

**GENOA CHARTER TOWNSHIP BOARD**  
**Regular Meeting and Public Hearing**  
**June 20, 2022**  
**6:30 p.m.**

**AGENDA**

Call to Order:

Pledge of Allegiance:

Call to the Public (Public comment will be limited to two minutes per person) \*:

**Consent Agenda:**

1. Payment of Bills: June 20, 2022

2. Request to approve Minutes: June 6, 2022

3. A. Request for approval payment to the Michigan Townships Association for the Board of Trustees professional development and dues in the amount of \$7,978.59.

B. Request to amend the FY 2022/2023 Budget increasing line item 101-101-910-000 from \$1,500 to \$11,000.

4. Request to authorize payment of an invoice from the Economic Development Council of Livingston County in the amount of \$23,283.09 for 2022 membership.

5. A. Request for authorization of payment in the amount of \$47,290.67 to Hart Interactive for service and maintenance of tabulators.

B. Request to amend the FY 2022/2023 Budget by increasing line item #464-262-903-000 from \$115,000 to \$163,000.

**Regular Agenda:**

6. A. Request to enter into a Cooperative Contract with Howell Public Schools, Marion Township, Howell Township, and Oceola Township for law enforcement services from the Livingston County Sheriff at a cost of \$25,000 annually.

B. Request to amend the FY 2022/2023 Budget by increasing line item #101-261-802-000 from \$1,000 to \$26,000.

7. Request for approval of Resolution #5 [confirming the special assessment roll] for the Timberview Private Drive Road Improvement Project Special Assessment District (Winter 2022). Roll Call

A. Call to the Property Owners

B. Call to the Public

8. Consideration of the Planning Commission recommendation to distribute the draft Master Plan to the adjacent communities and agencies as required in the Michigan Planning Enabling Act for the 63-day review period.

9. Consideration of a recommendation for approval of a special use application, environmental impact assessment and site plan for an expansion of an existing automobile dealership to expand a parking/vehicle storage lot located at 7100 Grand River Avenue, southeast corner of Grand River Avenue and Hubert Drive. The request is petitioned by Joshua Tauriainen.

A. Disposition of Special Use Application.

B. Disposition of Environmental Impact Assessment (1-18-22)

C. Disposition of Site Plan (5-3-22)

10. Consideration of a recommendation for approval of an environmental impact assessment dated May 3, 2022 for a proposed renovation and addition to the existing clubhouse located inside the Sylvan Glen Manufactured Housing Park. The park is located at 6600 Grand River Avenue, south side of Grand River, east of Dorr Road. The request is petitioned by Mike Barnett, Sun Communities.

Correspondence

Member Discussion

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.

BOARD PACKET

CHECK REGISTERS FOR TOWNSHIP BOARD MEETING

MEETING DATE: June 20, 2022

All information below through June 15, 2022

TOWNSHIP GENERAL EXPENSES	\$	174,855.59
June 10, 2022 Bi Weekly Payroll	\$	110,716.84
OPERATING EXPENSES DPW	\$	39,387.32
OPERATING EXPENSES Oak Pointe	\$	247,584.76
OPERATING EXPENSES Lake Edgewood	\$	20,419.23
TOTAL	\$	592,963.74

Check Date	Check	Vendor Name	Amount
Bank FNBCK CHECKING ACCOUNT			
05/26/2022	37484	CAROLYN KERR	200.00
05/27/2022	37485	CAPITAL ONE	370.55
05/27/2022	37486	DTE ENERGY	27.36
05/27/2022	37487	TRI COUNTY SUPPLY, INC.	486.66
06/01/2022	37488	UNITED STATES POSTAL SERVICE	3,033.22
06/02/2022	37489	DTE ENERGY	655.06
06/02/2022	37490	MHOG UTILITIES	392.00
06/02/2022	37491	NETWORK SERVICES GROUP, L.L.C.	50.00
06/02/2022	37492	PERFECT MAINTENANCE CLEANING	565.00
06/06/2022	37493	AMERICAN AQUA	25.00
06/06/2022	37494	CONTINENTAL LINEN SERVICE	129.54
06/06/2022	37495	COOPER'S TURF MANAGEMENT LLC	1,248.00
06/06/2022	37496	DTE ENERGY	51.09
06/06/2022	37497	DTE ENERGY	207.74
06/06/2022	37498	SAFE BUILT STUDIO	6,098.31
06/06/2022	37499	SMART BUSINESS SOURCE	346.20
06/06/2022	37500	TRI COUNTY SUPPLY, INC.	31.96
06/06/2022	37501	WASTE MANAGEMENT CORP, SERVICES	70.07
06/06/2022	37502	WASTE MANAGEMENT CORP, SERVICES	114,632.66
06/08/2022	37503	EHIM, INC	10,876.05
06/09/2022	37504	BRIGHTON ANALYTICAL LLC	35.00
06/09/2022	37505	PFEFFER, HANNIFORD, PALKA	3,250.00
06/09/2022	37506	TETRA TECH INC	2,653.00
06/09/2022	37507	WELLNESS IQ	855.00
06/15/2022	37508	COMCAST	1,340.07
06/15/2022	37509	CONSUMERS ENERGY	107.67
06/15/2022	37510	ESRI	9,600.00
06/15/2022	37511	ETNA SUPPLY COMPANY	13,969.00
06/15/2022	37512	LINDHOUT ASSOCIATES ARCHITECTS INC	715.00
06/15/2022	37513	PRINTING SYSTEMS	364.58
06/15/2022	37514	US BANK EQUIPMENT FINANCE	2,037.41
06/15/2022	37515	VERIZON WIRELESS	432.39

FNBCK TOTALS:

Total of 32 Checks:	174,855.59
Less 0 Void Checks:	0.00
Total of 32 Disbursements:	174,855.59

06/15/2022 11:23 AM

PAYROLL REGISTER REPORT FOR GENOA CHARTER TOWNSHIP

Page 30 of 30

Payroll ID: 211

Pay Period End Date: 06/03/2022 Check Post Date: 06/10/2022 Bank ID: FNBCK

\* YTD values reflect values AS OF the check date based on all current adjustments, checks, void checks

Gross Pay This Period	Deduction Refund	Ded. This Period	Net Pay This Period	Gross Pay YTD	Dir. Dep.
109,710.85	0.00	33,121.42	76,589.43	1,212,031.89	75,570.68

06/15/2022 11:24 AM

Check Register Report For Genoa Charter Township  
For Check Dates 06/10/2022 to 06/10/2022

