

**GENOA CHARTER TOWNSHIP
ZONING BOARD OF APPEALS
APRIL 16, 2024
6:30 P.M.
AGENDA**

Call to Order:

Pledge of Allegiance:

Introductions:

Conflict of Interest:

Approval of Agenda:

Call to the Public: *(Please Note: The Board will not begin any new business after 10:00 p.m)*

1. 24-08...A request by Robert Dow of Ventures Design, 5425 Wildwood Drive, for two sides, front and waterfront yard setback variances and any other variance deemed necessary by the Zoning Board of Appeals, to demolish part of existing home and construct an attached garage and to allow an existing covered patio to remain.
2. 24-09...A request by Nancy Dykema, 4053 Homestead Drive, for side yard setback variance and a height variance and any other variance deemed necessary by the Zoning Board of Appeals, to build a new home.
3. 24-10...A request by MITTS LLC, 5776 E. Grand River Avenue, for a front yard setback variance and any other variance deemed necessary by the Zoning Board of Appeals, to allow barrier-free parking near the building entrance. (REQUEST TO BE WITHDRAWN)
4. 24-11...A request by 1015 Latson Road LLC, 1111 S. Latson Road, for a setback variance and any other variance deemed necessary by the Zoning Board of Appeals, to allow for a drive-thru.
5. 24-12...A request by Michael Brown, 4655 Sweet Road, for a side yard setback variance and any other variance deemed necessary by the Zoning Board of Appeals, to allow solar panels to remain.

Administrative Business:

1. Approval of minutes for the February 20, 2024 Zoning Board of Appeals meeting.
2. Correspondence
3. Member Discussion
4. Adjournment

*Citizen's Comments- In addition to providing the public with an opportunity to address the Township Board at the beginning of the meeting, opportunity to comment on individual agenda items may be offered by the Chairman as they are presented. Anyone speaking on an agenda item will be limited to 2 minutes.



GENOA CHARTER TOWNSHIP VARIANCE APPLICATION
2911 DORR ROAD | BRIGHTON, MICHIGAN 48116
(810) 227-5225 | FAX (810) 227-3420

Case # 24-08 Meeting Date: March 19, 2024
@ 6:30 pm Boardroom
 PAID Variance Application Fee

\$215.00 for Residential | \$300.00 for Sign Variance | \$395.00 for Commercial/Industrial

Applicant/Owner: ROBERT DOW Email: BOB DOW 2060 @ YAHOO.COM
Property Address: 5425 WELDLWOOD DR Phone: (734) 765-9300
Present Zoning: RESIDENTIAL Tax Code: 11-10-102-066

ARTICLE 23 of the Genoa Township Zoning Ordinance describes the Variance procedure and the duties of the Zoning Board of Appeals.

Each application for Variance is considered individually by the ZBA. The ZBA is a board of limited power; it cannot change the Zoning Ordinance or grant relief when it is possible to comply with the Zoning Ordinance. It may provide relief where due to unique aspects of the property with strict application of the zoning ordinance to the land results in practical difficulties or unnecessary hardship.

The applicant is responsible for presenting the information necessary to support the relief requested. While much of the necessary information is gathered through the completed application, other information may be gathered by on-site visits, other sources, and during the ZBA meeting. ZBA members, township officials and township staff may visit the site without prior notification to property owners.

Failure to meet the submittal requirements and properly stake the property showing all proposed improvements may result in postponement or denial of this petition.

Please explain the proposed variance below:

1. Variance requested/intended property modifications: its a non conforming lot
that I would like to extend the already small lot.

Please note that the packet and staff report for your scheduled Zoning Board of Appeals meeting will be available to review at <https://www.genoa.org/government/boards/zoningboard> five days prior to the meeting.

The following is per Article 23.05.03 of the Genoa Township Ordinance:

Criteria Applicable to Dimensional Variances. No variance in the provisions or requirements of the Ordinance shall be authorized by the Board of Appeals unless it is found from the evidence that all of the following conditions exist:

Under each please indicate how the proposed project meets each criteria.

Practical Difficulty/Substantial Justice. Compliance with the strict letter of the restrictions governing area, setbacks, frontage, height, bulk, density, or other dimensional provisions would unreasonably prevent the use of the property. Granting of a requested variance or appeal would do substantial justice to the applicant as well as to other property owners in the district and 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 vicinity of the subject parcel.

property is limited space so the structure will be close to property edge. however it will remain within the same width of the house

Extraordinary Circumstances. There are exceptional or extraordinary circumstances or conditions applicable to the property or the intended use which are different than other properties in the same zoning district or the variance would make the property consistent with the majority of other properties in the vicinity. The need for the variance was not self-created by the applicant.

all homes in the area are lakefront and space is limited. I will not be adding anything that will be different or impeding others views

Public Safety and Welfare. The granting of the variance will not impair an adequate supply of light and air to adjacent property or unreasonably increase the congestion in public streets, or increase the danger of fire or endanger the public safety, comfort, morals or welfare of the inhabitants of the Township of Genoa.

no safety issues with the structure being added

Impact on Surrounding Neighborhood. The variance will not interfere with or discourage the appropriate development, continued use, or value of adjacent properties and the surrounding neighborhood.

the patio does not affect others around me

Attendance by the applicant is required at the Zoning Board of Appeals meeting.

Any Variance not acted upon within 12 months from the date of approval is invalid and must receive a renewal from the Zoning Board of Appeals (ZBA).

After the decision is made regarding your Variance approval a land use permit will be required with additional site plans and construction plans.

Date: 1/30/24 Signature: Blair



2911 Dorr Road
Brighton, MI 48116
810.227.5225
810.227.3420 fax
genoa.org

REVISED MEMORANDUM

Memorandum was revised due to additional variances being requested since the March ZBA meeting that was canceled

TO: Genoa Township Zoning Board of Appeals
FROM: Amy Ruthig, Planning Director
DATE: April 14, 2024
RE: ZBA 24-08

STAFF REPORT

File Number: ZBA#24-08
Site Address: 5425 Wildwood Drive
Parcel Number: 4711-10-102-066
Parcel Size: 0.103 Acre
Applicant: Dow, Robert and Renee 47125 Ashley Court Canton, 48187
Property Owner: Same as Applicant
Information Submitted: Application, site plan, conceptual drawings

Request: Dimensional Variance

Project Description: Applicant is requesting a waterfront, side and front yard setback variance to allow an existing roof structure to remain over a patio and to demolish portion of existing home and construct an attached garage.

Zoning and Existing Use: LRR (Lakeshore Resort Residential) Single Family Dwelling located on property.

Other:

Public hearing was published in the Livingston County Press and Argus on Sunday March 31, 2024 and 300-foot mailings were sent to any real property within 300 feet of the property in accordance with the Michigan Zoning Enabling Act.

Background

The following is a brief summary of the background information we have on file:

- Per assessing records the parcel has an existing single-family dwelling built in 1930, remodeled in 2006.
- In 2001, a land use permit was issued for a fence.
- In 2002, after multiple ZBA meetings, a variance was denied for an addition petitioned by the previous owner. (see attached minutes)
- The property utilizes a well and public sewer system.
- See Real Record Card.

SUPERVISOR

Bill Rogers

CLERK

Paulette A. Skolarus

TREASURER

Robin L. Hunt

TRUSTEES

Jean W. Ledford

Terry Croft

Diana Lowe

Jeff Dhaenens

MANAGER

Kelly VanMarter

Summary

Applicant is seeking a waterfront, two side yard and front yard setback variances to allow an existing roof to remain over a patio and demolish portion of existing home to be able construct an attached garage. The applicant requested a land use permit for solar panels to be installed on the existing roof structure which was determined to be illegal since no land use permit was issued for the roof. The solar panel land use permit was not approved. However, it has come to staff's attention that the solar panels were installed on the roof anyway.

The property lines extend to the water's edge per the Township Assessing Dept. Staff found it difficult to determine requested setbacks especially for the front yard setback. Included in the 2002 variance application submittal was a mortgage survey (see attached) that indicated the existing house was located on the front lot line. Applicant is requesting to increase the length of the house from the existing footprint for the proposed attached garage. If the addition is larger than the existing footprint, it could push the addition over the front property line. Staff recommends that the applicant obtain a certified survey to verify accurate setbacks since mortgage surveys are not certified.

Staff could not locate a land use permit or variance application for the 2000 addition that applicant indicates on the site plan.

Applicant supplied adjacent properties waterfront setbacks from the decks of the homes however the Zoning Ordinance requires the measurements to be taken from the closest roofed portion of the home to the water's edge. Staff used Township Assessing records to determine the size of the decks to determine the correct adjacent waterfront property setbacks based on applicant's information.

The parcel is not serviced with a grinder. No approval is required.

Variance Requests

The following is the section of the Zoning Ordinance that the variance is being requested from:

Table 3.04.01 (LRR District)

SINGLE FAMILY STRUCTURE	Side Yard (North) Setback	Side Yard (South) Setback	Waterfront Setback	Front Yard Setback
REQUIRED YARD SETBACK	10'	10'	76'	35'
PROPOSED YARD SETBACKS	3'	2'	63'	0'
REQUESTED YARD VARIANCES	7'	8'	13'	35'

Summary of Findings of Fact- After reviewing the application and materials provided, I offer the possible findings of fact for your consideration:

Please note that in order for a variance to be approved it has to meet all of the standards in 23.05.03.

- (a) Practical Difficulty/Substantial Justice** –Strict compliance with the setbacks would prevent the illegal roof structure to remain and would prevent the addition of the garage. It would not prevent the use of the property. There are other homes in the vicinity with reduced side yard and waterfront yard setbacks that could support substantial justice for the roof structure. Township staff cannot verify the front yard setback to make a determination for substantial justice.
- (b) Extraordinary Circumstances** – The exceptional or extraordinary condition of the property is the narrowness of the lot and it is a non-conforming lot in the LRR district. The angle of the property creates an irregular shoreline in

comparison to the neighbor to the south. It appears the need for the variances is not self-created however applicant should demonstrate that it is the least amount necessary for the waterfront setback variance request.

(c) Public Safety and Welfare – The granting of the variances will not impair an adequate supply of light and air to adjacent properties. The garage addition will unreasonably increase the congestion in public streets and increase the danger of fire or endanger the public safety, comfort, morals or welfare of the inhabitants of the Township of Genoa since it appears there will not be adequate parking available on the property.

(d) Impact on Surrounding Neighborhood – The proposed variances will have an impact on the appropriate development and continued use due to adequate parking is not provided on the property. It will not have impact on the value of adjacent properties and the surrounding neighborhood.

Recommended Conditions

If the Zoning Board of Appeals grants the variance requests, staff recommends the following conditions be placed on the **approval**:

1. If survey is required by a certified engineer than the following shall apply:
 - a) Survey shall be completed and submitted to the Township within 3 months of approval
 - b) Land use waiver shall be applied for within 7 business days of survey submittal for the roof and solar panels.
 - c) A Livingston County Building Permit shall be applied for within 5 business days of land use permit approval.
3. Structure must be guttered with downspouts.
4. The land use permit for demolition and the addition of the garage will need to be applied for within 1 year of approval.

If the Zoning Board of Appeals grants the variance requests, staff recommends the following conditions be placed on the **denial**:

1. Land use waiver shall be applied for within 7 business days of denial for the removal of the roof and solar panels.
2. A Livingston County Building Permit shall be applied for within 5 business days of land use waiver approval.
3. The solar panels and roof shall be removed within 45 days of denial.



Subject Property

Mon Oct 2 2023

Imagery © 2024 Nearmap, HERE

20 ft

nearmap

GENOA TOWNSHIP
ZONING BOARD OF APPEALS
JUNE 11, 2002

MINUTES

A regular meeting of the Genoa Township Zoning Board of Appeals was called to order by Vice-Chairman Figurski at 7:00 p.m. at the Genoa Township Hall. The Pledge of Allegiance was then said.

The following board members were present constituting a quorum for the transaction of business: Barbara Figurski, Judy Stornant, Jean Ledford and Chris Hensick. Also present were Township Ordinance Enforcement Officer Adam VanTassell and approximately 20 persons in the audience.

Moved by Ledford, supported by Hensick, to approve the Agenda as presented. The motion carried unanimously.

A Call to the Public was made with no response.

02-16...A request by Thomas and Beverly Smith, Section 10, 5425 Wildwood for a 6.5-foot side yard variance with a 3.5 foot setback and a 31 foot front yard variance with a 4 foot setback to construct an addition.

Smith - This request is for a 627-sq. ft. addition. Our neighbors have supported us on this request. Our cottage is the second oldest on the lake and needs to be updated. We don't want to join the lots because we may sell the other parcel sometime in the future. A Call to the Public was made with no response. Moved by Ledford, supported by Hensick, to deny the request for variance since no practical difficulty exists because the petitioner owns a vacant parcel adjoining this parcel. In addition there is no space for a garage on the existing lot. The petitioner uses the side of the lot for parallel parking. The motion carried unanimously.

02-18...A request by Mark Restoration, Section 5, 1091 Victory Dr. for a 25-foot front yard variance with a 50 foot setback to install additional parking.

A Call to the Public was made with no response. Moved by Hensick, supported by Ledford, to grant a 25-foot front yard variance for the addition of a parking surface as presented by Desine, Inc. for nine additional spaces with curbing. The practical difficulty is the extensive wetland characteristics of the parcel that will not allow for an expansion in any other area. The motion carried unanimously.

02-24...A request by John Edwards, Section 22, 3671 Highcrest for an 8'6" waterfront variance with a 33-foot setback to construct a deck.

GENOA TOWNSHIP
ZONING BOARD OF APPEALS
MAY 14, 2002

MINUTES

A regular meeting of the Zoning Board of Appeals was called to order by Chairman Staley at 7:00 p.m. at the Genoa Township Hall. The Pledge of Allegiance was then said.

The following board members were present constituting a quorum for the transaction of business: Rick Staley, Jean Ledford, Polly Skolarus and Judy Stornant. Also present were Township Zoning Administrator Adam VanTassell and approximately 20 persons in the audience.

Moved by Ledford, supported by Stornant, to approve the Agenda with the tabling of petition 02-18. The motion carried unanimously.

A Call to the Public was made with no response.

02-13...A request by Gary Spare, Section 10, 5264 Westwood for an 8 foot side yard variance with a 2 foot side yard setback and a 17.5 foot front yard variance with a 17.5 foot setback to construct an addition.

A Call to the Public was made with no response. Moved by Skolarus, supported by Ledford, to approve the variance of 8' on the side and 17.5' on the front, contingent on the home being guttered. The practical difficulty is the narrowness of the lot. The motion carried unanimously.

02-16...A request by Thomas and Beverly Smith, Section 10, 5425 Wildwood, is for a 6.5-foot side yard variance with a 3.5-foot setback and a 31-foot front yard variance with a 4-foot setback to construct an addition.

A Call to the Public was made with the following response: Joyce Matevia. - My home is on the property line and there is enough room for two cars on the side of the house, next to the fence. A letter of support was received from John Benson. Moved by Skolarus, supported by Ledford, to deny the request because of the potential harm to the safety and welfare of the community when there is no place for a garage or parking. The motion failed as follows: Ayes - Skolarus and Ledford. Nay - Stornant and Staley. Moved by Ledford, supported by Skolarus, to table until the next regular meeting of the board when there are five members present to make a decision. The motion carried unanimously.

02-18...A request by Mark I Restoration, Section 5, 1091 Victory Dr., is for a 25-foot front yard variance with a 50-foot setback to install additional parking.

Tabled at the petitioner's request.

the lot in LDR zone, the preservation of existing mature trees and the location of the existing home on the site that will not allow the addition in any other place. The motion carried unanimously.

02-15...A request by Craig White, Section 28, 4277 Homestead, for a 3-foot side yard variance with a 7-foot setback to construct an attached garage and a side variance to construct an addition on a detached garage.

A Call to the Public was made with no response. The petitioner was advised that no practical difficulty existed for the variance to the accessory structure. The petitioner withdrew his request for the variance for the accessory building. He will comply with the 900-sq. ft. requirement of the ordinance. Moved by Skolarus, supported by Figurski, to grant a 5' variance to the side to allow the construction of an attached garage in the dimensions provided. The practical difficulty is that there is no other feasible location for the placement of the garage. This action would allow the continuation of a nonconforming use. The motion carried unanimously.

02-16...A request by Thomas and Beverly Smith, Section 10, 5425 Wildwood, for a 6.5-foot side yard variance with a 3.5-foot setback, 20-foot waterfront variance with a 60-foot setback and a 31-foot front yard variance with a 4-foot setback to construct an addition.

A Call to the Public was made with no response. A letter of support was received from John and Karen Buckley. The petitioner advised the board that the existing home is approximately 1300-sq. ft. in area. Their plan is to remove the existing Florida room (measuring 6' x 20') and deck and replace it with an addition of approximately 672-sq. ft. in area. Moved by Ledford, supported by Figurski, to deny the request since the small lot size and the existence of the present structure is out-weighted by the health and safety impact on the township and the adjacent property owners. The parcel at present does not make allowance for any parking. The petitioner advised the board that they park their vehicles on the neighboring lot that they own. The board felt that the petitioner should combine both lots and make a buildable site that would allow them to meet the standards of the zoning ordinance. Any future sale of the existing home would be a severe problem for anyone purchasing the site in that there is no parking area on the site. In addition, the impervious lot coverage is far in excess of the maximum allowance under the zoning ordinance. Before the board could make a final decision, the petitioner asked if the board could make any compromise on their request. It was the consensus of the board that a split vote would allow the petitioner to ask for a tabling of their request in order to allow them to discuss other options. The motion failed as follows: Aye - Figurski and Ledford. Nay - Skolarus and Staley. Moved by Skolarus, supported by Ledford, to table (at the petitioner's request) until the next regular meeting of the board. The motion carried unanimously.

02-17...A request by Cedar West Development, Section 9, 4300 E. Grand River, for a 10-foot front yard variance with a setback of 60 feet for an existing structure with

01-48...A request by Brian Lynn, Section 10, 733 Pathway, is for a 27-foot rear yard and a 6 foot side yard variance to construct an attached garage.

A Call to the Public was made with no response. Moved by Figurski, supported by Ledford, to grant a 6' variance on the northwest side and a 27' variance to the rear contingent upon the building being guttered. The extraordinary circumstance is the topography and unusual lot size. The motion carried as follows: Ayes - Figurski, Ledford, Hensick and Skolarus. Nay - Staley.

02-06...A request by Donald Toomey, Section 28, 4510 Oak Pointe Drive, is for a variance to allow the construction of an accessory structure on a lot without a primary residence.

A Call to the Public was made with the following response: Letters of objection were received from Paul and Cecile Henderson, David Loan, Jean Merrion and Glenn and Bonnie Price. The following persons addressed the board: David Lardinai (representing the Oak Pointe Homeowners Association) - We believe that there are easements for this property but not ownership of the land. Oak Pointe is a fenceless community by covenant and we feel that this parcel should abide by the restrictions. David Merrion - I am opposed to the variance. This request is not compatible with the neighborhood and may decrease the value of my property. Rich Rachner - I believe that this structure is not compatible with the neighborhood. Dave Parker - This is an area of quality homes. The homeowner's association should follow suit and not allow fences. Connie DeLuca - I am opposed to this building being constructed before the residential structure. Skolarus - Mr. Toomey - Your neighbors are concerned with the fence will you relinquish your permit? Toomey - I will relinquish the fence construction permit.

The board reviewed Adam Van Tassell's memorandum of 02-07-02. It was determined that since Mr. Price was not present his request to rescind the permit was not an appropriate action for the Zoning Board to take. Mike Olson (Attorney for Mr. Price) addressed the board - We agree that the establishment of ownership of the property is necessary before the Zoning Board can act. Toomey - I retract that I have a right to put up a fence. Staley - In light of Mr. Olson's presence and under the township-zoning ordinance, we should take action rescinding Archinal's permit. Hensick disagreed. Moved by Skolarus, supported by Ledford, to rescind the township manager's previous action concerning the construction of a fence and to revoke the fence permit for Mr. Toomey. The motion carried unanimously.

Moved by Hensick, supported by Ledford, to table the request until such time as the petitioner can provide clear ownership of the property to which he seeks a variance. The motion carried unanimously.

02-07...A request by Thomas and Beverly Smith, Section 10, 5425 Wildwood, is for a 6.5-foot side yard variance with a 3.5-foot side yard setback and a 2-foot side yard variance with an 8-foot side yard setback to construct an addition.

A Call to the Public was made with the following response: John Benson - I am opposed to the 2' variance on the south side. I have no objection to the other variances being granted. Letters of objection were received from John Benson and Karen Buckley. Moved by Hensick, supported by Ledford, to deny the variances sought. The overall lot coverage is 90% more than what is allowed in the ordinance. There is also a safety factor with the house being located right on the edge of the road. The motion carried unanimously.

02-08...A request by Janet Henry, Section 34, 5050 Kintyre Lane, is for a variance to install a lighted ground sign for a Bed and Breakfast in a residential area.

A Call to the Public was made with the following response: Joan LaCroix - I am not happy with the Bed and breakfast and do not want to see a lighted sign. Richard Starns - There are already two spotlights on the trees on the lot. I object to more light. Ms. Morrison - I have no objection to the bed and breakfast, but the lighted sign is not normal to this use and I object to the sign and the light. Moved by Skolarus, supported by Hensick, to grant the variance for signage along Brighton Road. The sign will be no more than 2.5' off the ground and measure no larger than 3' x 3' in area, as provided in the application for variance. This action is contingent on no lighting be allowed to illuminate the signage because it is located in a residential area. The practical difficulty is the need for identification of the location of the facility for persons using the bed and breakfast. The motion carried as follows: Ayes - Skolarus, Hensick, Ledford and Staley. Nay - Figurski.

02-09...A request by Chris and Jean Hensick, Section 1, 7589 McClements, is for a 3-foot side yard variance with a 17-foot side yard setback to construct an addition.

Hensick advised the board that he would abstain from discussion and voting and that his wife Jean would represent their petition. A Call to the Public was made with no response. Moved by Skolarus, supported by Figurski, to grant a 3' variance to construct an addition. The practical difficulty is the unusual orientation of the existing home on an irregularly shaped lot. The motion carried unanimously.

02-10...A request by David Templeton, Section 12 at 1600 Euler Road, is for a 50-foot variance from wetlands with a 50-foot wetland setback for an accessory structure.

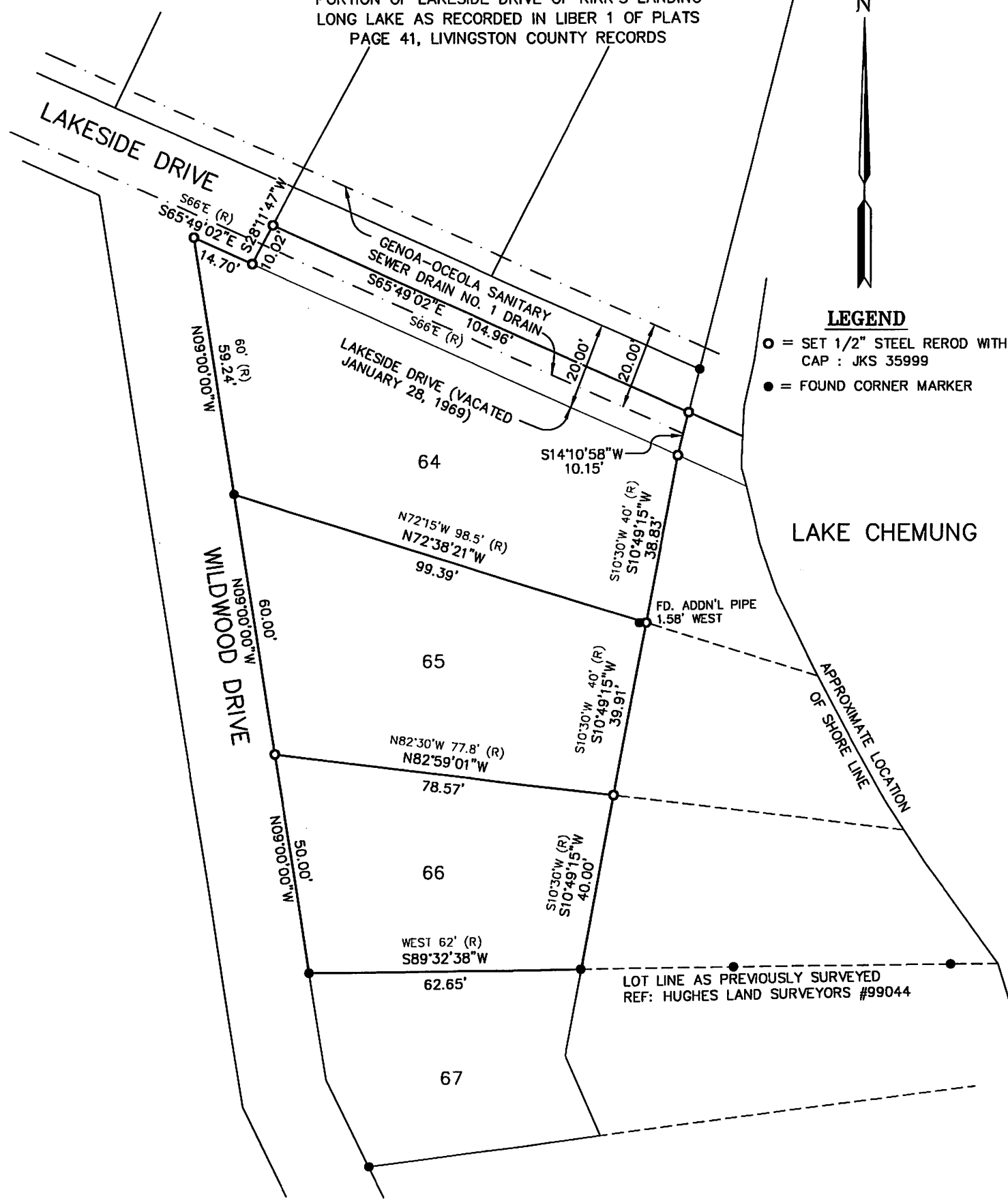
A Call to the Public was made with the following response: Letters of objection were received from Attorney Michele Formes representing Walter and Jane Wasilewski, and from Scott Williams. The petitioner advised the board that he services tires on heavy equipment. He carries no inventory on his property or hazardous materials. Moved by Hensick, supported by Figurski, to table the petition until the Templetons can supply a boundary survey in relation to the pond, easement, home and barn. The motion carried unanimously.

CERTIFICATE OF SURVEY

LOTS 64, 65 AND 66 AND THE SOUTH 1/2 OF VACATED
PORTION OF LAKESIDE DRIVE OF KIRK'S LANDING
LONG LAKE AS RECORDED IN LIBER 1 OF PLATS
PAGE 41, LIVINGSTON COUNTY RECORDS

FD. REROD
0.93' WEST

N



LEGEND

- = SET 1/2" STEEL REROD WITH CAP : JKS 35999
- = FOUND CORNER MARKER

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT I HAVE SURVEYED AND MAPPED THE LAND HEREIN PLATTED AND/OR DESCRIBED ON 3/12/2001, AND THAT THE RATIO OF CLOSURE ON THE UNADJUSTED FIELD OBSERVATIONS OF SUCH SURVEY WAS 1/7,500 OR BETTER.

CLIENT: **TOM & BEVERLY SMITH**

SCALE: 1" = 30'

SECTION: 10 TOWN: 2 NORTH RANGE: 5 EAST

GENOA TOWNSHIP
LIVINGSTON COUNTY, MICHIGAN

[Signature]
JACK K. SMITH
PROFESSIONAL SURVEYOR No. 35999

DATE: 03-22-2001

CREW: JKS/DPS

BOOK NO. 186 PG 24

COMP: JKS

DRAWN: JKS

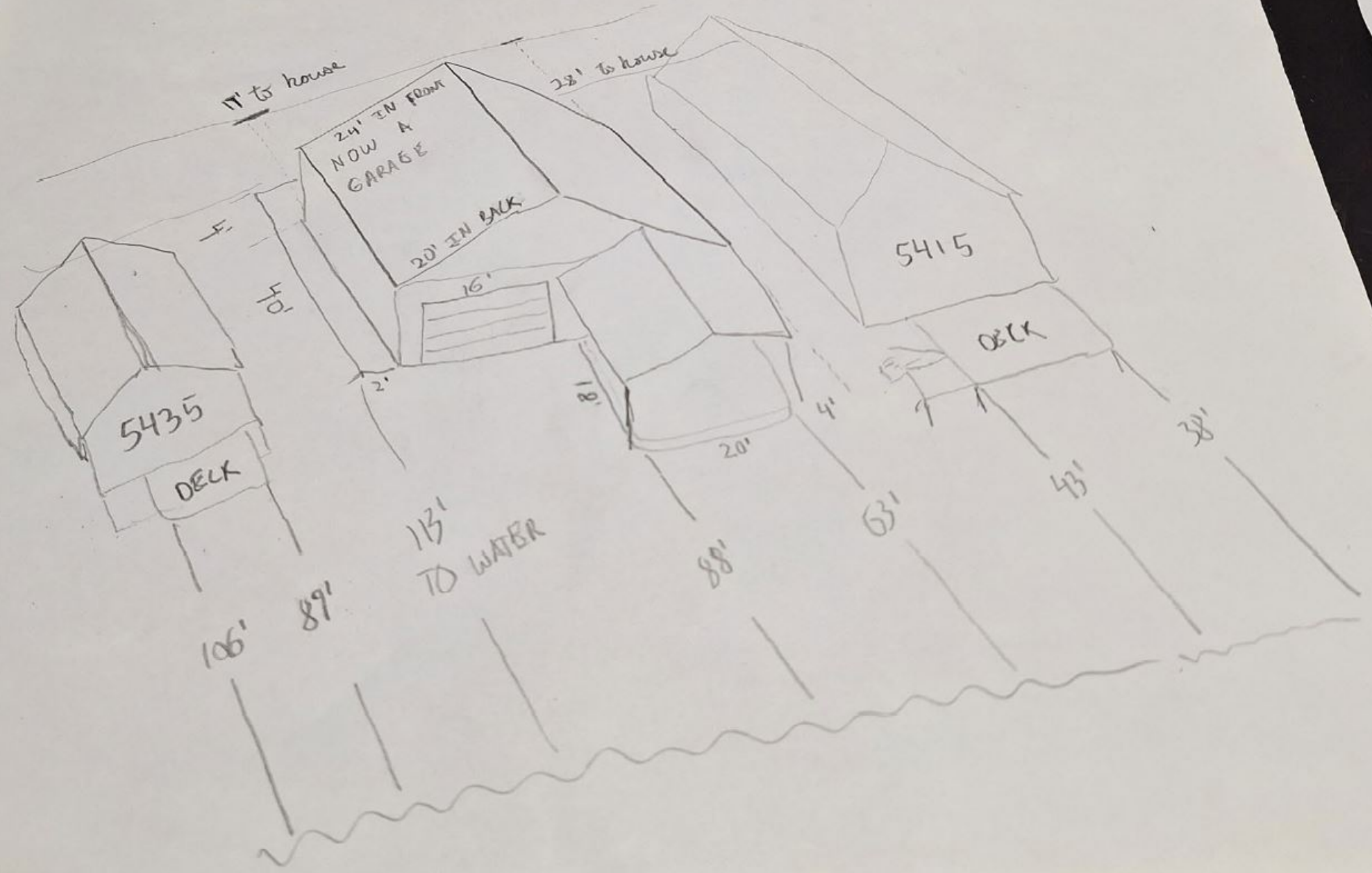
SHEET 1 OF 2

REV:

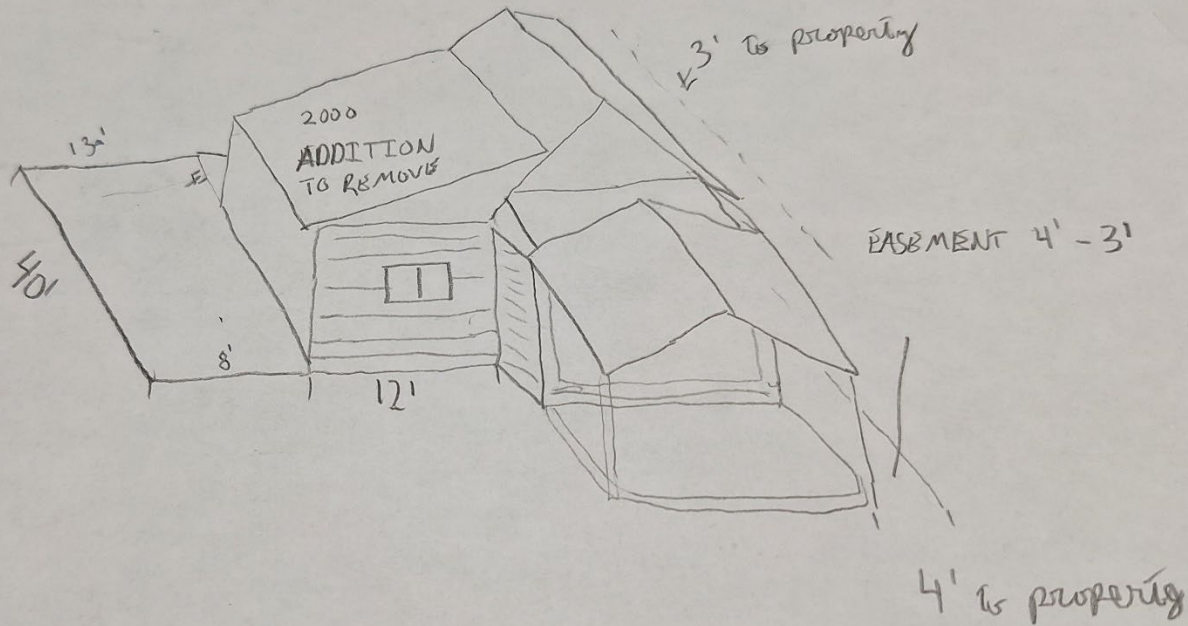
GARLOCK-SMITH
PROFESSIONAL SURVEYORS
804 EAST GRAND RIVER
HOWELL, MICHIGAN 48843
(517) 546 - 3340
FAX: (517) 546 - 2941



PLAN



NO W



Genoa Township Zoning Board of Appeals
Attn: Amy Ruthig, Planning Director
2911 Dorr Road
Brighton, MI 48116
amy@genoa.org

Re: Proposed variance for 5425 Wildwood Drive – Robert Dow/Ventures Design

Dear Amy:

I am writing this letter as the manager and sole member of MVHMHM-1, LLC, a Michigan limited liability company, which is the record owner of the property commonly known as 5435 Wildwood Drive. This letter addresses my concerns regarding Robert Dow of Ventures Design's proposed variance at property 5425 Wildwood Drive. As the next-door property owner, I realize property owners face difficulties when constructing or modifying houses on Wildwood Drive. The narrow and odd-shaped parcels originated from the desire to have mere lake cottages on them. The desire for larger square footage houses and expansive garages, which vary from the permitted dimensions under Genoa Township's ordinance, is often not feasible, and presumably was drafted in this manner to ensure all owners of lakeshores residential real estate have the ability to continue to enjoy and use their own parcels.

As the Board is likely well aware, the stretch of houses (including 5435 Wildwood Drive and 5425 Wildwood Drive) are already densely compacted with very little setback between parcels. In particular, the proposed 2-foot setback from Mr. Dow's side yard will only exacerbate this condition further. Due presumably to the fact that construction of the residence on 5435 Wildwood Drive occurred before the current version of the Township's Zoning Ordinance, the primary structures sit closer together than would otherwise be permitted already. I observed the improvement to 5425 Wildwood Drive as described in your letter dated March 1, 2024, and I was under the assumption that Mr. Dow had performed the improvements to 5425 Wildwood Drive to add the covered patio with the Township's approval and/or within the confines of the Township's ordinance.

With the current knowledge that this was not the case, in addition to the above, permitting the proposed variance by Mr. Dow will undoubtedly impact the curb appeal and desirability of 5435 Wildwood and all other neighboring parcels due to the unauthorized improvements by promoting additional crowding on this stretch of houses and potentially lead to a significant decrease in property values.

That said, the waterfront setback variance requested by Mr. Dow seems a more viable option as it avoids the overcrowding factor that is discussed above. If the Township were to permit this type of variance, or any other type of variance, I would also want to ensure that the existing covered patio, solar panels, gas heater system, and any other installations or fixtures covered by the Township's ordinance which have been installed have all undergone the necessary installation, code, and inspections to mitigate the possibility of any potential fire and gas hazards to the adjacent properties which may be caused by nonconforming improvements.

If you have any questions, comments, or concerns, please contact me at my email address listed at the bottom of this letterhead. I appreciate your time and consideration.

Sincerely,

Heather Mayor

Heather Mayor,

Manager and sole member of
MVHMHW-1, LLC
heather.a.mayor@gmail.com

From: [Karen Buckley](#)
To: [Amy Ruthig](#)
Subject: Regarding case number ZBA 24-08, 5425 Wildwood Dr., Howell
Date: Tuesday, March 12, 2024 12:59:23 PM

Dear Ms.Ruthig:

We are willing to allow the existing covered patio on the single family home of Robert Dow.

However, we are opposed to any further additions to this patio or any further structures.

Thank you.

Karen A. Buckley
John A. Benson
5440 Wildwood Dr.
Howell, MI 48843
(517) 548-6702

Sent from my iPad

Grantor	Grantee	Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	Verified By	Prcnt. Trans.
DOW ROBERT & RENEE, COMER	DOW ROBERT & RENEE	1	01/20/2022	QC	21-NOT USED/OTHER	2022R-003703	BUYER/SELLER	0.0
SMITH, THOMAS E. & BEVERLY	DOW ROBERT & RENEE, COMER	160,000	02/27/2013	WD	03-ARM'S LENGTH	2013R-009140	BUYER/SELLER	100.0
LEE, JOHN P.	SMITH, THOMAS E. & BEVERLY	178,000	09/06/2000	WD	03-ARM'S LENGTH	2837/0149	BUYER/SELLER	100.0

Property Address	Class: RESIDENTIAL-IMPROV	Zoning: LRR	Building Permit(s)	Date	Number	Status
5425 WILDWOOD	School: HOWELL PUBLIC SCHOOLS					
Owner's Name/Address	P.R.E. 0%					
DOW ROBERT & RENEE 47125 ASHLEY CT CANTON MI 48187-1407	MAP #: V24-08					
	2024 Est TCV 320,703 TCV/TFA: 242.96					

Tax Description	Improved	Vacant	Land Value Estimates for Land Table 4301.WEST LAKE CHEMUNG							
SEC. 10 T2N, R5E, KIRK'S LANDING LONG LAKE LOT 66	X		* Factors *							
			Description	Frontage	Depth	Front	Depth	Rate %Adj.	Reason	Value
			D LAKE FRONT	40.00	100.00	1.0000	1.0000	3000	100	120,000
			J SURPLUS LF	5.00	100.00	1.0000	1.0000	1500	100	7,500
			45 Actual Front Feet, 0.10 Total Acres			Total Est. Land Value =		127,500		

Comments/Influences	Land Improvement Cost Estimates			
	Description	Rate	Size % Good	Cash Value
	Sewer	6.47	288 50	931
	Electric			
	Gas			
	Ad-Hoc Unit-In-Place Items			
	Description	Rate	Size % Good	Cash Value
	/CI16/YARI/PATR/PICSA	30.35	288 50	4,370
	Total Estimated Land Improvements True Cash Value =			5,301



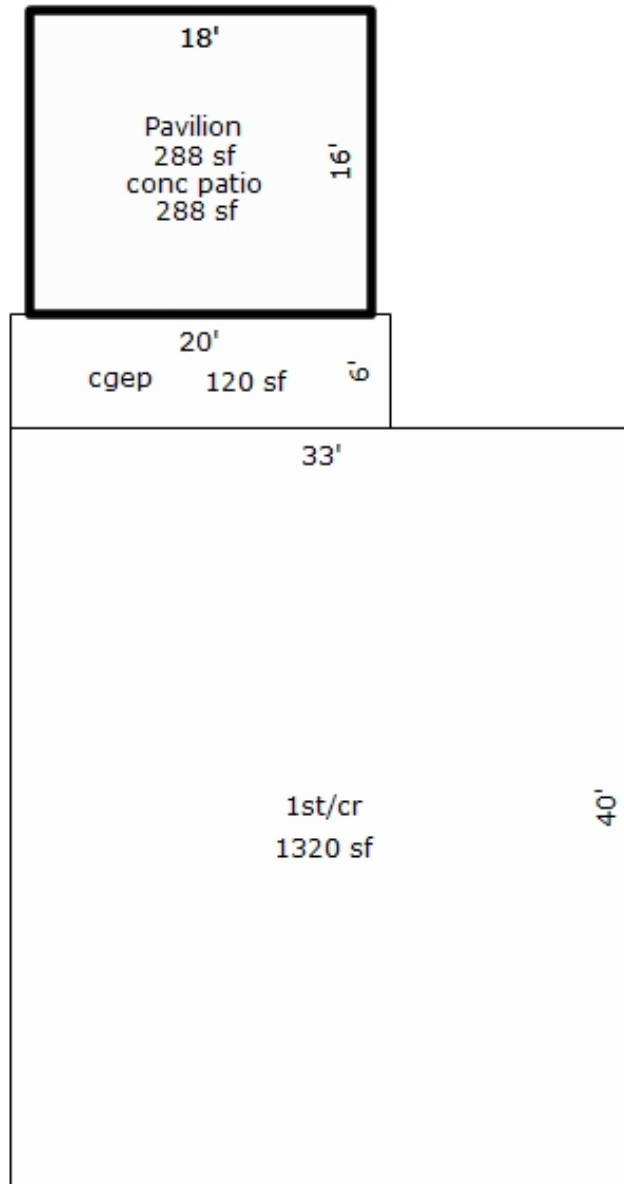
Topography of Site	Year	Land Value	Building Value	Assessed Value	Board of Review	Tribunal/Other	Taxable Value
Level	2024	63,800	96,600	160,400			126,569C
Rolling	2023	63,800	90,200	154,000			120,542C
Low	2022	64,000	81,800	145,800			114,802C
High	2021	65,000	79,900	144,900			111,135C
Landscaped							
Swamp							
Wooded							
Pond							
X Waterfront							
Ravine							
Wetland							
Flood Plain							
X REFUSE							

4711-10-102-066 07/30/2019
 The Equalizer. Copyright (c) 1999 - 2009.
 Licensed To: Township of Genoa, County of Livingston, Michigan

*** Information herein deemed reliable but not guaranteed***

Building Type		(3) Roof (cont.)		(11) Heating/Cooling			(15) Built-ins			(15) Fireplaces			(16) Porches/Decks		(17) Garage																																																						
X	Single Family Mobile Home Town Home Duplex A-Frame		Eavestrough Insulation 0 Front Overhang 0 Other Overhang	X	Gas Wood	Oil Coal	Elec. Steam		Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum Security System		Interior 1 Story Interior 2 Story 2nd/Same Stack Two Sided Exterior 1 Story Exterior 2 Story Prefab 1 Story Prefab 2 Story Heat Circulator Raised Hearth Wood Stove Direct-Vented Gas	Area 120	Type CGEP (1 Story)	Year Built: Car Capacity: Class: Exterior: Brick Ven.: Stone Ven.: Common Wall: Foundation: Finished ?: Auto. Doors: Mech. Doors: Area: % Good: Storage Area: No Conc. Floor:																																																							
X	Wood Frame	(4) Interior			Forced Air w/o Ducts Forced Air w/ Ducts Forced Hot Water Electric Baseboard Elec. Ceil. Radiant Radiant (in-floor) Electric Wall Heat Space Heater Wall/Floor Furnace X Forced Heat & Cool Heat Pump No Heating/Cooling																																																																
Building Style: CD		Drywall Paneled	Plaster Wood T&G	Trim & Decoration																																																																	
Yr Built 1930	Remodeled 2006	Ex	X Ord	Min	Size of Closets																																																																
Condition: Good		Lg	X Ord	Small	Central Air Wood Furnace																																																																
Room List		Doors:	Solid X	H.C.	(12) Electric																																																																
	Basement 1st Floor 2nd Floor 4 Bedrooms	(5) Floors			0 Amps Service																																																																
		Kitchen: Other: Other:			No./Qual. of Fixtures																																																																
(1) Exterior		Ex.	X Ord.	Min	No. of Elec. Outlets																																																																
X	Wood/Shingle Aluminum/Vinyl Brick Insulation				Many	X Ave.	Few																																																														
		(13) Plumbing			Average Fixture(s) 2 3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan																																																																
(2) Windows		(7) Excavation			(14) Water/Sewer																																																																
X	Many Avg. Few	X	Large Avg. Small		Basement: 0 S.F. Crawl: 1320 S.F. Slab: 0 S.F. Height to Joists: 0.0																																																																
	Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors Storms & Screens	(8) Basement			Public Water Public Sewer Water Well 1000 Gal Septic 2000 Gal Septic																																																																
		Conc. Block Poured Conc. Stone Treated Wood Concrete Floor	(9) Basement Finish			Lump Sum Items:																																																															
(3) Roof		Recreation SF Living SF Walkout Doors (B) No Floor SF Walkout Doors (A)			(10) Floor Support																																																																
X	Gable Hip Flat	Gambrel Mansard Shed	Joists: Unsupported Len: Cntr.Sup:			Chimney: Brick																																																															
X	Asphalt Shingle																																																																				
<p>Cost Est. for Res. Bldg: 1 Single Family CD (11) Heating System: Forced Heat & Cool Ground Area = 1320 SF Floor Area = 1320 SF. Phy/Ab.Phy/Func/Econ/Comb. % Good=71/100/100/100/71 Building Areas</p> <table border="1"> <thead> <tr> <th>Stories</th> <th>Exterior</th> <th>Foundation</th> <th>Size</th> <th>Cost New</th> <th>Depr. Cost</th> </tr> </thead> <tbody> <tr> <td>1 Story</td> <td>Siding</td> <td>Crawl Space</td> <td>1,320</td> <td></td> <td></td> </tr> <tr> <td colspan="3">Total:</td> <td></td> <td>161,911</td> <td>114,957</td> </tr> </tbody> </table> <p>Other Additions/Adjustments</p> <table border="1"> <thead> <tr> <th>Item</th> <th>Quantity</th> <th>Cost</th> <th>Depr. Cost</th> </tr> </thead> <tbody> <tr> <td>Plumbing</td> <td></td> <td></td> <td></td> </tr> <tr> <td>3 Fixture Bath</td> <td>1</td> <td>4,052</td> <td>2,877</td> </tr> <tr> <td>Porches</td> <td></td> <td></td> <td></td> </tr> <tr> <td>CGEP (1 Story)</td> <td>120</td> <td>8,129</td> <td>5,772</td> </tr> <tr> <td>Water/Sewer</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Public Sewer</td> <td>1</td> <td>1,392</td> <td>988</td> </tr> <tr> <td>Water Well, 200 Feet</td> <td>1</td> <td>10,889</td> <td>7,731</td> </tr> <tr> <td>Totals:</td> <td></td> <td>186,373</td> <td>132,325</td> </tr> </tbody> </table> <p>Notes: ECF (4307 W. LK CHEMUNG LK FRONT) 1.420 => TCV: 187,902</p>																Stories	Exterior	Foundation	Size	Cost New	Depr. Cost	1 Story	Siding	Crawl Space	1,320			Total:				161,911	114,957	Item	Quantity	Cost	Depr. Cost	Plumbing				3 Fixture Bath	1	4,052	2,877	Porches				CGEP (1 Story)	120	8,129	5,772	Water/Sewer				Public Sewer	1	1,392	988	Water Well, 200 Feet	1	10,889	7,731	Totals:		186,373	132,325
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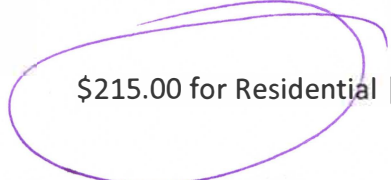
*** Information herein deemed reliable but not guaranteed***



GENOA CHARTER TOWNSHIP VARIANCE APPLICATION
 2911 DORR ROAD | BRIGHTON, MICHIGAN 48116
 (810) 227-5225 | FAX (810) 227-3420

Case # 24-09 Meeting Date: March 19, 2024
Boardroom @ 6:30pm

PAID Variance Application Fee



\$215.00 for Residential | \$300.00 for Sign Variance | \$395.00 for Commercial/Industrial

Applicant/Owner: Nancy Dykema Email: nmdykema@gmail.com

Property Address: 4053 Homestead Dr Phone: 517-388-8040

Present Zoning: _____ Tax Code: 11-28-201-013

ARTICLE 23 of the Genoa Township Zoning Ordinance describes the Variance procedure and the duties of the Zoning Board of Appeals.

