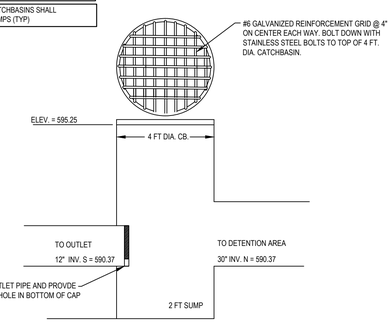
1. ALL WATERMAIN AND SANITARY SEWER CONSTRUCTION SHALL CONFORM TO THE TOWNSHIP STANDARD CONSTRUCTION SPECIFICATIONS, INCLUDING POST CONSTRUCTION VIDEO INSPECTION OF THE SANITARY SEWER SYSTEM.

GENERAL

1. ALL CONSTRUCTION AND MATERIAL SPECIFICATIONS INCLUDED FOR THIS PROJECT SHALL BE IN ACCORDANCE WITH THE MDOT CONSTRUCTION AND MATERIALS SPECIFICATIONS (LATEST EDITION) AND THE ORDINANCES OF THE TOWNSHIP, WHERE CONFLICTS OCCUR IN THE ABOVE, THE TOWNSHIP SHALL BE THE GOVERNING AUTHORITY.
2. VARIATION IN EXISTING SOIL CONDITIONS MAY IMPACT THE EARTHWORK QUANTITIES IF UNUSABLE SOILS ARE ENCOUNTERED DURING CONSTRUCTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGES TO THE EXISTING WATER AND SEWAGE SYSTEM RESULTING FROM NON-CONFORMANCE WITH THE APPLICABLE STANDARDS OR THROUGH GENERAL NEGLIGENCE.
4. ALL WORK, INCLUDING INSPECTIONS AND TESTING COST REQUIRED FOR REMOVAL, RELOCATION OR NEW CONSTRUCTION FOR PRIVATE OR PUBLIC UTILITIES, WILL BE DONE BY AND AT THE EXPENSE OF THE CONTRACTOR AND INCLUDED IN THE BID PRICE FOR THE VARIOUS WORK ITEMS UNLESS OTHERWISE NOTED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND PAYING FOR ALL NECESSARY PERMITS FROM THE TOWNSHIP AND COUNTY AND ANY OTHER AGENCY FOR ALL WORK DONE BY THE CONTRACTOR.
5. ANY DEFECTS IN THE CONSTRUCTION, INCLUDING MATERIALS OR WORKMANSHIP, SHALL BE REPLACED OR CORRECTED BY REMOVAL AND REPLACEMENT OR OTHER APPROVED METHODS PRIOR TO ACCEPTANCE BY THE TOWNSHIP OR OWNER WITHOUT ANY ADDITIONAL COST TO THE TOWNSHIP OR OWNER.
6. ALL LAWN AREAS REMOVED OR DISTURBED SHALL BE REPLACED WITH TOPSOIL AND SOD WHERE NEEDED AND SHALL BE RESEEDED AND MULCHED IF SATISFACTORY RE-ESTABLISHMENT OF LAWN DOES NOT OCCUR.
7. ALL PUNCH LIST AND DEFICIENCY WORK SHALL BE COMPLETED WITHIN 1 MONTH OF THE END OF CONSTRUCTION.
8. THE CONTRACTOR SHALL OBTAIN A STREET OPENING PERMIT FROM THE COUNTY BEFORE BEGINNING WORK WITHIN ANY PUBLIC STREET RIGHT-OF-WAY.
9. THE CONTRACTOR SHALL MAINTAIN A CURRENT SET OF CONSTRUCTION DRAWINGS ON SITE AT ALL TIMES.
10. THESE PLANS HAVE BEEN DEVELOPED FOR ELECTRONIC FIELD LAYOUT. DIMENSIONS SHOWN ARE FOR GRAPHIC PRESENTATION ONLY AND SHOULD NOT BE USED FOR LAYOUT. CONTACT THE ENGINEER IF ANY DISCREPANCIES BETWEEN THE PLAN AND ELECTRONIC DATA ARE DISCOVERED.
11. THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY LIGHTS, BARRICADES, FLAGMEN, ETC. AS REQUIRED TO PERFORM THE REQUIRED WORK. THE INSTALLATION AND OPERATION OF ALL TEMPORARY TRAFFIC CONTROL AND TEMPORARY TRAFFIC CONTROL DEVICES AS REQUIRED SHALL BE PROVIDED BY THE CONTRACTOR WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS. THE CONTRACTOR SHALL FURNISH, ERECT, MAINTAIN AND SUBSEQUENTLY REMOVE SUCH ADDITIONAL TRAFFIC CONTROL DEVICES LOCATED OUTSIDE THE LIMITS OF CONSTRUCTION AS ARE REQUIRED ON THOSE STREETS WHICH ARE USED AS DETOURS, INCLUDING "ROAD CLOSED" SIGNS AND BARRICADES AT THE POINT WHERE THE ROAD IS CLOSED TO THROUGH TRAFFIC.
12. THE CONTRACTOR SHALL PROTECT LOCATION OF ALL PROPERTY PINS AND BENCHMARKS.
13. ALL WORK CONTEMPLATED SHALL AT ALL TIMES BE SUBJECT TO THE DIRECT INSPECTION OF THE TOWNSHIP, OWNER AND THEIR REPRESENTATIVES. THE TOWNSHIP AND OWNER RESERVES THE RIGHT TO HALT ALL CONSTRUCTION ACTIVITY FOR NONCONFORMANCE OF PLANS, SPECIFICATIONS AND OTHER APPLICABLE STANDARDS OR REGULATIONS.
14. PRICES BID PER FOOT FOR ALL PIPES IS COMPACTED IN PLACE REGARDLESS OF SOIL OR ROCK CONDITIONS.
15. CONTRACTOR IS RESPONSIBLE FOR ALL SIGNS, BARRICADES AND SAFETY FENCES TO DETER PEOPLE FROM ENTERING THE WORK AREA AND FOR MAINTAINING AND PROTECTING THE FLOW OF VEHICULAR AND PEDESTRIAN TRAFFIC AROUND THE JOB SITE. TRAFFIC CONTROLS SHALL BE COORDINATED WITH THE POLICE DEPARTMENT AND THE TOWNSHIP.
16. PRIOR TO ANY CONSTRUCTION OR GRADING, A PROTECTIVE BARRIER, FENCE, POST AND/OR SIGNS CLEARLY INDICATING LIMITS OF WORK/DISTURBANCE SHALL BE INSTALLED INDICATING NO TREE REMOVAL OR DISTURBANCES OUTSIDE LIMITS, THE TOWNSHIP AND OWNER SHALL BE CONTACTED UPON DETERMINATION OF LIMITS IN THE FIELD.
17. ALL ROAD SURFACES, EASEMENTS OR RIGHT-OF-WAYS DISTURBED BY CONSTRUCTION OF ANY PART OF THIS IMPROVEMENT ARE TO BE RESTORED COMPLETELY TO THE SATISFACTION OF THE COUNTY, TOWNSHIP, AND THE OWNER.
18. NO PARKING OF CONTRACTOR OR CONTRACTOR EMPLOYEE'S VEHICLES ON ANY PUBLIC STREETS SHALL BE PERMITTED.
19. ALL DISTURBED SIGNS, GUARDRAILS, MAIL BOXES, AND DRIVEWAYS SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE TOWNSHIP, COUNTY, AND THE OWNER.
20. DUST CONTROL: THE CONTRACTOR SHALL SUPPLY ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY SUCH AS CALCIUM CHLORIDE, WATER OR A MOTORIZED DUST-FREE STREET SWEEPING DEVICE TO MAINTAIN ALL ROADWAYS BEING USED FOR ACCESS TO THE CONSTRUCTION SITE AND SHALL ADHERE TO ALL ORDINANCES OF THE TOWNSHIP, COUNTY, EGLE OR ANY OTHER GOVERNING AUTHORITY.
21. ALL SEWERS, MANHOLES, JUNCTION CHAMBERS AND INLET BASINS MUST BE CLEANED BEFORE ACCEPTANCE BY THE TOWNSHIP AND OWNER.
22. IF MUD, SOIL OR OTHER DEBRIS IS DEPOSITED ON ADJACENT STREETS, ROADS OR OTHER PROPERTY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF SUCH AT THE END OF EACH WORK DAY OR AS REQUIRED DURING THE WORK DAY.
23. ADJUST TO GRADE OR RECONSTRUCT TO GRADE WORK SHALL INCLUDE THE REMOVAL AND REPLACEMENT OF ANY EXISTING CONCRETE BLOCKOUT PAVEMENT, DAMAGED PAVEMENT DOWELS OR OTHER SUCH LOAD TRANSFERS DEVICES SHALL BE REPLACED AS DIRECTED BY THE COUNTY AND THE ENGINEER.
24. ALL EXISTING CASTINGS FOR STRUCTURES TO BE ADJUSTED OR RECONSTRUCTED TO GRADE SHALL BE FIELD CHECKED AT THE TIME OF CONSTRUCTION AND MARKED SUITABLE FOR SALVAGE AND REUSE OR REPLACED.
25. COMPACTED PREMIUM BACKFILL (MDOT CLASS II SAND) WILL BE REQUIRED AT ALL FILL AREAS OR ANY STREETS WHERE REMOVAL AND REPLACEMENT OF PAVEMENT IS REQUIRED AND FOR ALL UNDERGROUND CONSTRUCTION UNDER ANY DRIVEWAY OR PAVEMENT INCLUDING THE 45 DEGREE ANGLE OF INFLUENCE FROM THE OUTSIDE EDGE OF PAVEMENT OR TOP OF CURB. COMPACTION TESTS SHALL BE REQUIRED EVERY 50 FEET UNDER PAVEMENT. PAVEMENT INCLUDES, BUT NOT LIMITED TO, ROADWAY SURFACES, SIDEWALKS, BIKE WAYS, DRIVEWAYS, SHOULDERS, BUILDINGS, ETC.
26. NO BUILDING MATERIAL, EQUIPMENT, VEHICLES OR CHEMICALS SHALL BE STORED OR PLACED OUTSIDE LIMITS OF WORK/DISTURBANCE.
27. STORMWATER POLLUTION PREVENTION ITEMS SHALL BE IN PLACE PRIOR TO COMMENCING CLEARING OPERATIONS, EARTHWORK GRADING, OR ANY OTHER TYPE OF CONSTRUCTION ACTIVITY.
28. ROOF DRAINS, FOUNDATION DRAINS AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER ARE PROHIBITED.
29. CONSTRUCTION NOISE SHALL BE KEPT TO A MINIMUM DURING NIGHTTIME HOURS AND MUST COMPLY WITH MUNICIPAL CODE REQUIREMENTS.
30. ALL TREES AND VEGETATION WITHIN THE GRADING LIMITS SHALL BE REMOVED UNLESS OTHERWISE NOTED.
31. CONTRACTOR TO FIELD VERIFY AND SCOPE EXISTING SANITARY SEWER LATERAL TO CONFIRM ELEVATION, SLOPE, CONDITION AND PHYSICAL CONNECTION TO PUBLIC SANITARY SEWER MAIN PRIOR TO CONNECTION OF LATERAL SERVICE.
32. A KNOX BOX IS REQUIRED FOR THE BUILDING. AND THE FIRE DEPARTMENT CONNECTION FOR THE SPRINKLER SYSTEM SHALL BE A 5" STORZ COUPLING, INSTEAD OF THE NORMAL 2, 2½ CONNECTIONS.