Page 1 of 1

Check Date	Bank	Check Number	Name	Check Gross	Physical Check Amount	Direct Deposit	Status
06/10/2022	FNBCK	13527	DIXON, RYAN E	1,243.62	1,018.75	0.00	Open
06/10/2022	FNBCK	EFT685	FLEX SPENDING (TASC)	807.30	807.30	0.00	Open
06/10/2022	FNBCK	EFT686	INTERNAL REVENUE SERVICE	27,245.18	27,245.18	0.00	Open
06/10/2022	FNBCK	EFT687	PRINCIPAL FINANCIAL	4,376.00	4,376.00	0.00	Open
06/10/2022	FNBCK	EFT688	PRINCIPAL FINANCIAL	1,698.93	1,698.93	0.00	Open
<b>Totals:</b>				<b>35,371.03</b>	<b>35,146.16</b>	<b>0.00</b>	
Total Physical Checks:			1				
Total Check Stubs:			4				

Direct Deposit	\$75,570.68
Physical Check Amount	<u>\$35,146.16</u>
Total	\$110,716.84

06/15/2022 11:33 AM  
User: denise  
DB: Genoa Township

CHECK REGISTER FOR GENOA TOWNSHIP  
CHECK NUMBERS 5544 - 6000

Page: 1/1

Check Date	Check	Vendor Name	Amount
Bank 592FN OAK POINTE OPERATING FUND #592			
05/27/2022	5544	AT&T LONG DISTANCE	61.65
05/27/2022	5545	GENOA TWP OAK POINTE SEWER BOND	88,379.69
06/02/2022	5546	GENOA TWP OAK POINTE SEWER BOND	88,379.69
06/07/2022	5547	AT&T LONG DISTANCE	56.51
06/07/2022	5548	DTE ENERGY	1,317.98
06/07/2022	5549	DTE ENERGY	2,354.45
06/09/2022	5550	PFEFFER, HANNIFORD, PALKA	3,000.00
06/14/2022	5551	AT&T	145.22
06/14/2022	5552	BRIGHTON ANALYTICAL LLC	440.00
06/14/2022	5553	COOPER'S TURF MANAGEMENT LLC	1,359.00
06/14/2022	5554	GENOA TOWNSHIP D.P.W. FUND	21,107.83
06/14/2022	5555	HYDROCORP	226.87
06/14/2022	5556	LOREA TOPSOIL & AGGREGATE	38.00
06/14/2022	5557	VIC BOND SALES	223.37
06/14/2022	5558	COOPER'S TURF MANAGEMENT LLC	972.00
06/14/2022	5559	DUBOIS-COOPER	7,162.00
06/14/2022	5560	ETNA SUPPLY COMPANY	739.00
06/14/2022	5561	GENOA TOWNSHIP D.P.W. FUND	24,772.12
06/14/2022	5562	GENOA OCEOLA SEWER AUTHORITY	113.00
06/14/2022	5563	TLS CONSTRUCTION	6,556.38
06/14/2022	5564	UIS SCADA	180.00

592FN TOTALS:

Total of 21 Checks:	247,584.76
Less 0 Void Checks:	0.00
Total of 21 Disbursements:	247,584.76

06/15/2022 11:33 AM  
User: denise  
DB: Genoa Township

CHECK REGISTER FOR GENOA TOWNSHIP  
CHECK NUMBERS 4137 - 5000

Page: 1/1

Check Date	Check	Vendor Name	Amount
Bank 593FN LAKE EDGEWOOD OPERATING FUND #590			
06/07/2022	4137	DTE ENERGY	64.25
06/07/2022	4138	DTE ENERGY	3,529.53
06/09/2022	4139	PFEFFER, HANNIFORD, PALKA	2,250.00
06/13/2022	4140	BRIGHTON ANALYTICAL LLC	670.00
06/13/2022	4141	COOPER'S TURF MANAGEMENT LLC	711.72
06/13/2022	4142	GENOA TOWNSHIP D.P.W. FUND	12,861.55
06/13/2022	4143	GENOA OCEOLA SWR & WTR AUTHORI	155.64
06/13/2022	4144	K/E ELECTRIC SUPPLY CORP	133.80 V
		Void Reason: BILL ALREADY PAID	
06/14/2022	4145	CONSUMERS ENERGY	176.54

593FN TOTALS:

Total of 9 Checks:	20,553.03
Less 1 Void Checks:	133.80
Total of 8 Disbursements:	20,419.23

Check Date	Check	Vendor Name	Amount
<b>Bank 503FN DFW-UTILITIES #233</b>			
05/27/2022	5544	ASCENSION MI. EMPLOYER SOLUTIONS	140.00
05/27/2022	5545	GREG TATARA	10.79
05/27/2022	5546	MNEA	80.00
05/27/2022	5547	DAVID SZURAN	53.77
06/06/2022	5548	ASCENSION MI. EMPLOYER SOLUTIONS	65.00
06/06/2022	5549	FRANKLIN BODY SHOP	1,364.00
06/07/2022	5550	TRACTOR SUPPLY CO.	208.19
06/09/2022	5551	ASCENSION MI. EMPLOYER SOLUTIONS	130.00
06/09/2022	5552	PFEFFER, HANNIFORD, PALKA	2,750.00
06/09/2022	5553	WELLNESS IQ	855.00
06/13/2022	5554	ADVANCE AUTO PARTS	363.35
06/13/2022	5555	AUTO-LAB OF LIVINGSTON	179.68 V
		Void Reason: WRONG VENDOR ON ONE INVOICE	
06/13/2022	5556	AUTO ZONE	405.34 V
		Void Reason: WRONG VENDOR FOR ONE INVOICE	
06/13/2022	5557	BELLE TIRE	224.99
06/13/2022	5558	BYRUM ACE HARDWARE	242.51
06/13/2022	5559	CRUISERS	1,267.50
06/13/2022	5560	GIEFFELS WEBSTER	840.00
06/13/2022	5561	MANCUSO & CAMERON	618.76
06/13/2022	5562	NETWORK SERVICES GROUP, L.L.C.	99.00
06/13/2022	5563	PORT CITY COMMUNICATIONS, INC.	227.98
06/13/2022	5564	RED WING BUSINESS ADVANTAGE ACCOUNT	630.45
06/13/2022	5565	TETRA TECH INC	4,900.00
06/13/2022	5566	TRITECH SOFTWARE SYSTEMS	11,819.55
06/13/2022	5567	WINDSTREAM	47.28
06/13/2022	5568	AUTO-LAB OF LIVINGSTON	392.48
06/13/2022	5569	AUTO ZONE	12.86
06/13/2022	5570	AUTO-LAB OF LIVINGSTON	179.68
06/14/2022	5571	WEX BANK	7,094.67
06/14/2022	5572	CHASE CARD SERVICES	3,993.49
06/14/2022	5573	VERIZON WIRELESS	702.32
06/15/2022	5574	UNITED STATES POSTAL SERVICE	73.70

**503FN TOTALS:**

Total of 31 Checks:	39,972.34
Less 2 Void Checks:	585.02
<b>Total of 29 Disbursements:</b>	<b>39,387.32</b>



June 2022						
S	M	T	W	T	F	S
29	30	31	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	1	2
3	4	5	6	7	8	9

New Balance  
**\$5,429.12**  
 Minimum Payment Due  
**\$54.00**  
 Payment Due Date  
**06/01/22**

**INK CASH(SM) POINT SUMMARY**

Previous points balance	25,604
+ 1 Point per \$1 earned on all purchases	5,430
<b>Total points available for redemption</b>	<b>31,034</b>

**Late Payment Warning:** If we do not receive your minimum payment by the due date, you may have to pay a late fee, and existing and new balances may become subject to the Default APR.