Each application for Variance is considered individually by the ZBA. The ZBA is a board of limited power; it cannot change the Zoning Ordinance or grant relief when it is possible to comply with the Zoning Ordinance. It may provide relief where due to unique aspects of the property with strict application of the zoning ordinance to the land results in practical difficulties or unnecessary hardship.

The applicant is responsible for presenting the information necessary to support the relief requested. While much of the necessary information is gathered through the completed application, other information may be gathered by on-site visits, other sources, and during the ZBA meeting. ZBA members, township officials and township staff may visit the site without prior notification to property owners.

Failure to meet the submittal requirements and properly stake the property showing all proposed improvements may result in postponement or denial of this petition.

Please explain the proposed variance below:

1. Variance requested/intended property modifications: _____

Request variance for South side of house to be 6.7' instead of 10' from property line.

Request variance for height of 11.5" **Applicant is not requesting a height variance.**

Please note that the packet and staff report for your scheduled Zoning Board of Appeals meeting will be available to review at <https://www.genoa.org/government/boards/zoningboard> five days prior to the meeting.

The following is per Article 23.05.03 of the Genoa Township Ordinance:

Criteria Applicable to Dimensional Variances. No variance in the provisions or requirements of the Ordinance shall be authorized by the Board of Appeals unless it is found from the evidence that all of the following conditions exist:

Under each please indicate how the proposed project meets each criteria.

Practical Difficulty/Substantial Justice. Compliance with the strict letter of the restrictions governing area, setbacks, frontage, height, bulk, density, or other dimensional provisions would unreasonably prevent the use of the property. Granting of a requested variance or appeal would do substantial justice to the applicant as well as to other property owners in the district and 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 vicinity of the subject parcel.

Property is very narrow. Compliance to the side setback would result in an extremely narrow house & garage.

Extraordinary Circumstances. There are exceptional or extraordinary circumstances or conditions applicable to the property or the intended use which are different than other properties in the same zoning district or the variance would make the property consistent with the majority of other properties in the vicinity. The need for the variance was not self-created by the applicant.

The lot is extremely narrow, but deep. The variance is requested to allow for a comfortable home width and reasonable design making curb appeal better.

Public Safety and Welfare. The granting of the variance will not impair an adequate supply of light and air to adjacent property or unreasonably increase the congestion in public streets, or increase the danger of fire or endanger the public safety, comfort, morals or welfare of the inhabitants of the Township of Genoa.

By allowing a variance on the South side of the property, this will increase the distance of the new structure on the north side of the property to 5'. It is currently just over 2'. This increase will improve occupant safety in both homes in case of fire or other emergency, allowing for easier access for responders.

Impact on Surrounding Neighborhood. The variance will not interfere with or discourage the appropriate development, continued use, or value of adjacent properties and the surrounding neighborhood.

Granting this variance will allow the construction of a new home with higher value than the current home.
The new home will be more structurally sound and code compliant in safety features.

Attendance by the applicant is required at the Zoning Board of Appeals meeting.

Any Variance not acted upon within 12 months from the date of approval is invalid and must receive a renewal from the Zoning Board of Appeals (ZBA).

After the decision is made regarding your Variance approval a land use permit will be required with additional site plans and construction plans.

Date: 2/4/2024 Signature: Nancy Dykema



2911 Dorr Road
Brighton, MI 48116
810.227.5225
810.227.3420 fax
genoa.org

MEMORANDUM

TO: Genoa Township Zoning Board of Appeals
FROM: Amy Ruthig, Planning Director
DATE: March 14, 2024

RE: ZBA 24-09

STAFF REPORT

File Number: ZBA#24-09
Site Address: 4053 Homestead Drive
Parcel Number: 4711-28-201-013
Parcel Size: 0.312 Acre
Applicant: Dykema, Nancy, 4053 Homestead Drive, Howell
Property Owner: Same as Applicant

Information Submitted: Application, site plan, conceptual drawings

Request: Dimensional Variance

Project Description: Applicant is requesting two side yard setback variances to construct a new home.

Zoning and Existing Use: LRR (Lakeshore Resort Residential) Single Family Dwelling located on property.

Other:

Public hearing was published in the Livingston County Press and Argus on Sunday March 3, 2024 and 300-foot mailings were sent to any real property within 300 feet of the property in accordance with the Michigan Zoning Enabling Act.

Background

The following is a brief summary of the background information we have on file:

- Per assessing records the parcel has an existing single-family dwelling built in 1945.
- The property utilizes a well and public sewer system.
- See Real Record Card.

SUPERVISOR

Bill Rogers

CLERK

Paulette A. Skolarus

TREASURER

Robin L. Hunt

TRUSTEES

Jean W. Ledford

Terry Croft

Diana Lowe

Jeff Dhaenens

MANAGER

Kelly VanMarter

Summary

Applicant is seeking two side yard setback variances to demolish an existing single-family home and construct a new single-family home. Applicant is proposing to remove the front non-conforming shed. Applicant did receive approval from the Utility Director for the proposed grinder pump location. However, staff did not receive the approval letter from the Utility Director prior to the date of the packet.

Applicant withdrew the height variance request.

Variance Requests

The following is the section of the Zoning Ordinance that the variance is being requested from:

Table 3.04.01 (LRR District)

- (k) **LRR Side Yards:** In the LRR Zoning District one of the side yards may be reduced to a minimum of five (5) feet where all of the following are met:
 - (1) The other side yard must be at least ten (10) feet.
 - (2) The distance between the building and any building on the adjacent lot shall be no less than ten (10) feet.
 - (3) The roof shall have gutters. (as amended 3/5/10)

SINGLE FAMILY STRUCTURE	Side Yard Setback North	Side Yard Setback South
REQUIRED SIDE YARD SETBACK	10'	10'
PROPOSED SIDE YARD SETBACKS	5'	6.7'
REQUESTED SIDE YARD VARIANCE	5'	3.3'

Summary of Findings of Fact- After reviewing the application and materials provided, I offer the possible findings of fact for your consideration:

Please note that in order for a variance to be approved it has to meet all of the standards in 23.05.03.

- (a) **Practical Difficulty/Substantial Justice** –Strict compliance with the setbacks would cause the applicant to be unable to construct the proposed single-family home. There are other homes in the vicinity with reduced side yard setbacks that would support substantial justice and is necessary for the preservation and enjoyment of a substantial property right similar to that possessed by other properties in the same vicinity of the subject parcel.
- (b) **Extraordinary Circumstances** – The exceptional or extraordinary condition of the property is the narrowness of the lot and it is a non-conforming lot in the LRR district. It appears the need for the variances is not self-created and is the least amount necessary.
- (c) **Public Safety and Welfare** – The granting of the variances will not impair an adequate supply of light and air to adjacent property or unreasonably increase the congestion in public streets, or increase the danger of fire or endanger the public safety, comfort, morals or welfare of the inhabitants of the Township of Genoa.
- (d) **Impact on Surrounding Neighborhood** – The proposed variances would have little impact on the appropriate development, continued use, or value of adjacent properties and the surrounding neighborhood.

Recommended Conditions

If the Zoning Board of Appeals grants the variance requests, staff recommends the following conditions be placed on the approval:

1. If retaining walls are required, they must adhere to the Township Zoning Ordinance and receive a land use permit.
2. Structure must be guttered downspouts.



11-28-201-011
4045 HOMESTEAD DR

11-28-201-012
4049 HOMESTEAD DR

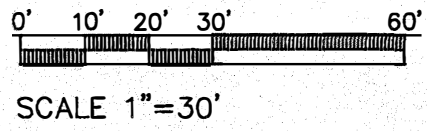
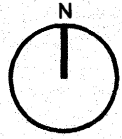
11-28-201-013
4053 HOMESTEAD DR

11-28-201-014
4057 HOMESTEAD DR

11-28-201-055
4065 HOMESTEAD DR

LEGAL DESCRIPTION:

LOT 13 OF OLD HOMESTEAD SUBDIVISION,
 LOCATED IN THE SW ¼ OF SECTION 21, T2N,
 R5E, GENOA TOWNSHIP, ACCORDING TO THE
 PLAT THEREOF RECORDED IN LIVINGSTON
 COUNTY RECORDS.

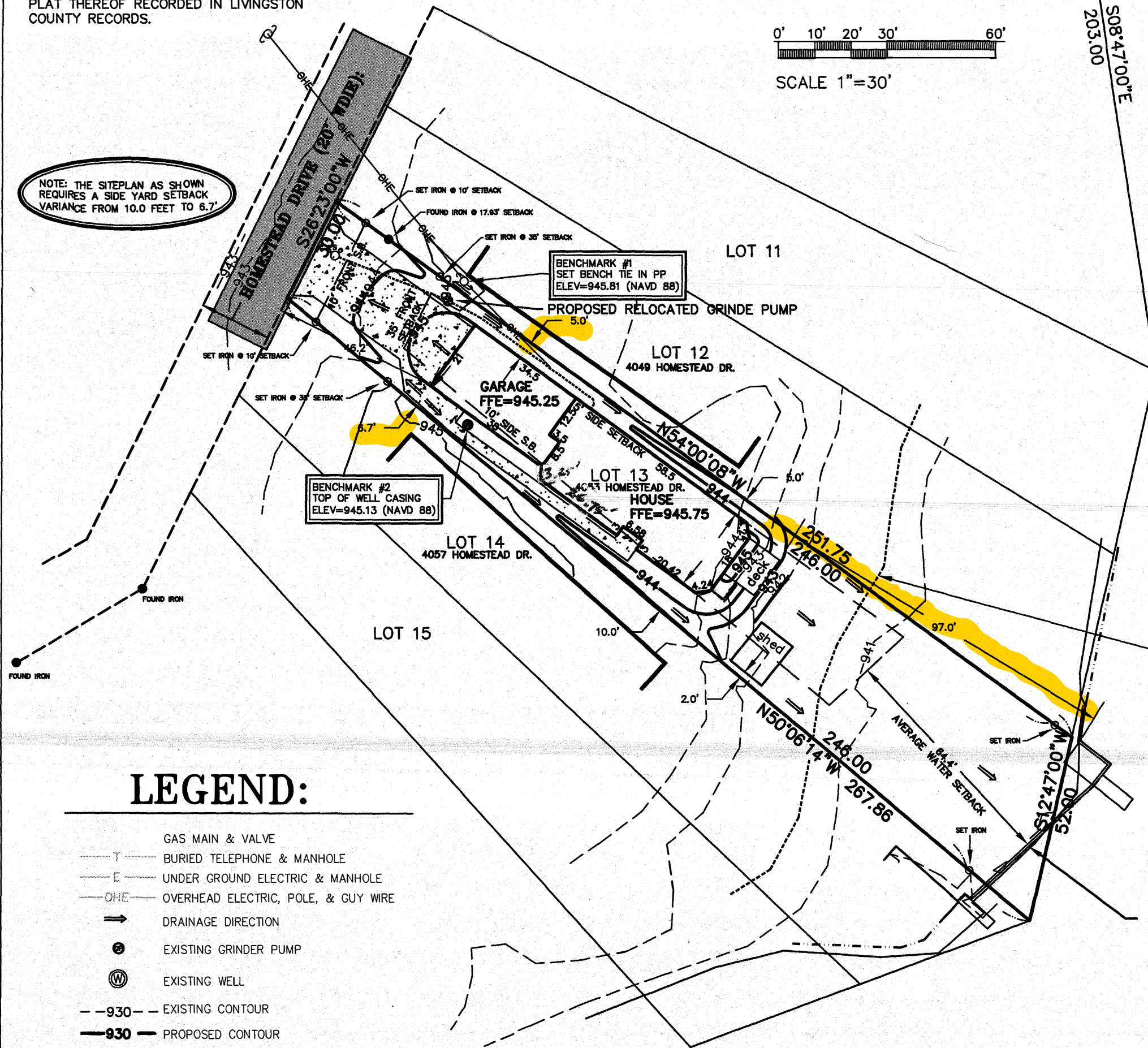


WATER SETBACK TABLE:

LOT NUMBER	DISTANCE TO WATER
23	47'
22	38'
21	44'
20	43'
19	41'
18	57'
17	58'
16-15	67'
14	88'
13 (SUBJECT LOT)	NA
12	106'
11	85'
10-9	66'
8-7	35'
6	49'
5	91'
4	108'
3	96'
2	60'
1	45'

AVERAGE SETBACK = $1224' / 19 = 64.4'$

NOTE: THE SITEPLAN AS SHOWN
 REQUIRES A SIDE YARD SETBACK
 VARIANCE FROM 10.0 FEET TO 6.7'



BENCHMARK #2
 TOP OF WELL CASING
 ELEV=945.13 (NAVD 88)

BENCHMARK #1
 SET BENCH TIE IN PP
 ELEV=945.81 (NAVD 88)

NOTE: 100 YEAR FLOODPLAIN ELEVATION TAKEN
 FROM FEMA COMMUNITY NO: 26083, PANEL
 NUMBER 26093C0340D WITH EFFECTIVE DATE OF
 9-17-2008. ELEVATION 941.3 per LOMA Case
 Number 14-05-1272A Dated 11-25-2013

100 YR. FLOODPLAIN ELEV=941.3 (NAVD88)

WEST CROOKED LAKE
 WATERS EDGE
 ELEV = 939.7± (8-21-23)

LEGEND:

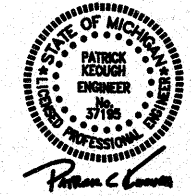
- GAS MAIN & VALVE
- T — BURIED TELEPHONE & MANHOLE
- E — UNDER GROUND ELECTRIC & MANHOLE
- GHE — OVERHEAD ELECTRIC, POLE, & GUY WIRE
- DRAINAGE DIRECTION
- ⊙ EXISTING GRINDER PUMP
- ⊙ EXISTING WELL
- - 930 - - EXISTING CONTOUR
- 930 — PROPOSED CONTOUR

4053 HOMESTEAD DRIVE
 PROPOSED SITE PLAN

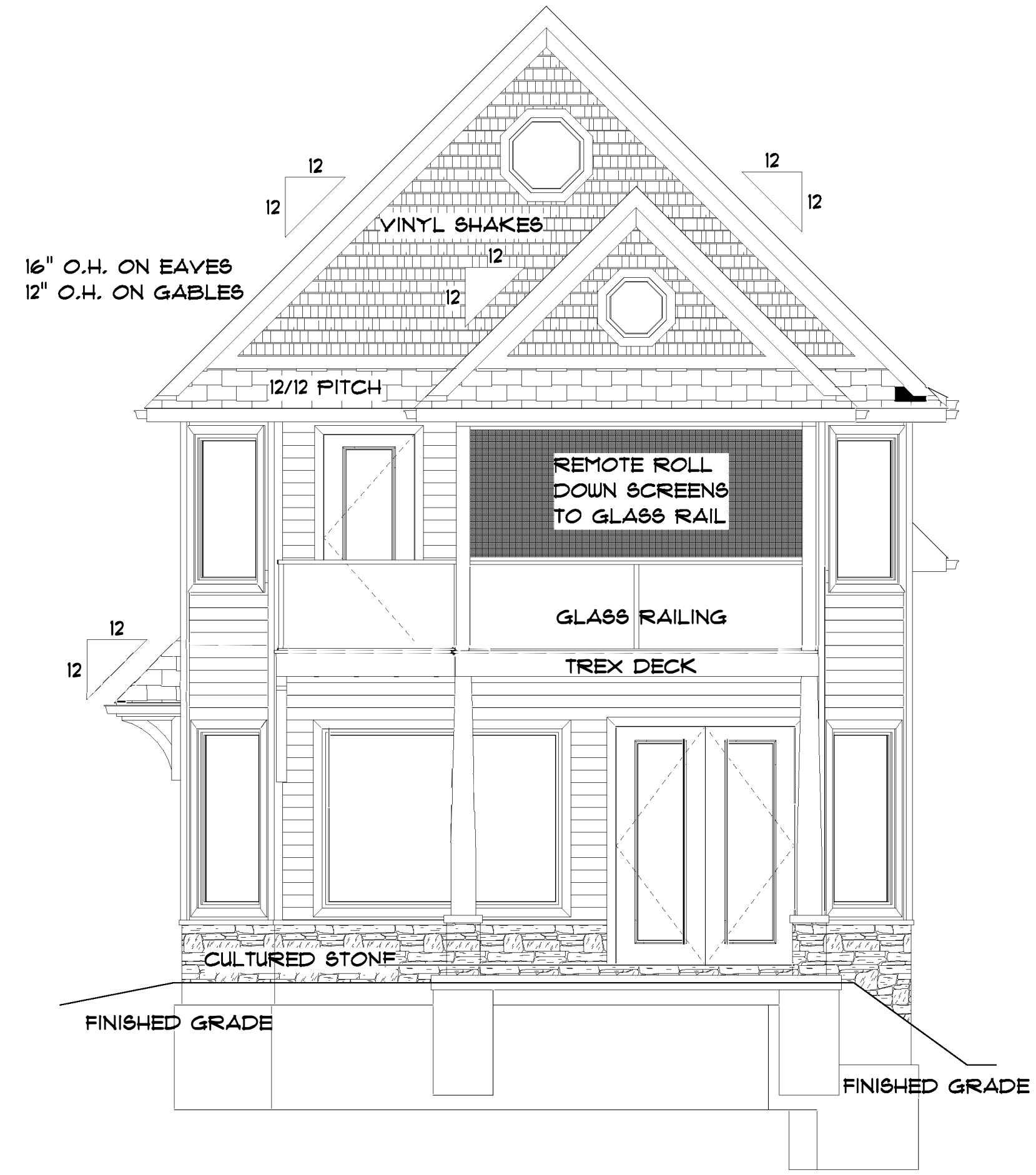
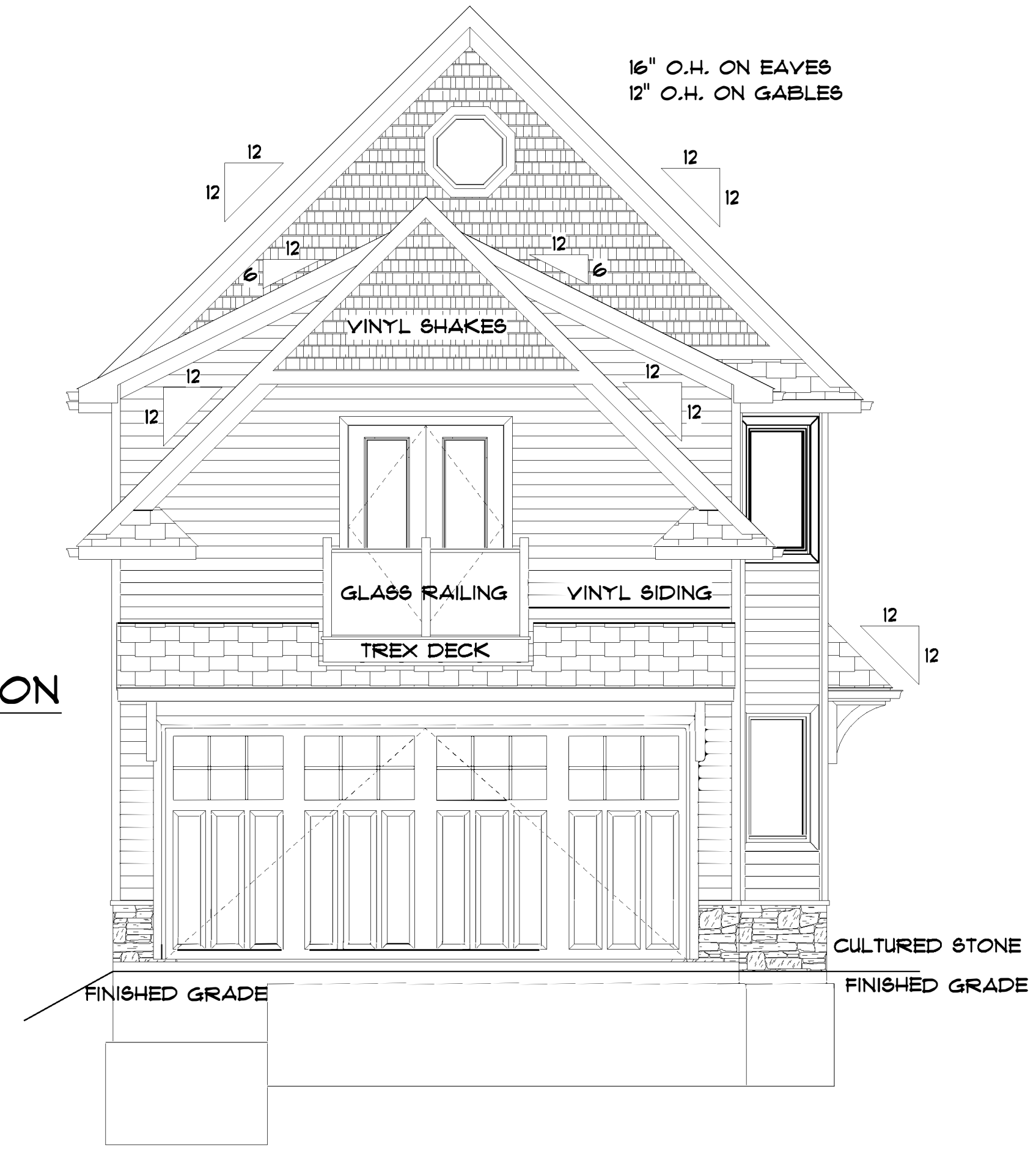
ACE
 CIVIL
 ENGINEERING

DATE: 08-22-23
 DRAWN BY: PCK
 CHECKED BY: PCK
 JOB No. 23029
 DRAWING No.

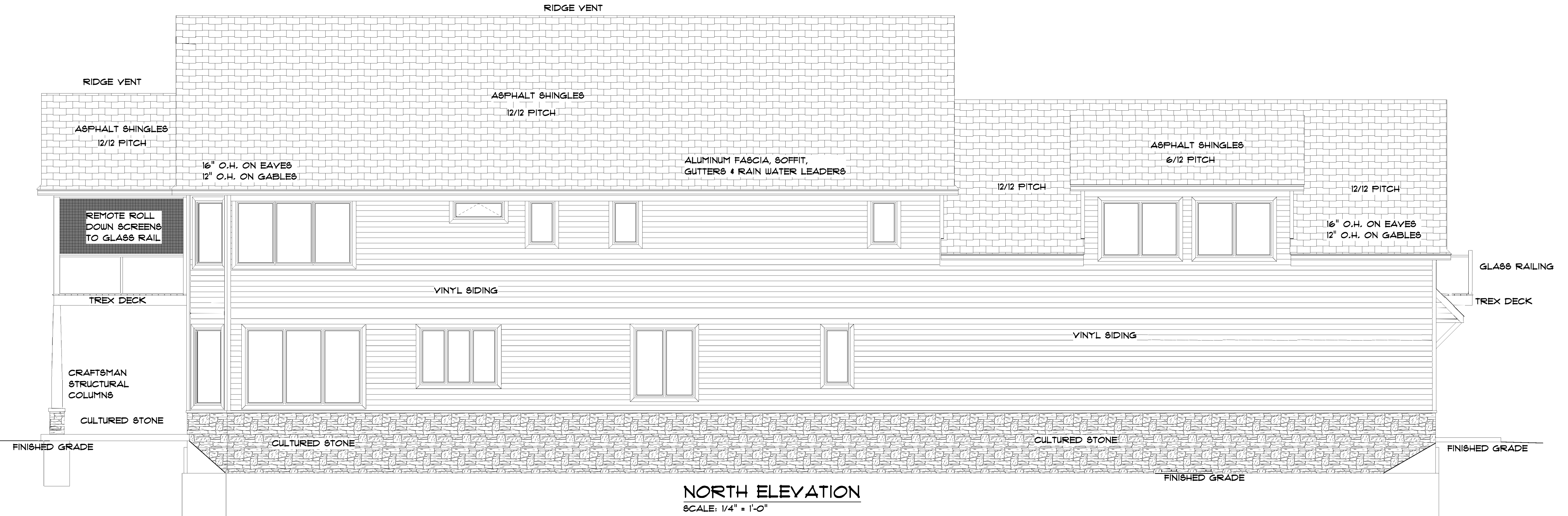
2



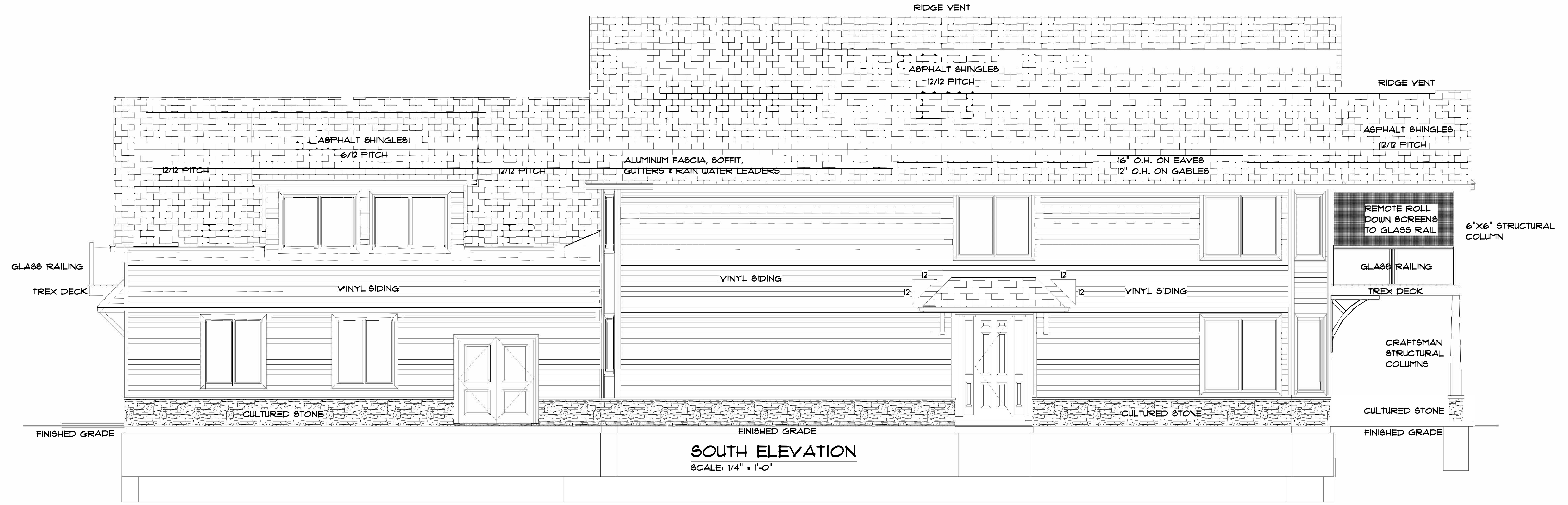
WEST ELEVATION
SCALE: 1/4" = 1'-0"



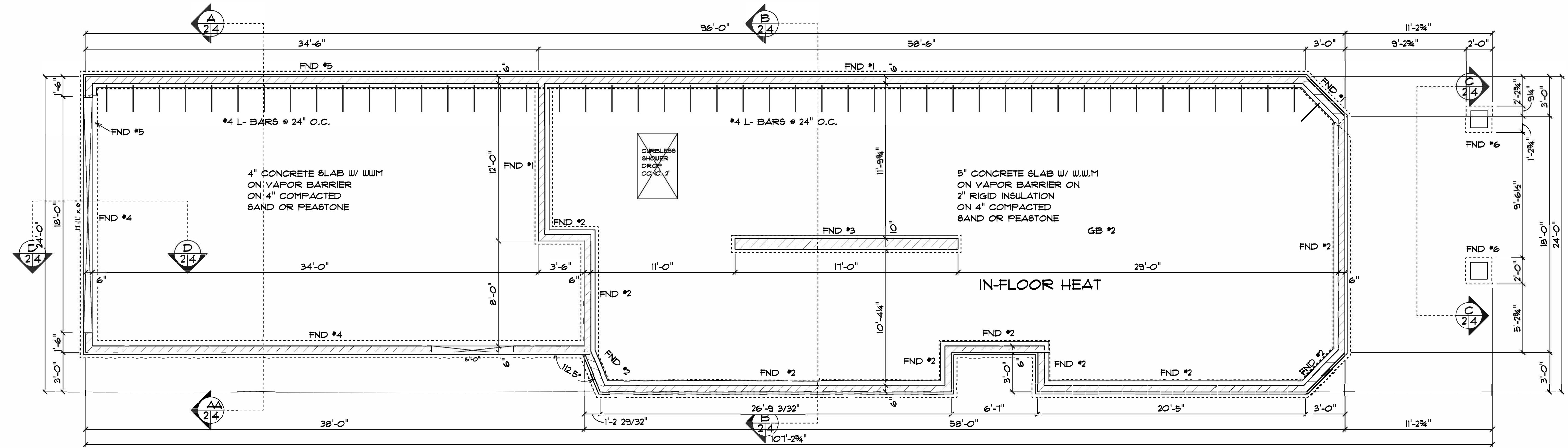
EAST ELEVATION
SCALE: 1/4" = 1'-0"



NORTH ELEVATION
SCALE: 1/4" = 1'-0"



SOUTH ELEVATION
 SCALE: 1/4" = 1'-0"



NOTE:
 ALL TOPS OF FOUNDATIONS
 ARE AT SAME ELEVATION.

FND #1:
 1 COURSE 6" BLOCK ON
 4 COURSE 10" BLOCK W/
 VERTICLE #4 BARS 32" O.C.
 W/ #4 L-BARS 32" O.C. INTO SLAB
 ON 16"x42" CONC. FTG W/
 2 #5 BARS TOP & BOTTOM

FND #2:
 1 COURSE 6" BLOCK ON
 1 COURSE 10" BLOCK W/
 VERTICLE #4 BARS 32" O.C.
 W/ #4 L-BARS 32" O.C. INTO SLAB
 ON 16"x42" CONC. FTG W/
 2 #5 BARS TOP & BOTTOM

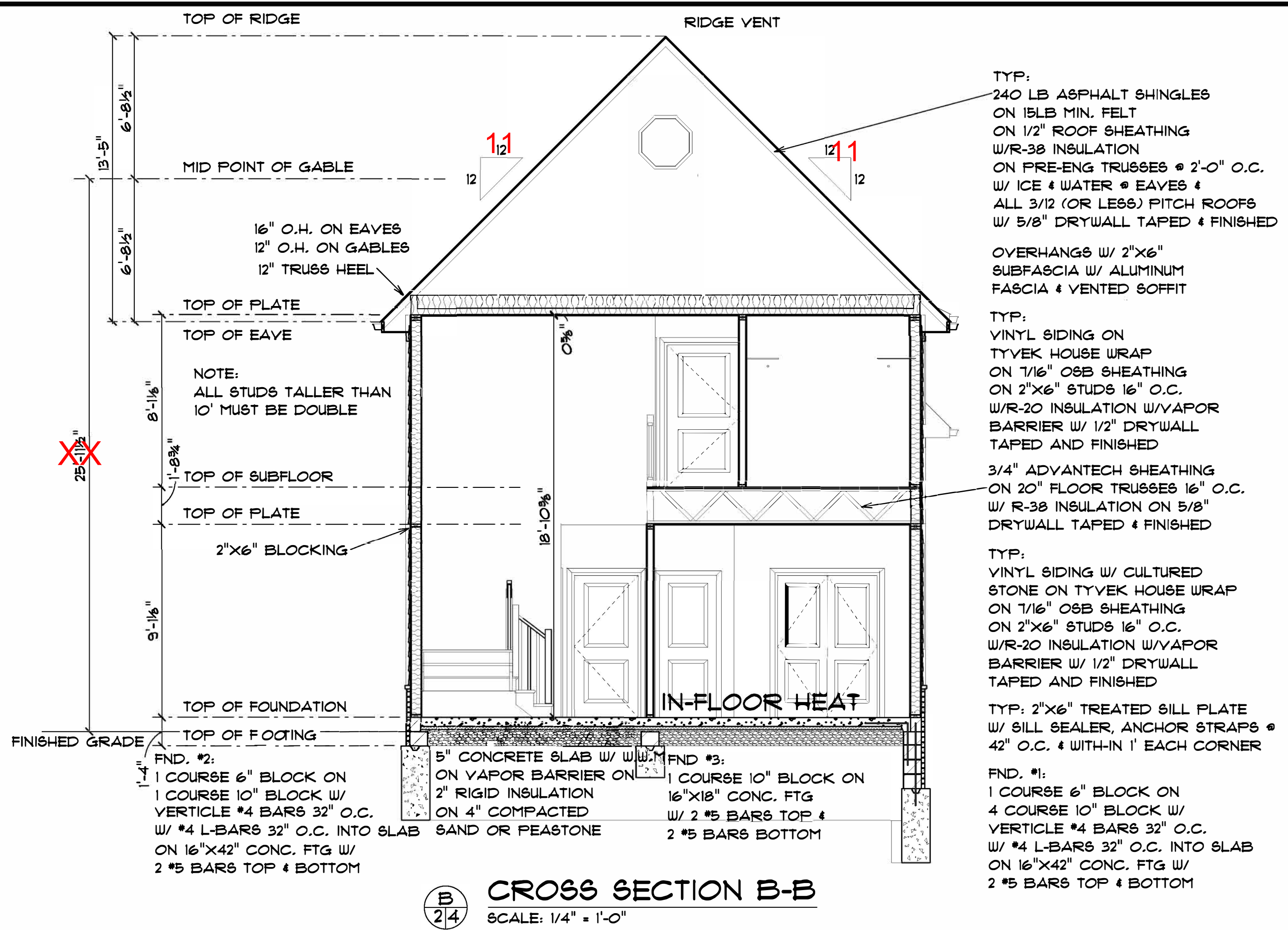
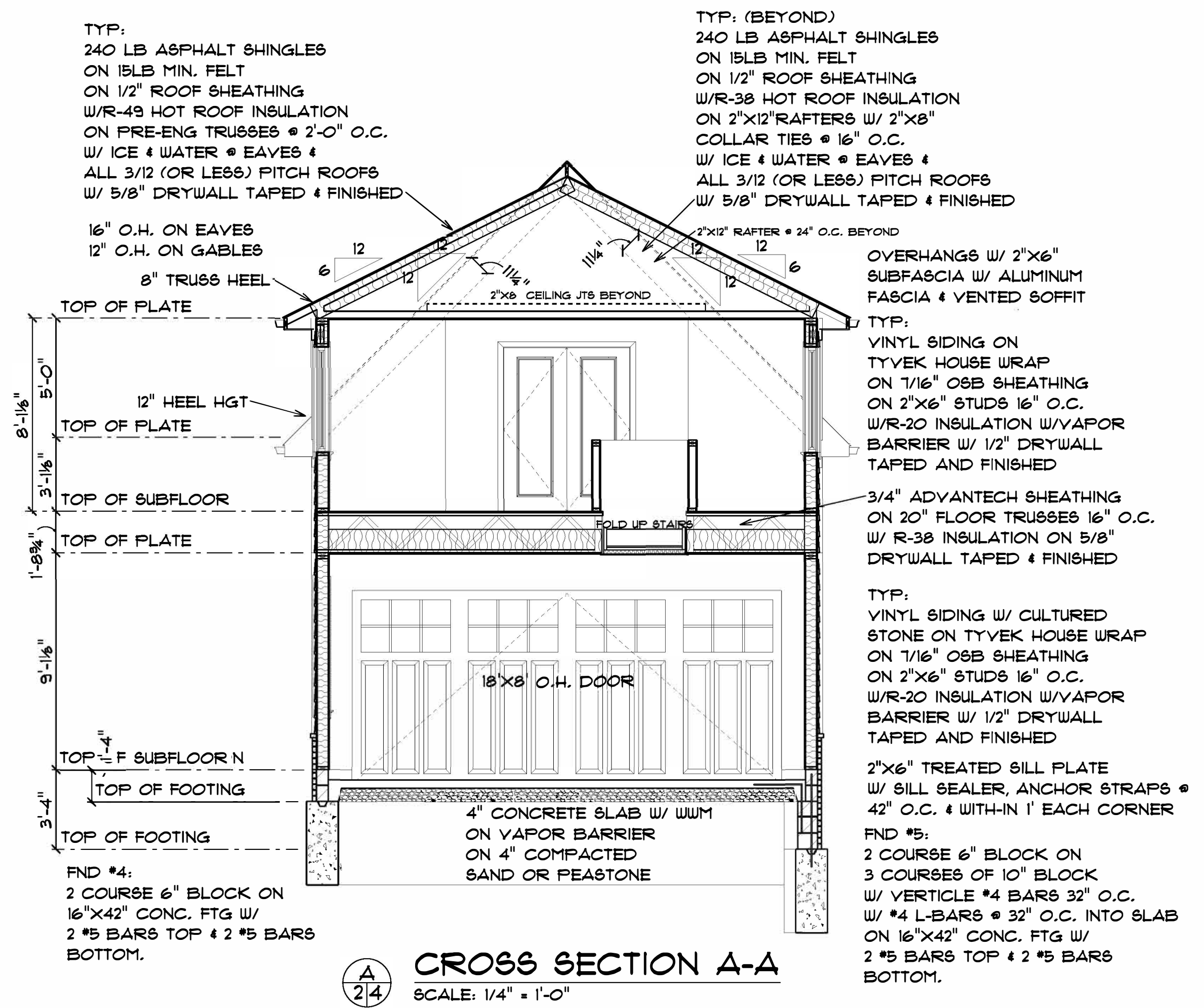
FND #3:
 1 COURSE 10" BLOCK ON
 16"x18" CONC. FTG
 W/ 2 #5 BARS TOP &
 2 #5 BARS BOTTOM

FND #4:
 2 COURSE 6" BLOCK ON
 16"x42" CONC. FTG W/
 2 #5 BARS TOP & 2 #5 BARS
 BOTTOM.

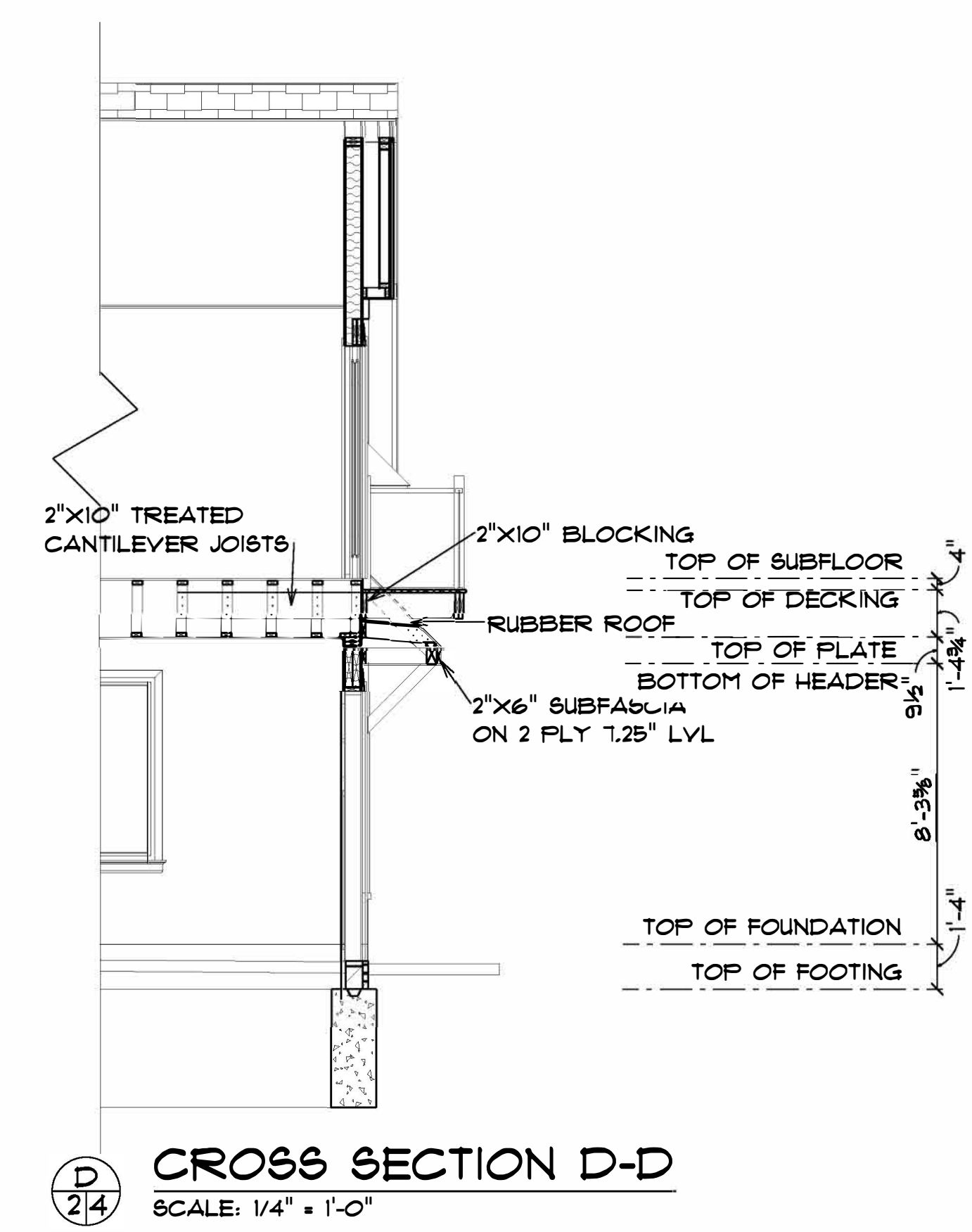
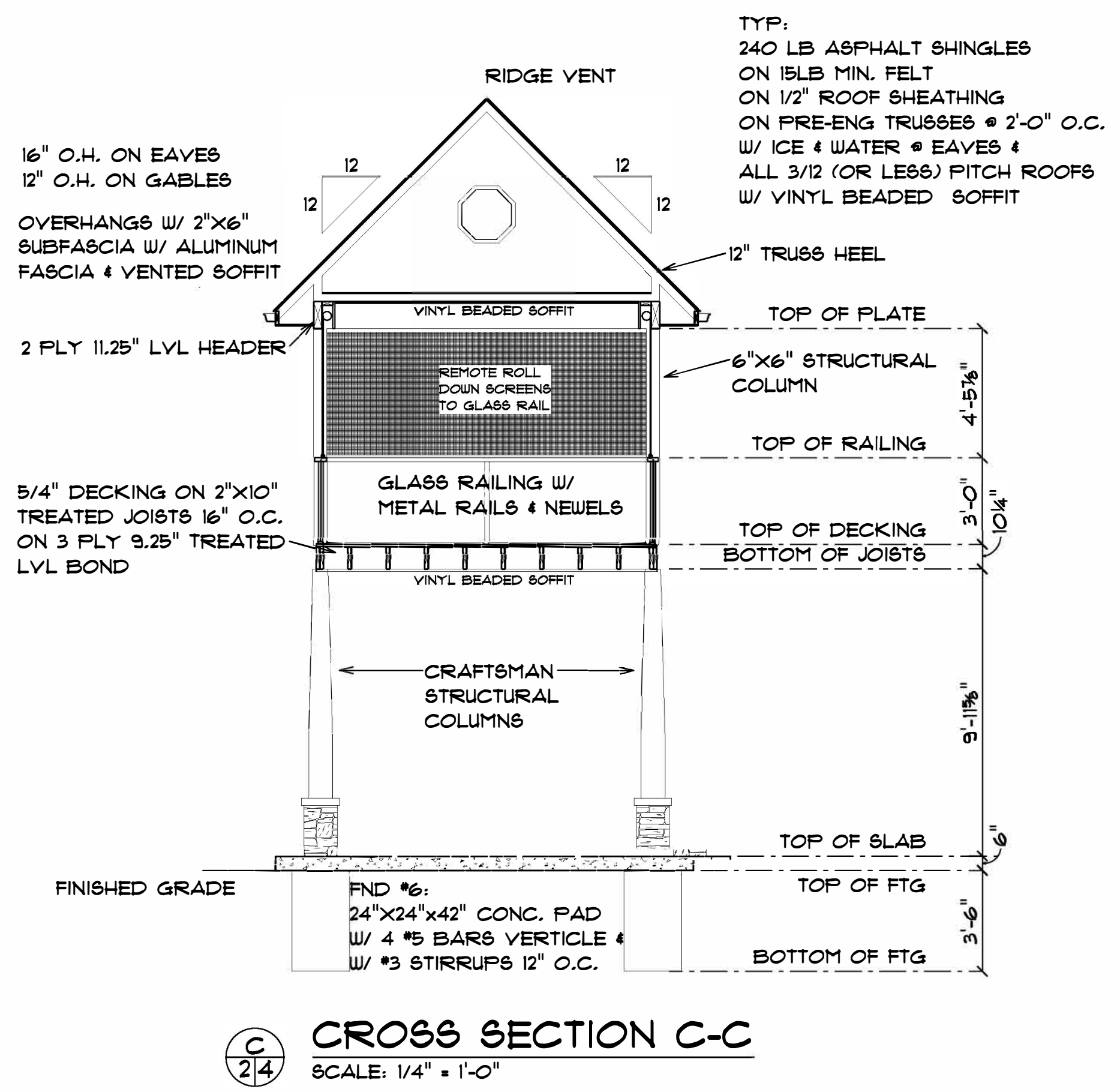
FND #5:
 2 COURSE 6" BLOCK ON
 3 COURSE OF 10" BLOCK
 W/ VERTICLE #4 BARS 32" O.C.
 W/ #4 L-BARS @ 32" O.C. INTO SLAB
 ON 16"x42" CONC. FTG W/
 2 #5 BARS TOP & 2 #5 BARS
 BOTTOM.

FND #6:
 24"x24"x42" CONC. PAD
 W/ 4 #5 BARS VERTICLE &
 W/ #3 STIRRUPS 12" O.C.

FOUNDATION
 SCALE: 1/4" = 1'-0"



Applicant has stated that the roof will be revised to an 11/12 pitch and is not requesting a height variance.