STORM SEWER CHART

PROP. CB #1 4' DIA LEACHING CATCHBASIN W/ E.J.I.W. #7065 COVER RIM ELEV. = 594.95 30" INV. NW = 590.83 30" INV. S = 590.83	PIPE LENGTH A PLACE 31 L.F. OF 30" STM SEWER (PERF. SLCPP W/ SOCK) @ 0.10%
PROP. CB #2 4' DIA. LEACHING CATCHBASIN W/ E.J.I.W. #7065 COVER RIM ELEV. = 594.85 10" INV. E = 590.72 30" INV. S = 590.72 30" INV. NE = 590.72	PIPE LENGTH B PLACE 110 L.F. OF 30" STM SEWER (PERF. SLCPP W/ SOCK) @ 0.10% PIPE LENGTH C PLACE 39 L.F. OF 8" STM SEWER (PVC) @ 0.40%
PROP. CB #3 4' DIA. CATCHBASIN W/ E.J.I.W. #1045 TYPE M2 COVER RIM ELEV. = 593.50 8" INV. S, N = 591.10	PIPE LENGTH D PLACE 113 L.F. OF 10" STM SEWER (PVC) @ 0.20% PIPE LENGTH E PLACE 93 L.F. OF 30" STM SEWER (PERF. SLCPP W/ SOCK) @ 0.10%
PROP. CB #4 4' DIA. CATCHBASIN W/ E.J.I.W. #1045 TYPE M2 COVER RIM ELEV. = 593.50 8" INV. N = 590.95 10" INV. W = 590.95	PIPE LENGTH F PLACE 147 L.F. OF 30" STM SEWER (PERF. SLCPP W/ SOCK) @ 0.10% PIPE LENGTH G PLACE 75 L.F. OF 30" STM SEWER (PERF. SLCPP W/ SOCK) @ 0.10%
PROP. CB #5 4' DIA. LEACHING CATCHBASIN W/ E.J.I.W. #7065 COVER RIM ELEV. = 594.90 30" INV. N = 590.63 30" INV. S = 590.63	PIPE LENGTH H PLACE 19 L.F. OF 30" STM SEWER (PERF. SLCPP W/ SOCK) @ 0.15% PIPE LENGTH I PLACE 156 L.F. OF 18" STM SEWER (PERF. SLCPP W/ SOCK) @ 0.35%
PROP. CB #6 4' DIA LEACHING CATCHBASIN W/ E.J.I.W. #7065 COVER RIM ELEV. = 594.50 12" INV. E = 590.48 30" INV. N = 590.48 30" INV. S = 590.48	PIPE LENGTH J PLACE 127 L.F. OF 18" STM SEWER (PERF. SLCPP W/ SOCK) @ 0.25% PIPE LENGTH K PLACE 126 L.F. OF 18" STM SEWER (PERF. SLCPP W/ SOCK) @ 0.25%
PROP. CB #7 5' DIA. LEACHING CATCHBASIN W/ E.J.I.W. #1060 TYPE M2 COVER RIM ELEV. = 595.05 18" INV. E = 590.40 30" INV. N = 590.40 30" INV. S = 590.40	PIPE LENGTH L PLACE 252 L.F. OF 15" STM SEWER (PERF. SLCPP W/ SOCK) @ 0.20% PIPE LENGTH L PLACE 46 L.F. OF 12" STM SEWER (PERF. SLCPP W/ SOCK) @ 0.50%
PROP. CB #8 4' DIA. LEACHING CATCHBASIN W/ E.J.I.W. #1060 TYPE M2 COVER RIM ELEV. = 595.25 18" INV. E = 590.95 18" INV. W = 590.95	PIPE LENGTH Z PLACE 18 L.F. OF 12" STM SEWER (SLCPP) @ 10.44% PIPE LENGTH XX PLACE 65 L.F. OF 12" STM SEWER (SLCPP) ROOF DRAIN LEAD @ 0.50%
PROP. CB #9 4' DIA. LEACHING CATCHBASIN W/ E.J.I.W. #1060 TYPE M2 COVER RIM ELEV. = 595.50 18" INV. N = 591.28 18" INV. W = 591.26	PROP. F.E.S. #30 PLACE 12" CONC. FLARED END SECTION. 30" INV. = 590.87 PLACE 4 CY OF 10-12" COBBLES OVER NON-WOVEN FILTER FABRIC.
PROP. CB #10 4' DIA. LEACHING CATCHBASIN W/ E.J.I.W. #1060 TYPE M2 COVER RIM ELEV. = 595.85 15" INV. N = 591.58 18" INV. S = 591.58	PROP. F.E.S. #31 PLACE 30" CONC. FLARED END SECTION. 30" INV. = 590.87 PLACE 4 CY OF 10-12" COBBLES OVER NON-WOVEN FILTER FABRIC.
PROP. CB #11 4' DIA. CATCHBASIN W/ E.J.I.W. #1060 TYPE M2 COVER RIM ELEV. = 595.05 15" INV. S = 592.08	
PROP. CB #12 4' DIA. LEACHING CATCHBASIN W/ E.J.I.W. #7065 COVER RIM ELEV. = 595.85 12" INV. W = 590.71 12" INV. E = 590.71	
PROP. CB #20 OUTLET CONTROL STRUCTURE SEE DETAIL THIS SHEET	
NOTE: ALL CATCHBASINS SHALL HAVE 2 FT SUMPS (TYP)	