**Minimum Payment Warning:** Enroll in Auto-Pay and avoid missing a payment. To enroll, go to [www.chase.com](http://www.chase.com)

### ACCOUNT SUMMARY

<b>Account Number:</b>	[REDACTED]
Previous Balance	\$1,456.34
Payment, Credits	-\$1,456.34
Purchases	+\$5,429.12
Cash Advances	\$0.00
Balance Transfers	\$0.00
Fees Charged	\$0.00
Interest Charged	\$0.00
<b>New Balance</b>	<b>\$5,429.12</b>
Opening/Closing Date	04/08/22 - 05/07/22
Credit Limit	\$36,500
Available Credit	\$31,070
Cash Access Line	\$1,825
Available for Cash	\$1,825
<b>Past Due Amount</b>	<b>\$0.00</b>
<b>Balance over the Credit Limit</b>	<b>\$0.00</b>

ALL SYS -  
 UTILITY DEPT.

MAY 13 2022

RECEIVED





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Customer Service: 1-800-945-2028

Mobile: Download the Chase Mobile® app today

## ACCOUNT ACTIVITY

Date of Transaction	Merchant Name or Transaction Description	\$ Amount
04/11	NAPINDGROUP NAPTAGS.COM MI <i>DPW vehicles</i>	101.39 ✓
04/12	WEATHERTECH 800-4416287 IL <i>DPW truck</i>	349.70 ✓
04/13	AUTO ONE OF HOWELL HOWELL MI <i>DPW truck</i>	620.59 ✓
04/14	WEATHERTECH 800-4416287 IL <i>DPW truck</i>	146.23 ✓
04/20	AMZN Mktp US*1O0NF1IY1 Amzn.com/bill WA <i>MHOG</i>	59.13 ✓
04/22	LINE-X OF BRIGHTON BRIGHTON MI <i>DPW truck</i>	629.00 ✓
04/25	LINE-X OF BRIGHTON BRIGHTON MI <i>DPW truck</i>	729.00 ✓
05/01	Amazon.com*137CT7PU1 Amzn.com/bill WA <i>DPW truck</i> ALEX CHIMPOURAS TRANSACTIONS THIS CYCLE (CARD 2501) \$2705.88	70.84 ✓
04/19	PHENOVA, INC. 303-9400033 CO	199.20
04/13	PHENOVA, INC. 303-9400033 CO JAMES AULETTE TRANSACTIONS THIS CYCLE (CARD 7653) \$589.10	389.90
04/21	HIRE MOJO INC 800-395-2805 CA <i>DPW recruiting</i> KIMBERLY LANE TRANSACTIONS THIS CYCLE (CARD 4797) \$1821.00	1,821.00
04/15	Payment ThankYou Image Check	-1,456.34
04/10	GoTo GoToConnect goto.com MA <i>MHOG</i>	247.81 ✓
05/04	RINGCENTRAL INC. 888-898-4591 CA <i>DPW phone</i> GREG TATARA	65.33 -



ink.



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Customer Service: 1-800-945-2028



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June 2022						
S	M	T	W	T	F	S
29	30	31	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	1	2
3	4	5	6	7	8	9

New Balance

**\$798.96**

Minimum Payment Due

**\$159.00**

Payment Due Date

**06/10/22**

**MAILED**  
5-28-22

**Late Payment Warning:** If we do not receive your minimum payment by the due date, you may have to pay a late fee, and existing and new balances may become subject to the Default APR.

**Minimum Payment Warning:** Enroll in Auto-Pay and avoid missing a payment. To enroll, go to [www.chase.com](http://www.chase.com)

## ACCOUNT SUMMARY

Account Number: [REDACTED]

Previous Balance	\$79.55
Payment, Credits	-\$79.55
Purchases	+\$798.96
Cash Advances	\$0.00
Balance Transfers	\$0.00
Fees Charged	\$0.00
Interest Charged	<u>\$0.00</u>
<b>New Balance</b>	<b>\$798.96</b>
Opening/Closing Date	04/17/22 - 05/16/22
Credit Limit	\$20,000
Available Credit	\$19,201
Cash Access Line	\$1,000
Available for Cash	\$1,000
<b>Past Due Amount</b>	<b>\$0.00</b>
<b>Balance over the Credit Limit</b>	<b>\$0.00</b>

OK  
[Signature]  
5/23/2022



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Customer Service: 1-800-945-2028

Mobile: Download the Chase Mobile® app today

## ACCOUNT ACTIVITY

Date of Transaction	Merchant Name or Transaction Description	\$ Amount
04/23	Payment ThankYou Image Check	-79.55
04/15	Amazon.com*1A9Y935A0 Amzn.com/bill WA	56.57 <i>Rm</i>
04/17	Amazon.com*1A1071MJ2 Amzn.com/bill WA	164.88 <i>Rm</i>
04/21	LANDS END BUS OUTFITTERS 800-332-4700 WI	122.68 <i>OS</i>
04/26	NUTHOUSE SPORTS GRILL LANSING MI	<i>CONF 75.12 Food</i>
04/26	LANSING PARKING RAMP TIBA LANSING MI	<i>CONF 15.00 Parking</i>
04/27	SQ *FROM SCRATCH OKEMOS MI	<i>CONF 26.82 Food</i>
04/27	911PEPSIVEN9147678600 LANSING MI	<i>CONF 2.10 Food</i>
04/27	911PEPSIVEN9147678600 LANSING MI	<i>CONF 2.10 Food</i>
04/27	911PEPSIVEN9147678600 LANSING MI	<i>CONF 2.10 Food</i>
04/27	LANSING PARKING RAMP TIBA LANSING MI	15.00 <i>Parking</i>
05/08	AMZN Mktp US*139KL7AU0 Amzn.com/bill WA	11.43 <i>OS</i>
05/09	AMZN Mktp US*1351N4VA2 Amzn.com/bill WA MICHAEL C ARCHINAL TRANSACTIONS THIS CYCLE (CARD 3223) \$719.41 INCLUDING PAYMENTS RECEIVED	<i>Electron</i> 305.16

2022 Totals Year-to-Date	
Total fees charged in 2022	\$0.00
Total interest charged in 2022	\$0.00

Year-to-date totals do not reflect any fee or interest refunds you may have received.

## INTEREST CHARGES

Your Annual Percentage Rate (APR) is the annual interest rate on your account.