Grantor	Grantee	Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	Verified By	Prcnt. Trans.				
LANZON, OLIVER	DYKEMA NANCY	250,000	07/31/2018	WD	09-FAMILY	2018R-020937	BUYER/SELLER	0.0				
Property Address		Class: RESIDENTIAL-IMPROV		Zoning: LRR		Building Permit(s)		Date	Number	Status		
4053 HOMESTEAD DR		School: BRIGHTON AREA SCHOOLS		P.R.E. 100% 12/29/2021								
Owner's Name/Address		MAP #: V24-09		2024 Est TCV 367,654 TCV/TFA: 367.29								
DYKEMA NANCY 4053 HOMESTEAD DR HOWELL MI 48843		X	Improved		Vacant	Land Value Estimates for Land Table 4304.OLD HOMESTEAD						
Tax Description		Public Improvements		* Factors *								
SEC. 28 T2N, R5E, OLD HOMESTEAD LOT 13		Dirt Road		Description	Frontage	Depth	Front	Depth	Rate	%Adj.	Reason	Value
Comments/Influences		Gravel Road		A LAKE FRONT	50.00	261.00	1.0000	1.0000	4500	100		225,000
		Paved Road		C SURPLUS LF	2.00	261.00	1.0000	1.0000	2000	100		4,000
		Storm Sewer		52 Actual Front Feet, 0.31 Total Acres				Total Est. Land Value =		229,000		
		Sidewalk		Land Improvement Cost Estimates								
		Water		Description	Rate		Size		% Good	Cash Value		
		Sewer		Wood Frame	24.96		150		50	1,872		
		Electric		Wood Frame	25.82		128		50	1,652		
		Gas		Total Estimated Land Improvements True Cash Value = 3,524								
		Curb										
		Street Lights										
		Standard Utilities										
		Underground Utils.										
		Topography of Site										
		Level										
		Rolling										
		Low										
		High										
		Landscaped										
		Swamp										
		Wooded										
		Pond										
		X	Waterfront									
		Ravine										
		Wetland										
		Flood Plain										
		X	REFUSE	Year	Land Value	Building Value	Assessed Value	Board of Review	Tribunal/Other	Taxable Value		
		Who	When	What	2024	114,500	69,300	183,800		66,606C		
		JB	01/30/2020	INSPECTED	2023	109,100	57,500	166,600		63,435C		
				2022	111,800	39,900	151,700			60,415C		
				2021	111,800	37,700	149,500			58,485C		

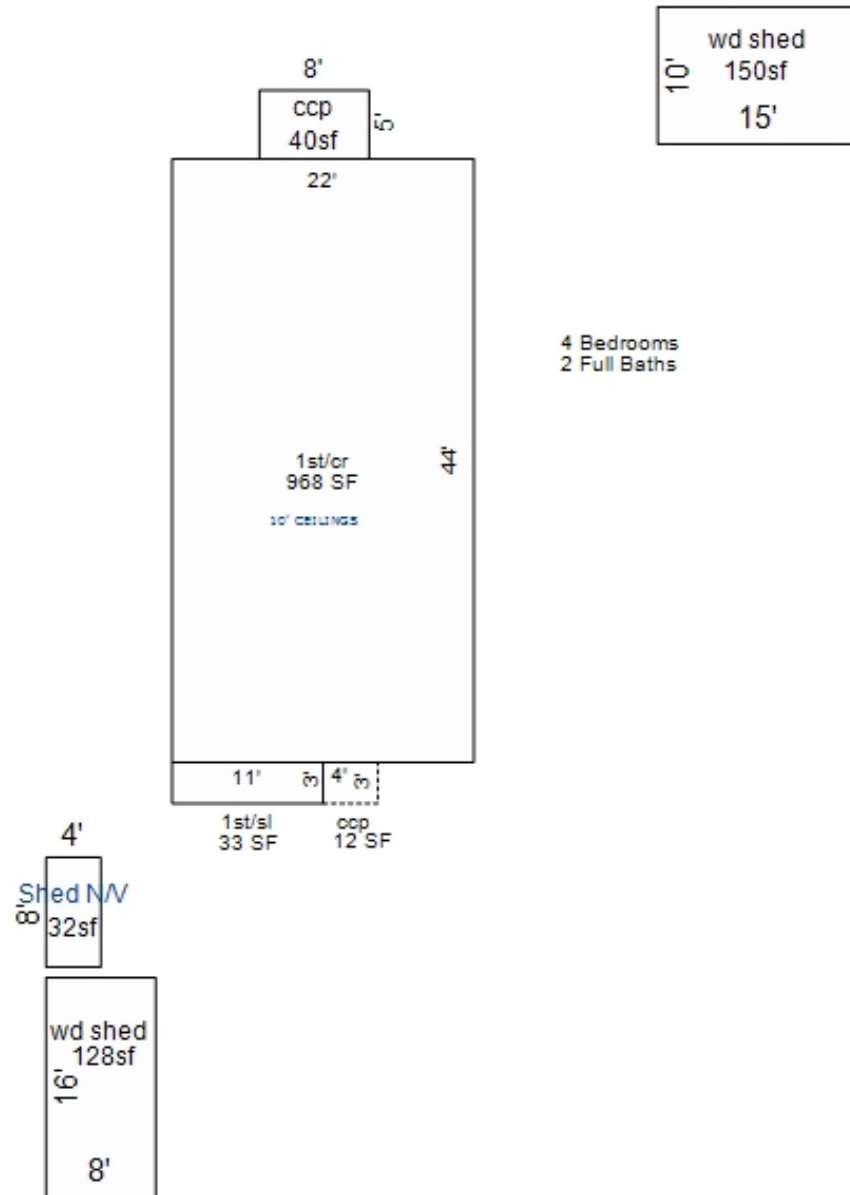


4711-28-201-013 01/30/2020
 The Equalizer. Copyright (c) 1999 - 2009.
 Licensed To: Township of Genoa, County of Livingston, Michigan

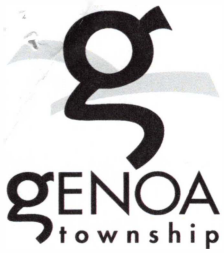
*** Information herein deemed reliable but not guaranteed***

Building Type		(3) Roof (cont.)		(11) Heating/Cooling			(15) Built-ins			(15) Fireplaces			(16) Porches/Decks			(17) Garage			
X	Single Family Mobile Home Town Home Duplex A-Frame		Eavestrough Insulation 0 Front Overhang 0 Other Overhang	X	Gas Wood		Oil Coal		Elec. Steam		Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum Security System		Interior 1 Story Interior 2 Story 2nd/Same Stack Two Sided Exterior 1 Story Exterior 2 Story Prefab 1 Story Prefab 2 Story Heat Circulator Raised Hearth Wood Stove Direct-Vented Gas	Area	Type		Year Built: Car Capacity: Class: Exterior: Brick Ven.: Stone Ven.: Common Wall: Foundation: Finished ?: Auto. Doors: Mech. Doors: Area: % Good: Storage Area: No Conc. Floor:		
X	Wood Frame	(4) Interior		X	Forced Air w/o Ducts Forced Air w/ Ducts Forced Hot Water Electric Baseboard Elec. Ceil. Radiant Radiant (in-floor) Electric Wall Heat Space Heater Wall/Floor Furnace Forced Heat & Cool Heat Pump No Heating/Cooling								12 40	CCP (1 Story) CCP (1 Story)					
Building Style: CD		Drywall Paneled	Plaster Wood T&G	Central Air Wood Furnace			(12) Electric			Class: CD Effec. Age: 35 Floor Area: 1,001 Total Base New : 137,859 Total Depr Cost: 89,609 Estimated T.C.V: 135,130									
Yr Built 1945	Remodeled 0	Ex	X	Ord		Min	No./Qual. of Fixtures			Cost Est. for Res. Bldg: 1 Single Family CD (11) Heating System: Forced Air w/ Ducts Ground Area = 1001 SF Floor Area = 1001 SF. Phy/Ab.Phy/Func/Econ/Comb. % Good=65/100/100/100/65									
Condition: Good		Lg	X	Ord		Small	No. of Elec. Outlets			Building Areas									
Room List		Doors:		Solid	X	H.C.	(13) Plumbing			Stories									
	Basement 1st Floor 2nd Floor 4 Bedrooms	(5) Floors		Kitchen: Other: Other:			Average Fixture(s)			Exterior									
(1) Exterior		(6) Ceilings		No. of Elec. Outlets			1 3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan			Foundation									
X	Wood/Shingle Aluminum/Vinyl Brick Insulation						Many			X	Ave.		Few	(14) Water/Sewer			Cost New		
(2) Windows		(7) Excavation		Basement: 0 S.F. Crawl: 968 S.F. Slab: 33 S.F. Height to Joists: 0.0			1 1000 Gal Septic 2000 Gal Septic			Siding									
X	Many Avg. Few	X	Large Avg. Small	(8) Basement			Lump Sum Items:			Water Well, 200 Feet									
Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors Storms & Screens		(9) Basement Finish		Recreation SF Living SF Walkout Doors (B) No Floor SF Walkout Doors (A)			Public Water Public Sewer Water Well 1000 Gal Septic 2000 Gal Septic			Notes:									
(3) Roof		(10) Floor Support		Joists: Unsupported Len: Cntr.Sup:			Public Sewer Water Well 1000 Gal Septic 2000 Gal Septic			ECF (4304 OLD HOMESTEAD) 1.508 => TCV:									
X	Gable Hip Flat		Gambrel Mansard Shed	Totals:			Totals:			137,859									
X	Asphalt Shingle			Totals:			Totals:			137,859									

*** Information herein deemed reliable but not guaranteed***



*** Information herein deemed reliable but not guaranteed***



GENOA CHARTER TOWNSHIP VARIANCE APPLICATION
2911 DORR ROAD | BRIGHTON, MICHIGAN 48116
(810) 227-5225 | FAX (810) 227-3420

Case # 24-11

Meeting Date: April 16, 2024
@ 6:30pm in Boardroom

PAID Variance Application Fee

\$215.00 for Residential | \$300.00 for Sign Variance | \$395.00 for Commercial/Industrial

Applicant/Owner: MICHAEL BROWN Email: MAGICMIKE238@YAHOO.COM

Property Address: 4655 SWEET RD Phone: 810 423 3758

Present Zoning: CE Tax Code: 11-09-400-004

ARTICLE 23 of the Genoa Township Zoning Ordinance describes the Variance procedure and the duties of the Zoning Board of Appeals.

Each application for Variance is considered individually by the ZBA. The ZBA is a board of limited power; it cannot change the Zoning Ordinance or grant relief when it is possible to comply with the Zoning Ordinance. It may provide relief where due to unique aspects of the property with strict application of the zoning ordinance to the land results in practical difficulties or unnecessary hardship.

The applicant is responsible for presenting the information necessary to support the relief requested. While much of the necessary information is gathered through the completed application, other information may be gathered by on-site visits, other sources, and during the ZBA meeting. ZBA members, township officials and township staff may visit the site without prior notification to property owners.

Failure to meet the submittal requirements and properly stake the property showing all proposed improvements may result in postponement or denial of this petition.

Please explain the proposed variance below:

1. Variance requested/intended property modifications: TO LEAVE SOLAR PANELS

WHERE THEY ARE.

Please note that the packet and staff report for your scheduled Zoning Board of Appeals meeting will be available to review at <https://www.genoa.org/government/boards/zoningboard> five days prior to the meeting.

The following is per Article 23.05.03 of the Genoa Township Ordinance:

Criteria Applicable to Dimensional Variances. No variance in the provisions or requirements of the Ordinance shall be authorized by the Board of Appeals unless it is found from the evidence that all of the following conditions exist:

Under each please indicate how the proposed project meets each criteria.

Practical Difficulty/Substantial Justice. Compliance with the strict letter of the restrictions governing area, setbacks, frontage, height, bulk, density, or other dimensional provisions would unreasonably prevent the use of the property. Granting of a requested variance or appeal would do substantial justice to the applicant as well as to other property owners in the district and 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 vicinity of the subject parcel.

I AM 47,000 + IN DEBT FOR SOLAR + LIVE @ END OF PRIVATE RD. THERE IS WOODS NEXT TO SOLAR. NO ONE WILL LIVE THERE AS THIS IS COUNTRY ESTATE. SACRE MINIMUM, MUST PUT IN CURBSIDE + WIDEN PRIVATE ROAD IN ORDER TO BUILD NEXT DOOR. I DO NOT BELIEVE IT IS FINANCIALLY RESPONSIBLE

Extraordinary Circumstances. There are exceptional or extraordinary circumstances or conditions applicable to the property or the intended use which are different than other properties in the same zoning district or the variance would make the property consistent with the majority of other properties in the vicinity. The need for the variance was not self-created by the applicant.

COMPANY THAT INSTALLED SOLAR IS OUT OF BUSINESS. THEY NEVER PULLED PERMITS. THEY INSTALLED SOLAR + DID NOT TELL GENOA WHERE THEY ACTUALLY WERE AT. NOW WHO WILL MOVE THEM? I DID NOT KNOW ABOUT THIS BEING IN WRONG PLACE. I HAVE NO WAY TO MOVE

Public Safety and Welfare. The granting of the variance will not impair an adequate supply of light and air to adjacent property or unreasonably increase the congestion in public streets, or increase the danger of fire or endanger the public safety, comfort, morals or welfare of the inhabitants of the Township of Genoa.

Impact on Surrounding Neighborhood. The variance will not interfere with or discourage the appropriate development, continued use, or value of adjacent properties and the surrounding neighborhood.

I AM AT END OF A PRIVATE ROAD. I CAN NOT MOVE THE SOLAR PLEASE ALLOW THE SOLAR TO STAY WHERE IT IS

Attendance by the applicant is required at the Zoning Board of Appeals meeting.

Any Variance not acted upon within 12 months from the date of approval is invalid and must receive a renewal from the Zoning Board of Appeals (ZBA).

After the decision is made regarding your Variance approval a land use permit will be required with additional site plans and construction plans.

Date: 3-15-24 Signature: Michael Brown



MEMORANDUM

TO: Genoa Township Zoning Board of Appeals
FROM: Amy Ruthig, Planning Director
DATE: April 10, 2024
RE: ZBA 24-11

2911 Dorr Road
Brighton, MI 48116
810.227.5225
810.227.3420 fax
genoa.org

STAFF REPORT

File Number: 24-11
Site Address: 4655 Sweet Road
Parcel Number: 4711-09-400-004
Parcel Size: 1.00 acre
Applicant: Michael Brown
Property Owner: Michael and Cindy Brown, 4655 Sweet Road, Howell
Information Submitted: Application, site plan, construction plans
Request: Dimensional Variance
Project Description: Applicant is requesting a side yard setback variance to construct allow solar panels to remain.
Zoning and Existing Use: CE (Country Estates) Single Family Residential home is located on the parcel.

Other:

Public hearing was published in the Livingston County Press and Argus on Sunday March 31, 2024 and 300-foot mailings were sent to any real property within 300 feet of the property lines in accordance with the Michigan Zoning Enabling Act.

Background

The following is a brief summary of the background information on file:

- Per assessing records the parcel has an existing single-family dwelling built in 2020.
- In 2020, a land use permit was issued for a new construction home.
- In 2021, a land use permit was issued for a new deck.
- In 2021, a land use permit was issued for the installation of solar panels.
- The property utilizes a private water and private sewer system.
- See Real Record Card.

SUPERVISOR

Bill Rogers

CLERK

Paulette A. Skolarus

TREASURER

Robin L. Hunt

TRUSTEES

Jean W. Ledford

Terry Croft

Diana Lowe

Jeff Dhaenens

MANAGER

Kelly VanMarter

Summary

The applicant is requesting a variance to allow solar panels to remain within the side yard setback. The solar panels were installed not installed in the previously approved location as per the land use permit site plan. Once it came to staff’s attention, code enforcement contacted the applicant for compliance.

Variance Requests

The regulations in the zoning ordinance pertaining to this variance are as follows:

11.06.03 Ground Mounted Private Solar Energy System. Ground Mounted Private Solar Energy Systems are permitted in all zoning districts as an accessory use, subject to the following:

(b) Location. Ground Mounted Private Solar Energy System shall only be located in the non-required rear or side yard for principal buildings in the zoning district in which it is located. The unit may be located in the front yard only if permitted by the Planning Commission provided that the unit is no less than two-hundred (200) feet from the front lot line

Setback information will be provided on Monday so staff can obtain correct setback requests from the applicant.

COUNTRY ESTATES - SETBACKS	Side Yard Setback
SIDE YARD SETBACK	40'
REQUESTED SETBACK	
REQUESTED VARIANCE AMOUNT	

Summary of Findings of Fact- After reviewing the application and materials provided, I offer the possible findings of fact for your consideration:

Please note that in order for a variance to be approved it has to meet all of the standards in 23.05.03.

- (a) Practical Difficulty/Substantial Justice** – Strict compliance with the side yard setback would prevent the solar panels to remain where in the current location however it would not prevent the use of the property. Granting of the requested variance would not do substantial justice to the applicant as well as other property owners in the district. It is not necessary for the preservation and enjoyment of a substantial property right similar to that possessed by other properties in the same vicinity of the subject parcel.
- (b) Extraordinary Circumstances** – The lot is a non-conforming parcel in the CE zoning district however the requested variance does not appear to be the least amount necessary. Applicant should provide information as to why the solar panels cannot be relocated within conforming setbacks.
- (c) Public Safety and Welfare** – The granting of the variance will not impair an adequate supply of light and air to adjacent property or unreasonably increase the congestion in public streets, or increase the danger of fire or endanger the public safety, comfort, morals or welfare of the inhabitants of the Township of Genoa.
- (d) Impact on Surrounding Neighborhood** – The proposed variance would have little or no impact on the appropriate development, continued use, or value of adjacent properties and the surrounding neighborhood.

Recommended Conditions

If the Zoning Board of Appeals grants the variance requests, staff recommends the following conditions be placed on the **APPROVAL**:

1. A site plan demonstrating accurate setbacks will be provided.
2. A land use permit application shall be submitted within 7 business days of approval.
3. Livingston County Building Permit will be applied for within 5 business days of land use permit approval.

Recommended Conditions

If the Zoning Board of Appeals grants the variance requests, staff recommends the following conditions be placed on the **DENIAL**:

1. Land use waiver shall be applied for within 7 business days of denial for the removal of the solar panels.
2. A Livingston County Building Permit shall be applied for within 5 business days of land use waiver approval.
3. The solar panels shall be removed within 45 days of denial.



Genoa Township

2911 Dorr Road, Brighton, Michigan 48116
 Phone: 810.227.5225 Fax: 810.227.3420 www.genoa.org

Planning & Zoning

P20-165

Issued: 09/30/2020
 Expires: 09/30/2021

Residential Land Use

Residential New Construction

LOCATION	OWNER	APPLICANT
4655 SWEET RD 4711-09-400-004 Zoning: CE	BROWN MICHAEL & CINDY 3674 AMBER OAKS DR HOWELL MI 48843 Phone: E-mail:	Trinity Home Builders 4225 Miller Road Flint MI 48507 Phone: (810) 835 8875 E-mail:

Work Description: New construction home

PROJECT INFORMATION:

Front Setback: 75	Side Setback: 40	Water/Wetland:
Least Side Setback: 40	Rear Setback: 60	Distance from Principal Structure:
Construction Value: \$140,000.00	Height:	Total Square Feet: 1,480
ZBA Approval: n/a		

Comments/ Conditions: **Flood Plain: N/A**

Must maintain a 25 foot natural undisturbed buffer to the wetland. No clearing, grass cutting, etc.

Home must meet the 1500 sq. ft. living area requirement.

Permit Item	Permit Fee	Fee Basis	Item Total
Residential New Construction/Addition	Permit Fee	1.00	75.00

Fee Total: \$75.00
 Amount Paid: \$75.00
Balance Due: \$0.00

Issuance of this permit confirms the applicants certification that all information and data attached to and made part of this permit are true and accurate and to the best of the applicants knowledge and belief. The applicant has certified that the proposed work has been authorized by the owner of record and that the applicant has been authorized by the owner to obtain this permit as the authorized agent. The applicant has agreed to conform to all applicable laws, codes and ordinances of the State of Michigan, Livingston County and Genoa Township. The applicant acknowledges that private covenants and restrictions are potentially enforceable by private parties. This permit authorizes on-site inspections by an official representative of Genoa Charter Township. This permit is valid for a period of 12 months from the date of issue and the applicant agrees that any modifications must be approved by Genoa Township.



Genoa Township

2911 Dorr Road, Brighton, Michigan 48116
 Phone: 810.227.5225 Fax: 810.227.3420 www.genoa.org

Planning & Zoning

P21-246

Issued: 12/16/2021
 Expires: 12/16/2022

Residential Land Use

Other

LOCATION	OWNER	APPLICANT
4655 SWEET RD 4711-09-400-004 Zoning: CE	BROWN MICHAEL & CINDY 4655 SWEET RD HOWELL MI 48843 Phone: E-mail:	Limitless Solar 30505 Anderson Court Wixom MI 48393 Phone: (517) 540 4110 E-mail:

Work Description: Solar array

PROJECT INFORMATION:

Front Setback: 0	Side Setback: 0	Water/Wetland:
Least Side Setback: 0	Rear Setback: 0	Distance from Principal Structure:
Construction Value: \$58,000.00	Height:	Total Square Feet: 01
ZBA Approval: n/a		

Comments/ Conditions: Solar array (will be closer to house than depicted on ground plans)
 Location of array is at least 30 feet off side property line and over 200 ft from rear property line.

Permit Item	Permit Fee	Fee Basis	Item Total
Accessory Building	Permit Fee	1.00	50.00

Fee Total: \$50.00
 Amount Paid: \$50.00
Balance Due: \$0.00

Issuance of this permit confirms the applicants certification that all information and data attached to and made part of this permit are true and accurate and to the best of the applicants knowledge and belief. The applicant has certified that the proposed work has been authorized by the owner of record and that the applicant has been authorized by the owner to obtain this permit as the authorized agent. The applicant has agreed to conform to all applicable laws, codes and ordinances of the State of Michigan, Livingston County and Genoa Township. The applicant acknowledges that private covenants and restrictions are potentially enforceable by private parties. This permit authorizes on-site inspections by an official representative of Genoa Charter Township. This permit is valid for a period of 12 months from the date of issue and the applicant agrees that any modifications must be approved by Genoa Township.

Approved site plan for solar panel land use permit

Array

30 FT off property line

xxx

xxx

xxx

200FT away from the rear

PHOTOVOLTAIC GROUND MOUNT SYSTEM

18 MODULES-GROUND MOUNTED - 7.740 kW DC, 7.600 kW AC

4655 SWEET RD, HOWELL, MI 48843



LIMITLESS SOLAR

30505 ANDERSEN CT.
WIXOM, MI 48393

PROJECT DATA

PROJECT ADDRESS: 4655 SWEET RD, HOWELL, MI 48843
 OWNER: MICHAEL BROWN
 DESIGNER: ESR
 SCOPE: 7.740 kW DC GROUND MOUNT SOLAR PV SYSTEM WITH 18 - HANWHA SOLAR: Q.PEAK DUO L-G8.2 430W MONO MODULES WITH 18 GENERAC SNAPRS801 02 GENERAC PV LINK S2502 POWER OPTIMIZERS 01 GENERAC PWRCELL: X7602 7600W INVERTER 01 GENERAC PWRCELL: 9kW (18kWh) BATTERY
 AUTHORITIES HAVING JURISDICTION: BUILDING: LIVINGSTON COUNTY ZONING: LIVINGSTON COUNTY

SHEET INDEX

PV-1 COVER SHEET
 PV-2 PLOT PLAN WITH GROUND PLAN
 PV-3 GROUND PLAN & MODULES
 PV-4 ELECTRICAL PLAN
 PV-5 MOUNTING DETAIL
 PV-6 ELECTRICAL LINE DIAGRAM
 PV-7 WIRING CALCULATION
 PV-8 LABELS
 PV-9 PLACARD
 PV-10 MICRO INVERTER CHART
 PV-11+ EQUIPMENT SPECIFICATIONS

SIGNATURE



GENERAL NOTES

- ALL COMPONENTS ARE UL LISTED AND CEC CERTIFIED, WHERE WARRANTED.
- THE SOLAR PV SYSTEM WILL BE INSTALLED IN ACCORDANCE WITH ARTICLE 690 OF THE NEC 2017.
- THE UTILITY INTERCONNECTION APPLICATION MUST BE APPROVED AND PV SYSTEM INSPECTED PRIOR TO PARALLEL OPERATION.
- ALL CONDUCTORS OF A CIRCUIT, INCLUDING THE EGC, MUST BE INSTALLED IN THE SAME RACEWAY, OR CABLE, OR OTHERWISE RUN WITH THE PV ARRAY CIRCUIT CONDUCTORS WHEN THEY LEAVE THE VICINITY OF THE PV ARRAY.
- WHERE METALLIC CONDUIT CONTAINING DC CONDUCTORS IS USED INSIDE THE BUILDING, IT SHALL BE IDENTIFIED AS "CAUTION: SOLAR CIRCUIT" EVERY 10FT.
- HEIGHT OF THE AC DISCONNECT SHALL NOT EXCEED 6'-7" PER NEC CODE 240.24.
- A GROUNDING ELECTRODE SYSTEM IN ACCORDANCE WITH CEC 690.47 AND 250.50 THROUGH 60 AND 250-166 SHALL BE PROVIDED. PER NEC GROUNDING ELECTRODE SYSTEM OF EXISTING BUILDING MAY BE USED AND BONDED TO THE SERVICE ENTRANCE. IF EXISTING SYSTEM IS INACCESSIBLE OR INADEQUATE A SUPPLEMENTAL GROUNDING ELECTRODE WILL BE USED AT THE INVERTER LOCATION CONSISTING OF A UL LISTED 8 FT. GROUND ROD WITH ACORN CLAMP. GROUNDING ELECTRODE CONDUCTORS SHALL BE NO LESS THAN #8 AWG AND NO LARGER THAN #6 AWG COPPER AND BONDED TO THE EXISTING GROUNDING ELECTRODE TO PROVIDE FOR A COMPLETE SYSTEM.
- PHOTOVOLTAIC MODULES ARE TO BE CONSIDERED NON-COMBUSTIBLE.
- PHOTOVOLTAIC INSTALLATION WILL NOT OBSTRUCT ANY PLUMBING, MECHANICAL, OR BUILDING ROOF VENTS.
- ALL WIRING MUST BE PROPERLY SUPPORTED BY DEVICES OR MECHANICAL MEANS DESIGNED AND LISTED FOR SUCH USE. WIRING MUST BE PERMANENTLY AND COMPLETELY HELD OFF THE ROOF SURFACE.
- ALL SIGNAGE TO BE PLACED IN ACCORDANCE WITH THE LOCAL BUILDING CODE. IF EXPOSED TO SUNLIGHT, IT SHALL BE UV RESISTANT. ALL PLAQUES AND SIGNAGE WILL BE INSTALLED AS REQUIRED BY THE NEC AND AHJ.
- AS SPECIFIED BY THE AHJ, EQUIPMENT USED IN UNGROUNDED SYSTEMS LABELED ACCORDING TO NEC 690.35(F).
- INVERTER(S) USED IN UNGROUNDED SYSTEM SHALL BE LISTED FOR THIS USE [NEC 690.35(G)].
- THE INSTALLATION OF EQUIPMENT AND ALL ASSOCIATED WIRING AND INTERCONNECTION SHALL BE PERFORMED ONLY BY QUALIFIED PERSONS [NEC 690.4(C)]
- ALL OUTDOOR EQUIPMENT SHALL BE NEMA 3R RATED (OR BETTER), INCLUDING ALL ROOF MOUNTED TRANSITION BOXES AND SWITCHES.
- ALL EQUIPMENT SHALL BE PROPERLY GROUNDED AND BONDED IN ACCORDANCE WITH NEC ARTICLE 250.
- SYSTEM GROUNDING SHALL BE IN ACCORDANCE WITH NEC 690.41.
- PV SYSTEM CIRCUITS INSTALLED ON OR IN BUILDINGS SHALL INCLUDE A RAPID SHUTDOWN FUNCTION IN ACCORDANCE WITH NEC 690.12
- DISCONNECTING MEANS SHALL BE LOCATED IN A VISIBLE, READILY ACCESSIBLE LOCATION WITHIN THE PV SYSTEM EQUIPMENT OR A MAXIMUM OF 10 FEET AWAY FROM THE SYSTEM [NEC 690.13(A)]
- ALL WIRING METHODS SHALL BE IN ACCORDANCE WITH NEC 690.31
- WORK CLEARANCES AROUND ELECTRICAL EQUIPMENT WILL BE MAINTAINED PER NEC 110.26(A)(1), 110.26(A)(2) AND 110.26(A)(3).
- ROOFTOP MOUNTED PHOTOVOLTAIC PANELS AND MODULES SHALL BE TESTED, LISTED & IDENTIFIED IN ACCORDANCE WITH UL1703
- ELECTRICAL CONTRACTOR TO PROVIDE CONDUIT EXPANSION JOINTS AND ANCHOR CONDUIT RUNS AS REQUIRED PER NEC.

VICINITY MAP



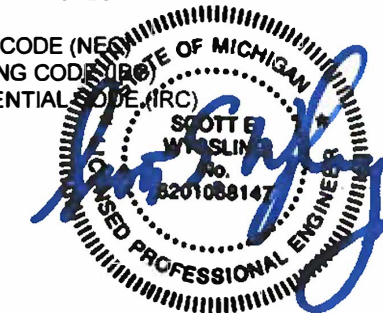
HOUSE PHOTO



CODE REFERENCES

PROJECT TO COMPLY WITH THE FOLLOWING:

- 2017 NATIONAL ELECTRICAL CODE (NEC)
- 2015 INTERNATIONAL BUILDING CODE (IBC)
- 2015 INTERNATIONAL RESIDENTIAL CODE (IRC)



Date Signed 12/8/21

REVISIONS

DESCRIPTION	DATE	REV

DATE: 12/07/2021

PROJECT NAME & ADDRESS

MICHAEL BROWN
 RESIDENCE
 4655 SWEET RD,
 HOWELL, MI 48843

DRAWN BY

ESR

SHEET NAME

COVER SHEET



SHEET SIZE

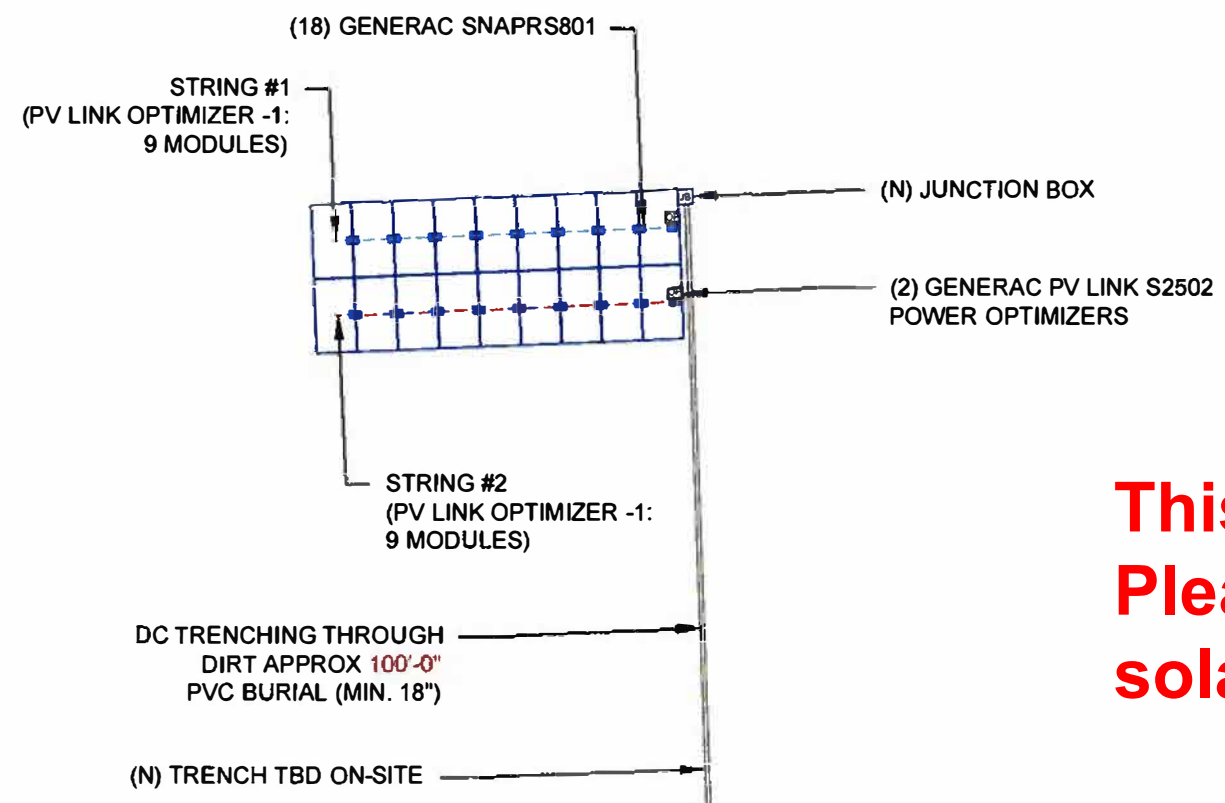
ANSI B
 11" X 17"

SHEET NUMBER

PV-1

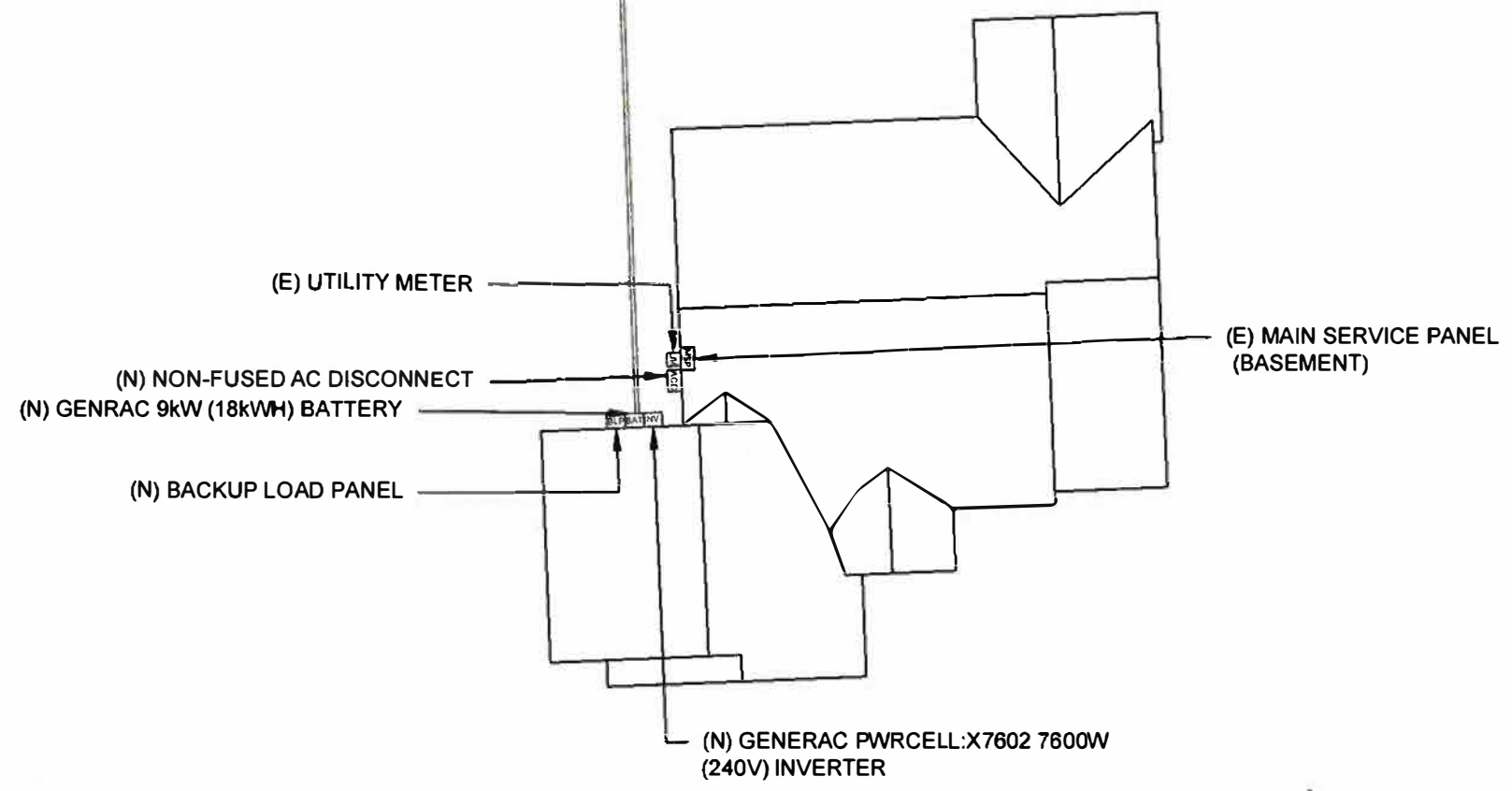
Approved construction plans for solar panel land use permit.

STRING LEGENDS	
	STRING #1
	STRING #2




BILL OF MATERIALS		
EQUIPMENT	QTY	DESCRIPTION
SOLAR PV MODULES	18	HANWHA SOLAR: Q.PEAK DUO L-G8.2 430W
INVERTERS	18	GENERAC PWRCELL: X7602 7600W MICROINVERTERS
BATTERY	1	GENERAC PWRCELL: 9kW (18kWh) BATTERY
OPTIMIZER	2	GENERAC PV LINK S2502 POWER OPTIMIZERS
SNAPRS	18	GENERAC SNAPRS801
JUNCTION BOX	1	JUNCTION BOX

**This location was not approved.
Please see approved site plan for
solar panels land use permit.**



STATE OF MICHIGAN
SCOTT E. WYSLIN
No. 3201068147
LICENSED PROFESSIONAL ENGINEER
Date Signed 12/8/21



Limitless Solar
Building a better tomorrow

LIMITLESS SOLAR
30505 ANDERSEN CT.
WIXOM, MI 48393

REVISIONS		
DESCRIPTION	DATE	REV

DATE 12/07/2021

PROJECT NAME & ADDRESS

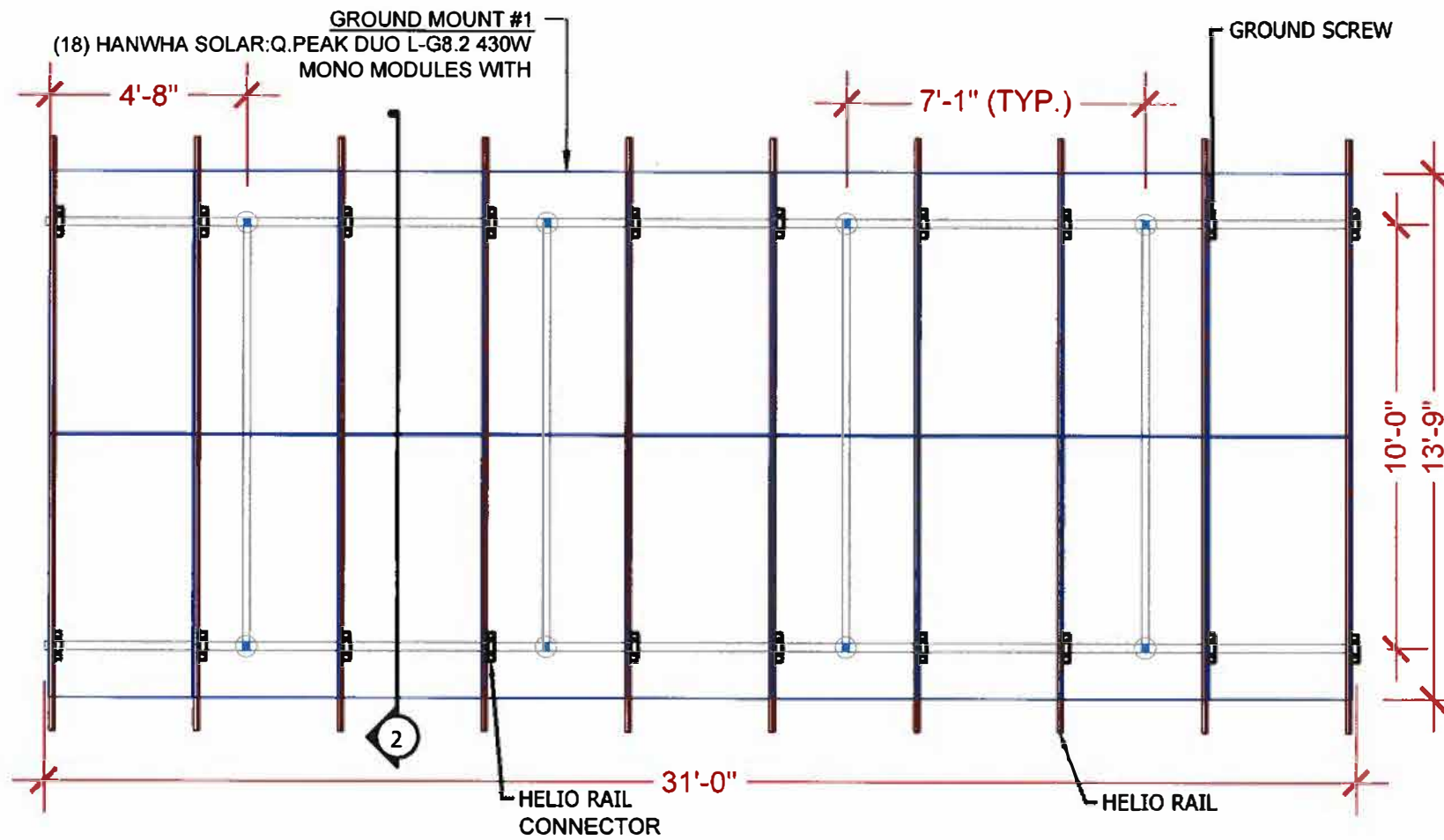
**MICHAEL BROWN
RESIDENCE**
4655 SWEET RD,
HOWELL, MI 48843

DRAWN BY
ESR

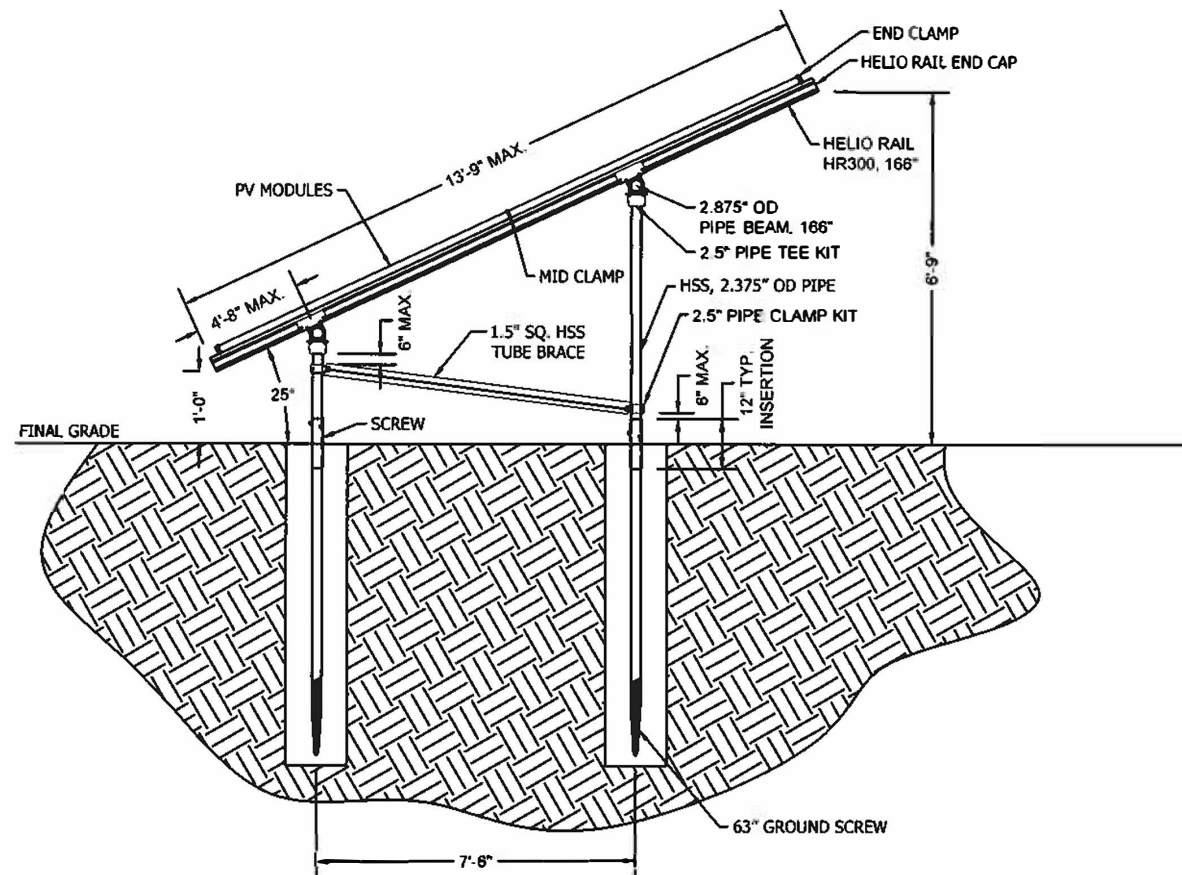
SHEET NAME
ELECTRICAL PLAN

SHEET SIZE
**ANSI B
11" X 17"**

SHEET NUMBER
PV-4



1 MOUNTING DETAILS
PV-5 SCALE: NTS



2 SIDE VIEW
PV-5 SCALE: NTS

REVISIONS		
DESCRIPTION	DATE	REV

DATE: 12/07/2021

PROJECT NAME & ADDRESS

MICHAEL BROWN
RESIDENCE
4655 SWEET RD,
HOWELL, MI 48843

DRAWN BY

ESR

SHEET NAME

**MOUNTING
DETAIL**

SHEET SIZE

**ANSI B
11" X 17"**

SHEET NUMBER

PV-5



Date Signed 12/8/21

DC SYSTEM SIZE: 7.740 KW DC
AC SYSTEM SIZE: 7.600 KW AC

(18) HANWHA SOLAR: Q.PEAK DUO L-G8.2 430W MONO MODULES WITH (01) GENERAC PWRCELL: X7602 7600W (240V) INVERTER

(2) STRINGS OF 9 MODULES CONNECTED IN SERIES

INTERCONNECTION NOTES:

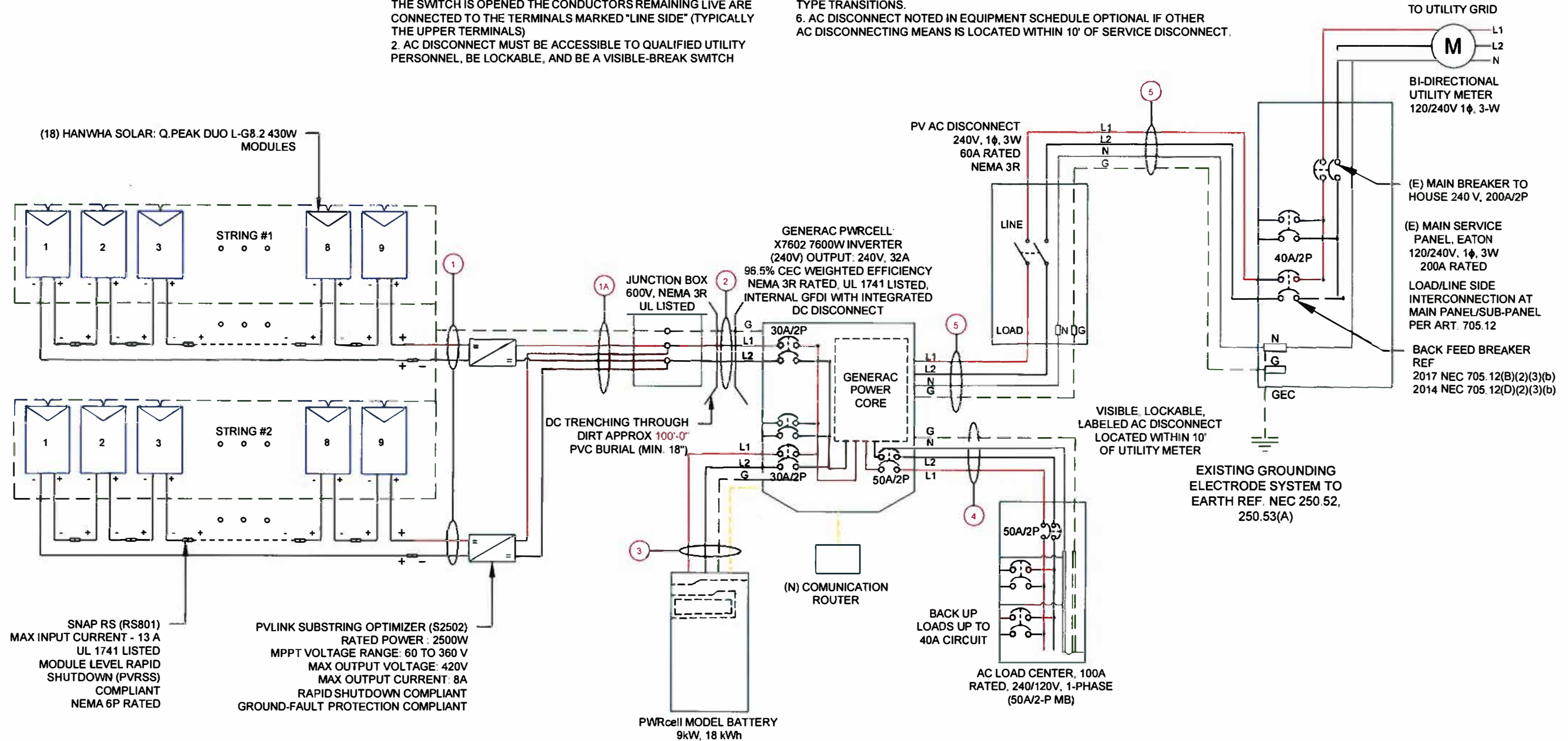
1. INTERCONNECTION SIZING, LIMITATIONS AND COMPLIANCE DETERMINED IN ACCORDANCE WITH [NEC 705.12], AND [NEC 690.64].
2. GROUND FAULT PROTECTION IN ACCORDANCE WITH [NEC 215.9], [NEC 230.95] AND [NEC 690.5]
3. ALL EQUIPMENT TO BE RATED FOR BACKFEEDING.
4. PV BREAKER TO BE POSITIONED AT THE OPPOSITE END OF THE BUSBAR RELATIVE TO THE MAIN BREAKER.