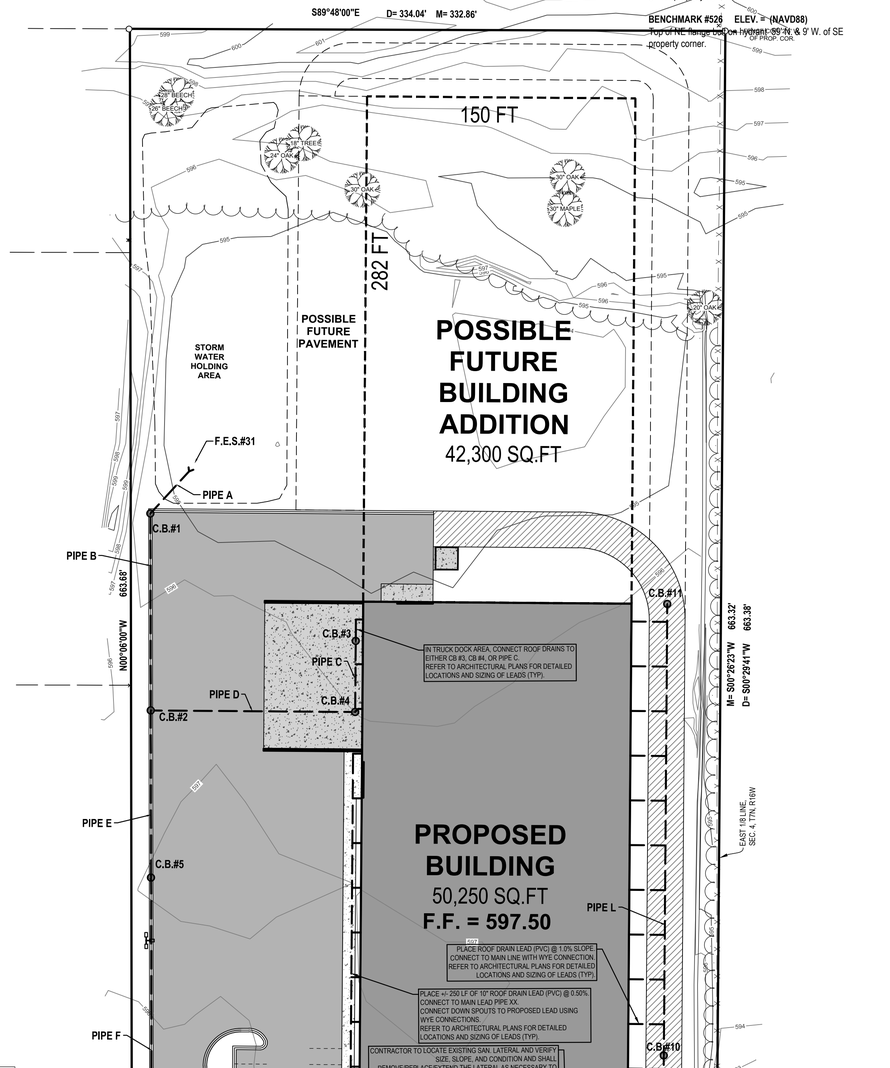
OUTLET CONTROL STRUCTURE DETAIL (CB#20)

N.T.S.

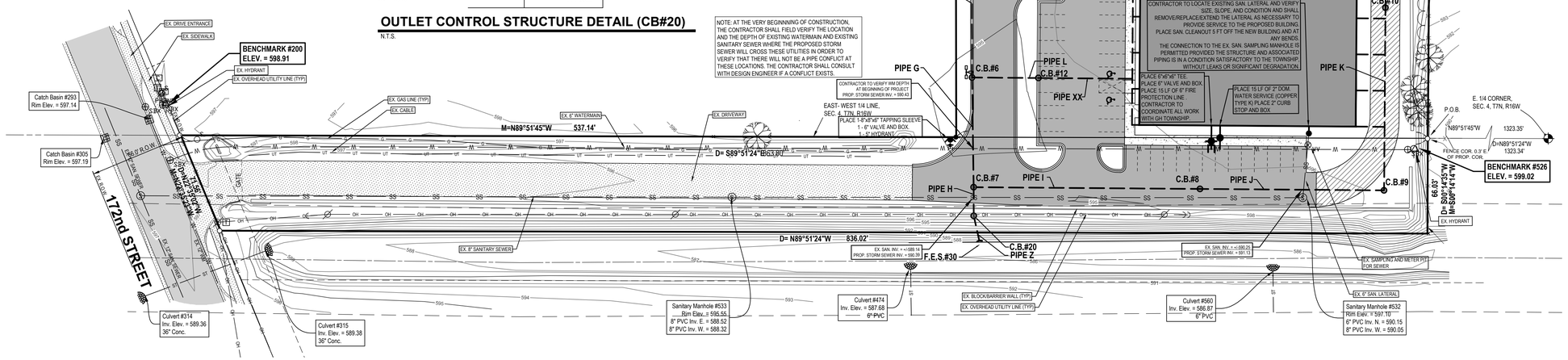
BENCHMARKS

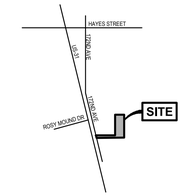
BENCHMARK #200 ELEV. = 598.91 (NAVD88)
Top of NE flange bolt on hydrant (under "USA") 23' N. of NW property corner.

BENCHMARK #526 ELEV. = (NAVD88)
Top of NE flange bolt on hydrant 66' N. & 9' W. of SE property corner.



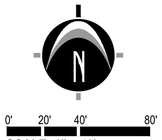
NOTE: AT THE VERY BEGINNING OF CONSTRUCTION, THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION AND THE DEPTH OF EXISTING WATERMAIN AND EXISTING SANITARY SEWER WHERE THE PROPOSED STORM SEWER WILL CROSS THESE UTILITIES IN ORDER TO VERIFY THAT THERE WILL NOT BE A PIPE CONFLICT AT THESE LOCATIONS. THE CONTRACTOR SHALL CONSULT WITH DESIGN ENGINEER IF A CONFLICT EXISTS.





LOCATION MAP

NOT TO SCALE



LEGEND

- EX. GRADE CONTOUR
- PROP. GRADE CONTOUR
- PROP. GRADE ELEV.
- PROP. GRADE ELEV. (BLACKTOP)
- PROP. GRADE ELEV. (CONCRETE)
- PROP. GRADE ELEV. (GUTTER)
- PROP. GRADE ELEV. (EDGE OF METAL)
- PROP. GRADE ELEV. (HIGH POINT)
- EX. BITUMINOUS
- EX. CONCRETE
- PROPOSED BITUMINOUS (STANDARD DUTY)
- PROPOSED CONCRETE (STANDARD DUTY)
- PROPOSED CONCRETE (HEAVY DUTY)
- PROP. STORM SEWER
- PROP. SANITARY SEWER
- PROP. WATERMAIN
- FLOW DIRECTION
- PROP. LIMITS OF GRADING
- SILT FENCE

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PREPARED FOR:
CopperRock Construction Inc.
Attention: Brandon Hartel

601 5th Street NW, Suite 300
Grand Rapids, MI 49504
Phone: 616.920.1655

REVISIONS:

Title: Preliminary Site Plan		
Drawn: SW	Checked: SW	Date: 01/22/20
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Drawn: SW	Checked: SW	Date: 03/04/20

GH Custom Molding

Utility Plan

14016 172nd Street
PART OF THE NORTHEAST 1/4 OF SECTION 4, T7N, R16W, GRAND HAVEN TOWNSHIP, OTTAWA COUNTY, MICHIGAN

STAMP:
STATE OF MICHIGAN
STEVEN L. WITTE
ENGINEER
No. 46769
LICENSED PROFESSIONAL ENGINEER

PROJECT NO: 19201738

SHEET NO: C-300

SHEET: 3 OF 5

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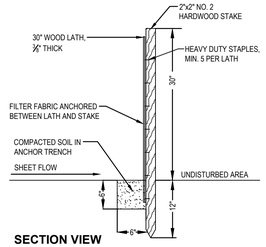
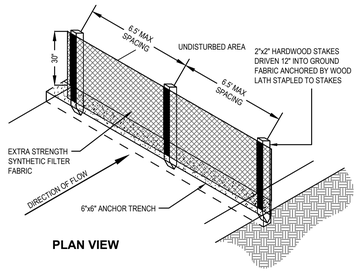


SECTION VIEW



PLAN VIEW

SILT FENCE DETAIL

N.T.S.