Balance Type	Annual Percentage Rate (APR)	Balance Subject To Interest Rate	Interest Charges
<b>PURCHASES</b>			

## **DRAFT**

### **GENOA CHARTER TOWNSHIP BOARD Regular Meeting and Public Hearing June 6, 2022**

#### **MINUTES**

Supervisor Rogers called the regular meeting of the Genoa Charter Township Board to order at 6:30 pm at the Township Hall with the Pledge of Allegiance. The following members were present constituting a quorum for the transaction of business: Bill Rogers, Paulette Skolarus, Robin Hunt, Jean Ledford, Terry Croft, Jim Mortensen and Diana Lowe. Also present were Township Manager Michael Archinal, Township Attorney Joe Seward, and 29 persons in the audience.

Mr. Rogers read a resolution from the Brighton Area Fire Authority recognizing the outstanding service of Jim Mortensen.

The call to the public was made at 6:33 pm.

Mr. Mike Berean of 1273 Euler Road spoke regarding the retreat center on Kellogg Road. They are planning to only rent to religious groups; however, there is no way to monitor that. They are hoping to use the facility to capacity, which could serve over 11,400 visitors each month. This type of use is required to be serviced by a primary county road and this property does not meet that standard. The use is not harmonious with the surrounding neighborhood. He is requesting that the Township Board deny the request as recommended by the Planning Commission.

Mr. James Drouillard of 6781 Filice has 300 feet adjacent to this camp. He would like the Township Board to deny this request as recommended by the Planning Commission.

Ms. Lynn Drouillard of 6781 Filice stated she loves the quietness of her neighborhood and there is already a lot of traffic on the road. This is a commercial building and does not belong in a residential area.

Mr. Charles Saliba of 1829 Kellogg Road is concerned that the applicant is interested in the 60 acres across the road and would like to know what their intent is for that.

Ms. Kay Baker of 1780 Euler Road moved to her home to enjoy the quiet, peaceful space. She is concerned for her property values, the increased traffic, the water pollution, property drainage, solid waste management, soil erosion, and the loss of wildlife. This will only benefit the applicant and they do not pay taxes in Genoa Township, nor did they elect the Township Board.

Mr. Robert Kopicko of 6843 Filice Drive stated his house will be 250-300 feet from the proposed building. He does not want to look at the back of a hotel and have to put blinds on his windows. He moved to the country for peace and quiet.

Mr. Bill Maniaci 1866 Euler Road agrees with what his neighbors have said with regard to the property values and the increased traffic.

Mr. Saliba stated there are two hills on Kellogg Road between Grand River and the camp that cause blind spots.

Ms. Patricia Kopicko 6843 Filice submitted a letter from Michael and Bradlynn Jusino of 6967 Filice Drive who are, against the proposal. She stated that the Sheriff has rescinded his letter of recommendation for this project. They have had numerous complaints to the Township. She requested the Township Board agree with the recommendation of the Planning Commission.

Mr. Michael Baker of 1780 Euler Road moved here for the country, quiet life. This is the wrong use in the wrong place. The neighbors do not want it and they do not need it.

Mr. Jonathan Rhodes of 1735 Euler Road believes that the owners can do what they wish with their property; however, a 30,000 square foot building is excessive. He has lived in his home for three years and has heard the music from the camp. He suggested a negotiation for the size of the building and when the events can be held.

Mr. Patrick Spence who lives on Euler Road is opposed to this project. It is not the right place.

The call to the public was closed at 6:57 pm.

#### **Consent Agenda:**

Mr. Croft requested to have Items 3, 4, 5 be moved to the Regular Agenda. Ms. Skolarus requested to have Items 2 and 8 moved to the Regular Agenda. Mr. Mortensen requested to have Item 7 moved to the Regular Agenda.

Moved by Lowe, supported by Hunt, to approve the consent agenda moving Agenda Items 2-8 to the Regular Agenda. The motion carried follows: Ayes - Hunt, Croft, Ledford, Lowe, Mortensen, Skolarus, Rogers; Nays - none.

#### **1. Payment of Bills: June 6, 2022**

## **Regular Agenda**

### **2. Request to Approve Minutes: May 16, 2022**

Ms. Skolarus noted there are some items in the minutes that were not formatted properly. All motions should have the "Ayes" and "Nays" listed showing how each member voted. She noted additions that need to be made for Items 6 and 12.

Moved by Mortensen, supported by Ledford, to approve the minutes submitted by the Recording Secretary, with the changes provided by Ms. Skolarus. The motion carried follows: Ayes - Hunt, Croft, Ledford, Lowe, Mortensen, Skolarus, Rogers; Nays - none.

### **3. Request for approval of a fireworks display on Lake Chemung on June 25, 2022 as submitted by Chris Bonk.**

### **4. Request for approval of a fireworks display on the lakefront at 4127 Clifford Road on July 2, 2022 as submitted by Calvin Heckman, Jr.**

### **5. Request for approval of a fireworks display at Oak Pointe Country Club on July 3, 2022 as submitted by Michael Freeland of Ace Pyro, LLC.**

### **6. Request for approval of a fireworks display at Mt. Brighton Ski Lodge on July 16, 2022 as submitted by Calvin Heckman, Jr.**

Mr. Croft questioned if the Fire Department has reviewed these applications. Mr. Rogers stated the Township Manager advised them that these firework displays will be taking place. He will also advise the Fire Board at his meeting this week.

Moved by Croft, supported by Hunt, to ensure the Fire Department is aware that these displays will be occurring. The motion carried follows: Ayes - Hunt, Croft, Ledford, Lowe, Mortensen, Skolarus, Rogers; Nays - none.

### **7. Request for approval of an agreement with Howell Public Schools for the construction of Senior Survivor Park.**

Mr. Mortensen stated that the contract states the students raised \$482,290.33 and the contract for the work is proposed to be \$750,000, that leaves an approximate gap of \$260,000. Mr. Archinal stated that the Township approved \$145,000 to help for this. The total raised by the students in 2021 and 2022 is \$622,000. The anticipated cost of the project is \$750,000. The contractor is a good corporate citizen, and they will be doing some in-kind donations. If there is still a gap, there will be some changes made to the plan to meet the amount of funding.

Moved by Mortensen, supported by Skolarus, to approve an agreement with Howell Public Schools for the construction of Senior Survivor Park. The motion carried follows: Ayes - Hunt, Croft, Ledford, Lowe, Mortensen, Skolarus, Rogers; Nays - none.

**8. Request for approval of Board appointments as presented.**

Ms. Skolarus stated there is an error. Mr. Greg Rassel has a three-year term and should expire on "6/30/2025" not "6/30/2023".

Moved by Skolarus, supported by Lowe, to approve the Board appoints as corrected. The motion carried follows: Ayes - Hunt, Croft, Ledford, Lowe, Mortensen, Skolarus, Rogers; Nays - none.