DISCONNECT NOTES:

1. DISCONNECTING SWITCHES SHALL BE WIRED SUCH THAT WHEN THE SWITCH IS OPENED THE CONDUCTORS REMAINING LIVE ARE CONNECTED TO THE TERMINALS MARKED "LINE SIDE" (TYPICALLY THE UPPER TERMINALS)
2. AC DISCONNECT MUST BE ACCESSIBLE TO QUALIFIED UTILITY PERSONNEL, BE LOCKABLE, AND BE A VISIBLE-BREAK SWITCH

GROUNDING & GENERAL NOTES:

1. A SECOND FACILITY GROUNDING ELECTRODE IS NOT REQUIRED PER [NEC 690.47(C)(3)]
2. PV INVERTER IS UNGROUNDED, TRANSFORMER-LESS TYPE.
3. DC GEC AND AC EGC TO REMAIN UNSPLICED, OR SPLICED TO EXISTING ELECTRODE
4. ANY EXISTING WIRING INVOLVED WITH PV SYSTEM CONNECTION THAT IS FOUND TO BE INADEQUATE PER CODE SHALL BE CORRECTED PRIOR TO FINAL INSPECTION.
5. JUNCTION BOX QUANTITIES, AND PLACEMENT SUBJECT TO CHANGE IN THE FIELD - JUNCTION BOX DEPICTED ON ELECTRICAL DIAGRAM REPRESENT WIRE TYPE TRANSITIONS.
6. AC DISCONNECT NOTED IN EQUIPMENT SCHEDULE OPTIONAL IF OTHER AC DISCONNECTING MEANS IS LOCATED WITHIN 10' OF SERVICE DISCONNECT.



SNAP RS (RS801)
MAX INPUT CURRENT - 13 A
UL 1741 LISTED
MODULE LEVEL RAPID
SHUTDOWN (PVRSS)
COMPLIANT
NEMA 6P RATED

PV LINK SUBSTRING OPTIMIZER (S2502)
RATED POWER : 2500W
MPPT VOLTAGE RANGE: 60 TO 360 V
MAX OUTPUT VOLTAGE: 420V
MAX OUTPUT CURRENT: 8A
RAPID SHUTDOWN COMPLIANT
GROUND-FAULT PROTECTION COMPLIANT

DC TRENCHING THROUGH
DIRT APPROX 100'-0"
PVC BURIAL (MIN. 18")

(N) COMMUNICATION
ROUTER

PWRcell MODEL BATTERY
9kW, 18 kWh

AC LOAD CENTER, 100A
RATED, 240/120V, 1-PHASE
(50A/2-P MB)

QTY	CONDUCTOR INFORMATION	CONDUIT TYPE	CONDUIT SIZE
1	(4) CU #10AWG - PV WIRE/USE-2	N/A	N/A
	(1) CU #6AWG - BARE COPPER IN FREE AIR		
1A	(4) CU #10AWG - PV WIRE/USE-2	N/A	3/4"
	(1) CU #6AWG - BARE COPPER IN FREE AIR		
2	(4) CU #10AWG - THWN-2 (L1,L2)	PVC (18" DEPTH MIN.)	3/4"
	(1) CU #10AWG - THWN-2 GND		
3	(3) CU #8AWG - THWN-2 (L1,L2,N)	EMT, LFMC OR PVC	3/4"
	(1) CU #10AWG - THWN-2 GND		
4	(3) CU #8AWG - THWN-2 (L1,L2,N)	EMT, LFNC OR LFMC	3/4"
	(1) CU #10AWG - THWN-2 GND		
5	(2) CU #8AWG - THWN-2 (L1,L2)	EMT, LFNC OR LFMC	3/4"
	(1) CU #10AWG - THWN-2 GND		

1 ELECTRICAL LINE DIAGRAM

PV-6

SCALE: NTS



LIMITLESS SOLAR

30505 ANDERSEN CT.
WIXOM, MI 48393

REVISIONS

DESCRIPTION	DATE	REV

DATE: 12/07/2021

PROJECT NAME & ADDRESS

**MICHAEL BROWN
RESIDENCE**
4655 SWEET RD,
HOWELL, MI 48843

DRAWN BY

ESR

SHEET NAME
**ELECTRICAL LINE
DIAGRAM**

SHEET SIZE

**ANSI B
11" X 17"**

SHEET NUMBER

PV-6

SOLAR MODULE SPECIFICATIONS	
MANUFACTURER / MODEL #	HANWHA SOLAR: Q.PEAK DUO L-G8.2 430W MODULE
VMP	41.70V
IMP	10.31A
VOC	49.33V
ISC	10.83A
TEMP. COEFF. VOC	-0.27%/K
MODULE DIMENSION	81.9"L x 40.6"W x 1.38"D (In Inch)

INVERTER SPECIFICATIONS	
MANUFACTURER / MODEL #	GENERAC PWRCELL:X7602
NOMINAL AC POWER	7.600 KW
NOMINAL OUTPUT VOLTAGE	240 VAC
NOMINAL OUTPUT CURRENT	32.0A

PERCENT OF VALUES	NUMBER OF CURRENT CARRYING CONDUCTORS IN EMT
.80	4-6
.70	7-9
.50	10-20

AMBIENT TEMPERATURE SPECS	
RECORD LOW TEMP	-20°
AMBIENT TEMP (HIGH TEMP 2%)	32°
CONDUCTOR TEMPERATURE RATE	90°
MODULE TEMPERATURE COEFFICIENT OF Voc	-0.27%/°K

POWER OPTIMIZER (GENERAC PV LINK S2502 POWER OPTIMIZERS)	
RATED POWER	2500W
MAXIMUM INPUT VOLTAGE	420Voc
MPPT VOLTAGE RANGE	60-360Vmp
NOMINAL OUTPUT	380Vdc
MAXIMUM OUTPUT	420Adc
MAXIMUM OUTPUT CURRENT	8A
MAXIMUM SHORT CIRCUIT CURRENT	18A



LIMITLESS SOLAR
30505 ANDERSEN CT.
WIXOM, MI 48393

REVISIONS		
DESCRIPTION	DATE	REV

DC FEEDER CALCULATIONS																					
CIRCUIT ORIGIN	CIRCUIT DESTINATION	VOLTAGE (V)	FULL LOAD AMPS "FLA" (A)	FLA*1.56 (A)	OCPD SIZE (A)	GROUND SIZE	CONDUCTOR SIZE	75°C AMPACITY (A)	AMPACITY CHECK #1	AMBIENT TEMP. (°C)	TOTAL CC CONDUCTORS IN RACEWAY	90°C AMPACITY (A)	DERATION FACTOR FOR AMBIENT TEMPERATURE NEC 310.15(B)(2)(a)	DERATION FACTOR FOR CONDUCTORS PER RACEWAY NEC 310.15(B)(3)(a)	90°C AMPACITY DERATED (A)	AMPACITY CHECK #2	FEEDER LENGTH (FEET)	CONDUCTOR RESISTANCE (OHM/KFT)	VOLTAGE DROP AT FLA (%)	CONDUIT SIZE	CONDUIT FILL (%)
STRING 1	JUNCTION BOX	380	8.00	12.48	20	BARE COPPER #6 AWG	CU #10 AWG	35	PASS	32	2	40	0.96	1	38.4	PASS	5	1.24	0.026	N/A	#N/A
STRING 2	JUNCTION BOX	380	8.00	12.48	20	BARE COPPER #6 AWG	CU #10 AWG	35	PASS	32	2	40	0.96	1	38.4	PASS	5	1.24	0.026	N/A	#N/A
JUNCTION BOX	INVERTER	380	16.00	24.96	30	CU #10 AWG	CU #10 AWG	35	PASS	32	2	40	0.96	1	38.4	PASS	100	1.24	1.044	3/4" PVC	12.46063

String 1 Voltage Drop	1.070
String 2 Voltage Drop	1.070

DATE:12/07/2021

PROJECT NAME & ADDRESS

AC FEEDER CALCULATIONS																						
CIRCUIT ORIGIN	CIRCUIT DESTINATION	VOLTAGE (V)	FULL LOAD AMPS "FLA" (A)	FLA*1.25 (A)	OCPD SIZE (A)	NEUTRAL SIZE	GROUND SIZE	CONDUCTOR SIZE	75°C AMPACITY (A)	AMPACITY CHECK #1	AMBIENT TEMP. (°C)	TOTAL CC CONDUCTORS IN RACEWAY	90°C AMPACITY (A)	DERATION FACTOR FOR AMBIENT TEMPERATURE NEC 310.15(B)(2)(a)	DERATION FACTOR FOR CONDUCTORS PER RACEWAY NEC 310.15(B)(3)(a)	90°C AMPACITY DERATED (A)	AMPACITY CHECK #2	FEEDER LENGTH (FEET)	CONDUCTOR RESISTANCE (OHM/KFT)	VOLTAGE DROP AT FLA (%)	CONDUIT SIZE	CONDUIT FILL (%)
INVERTER	AC DISCONNECT	240	32	40	40	CU #8 AWG	CU #10 AWG	CU #8 AWG	50	PASS	32	2	55	0.96	1	52.8	PASS	5	0.778	0.104	3/4" EMT	24.5591
AC DISCONNECT	POI	240	32	40	40	CU #8 AWG	CU #10 AWG	CU #8 AWG	50	PASS	32	2	55	0.96	1	52.8	PASS	5	0.778	0.104	3/4" EMT	24.5591

CUMULATIVE VOLTAGE	0.207
--------------------	-------

ELECTRICAL NOTES

- ALL EQUIPMENT TO BE LISTED BY UL OR OTHER NRTL, AND LABELED FOR ITS APPLICATION.
- ALL CONDUCTORS SHALL BE COPPER, RATED FOR 600 V AND 90 DEGREE C WET ENVIRONMENT.
- WIRING, CONDUIT, AND RACEWAYS MOUNTED ON ROOFTOPS SHALL BE ROUTED DIRECTLY TO, AND LOCATED AS CLOSE AS POSSIBLE TO THE NEAREST RIDGE, HIP, OR VALLEY.
- WORKING CLEARANCES AROUND ALL NEW AND EXISTING ELECTRICAL EQUIPMENT SHALL COMPLY WITH NEC 110.26.
- DRAWINGS INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS. CONTRACTOR SHALL FURNISH ALL NECESSARY OUTLETS, SUPPORTS, FITTINGS AND ACCESSORIES TO FULFILL APPLICABLE CODES AND STANDARDS.
- WHERE SIZES OF SOLADECK, RACEWAYS, AND CONDUITS ARE NOT SPECIFIED, THE CONTRACTOR SHALL SIZE THEM ACCORDINGLY.
- ALL WIRE TERMINATIONS SHALL BE APPROPRIATELY LABELED AND READILY VISIBLE.
- MODULE GROUNDING CLIPS TO BE INSTALLED BETWEEN MODULE FRAME AND MODULE SUPPORT RAIL, PER THE GROUNDING CLIP MANUFACTURER'S INSTRUCTION.
- MODULE SUPPORT RAIL TO BE BONDED TO CONTINUOUS COPPER G.E.C. VIA WEEB LUG OR ILSCO GBL-4DBT LAY-IN LUG.
- TEMPERATURE RATINGS OF ALL CONDUCTORS, TERMINATIONS, BREAKERS, OR OTHER DEVICES ASSOCIATED WITH THE SOLAR PV SYSTEM SHALL BE RATED FOR AT LEAST 75 DEGREE C.

**MICHAEL BROWN
RESIDENCE**
4655 SWEET RD,
HOWELL, MI 48843

DRAWN BY

ESR

SHEET NAME

**WIRING
CALCULATIONS**

SHEET SIZE

**ANSI B
11" X 17"**

SHEET NUMBER

PV-7

CAUTION:
AUTHORIZED SOLAR
PERSONNEL ONLY!

LABEL-1:
LABEL LOCATION:
AC DISCONNECT

**WARNING: PHOTOVOLTAIC
POWER SOURCE**
EVERY 10' ON CONDUIT & ENCLOSURES

LABEL- 2:
LABEL LOCATION:
EMT/CONDUIT RACEWAY
SOLADECK / JUNCTION BOX
CODE REF: NEC 690.31 (D)(2)

WARNING
ELECTRICAL SHOCK HAZARD
TERMINALS ON THE LINE AND LOAD SIDES MAY
BE ENERGIZED IN THE OPEN POSITION

LABEL- 3:
LABEL LOCATION:
AC DISCONNECT
INVERTER
MAIN SERVICE PANEL
SUBPANEL
MAIN SERVICE DISCONNECT
CODE REF: NEC 690.13(B)

**WARNING DUAL POWER SOURCE
SECOND SOURCE IS PHOTOVOLTAIC SYSTEM**

LABEL- 4:
LABEL LOCATION:
PRODUCTION METER
UTILITY METER
MAIN SERVICE PANEL
SUBPANEL
CODE REF: NEC 705.12(C) & NEC 690.59

WARNING
**TURN OFF PHOTOVOLTAIC AC
DISCONNECT PRIOR TO
WORKING INSIDE PANEL**

LABEL- 5:
LABEL LOCATION:
MAIN SERVICE PANEL
SUBPANEL
MAIN SERVICE DISCONNECT
CODE REF: NEC 110.27(C) & OSHA 1910.145 (f) (7)

CAUTION
PHOTOVOLTAIC SYSTEM CIRCUIT IS
BACKFEED

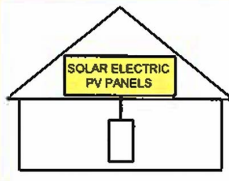
LABEL- 6:
LABEL LOCATION:
MAIN SERVICE PANEL (ONLY IF SOLAR IS BACK-FED)
SUBPANEL (ONLY IF SOLAR IS BACK-FED)
CODE REF: NEC 705.12(D) & NEC 690.59

WARNING
POWER SOURCE OUTPUT
CONNECTION. DO NOT
RELOCATE THIS
OVERCURRENT DEVICE

LABEL- 7:
LABEL LOCATION:
MAIN SERVICE PANEL (ONLY IF SOLAR IS BACK-FED)
SUBPANEL (ONLY IF SOLAR IS BACK-FED)
CODE REF: NEC 705.12(B)(3)(2)

**SOLAR PV SYSTEM EQUIPPED
WITH RAPID SHUTDOWN**

TURN RAPID SHUTDOWN
SWITCH TO THE
"OFF" POSITION TO
SHUT DOWN PV SYSTEM
AND REDUCE
SHOCK HAZARD
IN THE ARRAY



LABEL- 8:
LABEL LOCATION:
AC DISCONNECT
CODE REF: IFC 605.11.3.1(1) & NEC 690.56(C)

**RAPID SHUTDOWN SWITCH
FOR SOLAR PV SYSTEM**

LABEL- 9:
LABEL LOCATION:
AC DISCONNECT
CODE REF: NEC 690.56(C)(2)

PHOTOVOLTAIC
AC DISCONNECT

LABEL- 10:
LABEL LOCATION:
AC DISCONNECT
CODE REF: NEC 690.13(B)

PHOTOVOLTAIC
DC DISCONNECT

LABEL- 11:
LABEL LOCATION:
INVERTER
CODE REF: NEC 690.13(B)

PHOTOVOLTAIC
AC DISCONNECT
NOMINAL OPERATING AC VOLATGE **240 V**
RATED AC OUTPUT CURRENT **32.00 A**

LABEL- 12:
LABEL LOCATION:
MAIN SERVICE PANEL
SUBPANEL
AC DISCONNECT
CODE REF: NEC 690.54

INVERTER
AC DISCONNECT
NOMINAL OPERATING AC VOLATGE **240 V**
RATED AC OUTPUT CURRENT **32.00 A**

LABEL- 13:
LABEL LOCATION:
INVERTER
CODE REF: NEC 690.54

MAXIMUM VOLTAGE **380 V**
MAXIMUM CIRCUIT CURRENT **20 A**
MAXIMUM RATED OUTPUT
CURRENT OF THE CHARGE
CONTROLLER OR DC-TO-DC
CONVERTER (IF INSTALLED)

LABEL- 14:
LABEL LOCATION:
INVERTER
CODE REF: NEC 690.53

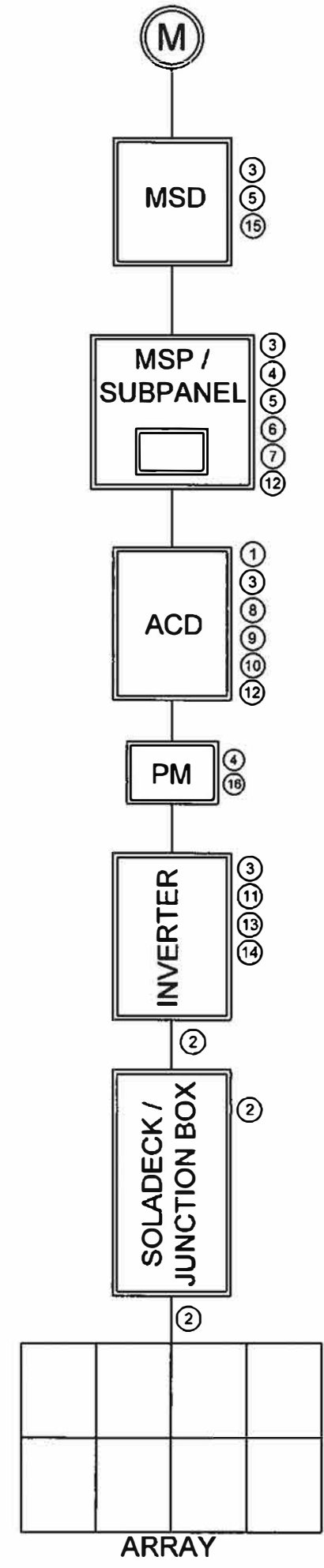
MAIN PHOTOVOLTAIC
SYSTEM DISCONNECT

LABEL- 15:
LABEL LOCATION:
MAIN SERVICE DISCONNECT (ONLY IF MAIN SERVICE DISCONNECT IS PRESENT)
CODE REF: NEC 690.13(B)

PRODUCTION METER

LABEL- 16:
LABEL LOCATION:
PRODUCTION METER (ONLY IF PRODUCTION METER IS USED)

NOTE:
** ELECTRICAL DIAGRAM SHOWN IS FOR LABELING PURPOSES ONLY. NOT AN ACTUAL REPRESENTATION OF EQUIPMENT AND CONNECTIONS TO BE INSTALLED. LABEL LOCATIONS PRESENTED MAY VARY DEPENDING ON TYPE OF INTERCONNECTION METHOD AND LOCATION PRESENTED ELECTRICAL DIAGRAM PAGE **



Limitless Solar
Building a better tomorrow
LIMITLESS SOLAR
30505 ANDERSEN CT.
WIXOM, MI 48393

REVISIONS		
DESCRIPTION	DATE	REV

DATE 12/07/2021

PROJECT NAME & ADDRESS
**MICHAEL BROWN
RESIDENCE**
4655 SWEET RD,
HOWELL, MI 48843

DRAWN BY
ESR

SHEET NAME
LABELS

SHEET SIZE
**ANSI B
11" X 17"**

SHEET NUMBER
PV-8



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WIXOM, MI 48393

REVISIONS

DESCRIPTION	DATE	REV

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PROJECT NAME & ADDRESS

**MICHAEL BROWN
RESIDENCE**

4655 SWEET RD,
HOWELL, MI 48843

DRAWN BY

ESR

SHEET NAME

PLACARD

SHEET SIZE

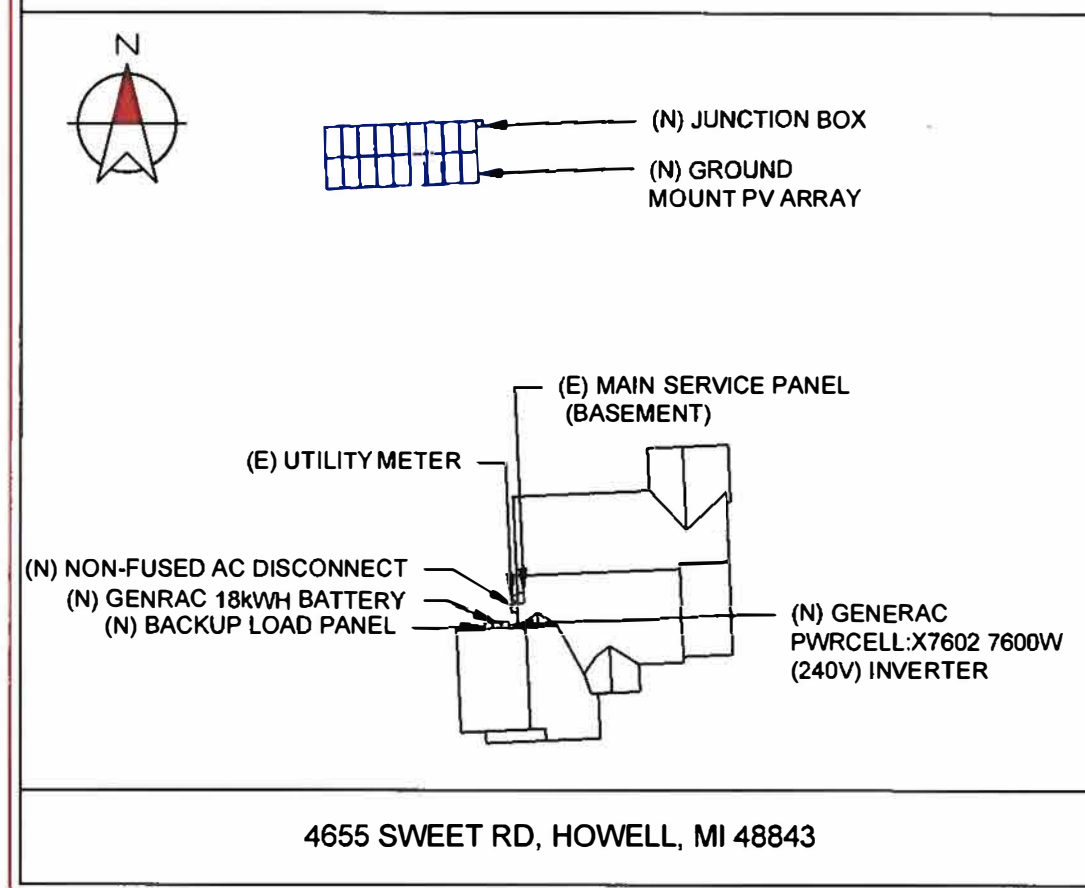
**ANSI B
11" X 17"**

SHEET NUMBER

PV-9

CAUTION

POWER TO THIS BUILDING IS ALSO SUPPLIED FROM MULTIPLE SOURCES WITH SAFETY DISCONNECTS AS SHOWN:



DIRECTORY

PERMANENT PLAQUE OR DIRECTORY PROVIDING THE LOCATION OF THE SERVICE DISCONNECTING MEANS AND THE PHOTOVOLTAIC SYSTEM.

(ALL PLAQUES AND SIGNAGE WILL BE INSTALLED AS OUTLINED WITHIN: NEC 690.56(B)&(C), [NEC 705.10])

LABELING NOTES:

1. LABELS CALLED OUT ACCORDING TO ALL COMMON CONFIGURATIONS. ELECTRICIAN TO DETERMINE EXACT REQUIREMENTS IN THE FIELD PER CURRENT NEC AND LOCAL CODES AND MAKE APPROPRIATE ADJUSTMENTS.
2. LABELING REQUIREMENTS BASED ON THE 2017 NATIONAL ELECTRIC CODE, OSHA STANDARD 19010.145, ANSI Z535.
3. MATERIAL BASED ON THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.
4. LABELS TO BE OF SUFFICIENT DURABILITY TO WITHSTAND THE ENVIRONMENT INVOLVED [NEC 110.21]
5. LABELS TO BE A MINIMUM LETTER HEIGHT OF 3/8", WHITE ON RED BACKGROUND; REFLECTIVE, AND PERMANENTLY AFFIXED [IFC 805.11.1.1]

POWER OPTIMIZER CHART

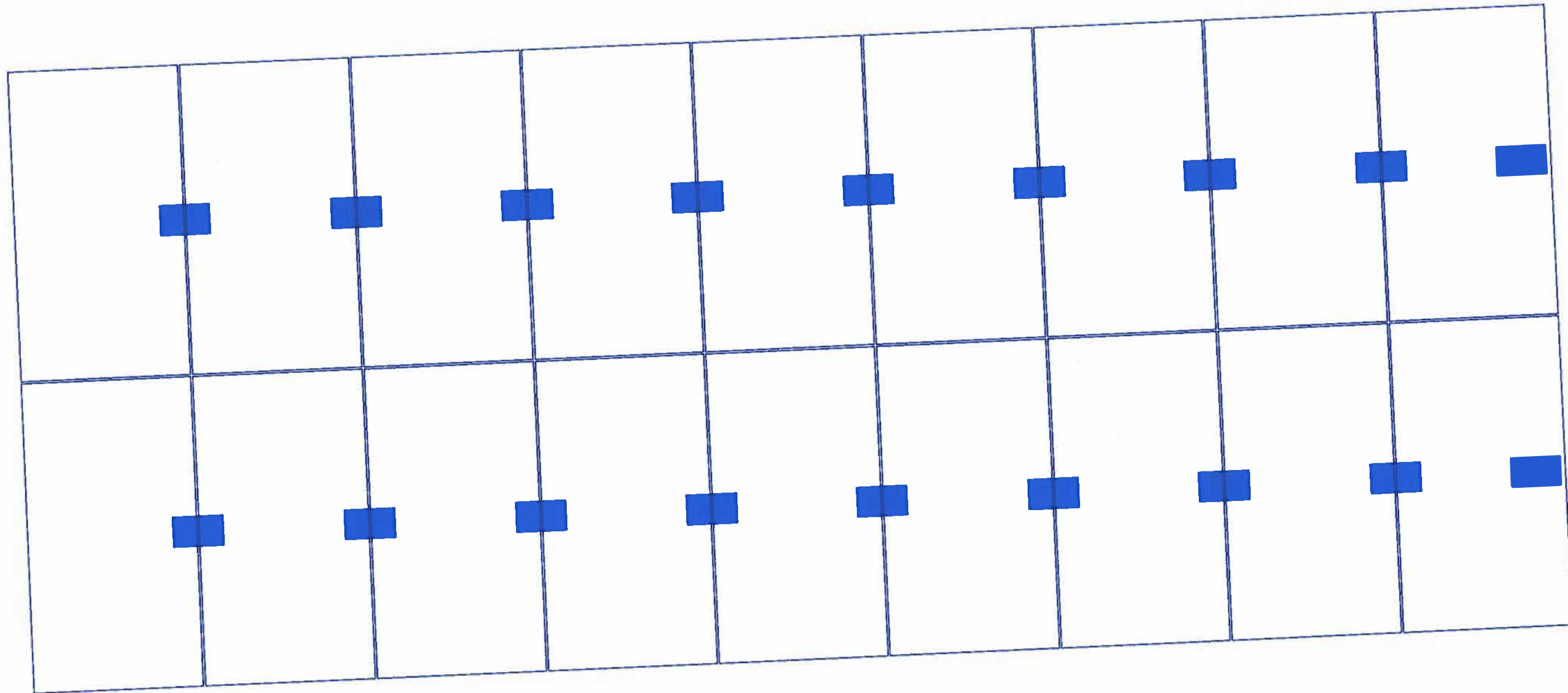


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LIMITLESS SOLAR

30505 ANDERSEN CT.
WIXOM, MI 48393



REVISIONS

DESCRIPTION	DATE	REV

DATE: 12/07/2021

PROJECT NAME & ADDRESS

**MICHAEL BROWN
RESIDENCE**
4655 SWEET RD,
HOWELL, MI 48843

DRAWN BY

ESR

SHEET NAME

**MICRO INVERTER
CHART**

SHEET SIZE

**ANSI B
11" X 17"**

SHEET NUMBER

PV-10



Q. PEAK DUO L-G8.2

415-430

ENDURING HIGH PERFORMANCE



- Q. ANTUM TECHNOLOGY: LOW LEVELISED COST OF ELECTRICITY**
Higher yield per surface area, lower BOS costs, higher power classes, and an efficiency rate of up to 20.3%.
- INNOVATIVE ALL-WEATHER TECHNOLOGY**
Optimal yields, whatever the weather with excellent low-light and temperature behaviour.
- ENDURING HIGH PERFORMANCE**
Long-term yield security with Anti-LID Technology, Anti PID Technology¹, Hot-Spot Protect and Traceable Quality Tra.Q™.
- EXTREME WEATHER RATING**
High-tech aluminium alloy frame, certified for high snow (5400Pa) and wind loads (2400Pa).
- A RELIABLE INVESTMENT**
Inclusive 12-year product warranty and 25-year linear performance warranty².
- STATE OF THE ART MODULE TECHNOLOGY**
Q. ANTUM DUO combines cutting edge cell separation and innovative 12-busbar design with Q. ANTUM Technology.

¹ APT test conditions according to IEC/TS 62804-1:2015, method B (-1500V, 168h)
² See data sheet on rear for further information

THE IDEAL SOLUTION FOR:

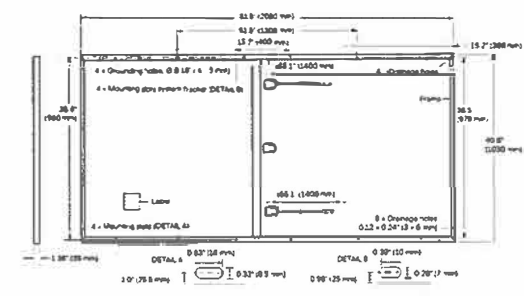
- Rooftop arrays on commercial/industrial buildings
- Ground-mounted solar power plants

Engineered in Germany



MECHANICAL SPECIFICATION

Format	81.9 in × 40.6 in × 1.38 in (including frame) (2080 mm × 1030 mm × 35 mm)
Weight	55.1 lbs (25.0 kg)
Front Cover	0.13 in (3.2 mm) thermally pre-stressed glass with anti-reflection technology
Back Cover	Composite film
Frame	Anodized aluminum
Cell	6 × 24 monocrystalline Q. ANTUM solar half cells
Junction Box	2.09-3.98 in × 1.26-2.36 in × 0.59-0.71 in (53-101 mm × 32-60 mm × 15-18 mm), IP67, with bypass diodes
Cable	4 mm ² Solar cable, (+) ≥ 55.1 in (1400 mm), (-) ≥ 55.1 in (1400 mm)
Connector	Siubli MC4-Evo2, Hanwha Q CELLS HQC4, Amphenol UTX, Renhe 05-8, JMTHY JM801A; Tongling Cable01S-F, IP68 or Friends PV2e; IP67

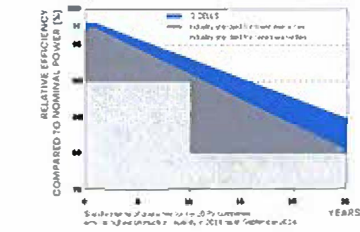


ELECTRICAL CHARACTERISTICS

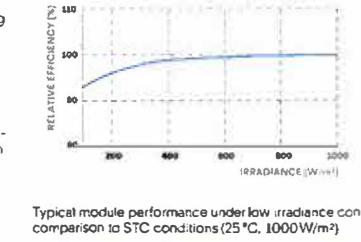
POWER CLASS	415	420	425	430	
MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC ¹ (POWER TOLERANCE +5W/-0W)					
Power at MPP ¹	P_{MPP} [W]	415	420	425	430
Short Circuit Current ¹	I_{SC} [A]	10.69	10.74	10.78	10.83
Open Circuit Voltage ¹	V_{OC} [V]	48.59	48.84	49.09	49.33
Current at MPP	I_{MPP} [A]	10.18	10.22	10.27	10.31
Voltage at MPP	V_{MPP} [V]	40.77	41.08	41.39	41.70
Efficiency ¹	η [%]	≥ 19.4	≥ 19.6	≥ 19.8	≥ 20.1
MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT ²					
Power at MPP	P_{MPP} [W]	310.8	314.5	318.3	322.0
Short Circuit Current	I_{SC} [A]	8.61	8.65	8.69	8.72
Open Circuit Voltage	V_{OC} [V]	45.82	46.05	46.29	46.52
Current at MPP	I_{MPP} [A]	8.01	8.05	8.08	8.12
Voltage at MPP	V_{MPP} [V]	38.79	39.09	39.38	39.67

¹ Measurement tolerances $P_{MPP} \pm 3\%$; I_{SC} ; $V_{OC} \pm 5\%$ at STC; 1000 W/m², 25 ± 2 °C, AM 1.5 according to IEC 60904-3 • 800 W/m², NMOT, spectrum AM 1.5

Q CELLS PERFORMANCE WARRANTY



PERFORMANCE AT LOW IRRADIANCE



TEMPERATURE COEFFICIENTS

Temperature Coefficient of I_{SC}	α [%/K]	+0.04	Temperature Coefficient of V_{OC}	β [%/K]	-0.27
Temperature Coefficient of P_{MPP}	γ [%/K]	-0.35	Normal Module Operating Temperature	NMOT [°F]	109 ± 5.4 (43 ± 3 °C)

PROPERTIES FOR SYSTEM DESIGN

Maximum System Voltage V_{S-1}	[V]	1500 (IEC)/1500 (UL)	Safety Class	II
Maximum Series Fuse Rating	[A DC]	20	Fire Rating based on ANSI/UL 1703	C (IEC)/TYPE 1 (UL)
Max. Design Load, Push/Pull ¹	[lbs/ft ²]	75 (3600Pa)/33 (1600Pa)	Permitted Module Temperature on Continuous Duty	-40 °F up to +185 °F (-40 °C up to +85 °C)
Max. Test Load, Push/Pull ¹	[lbs/ft ²]	113 (5400Pa)/50 (2400Pa)		

¹ See Installation Manual

QUALIFICATIONS AND CERTIFICATES

UL 1703, CE-compliant, IEC 61215:2016, IEC 61730:2016
Application Class II, U.S. Patent No. 9,993,215 (solar cells)

PACKAGING INFORMATION

Number of Modules per Pallet	29
Number of Pallets per 53' Trailer	26
Number of Pallets per 40' HC-Container	22
Pallet Dimensions (L × W × H)	84.6 × 45.3 × 48.0 in (2150 × 1150 × 1220 mm)
Pallet Weight	1717 lbs (779 kg)

Note: Installation instructions must be followed. See the installation and operating manual or contact our technical service department for further information on approved installation and use of this product.

Hanwha Q CELLS America Inc.
400 Spectrum Center Drive, Suite 1400, Irvine, CA 92618, USA | TEL: +1 949 748 59 96 | EMAIL: inquiry@us.q-cells.com | WEB: www.q-cells.us

Building a better tomorrow

LIMITLESS SOLAR

30505 ANDERSEN CT.
WIXOM, MI 48393

REVISIONS

DESCRIPTION	DATE	REV

DATE: 12/07/2021

PROJECT NAME & ADDRESS

MICHAEL BROWN RESIDENCE

**4655 SWEET RD,
HOWELL, MI 48843**

DRAWN BY

ESR

SHEET NAME

EQUIPMENT SPECIFICATION

SHEET SIZE

**ANSI B
11" X 17"**

SHEET NUMBER

PV-11

Specifications subject to technical changes © Q CELLS Q. PEAK DUO L-G8.2 415-430 2019-07 Rev01, NA

GENERAC

SnapRS™

Inline Disconnect Switch
Model APKE00011



Generac SnapRS are a simple way to satisfy rapid shutdown compliance for solar + storage systems. Generac SnapRS are NEC 2017/2020 690.12 compliant, don't require any extra hardware to mount, and need no pairing or fussy digital communications

FEATURES & BENEFITS

- Fast, easy, and simple to install
- One SnapRS device per PV module
- Achieves PVRSS Compliance
- Low cost, high efficiency solution

SYSTEM DESIGN

Snap a Generac SnapRS disconnect device (RS) to the negative lead (-) of each module in the solar array for simple module-level rapid shutdown compliance. SnapRS devices isolate array voltage when a rapid shutdown command is given by a connected PWRcell™ Inverter. When signaled by the inverter, SnapRS units isolate each PV module in the array, reducing array voltage to <80V in seconds.

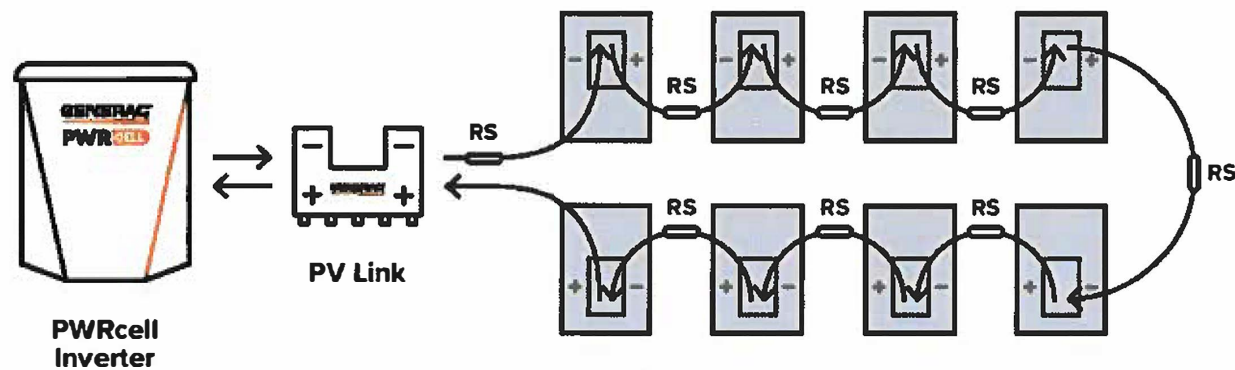


Diagram is applicable for most 60 cell PV modules. Modules with higher cell count may require a different arrangement. Contact Generac for more details.

Specifications

SnapRS™ (APKE00011)	
PV MODULE MAX VOC:	75 V
EFFICIENCY:	99.8%*
MAX INPUT CURRENT:	13 A
SHUTDOWN TIME:	< 10 Seconds
ENCLOSURE RATING:	NEMA 6P
OPERATING TEMPERATURE - FAHRENHEIT (CELSIUS):	-40 to 158 °F (-40 to 70 °C)
CERTIFICATIONS:	UL1741
WEIGHT - LB (KG):	0.17 (0.08)
DIMENSIONS, L x W x H - IN (MM):	7" x 1" x 1" (177.8 x 25.4 x 25.4)
WARRANTY:	25 Years

*When used with a 50V panel

Connect one SnapRS device to the negative lead of each PV module in the PV Link controlled array for complete PV Rapid shutdown performance



Generac Power Systems, Inc.
S45 W29290 Hwy. 59, Waukesha, WI 53189
www.Generac.com | 888 GENERAC (436 3722)

A0000528183 REV B

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GENERAC


Limitless Solar
Building a better tomorrow

LIMITLESS SOLAR
30505 ANDERSEN CT.
WIXOM, MI 48393

REVISIONS		
DESCRIPTION	DATE	REV

DATE 12/07/2021

PROJECT NAME & ADDRESS

MICHAEL BROWN
RESIDENCE
4655 SWEET RD,
HOWELL, MI 48843

DRAWN BY

ESR

SHEET NAME
**EQUIPMENT
SPECIFICATION**

SHEET SIZE

**ANSI B
11" X 17"**

SHEET NUMBER

PV-12

GENERAC

PV Link™

2500W MPPT Substring Optimizer
Model: APKE00010

PV Link is the simple solar optimizer for quick installation and long-lasting performance. Connect PV modules to each PV Link to overcome shading and challenging roof lines.

FEATURES & BENEFITS

- Fast, simple installation
- Lower failure risk than module-level optimizers
- NEC 2017 rapid shutdown compliant with SnapRS™
- Quick connections with MC4 connectors
- Exports up to 2500W
- Compatible with PWRcell™ Inverters
- Cost-effective solution for high-performance PV
- Ground-fault protection

SINGLE-STRING PV ARRAY WITH SnapRS DEVICES

Where PV module-level rapid shutdown is required (NEC 690.12), a SnapRS device (RS) is installed to negative (-) lead of each PV module.

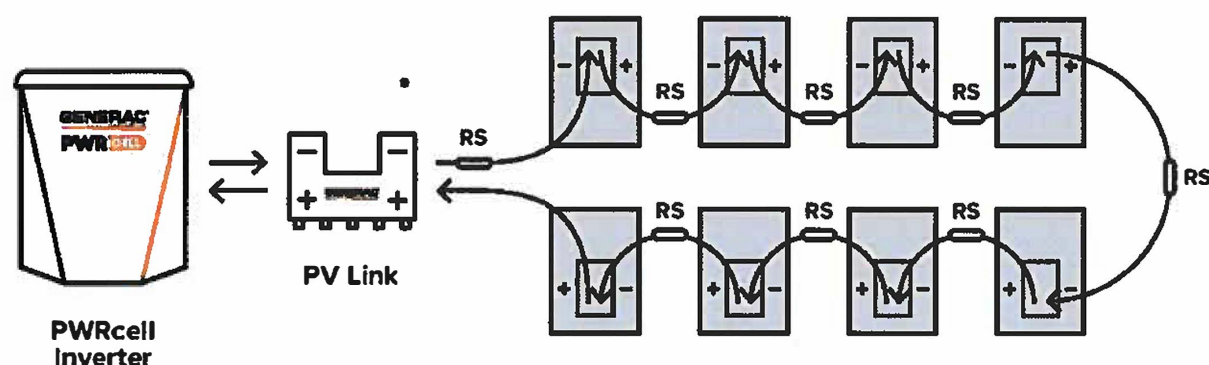
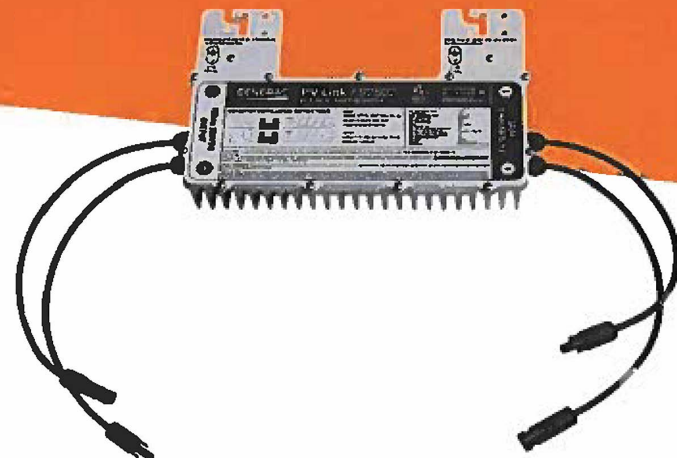


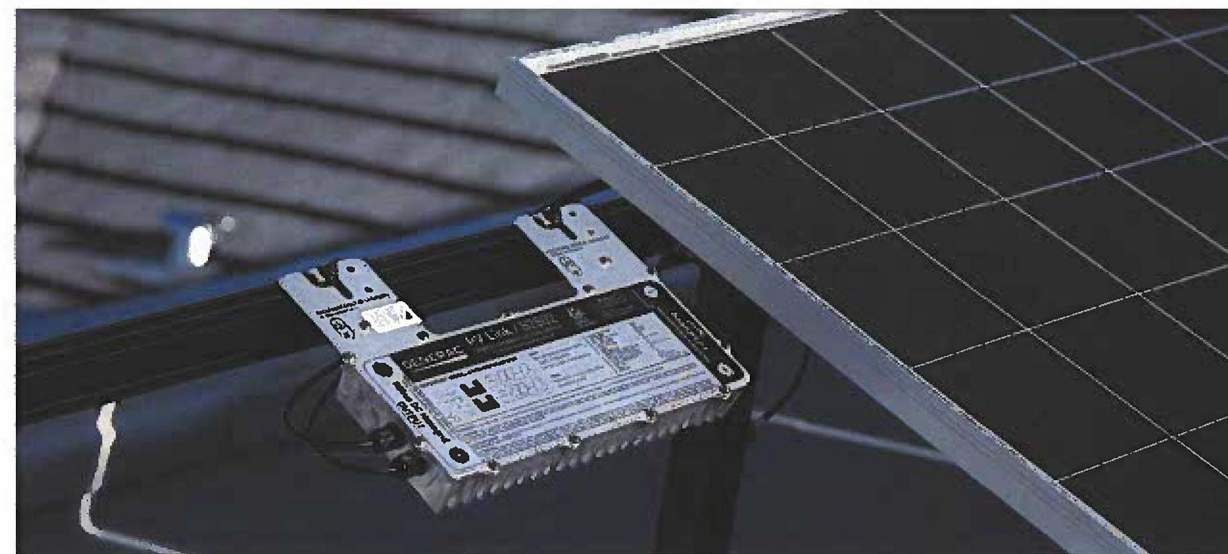
Diagram is applicable for most 60 cell PV modules. Modules with higher cell count may require a different arrangement. Contact Generac for more details.



Specifications

PV Link™ (APKE00010)	
RATED POWER*:	2500W
PEAK EFFICIENCY:	99%
MPPT VOLTAGE RANGE:	60-360 VMP
MAX INPUT VOLTAGE:	420 VOC; max when cold
MAX OUTPUT:	420 VDC
NOMINAL OUTPUT (REbus™):	380 VDC
MAX OUTPUT CURRENT (CONTINUOUS):	8 A
MAX OUTPUT CURRENT (FAULT):	10 A
MAX INPUT CURRENT (CONTINUOUS):	13 A @ 50°C, 10 A @ 70°C
MAX INPUT SHORT CIRCUIT CURRENT (ISC):	18 A
STANDBY POWER:	< 1 W
PROTECTIONS:	Ground-fault, Arc-fault (Arc-fault Type 1 AFCI, Integrated), PVRSE
MAX OPERATING TEMP. FAHRENHEIT (CELSIUS):	158 °F (70 °C)
SYSTEM MONITORING:	PWRview™ Web Portal and Mobile App
ENCLOSURE:	Type 3R
WEIGHT - LB (KG):	7.3 lb (3.3 kg)
DIMENSIONS, L x W x H - IN (MM):	15.4" x 2" x 9.6" (391.2 x 50.8 x 243.8)
COMPLIANCE:	UL 1741, CSA 22.2
WARRANTY:	25 Years

*PV Link can tolerate higher than rated power at its input if Max Input Voltage and Short Circuit Current specifications are not exceeded



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**MICHAEL BROWN
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DRAWN BY

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SHEET NAME
**EQUIPMENT
SPECIFICATION**

SHEET SIZE

**ANSI B
11" X 17"**

SHEET NUMBER

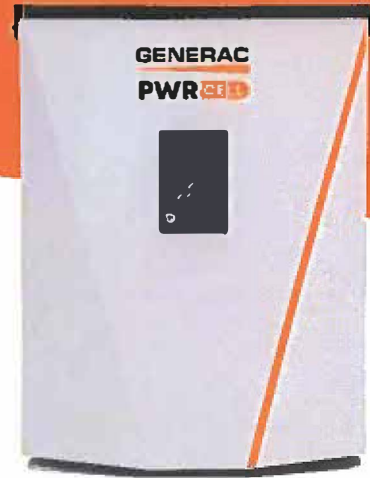
PV-13

GENERAC

PWRCELL

7.6kW 1Ø PWRcell Inverter with CTs
Model #: X7602 (Ordering SKU: APKE00014)

11.4 kW 3Ø PWRcell Inverter with CTs
Model #: X11402 (Ordering SKU: APKE00013)



Solar + storage is simple with the Generac PWRcell™ Inverter. This bi-directional, REbus™-powered inverter offers a simple, efficient design for integrating smart batteries with solar. Ideal for self-supply, backup power, zero-export and energy cost management, the PWRcell Inverter is the industry's most feature-rich line of inverters, available in single-phase and three-phase models.