SOIL EROSION CONTROL SCHEDULE 2020

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
PLACE SILT FENCE												
STRIP & STOCKPILE TOPSOIL												
CONSTRUCT CONNECTION TO STORM SEWER												
ROUGH GRADE SITE												
CONSTRUCT BUILDING FOUNDATION AND BUILDING												
CONSTRUCT IMPROVEMENTS AROUND BUILDING												
CONSTRUCT UTILITY LINES TO BUILDING												
FINISH GRADE SITE												
PAVE SITE												
RESPREAD TOPSOIL/COMPACTION												
SEED DISTURBED AREAS												
SITE RESTORATION/CLEAN UP												

811 Know what's **below.** **CALL** before you dig.

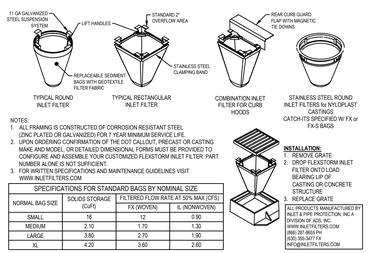
UTILITY LOCATIONS AS SHOWN ON THE PLAN WERE OBTAINED FROM ACTUAL MEASUREMENTS OR AVAILABLE AS-BUILT RECORD DRAWINGS AS PROVIDED TO US. THEY SHOULD NOT BE INTERPRETED TO BE EXACT LOCATIONS NOR SHOULD IT BE ASSUMED THAT THEY ARE THE ONLY UTILITIES IN THIS AREA.

NOTE:
THE CONTRACTOR SHALL VERIFY THE LOCATION, DEPTH AND STATUS OF ALL UTILITIES AND SERVICE LINES PRIOR TO NEW CONNECTIONS.

BENCHMARKS

BENCHMARK #200 ELEV. = 598.91 (NAVD88)
Top of NE flange bolt on hydrant (under "USA") 23' N. of NW property corner.

BENCHMARK #526 ELEV. = (NAVD88)
Top of NE flange bolt on hydrant 59' N. & 9' W. of SE property corner.



NOTES:
1. ALL FRAMING IS CONSTRUCTED OF CORROSION RESISTANT STEEL (ZINC PLATED OR GALVANIZED) FOR 7 YEAR MINIMUM SERVICE LIFE.
2. UPON ORDERING CONFIRMATION OF THE DOT CALLOUT, PRECAST OR CASTING MAKE AND MODEL, OR DETAILED DIMENSIONAL FORMS MUST BE PROVIDED TO CONFIGURE AND ASSEMBLE YOUR CUSTOMIZED FLEXSTORM INLET FILTER. PART NUMBER ALONE IS NOT SUFFICIENT.
3. FOR WRITTEN SPECIFICATIONS AND MAINTENANCE GUIDELINES VISIT WWW.INLETFILTERS.COM

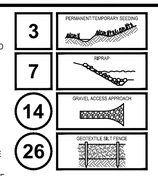
SPECIFICATIONS FOR STANDARD BAGS BY NOMINAL SIZE			
NORMAL BAG SIZE	SOLIDS STORAGE (Gal'l)	FILTERED FLOW RATE AT 50% MAX (CFS)	
		FX (WOVEN)	IL (NONWOVEN)
SMALL	16	12	0.90
MEDIUM	2.10	1.70	1.30
LARGE	3.80	2.70	1.90
XL	4.20	3.60	2.60