**9. Public Hearing for the Timberview Private Drive Road Improvement Special Assessment Project (Winter 2022)**

- 1. Call to the Property Owners**
- 2. Call to the Public**

The call to the property owners was opened at 7:13 pm

Ms. Jan Barrett who lives on Timberview stated the residents are all in agreement with the special assessment. They wanted to say "Thank You" to the Township for their time and consideration.

The call to the property owners was closed at 7:14 pm.

The call to the Public was made at 7:14 pm with no response.

Ms. Hunt reminded the property owners that the original Timberview Agreement is still in effect for one more year so that last assessment and this first assessment will be at the same time for one year.

**10. Request for approval of Resolution #3 approving the project cost estimates, special assessment district and causing the special assessment roll to be prepared for the Timberview Private Drive Road Improvement Special Assessment Project. (Winter 2022).**

Moved by Mortensen, supported by Lowe, to approve the project cost estimates, special assessment district and causing the special assessment roll to be prepared for the Timberview Private Drive Road Improvement Special Assessment Project. (Winter 2022). The motion carried by a roll call vote as follows: Ayes - Hunt, Croft, Ledford, Lowe, Mortensen, Skolarus, Rogers; Nays - none.

**11. Request for approval of Resolution #4 acknowledging the filing of the special assessment roll, scheduling the second hearing, and directing the issuance of statutory notices for the Timberview Private Drive Road Improvement Special Assessment Project (Winter 2022).**

Moved by Skolarus, supported by Mortensen, to acknowledge the filing of the special assessment roll, scheduling the second hearing, and directing the issuance of statutory notices for the Timberview Private Drive Road Improvement Special Assessment Project (Winter 2022). The motion carried by a roll call vote as follows: Ayes - Hunt, Croft, Ledford, Lowe, Mortensen, Skolarus, Rogers; Nays - none.

**12. Consideration of a recommendation for denial of a special use application, environmental impact assessment and site plan to expand the Our Lady of the Fields Camp (formerly Camp Chaldean) by constructing a proposed 28,851 sq. ft. retreat center with a 40-room dormitory for overnight stays. The property is located at 1391 Kellogg at the southwest corner of Kellogg and McClements Roads. The request is petitioned by the Chaldean Catholic Church of the U.S.A.**

Mr. Dave Johnson, the attorney for the Caldean Church, provided an aerial view of the property that he submitted to the Board.

Ms. Eavan Yaldo of Saroki Architecture provided a review of the proposed project, including details of the proposed building, the access road, and their proposed uses. They have provided an operations plan, and an environmental impact assessment. She noted that all the zoning requirements have been met. The comments brought up this evening in the Call to the Public have been discussed with the Planning Commission before and have been addressed. She requested that the Township Board approve their request this evening.

Mr. Burt Kassab, Chairman of the Our Lady of the Fields Committee, provided details of how the property would be used.

Mr. Johnson stated that he has provided the Board with letters of recommendation from other religious organizations who request that the Township Board approve this proposal. He noted that the Future Land Use Plan would allow this property to be developed with 40 households, which would cause a more intense use than what is being proposed. He reviewed when the retreats would occur and the number of attendees at each retreat. This would be a benefit to the community.

Ms. Hunt stated that the roads do not meet the requirements and this property could only be developed with 19 homes as it is zoned today. She stated that the current use, as a country camp, is a perfect use for this site. The proposed size of the building is too large for her to approve.

Ms. Skolarus questioned the need for such a large facility. Ms. Yaldo stated they have accounted for the need for this space in their submission. There are places for people to eat and meet and there is a small chapel. Ms. Skolarus is opposed to the project as it is proposed. She would like to see a building approximately half of this size. Ms. Yaldo provided the square footage for each of the floors and the walk-out basement, noting the setbacks, density and height are well below the ordinance limits.



Mr. Rogers disclosed that he has known Mr. Johnson since the 1970's and he was his corporate attorney since the 1980's; however, he does not have to recuse himself from this item. He noted there are many subdivisions in the Township that he remembers as farms. He has toured this property and the proposed building would not be overbearing. He is in support of this proposal.

Ms. Skolarus noted that only three members of the Planning Commission voted to deny this. She would like the applicant to return to them with a smaller building with less bedrooms. She stated that the agenda states a recommendation of denial and this should not be. Ms. Hunt stated that is because the Planning Commission recommended denial. Mr. Rogers stated that the Planning Department provided recommended motions for both approval and denial.

Mr. Mortensen stated there are other facilities like this; however, they are not in residential areas.

### **A. Disposition of Special Use Application**

Moved by Hunt, supported by Lowe, to deny the Special Land Use request as provided by Section 19.02.04(f)(5) for a 28,851 square foot Prophet Elijah Retreat Center located at 1391 Kellogg Road, Howell. This action is based upon the finding that the proposed use is inconsistent with the standards of Section 19.03 of the Township Zoning Ordinance and specifically finds that:

1. The proposed use involving a 28,851 square feet retreat center and dormitory with 40 rooms for overnight stay with associated parking lot, site lighting, and building lighting that is planned for year-round use with up to 60 retreat participants plus staff is not consistent with the following goals, objectives and policies of the Master Plan:
  - a. The use does not "Promote harmonious and organized development consistent with adjacent land uses".
  - b. The proposed use is located within the rural reserve area outside of the growth boundary and is contrary to the purpose of the rural reserve area which is an area that is to be "maintained at a relatively low intensity rural character of development, that will not adversely impact natural features and agricultural uses".
  - c. The proposed use is not consistent with the following description of the Rural residential planned areas: "These areas shall develop as single family residential on large lots. Many of the areas have significant natural limitations such as wetlands or severe soil limitations and are not planned for sanitary sewer. This classification is recommended for single family residences on lots no smaller than 2 acres".
2. The amount of traffic, visitors, lighting, noise, and activity associated with the use is not compatible with and will significantly alter the existing and intended character of the general vicinity. Events previously held at the site were described by numerous neighbors as creating nuisance noise with heavy traffic involving cars parked on the roadway causing hazardous conditions.
3. The access to the project on a rural secondary gravel road is not suitable for the proposed use.

4. The impacts of the proposed use and activities will be detrimental to the natural environment, public health, safety or welfare by reason of excessive production of traffic, noise, lighting or other such nuisance.

The motion carried as follows: Ayes - Hunt, Croft, Ledford, Lowe, Mortensen; Nays - Skolarus, Rogers.

### **B. Disposition of Environmental Impact Assessment (3-15-21)**

Moved by Hunt, supported by Lowe, to deny the Environmental Impact Assessment dated March 15, 2021 for a 28,851 square foot Prophet Elijah Retreat Center located at 1391 Kellogg Road, Howell due to non-compliance with the standards of Sections 19.03 and 18.08 and more specifically sections 18.08.02, 18.08.04, 18.08.10, and 18.08.11 as follows:

1. The proposed use involving a 28,851 square feet retreat center and dormitory with 40 rooms for overnight stay with associated parking lot, site lighting, and building lighting that is planned for year-round use with up to 60 retreat participants plus staff is not harmonious with, and will be harmful, injurious, or objectionable to, existing and planned future uses in the immediate area.
2. The architectural scale of the proposed 28,851 square feet retreat center and two-story dormitory with 40 rooms does not complement the character of the surrounding area.
3. The amount of traffic, visitors, and activity associated with the use is not compatible with and will negatively impact the rural secondary gravel road provided access to the site.