FEATURES & BENEFITS

- Single inverter for grid-tied solar with smart battery integration
- Simplified system design: No autotransformer or battery inverter needed
- User-selectable modes for backup power, self-supply, time-of-use, zero-import and export limiting
- Free system monitoring included via PWRview™ Web Portal and Mobile App

Specifications

FEATURES AND MODES

ISLANDING*:	Yes
GRID SELL:	Yes
SELF CONSUMPTION:	Yes
PRIORITIZED CHARGING FROM RENEWABLES:	Yes
GRID SUPPORT - ZERO EXPORT:	Yes
ESS PCS OPERATION MODES (IMPORT ONLY, EXPORT ONLY):	Yes

ADDITIONAL FEATURES

SUPPORTED COMMUNICATION INTERFACES:	REbus™, CANbus, Ethernet
SYSTEM MONITORING:	PWRview™ Web Portal and Mobile App
BACKUP LOADS DISCONNECT*:	Yes, 50 A Circuit Breaker
INVERTER BYPASS SWITCH:	Automatic
WARRANTY:	10 Years

STANDARDS COMPLIANCE

SAFETY:	UL 1741 SA, CSA 22.2, UL 1998
GRID CONNECTION STANDARDS:	IEEE 1547, Rule 21, Rule 14H, CSIP, UL 1741 PCS CRD (Import Only, Export Only)
EMISSIONS:	FCC Part 15 Class B

DIMENSIONS AND INSTALLATION SPECIFICATIONS

ENCLOSURE KNOCKOUTS - QTY, SIZE - IN (MM):	6 x Combo 3/4" x 1" (19 x 25.4) 7 x Combo 1/2" x 3/4" (12.7 x 19)
DIMENSIONS L x W x H - IN (MM):	24.5" x 19.25" x 8" (622.3 x 488.9 x 203.2)
WEIGHT - LB (KG):	62.7 (28.4)
COOLING:	Forced convection
AUDIBLE NOISE:	< 40 dBA
OPERATING TEMPERATURE - FAHRENHEIT (CELSIUS):	-4 to 122 °F (-20 to 50 °C)*
ENCLOSURE TYPE:	Type 3R

INSTALLATION GUIDELINES

BATTERY TYPES SUPPORTED:	PWRcell™ Battery
MODULE STRING SIZE PER PV LINK OPTIMIZER:	Varies, refer to PV Link Installation Manual
MAXIMUM RECOMMENDED DC POWER FROM PV [†] :	10 kW (1Ø), 15 kW (3Ø)

*3Ø inverters offer islanding for 1Ø loads.
[†]Includes ambient temperature rising from inverter operation. Reduced power at extreme temperatures.
 Specifications listed in this document are achieved with firmware version 13310 or greater. Confirm inverter has latest firmware to ensure full performance.
[‡]Values provided for PV-only or small storage systems. Additional PV power is permissible if sufficient battery storage capacity is installed.

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 30505 ANDERSEN CT.
 WIXOM, MI 48393

REVISIONS

DESCRIPTION	DATE	REV

DATE:12/07/2021

PROJECT NAME & ADDRESS

**MICHAEL BROWN
 RESIDENCE**
 4655 SWEET RD,
 HOWELL, MI 48843

DRAWN BY
ESR

SHEET NAME
**EQUIPMENT
 SPECIFICATION**

SHEET SIZE

**ANSI B
 11" X 17"**

SHEET NUMBER
PV-14

AC OUTPUT/GRID-TIE	MODEL X7602	MODEL X11402
CONT. GRID-TIED AC POWER @ 50 °C (122°F):	7600 W	11400 W
AC OUTPUT VOLTAGE	120/240, 1Ø VAC	120/208, 3Ø VAC
AC FREQUENCY:	60 Hz	
MAXIMUM CONTINUOUS OUTPUT CURRENT:	32 A, RMS	
GROUND-FAULT ISOLATION DETECTION:	Included	
CHARGE BATTERY FROM AC:	Yes	
THD (CURRENT):	< 2%	
TYPICAL NIGHTTIME POWER CONSUMPTION:	< 7 W	

DC INPUT	MODEL X7602	MODEL X11402
DC INPUT VOLTAGE RANGE:	360-420 VDC	
NOMINAL DC BUS VOLTAGE:	380 VDC	
DC DISTRIBUTION INPUT BREAKERS:	4 x 2P30 A	
MAX INPUT CURRENT PER DC INPUT:	30 A	
REVERSE-POLARITY PROTECTION:	Yes	
TRANSFORMERLESS, UNGROUNDED:	Yes	
TYPICAL NIGHTTIME POWER CONSUMPTION:	< 7 W	
DC BUS EXPORT FUSES (-/-):	40 A	
2-POLE DISCONNECTION:	Yes	

AC OUTPUT/ISLANDED	MODEL X7602	MODEL X11402
MAX. CONT. ISLANDED AC POWER WITHOUT AN EXTERNAL TRANSFER SWITCH [†] :	7600 W	
MAX. CONT. ISLANDED AC POWER W/ EXTERNAL TRANSFER SWITCH AND SINGLE MODULE BATTERY CABINET [‡] :	9000 W	
MAX. CONT. ISLANDED AC POWER W/ EXTERNAL TRANSFER SWITCH AND 2 BATTERY CABINETS (8 MODULES MINIMUM) [‡] :	11000 W	9600 W/ 11000 W [†]
PEAK MOTOR STARTING CURRENT (2 SEC):	55 A, RMS	
AC BACKUP OUTPUT VOLTAGE:	120/240, 1Ø VAC	120/208, 1Ø VAC
AC FREQUENCY:	60 Hz	
THD (VOLTAGE):	< 2%	
ALLOWABLE SPLIT PHASE IMBALANCE:	Up to 30%	

EFFICIENCY	MODEL X7602	MODEL X11402
PEAK EFFICIENCY:	97.3%	97.7%
CEC WEIGHTED EFFICIENCY:	96.5%	97.5%

[†]When islanded, continuous power output is restricted to 7.6kW unless backup power is routed through an external transfer switch.
[‡]Peak performance, values provided for 40°C (104°F).
[‡]In Island mode X11402 protected loads only supply 2 phases 120 VAC L-N, 208 L-L which results in lower power than in grid tied 3 phase mode. The low value of the range is for full L-L loading while high value of the range is full L-N loading

GENERAC

PWRCELL

OUTDOOR RATED BATTERY

PWRcell Outdoor Rated Battery Cabinet (Ordering SKU APKE00028)

3.0 kWh PWRcell DCB Battery Module
Model # BJ-DCB05ZK8G (Ordering SKU G0080040)

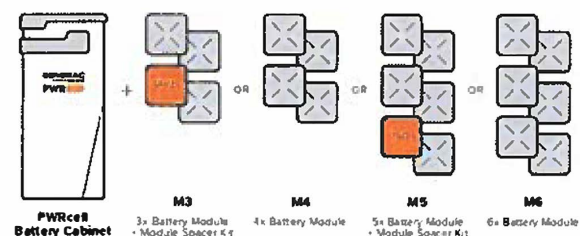
3.0 kWh PWRcell EX Battery Module
Model # G0080001

The PWRcell™ Outdoor Rated (OR) Battery Cabinet is a Type 3R smart battery enclosure that allows for a range of configurations to suit any need, small or large, indoor or outdoor. No other smart battery offers the power and flexibility of PWRcell.

PWRcell BATTERY CABINET DESIGN

The PWRcell Battery Cabinet allows system owners the flexibility to scale from an economical 9kWh to a massive 18kWh by installing additional battery modules to the PWRcell Battery Cabinet. An existing PWRcell Battery Cabinet can be upgraded with additional modules. Use the graphic below and the chart on the back of this sheet to understand what components you need for your chosen PWRcell configuration.

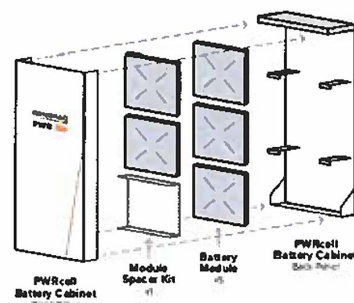
BATTERY CONFIGURATION GUIDE



FEATURES & BENEFITS

- Connect 2 PWRcell Battery Cabinets to a single PWRcell Inverter for up to 36kWh of storage
- Best-in-class battery backup power
- Plug-and-play with PWRcell Inverter and PV Link™
- Time-of-use (TOU) and zero-export ready
- Residential and commercial application ready.
- 3R-rated cabinet allows for outdoor or indoor installation
- Additional mounting hardware for outdoor installations comes standard to provide additional ground clearance and support

BATTERY CABINET ASSEMBLY



Specifications

PWRcell™ BATTERY CONFIGURATIONS

BATTERY MODULE SERIES:	3.0 kWh DCB / 3.0 kWh EX			
BATTERY MODULES:	3	4	5	6
USABLE ENERGY:	9 kWh	12 kWh	15 kWh	18 kWh
NOMINAL CONT. AC POWER ¹ :	3.4 kW	4.5 kW	5.6 kW	6.7 kW
MAX. CONT. AC POWER ² :	4.5 kW	6 kW	7.5 kW	9 kW
NOMINAL CONT. DC (CHARGE/DISCHARGE) - A:	11.6	15.5	19.4	23.3
PEAK MOTOR STARTING CURRENT (2 SEC) - A, RMS:	25	33	42	50
REbus™ VOLTAGE - INPUT/OUTPUT:	360-420 VDC			
NOMINAL VOLTAGE:	380 VDC			
DC-DC ROUND-TRIP EFFICIENCY:	96.5%			
MAXIMUM AMBIENT OPERATING TEMPERATURE:	14 TO 122 °F (-10 TO 50 °C)			
OPTIMAL AMBIENT OPERATING TEMPERATURE:	41 TO 104 °F (5 TO 40 °C)			
MAXIMUM INSTALLATION ALTITUDE - FT (M):	9834 (3000)			
DIMENSIONS, L x W x H - IN (MM):	22" x 10" x 68" (559 x 254 x 1727)			
WEIGHT, ENCLOSURE - LB (KG):	115 (52)			
WEIGHT, INSTALLED W/ DCB MODULES - LB (KG):	280 (127)	335 (152)	390 (177)	445 (202)
WEIGHT, INSTALLED W/ EX MODULES - LB (KG):	287 (130)	344 (156)	401 (182)	459 (208)
WEIGHT, ACCESSORY MOUNTING HARDWARE - LB (KG):	21 (10)			
ENCLOSURE TYPE:	Type 3R			
WARRANTY - LI-ION MODULES:	10 Years, (7.56MWh)			
WARRANTY - ELECTRONICS AND ENCLOSURE:	10 Years			
COMMUNICATION PROTOCOL:	REbus™ DC Nanogrid™			
SEISMIC RATING:	IEEE 693-2018 (HIGH)			
COMPLIANCE:	UL 9540, UL 1973, UL 1642, CSA 22.2 #107.1			

¹Average AC power over a complete discharge cycle. ²Peak Performance, values provided for 40°C (104°F).
Note: Charge/discharge rate may be reduced at temperature extremes

PWRcell ACCESSORIES

Inside of the PWRcell Battery Cabinet, battery modules are stacked two deep on three levels, allowing for up to six modules to be connected in series. You can upgrade an existing PWRcell Battery Cabinet by adding Battery Modules and a Module Spacer (APKE00008). A Module Spacer is only required for battery configurations with an odd number of modules (i.e. 3 or 5).

Generac offers a convenient PWRcell Battery Upgrade Kit (APKE00009) to help replace lost or misplaced hardware.

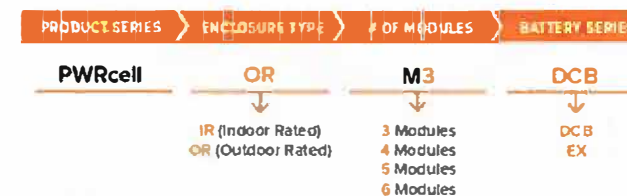
Note: When adding modules, be sure all modules within an individual cabinet are of the same series type (i.e., EX or DCB).

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PWRcell MODEL BUILDER



Sample Model Name: PWRcell OR M3 DCB

GENERAC

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WIXOM, MI 48393

REVISIONS

DESCRIPTION	DATE	REV

DATE 12/07/2021

PROJECT NAME & ADDRESS

MICHAEL BROWN
RESIDENCE
4655 SWEET RD,
HOWELL, MI 48843

DRAWN BY

ESR

SHEET NAME
EQUIPMENT SPECIFICATION

SHEET SIZE

ANSI B
11" X 17"

SHEET NUMBER

PV-15



GO BIG ON TURF

SunTurf™ Ground Mount System



SunModo offers the next generation Ground Mount System with SunTurf™. The streamlined design combines the strength of Helio Rails with steel pipes to create the perfect ground mount solution.

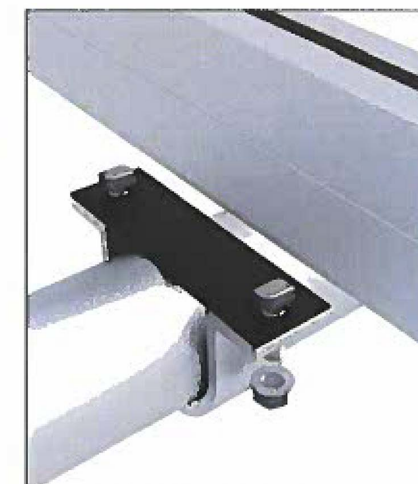
SunTurf™ is ideal for solar installers looking for a durable and cost-effective system that can accommodate a wide variety of soil conditions.

The SunTurf™ Ground Mount Advantage

- ✓ Easily scalable from kilowatts to multimegawatts PV Arrays.
- ✓ Foundation design solution for every soil condition.
- ✓ Online configuration tool available to streamline design process.
- ✓ Components optimized for strength, durability and fast installation.
- ✓ UL 2703 Listed by Intertek.

Key Features of SunTurf™ Ground Mount System

SunTurf™ Ground Mount System easily integrate Helio Rails with Schedule 40 steel pipes. No drilling is required to attach the aluminum rails to the horizontal pipe. Optional bracing can provide additional structural rigidity for sites with high snow or wind load conditions. Anchor any ground mount installation using one of our fountain types including helical piles, precast ballasts and concrete piers.



Augers and Ground Screws

Our augers are suitable for use in weak to moderate strength soils and areas with a high-water table. Our ground screws are ideal for use in hard packed earth or soils with large amounts of cobble and gravel.



Ground Screw



Earth Auger

Technical Data

Application	Ground Mount
Material	High grade aluminum, galvanized steel and 304 stainless steel hardware
Module Orientation	Portrait and Landscape
Tilt Angle	Range between 10 to 50 degrees
Foundation Types	Post in concrete, helical earth auger, ground screw anchor and ballast
Structural Integrity	Stamped engineering letters available
Certificate	UL2703 listed by ETL
Warranty	25 years

SunModo, Corp. Vancouver, WA., USA • www.sunmodo.com • 360.844.0048 • info@sunmodo.com



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HOWELL, MI 48843

DRAWN BY

ESR

SHEET NAME

EQUIPMENT
SPECIFICATION

SHEET SIZE

ANSI B
11" X 17"

SHEET NUMBER

PV-16



Scott E. Wyssling, PE, PP, CME

Wyssling Consulting
76 North Meadowbrook Drive
Alpine, UT 84004
office (201) 874-3483
swyssling@wysslingconsulting.com

December 8, 2021

Limitless Solar
30505 Andersen Court
Wixom, MI 48393

Re: Engineering Services
Brown Residence
4655 Sweet Road, Howell MI
7.740 kW System

To Whom it May Concern:

Pursuant to your request, we have reviewed the following information regarding ground mount solar panel installation at the above referenced location:

1. Structural drawings/design prepared by EnergyScape identifying specific racking layout, footing design and components for the proposed ground mount system.
2. Design drawings of the proposed system including a site plan, and details for the solar panels. This information was prepared by EnergyScape and will be utilized for approval and construction of the proposed system.

Based on our review of the Photovoltaic Array installed at 2 modules high and 9 modules wide. The PV array shall have a screw/auger spacing of 7'-1" max east/west and 7'-6" max north/south. Based on a wind speed of 115 mph with a ground snow load of 25 PSF and Exposure C, it was determined that the minimum required depth of the auger/screw shall be 63" inches below grade. The augur/screw shall be tested in the field after installation to provide minimum 2,000 lbs pull out and this information shall be provided to this office.

Based on the above evaluation, it is the opinion of this office that with appropriate panel anchors being utilized the roof system will adequately support the additional loading imposed by the solar panels. This evaluation is in conformance with the 2015 International Residential Code, current industry and standards, and based on information supplied to us at the time of this report.

This certification is specific to the screw/auger for the solar system and does not include the racking system. Racking system and components designed and specified by the manufacturer. (SunModo).

Should you have any questions regarding the above or if you require further information do not hesitate to contact me.

Very truly yours,

Scott E. Wyssling, PE
Michigan License No. 6201068147



Date Signed 12/8/21



CODE ENFORCEMENT

February 14, 2024

2911 Dorr Road
Brighton, MI 48116
810.227.5225
810.227.3420 fax
genoa.org

Mr. & Mrs. Brown
4655 Sweet Rd.
Howell, MI 48843

Dear: Mr. & Mrs. Brown

Livingston County Building Department informed us of the final inspection of the ground mounted solar array. Unfortunately, the solar array was not installed in accordance to the Genoa Township ordinances or what is was approved on the original site plan. The original site plan has been attached along with a copy of the Genoa Township Solar ordinance and a copy of your site plan and where the solar array can be placed.

We are interested in further discussing these issues with you and working with you to bring the property into compliance with the Zoning Ordinance. Please contact the Township within seven (7) days of this notice to set up a timeframe to have the solar array moved to a place that is in accordance with the Genoa Township Ordinance.

Sincerely,

Sharon Stone
Ordinance Officer
Genoa Township

SUPERVISOR

Bill Rogers

CLERK

Paulette A. Skolarus

TREASURER

Robin L. Hunt

TRUSTEES

Jean W. Ledford

H. James Mortensen

Terry Craft

Diana Lowe

MANAGER

Kelly VanMarter

A photograph of a house with a yellow vertical line and text annotations indicating setbacks for an array. The house is a two-story structure with a dark roof and light-colored siding. The yellow line is positioned to the left of the house. The text 'Array' is written in yellow above the line. Below it, '30 FT off property line' is written in yellow. Three 'xxx' characters are written in yellow along the line. Further down, '200 FT away from the rear' is written in red. The background shows trees and a driveway.

Array

30 FT off property line

xxx

xxx

xxx

200 FT away from the rear

Site Plan For P21-246

Sharon Stone-Francis

From: Sharon Stone-Francis
Sent: Tuesday, March 12, 2024 9:41 AM
To: 'eric@ericstammteam.com'
Subject: 4655 Sweet Road
Attachments: DOC.pdf

Good Morning:

I thought I would make you aware of a violation on the property that Genoa Township has made the owner of 4655 Sweet Road aware of but have not heard back from.

The violation would roll over to the new owner if the property is sold and the violation is not taken care of.

I have attached all the information, including the violation letter that was written back in February.

Please let me know if you have any questions or concerns.

Sharon Stone
Building and Zoning Compliance
Genoa Charter Township
2911 Dorr Road, Brighton, Michigan 48116
Phone: (810) 227-5225, Fax: (810) 227-3420
E-mail: Sharon@genoa.org, Url: www.genoa.org



Grantor	Grantee	Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	Verified By	Prcnt. Trans.
DOUGLAS ARTHUR & SUSAN	BROWN MICHAEL & CINDY	70,000	08/26/2020	MLC	16-LC PAYOFF	2020R-029229	BUYER/SELLER	100.0
KYTASTY JOHN	DOUGLAS ARTHUR & SUSAN	52,500	05/05/2017	WD	03-ARM'S LENGTH	2017R-014370	BUYER/SELLER	100.0
KYTASTY, PETER & LYDIA	KYTASTY JOHN	0	03/15/2007	QC	03-ARM'S LENGTH	2007R-010993	BUYER/SELLER	100.0

Property Address	Class: RESIDENTIAL-IMPROV	Zoning: CE	Building Permit(s)	Date	Number	Status
4655 SWEET RD	School: HOWELL PUBLIC SCHOOLS		Other	12/16/2021	P21-246	7 FINAL BL
	P.R.E. 100% 11/03/2021		Deck	08/13/2021	P21-161	7 FINAL BL
Owner's Name/Address	MAP #: V24-11		Residential New Constructi	09/30/2020	P20-165	7 FINAL BL
BROWN MICHAEL & CINDY 4655 SWEET RD HOWELL MI 48843	2025 Est TCV Tentative (24,800 MCL 211					

X Improved		Vacant	Land Value Estimates for Land Table 4500.HOWELL M& B					
Public Improvements			* Factors *					
Dirt Road			Description	Frontage	Depth	Front Depth	Rate %Adj. Reason	Value
Gravel Road			LAND TABLE A			1.000 Acres	62,000 100	62,000
Paved Road					1.00 Total Acres	Total Est. Land Value =		62,000

Tax Description	Land Improvement Cost Estimates			
SEC. 9 T2N, R5E, BEG. AT S. E. COR. OF W 1/2 OF SE 1/4 OF SEC. TH N 311.2 FT, W 140 FT, S 311.2 FT, E 140 FT TO POB, ALSO ALL LAND N OF DESCRIBED PARCEL & S OF LAKE LOCATED TO N OF DESCRIBED PARCEL	Description	Rate	Size % Good	Cash Value
	Residential Local Cost Land Improvements			
	Description	Rate	Size % Good	Cash Value
	SOLAR PANELS	2,750.00	18 50	24,750

Comments/Influences	Total Estimated Land Improvements True Cash Value =			
	24,750			

Topography of Site	Year	Land Value	Building Value	Assessed Value	Board of Review	Tribunal/Other	Taxable Value
Level	2025	Tentative	Tentative	Tentative			Tentative
Rolling	2024	31,000	212,400	243,400			224,350C
Low	2023	28,500	183,100	211,600			204,465C
High	2022	28,500	164,800	193,300			193,300S

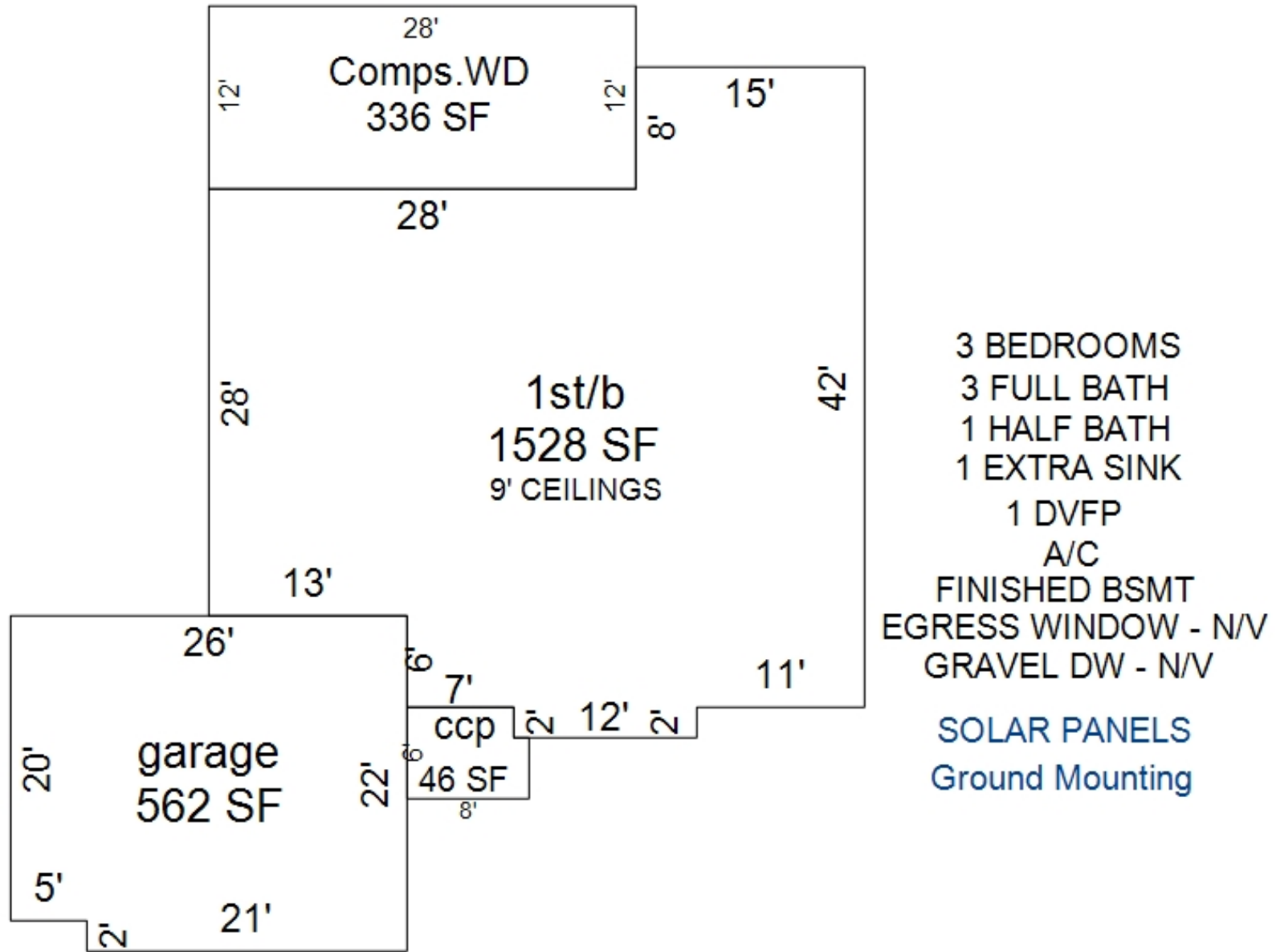


Who	When	What	Year	Land Value	Building Value	Assessed Value	Board of Review	Tribunal/Other	Taxable Value
4711-09-400-004	10/13/2021	JB 08/09/2023 REVIEWED R	2024	31,000	212,400	243,400			224,350C
The Equalizer. Copyright (c) 1999 - 2009.		LG 06/27/2022 INSPECTED	2023	28,500	183,100	211,600			204,465C
Licensed To: Township of Genoa, County of Livingston, Michigan		JB 10/28/2021 INSPECTED	2022	28,500	164,800	193,300			193,300S

*** Information herein deemed reliable but not guaranteed***

Building Type		(3) Roof (cont.)		(11) Heating/Cooling			(15) Built-ins			(15) Fireplaces			(16) Porches/Decks		(17) Garage				
X	Single Family Mobile Home Town Home Duplex A-Frame	X	Eavestrough Insulation	X	Gas Wood		Oil Coal		Elec. Steam		Appliance Allow. Cook Top Dishwasher Garbage Disposal Bath Heater Vent Fan Hot Tub Unvented Hood Vented Hood Intercom Jacuzzi Tub Jacuzzi repl.Tub Oven Microwave Standard Range Self Clean Range Sauna Trash Compactor Central Vacuum Security System		Interior 1 Story Interior 2 Story 2nd/Same Stack Two Sided Exterior 1 Story Exterior 2 Story Prefab 1 Story Prefab 2 Story Heat Circulator Raised Hearth Wood Stove 1 Direct-Vented Gas	Area 46 336	Type CCP (1 Story) Composite	Year Built: Car Capacity: Class: BC Exterior: Siding Brick Ven.: 0 Stone Ven.: 0 Common Wall: 1/2 Wal Foundation: 42 Inch Finished?: Yes Auto. Doors: 0 Mech. Doors: 0 Area: 562 % Good: 0 Storage Area: 0 No Conc. Floor: 0			
X	Wood Frame	(4) Interior		Forced Air w/o Ducts Forced Air w/ Ducts Forced Hot Water Electric Baseboard Elec. Ceil. Radiant Radiant (in-floor) Electric Wall Heat Space Heater Wall/Floor Furnace Forced Heat & Cool Heat Pump No Heating/Cooling			X			Class: BC Effec. Age: 2 Floor Area: 1,528 Total Base New : 433,551 Total Depr Cost: 424,881 Estimated T.C.V: 424,881			E.C.F. X 1.000		Bsmnt Garage: Carport Area: Roof:				
Building Style: BC		X	Drywall Paneled				Plaster Wood T&G	Trim & Decoration			Size of Closets			Condition: Good					
Yr Built 2020	Remodeled 0	Ex	X	Ord			Min	X			Lg			X	Ord		Small		
Room List		Doors:		Solid	X		H.C.	Central Air Wood Furnace			(12) Electric								
	Basement 1st Floor 2nd Floor 3 Bedrooms	(5) Floors		Kitchen: Other: Other:			0 Amps Service			No./Qual. of Fixtures			Cost Est. for Res. Bldg: 1 Single Family BC			Cls BC		Blt 2020	
(1) Exterior		Ex.	X	Ord.			Min	No. of Elec. Outlets			Ground Area = 1528 SF Floor Area = 1528 SF. Phy/Ab.Phy/Func/Econ/Comb. % Good=98/100/100/100/98								
	Wood/Shingle Aluminum/Vinyl Brick X Vinyl X Insulation	(6) Ceilings		Many			X	Ave.		Few	(13) Plumbing			Building Areas					
(2) Windows		(7) Excavation		Average Fixture(s)			3			3 Fixture Bath 2 Fixture Bath Softener, Auto Softener, Manual Solar Water Heat No Plumbing Extra Toilet 1 Extra Sink Separate Shower Ceramic Tile Floor Ceramic Tile Wains Ceramic Tub Alcove Vent Fan			Stories Exterior Foundation 1 Story Siding/Brick Basement			Size 1,528	Cost New	Depr. Cost	
X	Many Avg. Few	X	Large Avg. Small	Basement: 1528 S.F. Crawl: 0 S.F. Slab: 0 S.F. Height to Joists: 0.0			1			Other Additions/Adjustments			Recreation Room Plumbing 3 Fixture Bath Extra Sink Water/Sewer 1000 Gal Septic Water Well, 150 Feet Porches CCP (1 Story) Garages Class: BC Exterior: Siding Foundation: 42 Inch (Finished) Base Cost Common Wall: 1/2 Wall			Total: 1200 34,416 14,342 1,477 5,916 9,690 1,870 562 -1,636		310,509 33,728 14,055 1,447 5,798 9,496 1,833 39,177 -1,603	
	Wood Sash Metal Sash Vinyl Sash Double Hung Horiz. Slide Casement Double Glass Patio Doors Storms & Screens	(8) Basement		Conc. Block Poured Conc. Stone Treated Wood Concrete Floor			(14) Water/Sewer			Fireplaces			Direct-Vented Gas		Deck				
(3) Roof		1200	Recreation SF Living SF Walkout Doors (B) No Floor SF Walkout Doors (A)	1			1			1000 Gal Septic 2000 Gal Septic			Composite			336 6,838 6,701			
X	Gable Hip Flat		Gambrel Mansard Shed	(9) Basement Finish			(10) Floor Support			Notes:			Totals:		433,551 424,881				
X	Asphalt Shingle	Joists: Unsupported Len: Cntr.Sup:		Lump Sum Items:			ECF (4500 (47070) HOWELL M & B) 1.000 => TCV:			424,881									

*** Information herein deemed reliable but not guaranteed***



*** Information herein deemed reliable but not guaranteed***



GENOA CHARTER TOWNSHIP VARIANCE APPLICATION
 2911 DORR ROAD | BRIGHTON, MICHIGAN 48116
 (810) 227-5225 | FAX (810) 227-3420

Case # 24-12 Meeting Date: April 16, 2024 @ 6:30pm
in Boardroom

PAID Variance Application Fee

\$215.00 for Residential | \$300.00 for Sign Variance | \$395.00 for Commercial/Industrial

Applicant/Owner: 1015 Latson Road LLC Email: kbahnam@usa2goquickstores.com

Property Address: 1111 S. Latson Road Phone: 248-767-5337

Present Zoning: GCD Tax Code: 4711-09-100-004 & 4711-04-300-017

ARTICLE 23 of the Genoa Township Zoning Ordinance describes the Variance procedure and the duties of the Zoning Board of Appeals.

Each application for Variance is considered individually by the ZBA. The ZBA is a board of limited power; it cannot change the Zoning Ordinance or grant relief when it is possible to comply with the Zoning Ordinance. It may provide relief where due to unique aspects of the property with strict application of the zoning ordinance to the land results in practical difficulties or unnecessary hardship.

The applicant is responsible for presenting the information necessary to support the relief requested. While much of the necessary information is gathered through the completed application, other information may be gathered by on-site visits, other sources, and during the ZBA meeting. ZBA members, township officials and township staff may visit the site without prior notification to property owners.

Failure to meet the submittal requirements and properly stake the property showing all proposed improvements may result in postponement or denial of this petition.

Please explain the proposed variance below:

1. Variance requested/intended property modifications: Requesting variance from Section 7.02.02(j)(2)

Requesting to allow a drive thru use on a lot within 500 feet from another drive thru use. Currently,
Panda Express and Panera Bread on teh west side of Latson Road fall within 500' (parcel to parcel).

Please note that the packet and staff report for your scheduled Zoning Board of Appeals meeting will be available to review at <https://www.genoa.org/government/boards/zoningboard> five days prior to the meeting.

The following is per Article 23.05.03 of the Genoa Township Ordinance:

Criteria Applicable to Dimensional Variances. No variance in the provisions or requirements of the Ordinance shall be authorized by the Board of Appeals unless it is found from the evidence that all of the following conditions exist:

Under each please indicate how the proposed project meets each criteria.

Practical Difficulty/Substantial Justice. Compliance with the strict letter of the restrictions governing area, setbacks, frontage, height, bulk, density, or other dimensional provisions would unreasonably prevent the use of the property. Granting of a requested variance or appeal would do substantial justice to the applicant as well as to other property owners in the district and 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 vicinity of the subject parcel.

The subject parcel is a narrow parcel with a depth of about 185' on average. The front setback of 70' and rear setback of 50', account for 120' of the 185' depth of the parcel, which only leaves about 65' of depth for a building. The size of the parcel and depth significantly reduces the list of permissible uses within this district that would be viable on this subject property. Allowing the requested variance for a drive thru use would be consistent with the property rights experienced by many others within the vicinity of the subject parcel.

Extraordinary Circumstances. There are exceptional or extraordinary circumstances or conditions applicable to the property or the intended use which are different than other properties in the same zoning district or the variance would make the property consistent with the majority of other properties in the vicinity. The need for the variance was not self-created by the applicant.

There is a NRPUD on the west side of Latson Road that allows drive-thru restaurants. Of which, contains a Tim Hortons Drive Thru, Panda Express, Panera Bread, Culvers, and White Castle. This significant concentration of drive-thrus in the NRPUD poses an exceptional hardship on the subject property (and other remaining parcels on the Latson Road/Grand River corridor in proximity to the I-96 interchange as it eliminates the ability to provide a drive thru use within this corridor. A drive thru use on the subject property makes this sites use consistent with the uses currently located within the NRPUD to the west, the MUPUD to the northwest and other parcels on the Latson Road/Grand River corridor near the I-96 interchange.

Public Safety and Welfare. The granting of the variance will not impair an adequate supply of light and air to adjacent property or unreasonably increase the congestion in public streets, or increase the danger of fire or endanger the public safety, comfort, morals or welfare of the inhabitants of the Township of Genoa.

Granting of the requested variance does not impair the supply of light and air to surrounding parcels. A traffic study was performed modifications suggested to the Grand River/Latson Rd signal that would improve current traffic conditions. The location of said drive-thru being located in proximity to the I-96 interchange is appropriate and does not endanger public safety, nor does it conflict with the comfort, morals or welfare of residents of Genoa Township.

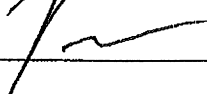
Impact on Surrounding Neighborhood. The variance will not interfere with or discourage the appropriate development, continued use, or value of adjacent properties and the surrounding neighborhood.

Surrounding parcels have already been developed. A drive thru use on the subject parcel does not hinder the continued use of surrounding parcels. Rather, a drive thru use on Latson Road near the I96 interchange is an appropriate use for the area.

Attendance by the applicant is required at the Zoning Board of Appeals meeting.

Any Variance not acted upon within 12 months from the date of approval is invalid and must receive a renewal from the Zoning Board of Appeals (ZBA).

After the decision is made regarding your Variance approval a land use permit will be required with additional site plans and construction plans.

Date: 5-18-24 Signature: 



MEMORANDUM

TO: Genoa Township Zoning Board of Appeals
FROM: Amy Ruthig, Planning Director
DATE: April 10, 2024
RE: ZBA 24-12

2911 Dorr Road
Brighton, MI 48116
810.227.5225
810.227.3420 fax
genoa.org

STAFF REPORT

File Number: 24-12
Site Address: Vacant, Latson Road
Parcel Number: 4711-04-300-017 and 4711-09-100-004
Parcel Size: 1.8 acre
Applicant: 1015 Latson Road LLC.
Property Owner: 1015 Latson Road LLC., 29592 Beck Road, Wixom 48393
Information Submitted: Application, site plan, construction plans
Request: Special Land Use Dimensional Variance
Project Description: Applicant is requesting a variance from a special use requirement of 500-foot separation between two drive-through establishments to allow for a proposed coffee-shop drive-through.
Zoning and Existing Use: GCD (General Commercial District) property is currently vacant.

Other:

Public hearing was published in the Livingston County Press and Argus on Sunday March 31, 2024 and 300-foot mailings were sent to any real property within 300 feet of the property lines in accordance with the Michigan Zoning Enabling Act.

Background

The following is a brief summary of the background information on file:

- Per assessing records the parcel is vacant.
- In 2024, a special use and site plan approval was granted for a proposed multi-tenant commercial building with a proposed drive-through coffee shop. (see planner's review letter and traffic impact assessment)
- The property utilizes the public water and public sewer system.
- See Real Property record Card.

SUPERVISOR

Bill Rogers

CLERK

Paulette A. Skolarus

TREASURER

Robin L. Hunt

TRUSTEES

Jean W. Ledford

Terry Croft

Diana Lowe

Jeff Dhaenens

MANAGER

Kelly VanMarter

Summary

The applicant is requesting a variance to allow a proposed drive-through coffee shop within 500-feet of another drive-through restaurant. The applicant received site plan approval from the Planning Commission on March 11th, 2024 and the Township Board on April 1, 2024. (See attached minutes) The site plan was approved for a multi-tenant commercial building with a proposed drive-through coffee shop on a previously developed parcel.

In order to construct the proposed building, the applicant is required to split parcel# 4711-04-300-017 to create a new parcel to combine with parcel # 4711-09-100-004. Once the new parcels are created, the parcel to the north will be occupied by an automatic car wash that was approved by the Planning Commission and Township Board.

The Zoning Ordinance requires the Planning Commission give a recommendation to the Zoning Board of Appeals for special use requirement variance. An official recommendation was not made to the Zoning Board of Appeals; however, the Planning Commission did recommend approval of the special use permit with the condition of the applicant obtaining a variance.

Variance Requests

The regulations in the zoning ordinance pertaining to this variance are as follows:

7.02.02 Use Conditions: Uses noted above shall only be allowed where the following requirements are complied with:

(j) Restaurants or coffee shops with drive-in or drive-through facilities shall comply with the following requirements:

- (1) Principal and accessory buildings shall be setback fifty (50) feet from any adjacent public right of way line or property line.
- (2) The establishment of a new drive-through restaurant shall require the lot be separated a minimum of five hundred (500) feet from any other lot containing a drive-through restaurant.**
- (3) Only one (1) access shall be provided onto any street.
- (4) Such restaurants constructed adjacent to other commercial developments shall have a direct vehicular access connection where possible.

DRIVE-THROUGH SETBACK	Side Yard Setback
REQUIRED SETBACK	500'
REQUESTED SETBACK	120' (Panda Express)*
REQUESTED VARIANCE AMOUNT	380'

**Please note staff determined setbacks utilizing an aerial. Applicant should verify setback.*

Summary of Findings of Fact- After reviewing the application and materials provided, I offer the possible findings of fact for your consideration:

Please note that in order for a variance to be approved it has to meet all of the standards in 23.05.03.

- (a) Practical Difficulty/Substantial Justice** – Strict compliance with the required special use setback requirement would not prevent use of the site for a permitted purpose. There are multiple in the GCD zoning district that are permitted by right. The applicant’s proposed use is necessitating the need for the

variance. A coffee shop without a drive-through is allowed on the property without a special use permit. The applicant must demonstrate that alternative land uses are not reasonable or feasible for the Board to consider strict compliance to unreasonably prevent use of the property. There are multiple restaurant drive-throughs in the immediate area that are located within PUDs (Restaurant drive-throughs are not allowed in the GCD zoning district). Granting of the requested variance could do substantial justice to the applicant since there multiple restaurant drive-throughs in the vicinity however they are all located in different zoning and on an interior roadway with no direct access to Grand River Avenue or Latson Road.

- (b) Extraordinary Circumstances** – Once the new parcel is created, that lot will be conforming in the GCD zoning district. The parcel would not qualify to rezone to PUD to allow the flexibility which has been used by other properties in the vicinity. The need for the variance is driven by the proposed use. A coffee shop without a drive-through is allowed without requiring a special use permit in the GCD zoning district. Restaurant drive-throughs are not allowed in the GCD zoning district.
- (c) Public Safety and Welfare** – The granting of the variance will not impair an adequate supply of light and air to adjacent property. Approving the variance will increase the congestion in public streets since modifications are required per the Township’s engineer’s letter (see attached). It will not increase the danger of fire or endanger the public safety. It will not impact the comfort, morals or welfare of the inhabitants of the Township of Genoa.
- (d) Impact on Surrounding Neighborhood** – The proposed variance would have little or no impact on the appropriate development, continued use, or value of adjacent properties and the surrounding neighborhood.

Moved by Lowe, supported by Hunt, to approve the Environmental Impact Assessment dated January 16, 2024 to allow for a proposed automatic car wash on the northern portion of vacant parcel #4711-04-300-017. The site is located on the east side of Latson Road, south side of Grand River Avenue with the following condition:

- Official approval from MDOT for the stormwater discharge shall be submitted prior to land use permit issuance.

The motion carried unanimously.

Moved by Hunt, supported by Lowe, to approve of the Site Plan dated March 14, 2024 to allow for a proposed automatic car wash on the northern portion of vacant parcel #4711-04-300-017. The site is located on the east side of Latson Road, south side of Grand River Avenue, with the following conditions:

- The required concrete pad at the Dumpster enclosure shall be installed.
- The property split shall be approved prior to land use permit issuance.
- The limited access driveway should remain at 15-foot width or preferably be eliminated. The applicant shall work with the Livingston County Road Commission, Brighton Area Fire Dept., and Township staff on the final design.
- The applicant shall use all available efforts to establish the connection to the north.
- An executed cross access easement with the property to the south shall be submitted and recorded prior to land use permit issuance.
- All site plan review overage fees must be paid prior to issuance of a land use permit.

The motion carried unanimously.

5. Consideration of a recommendation for approval of a special land use application, environmental impact assessment, and site plan to allow for a proposed multi-tenant commercial center including a drive-through coffee shop and outdoor seating restaurant. The site consists of vacant parcels #4711-04-300-017 and 4711-09-100-004 and is located on the east side of Latson Road, south of Grand River Avenue. The request is petitioned by Kevin Bahnam, 1015 Latson Road LLC.

A. Disposition of Special Use Application.

B. Disposition of Environmental Impact Assessment (1-16-24)

C. Disposition of Site Plan (3-14-24)

Mr. Brent LaVanway of Boss Engineering, Mr. Jeff Klatt, the architect, and Mr. Travis Sokana with Symmetry Management were present.

Mr. LaVanway provided a review of the project, which will have multiple tenants, one of which is a drive thru. They will need a variance from the ZBA for the drive thru as it is within 500 feet of another drive thru restaurant. They will be on their April agenda.

Ms. Hunt reiterated her concerns for the underground storage tanks for stormwater, but the engineer and Planning Commission approved them. She likes the building design. She confirmed that the existing entrance drive on Latson will be removed and Mr. LaVanway stated, "yes".

Supervisor Rogers likes the building design as well. He asked if the applicant knew what the other tenants would be and if they would be combined. Mr. Lavanway stated that the amount of parking available will determine what uses can be here.

Moved by Skolarus, supported by Lowe, to approve the Special Use Permit to allow for a proposed multi-tenant commercial center including a drive-through coffee shop and outdoor seating restaurant located on vacant parcels #4711-04-300-017 and 4711-09-100-004. The site is located on the east side of Latson Road, south side of Grand River Avenue with the following condition:

- A variance from the Zoning Board of Appeals shall be obtained for the 500-foot requirement from an existing drive-through.

The motion carried unanimously.

Moved by Lowe, supported by Hunt, to approve the Environmental Impact Assessment dated January 16, 2024 to allow for a proposed multi-tenant commercial center including a drive-through coffee shop and outdoor seating restaurant located on vacant parcels #4711-04-300-017 and 4711-09-100-004. The site is located on the east side of Latson Road, south side of Grand River with the following condition:

- Official approval from MDOT for the stormwater discharge shall be submitted prior to land use permit issuance.

The motion carried unanimously.

Moved by Ledford, supported by Lowe, to approve of the Site Plan dated March 14, 2024 to allow for a proposed multi-tenant commercial center including a drive through coffee shop and outdoor seating restaurant located at vacant parcels #4711-04-300-017 and 4711-09-100-004. The site is located on the east side of Latson Road, south side of Grand River Avenue, with the following conditions:

- The required concrete pad for the Dumpster enclosure shall be installed.
- The reconfiguring of the parcels shall be approved prior to land use permit issuance.
- An executed cross access easement with the property to the north shall be submitted and recorded prior to land use permit issuance.
- All site plan review overage fees must be paid prior to issuance of a land use permit.

The motion carried unanimously.

6. Consideration of a recommendation for approval of a special land use application, environmental impact assessment, and site plan to allow for outdoor RV/camper storage. The site is located at 2630 Grand River Avenue on the south side of Grand

LCRC's request for the signal changes. Mr. Tougnant stated they will be working with MDOT to modify the signalization as requested.

Commissioner Dhaenens is satisfied with the landscaping provided and would not require the petitioner to add additional trees.

The call to the public was made at 7:36 pm with no response.