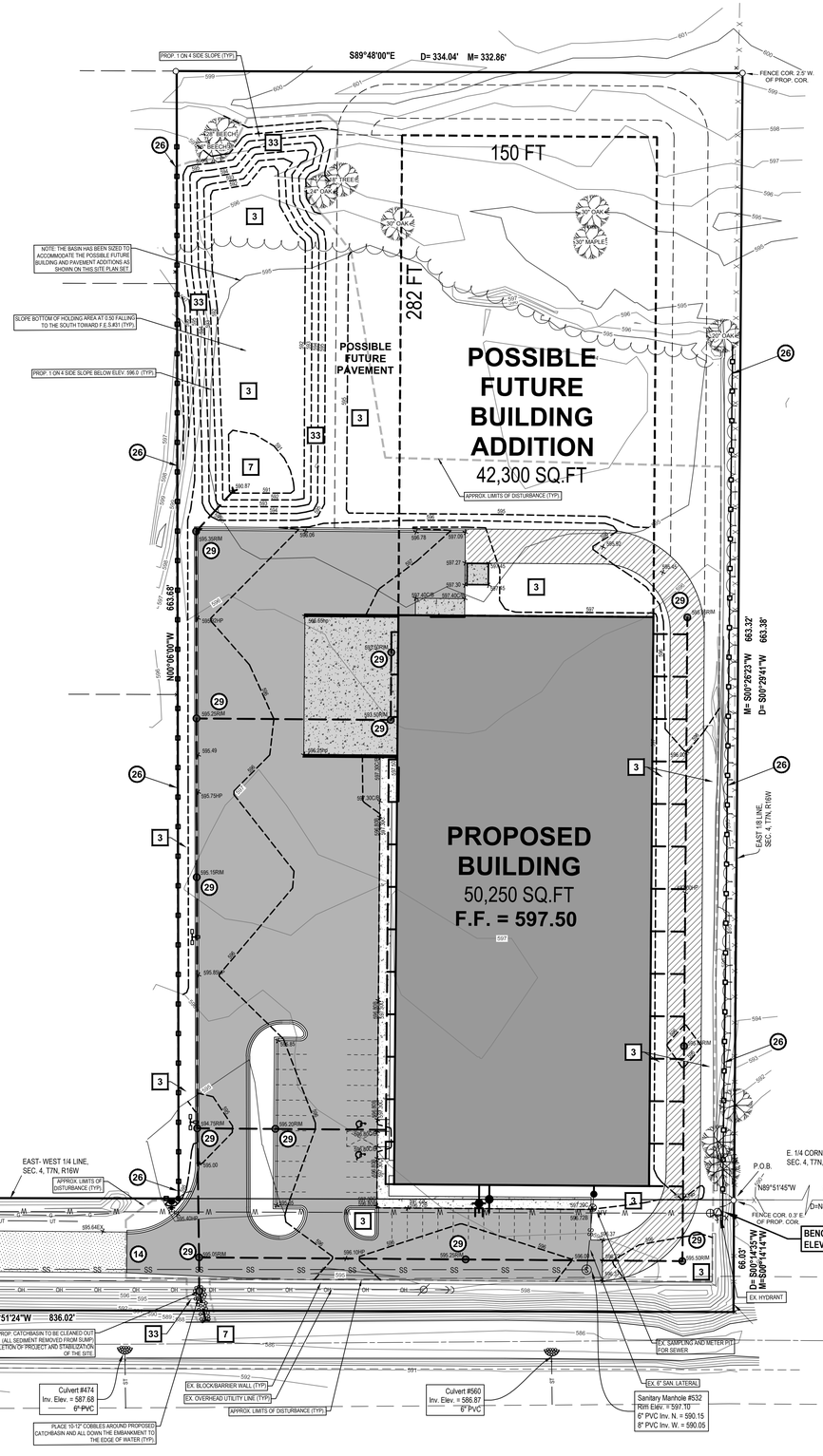
FLEXSTORM INLET FILTER DETAIL

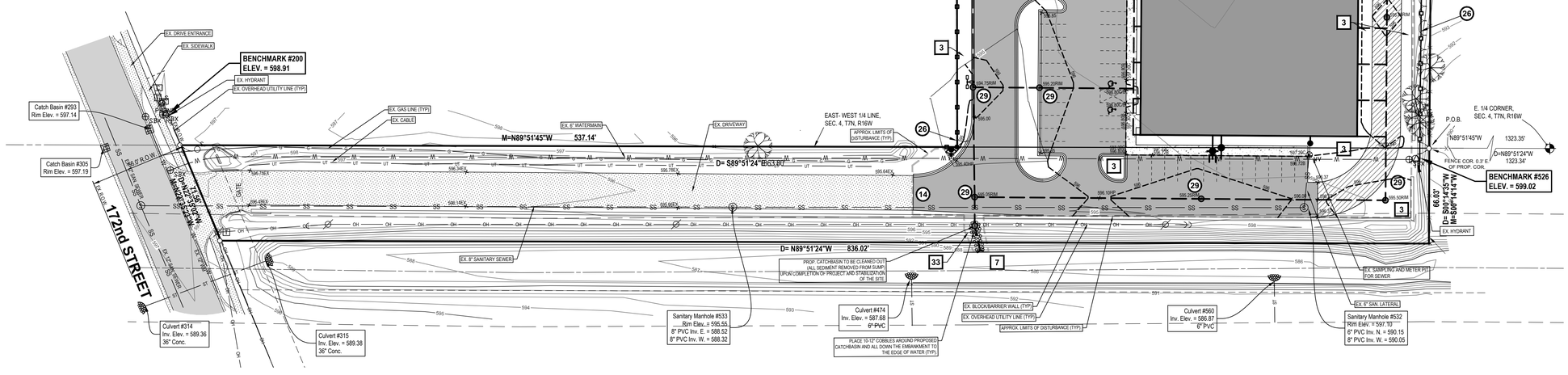
N.T.S.

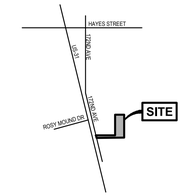
SOIL EROSION AND SEDIMENTATION CONTROL NOTES

1) CONTRACTOR SHALL POSSESS THE SOIL EROSION AND SEDIMENTATION CONTROL PERMIT PRIOR TO START OF ANY EARTH WORK.
2) CONTRACTOR SHALL MODIFY THIS SOIL EROSION AND SEDIMENTATION CONTROL PLAN TO SHOW THE ADDITIONAL CONTROL MEASURES INTENDED TO BE USED DURING CONSTRUCTION. SUBMIT MODIFICATIONS TO THE CONTROLLING AGENCY, THE OWNER, AND THE ENGINEER.
3) EROSION PROTECTION SHALL BE PROVIDED AT ALL STORM SEWER INLETS AND OUTLETS. ALL BARE EARTH SHALL BE STABILIZED WITH SEEDING.
4) REFER TO THE M.D.O.T. "SOIL EROSION AND SEDIMENTATION CONTROL MANUAL" (APRIL 2006) FOR ADDITIONAL INFORMATION
5) THE ENTIRE STORM SEWER SYSTEM SHALL BE CLEANED AND FLUSHED FOLLOWING CONSTRUCTION AND PAID RECEIPT THEREOF PROVIDED TO THE ENGINEER AND COUNTY SESC AGENT PRIOR TO FINAL PAYMENT TO THE CONTRACTOR OR FINAL ACCEPTANCE OF THE CONSTRUCTION BY THE OWNER.
6) THE CONTRACTOR SHALL BE RESPONSIBLE TO INSPECT, TAKE CORRECTIVE ACTION AND MAINTAIN ALL TEMPORARY SESC MEASURES DAILY AND AFTER EACH RAIN EVENT UNIT FINAL COMPLETION AND ACCEPTANCE OF THE PROJECT.









LOCATION MAP

NOT TO SCALE

0' 20' 40' 80'
SCALE: 1" = 40'

LEGEND

- EX. GRADE CONTOUR
- PROP. GRADE CONTOUR
- 778.00 PROP. GRADE ELEV.
- 778.00(B) PROP. GRADE ELEV. (BLACKTOP)
- 778.00(C) PROP. GRADE ELEV. (CONCRETE)
- 778.00(G) PROP. GRADE ELEV. (GUTTER)
- 778.00(EOM) PROP. GRADE ELEV. (EDGE OF METAL)
- 778.00(HP) PROP. GRADE ELEV. (HIGH POINT)
- EX. BITUMINOUS
- EX. CONCRETE
- PROPOSED BITUMINOUS (STANDARD DUTY)
- PROPOSED CONCRETE (STANDARD DUTY)
- PROPOSED CONCRETE (HEAVY DUTY)
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GH Custom Molding

Grading and S.E.S.C. Plan

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STAMP:
STATE OF MICHIGAN
STEVEN L. WITTE
ENGINEER
No. 46769
LICENSED PROFESSIONAL ENGINEER

PROJECT NO: 19201738

SHEET NO: C-301

SHEET: 4 OF 5

19201738-CPS.dwg SW 5/19/2020 18:45

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LANDSCAPE NOTES

PLANTING NOTES:

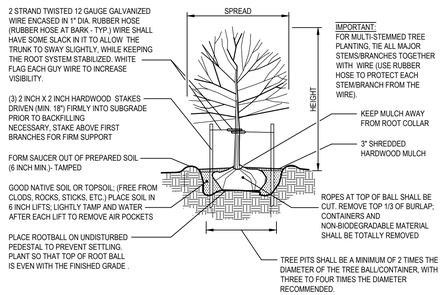
1) ALL PLANT MATERIAL SHALL BE LOCALLY NURSERY GROWN NO.1 GRADE AND INSTALLED ACCORDING TO ACCEPTED PLANTING PROCEDURES. ALL PLANT MATERIALS SHALL MEET CURRENT AMERICAN ASSOCIATION OR NURSERYMEN STANDARDS. DO NOT PLANT MATERIALS UNTIL DIRECTED BY OWNER, LANDSCAPE ARCHITECT, AND/OR CONSTRUCTION MANAGER. THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO REJECT ANY PLANT MATERIAL, FOR ANY REASON BEFORE OR AFTER IT IS INSTALLED.
2) SIZES SPECIFIED ARE MINIMUM SIZES TO WHICH THE PLANTS ARE TO BE INSTALLED.
3) ANY PLANT SUBSTITUTIONS SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT.
4) MAINTENANCE OF LANDSCAPING ITEMS, TREES, AND PLANTS SHALL BE PERFORMED BY THE PROPERTY OWNER OR A QUALIFIED PROFESSIONAL. ALL LANDSCAPING SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH APPLICABLE MUNICIPAL STANDARDS AND IN ACCORDANCE WITH CURRENT INDUSTRY STANDARDS IN A NEAT, HEALTHY AND WEED FREE CONDITION. ANY DEAD, DISEASED OR DAMAGED PLANT MATERIALS ARE TO BE REPLACED IMMEDIATELY AFTER NOTIFIED TO DO SO.
5) PLANT TREES AND SHRUBS IN ACCORDANCE WITH PLANTING DETAILS. DIG TREE PITS PER DETAILS. PLANT TREES AND SHRUBS AT THE SAME GRADE LEVEL AT WHICH THEY WERE GROWN AT THE NURSERY. IF HEAVY CLAY SOILS ARE EVIDENT, PLANT TREES AND SHRUBS HIGHER, APRROX. 1/4 OF THE ROOT BALL ABOVE GRADE, AND BACKFILL TO TOP OF ROOT BALL.
6) REMOVE ALL TWINE, WIRE, NURSERY TREE GUARDS, TAGS AND INORGANIC MATERIAL FROM ROOT BALLS. REMOVE THE TOP 1/3 OF BURLAP FROM EARTH BALLS AND REMOVE BURLAP FROM AROUND TRUNK.
7) FINELY SHREDDED HARDWOOD BARK MULCH, NATURAL COLOR (NON-COLORED), IS REQUIRED FOR ALL PLANTINGS AND PLANTING BEDS. MULCH PER PLANTING DETAILS. MULCH IN PLANT BEDS SHALL BE 3" THICK AT TIME OF INSPECTION AND AFTER COMPACTED BY RAIN OR IRRIGATION. ALL PLANTING BEDS SHALL BE EDGED WITH 6" X 12 GAUGE STEEL LANDSCAPE EDGING.
8) LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR THE VERIFICATION OF ALL UNDERGROUND AND OVERHEAD UTILITIES. IF A CONFLICT WITH UTILITIES EXIST, NOTIFY OWNER/CONSTRUCTION MANAGER PRIOR TO PLANTING.
9) PLANT MATERIAL SHALL BE GUARANTEED FOR ONE YEAR AFTER PLANTING AND ACCEPTANCE.