The motion carried as follows: Ayes - Hunt, Croft, Ledford, Lowe, Mortensen; Nays - Skolarus, Rogers.

### **C. Disposition of Site Plan (3-15-21)**

Moved by Lowe, supported by Ledford, to deny the Site Plan dated March 15, 2021 for a 28,851 square foot Prophet Elijah Retreat Center located at 1391 Kellogg Road, Howell due to non-compliance with the standards of Sections 19.03 and 18.08 and more specifically sections 18.08.02, 18.08.04, 18.08.10, and 18.08.11 as follows:

1. The proposed use involving a 28,851 square feet retreat center and dormitory with 40 rooms for overnight stay with associated parking lot, site lighting, and building lighting that is planned for year-round use with up to 60 retreat participants plus staff is not harmonious with, and will be harmful, injurious, or objectionable to, existing and planned future uses in the immediate area.
2. The architectural scale of the proposed 28,851 square feet retreat center and two-story dormitory with 40 rooms does not complement the character of the surrounding area.
3. The amount of traffic, visitors, and activity associated with the use is not compatible with and will negatively impact the rural secondary gravel road provided access to the site.

The motion carried as follows: Ayes - Hunt, Croft, Ledford, Lowe, Mortensen; Nays - Skolarus, Rogers.

**13. Consideration of a recommendation for approval of a special land use application, environmental impact assessment and site plan for a proposed group day care home (7 to 12 children) located at 2638 Hubert Road on the west side of Hubert Road, north of Herbst Road. The request is petitioned by Sarah Lanning.**

Ms. Sarah Lanning provided a review of her request.

**A. Disposition of Special Use Application**

Moved by Lowe, supported by Croft, to approve the Special Land Use permit for a group day care home allowing in-home childcare for 7 to 12 children because it has been found that the requested use meets the requirements of Sections 19.03 and accommodates a variety of land uses that are located in a logical pattern and complements community goals, the surrounding land uses, environment, capacity of roads and the sanitary sewer, and public water system capabilities. The use provides landowners with reasonable use of their land in a manner that is compatible with adjacent land uses and the overall land use plan for the Township and the capacity of infrastructure. The use promotes harmonious and organized development consistent with adjacent land uses and achieves well-planned, safe, balanced, and pleasant residential neighborhoods. The use also has been found to comply with the use conditions found in Section 2.03.02(k) of the Zoning Ordinance. The motion carried as follows: Ayes - Hunt, Croft, Ledford, Lowe, Mortensen, Skolarus, Rogers; Nays - None.

**B. Disposition of Environmental Impact Assessment (3-28-22)**

Moved by Hunt, supported by Skolarus, to approve the Environmental Impact Assessment dated March 28, 2022. The motion carried as follows: Ayes - Hunt, Croft, Ledford, Lowe, Mortensen, Skolarus, Rogers; Nays - None.

**C. Disposition of Site Plan (4-20-22)**

Moved by Lowe, supported by Ledford, to approve the site plan dated April 20, 2022. The motion carried as follows: Ayes - Hunt, Croft, Ledford, Lowe, Mortensen, Skolarus, Rogers; Nays - None.

**14. Consideration of a recommendation for approval of an environmental impact assessment and final PUD site plan for a proposed 2,600 sq. ft. restaurant with a drive-through facility located on the northwest corner of Latson Road and Grand Oaks Drive on parcel #4711-08-200-018. The property is within the Livingston Commons Phase 2 Planned Unit Development and is petitioned by Panda Restaurant Group.**

Mr. Mike McPherson of Atwell. LLC provided a review of the site plan. Ms. Mekawy of Norr Architect reviewed the details of the building, noting they made the changes as requested by the Planning Commission.

The Board and the applicant briefly discussed the colors and signage on the building.

**A. Disposition of Environmental Impact Assessment (received 05-27-22)**

Moved by Hunt, supported by Croft, to approve the Environmental Impact Assessment received on May 27, 2022 with the following conditions:

1. The impact assessment shall include a date on the first page.
2. The section regarding "Impact on Surrounding Land Use" shall be updated as follows:
  - a. A statement shall be added to indicate that all product deliveries and trash/grease collection shall occur outside of business hours.
  - b. A statement shall be added that the dumpster gates shall remain closed at all times.

The motion carried as follows: Ayes - Hunt, Croft, Ledford, Lowe, Mortensen, Skolarus, Rogers; Nays - None.

**B. Disposition of Final PUD Site Plan (05-26-22)**

Moved by Lowe, supported by Croft, to approve the Final PUD Site Plan dated May 26, 2022 with the following conditions:

1. The building elevations presented this evening are acceptable and approved by the Township Board.
2. The easement document for the Township Gateway area shall be reviewed and approved by Staff and the Township Attorney prior to issuance of the Land Use Permit.
3. The additional site circulation pavement markings and signs requested by staff in the attached mark-up plan shall be provided and approved prior to issuance of a land use permit.
4. The sign package must be revised prior to land use permit issuance as follows:
  - a. The PUD requires individual channel letters for wall signs. The logo sign proposed on the Latson Road elevation must be revised to be individual letters.
  - b. Directional signs shall not exceed a height of 3 feet.
  - c. The clearance bar shall be eliminated from the western most drive-thru lane to allow for over height delivery vehicles.
  - d. Signage must be removed from the clearance bar.
  - e. The menu board cannot exceed 20 square feet.
  - f. The S10 Sign that says "Wok On" shall be eliminated.
5. The following items from the Township Engineer letter dated May 4, 2022 shall be addressed prior to issuance of a land use permit:
  - a. The parking spot detail shall be revised to eliminate the bumper blocks.
  - b. The site plan should include inverts of the proposed storm sewer to provide more information on how the connection to the existing storm sewer will be achieved. The storm sewer calculations should also include the hydraulic grade line in the proposed pipe.

The motion carried as follows: Ayes - Hunt, Croft, Ledford, Lowe, Skolarus, Rogers; Nays - Mortensen.

### **15. Discussion regarding contracted Sheriff services.**

Sheriff Murphy sent a letter to the Township asking if they are interested in having more protection in the schools. They would have a dedicated officer to check into the schools each day and would then patrol the roads and assist with ordinance or traffic issues. During school breaks and during the summer, they would still be dedicated to the Township. All Board Members agree this is a good idea and requested that a contract be brought before the Board for review and action.