Moved by Commissioner Rassel, supported by Commissioner Chouinard, to recommend to the Township Board approval of the Special Use Application to allow for a proposed automatic car wash located on vacant parcels #4711-04-300-017 ~~and 4711-09-100-017~~ Latson Road, east side of Latson Road, south side of Grand River Avenue as this Commissioner finds that the special land use standards of Section 19.03 are generally met and the conditions of Section 7.02.02(l) have been met. **The motion carried unanimously.**

Moved by Commissioner Rassel, supported by Commissioner Chouinard, to recommend to the Township Board approval of the Environmental Impact Assessment dated January 16, 2024 to allow for a proposed automatic car wash located on vacant parcels #4711-04-300-017 ~~and 4711-09-100-017~~ Latson Road, east side of Latson Road, south side of Grand River Avenue. **The motion carried unanimously.**

Moved by Commissioner Rassel, supported by Commissioner Rauch, to recommend to the Township Board approval of the Site Plan dated January 16, 2024 to allow for a proposed automatic car wash located on vacant parcels #4711-04-300-017 ~~and 4711-09-100-017~~ Latson Road, east side of Latson Road, south side of Grand River Avenue, with the following conditions:

- The color of the fencing shall be changed from blue to a dark bronze or black color.
- The required concrete pad at the Dumpster enclosure shall be installed.
- The Planning Commission approves the landscape deficiency.
- The property split of this parcel shall be approved.

The motion carried unanimously.

OPEN PUBLIC HEARING #3... Consideration of a special land use application, environmental impact assessment and site plan to allow for a proposed multi-tenant commercial center including a drive through coffee shop and outdoor seating restaurant located on vacant parcels#:4711-04-300-017 and 4711-09-100-~~017~~004 Latson Road, east side of Latson Road, south side of Grand River Avenue. The request is petitioned by Kevin Bahnam, 1015 Latson Road LLC.

A. Recommendation of Special Use Application.

B. Recommendation of Environmental Impact Assessment (1-16-24)

C. Recommendation of Site Plan (1-16-24)

Mr. Scott Tousignant of Boss Engineering and Jeff Klatt, the architect, were present. Mr. Tousignant stated that MDOT's approval for the stormwater discharge applies to this site as well. He provided the changes made to the previous plans after discussions with the Planning Commission. They have relocated the access drive further to the north per the LCRC's request, moved the building closer to the access drive, relocated a bank of parking spaces, eliminated the site access from the right side of the property, and added the sidewalk.

Mr. Borden reviewed his letter dated February 6, 2024.

1. Special Land Uses (Section 19.03):

- a. The special land use standards of Section 19.03 are generally met.
- b. In order to make favorable findings related to compatibility and impacts, the conditions of Sections 7.02.02(i) and (j) and the buffer zone requirements of Section 12.02.03 must be met to the Commission's satisfaction.
- c. If a favorable recommendation is made, the Commission may wish to include a condition that a sound study be provided for the drive-through speaker system when the tenant is known.
- d. The applicant must address any comments provided by the Township Engineer or Brighton Area Fire Authority regarding public facilities and services.

2. Drive-Through Use Conditions (Section 7.02.02(j)):

- a. The 500-foot spacing between drive-throughs is not met (approximately 120 feet). The applicant notes that they will seek a variance from ZBA.

3. Site Plan Review:

- a. Building materials and color scheme are subject to review and approval by the Planning Commission.
- b. The landscape plan is deficient in width and a full screen wall for the easterly buffer zone; there is only a partial screen wall.

Mr. Barber reviewed Ms. Byrne's letter dated February 6, 2024 states:

1. The petitioner should obtain approval from the Livingston County Road Commission (LCRC) for the proposed site driveway prior to final site plan approval.
2. The petitioner is proposing a closed pipe type underground detention basin comprised of five 42-inch diameter pipes to provide 16,890 cubic feet of storage. The proposed building, site drive, and parking improvements do not allow enough space for any at-grade stormwater detention or retention.
3. Soil borings and infiltration testing should be provided within the proposed detention basin footprint and should show the documented high groundwater elevation. Soil borings shall be provided to a depth of at least 20 feet. The petitioner has noted that no geotechnical work has been completed for the site yet, but the geotechnical from the northern parcel was used for the current design. The infiltration rate and soil borings being used for the current design should be confirmed prior to construction of the storm system. Mr. Tousignant stated they will obtain those.

4. The proposed underground detention basin will tie into the existing storm sewer on Latson Road. The LCRC has indicated that the existing storm sewer is under MDOT jurisdiction and approval from MDOT will be required to connect to it. If approval from MDOT cannot be obtained the proposed site layout and storm management plan would change significantly, therefore we recommend that approval from MDOT be obtained prior to bringing the site plan before the Township Planning Commission.
5. The LCRC completed a review of the traffic impact study and plans, and the study was revised per their recommendation. The study recommended signal modifications at the Grand River Avenue and Latson Road intersection, which would need to be reviewed and discussed with MDOT. The study also recommended restricting the northernmost site driveway to right-in-right-out and aligning the southernmost site driveway to align directly with the existing Lowes driveway. Both site driveway recommendations have been addressed on the revised plans.

The Brighton Area Fire Authority Fire Marshal's letter dated February 2, 2024 states "The East drive clear width has been reduced to 23.5-feet and shall be increased to 26-feet as required. West drive fire lane signs are facing the incorrect direction." Mr. Tousignant stated they will amend the plans to meet the

Commissioner Rauch thanked the applicant for making the revisions. He is very happy with the building colors and materials. He noted that the color of the fencing should be changed as requested in the previous project.

Commissioner McCreary questioned the traffic impact study. Mr. Tousignant stated the changes to the signalization at Grand River and Latson Road will be made to improve the peak hour grades. This will be done at the time the project is developed.

Commissioner Dhaenens questioned Mr. Borden's suggestion regarding the noise ordinance and the drive thru speaker. Mr. Borden stated that since we do not know what is being built there, the Commission may wish to include a condition that a sound study be provided for the drive-through speaker system when the tenant is known.

The call to the public was made at 8:00 pm with no response.

Moved by Commissioner Chouinard, supported by Commissioner Rassel, to recommend to the Township Board approval of the Special Use Application to allow for a proposed multi-tenant commercial center including a drive through coffee shop and outdoor seating restaurant located on vacant parcels#:4711-04-300-017 and 4711-09-100-~~017-004~~ Latson Road, east side of Latson Road, south side of Grand River Avenue. **The motion carried unanimously.**

Moved by Commissioner Chouinard, supported by Commissioner Rassel, to recommend to the Township Board approval of the Environmental Impact Assessment dated January 16, 2024 to allow for a proposed multi-tenant commercial center including a drive through coffee shop and

outdoor seating restaurant located on vacant parcels#:4711-04-300-017 and 4711-09-100-~~017~~
~~004~~ Latson Road, east side of Latson Road, south side of Grand River Avenue. **The motion
carried unanimously.**

Moved by Commissioner Chouinard, supported by Commissioner Rauch to recommend to the Township Board approval of the Site Plan dated January 16, 2024 to allow for a proposed multi-tenant commercial center including a drive through coffee shop and outdoor seating restaurant located on vacant parcels#:4711-04-300-017 and 4711-09-100-~~017~~~~004~~ Latson Road, east side of Latson Road, south side of Grand River Avenue, with the following conditions:

- The color of the fencing shall be changed from blue to a dark bronze or black color.
- The ZBA's approval of the future drive thru uses.
- The required concrete pad at the Dumpster enclosure shall be installed.
- The property split of this parcel shall be approved.
- All conditions by other agencies shall be met.

The motion carried unanimously.

NEW BUSINESS:

OPEN PUBLIC HEARING #4...Consideration of a special land use application, environmental impact assessment and site plan to allow for temporary boat sales and service at an existing commercial site located at 5776 Grand River Avenue, south side of Grand River Avenue, west of Dorr Road. The request is petitioned by Wonderland Marine West.

A. Recommendation of Special Use Application

B. Recommendation of Environmental Impact Assessment (~~11-29-231-16-24~~)

C. Recommendation of Site Plan (~~2-16-242-19-24~~)

Mr. Gary Mitter, Sr. stated they are in the process of renovating their existing building, and during construction, they need a temporary building. They purchased the building next to their business. They will be remodeling it and it will match the same style as their renovated existing building.

Mr. Borden reviewed his letter dated March 5, 2024.

1. Special Land Uses (Section 19.03):

- a. The special land use standards of Section 19.03 are generally met.
- b. In order to make favorable findings related to compatibility and impacts, the use requirements of Section 7.02.02(c) must be met to the Commission's satisfaction.
- c. The applicant must address any comments provided by the Township Engineer or Brighton Area Fire Authority regarding public facilities and services.

2. Use Requirements (Section 7.02.02(c)):

- a. The majority of the use conditions are met; however, the buffer zone/screen fence requirement for outdoor storage is not fully met at the rear of the site. They are proposing

- The LCRC's requirements for the stormwater and their response to the traffic impact study and what improvements they agree to make.

Commissioner McBain suggested reducing the number of vacuum bays, she reiterated her concerns regarding the traffic flow on the site and agrees with additional landscaping being needed on Latson Road.

Moved by Commissioner Rauch, supported by Commissioner Chouinard, to table Open Public Hearing Item #1 petitioned by CWP West, LLC. **The motion carried unanimously.**

OPEN PUBLIC HEARING #2... Consideration of a special land use application, environmental impact assessment and site plan to allow for a proposed multi-tenant commercial center including a drive through coffee shop and outdoor seating restaurant located on vacant parcels#:4711-04-300-017 and 4711-09-100-~~017~~004 Latson Road, east side of Latson Road, south side of Grand River Avenue. The request is petitioned by Kevin Bahnam, 1015 Latson Road LLC.

- A. Recommendation of Special Use Application.
- B. Recommendation of Environmental Impact Assessment (10-26-23)
- C. Recommendation of Site Plan (10-25-23)

Mr. Brent LaVanway of Boss Engineering, Mr. Jeff Klatt, the architect, and Mr. Frank Jarbou of CWP West, LLC were present.

Mr. LaVanway provided a review of the project. This is a multi-use tenant building on the site adjacent to the previous agenda item and one of the tenants will include a drive thru. There is a partial existing wall on the east side and they are again proposing to add additional evergreens where there is no wall. They will be requesting two variances from the ZBA, one is for the location of the parking and the proximity of a drive thru to an existing drive thru.

Mr. Klatt showed colored building renderings and material samples. The building is modern with clear lines and the colors are consistent with other buildings in the area.

Mr. Borden reviewed his letter dated November 8, 2023.

1. Special Land Uses (Section 19.03):

- a. The special land use standards of Section 19.03 are generally met.
- b. In order to make favorable findings related to compatibility and impacts, the conditions of Sections 7.02.02(i) and (j) and the buffer zone requirements of Section 12.02.03 must be met to the Commission's satisfaction.
- c. If a favorable recommendation is made, the Commission may wish to include a condition that a sound study be provided for the drive-through speaker system when the tenant is known.

2. Drive-Through Use Conditions (Section 7.02.02(j)):

- a. The 500-foot spacing between drive-throughs is not met. The applicant states that they will seek a variance from ZBA.

3. Site Plan Review:

- a. The applicant will seek a variance from ZBA for the deficient front yard parking setback.
- b. He suggested the applicant add some vertical elements to help break up the overall building length of the rear façade.
- c. Building materials and color scheme are subject to review and approval by the Planning Commission.
- d. The proposed driveway does not meet the spacing requirements of Section 15.06.02 of the township ordinance.
- e. The lighting plan must be revised to match the currently proposed site plan. It was not updated when the outdoor seating was removed.
- f. The landscape plan is deficient in width for the Latson Road greenbelt and width and screen wall for the easterly buffer zone.
- g. There are minor discrepancies between the landscape plan and table that need to be corrected.

Additionally, the applicant must address any comments provided by the Township Engineer or Brighton Area Fire Authority regarding public facilities and services.

Ms. Byrne reviewed her letter dated November 8, 2023, noting they are the same as the previous site and that LCRC approval will be needed for the drive and the stormwater.

1. The petitioner should obtain approval from the Livingston County Road Commission (LCRC) for the proposed site driveway prior to final site plan approval.
2. The Petitioner is proposing a closed pipe type underground detention basin comprised of five 42-inch diameter pipes to provide 16,890 cubic feet of storage. The proposed building, site drive, and parking improvements do not allow enough space for any at-grade storm water detention or retention.
3. Soil borings and infiltration testing should be provided within the proposed detention basin footprint and should show the documented high ground water elevation. Soil borings shall be provided to a depth of at least 20 feet. The Petitioner has noted that no geotechnical work has been completed for the site yet, but the geotechnical from the northern parcel was used for the current design. The infiltration rate and soil borings being used for the current design should be confirmed prior to construction of the storm system.
4. The proposed underground detention basin will tie into the existing storm sewer on Latson Road. The Petitioner will need to obtain approval from the LCRC to connect to their storm sewer and said approval should be provided to the Township prior to final site plan approval. In the past the LCRC has not allowed any increase in storm volume into their storm sewer. The underground detention design has been revised since the last submittal to allow for additional infiltration to limit the storm volume that would outlet into the LCRC sewer.

5. The Petitioner has provided a traffic impact study for the proposed development. The study included expected traffic volumes from other proposed developments in the area in the no-build condition and recommended signal timing and length be modified at the Grand River Avenue and Latson Road for both the no-build and build condition. The Livingston County Road Commission will review the traffic impact study as part of their approval for the proposed site driveways and they will need to review the recommendation of optimized signal timings at the Grand River Avenue and Latson Road intersection.

Mr. LaVanway stated they have addressed all of the concerns of the Brighton Area Fire Authority Fire Marshal's letter dated November 3, 2023.

The call to the public was made at 8:08 pm with no response.

Commissioner Rauch complimented the architect on the building design, materials, and colors. He stated that the petitioner is proposing a building that is too large for this site. The size is what necessitates the need for the 10 parking spaces in the front of the site and the need for two variances.

Mr. Jarbou stated they are proposing to develop a great project with a great design and materials, but there is a financial aspect. The property is very narrow and they have met most of the requirements. Commissioner McCreary noted that a financial hardship is not a reason to be granted a variance.

Commissioner Rauch noted that this site is proposing asphalt and Mister Car Wash is proposing concrete. He would like them to be the same. He is also concerned with the location of the driveways, and suggested the applicant complete the sidewalk to meet the one in front of the apartment complex.

Mr. Borden noted that the large number of parking spaces is due to the proposed uses of two restaurants. If this is changed, then the parking would be reduced and there would not be a need to have it in the front.

Mr. Lavanway stated he would like to redesign this project so that the curb cuts and traffic flows of the two sites work together.

The suggested changes to be made were noted as:

- Meeting the requirements for no parking in the front by reducing the size of the building or changing the uses.
- Changing the driveway accesses.
- Connecting the sidewalk to meet the existing sidewalk in front of the apartment complex.
- Update the rear building elevations as suggested by Mr. Borden.
- Provide details regarding site signage, the monument sign, and landscaping along Latson Road.

Moved by Commissioner Rauch, supported by Commissioner Lowe, to table Open Public Hearing Item #2 petitioned Kevin Bahnam of 1015 Latson Road, LLC. **The motion carried unanimously.**

The Planning Commission took a five minute break at 8:25 pm.

OPEN PUBLIC HEARING #3... Consideration of a sketch plan application, environmental impact assessment and sketch plan for proposed bike trails located at the Fillmore Park. The park is located at 7075 McClements, northwest corner of McClements and Kellogg Roads. The request is petitioned by the Livingston County Planning Department.

- A. Recommendation of Environmental Impact Assessment (10-25-23)
- B. Disposition of Site Plan. (10-25-23)

Ms. Martha Haglund, Principal Planner with the Livingston County Planning Department, stated they would like to use the western portion of the site to install mountain bike trails. They will be crossing Kellogg Road and have received approval from the Livingston County Road Commission for crossing signage. The work is being done by volunteers so she anticipates it taking 3-4 years to complete.

She has responded to Mr. Borden and Ms. Byrne's review letters.

Mr. Borden reviewed his letter dated November 8, 2023.

1. The submittal does not identify the proposed setbacks; however, the front yard setback requirement is not met at the trail crossing across Kellogg Road. He noted that since this is a trail, it could be considered similar to a sidewalk. Commissioner Rauch agrees; however, having it 50 feet off the road would allow it to be safer.
2. If granted, sketch plan approval is valid for only one year, though the project timeline extends out to 2026. The applicant will need to apply for and obtain extensions to cover the full project, which will be evaluated based on Ordinance standards and may or may not be granted.
4. Ms. Haglund did respond to his comment regarding the internal signs setbacks. They will be less than two square feet so they are exempt from sign regulations.

Additionally, the applicant must address any comments provided by the Township Engineer or Brighton Area Fire Authority regarding public facilities and services.

Ms. Byrne reviewed her letter dated November 8, 2023.

1. The petitioner has already obtained a permit from the Livingston County Road Commission regarding the signage required for the proposed trail crossing and this has been provided to the Township.
2. The petitioner has noted that an EGLE wetland permit will be required for some portions of the proposed trail improvements. This permit should be provided to the Township for their records once it is obtained.



February 6, 2024

Planning Commission
Genoa Township
2911 Dorr Road
Brighton, Michigan 48116

Attention:	Amy Ruthig, Planning Director
Subject:	S. Latson Commercial Development – Special Land Use and Site Plan Review #3
Location:	1015 Latson Road – east side of Latson Road, south side of Grand River Avenue
Zoning:	GCD General Commercial District

Dear Commissioners:

At the Township’s request, we have reviewed the revised submittal for development of a multi-tenant commercial center, including a coffee shop with a drive-through (plans dated 1/16/24).

A. Summary

1. Special Land Uses (Section 19.03):

- a. The special land use standards of Section 19.03 are generally met.
- b. In order to make favorable findings related to compatibility and impacts, the conditions of Sections 7.02.02(i) and (j) and the buffer zone requirements of Section 12.02.03 must be met to the Commission’s satisfaction.
- c. If a favorable recommendation is made, the Commission may wish to include a condition that a sound study be provided for the drive-through speaker system when the tenant is known.
- d. The applicant must address any comments provided by the Township Engineer or Brighton Area Fire Authority regarding public facilities and services.

2. Drive-Through Use Conditions (Section 7.02.02(j)):

- a. The 500-foot spacing between drive-throughs is not met (approximately 120 feet). The applicant notes that they will seek a variance from ZBA.

3. Site Plan Review:

- a. Building materials and color scheme are subject to review and approval by the Planning Commission.
- b. The landscape plan is deficient in width and a full screen wall for the easterly buffer zone.

B. Proposal/Process

The applicant proposes development of an 8,925 square foot multi-tenant commercial building with space for up to 6 tenants. The plan includes a restaurant with a drive-through on the vacant 1.8 acre site.

Table 7.02 allows retail uses with up to 30,000 square feet of area as principal permitted uses; however, restaurants with drive-throughs require special land use approval in the GCD. As such, the request is also subject to the use conditions of Section 7.02.02(j).

Procedurally, the Planning Commission is to review the special land use, site plan, and Environmental Impact Assessment, and put forth recommendations to the Township Board following a public hearing.



Aerial view of site and surroundings (looking east)

C. Special Land Use Review

Section 19.03 of the Zoning Ordinance identifies the review criteria for Special Land Use applications as follows:

- 1. Master Plan.** The Township Master Plan identifies the subject site as Mixed Use – West Grand River. This classification states that “regional commercial uses, such as auto-oriented uses (including fast-food) are only intended at interchange uses and where otherwise currently existing along Grand River Avenue.”

The subject site is located near a major roadway intersection and within close proximity to an interchange. Furthermore, there are other auto-oriented uses (gas stations and another drive-through) in the immediate area.

As such, the Commission may find that the proposal is consistent with the Master Plan and Future Land Use Map.

- 2. Compatibility.** Surrounding properties are primarily commercial/service in nature, though the site also abuts residential zoning and land use along its east side lot line.

The primary concerns under this criterion are related to potential impacts (noise, light, overall intensity of uses) upon the adjacent residential property.

The use conditions of Section 7.02.02(j) and buffer zone requirements of Section 12.02.03 are intended to help mitigate potential off-site impacts.

In order to make a favorable finding under this criterion, the above standards must be met to the Commission’s satisfaction.

The previous submittal also notes that the drive-through will be available from 6AM to 9PM and that a sound study can be provided once a tenant is known. The Commission may wish to include this as a condition if a favorable recommendation is made.

- 3. Public Facilities and Services.** Given that the site fronts Latson Road near Grand River Avenue and was previously developed, we anticipate that necessary public facilities and services are in place.

However, the applicant must address any comments provided by the Township Engineer and/or Brighton Area Fire Authority related to this criterion.

- 4. Impacts.** Similar to previous comments, use conditions and buffering requirements must be met to help ensure that the adjacent residential use is not adversely impacted by the proposed development.

5. Mitigation. If further concerns arise as part of the review process, the Township may require additional efforts to mitigate potential adverse impacts.

D. Use Conditions (Drive-Through Restaurant)

Drive-through restaurants are subject to the use requirements of Section 7.02.02(j), as follows:

1. Principal and accessory buildings shall be setback fifty (50) feet from any adjacent public right of way line or property line.

The proposed building provides setbacks of at least 50 feet from each lot line.

2. The establishment of a new drive-through restaurant shall require the lot be separated a minimum of five hundred (500) feet from any other lot containing a drive-through restaurant.

Based on staff research, the subject site is approximately 120 feet from the property across Latson Road, which contains a drive-through restaurant. As such, this condition is not met. The revised submittal notes that the applicant will seek a variance from ZBA.

3. Only one (1) access shall be provided onto any street.

The site plan depicts a single driveway on-site to/from Latson Road.

4. Such restaurants constructed adjacent to other commercial developments shall have a direct vehicular access connection where possible.

The site plan provides for cross-access with the adjacent commercial development to the north.

E. Site Plan Review

1. Dimensional Requirements. As noted in the table below, the revised site plan complies with the dimensional requirements of the GCD:

	Min. Lot Req.		Minimum Yard Setbacks (feet)				Max. Lot Coverage (%)	Max. Height
	Area (acres)	Width (feet)	Front Yard	Side Yard	Rear Yard	Parking Lot		
GCD	1	150	70	15	50	20 front 10 side/rear	35% building 75% impervious	35' 2 stories
Proposed	1.8	420	70	104 (N) 146 (S)	50	18 front 20 side 10 rear	11.3% building 74.2% impervious	20' 1 story

2. Building Design and Materials. The primary building materials are brick and stone, with relatively small amounts of wood paneling and metal as accent materials.

The revised submittal includes material calculations demonstrating compliance with the material standards of Section 12.01.

Building materials and colors are subject to review and approval by the Planning Commission.

3. Pedestrian Circulation. The site plan proposes an 8-foot wide concrete sidewalk along S. Latson.

The plan also provides internal pedestrian circulation between the parking areas and building entrances, as well as a crosswalk connection to the public sidewalk along Latson Road.

- 4. Vehicular Circulation.** The site plan proposes 1 curb cut for a full turning movement driveway along S. Latson. Cross-access is also provided with the proposed development to the north.

Drive aisles are of sufficient width for two-way traffic around the site.

The proposed driveway is nearly 400 feet from the existing driveway to the south (on the same side of Latson Road) and is aligned with the existing driveway across Latson Road.

The proposed un/loading area occupies a portion of a drive aisle in the northeast and southeast corners of the site; however, the revised plan includes a note that deliveries will be scheduled for off peak hours to avoid potential conflicts.

The applicant must address any comments provided by the Township Engineer and/or the Brighton Area Fire Authority with respect to vehicular circulation.

- 5. Parking.** Based on information contained in the submittal, the project requires 72 parking spaces, while 73 are provided.

The design and dimensions of parking spaces and drive aisles comply with Ordinance standards.

The number of stacking spaces and barrier-free spaces is also compliant.

- 6. Exterior Lighting.** The lighting plan identifies 9 light poles and 12 wall mounted fixtures (6 of which are ornamental/architectural).

Based on the detail sheets, aside from the ornamental/architectural fixtures, the proposed fixtures are downward direct LEDs, as required.

Pole heights and photometric readings (both on-site and along property lines) comply with Ordinance standards.

- 7. Landscaping.** The landscape plan has been reviewed for compliance with the standards of Section 12.02, as follows:

Standard	Required	Proposed	Comments
Front yard greenbelt	20' width 10 canopy trees	20' width 10 canopy trees	In compliance
Buffer Zone C (N)	10' width 9 canopy trees OR 9 evergreen trees OR 36 shrubs	23' width 5 canopy trees 16 shrubs	In compliance
Buffer Zone B (S)	20' width 6' wall OR 3' berm 7 canopy trees 7 evergreen trees 26 shrubs	20' width 3' berm 7 canopy trees 7 evergreen trees 27 shrubs	In compliance
Buffer Zone B (E)	20' width 6' wall OR 3' berm 14 canopy trees 14 evergreen trees 56 shrubs	10' width Partial wall 14 canopy trees 14 evergreen trees 56 shrubs	Deficient width and full length wall
Parking lot	8 canopy trees 790 SF landscaped area	8 canopy trees 1,400 SF landscaped area	In compliance


The Commission has the authority to modify landscaping requirements, per Section 12.02.13.

8. Waste Receptacle. The proposed waste receptacle has been reviewed for compliance with the standards of Section 12.04, as follows:

	Requirement	Proposed	Comments
Location	Rear yard or non-required side yard AND not less than 20' from residential	Rear yard 20' from residential	Requirements met
Access	Clear access w/ out damaging buildings/vehicles	Turning template demonstrates sufficient maneuvering area	Requirements met
Base design	9' x 15' concrete pad	Approximately 20' x 25' concrete pad	Requirement met
Enclosure	3-sided enclosure w/ gate Masonry walls 6' height/taller than receptacle	3 sides w/ gate across 4 th Masonry walls 6' height	Requirements met

Should you have any questions concerning this matter, please do not hesitate to contact our office.

Respectfully,
SAFE BUILT


Brian V. Borden, AICP
Michigan Planning Manager



February 6, 2024

Ms. Amy Ruthig
Genoa Township
2911 Dorr Road
Brighton, MI 48116

**Re: South Latson Commercial Development
Site Plan Review No. 3**

Dear Ms. Ruthig:

Tetra Tech conducted a third review of the proposed South Latson Commercial Development site plan last dated January 16, 2024. The plan was prepared by Boss Engineering on behalf of 1015 Latson Road, LLC. The development is located on two parcels with a total of 3.38 acres on the east side of Latson Road, approximately 350 feet south of the Latson Road and Grand River Avenue intersection. The Petitioner is proposing to split the site into two parcels that are being reviewed separately, and this review includes a proposed 8,925 square foot general commercial building on the proposed south parcel. The proposed improvements include a new parking lot, storm sewer, and underground detention.

We offer the following comments for your consideration:

GENERAL

1. The Petitioner should obtain approval from the Livingston County Road Commission (LCRC) for the proposed site driveway prior to final site plan approval.

DRAINAGE AND GRADING

1. The Petitioner is proposing a closed pipe type underground detention basin comprised of five 42-inch diameter pipes to provide 16,890 cubic feet of storage. The proposed building, site drive, and parking improvements do not allow enough space for any at-grade storm water detention or retention.
2. Soil borings and infiltration testing should be provided within the proposed detention basin footprint and should show the documented high ground water elevation. Soil borings shall be provided to a depth of at least 20 feet. The Petitioner has noted that no geotechnical work has been completed for the site yet, but the geotechnical from the northern parcel was used for the current design. The infiltration rate and soil borings being used for the current design should be confirmed prior to construction of the storm system.
3. The proposed underground detention basin will tie into the existing storm sewer on Latson Road. The LCRC has indicated that the existing storm sewer is under MDOT jurisdiction and approval from MDOT will be required to connect to it. If approval from MDOT cannot be obtained the proposed site layout and storm management plan would change significantly, therefore we recommend that approval from MDOT be obtained prior to bringing the site plan before the Township Planning Commission.

Tetra Tech

3497 Coolidge Road, East Lansing, MI 48823
Tel 517.316.3930 Fax 517.484.8140 www.tetrattech.com


Ms. Amy Ruthig
Re: South Latson Commercial Development
Site Plan Review No. 3
February 6, 2024
Page 2

TRAFFIC AND PAVEMENT

1. The LCRC completed a review of the traffic impact study and plans, and the study was revised per their recommendation. The study recommended signal modifications at the Grand River Avenue and Latson Road intersection, which would need to be reviewed and discussed with MDOT. The study also recommended restricting the northern most site driveway to right-in-right-out and aligning the southernmost site driveway to align directly with the existing Lowes driveway. Both site driveway recommendations have been addressed on the revised plans.

We recommend the Petitioner address the above comments prior to Township approval. Please call or email if you have any questions.

Sincerely,

A handwritten signature in blue ink that reads "Shelby Byrne". The signature is written in a cursive style.

Shelby Byrne, P.E.
Project Engineer



BRIGHTON AREA FIRE AUTHORITY

615 W. Grand River Ave.
Brighton, MI 48116
o: 810-229-6640 f: 810-229-1619

February 2, 2024

Amy Ruthig
Genoa Township
2911 Dorr Road
Brighton, MI 48116

RE: South Latson Commercial Development
1111 S. Latson Rd.
Genoa Twp., MI

Dear Amy,

The Brighton Area Fire Department has reviewed the above-mentioned site plan. The plans were received for review on January 17, 2024, The plans are dated October 4, 2023 with latest revisions dated January 16, 2024. The project is based on proposed redevelopment of an existing vacant parcel for a new 9,675 square foot multi-tenant commercial retail development. The plan review is based on the requirements of the International Fire Code (IFC) 2021 edition. **Previously acknowledged and complied with notes have been removed from this letter.**

1. Two-way emergency vehicle access roads shall be a minimum of 26-feet wide. With a width of 26-feet, one side (building side) of the drive shall be marked as a fire lane. Include additional signage along curb lines at least every 50-feet. Access roads to the site shall be provided and maintained during construction. Access roads shall be constructed to be capable of supporting the imposed load of fire apparatus weighing at least 84,000 pounds, this includes over the underground retention. **(The East drive clear width has been reduced to 23.5-feet and shall be increased to 26-feet as required. West drive fire lane signs are facing the incorrect direction.)**

IFC D 103.6
IFC D 103.1
IFC D 102.1
IFC D 103.3

Additional comments will be given during the building plan review process (specific to the building plans and occupancy). The applicant is reminded that the fire authority must review the fire protection systems submittals (sprinkler & alarm) prior to permit issuance by the Building Department and that the authority will also review the building plans for life safety requirements in conjunction with the Building Department.

If you have any questions about the comments on this plan review please contact me at 810-229-6640.

Cordially,

A handwritten signature in black ink, appearing to read "R. Boisvert".

Rick Boisvert, CFPS
Fire Marshal

cc: Kelly VanMarter, kelly@genoa.org

Livingston County Road Commission

3535 Grand Oaks Drive • Howell, Michigan 48843-8575
Telephone: (517) 546-4250 • Facsimile: (517) 546-9628
Internet Address: www.livingstonroads.org

March 13, 2024

Scott Tousignant
Boss Engineering
3121 E. Grand River Ave
Howell, MI 48843

Re: South Latson Commercial Development, Genoa Township, Section 4
LCRC# C-24-06

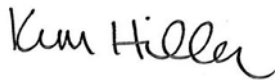
Dear Scott:

I have completed the review of the construction plans, dated January 16, 2024, for the above-referenced project and offer the following comments.

1. A contractor needs to be selected and the selected contractor must submit a certificate of insurance to the LCRC with the following language: "The Board of Livingston County Road Commissioners, the Livingston County Road Commission, and their officers, agents, and employees are listed additional insured parties with respects to General Liability." Please note this is note required for plan approval but will be required for issuance of a permit.
2. The type of MDOT concrete curb proposed within the Latson Road right-of-way should be labeled on the site plan.
3. Proposed sidewalk grades need to be provided in accordance with ADA requirements on the grading plan.
4. The proposed pavement cross section within the Latson Road right-of-way will need to match the existing cross section of Latson Road or at a minimum consist of 1.5" 5EML, 2.0" 4EML, 3.5" 3EML, 6" 21AA Aggregate, and 12" CL II sand.
5. Approval from the Livingston County Drain Commission and/or Genoa Township for the storm water system will need to be obtained and submitted prior to the issuance of the commercial driveway approach permit. MDOT approval has already been obtained and submitted for the discharge of the stormwater into their system at I-96 and Latson Road.

If you have any questions, please do not hesitate to contact me.

Sincerely,



Kim Hiller, P.E.
Utilities and Permits Engineer

Cc: File
Amy Ruthig, Genoa Township (via email)
Ken Recker, LCDC (via email)

PROPERTY DESCRIPTION:

PROPERTY DESCRIPTION PER KEM-TEC PROJECT

#21-03542 DATE 11-24-21 PARCEL

#4711-09-100-004

LAND SITUATED IN THE TOWNSHIP OF GENOA, COUNTY OF LIVINGSTON IN THE STATE OF MICHIGAN AND IS DESCRIBED AS FOLLOWS:

A PART OF THE NORTHWEST 1/4 OF THE NORTHWEST 1/4 OF SECTION 9, TOWN 2 NORTH, RANGE 5 EAST, MICHIGAN, DESCRIBED AS: BEGINNING 6.32 FEET SOUTH OF THE NORTHWEST CORNER OF THE NORTHWEST 1/4, THENCE EAST 223.00 FEET, THENCE NORTH 97.67 FEET, THENCE WEST 223.00 FEET, THENCE SOUTH 97.67 FEET TO THE POINT OF BEGINNING.

PROPERTY DESCRIPTION PER METRO CONSULTING ASSOCIATES

PROJECT #1037-17-8480 DATED 01-19-18 PARCEL

#4711-04-300-017

Commencing at the Southwest Corner of Section 9, Town 2 North, Range 5 East, Genoa Township, Livingston County, Michigan, said corner being NO 1°46'11" W 19.43 feet from a point referenced in Quit Claim Deed dated January 29, 1957, recorded April 4, 1961 in Liber 391, Page 382, Livingston County Records; thence N87°10'40" E 56.81 feet along the North line of said Section 9 and the South line of said Section 4, as established and approved by the Livingston County Reclamation Peer Group, dated June 6, 2002 and recorded in LSC# 171.0m, Livingston County Records to the POINT OF BEGINNING; thence S59°35'1" E 150.45 feet along the arc of a 10,060.00 foot radius non-tangent circular curve to the left, having a central angle of 100°54'27" having a chord which bears N00°15'46" W 159.36 feet along the East line of MDOT Right-of-Way as recorded in Instrument #2011R-023812, Livingston County Records; thence N89°33'52" E 150.45 feet along the South line of Parcel 3 as described in a Warranty Deed recorded June 6, 2016, in Instrument # 2016R-019204 and the North line of the Consumers Power Company land per Warranty Deed recorded in 539, Page 13, Livingston County Records; thence S01°19'25" E 125.00 feet along said Consumers Power Company land and parallel with the West line of said Section 4; thence the following four (4) courses along the North, East and South line of a Quit-Claim Deed to Consumers Power Company, recorded in Liber 391, Page 382, Livingston County Records: (1) N89°33'52" E 12.94 feet; (2) S01°14'18" E 30.63 feet to the South line of said Section 4; (3) S01°46'21" E 297.42 feet and (4) S88°33'38" E 177.83 feet along the North line of said Section 9 and within the Right-of-Way of Latson Road (Variable width); thence S02°52'35" E 33.10 feet along the South line of MDOT Right-of-Way as recorded in Instrument #2011R-023812, Livingston County Records; thence the following two (2) courses along said Right-of-Way: (1) N01°07'25" E 239.66 feet and (2) 163.72 feet along the arc of a 10,060.00 foot radius circular curve to the left, with a central angle of 00°55'57", having a chord which bears N00°59'26" E 163.71 feet to the POINT OF BEGINNING. Containing 2.09 acres of land, more or less. Being part of the SW 1/4 of the SW 1/4 of Section 4 and part of the NW 1/4 of Section 5, Town 2 North, Range 5 East, Genoa Township, Livingston County, Michigan. Subject to the right of the Public over the West 33.00 feet thereof, as occupied by Latson Road (Variable Width), being subject to any other Easement and restrictions of record, if any.

RESULTANT PARCEL

PROPOSED PARCEL 2 (SOUTH):

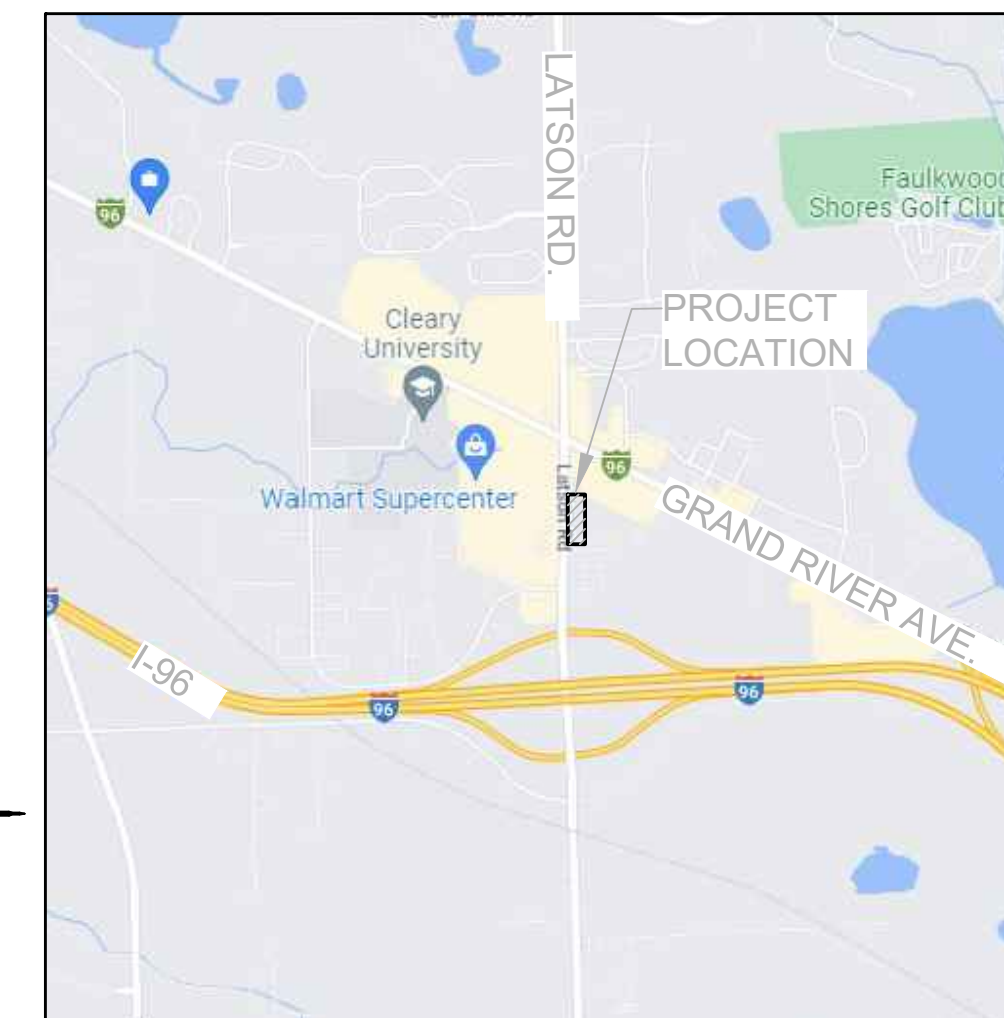
Part of the Northwest 1/4 of Section 9, T2N-R5E, Genoa Township, Livingston County, Michigan, more particularly described as follows: Commencing at the Northwest Corner of Section 9, also being the Southwest 1/4 of Section 4, said corner being North 01 degree 46 minutes 11 seconds West, 19.43 feet from a point referenced in Quit Claim Deed, dated January 29, 1957, recorded April 4, 1961 in Liber 391, Page 382, Livingston County Records; thence along the North line of Section 9 and the South line of Section 4, N 87°18'40" E, 56.81 feet; thence along the East line of MDOT Right-of-Way for Latson Road, as recorded in Instrument #2011R-023812, Livingston County Records, the following two (2) courses: 1) Southerly along an arc left, having a length of 163.71 feet, a radius of 10,091.50 feet, a central angle of 00°55'46", and a long chord which bears S 00°39'23" W, 163.71 feet; thence S 01°07'25" W, 68.33 feet, to the POINT OF BEGINNING of the Parcel to be described; thence N 88°33'38" E, 177.83 feet; thence S 01°46'21" E, 297.42 feet; thence S 01°46'11" E, 97.67 feet; thence S 88°08'19" W, 223.00 feet; thence along the West line of said Section 9 and within the Right-of-Way of Latson Road (Variable Width Right of Way), N 01°46'11" W, 158.78 feet; thence along the South line of MDOT Right-of-Way for Latson Road, as recorded in Instrument #2011R-023812, Livingston County Records, S 88°52'35" E, 33.10 feet; thence along the East line of MDOT Right-of-Way for Latson Road, as recorded in Instrument #2011R-023812, Livingston County Records, the following two (2) courses: 1) N 01°07'25" E, 239.66 feet, to the POINT OF BEGINNING, containing 1.81 acres, more or less, and subject to the rights of the public over the existing Latson Road. Also subject to any other easements or restrictions of record.

Bearings are based on Michigan State Plane Coordinate System, South Zone and legal description per Chicago Title Insurance Company, File No.: 21040145-C, Policy No.: 7430600-224063016, dated 6-4-21.

SITE PLAN FOR

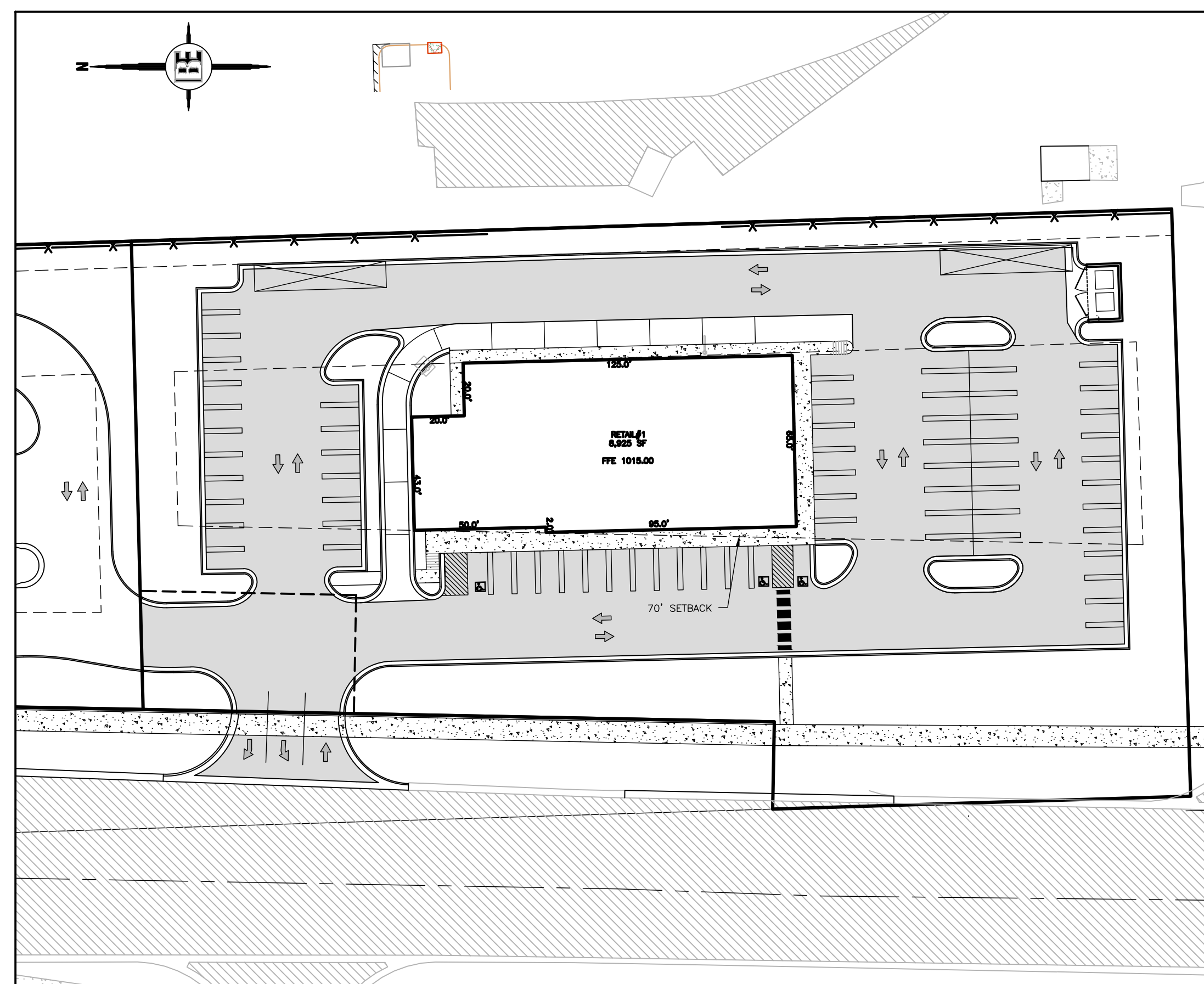
SOUTH LATSON COMMERCIAL DEVELOPMENT

**PART OF NW QUARTER, SECTION 4 & 9
GENOA CHARTER TOWNSHIP, LIVINGSTON COUNTY, MI**



LOCATION MAP

NO SCALE



OVERALL SITE MAP

NO SCALE

SHEET INDEX

SHEET NO.	DESCRIPTION
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2	GENERAL NOTES & LEGEND
3	EXISTING CONDITIONS, DEMO & NATURAL FEATURES PLAN
4	OVERALL SITE PLAN
5	SITE PLAN
6	GRADING & DRAINAGE PLAN
7	SOIL EROSION & SEDIMENTATION CONTROL PLAN
8	UTILITY PLAN
9	LANDSCAPE PLAN
10	CONSTRUCTION DETAILS
11	BASIN DETAILS
12	UNDERGROUND DETENTION DETAILS
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PLANS BY OTHERS	
1	PHOTOMETRIC PLAN
A.100	FLOOR PLAN
A.200	BUILDING ELEVATION
A.300	BUILDING RENDERING

PERMITS & APPROVALS		
AGENCY	DATE SUBMITTED	DATE APPROVED
• TOWNSHIP ENGINEERING APPROVAL	-	-
• LCRC	-	-
• LCDC SESC	-	-
• EGLE - ACT 399	-	-

LIGHTING PREPARED BY:
GASSER BUSH ASSOCIATES
30984 INDUSTRIAL RD
LIVONIA, MI 48150
QUOTES@GASSERBUSH.COM
PHONE: 734-266-6705

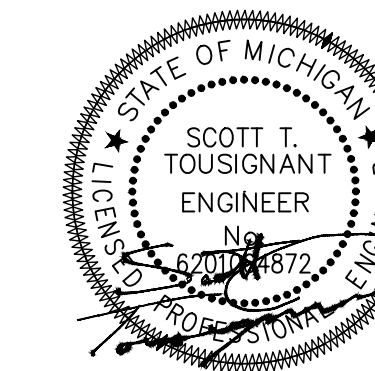
OWNER:
1015 LATSON ROAD LLC
29592 BECK RD
WIXOM, MI 48393
CONTACT: KEVIN BAHNAM
PHONE: 248.767.5337
EMAIL: KBAHNAM@USA2GOQUICKSTORES.COM

PREPARED BY:

BEBOSS Engineering
Engineers Surveyors Planners Landscape Architects

3121 E. GRAND RIVER AVE.
HOWELL, MI. 48843
517.546.4836 FAX 517.548.1670

CONTACT: SCOTT TOUSIGNANT, P.E.
EMAIL: SCOTT@BOSSENG.COM



INDEMNIFICATION STATEMENT

THE CONTRACTOR SHALL HOLD HARMLESS THE DESIGN PROFESSIONAL, MUNICIPALITY, COUNTY, STATE AND ALL OF ITS SUB CONSULTANTS, PUBLIC AND PRIVATE UTILITY COMPANIES, AND LANDOWNERS FOR DAMAGES TO INDIVIDUALS AND PROPERTY, REAL OR OTHERWISE, DUE TO THE OPERATIONS OF THE CONTRACTOR AND/OR THEIR SUBCONTRACTORS.