TOPSOIL AND TURF NOTES:

1) WHEREVER GROUND IN ITS NATURAL STATE HAS BEEN DISTURBED, APPROVED LANDSCAPING OR GRASS SHALL BE FULLY INSTALLED, AND ESTABLISHED WITHIN A REASONABLE PERIOD OF TIME, BUT NO LONGER THAN ONE GROWING SEASON (UNLESS OTHERWISE NOTED AND APPROVED).
2) DURING EXCAVATION, GRADING, AND INSTALLATION OF REQUIRED LANDSCAPING, ALL SOIL EROSION AND SEDIMENTATION CONTROL REGULATIONS SHALL BE STRICTLY FOLLOWED AND COMPLIED WITH.
3) ALL LAWN AREAS SHALL RECEIVE SOD OR HYDROSEED. TURF SHALL BE INSTALLED ON TOPSOIL UNLESS APPROVED OTHERWISE. DO NOT PLANT UNTIL ACCEPTANCE OF FINISH GRADE.
3) SOD SHALL BE GROWN ON TOPSOIL UNLESS APPROVED OTHERWISE. SOD SHALL BE 2 YEARS OLD AND STRONGLY ROOTED. PLACE SOD TIGHTLY WITH NO GAPS AND WITH GRAIN IN SAME DIRECTION. SEAMS OF SOD SHALL BE STAGGERED IN A RUNNING BOND PATTERN. SOD SHALL BE WATERED IMMEDIATELY TO AVOID DRYING OUT. DO NOT INSTALL SOD UNTIL ACCEPTANCE OF FINISH GRADE AND IRRIGATION SYSTEM IS OPERATING PROPERLY UNLESS DIRECTED IN WRITING TO DO OTHERWISE. FINISH ROLL SOD WITH A WATER FILLED LAWN ROLLER, ROLL PERPENDICULAR TO LENGTH OF SOD.
4) TURF SHALL BE INSTALLED ON A MIN. OF 3"-4" OF LIGHTLY COMPACTED APPROVED TOPSOIL. TOPSOIL SHALL BE FERTILE, SCREENED, FRIABLE TOPSOIL FREE OF STONES 1/2" IN DIA. AND LARGER, ROOTS, STICKS, OR OTHER EXTRANEOUS MATERIAL INCLUDING NOXIOUS PLANTS. PH BETWEEN 6.0 AND 6.5, SALTS 500 PARTS PPM, ORGANIC CONTENT 3% MIN. DO NOT INSTALL TOPSOIL UNTIL APPROVED BY OWNER/C.M.. TOPSOIL SHALL BE FINE GRADED TO A SMOOTH FINISH, FREE OF LUMPS AND DEPRESSIONS.
5) ALL LANDSCAPE ISLANDS WITHIN PARKING LOTS SHALL BE BACK FILLED WITH TOPSOIL TO A DEPTH OF 18" MIN.

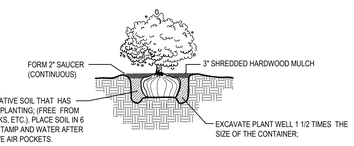
IRRIGATION NOTES:

1) ALL PLANTING AREAS WITH HATCH SHOWN ARE TO HAVE A COMPLETE IRRIGATION SYSTEM. THE G.C. SHALL BE RESPONSIBLE FOR RETAINING A QUALIFIED FIRM FOR THE DESIGN OF THE IRRIGATION SYSTEM. THE DESIGN MUST SHOW HOW THE SYSTEM TIES INTO THE BUILDING AND MUST SHOW ALL OF THE NECESSARY EQUIPMENT FOR A COMPLETE SYSTEM. THE G.C. SHALL SUBMIT THE IRRIGATION SYSTEM DESIGN TO THE ARCHITECT/OWNER FOR APPROVAL PRIOR TO COMMENCEMENT OF WORK.



TYPICAL TREE PLANTING DETAIL

N.T.S.



TYPICAL SHRUB / PERENNIAL / ORNAMENTAL GRASS PLANTING DETAIL

N.T.S.

LANDSCAPE CALCULATIONS

REQUIRED LANDSCAPING:

PARKING LOT LANDSCAPING
- 36" TALL (MIN.) SCREEN BETWEEN PARKING ROAD

PROPOSED LANDSCAPING:

PARKING LOT LANDSCAPING
- 3 CANOPY TREES (2.5" CAL.) PROVIDED
- 5 EVERGREEN TREES PROVIDED

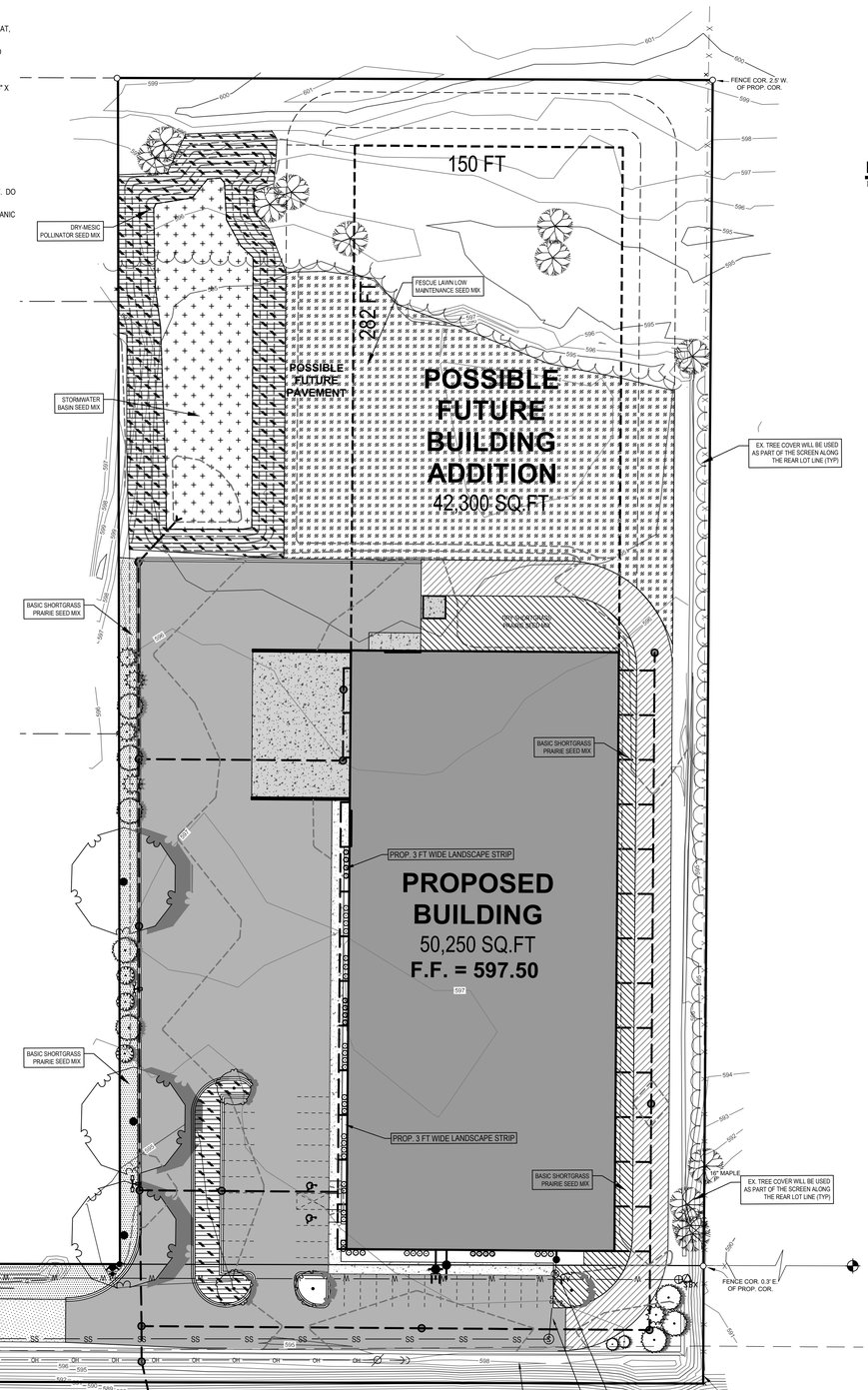
PLANT SCHEDULE

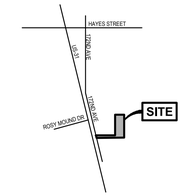
TREES	CODE	BOTANICAL NAME	COMMON NAME	CONT	QTY	SIZE AT PLANTING
	Ak	Abies koreana `Silberlocke`	Korean Fir	B&B	2	6' ht.
	Cc	Cercis canadensis	Eastern Redbud	B&B	2	6' ht.
	Cf	Cornus florida	Eastern Dogwood	B&B	2	6' ht.
	Je	Juniperus virginiana	Eastern Red Cedar	B&B	3	6' ht.
	Pd	Picea glauca `Densata`	Black Hills Spruce	B&B	8	6' ht.
	Ps	Picea orientalis `Skylands`	Skylands Oriental Spruce	B&B	5	6' ht.
	Qa	Quercus alba	White Oak	B&B	3	8' ht.