### **16. Discussion regarding use of ARPA funds at the Chilson Hills Cemetery.**

Commissioner Mortensen stated the cemetery needs attention. If ARPA funds are not available, he would like the Township to fund the improvements. The Board members discussed how the cemetery is maintained and what improvements should be made. Ms. Skolarus stated that Karlene Shaffer of Landscape Designs can provide a design.

Mr. Rogers asked the Board Members to rank the list of improvements submitted by Mr. Mortensen and submit them to Mr. Archinal. Ms. Skolarus will also contact Ms. Schaffer to develop a design and plan.

### **17. Discussion regarding Township Hall entrance sign.**

All Board Members like the design. It was noted that the address should be added to the sign. Mr. Archinal will make this change.

### **18. Request for approval of a proposal from Fahey Burzych Rhodes to perform an Independent Investigation and Report regarding various issues related to the Township Clerk.**

Moved by Hunt, supported by Ledford to approve a proposal from Fahey Burzych Rhodes to perform an Independent Investigation and Report regarding various issues related to the Township Clerk. The motion carried as follows: Ayes - Hunt, Croft, Ledford, Lowe, Mortensen, Rogers; Nays - None; Abstain - Skolarus.

### **Correspondence**

Mr. Archinal sent a memo to the Township Board reminding them that all agenda items should be submitted to him by noon five days prior to the scheduled Board Meeting.

### **Member Discussion**

Ms. Hunt noted that the corrected and approved version of the April 18, 2022 meeting minutes are not on the website. Ms. Skolarus will make this correction.

Mr. Archinal stated that Crooked Lake is on schedule to be completed by mid July.

Ms. Skolarus stated that the cost of the election equipment is \$9,500 per year for the next five years. She questioned if the Township should use ARPA funds to pay this off now instead of paying \$9,500 each year for the next five years from the general fund. The Board agreed to have this item placed on a future agenda for review and action.

**Adjournment**

**Moved** by Mortensen, supported by Lowe, to adjourn the meeting at 8:58 pm. The motion carried unanimously.

Respectfully Submitted,

Patty Thomas  
Recording Secretary

Approved:

Paulette Skolarus, Clerk  
Genoa Charter Township

Bill Rogers, Supervisor  
Genoa Charter Township

# MEMORANDUM

TO: Township Board

FROM: Michael Archinal 

DATE: 6/15/2022

RE: MTA Dues

For your consideration this evening is a request for approval of MTA dues and an optional contribution to the MTA legal defense fund. Please consider the following actions:

**Moved by \_\_\_\_\_, supported by \_\_\_\_\_, to authorize payment of the Michigan Townships Association invoice dated May 30, 2022 in the amount of \$7,978.59.**

**Moved by \_\_\_\_\_, supported by \_\_\_\_\_, to amend the FY 2022/2023 budget by increasing line item #101-101-910-000 "Township Trustees Professional Development/Conferences/Dues" from \$1,500 to \$11,000.**



MICHIGAN TOWNSHIPS ASSOCIATION

Michigan Townships Association  
PO Box 80078  
Lansing, MI 48908-0078

**MTA Dues Invoice**  
May 30, 2022

Due Date: **July 1, 2022**  
Township ID: 47495  
County: Livingston  
ATTN: Paulette Skolarus

**Genoa Chtr. Twp.**  
2911 Dorr Rd  
Brighton, MI 48116-9436

**IMPORTANT**  
*Please make a photocopy of this page  
and send it with your check.*

**Annual Dues**

- 1. Your annual dues payment for July 1, 2021 to June 30, 2022 is: \$7,746.20
- 2. Your Legal Defense Fund contribution for the year is (optional): \$232.39

Your dues and LDF total: \$7,978.59

**Choose an Unlimited MTA Online Learning Subscription (optional)**

*All members of your township team, including volunteers, will have access to the courses included in the package you choose. Please see the enclosed flyer and the back of this page for more details.*

- |                         |  |                                |   |  |
|-------------------------|--|--------------------------------|---|--|
| Please<br>Choose<br>One | <input type="checkbox"/> Premium Pass (ALL courses included)<br><input type="checkbox"/> Plus Package<br><input type="checkbox"/> Essentials Package | \$ 1,900<br>\$ 1,000<br>\$ 750 | Please enter the<br>selected package<br>PRICE here: | <div style="border: 1px solid black; width: 100px; height: 20px; display: inline-block;"></div> \$ |
|-------------------------|--|--------------------------------|---|--|

**Please total the green and gold boxes above and enter the amount enclosed:** \$

**Notes:**

1. *Please make a photocopy of this page and send it with your check.*
2. *Your dues were calculated using method 5 as described on the reverse side of this sheet.*
3. *MTA Online subscription prices are discounted for 2022 - 2023 to help townships expand learning access.*
4. *MTA's EIN number is: 38-1536994. IRS Disclosure: MTA dues payments are not deductible as a charitable contribution for federal income tax purposes.*
5. *If you have any questions, please email [service@michigantownships.org](mailto:service@michigantownships.org) or call us at (517) 321-6467.*



**Thank you very much for supporting strong township government!**



## Our Online Course Subscription Makes Good Sense for Your Team

MTA's priorities include that all members of your township team and volunteers have affordable access to targeted training – led by township experts – at your convenience. Our online learning center features a wide variety of topics and our annual subscription packages offer a substantial cost savings. If you haven't already, we encourage you to use our FREE trial described here: <https://bit.ly/MTAfreetrial> Package details are at <https://www.michigantownships.org/mtaonline.asp>.

### Key Advantages of MTA Online

- Continued development for elected and appointed officials, deputies, and volunteers – even new joiners whenever (and wherever!) they choose
- An economical way to now include those who may not have otherwise gone to classes
- Convenience of taking the courses 24 / 7 that you can pause, rewind and rewatch over again.

Each level offers access to qualifying courses in our new *Red Book Ready* learning series, but only the **Premium Level** includes nine of our Township Governance Academy courses, allowing everyone to make significant progress towards this distinctive township career achievement. In addition, **Premium Level subscribers also get free access to our live monthly webinar series, *Now You Know*, and a 20% discount off all education and events including next year's Annual Conference and Expo.**

Please see the enclosed promo flyer for all the details.