FOR SITE PLAN APPROVAL ONLY!
NOT FOR CONSTRUCTION

NO	BY	CK	REVISION	DATE	JOB NO:
4	ST	ST	PER LCRC AND PC COMMENTS	03-14-24	21-519
3	ST	ST	LAYOUT MODIFICATIONS	01-16-24	
2	ST	ST	PER P.C. MEETING	12-11-23	
1	ST	ST	PER TOWNSHIP COMMENTS	10-25-23	
NO	BY	CK	REVISION	DATE	

GENERAL NOTES

- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED TOWNSHIP, COUNTY, AND STATE OF MICHIGAN PERMITS.
- A GRADING PERMIT FOR SOIL EROSION-SEDIMENTATION CONTROL SHALL BE OBTAINED FROM THE GOVERNING AGENCY PRIOR TO THE START OF CONSTRUCTION.
- IF DUST PROBLEM OCCURS DURING CONSTRUCTION, CONTROL WILL BE PROVIDED BY AN APPLICATION OF WATER, EITHER BY SPRINKLER OR TANK TRUCK.
- ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH LOCAL MUNICIPAL STANDARDS AND SPECIFICATIONS.
- PAVED SURFACES, WALKWAYS, SIGNS, LIGHTING AND OTHER STRUCTURES SHALL BE MAINTAINED IN A SAFE, ATTRACTIVE CONDITION AS ORIGINALLY DESIGNED AND CONSTRUCTED.
- ALL BARRIER-FREE FEATURES SHALL BE CONSTRUCTED TO MEET ALL LOCAL, STATE AND A.D.A. REQUIREMENTS. WHERE EXISTING CONDITIONS AND/OR THE REQUIREMENTS OF THE PLANS WILL RESULT IN FINISHED CONDITIONS THAT DO NOT MEET ADA REQUIREMENTS, THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER PRIOR TO WORK COMMENCING.
- ANY DISCREPANCY IN THIS PLAN AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE DESIGN ENGINEER PRIOR TO THE START OF CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL SETBACKS, EASEMENTS AND DIMENSIONS SHOWN HEREON PRIOR TO BEGINNING CONSTRUCTION.
- THE CONTRACTOR SHALL CONTACT ALL OWNERS OF EASEMENTS, UTILITIES AND RIGHT-OF-WAY, PUBLIC OR PRIVATE, PRIOR TO THE START OF CONSTRUCTION.
- THE CONTRACTOR SHALL COORDINATE WITH ALL OWNERS TO DETERMINE THE LOCATION OF EXISTING LANDSCAPING, IRRIGATION LINES & PRIVATE UTILITY LINES. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING LANDSCAPING, IRRIGATION LINES, AND PRIVATE UTILITY LINES.
- THE CONTRACTOR SHALL REMOVE ALL TRASH AND DEBRIS FROM THE SITE UPON COMPLETION OF THE PROJECT.
- THE CONTRACTOR SHALL MAINTAIN THE SITE IN A MANNER SO THAT WORKMEN AND PUBLIC SHALL BE PROTECTED FROM INJURY, AND ADJOINING PROPERTY PROTECTED FROM DAMAGE.
- THE CONTRACTOR SHALL KEEP THE AREA OUTSIDE THE "CONSTRUCTION LIMITS" BROOM CLEAN AT ALL TIMES.
- THE CONTRACTOR SHALL CALL MISS DIG A MINIMUM OF 72 HOURS PRIOR TO THE START OF CONSTRUCTION.
- ALL PAVEMENT REPLACEMENT AND OTHER WORKS COVERED BY THESE PLANS SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE TOWNSHIP, INCLUDING THE LATEST MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT) SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE TO EXISTING UTILITIES.
- NO ADDITIONAL COMPENSATION WILL BE PAID TO THE CONTRACTOR FOR ANY DELAY OR INCONVENIENCE DUE TO THE MATERIAL SHORTAGES OR RESPONSIBLE DELAYS DUE TO THE OPERATIONS OF SUCH OTHER PARTIES DOING WORK INDICATED OR SHOWN ON THE PLANS OR IN THE SPECIFICATION OR FOR ANY REASONABLE DELAYS IN CONSTRUCTION DUE TO THE ENCOUNTERING OR EXISTING UTILITIES THAT MAY OR MAY NOT BE SHOWN ON THE PLANS.
- DURING THE CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL NOT PERFORM WORK BY PRIVATE AGREEMENT WITH PROPERTY OWNERS ADJACENT TO THE PROJECT.
- IF WORK EXTENDS BEYOND NOVEMBER 15, NO COMPENSATION WILL BE DUE TO THE CONTRACTOR FOR ANY WINTER PROTECTION MEASURES THAT MAY BE REQUIRED BY THE ENGINEER.
- NO TREES ARE TO BE REMOVED UNTIL MARKED IN THE FIELD BY THE ENGINEER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THE PROPERTY BEYOND THE CONSTRUCTION LIMITS INCLUDING BUT NOT LIMITED TO EXISTING FENCE, LAWN, TREES AND SHRUBBERY.
- TRAFFIC SHALL BE MAINTAINED DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL SIGNS AND TRAFFIC CONTROL DEVICES. FLAG PERSONS SHALL BE PROVIDED BY THE CONTRACTOR IF DETERMINED NECESSARY BY THE ENGINEER. ALL SIGNS SHALL CONFORM TO THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AT NO COST TO THE TOWNSHIP. NO WORK SHALL BE DONE UNLESS THE APPROPRIATE TRAFFIC CONTROL DEVICES ARE IN PLACE.
- ALL DEMOLISHED MATERIALS AND SOIL SPOILS SHALL BE REMOVED FROM THE SITE AT NO ADDITIONAL COST, AND DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.
- ANY EXISTING APPURTENANCES SUCH AS MANHOLES, GATE VALVES, ETC. SHALL BE ADJUSTED TO THE PROPOSED GRADE AND SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
- ALL PERMANENT SIGNS AND PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST REVISION OF THE MICHIGAN MUTCD MANUAL AND SHALL BE INCIDENTAL TO THE CONTRACT.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL ITEMS REQUIRED FOR CONSTRUCTION OF THE PROJECT ARE INCLUDED IN THE CONTRACT. ANY ITEMS NOT SPECIFICALLY DESIGNATED IN THE PLANS SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
- THE CONTRACTOR IS RESPONSIBLE FOR HAVING A SET OF APPROVED CONSTRUCTION PLANS, WITH THE LATEST REVISION DATE, ON SITE PRIOR TO THE START OF CONSTRUCTION, IN THE EVENT OF ANY QUESTIONS PERTAINING TO THE INTENT OF THE CONSTRUCTION PLANS OR SPECIFICATIONS, THE CONTRACTOR SHALL CONTACT THE DESIGN ENGINEER FOR A FINAL DETERMINATION FROM THE DESIGN ENGINEER.
- THE CONTRACTOR, NOT THE OWNER OR THE ENGINEER, ARE RESPONSIBLE FOR THE MEANS, METHODS, AND SEQUENCE OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR SAFE EXECUTION OF THE PROJECT SCOPE IN ACCORDANCE WITH THE APPROVED CONSTRUCTION PLANS.
- THE CONTRACTOR IS RESPONSIBLE FOR PRESERVING CONSTRUCTION STAKING AS NECESSARY. CONTRACTOR TO NOTIFY CONSTRUCTION SURVEYOR OF REPLACEMENT STAKES NEEDED WHICH SHALL BE AT THE CONTRACTORS EXPENSE.
- THE OWNER AND/OR CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING FRANCHISE UTILITY SERVICES (CABLE, ELECTRIC, GAS, ETC.) OWNER AND/OR CONTRACTOR SHALL WORK WITH UTILITY COMPANIES ON FURNISHING SITE UTILITY LAYOUTS AND PROVIDING CONDUIT CROSSINGS AS REQUIRED.
- DAMAGE TO ANY EXISTING UTILITIES OR INFRASTRUCTURE (INCLUDING PAVEMENT, CURB, SIDEWALK, ETC.) SHALL PROMPTLY BE REPLACED IN KIND AND SHALL BE AT THE CONTRACTORS EXPENSE.
- COORDINATION OF TESTING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND PER ALL CITY/TOWNSHIP/COUNTY REQUIREMENTS. COPIES OF ALL TEST REPORTS SHALL BE FURNISHED TO THE DESIGN ENGINEER.
- PRIOR TO THE START OF CONSTRUCTION, PROTECTION FENCING SHALL BE ERECTED AROUND THE TREE DRIPLINE OF ANY TREES INDICATED TO BE SAVED WITHIN THE LIMITS OF DISTURBANCE.
- THE CONTRACTOR SHALL MAINTAIN DRAINAGE OF THE PROJECT AREA AND ADJACENT AREAS. WHERE EXISTING DRAINAGE FACILITIES ARE IMPACTED/DISTURBED DUE TO CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE ANY NECESSARY TEMPORARY DRAINAGE PROVISIONS.
- SOIL BORING LOGS ARE REPRESENTATIVE OF SPECIFIC POINTS ON THE PROJECT SITE, AND IF PROVIDED TO THE CONTRACTOR ARE FOR INFORMATIONAL PURPOSES ONLY.
- WHERE CITY/TOWNSHIP STANDARD CONSTRUCTION DETAILS/SPECIFICATIONS ARE PROVIDED AND ARE IN CONFLICT WITH NOTES AND SPECIFICATIONS HEREIN, THE CITY/TOWNSHIP STANDARD SHALL GOVERN.

INDEMNIFICATION STATEMENT

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CONTRACTOR TO FOLLOW MANUFACTURER SPECS/RECOMMENDATIONS THAT SUPERCEDE PLANS

GENERAL GRADING & SESC NOTES

- THE CONTRACTOR SHALL HAVE IN PLACE ALL REQUIRED EROSION CONTROL METHODS AS INDICATED ON THE CONSTRUCTION PLANS AND AS REQUIRED BY GENERAL PRACTICE. SPECIFIC MEANS, METHODS AND SEQUENCES OF CONSTRUCTION MAY DICTATE ADDITIONAL SOIL EROSION CONTROL MEASURES BE NEEDED. THE CONTRACTOR SHALL COORDINATE WITH THE DESIGN ENGINEER ON THESE ANTICIPATED METHODS. ADDITIONAL SOIL EROSION CONTROL METHODS SHALL BE INCIDENTAL TO THE SCOPE OF WORK.
- ACTUAL FIELD CONDITIONS MAY DICTATE ADDITIONAL OR ALTERNATE SOIL EROSION CONTROL MEASURES BE UTILIZED. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DEFICIENCIES OR FIELD CONDITIONS THAT WARRANT ADDITIONAL AND/OR ALTERNATIVE SESC MEASURES BE UTILIZED.
- AT THE CLOSE OF EACH DAY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ALL CONSTRUCTION OPERATIONS, MATERIALS, DEBRIS, ETC ARE CONTAINED ON-SITE.
- AT THE CLOSE OF EACH WORKING DAY, ALL DRAINAGE STRUCTURES SHALL BE FREE OF DIRT AND DEBRIS AT THE FLOW LINE.
- ALL SOIL EROSION CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE PER MDEGL REGULATIONS AND BEST PRACTICES. ALL SOIL EROSION CONTROL MEASURES SHALL BE MAINTAINED BY THE CONTRACTOR.
- THE SOIL EROSION CONTROL MEASURES SHALL BE KEPT IN PLACE UNTIL SUCH A TIME THAT THE SITE IS DETERMINED TO BE ESTABLISHED WITH ACCEPTABLE AMOUNT OF VEGETATIVE GROUND COVER.
- ALL AREAS DISTURBED BY THE CONTRACTOR BEYOND THE NORMAL CONSTRUCTION LIMITS OF THE PROJECT SHALL BE SODDED OR SEEDED AS SPECIFIED OR DIRECTED BY THE ENGINEER.
- AFTER REMOVAL OF TOPSOIL, THE SUBGRADE SHALL BE COMPACTED TO 95% OF ITS UNIT WEIGHT.
- ALL GRADING IN THE PLANS SHALL BE DONE AS PART OF THIS CONTRACT. ALL DELETERIOUS MATERIAL SHALL BE REMOVED FROM THE SUBGRADE PRIOR TO COMPACTING.
- ALL ROOTS, STUMPS AND OTHER OBJECTIONABLE MATERIALS SHALL BE REMOVED AND THE HOLE BACKFILLED WITH SUITABLE MATERIAL. WHERE GRADE CORRECTION IS REQUIRED, THE SUBGRADE SHALL BE CUT TO CONFORM TO THE CROSS-SECTION AS SHOWN IN THE PLANS.
- ALL EXCAVATION UNDER OR WITHIN 3 FEET OF PUBLIC PAVEMENT, EXISTING OR PROPOSED SHALL BE BACKFILLED AND COMPACTED WITH SAND (MDOOT CLASS II).

GENERAL LANDSCAPE NOTES

- ALL PLANT MATERIAL SHALL CONFORM TO THE REQUIREMENTS AND SPECIFICATIONS OF THE GOVERNING MUNICIPALITY. ALL STOCK SHALL BE NURSERY GROWN, CONFORMING TO ANSI Z60.1 "AMERICAN STANDARD FOR NURSERY STOCK", AND IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICE. STOCK SHALL EXHIBIT NORMAL GROWTH HABIT AND BE FREE OF DISEASE, INSECTS, EGGS, LARVAE, & DEFECTS SUCH AS KNOTS, SUN-SCALD, INJURIES, ABRASIONS, OR DISFIGUREMENT. ALL PLANT MATERIAL SHALL BE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT.
 - ALL PLANT MATERIALS SHALL BE BALLED AND BURLAPPED OR CONTAINER STOCK. NO BARE ROOT STOCK IS PERMITTED. ALL PLANT BALLS SHALL BE FIRM, INTACT, AND SECURELY WRAPPED AND BOUND.
 - ALL PLANT BED MATERIALS SHALL BE EXCAVATED OF ALL BUILDING MATERIALS, OTHER EXTRANEIOUS OBJECTS, AND POOR SOILS TO A MINIMUM DEPTH OF 12-INCHES AND BACKFILLED TO GRADE WITH SPECIFIED PLANTING MIX (SEE BELOW).
 - PLANTING MIXTURE SHALL CONSIST OF 5 PARTS TOPSOIL FROM ON-SITE (AS APPROVED), 4 PARTS COARSE SAND, 1 PART SPHAGNUM PEAT MOSS (OR APPROVED COMPOST), AND 5 LBS OF SUPERPHOSPHATE FERTILIZER PER CU. YD. OF MIX. INGREDIENTS SHALL BE THOROUGHLY BLENDED FOR UNIFORM CONSISTENCY.
 - ALL PLANT BEDS AND INDIVIDUAL PLANTS, NOT OTHERWISE NOTED SHALL BE MULCHED WITH A 4-INCH LAYER OF SHREDDED BARK MULCH. EDGE OF MULCH BEDS AS SHOWN. DECIDUOUS TREES IN LAWN AREAS SHALL RECEIVE A 5-FT DIAMETER CIRCLE OF MULCH AND CONIFER TREES 8-FT (PLANTED CROWN OF TREE) UNLESS OTHERWISE NOTED.
 - LANDSCAPE STONE SHALL BE INSTALLED WHERE NOTED OR INDICATED (HATCHED). STONE SHALL BE 3/4"-1-1/4" WASHED RIVER GRAVEL OR AS SELECTED AND SHALL BE INSTALLED TO A MINIMUM DEPTH OF 3-INCHES.
 - ALL LANDSCAPE BEDS, UNLESS OTHERWISE NOTED SHALL BE INSTALLED OVER WEED BARRIER FABRIC - WATER PERMEABLE FILTRATION FABRIC OF NON-WOVEN POLYPROPYLENE OR POLYESTER FABRIC. FABRIC SHALL BE OF SUITABLE THICKNESS FOR APPLICATION.
 - ALL PLANTS AND PLANT BEDS SHALL BE THOROUGHLY WATERED UPON COMPLETION OF PLANTING AND STAKING OPERATIONS.
 - THE CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIALS FOR A PERIOD OF 1 YEAR FROM THE DATE THE WORK IS ACCEPTED, IN WRITING, BY THE LANDSCAPE ARCHITECT. THE CONTRACTOR SHALL REPLACE, WITHOUT COST TO THE OWNER, WITHIN A SPECIFIED PERIOD OF TIME, ALL DEAD PLANTS, AND ALL PLANTS NOT IN A VIGOROUS, THRIVING CONDITION, AS DETERMINED BY THE LANDSCAPE ARCHITECT, DURING AND AT THE END OF THE GUARANTEE PERIOD. REPLACEMENT STOCK SHALL CONFORM TO THE ORIGINAL SPECIFICATIONS.
 - EDGING SHALL BE PROVIDED FOR ALL LANDSCAPE BEDS NOT ADJACENT TO CONCRETE PAVEMENT. EDGING SHALL BE BLACK ALUMINUM EDGING, 3/16-INCH X 4-INCH. INSTALL PER MANUFACTURER'S INSTRUCTIONS, ALL EDGING SHALL BE INSTALLED IN STRAIGHT LINES OR SMOOTH CURVES WITHOUT IRREGULARITIES.
 - SOD SHALL BE DENSE, WELL ROOTED TURF, FREE OF WEEDS. IT SHALL BE COMPRISED OF A BLEND OF AT LEAST TWO KENTUCKY BLUE GRASSES AND ONE FESCUE. IT SHALL HAVE A UNIFORM THICKNESS OF 3/4-INCH AT TIME OF PLANTING, AND CUT IN UNIFORM STRIPS NOT LESS THAN 10-INCHES BY 18-INCHES. SOD SHALL BE KEPT MOIST AND LAID WITHIN 36-HOURS AFTER CUTTING.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH A DENSE LAWN OF PERMANENT GRASSES, FREE OF LUMPS AND DEPRESSIONS. ALL SODDED AREAS THAT BROWN-OUT OR HAVE NOT FIRMLY KNITTED TO THE SOIL BASE WITHIN A PERIOD OF 1 MONTH SHALL BE REPLACED BY THE CONTRACTOR, AT NO COST TO THE OWNER.
- ALL AREAS OF THE SITE THAT BECOME DISTURBED DURING CONSTRUCTION AND ARE NOT TO BE PAVED, STONED, LANDSCAPED, OR SODDED SHALL BE SEEDED AND MULCHED.
- SEED MIXTURE SHALL BE AS FOLLOWS:
 KENTUCKY BLUEGRASS (CHOOSE 3 VARIETIES - ADLPHI, RUGBY, GLADE, OR PARADE) 30%
 RUBY RED OR DAWSON RED FINE FESCUE 30%
 ATLANTA RED FESCUE 20%
 PENNFINE PERENNIAL RYE 20%
- THE ABOVE SEED MIXTURE SHALL BE SOWN AT A RATE OF 250 LBS PER ACRE. PRIOR TO SEEDING, THE TOPSOIL SHALL BE FERTILIZED WITH A COMMERCIAL FERTILIZER WITH A 10-0-10 ANALYSIS:
 10% NITROGEN - MIN 25% FROM A UREA FORMALDEHYDE SOURCE
 0 % PHOSPHATE
 10% POTASH - SOURCE POTASSIUM SULFATE OR POTASSIUM NITRATE
- THE FIRST FERTILIZER APPLICATION SHALL BE AT A RATE OF 10 LBS PER 1000 SQ FT OF BULK FERTILIZER.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH A DENSE LAWN OF PERMANENT GRASSES, FREE OF LUMPS AND DEPRESSIONS. ANY PART OF THE AREA THAT FAILS TO SHOW A UNIFORM GERMINATION SHALL BE RE-SEEDED AND SUCH RE-SEEDED SHALL CONTINUE UNTIL A DENSE LAWN IS ESTABLISHED. DAMAGE TO SEEDED AREAS RESULTING FROM EROSION SHALL BE REPAIRED BY THE CONTRACTOR.
- ALL AREAS OF THE SITE SCHEDULED FOR SEEDING OR SODDING SHALL FIRST RECEIVE A 6-INCH LAYER OF CLEAN, FRIABLE TOPSOIL. THE SOIL SHALL BE DISCED AND SHALL BE GRADED IN CONFORMANCE WITH THE GRADING PLAN.
 - IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION OF ALL UTILITIES AND TO INFORM THE LANDSCAPE ARCHITECT OF ANY CONFLICTS PRIOR TO COMMENCING LANDSCAPING.

GENERAL UTILITY NOTES

- BEDDING SHALL EXTEND A MINIMUM OF 4" BELOW THE PIPE, UNLESS OTHERWISE NOTED ON THE PLANS. BEDDING SHALL BE OF UNIFORM GRADATION MDOOT 6AA STONE OR MDOOT CLASS II GRANULAR MATERIAL FOR SANITARY AND STORM PIPE AND MDOOT CLASS II GRANULAR MATERIAL ONLY FOR WATERMAIN.
- WHERE UNSTABLE GROUND CONDITIONS ARE ENCOUNTERED, STONE BEDDING SHALL BE USED AS DIRECTED BY THE ENGINEER.
- BACKFILL SHALL BE OF A SUITABLE MATERIAL AND SHALL BE FREE OF ANY ORGANIC MATERIALS AND ROCKS.
- BACKFILL ABOVE THE PIPE SHALL BE OF GRANULAR MATERIAL MDOOT CLASS II TO A POINT 12" ABOVE THE TOP OF THE PIPE. WHERE THE TRENCH IS NOT WITHIN THE INFLUENCE OF THE ROAD, SUITABLE SITE MATERIAL MAY BE COMPACTED AND UTILIZED FROM A POINT 12" ABOVE THE PIPE TO GRADE. WHERE THE TRENCH IS WITHIN A 1:1 INFLUENCE OF THE ROAD, GRANULAR MATERIAL, MDOOT CLASS II OR III, IS TO BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING 12" IN THICKNESS. COMPACTION SHALL BE 95% AS DETERMINED BY AASHTO T99.
- 18" MINIMUM VERTICAL SEPARATION AND 10' HORIZONTAL SEPARATION IS TO BE MAINTAINED BETWEEN WATERMAIN AND SANITARY/STORM SEWER TO THE MAXIMUM EXTENT POSSIBLE.

GENERAL STORM NOTES

- ALL STORM PIPE LENGTHS ARE SHOWN FROM C/L TO C/L OF STRUCTURE OR FROM C/L OF STRUCTURE TO DISCHARGE END OF FLARED END SECTION.
- STORM PIPE MATERIALS SHALL BE AS FOLLOWS:
 2.1. RCP(REINFORCED CONCRETE PIPE); SHALL MEET THE REQUIREMENTS OF ASTM C76 WITH MODIFIED GROOVED TONGUE AND RUBBER GASKETS MEETING THE REQUIREMENTS OF ASTM C443. RCP TO BE EITHER CLASS IV OR V AS CALLED OUT ON THE PLANS.
 2.2. HDPE(HIGH DENSITY POLYETHYLENE); SHALL MEET THE REQUIREMENTS OF ASTM F2648.
 2.3. PP(POLYPROPYLENE); SHALL MEET THE REQUIREMENTS OF ASTM F2881.
 2.4. PVC(POLYVINYL CHLORIDE); SHALL MEET THE REQUIREMENTS OF ASTM D3034.
- STORM PIPE JOINTS SHALL MEET THE REQUIREMENTS OF ASTM D3212. HDPE AND PP PIPE GASKETS SHALL MEET THE REQUIREMENTS OF ASTM F477.
- ALL STORM PIPE TO HAVE WATERTIGHT PREMIUM JOINTS, UNLESS OTHERWISE NOTED ON THE PLANS.
- STORM DRAINAGE STRUCTURES SHALL BE FURNISHED WITH STEPS WHICH SHALL BE STEEL ENCASED WITH POLYPROPYLENE PLASTIC OR EQUIVALENT. STEPS SHALL BE SET AT 16" CENTER TO CENTER.
- ALL FLARED END SECTIONS 15" AND LARGER SHALL BE FURNISHED WITH AN ANIMAL GRATE.
- FLARED END SECTIONS DISCHARGING STORM WATER SHALL RECEIVE A MINIMUM OF 10 SQ YDS OF PLAIN CRESTLESTONE RIP RAP WITH A MINIMUM STONE SIZE OF 6" AND SHALL BE PLACED ON A GEOTEXTILE FABRIC WRAP.
- ALL CATCH BASINS WITHIN THE ROADWAY SHALL INCLUDE INSTALLATION OF 6" DIAMETER PERFORATED PIPE SUBDRAIN.
- STORM DRAINAGE STRUCTURE COVERS SHALL BE OF THE FOLLOWING (OR APPROVED EQUAL):
 TYPE LOCATION FRAME COVER/INLET
 'MH' ALL 1040 SANITARY-SOLID SELF-SEALING STORM-VENTED
 'CB' TYPE A CURB 7000-T1-M FLAT GRATE WITH VERT. OPEN BACK
 'CB' TYPE B CURB 7065-T1-M FLAT GRATE WITH ROLL BACK
 'CB' PAVEMENT/SHOULDER 1020-M1 FLAT GRATE
 'CB' OPEN AREA 1020-01 BEEHIVE GRATE 4" HIGH
 'CB' GUTTER 5100 CONCAVE INLET

GENERAL SANITARY NOTES

- ALL SANITARY PIPE LENGTHS ARE SHOWN FROM C/L OF STRUCTURE TO C/L OF STRUCTURE.
- SANITARY PIPE MATERIALS SHALL BE AS FOLLOWS:
 2.1. PVC SDR-26 (SANITARY MAIN)
 2.2. PVC SDR-23.5 (SANITARY LEADS)
 2.3. HDPE DR-11 (SANITARY FORCEMAIN)
- ALL PVC SDR SANITARY SEWER PIPE SHALL MEET THE REQUIREMENTS OF ASTM D3034 AND D2241. PVC SCHD 40 PIPE SHALL MEET THE REQUIREMENTS OF ASTM D1785. GASKET JOINTS FOR SANITARY PIPE SHALL MEET THE REQUIREMENTS OF ASTM D3139 AND D3212.
- SANITARY STRUCTURES SHALL BE FURNISHED WITH STEPS WHICH SHALL BE STEEL ENCASED WITH POLYPROPYLENE PLASTIC OR EQUIVALENT. STEPS SHALL BE SET AT 16" CENTER TO CENTER.
- ALL NEW MANHOLES SHALL BE MINIMUM 4' DIAMETER, PRECAST MANHOLE SECTIONS AND AN ECCENTRIC CONE. PRECAST MANHOLE JOINTS SHALL BE INSTALLED WITH BUTYL ROPE MEETING THE REQUIREMENTS OF ASTM C990.
- MANHOLES SHALL BE CONSTRUCTED WITH FLOW CHANNEL WALLS THAT ARE FORMER, AT A MINIMUM, TO THE SPRINGLINE OF THE PIPE.
- ALL NEW MANHOLES SHALL HAVE AN APPROVED FLEXIBLE, WATERTIGHT SEALS WHERE PIPES PASS THROUGH MANHOLE WALLS.
- WHEREVER AN EXISTING MANHOLE IS TO BE TAPPED, THE STRUCTURE SHALL BE CORED AND A KOR-N-SEAL BOOT UTILIZED FOR THE PIPE CONNECTION.
- ALL MANHOLES SHALL BE PROVIDED WITH WATERTIGHT COVERS. COVERS TO BE EJCO 1040 TYPE 'A' SOLID COVER.
- A MAXIMUM OF 12" OF GRADE ADJUSTMENT RINGS SHALL BE USED TO ADJUST THE FRAME ELEVATION. BUTYL ROPE SHALL BE USED BETWEEN EACH ADJUSTMENT RING.
- SANITARY SEWER LATERALS SHALL HAVE A MINIMUM SLOPE OF 1.0%.
- CLEANOUTS SHALL BE INSTALLED EVERY 100', AT ALL BENDS AND STUBS.
- PUBLIC SANITARY SEWER SHALL BE CENTERED WITHIN A 20 FOOT WIDE SANITARY SEWER EASEMENT.

GENERAL WATERMAIN NOTES

- WATERMAIN PIPE MATERIALS SHALL BE AS FOLLOWS:
 1.1. D.I.P. CL52 (WATERMAIN)
 1.2. TYPE 'K' COPPER (WATER LATERAL - MAIN TO CURB STOP)
 1.3. HDPE DR-9 (WATER LATERAL - CURB STOP TO STUB)
- WATERMAIN FITTINGS SHALL BE OF DUCTILE IRON WITH CEMENT MORTAR LINING AND MECHANICAL JOINTS CONFORMING TO AWWA C110.
- WATERMANS SHALL BE DISINFECTED IN ACCORDANCE WITH AWWA C651. BAC-T SAMPLES SHALL BE TAKEN IN ACCORDANCE WITH R235.11110 OF THE ADMINISTRATIVE RULES PROMULGATED UNDER MICHIGAN SAFE DRINKING WATER ACT, 1976 PA 399, AS AMENDED.
- ALLOWABLE LEAKAGE OR HYDROSTATIC PRESSURE TESTING SHALL BE IN ACCORDANCE WITH AWWA C600 AND C605.
- MAXIMUM DEFLECTION AT PIPE JOINTS SHALL BE IN ACCORDANCE WITH PIPE MANUFACTURERS CURRENT RECOMMENDATIONS AND AWWA SPECIFICATIONS.
- A FULL STOCK OF PIPE SHALL BE LAID CENTERED AT A PIPE CROSSING IN ORDER TO MAINTAIN THE MAXIMUM SEPARATION OF WATERMAIN JOINT TO THE CROSSING PIPE.
- WATERMAIN SHALL BE INSTALLED WITH A MINIMUM OF 5.5' OF COVER FROM FINISHED GRADE TO TOP OF PIPE AND NO MORE THAN 8' OF COVER, UNLESS SPECIAL CONDITIONS WARRANT.
- WATERMAIN VALVES SHALL BE IRON BODY RESILIENT WEDGE GATE VALVES, NON-RISING STEMS, COUNTERCLOCKWISE OPEN, AWWA C509.
- FIRE HYDRANTS SHALL BE INSTALLED WITH AN AUXILIARY VALVE WITH CAST IRON VALVE BOX. THE HYDRANT PUMPER HOSE CONNECTION SHALL FACE THE ROADWAY.
- THE BREAKAWAY FLANGE AND ALL BELOW GRADE FITTINGS SHALL HAVE STAINLESS STEEL NUTS AND BOLTS.
- PUBLIC WATERMAIN SHALL BE CENTERED WITHIN A 25 FOOT WIDE WATERMAIN EASEMENT.

LINES & HATCHES LEGEND

	<p>PROPOSED (PR) EXISTING (EX)</p> <p>900 900</p> <p>16" 16"</p> <p>1/2" XXX-XXX 1/2" XXX-XXX</p> <p>SN SN FL FL SM SM PS PS ST ST WM WM WL WL FO FO OH OH C C E E T T X X</p> <p>CONTOUR SPOT ELEVATION SANITARY SEWER SANITARY LEAD FORCE MAIN PRESSURE SEWER STORM SEWER WATER MAIN WATER LEAD FIBER OPTIC OVERHEAD WIRE CABLE ELECTRIC GAS TELEPHONE FENCE SILT FENCE WETLAND BOUNDARY LIMITS OF GRADING/CLEARING LIMITS OF DRAINAGE MODIFIED CURB CONCRETE HIGH STRENGTH CONCRETE ASPHALT HIGH STRENGTH ASPHALT WETLAND SANITARY SEWER LABEL STORM SEWER LABEL WATER MAIN LABEL SOIL EROSION CONTROL MEASURE (P=PERMANENT, T=TEMPORARY)</p>
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LANDSCAPE LEGEND

	<p>EXISTING CONIFER TREE PROPOSED CONIFER TREE PROPOSED TREE PROTECTION SOD SEED MULCH</p> <p>EXISTING DECIDUOUS TREE PROPOSED DECIDUOUS TREE PROPOSED ORNAMENTAL TREE PROPOSED DECIDUOUS SHRUBS PROPOSED GRASSES & PERENNIALS PROPOSED LANDSCAPE BOULDER</p>
--	---

SYMBOL LEGEND

	<p>STORM DRAINAGE FLOW GUY WIRE POWER POLE TRANSFORMER PAD ELECTRICAL RISER U.G. ELECTRICAL MARKER ELECTRICAL METER AIR CONDITIONING UNIT TELEPHONE RISER U.G. TELEPHONE MARKER GAS RISER GAS METER U.G. GAS MARKER CABLE TV RISER U.G. CABLE TV MARKER MAILBOX WELL WATER MANHOLE GATE VALVE (EXISTING) GATE VALVE (PROPOSED) HYDRANT (EXISTING) HYDRANT (PROPOSED) CATCH BASIN (EXISTING) YARD CATCH BASIN (EXISTING) CATCH BASIN (PROPOSED) STORM MANHOLE (EXISTING) STORM MANHOLE (PROPOSED) END SECTION (EXISTING) END SECTION (PROPOSED) SANITARY MANHOLE (EXISTING) SANITARY MANHOLE (PROPOSED) PUMP CHAMBER TRAFFIC SIGN SIGN (EXISTING) SIGN (PROPOSED) SOIL BORING STEEL ROD SET STEEL ROD OR PIPE FOUND WOOD LATH SET HUB SET MONUMENT FOUND SECTION CORNER GAS PUMP ANTENNA SATELLITE DISH NEWSPAPER BOX PARKING METER PHONE BOOTH HANDICAP SYMBOL BENCHMARK LIGHT POLE</p>
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ABBREVIATIONS

F.F.E.	FINISHED FLOOR ELEVATION
B.F.E.	BASEMENT FLOOR ELEVATION
G.F.E.	GARAGE FLOOR ELEVATION
FG	FINISHED GRADE
T/A	TOP OF ASPHALT
T/C	TOP OF CONCRETE/CURB
T/W	TOP OF WALK
T/P	TOP OF PIPE
B/P	BOTTOM OF PIPE
F/L	FLOW LINE
RIM	RIM ELEVATION (AT FLOW LINE)
INV	INVERT ELEVATION
MH	MANHOLE
CB	CATCH BASIN
RY	REAR YARD
YD	YARD DRAIN
RD	ROOF DRAIN
FES	FLARED END SECTION
CMP	CORRUGATED METAL PIPE
GPP	CORRUGATED PLASTIC PIPE
RCP	REINFORCED CONCRETE PIPE
HDPE	HIGH DENSITY POLYETHYLENE
PVC	POLYVINYL CHLORIDE
DIP	DUCTILE IRON PIPE
GV	GATE VALVE
GVW	GATE VALVE IN WELL
QVB	GATE VALVE IN BOX
HYD	HYDRANT
FDC	FIRE DEPARTMENT CONNECTION
UP	UTILITY POLE
NFV	NOT FIELD VERIFIED
TR	TO BE REMOVED
L	LIBER
P	PAGE
L.C.R.	LIVINGTON COUNTY RECORDS
(M&R)	MEASURED AND RECORD
L.O.B.	POINT OF BEGINNING

THE LOCATION AND ELEVATION OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THESE DRAWINGS ARE ONLY APPROXIMATE. NO GUARANTEE IS MADE FOR THE ACCURACY OF THESE UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND EASEMENTS FROM THE PLANS.

BEFORE ANY DIGGING CALL MISS DIG
 1-800-487-7171
 or visit www.call4missdig.com

BEBOSS Engineering
 Engineers Surveyors Planners Landscape Architects
 3121 E. GRAND RIVER AVE.
 HOWELL, MI. 48843
 517.546.4836 FAX 517.548.1670

SOUTH LATSON COMMERCIAL DEVELOPMENT

1015 LATSON ROAD LLC
 26932 BECK ROAD
 WOODHAM, MI 48393
 248-773-7992

PROJECT: SOUTH LATSON COMMERCIAL DEVELOPMENT
 PREPARED FOR: SOUTH LATSON COMMERCIAL DEVELOPMENT

NO.	DATE	PER LORC AND PC COMMENTS	LAYOUT MODIFICATIONS	PER P.C. MEETING	PER TOWNSHIP COMMENTS	REVISION PER	DATE
4	1/1						
3	1/1						
2	1/1						
1	1/1						
NO BY							

DESIGNED BY: ST
 DRAWN BY: ST
 CHECKED BY:
 SCALE: 21=SCALE
 JOB NO: NO 549
 DATE: 10/04/2023
 SHEET NO. 2

SANITARY SEWER INVENTORY:		STORM SEWER INVENTORY:		STORM SEWER INVENTORY:	
RM=1009.24 INV. N=1002.04 (8") INV. S=1002.14 (8")	LT2B RIM=1009.05 M INV. S=1003.27 R (15")	LT21 RIM=1011.78 M INV. S=1001.10 R (24") INV. N=1001.10 R (24")	LT22 RIM=1010.55 M INV. S=1001.55 R (24") INV. N=1001.65 R (18") INV. E=1006.78 R (12")	LT19 RIM=1012.86 M INV. S=1000.70 R (24") INV. E=1008.00 R (12")	LT19A RIM=1013.18 R INV. S=1000.70 R (24") INV. E=1008.00 R (12")
RM=1011.15 INV. N=1004.05 (8") INV. S=1004.15 (8")	LT24 RIM=1009.36 M INV. S=1002.78 R (18")	LT21A RIM=1011.61 M INV. S=1001.90 R (12") INV. N=1008.20 R (12")	LT22A RIM=1010.48 M INV. W=1007.10 R (12") INV. N=1007.20 R (12")	LT19B RIM=1012.62 M INV. W=1009.00 R (12")	LT19B RIM=1013.17 M INV. S=1000.00 R (30") INV. N=1000.50 R (24") INV. E=1008.50 R (12")
RM=1012.06 INV. N=1005.11 (8") INV. S=1005.16 (8")	LT24A RIM=1009.12 M INV. W=1009.51 R INV. E=1006.50 R (12")	LT20 RIM=1012.23 M INV. S=1002.25 R (24") INV. N=1003.30 R (24") INV. E=1007.00 R (12")	LT22B RIM=1010.40 M INV. S=1007.30 R (12")	LT19C RIM=1013.07 M INV. W=1009.50 R (12")	
RM=1013.91 INV. N=1006.81 (8") INV. S=1006.91 (8") INV. E=1008.91 (8")	LT24B RIM=1009.64 M INV. S=1007.00 R (12")	LT20A RIM=1011.93 M INV. W=1008.00 R (12") INV. N=1008.00 R (12")			

GENERAL SURVEY NOTES:

- BEARINGS WERE ESTABLISHED FROM METRO CONSULTING ASSOCIATES, JOB NO. SG-19193, DATED 01/19/2018.
- SUBSURFACE UTILITIES NOT LOCATED FOR THIS SURVEY MAY EXIST. IT IS THE RESPONSIBILITY OF THE OWNER OF THE RESPECTIVE UTILITY TO ACCURATELY LOCATE SUCH UTILITIES.
- EASEMENTS OR RESTRICTIONS OF RECORD NOT DEPICTED ON THIS DRAWING MAY EXIST.
- ELEVATIONS WERE ESTABLISHED WITH GPS USING OPUS GPS POST-PROCESSING. (NAVD83 DATUM)
- CONTOURS ARE SHOWN AT 1 FOOT INTERVALS.
- THE LOCATIONS OF STORM SEWER, SANITARY SEWER & WATERMAIN, AS SHOWN ON THIS DRAWING ARE APPROXIMATE. THE LOCATIONS ARE BASED ON PHYSICAL FIELD LOCATIONS OF STRUCTURES ALONG WITH DRAWINGS SUPPLIED BY MDOT AND MHC.
- ALL WORK SHALL BE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE MUNICIPALITY, THE COUNTY, AND THE STATE OF MICHIGAN.
- ALLOW THREE WORKING DAYS BEFORE YOU DIG, CALL MISS DIG TOLL FREE 1-800-482-7171.
- THERE WAS SNOW ON THE GROUND AT THE TIME OF FIELDWORK FOR THIS SURVEY.

SOIL NOTES:

THE PROJECT SITE IS COMPRISED OF THE FOLLOWING SOIL TYPE ACCORDING TO THE USDA NATURAL RESOURCES CONSERVATION SERVICE:
 Cva0B -- CONOVER LOAM, 0 TO 4 % SLOPES
 MoB -- MIAMI LOAM, 2 TO 6 % SLOPES
 Wh -- WASHTENAW SILT LOAM

SITE BENCHMARKS (NAVD83):

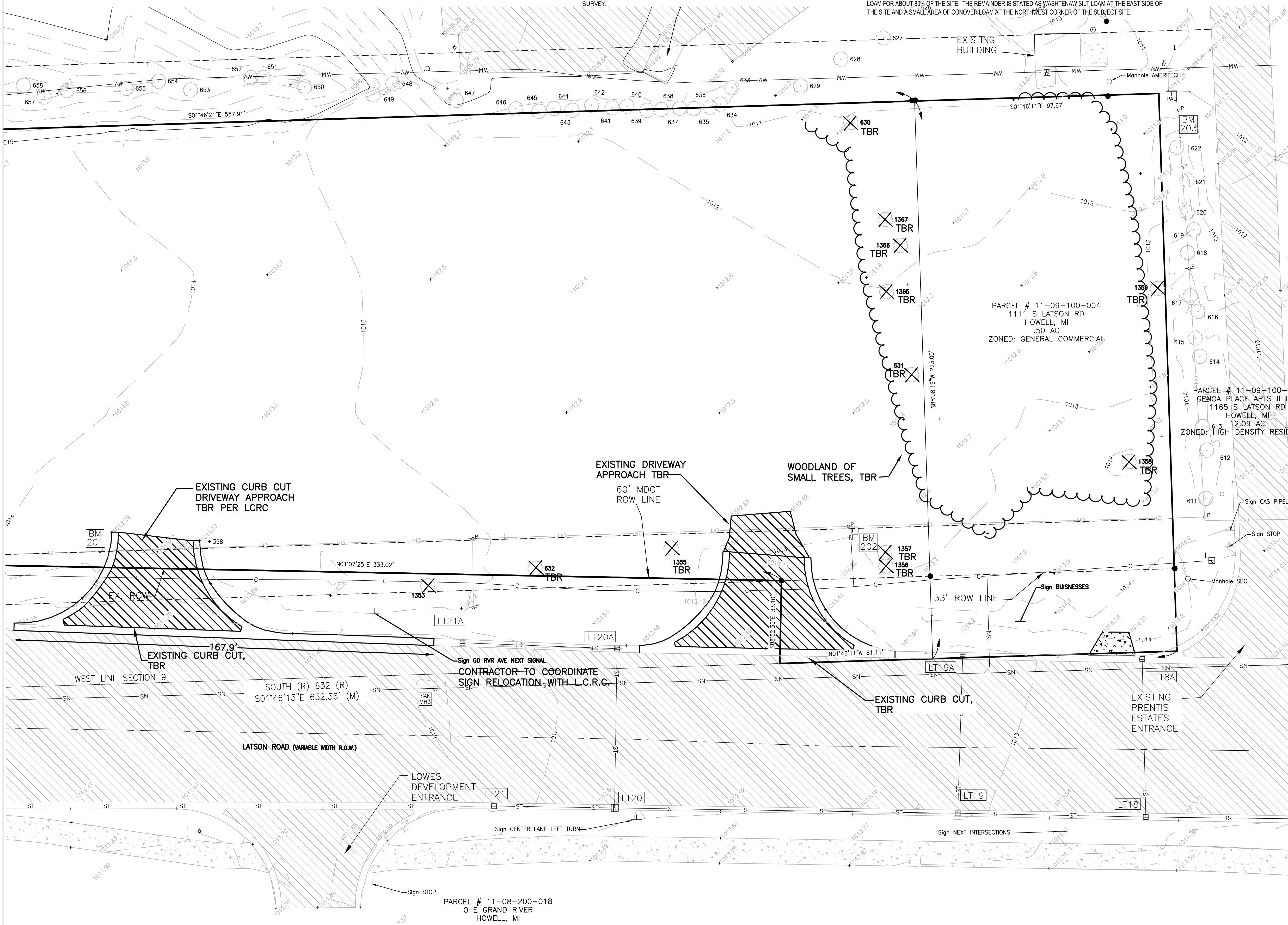
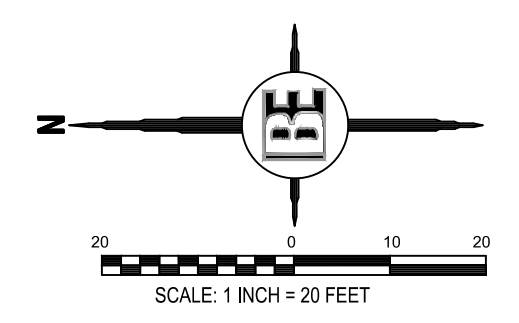
- BM #200 = NAIL/TAG S/S POWER POLE ELEV.=1013.34
- BM #201 = NAIL/TAG NE/S POWER POLE ELEV.=1014.28
- BM #202 = NAIL/TAG NE/S POWER POLE ELEV.=1013.57
- BM #203 = NORTH EAST CORNER TRANS-PAD ELEV.=1011.58

NATURAL FEATURES NARRATIVE:

NATURAL FEATURES WERE IDENTIFIED DURING AN ON-SITE VISIT TO THE PROPERTY ON SEPTEMBER 28, 2023. SITE IS VACANT AND PRIMARILY CAN BE DESCRIBED AS UNMANICURED TALL GRASS. THE SOUTHERN PORTION OF THE SITE CONTAINS SOME TREES AS INDICATED BY THE PLAN BELOW AND TREE LIST ON THIS SHEET.

ENTIRE SITE IS RELATIVELY FLAT, WITH A LOWER ELEVATION AT LATSON ROAD. SITE SLOPES WESTERLY TO LATSON ROAD AT SLOPES OF 2-4%. SOILS ARE ALSO UNIFORM PER USDA NRCS SOILS DATA CONSISTING OF MIAMI LOAM FOR ABOUT 80% OF THE SITE. THE REMAINDER IS STATED AS WASHTENAW SILT LOAM AT THE EAST SIDE OF THE SITE AND A SMALL AREA OF CONOVER LOAM AT THE NORTHWEST CORNER OF THE SUBJECT SITE.