SHRUBS	CODE	BOTANICAL NAME	COMMON NAME	CONT	QTY
	Ap2	Aesculus parviflora	Bottlebrush Buckeye	36" hgt.	10
	Pn	Physocarpus opulifolius	Ninebark	36" hgt.	13
	Pf	Potentilla fruticosa	Bush Cinquefoil	36" hgt.	12
	Va	Viburnum dentatum	Viburnum	36" hgt.	12
		Native Connections Fescue Lawn Low Maintenance Mix (or approved equal)			±28,700 sf.

BIORETENTION PLANT SCHEDULE

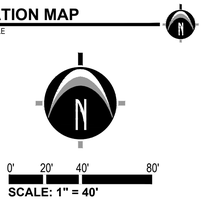
GROUND COVER	SEED MIX	AREA
	Native Connections Stormwater Basin Seed Mix (or approved equal)	±9,300 sf.
	Native Connections Dry-Mesic Pollinator Seed Mix (or approved equal)	±10,800 sf.
	Native Connections Basic Shortgrass Prairie Seed Mix (or approved equal; see irrigation notes)	±13,731 sf.
	Native Connections Basic Shortgrass Prairie Seed Mix (or approved equal)	±7,510 sf.





LOCATION MAP

NOT TO SCALE



LEGEND

- EXISTING BITUMINOUS
- EXISTING CONCRETE
- PROPOSED BITUMINOUS
- PROPOSED CONCRETE
- PROPOSED BUILDING

811 Know what's below. CALL before you dig.

UTILITY LOCATIONS AS SHOWN ON THE PLAN WERE OBTAINED FROM ACTUAL MEASUREMENTS OR AVAILABLE AS-BUILT RECORD DRAWINGS AS PROVIDED TO US. THEY SHOULD NOT BE INTERPRETED TO BE EXACT LOCATIONS NOR SHOULD IT BE ASSUMED THAT THEY ARE THE ONLY UTILITIES IN THIS AREA.

NOTE:
THE CONTRACTOR SHALL VERIFY THE LOCATION, DEPTH AND STATUS OF ALL UTILITIES AND SERVICE LINES PRIOR TO NEW CONNECTIONS.

NEDERVELD
www.nederveld.com
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Grand Rapids, MI 49503
Phone: 616.575.5190
ANN ARBOR
CHICAGO
COLUMBUS
HOLLAND
INDIANAPOLIS
ST. LOUIS

PREPARED FOR:

CopperRock Construction Inc.
Attention: Brandon Hartel

601 5th Street NW, Suite 300
Grand Rapids, MI 49504
Phone: 616.920.1655

REVISIONS:

Title: Preliminary Site Plan		
Drawn: SW	Checked: SW	Date: 01/22/20
Title: Site Plan Resubmittal		
Drawn: SW	Checked: SW	Date: 02/19/20
Title: Per OCWRC		
Drawn: SW	Checked: SW	Date: 02/24/20
Title: Submitted for March 2 PC Meeting		
Drawn: SW	Checked: SW	Date: 02/27/20
Title: Submitted for March 24 ZBA Meeting		
Drawn: SW	Checked: SW	Date: 03/04/20

GH Custom Molding

Landscape Plan

14016 172nd Street
PART OF THE NORTHEAST 1/4 OF SECTION 4, T7N, R16W, GRAND HAVEN TOWNSHIP, OTTAWA COUNTY, MICHIGAN

STAMP:

STATE OF MICHIGAN
STEVEN L. WITTE
ENGINEER
No. 46769
LICENSED PROFESSIONAL ENGINEER

PROJECT NO: 19201738

SHEET NO: L-201

SHEET: 5 OF 5

19201738-CPR.dwg SW 3/4/2020 14:32

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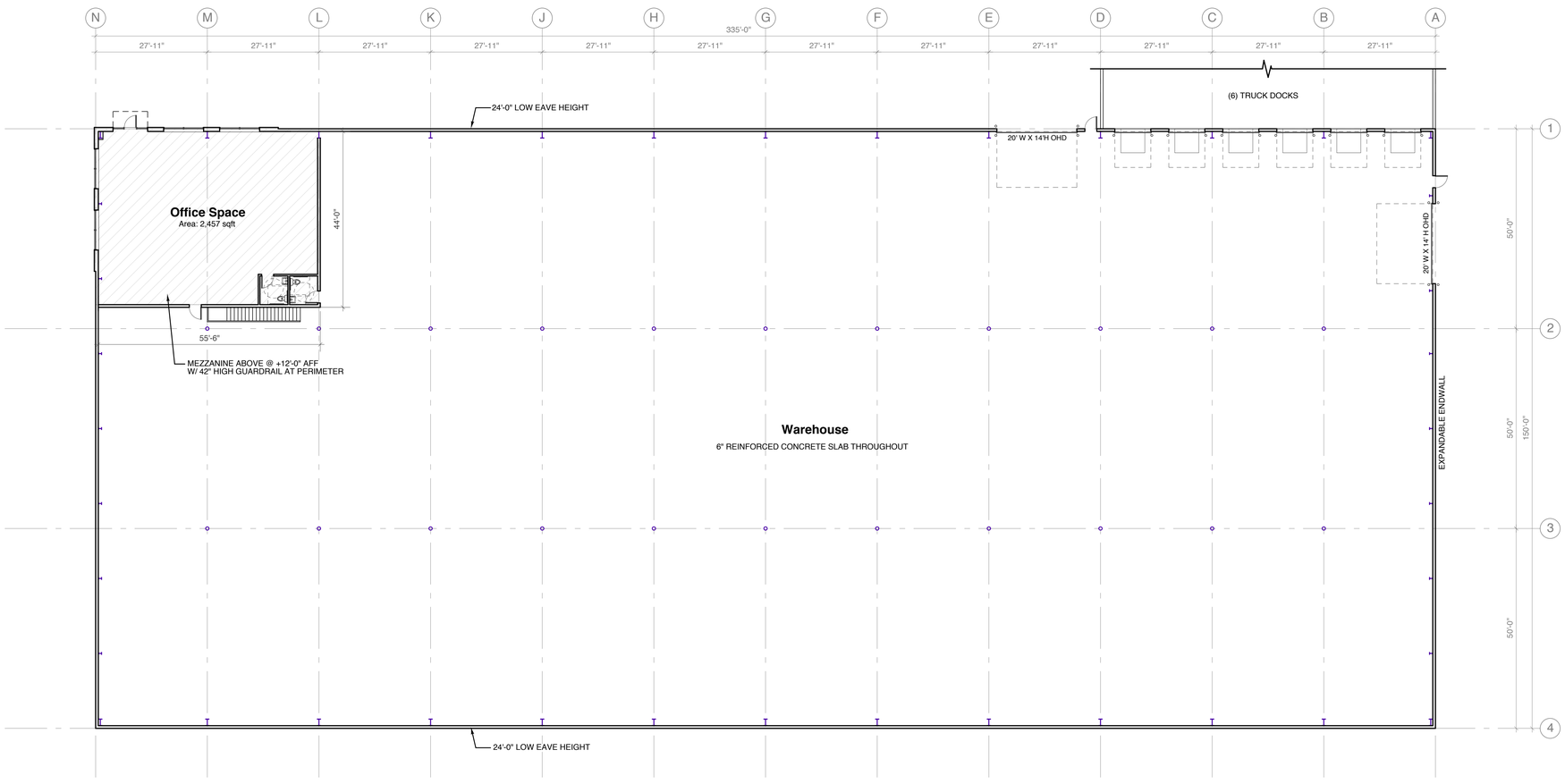