SEE SHEET 2 FOR GENERAL NOTES AND LEGEND



Tag #	Botanical Name	Common Name	Size	Condition
1357	Quercus rubra	Northern Red Oak	18"	good
1358	Pinus strobus	Red Pine	21"	good
1359	Quercus rubra	Northern Red Oak	18"	good
1360	Pinus strobus	Red Pine	18"	good
611	Pinus resinosa	Red Pine	14.5"	good
612	Pinus resinosa	Red Pine	17"	fair
613	Pinus resinosa	Red Pine	14.5"	fair
614	Pinus resinosa	Red Pine	10"	poor
615	Pinus resinosa	Red Pine	12"	poor
616	Pinus resinosa	Red Pine	9"	poor
617	Pinus resinosa	Red Pine	12"	poor
1361	Acer rubrum	Red Maple	8"	good
618	Pinus resinosa	Red Pine	13.5"	poor
619	Pinus resinosa	Red Pine	7"	poor
620	Pinus resinosa	Red Pine	14"	poor
621	Pinus resinosa	Red Pine	15"	poor
622	Pinus resinosa	Red Pine	13"	poor
623	Picea abies	Norway Spruce	14"	good
624	Picea abies	Norway Spruce	14"	good
625	Picea abies	Norway Spruce	17"	good
626	Picea abies	Norway Spruce	25"	good
627	Pinus resinosa	Red Pine	15"	fair
628	Pinus resinosa	Red Pine	11"	fair
629	Pinus resinosa	Red Pine	13"	good
1362	Populus deltoides	Cottonwood	6"	poor
1363	Prunus serotina	Black Cherry	11" 13"	poor
1364	Quercus bicolor	Swamp White Oak	13" 14"	poor
1365	Pinus strobus	Red Pine	13"	poor
1366	Pinus strobus	Red Pine	11"	poor
1367	Pinus strobus	Red Pine	11"	poor
1368	Pinus strobus	Red Pine	11"	poor
1369	Pinus strobus	Red Pine	11"	poor
1370	Pinus strobus	Red Pine	11"	poor
1371	Pinus strobus	Red Pine	11"	poor
1372	Pinus strobus	Red Pine	11"	poor
1373	Pinus strobus	Red Pine	11"	poor
1374	Pinus strobus	Red Pine	11"	poor
1375	Pinus strobus	Red Pine	11"	poor
1376	Pinus strobus	Red Pine	11"	poor
1377	Pinus strobus	Red Pine	11"	poor
1378	Pinus strobus	Red Pine	11"	poor
1379	Pinus strobus	Red Pine	11"	poor
1380	Pinus strobus	Red Pine	11"	poor
1381	Pinus strobus	Red Pine	11"	poor
1382	Pinus strobus	Red Pine	11"	poor
1383	Pinus strobus	Red Pine	11"	poor
1384	Pinus strobus	Red Pine	11"	poor
1385	Pinus strobus	Red Pine	11"	poor
1386	Pinus strobus	Red Pine	11"	poor
1387	Pinus strobus	Red Pine	11"	poor
1388	Pinus strobus	Red Pine	11"	poor
1389	Pinus strobus	Red Pine	11"	poor
1390	Pinus strobus	Red Pine	11"	poor
1391	Pinus strobus	Red Pine	11"	poor
1392	Pinus strobus	Red Pine	11"	poor
1393	Pinus strobus	Red Pine	11"	poor
1394	Pinus strobus	Red Pine	11"	poor
1395	Pinus strobus	Red Pine	11"	poor
1396	Pinus strobus	Red Pine	11"	poor
1397	Pinus strobus	Red Pine	11"	poor
1398	Pinus strobus	Red Pine	11"	poor
1399	Pinus strobus	Red Pine	11"	poor
1400	Pinus strobus	Red Pine	11"	poor



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BEBOSS Engineering
 Engineers Surveyors Planners Landscape Architects
 3121 E. GRAND RIVER AVE.
 HOWELL, MI. 48843
 517.546.4836 FAX 517.548.1670

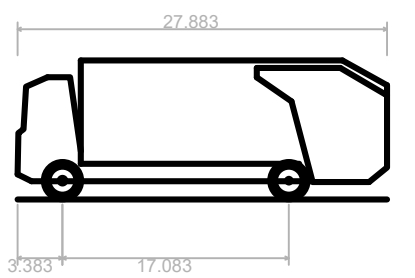
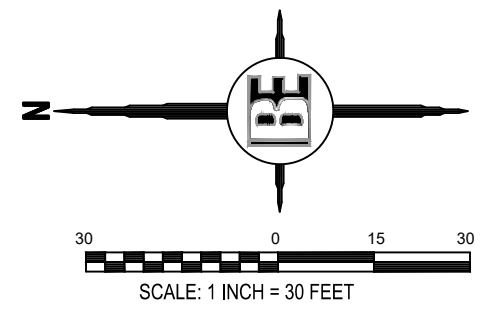
PROJECT: SOUTH LATSON COMMERCIAL DEVELOPMENT
 PREPARED FOR: 1015 LATSON ROAD LLC
 29932 BECK ROAD WOODON, MI 48393 248.773.9992

TITLE: EXISTING CONDITIONS, DEMO & NATURAL FEATURES PLAN

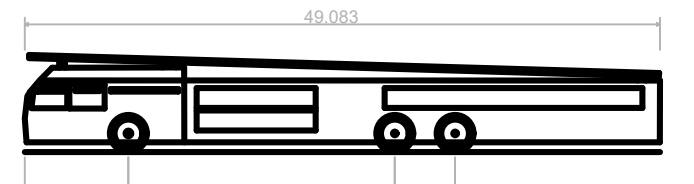
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3	ST	LAYOUT MODIFICATIONS	1-16-24
2	ST	PER P.C. MEETING	12-11-23
1	ST	PER TOWNSHIP COMMENTS	10-25-23
NO	BY	REVISION PER	DATE

DESIGNED BY: ST
 DRAWN BY: ST
 CHECKED BY:
 SCALE: 1" = 20'
 JOB NO: 21-519
 DATE: 10/04/2023
 SHEET NO. 3

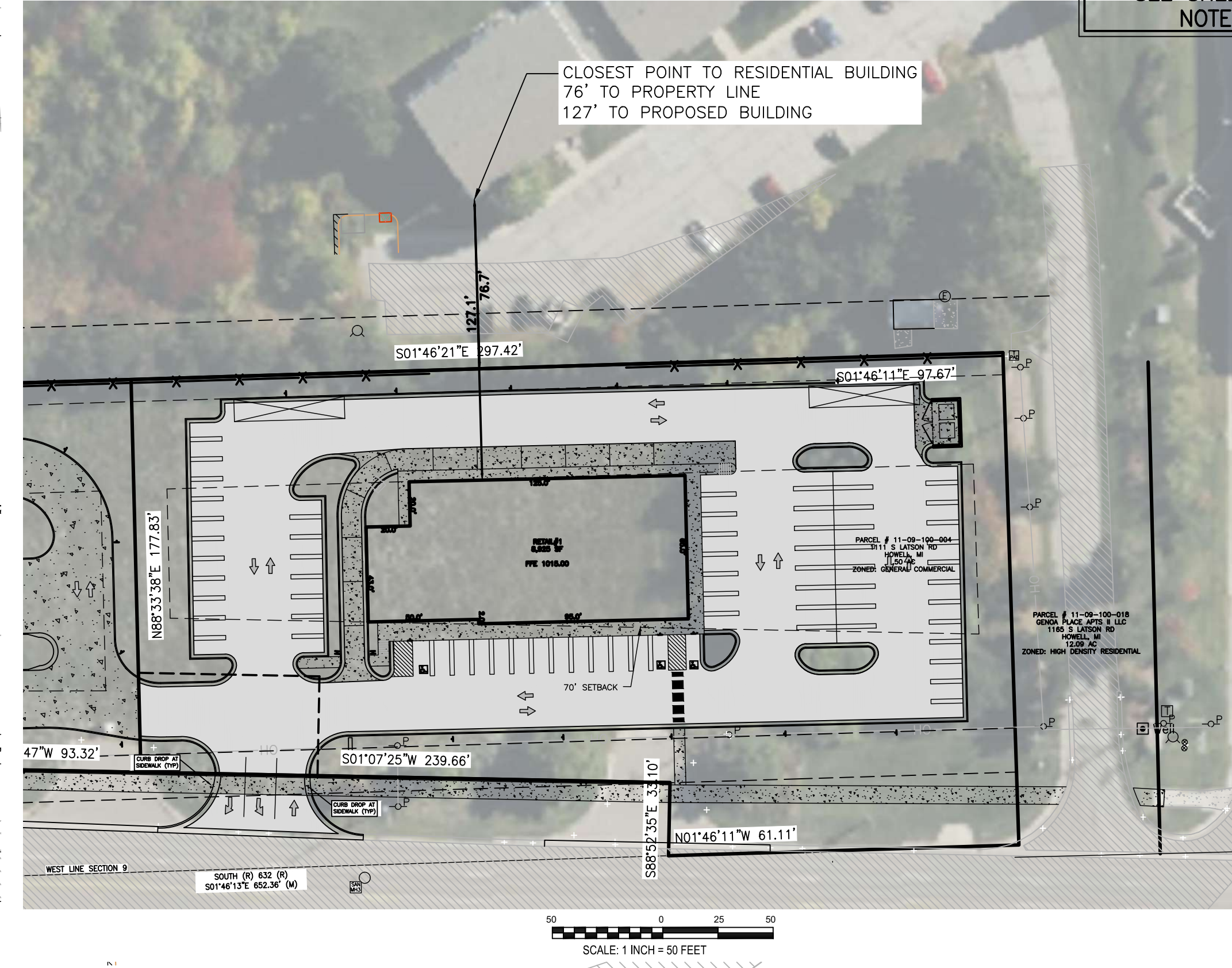
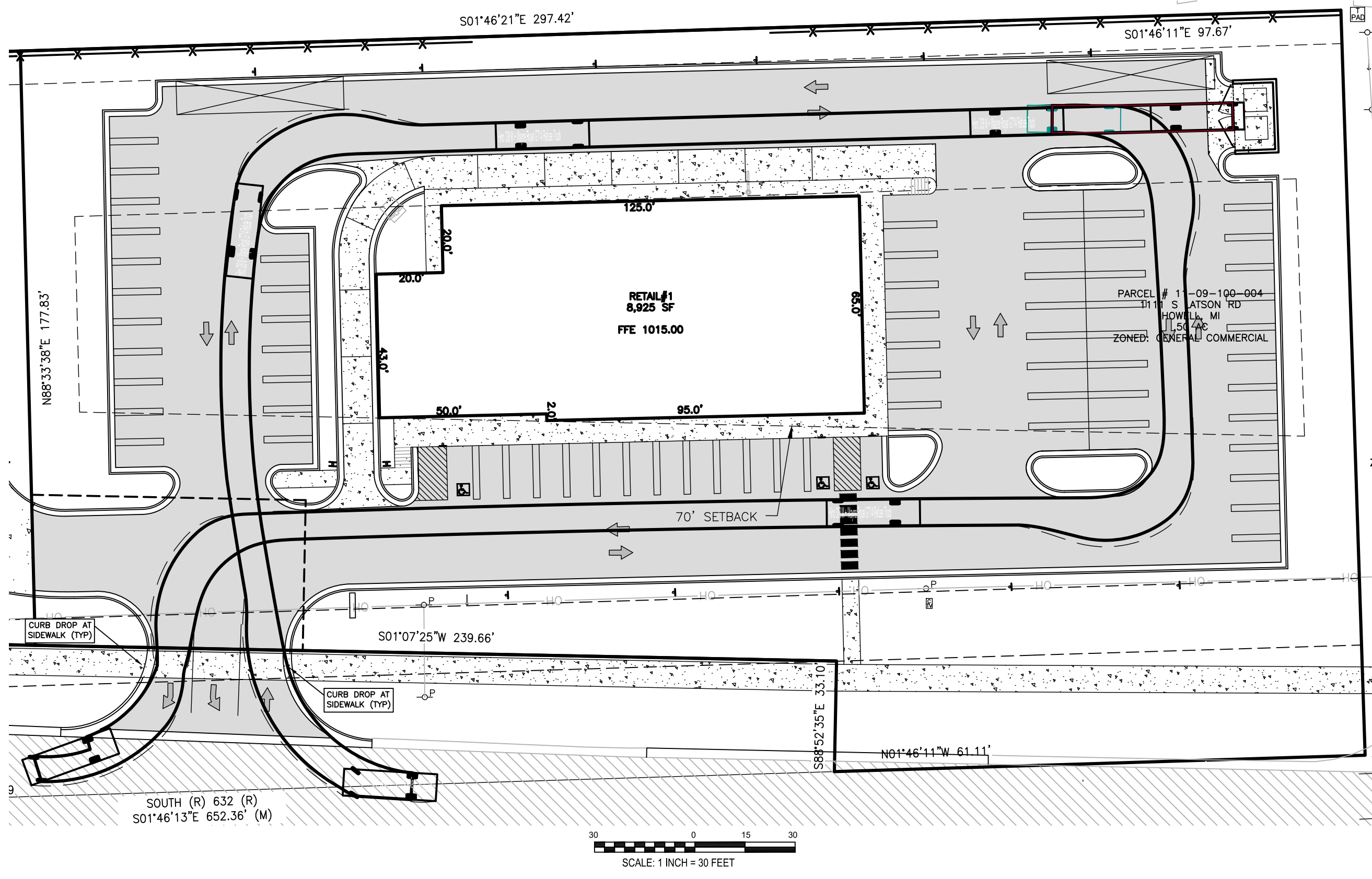
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 AutoCAD PDF (General Documentation).pc3



Hino 338 M + Wayne Royal GT14 Refuse Truck
 Overall Length 27.883ft
 Overall Width 8.042ft
 Overall Body Height 10.488ft
 Min Body Ground Clearance 1.318ft
 Track Width 8.042ft
 Lock-to-lock time 6.00s
 Curb to Curb Turning Radius 27.400ft



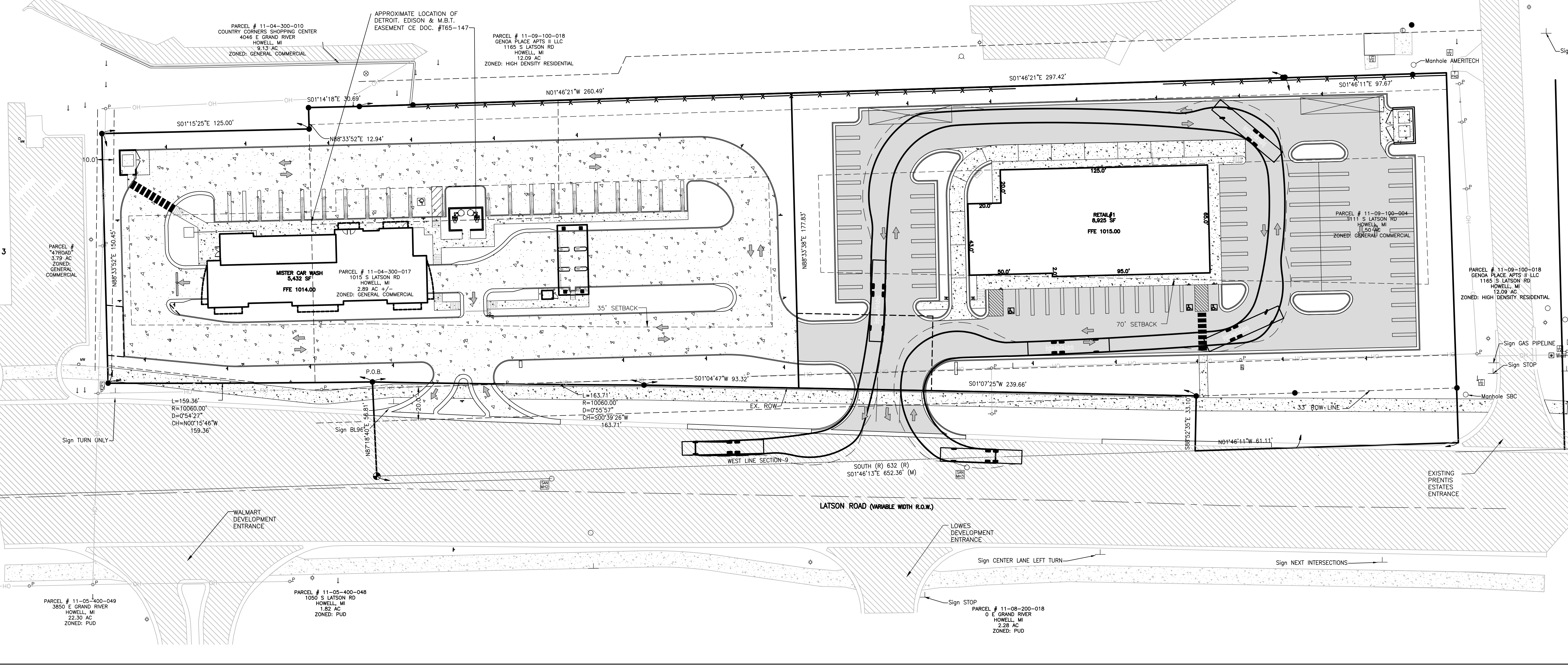
Brighton Area Fire Authority
 Overall Length 49.083ft
 Overall Width 8.167ft
 Overall Body Height 7.500ft
 Min Body Ground Clearance 0.750ft
 Track Width 8.167ft
 Lock-to-lock time 5.00s
 Max Steering Angle (Virtual) 45.00°



SEE SHEET 2 FOR GENERAL NOTES AND LEGEND

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 BE ENGINEERING, INC.
 3121 E. GRAND RIVER AVE.
 HOWELL, MI 48843
 517.546.4836 FAX 517.548.1670

BEBOSS
 Engineering
 Engineers Surveyors Planners Landscape Architects
 3121 E. GRAND RIVER AVE.
 HOWELL, MI. 48843
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PROJECT: SOUTH LATSON COMMERCIAL DEVELOPMENT
 PREPARED FOR: 1015 LATSON ROAD LLC
 29932 BECK ROAD
 WOODON, MI 48393
 248.773.7992
 TITLE: OVERALL SITE PLAN

NO	BY	DATE	REVISION PER
4	ST	3-14-24	PER LORC AND PC COMMENTS
3	ST	1-16-24	LAYOUT MODIFICATIONS
2	ST	12-11-23	PER P.C. MEETING
1	ST	10-25-23	PER TOWNSHIP COMMENTS

DESIGNED BY: ST
 DRAWN BY: ST
 CHECKED BY:
 SCALE: VARIES
 JOB NO: 21-519
 DATE: 10/04/2023
 SHEET NO. 4

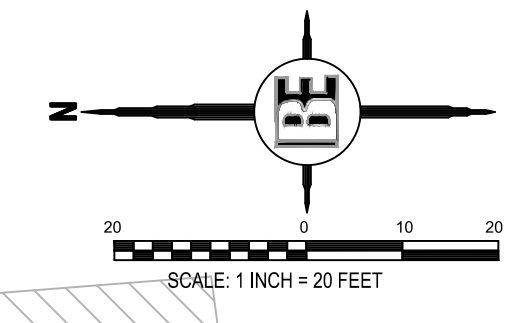




SCREEN FENCE SAMPLE IMAGE
MANUFACTURER: FENCETAC
PRODUCT: SANDSTONE VINYL

BLACK OR BRONZE
COLORED FRAMING

SEE SHEET 2 FOR GENERAL
NOTES AND LEGEND



SITE DATA
 PARCEL # 4711-04-300-017 & 4711-09-100-004
 1015 S. LATSON RD & 1111 S LATSON RD
 HOWELL, MI
 GENOA TOWNSHIP
 3.40 AC
 ZONING: GENERAL COMMERCIAL DISTRICT (GCD)
 CURRENT USE: VACANT

GENERAL COMMERCIAL DISTRICT
 - MIN. LOT AREA: 1 ACRE
 - MIN. LOT WIDTH: 150 FT

BUILDING SETBACK:

FRONT: 70 FT	PROVIDED 70.0 FT
SIDE: 15 FT	105.6 FT
REAR: 50 FT	50.5 FT

PARKING SETBACK:

FRONT: 20 FT	PROVIDED 23.5 FT
SIDE: 10 FT	24.0 FT
REAR: 10 FT	10.0 FT

-MAX LOT COVERAGE:

PARCEL AREA:	PROVIDED 78,946 SFT (1.81 AC)
BUILDING: 35%	8,925 SFT (11.3%)
IMPERVIOUS: 75%	58,586 SFT (74.2%)

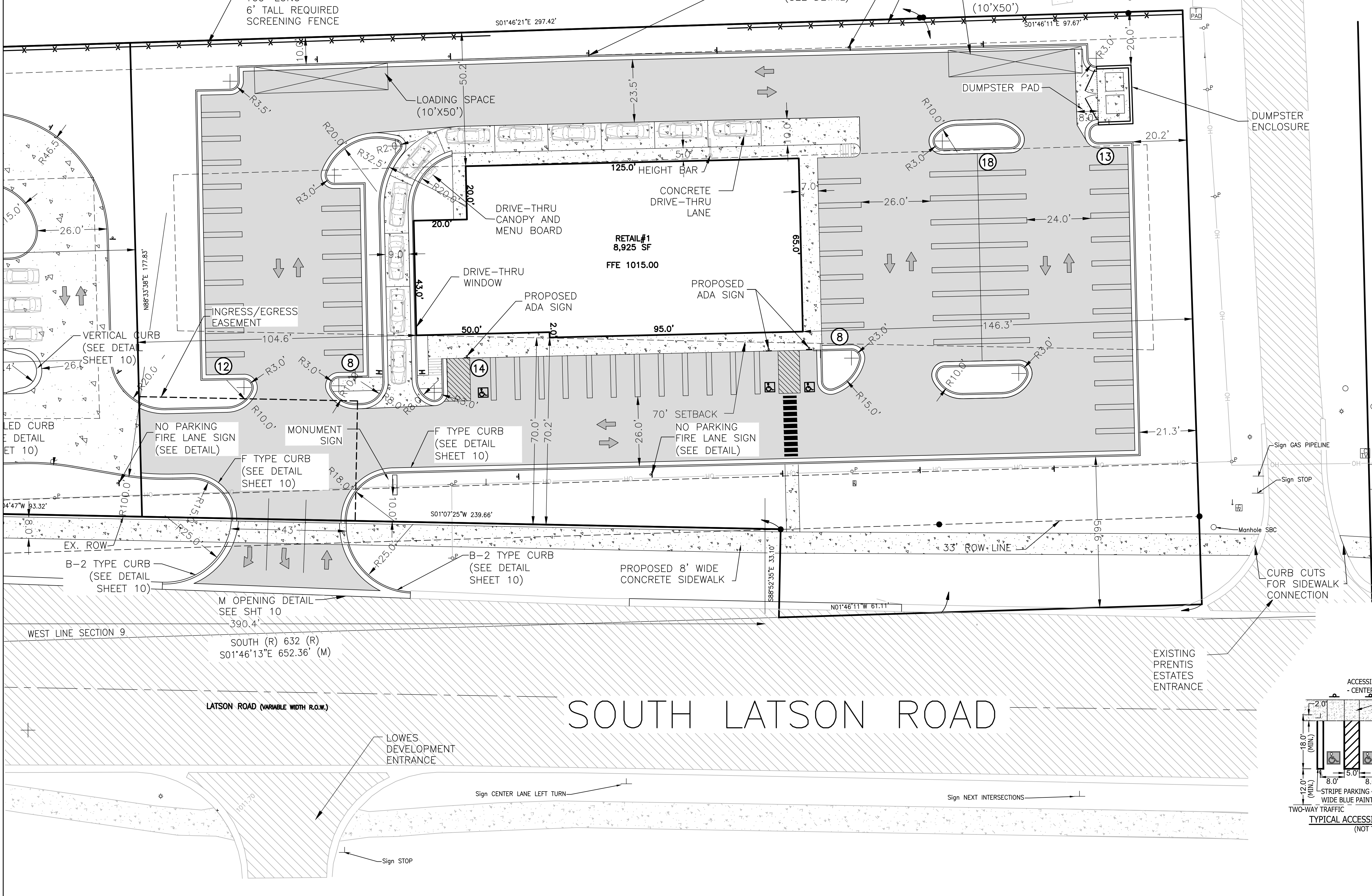
-MAX BUILDING HEIGHT: 35 FT (2 STORIES) 20 FT

*** TOTAL PROPOSED GROSS SQUARE FOOTAGE:**

-COFFEE SHOP W/ DRIVE-THROUGH	2,400 GSF
-GENERAL RETAIL	4,025 GSF
-SIT DOWN RESTAURANT (NO LIQUOR LICENSE)	2,500 GSF
TOTAL	8,925 GSF

THE LOCATION AND ELEVATION OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THESE DRAWINGS ARE ONLY APPROXIMATE. NO CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION, DEPTH, OR CHARACTER OF EXISTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF UTILITIES CROSSING IN THE FIELD PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE PLANS DEPARTMENT OF THE CITY OF HOWELL, MI.

BE BOSS Engineering
 Engineers Surveyors Planners Landscape Architects
 3121 E. GRAND RIVER AVE.
 HOWELL, MI. 48843
 517.546.4836 FAX 517.548.1670



PARKING CALCULATIONS:

-FAST FOOD DRIVE THRU: 1 SPACE PER 70 SQFT GROSS LEASABLE FLOOR AREA (85% OF GROSS FLOOR AREA)
 2400 * 85% = 2040 / 70 = 30 SPACES & 10 STACKING SPACES

-SIT DOWN RESTAURANT WITHOUT LIQUOR LICENSE = 1 SPACE/100 SFT GFA
 2,500 SFT / 100 SFT = 25 SPACES

-RETAIL = 1 SPACE /250 SFT GFA
 4,025 SFT / 250 SFT = 17 SPACES

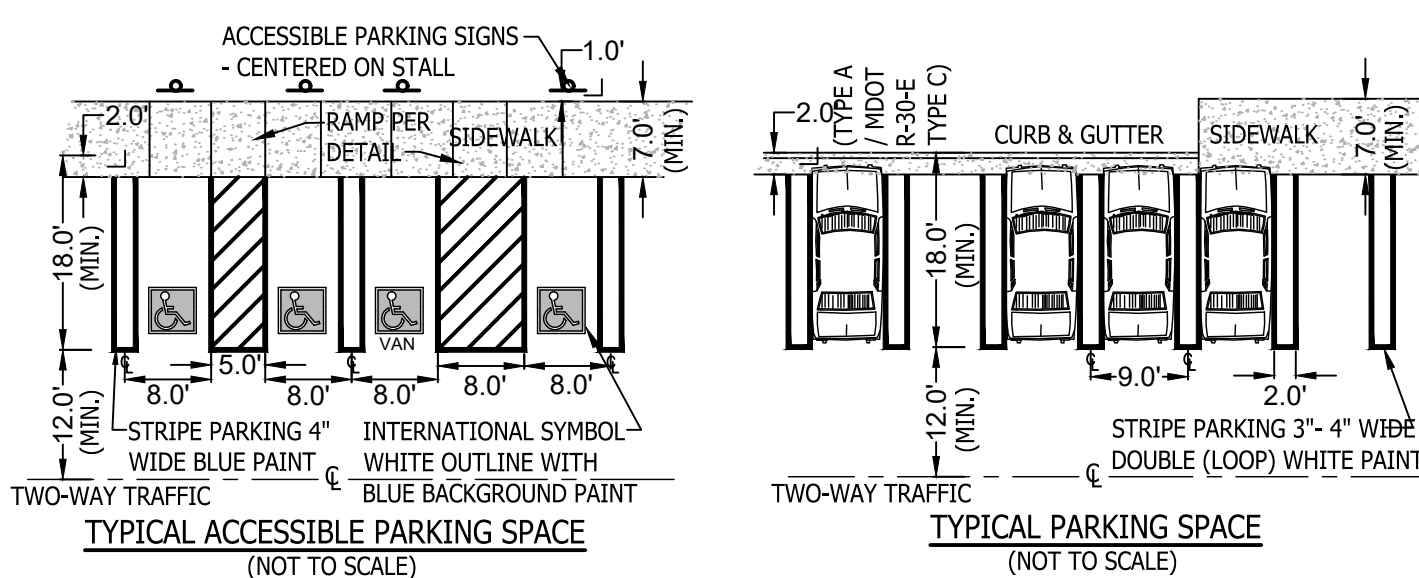
REQUIRED: 36 + 21 + 16 = 72 SPACES
 PROVIDED: 73 SPACES

LOADING/UNLOADING SPACES: 10' x 50'
 REQUIRED: 5,001 GFA TO 20,000 GFA REQUIRES 2 SPACES
 PROVIDED: 2 LOADING/UNLOADING SPACES

PLANNING COMMISSION WAIVERS REQUESTED:
 A REDUCTION IN LANDSCAPE BUFFER ON THE WEST AND EAST SIDE OF PROPERTY DUE TO SHALLOW DEPTH OF EXISTING PARCEL. A SCREEN FENCE AND ADEQUATE LANDSCAPING ARE STILL PROPOSED TO MEET THE ORDINANCE TO THE MAXIMUM EXTENT POSSIBLE.

- VARIANCES REQUIRED:**
- 1) DRIVE-THRU SEPARATION TO ANOTHER DRIVE-THRU

- GENERAL NOTES**
1. ALL OUTDOOR LIGHTS SHALL BE SHIELDED TO REDUCE GLARE AND SHALL BE ARRANGED TO NOT INTERFERE WITH THE VISION OF PERSONS ON ADJACENT ROADWAYS OR ADJACENT PROPERTY.
 2. ALL SIGNS SHALL MEET LOCAL MUNICIPALITY ORDINANCE REQUIREMENTS.
 3. THE BUILDING ADDRESS SHALL BE A MINIMUM 6" HIGH LETTERS OF CONTRASTING COLORS AND BE CLEARLY VISIBLE FROM THE STREET. THE LOCATION AND SIZE SHALL BE VERIFIED PRIOR TO INSTALLATION.
 4. A KEY BOX/KNOX BOX SHALL BE LOCATED NEAR THE FRONT ENTRY AT EACH TENANT SPACE (FINAL LOCATION TO BE DETERMINED BETWEEN THE OWNER & FIRE MARSHALL).
 5. ONE SIDE OF THE STREET SHALL BE MARKED AS A FIRE LANE AND SHALL HAVE APPROPRIATE SIGNAGE.
 6. ACCESS ROADS TO THE SITE SHALL BE PROVIDED AND MAINTAINED DURING CONSTRUCTION.
 7. ACCESS ROADS SHALL BE CONSTRUCTED TO BE CAPABLE OF SUPPORTING THE IMPOSED LOAD OF FIRE APPARATUS WEIGHING AT LEAST 84,000 LBS.
 8. A MINIMUM VERTICAL CLEARANCE OF 13.5 FEET SHALL BE MAINTAINED THROUGHOUT THE SITE. THIS INCLUDES ENCROACHMENTS FROM LARGE TREE CANOPIES, LIGHTING, ETC.
 9. DURING THE CONSTRUCTION PROCESS, THE BUILDING WILL BE EVALUATED FOR EMERGENCY RESPONDER RADIO SIGNAL STRENGTH. IF COVERAGE IS FOUND TO BE QUESTIONABLE OR INADEQUATE, AN APPROVED CONTRACTOR SHALL BE HIRED TO PERFORM A GRID TEST OF THE FACILITY. IF THE SIGNAL STRENGTH COVERAGE IS FOUND TO BE NON-COMPLIANT, AN APPROVED EMERGENCY RESPONDER RADIO COVERAGE SYSTEM SHALL BE PROVIDED IN THE BUILDING.
 10. SITE LIGHTING SHALL BE PLACED ON TIMERS TO BE OFF DURING NON-USE HOURS TO THE EXTENT POSSIBLE WHILE MAINTAINING SITE SAFETY. SITE LIGHTING SHALL BE PROGRAMMED TO TURN OFF AT NIGHT WHEN ACTIVITIES ARE NO LONGER OCCURRING ON THE PROPERTY.
 11. DELIVERIES SHALL BE ARRANGED FOR OFF PEAK HOURS TO AVOID POTENTIAL VEHICULAR CONFLICTS.



FOR SITE PLAN APPROVAL ONLY!
 NOT FOR CONSTRUCTION

SOUTH LATSON COMMERCIAL DEVELOPMENT

PROJECT: SOUTH LATSON COMMERCIAL DEVELOPMENT
 PREPARED FOR: 1015 LATSON ROAD LLC
 29932 BECK ROAD
 WOODIN, MI 48393
 248.773.9992

TITLE: SITE PLAN

NO	BY	DATE	REVISION
1	ST	10-25-23	PER TOWNSHIP COMMENTS
2	ST	12-11-23	PER P.C. MEETING
3	ST	1-16-24	LAYOUT MODIFICATIONS
4	ST	3-14-24	PER LORC AND PC COMMENTS

DESIGNED BY: ST
 DRAWN BY: ST
 CHECKED BY:
 SCALE: 1" = 20'
 JOB NO: 21-519
 DATE: 10/04/2023
 SHEET NO. 5

Grantor	Grantee	Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	Verified By	Prcnt. Trans.				
RITZ, JAMES & PAMELA	1015 LATSON ROAD LLC	325,000	12/16/2021	WD	03-ARM'S LENGTH	2021R-050186	BUYER/SELLER	100.0				
HERCEG, NICHOLAS & DOROTHY	RITZ, JAMES & PAMELA	65,000	10/13/1998	WD	03-ARM'S LENGTH	24430774	BUYER/SELLER	100.0				
DANICK	HERCEG	45,164	11/18/1996	WD	03-ARM'S LENGTH	2131-0564	BUYER/SELLER	100.0				
HERCEG	RITZ	45,164	11/18/1996	WD	21-NOT USED/OTHER	2131-0560	BUYER/SELLER	100.0				
Property Address		Class: COMMERCIAL-VACANT		Zoning: GCD		Building Permit(s)		Date	Number	Status		
1111 S LATSON RD		School: HOWELL PUBLIC SCHOOLS										
Owner's Name/Address		P.R.E. 0%										
1015 LATSON ROAD LLC 29592 BECK RD WIXOM MI 48393		MAP #: V24-12										
Tax Description		2025 Est TCV Tentative										
SEC. 9 T2N, R5E, BEG. 632 FT. S OF NW COR. OF NW 1/4 THENCE E 223 FT., N 97.67 FT. THENCE W 223 FT., S 97.67 FT. TO BEG. Comments/Influences		Improved	X	Vacant	Land Value Estimates for Land Table 2003.GRAND RIVER FRONTAGE							
		Public Improvements		* Factors *								
		Dirt Road		Description	Frontage	Depth	Front	Depth	Rate %Adj.	Reason	Value	
		Gravel Road		GRAND RIVE	15.00	SQ FT	21631	SqFt	15.00000	100	LATSON RD CORRIDOR	324,465
		Paved Road				0.50	Total Acres	Total Est. Land Value =		324,465		
		Storm Sewer										
		Sidewalk										
		Water										
		Sewer										
		Electric										
		Gas										
		Curb										
		Street Lights										
		Standard Utilities										
		Underground Utils.										
		Topography of Site										
		Level										
		Rolling										
		Low										
		High										
		Landscaped										
		Swamp										
		Wooded										
		Pond										
		Waterfront										
		Ravine										
		Wetland										
		Flood Plain										
		X	REFUSE	Year	Land Value	Building Value	Assessed Value	Board of Review	Tribunal/Other	Taxable Value		
		Who	When	What	2025	Tentative	Tentative	Tentative		Tentative		
				2024	162,200	0	162,200			119,290C		
				2023	162,200	0	162,200			113,610C		
				2022	108,200	0	108,200			108,200S		

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*** Information herein deemed reliable but not guaranteed***

Grantor	Grantee	Sale Price	Sale Date	Inst. Type	Terms of Sale	Liber & Page	Verified By	Prcnt. Trans.		
CONSUMERS ENERGY COMPANY	1015 LATSON ROAD LLC	1,200,000	04/23/2021	CD	03-ARM'S LENGTH	2021R-024206	BUYER/SELLER	100.0		
Property Address		Class: COMMERCIAL-VACANT		Zoning: GCD		Building Permit(s)		Date	Number	Status
1015 S LATSON RD		School: HOWELL PUBLIC SCHOOLS		DEMO		11/05/2010		W10-114	100%	
Owner's Name/Address		P.R.E. 0%		COMMERCIAL BLDG		12/11/2001		01-679	NO START	
1015 LATSON ROAD LLC 29200 NORTHWESTERN HWY STE 450 SOUTHFIELD MI 48034		MAP #: V24-12		COMM MISCEL		03/14/1997		97-071	NO START	
Tax Description		2025 Est TCv Tentative		Land Value Estimates for Land Table 2003.GRAND RIVER FRONTAGE						
SEC 4 & 9 T2N R5E BEG SW COR SEC 4 TH N 125 FT TH E 210 FT TH S 125 TH E 13 FT TH S 589.30 FT TH W 223 FT TH N 589.3 FT TO POB CONT. 3.621 AC M/L COMB. 5/96 FROM 04-300-004 & 09-100-003 CORR 5/2002		Improved X Vacant		* Factors *						
Comments/Influences		Public Improvements		Description Frontage Depth Front Depth Rate %Adj. Reason Value						
		Dirt Road		GRAND RIVE 10.00 SQ. FT. 157731 SqFt 10.00000 100 1,577,310						
		Gravel Road		3.62 Total Acres Total Est. Land Value = 1,577,310						
		Paved Road								
		Storm Sewer								
		Sidewalk								
		Water								
		Sewer								
		Electric								
		Gas								
		Curb								
		Street Lights								
		Standard Utilities								
		Underground Utils.								
		Topography of Site								
		Level								
		Rolling								
		Low								
		High								
		Landscaped								
		Swamp								
		Wooded								
		Pond								
		Waterfront								
		Ravine								
		Wetland								
		Flood Plain								
		Year		Land Value	Building Value	Assessed Value	Board of Review	Tribunal/Other	Taxable Value	
		Who When What		2025	Tentative	Tentative	Tentative		Tentative	
		DR 12/30/2010 INSPECTED		2024	788,700	0	788,700		788,700S	
				2023	788,700	0	788,700		788,700S	
				2022	788,700	0	788,700		788,700S	

*** Information herein deemed reliable but not guaranteed***

**GENOA CHARTER TOWNSHIP
ZONING BOARD OF APPEALS
February 20, 2024 - 6:30 PM**

MINUTES

Call to Order: Chairperson McCreary called the regular meeting of the Zoning Board of Appeals to order at 6:31 pm. The members and staff of the Zoning Board of Appeals were present as follows: Bill Rockwell, Craig Fons, Marianne McCreary, Jean Ledford and Kelly VanMarter, Township Manager. Absent was Michele Kreutzberg.

Pledge of Allegiance: The Pledge of Allegiance was recited.

Introduction: The members of the Board and staff introduced themselves.

Conflict of Interest: None

Approval of the Agenda:

Moved by Board Member Ledford, supported by Board Member Rockwell, to approve the agenda as presented. **The motion carried unanimously.**

Call to the Public:

The call to the public was opened at 6:33 pm with no response.

1. 24-03...A request by Jacob Lubig of Ventures Design, 3910 Honors Bluff, for a rear yard setback variance and any other variance deemed necessary by the Zoning Board of Appeals to construct an addition to an existing home.

Mr. Lock Durrant and Mr. Jacob Lubig of Ventures Design were present.

Mr. Lubig stated they are requesting a variance to build a covered deck to replace the existing deck. The need for the variance is due to the property having a uniquely shallower rear yard than other homes in the neighborhood. The lot is also a trapezoid shape so the home was placed further back on the lot. Other properties in the area have covered decks so allowing this variance would provide the applicant with substantial justice. This would not have any negative effects on the public safety or welfare of the neighborhood.

Mr. Durrant stated he disagrees with the staff report. He reiterated the practical difficulty stated by Mr. Lubig, which is that the lot is a trapezoid shape. Additionally, the setbacks were set by the developer and then enforced by the township. The HOA has approved this project, with an even less setback than they are requesting. He presented an aerial map showing the tee boxes

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on the adjacent golf course, which cause many golf balls to be hit into the applicant's yard. Having the covered deck would shield them from this. It is a safety concern.

Chairman McCreary noted that there have been two previous rear yard variance requests for this property and they were denied. Also having golf balls hit into the yard should be expected when you choose to live on a golf course. Mr. Durrant stated that those two variances were also requested to protect them from the many golf balls being hit into their yard.

Board Member Rockwell noted that there is still part of the deck and a patio that is not covered so those areas will not be protected from golf balls.

Board Member Ledford noted that one of the criteria for approving a variance is to show a specific reason connected to the land. Mr. Durrant reviewed the aerial view map that shows the shape and narrow depth of the lot, and how the home had to be placed further to the rear of the lot to meet the side-yard setbacks. This is what is causing the hardship and practical difficulty with the property.

Board Member Fons stated that the lot existed before the house was built. A different, smaller house could have been built. He would consider approving this only because the new deck and roof is within the existing deck footprint.

Ms. VanMarter advised the Board that because this deck is covered, it should be considered an addition to the home, and not a deck. Mr. Lubig understands that the ordinance considers this an addition; however, it is not the same as a full building addition.

The call to the public was opened at 7:01 pm.

Mr. Brandon Bertrang with Ventures Design stated that building a house smaller could be applied to almost any variance request. This lot is the smallest in this zoning district.

The call to the public was closed at 7:04 pm.

Moved by Board Member Rockwell, supported by Board Member Fons, to deny Case #24-03 for Jacob Lubig of Ventures Design and Adam and Madison Cregar for 3910 Honors Bluff for a rear yard setback variance of 16 feet from the required 50 feet for a rear yard setback of 34 feet, based on the following findings of fact:

- Strict compliance with the rear yard setback would prevent the applicant from constructing a covered deck; however, it would not prevent the use of the property. Granting of the requested variance would not do substantial justice to the applicant as well as other property owners in the district. It is not necessary for the preservation and enjoyment of a substantial property right similar to that possessed by other properties in the same vicinity of the subject parcel.

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- There are no exceptional circumstances of the property. Although the lot is the smallest in the Oak Pointe Honors Subdivision, the home is larger than the average home in the neighborhood, which is a self-created condition by the original owner.
- The granting of therear yard variance should not impair an adequate supply of light and air to adjacent property or unreasonably increase the congestion in public streets or increase the danger of fire or endanger the public safety, comfort, morals or welfare of the inhabitants of the Township of Genoa.
- The proposed rear yard s variance would have little or no impact on the appropriate development, continued use, or value of adjacent properties and the surrounding neighborhood.
- The requested variance is not the least amount necessary.

The motion carried unanimously.

Mr. Durrant questioned the reason for the denial, noting they could build a covered deck that will meet the ordinance. Board member Fons stated he voted against the request because they could build something similar to achieve the same goal without needing a variance.

2. 24-04...A request by Jon and Danielle Wlodarczak, 4183 Homestead Dr., for a side yard setback variance and any other variance deemed necessary by the Zoning Board of Appeals to install a whole house generator.

Mr. Wlodarczak stated the variance is necessary due to the non-conforming, narrow layout of the lot and the location of the home on the lot. Meeting the setback requirement would prohibit the installation of a whole home generator. It is the least necessary. There are numerous homes on Homestead Drive with generators and A/C units outside encroaching on the property line so this request is not unique. This would not have a negative effect on the surrounding neighborhood.

Ms. VanMarter stated there was confusion with regard to the variance request. The required setback for this feature is 36 inches off of the property line and the applicant is asking for the generator to be 16 inches off of the property line, which would be a variance of 20 inches.

Mr. Eric Osburn of Osburn Services, the generator contractor, stated that having a whole house generator is a safety issue. He noted that per the manufacturer's requirements, this is the only location where it can be placed.

A letter from the Township Utilities Director approved this location for the generator. An email was received from Jeff and Wanda Tanis of 4183 Homestead stating they have no issues with the variance request.

The call to the public was opened at 7:22 pm with no response.

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Board Member Fons noted that a backup generator is a necessity. He visited the site and could not find another location where it could be located. Chairperson McCreary agrees.

Board Member Rockwell stated that portable generators can be used without the need to put a permanent fixture on the property. Board member Fons noted that portable generators only work when someone is home to hook them up.

At this time, there was an outburst by Brandon Bertrang with Ventures Design where he accused the Board of being biased. He continued to disrupt the meeting, using the "f-word" multiple times. Chairperson McCreary asked him to leave. As he walked toward the door, he again used the "f-word" and walked out of the room.

There was a discussion regarding changing the ordinance for setbacks for mechanical units due to the increase in whole house permanent generator requests.

Moved by Board Member Rockwell, supported by Board Member Fons, to approve Case #24-04 for Jon and Danielle Wlodarczak of 4183 Homestead Drive for a side yard setback variance of 1 foot, 8 inches, from the required 3 feet, for a side setback of 1 foot, 4 inches to install a whole house generator, based on the following findings of fact:

- Strict compliance with the setback would cause the applicant to be unable to install the generator. There are other homes in the vicinity with reduced projections into the side yard with air conditioning units that support substantial justice and is necessary for the preservation and enjoyment of a substantial property right similar to that possessed by other properties in the same vicinity of the subject parcel.
- The exceptional or extraordinary condition of the property is the narrowness of the lot and it is a non-conforming lot in the LRR district.
- The granting of the variance will not impair an adequate supply of light and air to adjacent property or unreasonably increase the congestion in public streets or increase the danger of fire or endanger the public safety, comfort, morals or welfare of the inhabitants of the Township of Genoa.
- The proposed variance would have little impact on the appropriate development, continued use, or value of adjacent properties and the surrounding neighborhood. The direct neighbor is located 19 feet from the proposed location of the generator. In addition, staff received correspondence from the neighbor and they have no objections to the variance request.

This approval is conditioned upon the following:

1. Generator shall be sized to accommodate the connection of the grinder pump per recommendation by MHOG Utility Director.
2. The weekly test of the generator shall not be scheduled between 10:00 p.m. and 7:00 a.m. and must be in compliance with the Township Noise Ordinance.

The motion carried unanimously.

3. 24-05...A request by Kristie Dennes, 6511 Forest Beach Dr., for a side yard setback variance and any other variance deemed necessary by the Zoning Board of Appeals to install a whole house generator.

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Ms. Dennes stated that her lot is non-conforming for her zoning district so there is no location on her lot where the generator can be placed to meet the setbacks. The generator is proposed to be five feet from the lot line and eight feet from the house.

Ms. VanMarter stated that the requirement is to be 27 feet from the lot line and the applicant is requesting to be 5 feet from the property line, so it is a setback variance of 22 feet.

Mr. Osburn stated that due to the non-conforming lot width, any location on the property would require a variance. This location meets the requirements of the generator manufacturer. Ms. Dennes stated it will be placed in front of their home.

An email from Patrick Michael of 6517 Forest Beach Drive states he and his wife are in support of this variance request.

The call to the public was opened at 7:40 pm.

Mr. John Myers of 6505 Forest Beach Drive stated a generator is needed because they lose power in this neighborhood at least once a month for many days at a time.

The call to the public was closed at 7:41 pm.

Moved by Board Member Fons, supported by Board Member Rockwell, to approve Case #24-05 for Kristie Dennes of 6511 Forest Beach Drive for a side yard projection setback variance of 22 feet, from the required 27 feet, for a side yard projection setback of 5 feet to install a whole house generator, based on the following findings of fact:

- Strict compliance with the setback would cause the applicant to be unable to install the generator. While it does not unreasonably prevent use of the property, there are other homes in the vicinity with reduced side yard setbacks that would support substantial justice.
- The exceptional or extraordinary condition of the property is the narrowness of the lot and the non-conforming size in the LDR zoning district. The variance request is not self-created.
- The granting of the variance will not impair an adequate supply of light and air to adjacent property or unreasonably increase the congestion in public streets or increase the danger of fire or endanger the public safety.
- The proposed variance could have an impact on the appropriate development, continued use or value of adjacent properties and the surrounding neighborhood, but this is addressed in the above bullet point.

This approval is conditioned upon the following:

1. The weekly test of the generator shall not be scheduled between 10:00 p.m. and 7:00 a.m. and must be in compliance with the Township Noise Ordinance.
2. This generator cannot be used as a permanent source of power for the home.

The motion carried unanimously.

4. 24-06...**REQUEST TO WITHDRAW** A request by Craig Sheffer, 855 Victory Dr., for a capacity variance for a fuel storage tank and any other variance deemed necessary by the Zoning Board of Appeals to allow 1,000 gallons of fuel storage.

Moved by Ledford, supported by Fons, to note that Case #24-06 has been requested to be withdrawn by the applicant. **The motion carried unanimously.**

5. 24-07...**REQUEST TO WITHDRAW** A request by John Cleary, 3820 Crystal Valley Dr., for a front yard setback variance and any other variance deemed necessary by the Zoning Board of Appeals to install a whole house generator.

Moved by Ledford, supported by Fons, to note that Case #24-07 has been requested to be withdrawn by the applicant. **The motion carried unanimously.**

Administrative Business:

1. Approval of minutes for the January 23, 2024 Zoning Board of Appeals meeting.

Board Member Ledford noted one change needed.

Moved by Board Member Ledford, supported by Board Member Fons, to approve the minutes of the January 23, 2024 Zoning Board of Appeals meeting as corrected. **The motion carried unanimously.**

2. Correspondence

Ms. VanMarter stated there are three cases scheduled for the March meeting.

Board Member Fons will not be in attendance at the March meeting.

3. Member Discussion

The Board discussed how whole-house, permanent generators will be addressed in the future as the requests for them have increased. Is this a property right or should the township ensure they are being installed properly and in the proper location. Ms. VanMarter is not sure an ordinance amendment is needed at this time; however, she will monitor the requests.

4. Adjournment

Moved by Board Member Ledford, supported by Board Member Fons, to adjourn the meeting at 7:59 pm. **The motion carried unanimously.**

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Respectfully submitted:

Patty Thomas, Recording Secretary

DRAFT