1. Building Floor Plan

SCALE: 1/16" = 1'-0"
BLDG AREA: 50,250 SQ FT

0' 8' 16' 32'

N

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www.dixonarch.com

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Client
Client Address
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p. (616)
f. (616)

www.website.com

Grand Haven 50K PEMB

14016 172nd Sreeet
Grand Haven, Michigan

Floor Plan

Made in Michigan

Revisions:
SPR: 5/21/2020

Project No: 219060
Issue Date: 5/21/20
Reviewer: KCD
Drawn By: KCD

A2.1

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Site Birdseye View

Building Entrance View

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Grand Haven 50K PEMB

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Grand Haven, Michigan

Building Renderings

Made in Michigan

Revisions:
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Project No: 219060
Issue Date: 5/21/20
Reviewer: KCD
Drawn By: KCD

A3.1

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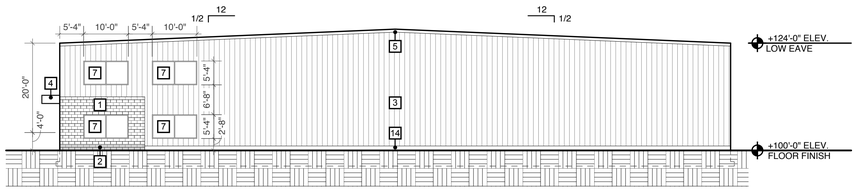
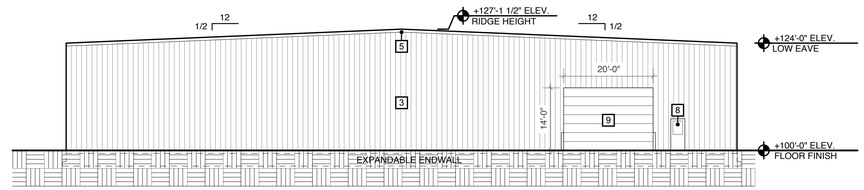


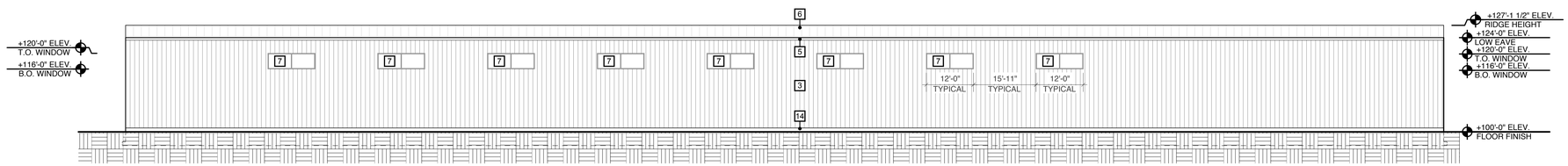
1. South Elevation

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



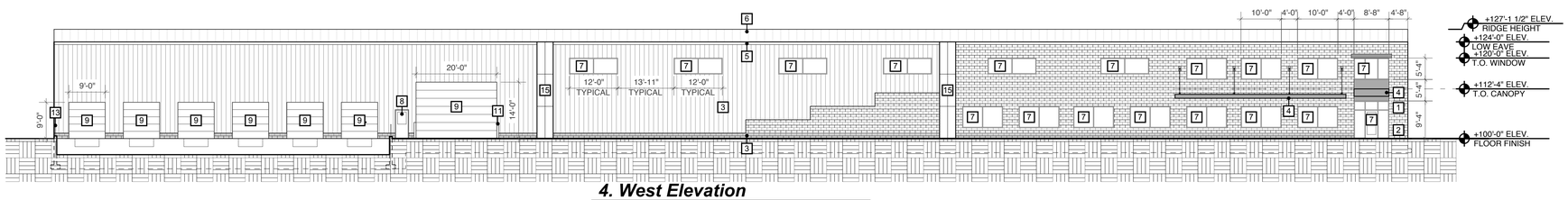
2. North Elevation

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



3. East Elevation

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



4. West Elevation

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

Exterior Materials Legend

LABEL	MATERIAL	MANUFACTURER	STYLE	COLOR
1	CONCRETE MASONRY VENEER	CONSUMERS	SPLIT FACE, 8X8X16	TBD
2	CONCRETE MASONRY VENEER	CONSUMERS	SPLIT FACE, 8X8X16	GRAY
3	METAL SIDING PANEL	PEMB MANUFACTURER	EXPOSED FASTENER	TBD
4	BREAK METAL CANOPY	PEMB MANUFACTURER	TBD	TBD
5	PREFINISHED METAL TRIM	PEMB MANUFACTURER	STANDARD PROFILE	TBD
6	STANDING SEAM METAL ROOF	PEMB MANUFACTURER	TBD	TBD
7	ALUMINUM STOREFRONT SYSTEM	TBD	4-1/2" X 2"	TBD
8	HOLLOW METAL DOOR	TBD	TBD	TBD
9	OVERHEAD DOOR	TBD	TBD	TBD
10	WALL PACK EXTERIOR LIGHT FIXTURE	TBD	TBD	TBD
11	GALVANIZED STEEL BOLLARD	TBD	TBD	TBD
12	ALUMINUM GUTTER / DOWNSPOUT	PEMB MANUFACTURER	TBD	TBD
13	STEEL GUARDRAIL	TBD	TBD	TBD
14	EXPOSED CONCRETE FOUNDATION	-	RUBBED	EXP
15	ARCHITECTURAL PANEL	TBD	TBD	TBD

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Grand Haven 50K PEMB
14016 172nd Sreeet
Grand Haven, Michigan
Exterior Elevations

Made in Michigan

Revisions:
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Issue Date: 5/21/20
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Drawn By: KCD

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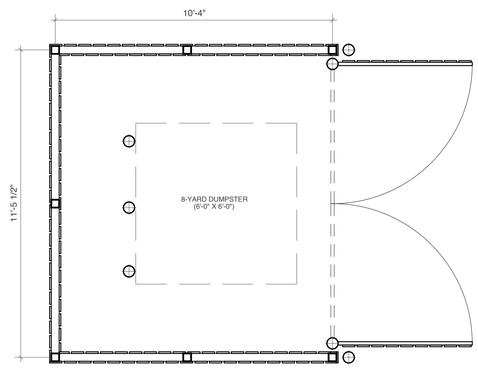
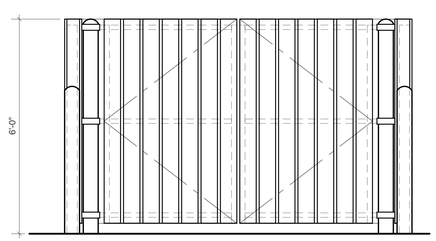


1. Dumpster Enclosure Plan

SCALE: 3/8" = 1'-0"

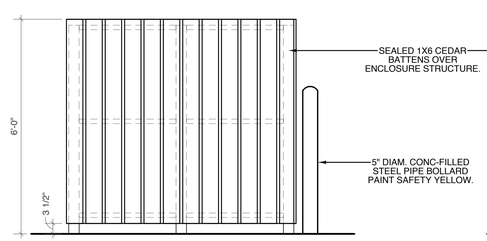
0' 1'-4" 2'-8" 5'-4"



2. Front Elevation

SCALE: 1/2" = 1'-0"

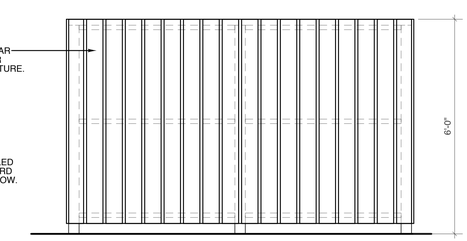
0' 1' 2' 4'



3. Side Elevation

SCALE: 1/2" = 1'-0"

0' 1' 2' 4'



4. Rear Elevation

SCALE: 1/2" = 1'-0"

0' 1' 2' 4'

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Grand Haven 50K PEMB

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Grand Haven, Michigan

Dumpster Enclosure Details

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Revisions:
SPR: 5/21/2020

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Reviewer: KCD
Drawn By: KCD

A4.2

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