The other two subscriptions step down in price and what is included. Pricing is as follows:

Subscription	Pricing for access by <i>ALL</i> your township team	Estimated value if just <i>ONE</i> participant took the included courses separately
<b>Premium</b>	<b>\$1,900</b>	\$5,340
<b>Plus</b>	<b>\$1,000</b>	\$2,010
<b>Essentials</b>	<b>\$ 750</b>	\$1,350

### Explanation of Dues Determination

Your dues were determined by the method number stated in the notes on your Dues Invoice:

1. Minimum dues of \$216 per year
2. Standard dues formula, which is calculated as:
  - 2021 Taxable Value (TV) x \$15.05 per million, PLUS
  - 2021 state shared revenues and city, village and township revenue sharing (CVTRS) x \$1.7376 per thousand
3. Graduated cap of \$6,653 (townships with TV of \$290-599 million)
4. Graduated cap of \$6,853 (TV of \$600-999 million)
5. Graduated cap of \$7,746 (TV greater than \$1 billion)
6. Otherwise, year on year increase capped at 10% above 2021-2022 dues



May 31, 2022

Dear Colleagues,

Your residents depended on your leadership during this past year of recovery and new challenges. MTA's mission is to help you deal with the good and the bad each year, and to speak with one voice on behalf of all our townships and your communities' needs. Your dues payment enables MTA to provide key services and resources to help you succeed:

- Respected and effective **advocates** in Lansing and Washington, DC
- Expert in-person **advice** and reference resources
- Affordable and thorough **education** on newly emerging and established topics
- Outstanding professional networking **events**, such as our 2022 in-person Annual Educational Conference & Expo, which this year included the Legislative Conference
- *Township Focus*, perhaps the **best local government magazine** of its type nationally

Every year, hundreds of new legislative bills emerge that impact township officials and your communities. Many are from special interest groups directly attacking our townships' best interests—often on matters of local authority. Can you imagine if our townships had no voice to counteract these threats? Your MTA Government Relations team typically stops or mitigates 95% of such harmful legislation. Proactively, they also work to successfully achieve objectives from the MTA Policy Platform. The dues also cover MTA's membership in our national association, NATaT. The NATaT team was directly responsible for getting us away from having limited "approved" purposes in the original American Rescue Plan Act rules to the much more flexible and useful "standard allowance" approach.

Nearly every township called or emailed our staff experts to get difficult questions answered. Others consulted with their peers on the *Community Connection* forum or read up on them in the MTA Answer Center. Soon we will roll out the new MTA website that will be even easier to navigate, will tie into our other online services better, and be easier to read across all your devices.

This spring, we celebrated the return of our in-person Annual Conference & Expo featuring more than 70 classes, inspirational main-stage sessions and amazing networking events. New this year, an online option allowed you to join live during the event or watch a recording at your convenience. Save the date for next year's event being held April 17-20 at the Grand Traverse Resort in Acme Township, near Traverse City. This year, we'll continue to bring you a wide range of live training courses from Assessing to Zoning around the state. Our Online Learning Center is filled with a wide variety of recorded webinars geared for *every* member your township team. Our annual subscription packages, *MTA Online*, offer a substantial savings and give access to your entire township team for one low price. See the enclosed flyer for more on this cost-effective program.

Over the coming year, the MTA Legal Defense Fund will continue to track and pursue cases with statewide importance to townships. Your township's contribution to the fund helps us defend and argue on behalf of townships' interests and to participate in major cases each year.

We thank you for supporting strong township government, for your own leadership and joining in MTA's collaborative work for Michigan and our future.

Sincerely,

A handwritten signature in blue ink that reads "Neil Sheridan".

Neil Sheridan  
Executive Director



# One subscription provides online learning for your entire township



**MTA's Online Learning Center** is home to a wide variety of recorded webinars designed with township officials in mind. From assessing to zoning, you're sure to find something for *every* member of your township team, at every stage in their public service career.

Our annual subscription packages allow you to unlock the savings in this extensive library. One subscription gives everyone on your township team (yes everyone!) access to all of the courses included in that package with no additional "per person" fees.

Three different levels allow you to choose which webinar package is the best fit your township:

The **Essentials** level includes **fourteen webinars** that cover the basics—what we consider essential topics—designed for all board members and required knowledge for all townships.

Step up to the **Plus** level to get access to **twenty-five webinars** that take you beyond the essentials, digging into planning and zoning topics, cemeteries and more. Your entire board, planning commissioners and zoning administrators can watch together (or separately) at no additional cost.

Upgrade to **Premium Pass** and get more than **90 webinars!** We'll throw in FREE access to our live monthly webinar series, **Now You Know** (featuring a new topic every month) AND our Township Governance Academy courses. But that's not all, you'll also get 20% off all upcoming—even in-person—training!



For a full list of what's included in each package, visit [www.michigantownships.org/mtaonline.asp](http://www.michigantownships.org/mtaonline.asp)

Eliminate per person fees with MTA's annual subscription options. Everyone in your township can watch (and learn) together OR on their own!

Package rates are:

**Essentials Package: \$750**

**Plus Package: \$1,000**

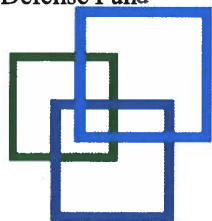
**Premium Package: \$1,900**

To continue your subscription or begin subscribing today, simply check the box next to the package of your choice on the enclosed statement.

If your township is already a subscriber, thank you! We hope you will consider renewing or perhaps even upgrading to the next learning level. New classes have been added to **every** package. 5.5 additional hours of training was added to **Essentials**, 8 hours to the **Plus** package and seventy-five hours to **Premium Pass!**

**Not yet a subscriber?** What are you waiting for? Now is the perfect time to try it!

**Individual webinars** more your speed? Browse our online classrooms at <https://learn.michigantownships.org>



# MICHIGAN TOWNSHIPS ASSOCIATION

Advocate (/michigantownships/advocate/) Key Issues (/michigantownships/key-issues/) Policy Platform (/michigantownships/policy-platform/)

Action Alerts (/michigantownships/alerts/)

MTA Website (<http://www.michigantownships.org>)

## MTA's Legal Defense Fund

### MTA's Legal Defense

(<https://www.michigantownships.org/members/legaldefense.asp>) Fund

(<http://www.michigantownships.org/members/legaldefense.asp>) (LDF)

assist townships in legal battles that have significant statewide impact. The following open cases have received LDF support, typically in the form of an *amicus curiae* brief:

### Collective bargaining

#### **Rita Kendzierski, et al v. County of Macomb**

—In this case, the county received an adverse decision in the Michigan Court of Appeals that

determined that a collective bargaining agreement that was “latently ambiguous” as to whether the language of the contract guaranteed, or “vested” health care benefits to the county’s retirees, could be interpreted based on statements made by the parties outside of the collective bargaining process. Now before the state Supreme Court, the decision, if it is not reversed, would mean that the county could not unilaterally change health care coverage for retirees as provided for in multiple collective bargaining agreements. This case has a statewide impact because labor contracts may have been based on the understanding that lifetime benefits can only be granted by express language. Joint amicus support will be provided.



### Headlee Amendment

**Headlee Amendment**—In this case before the state Court of Appeals, a not-for-profit corporation filed suit against the State of Michigan stating local government has been shortchanged by the state’s calculation of mandatory state funding required by the Headlee Amendment. The case asserts that the state has used the Proposal A state funding to divert other funds that would go to local government, and the Headlee Amendment did not intend to include this shift in funding source for schools.

**Michigan Association of Home Builders, et al v. City of Troy**—In this case, the plaintiffs alleged the city’s collection of building department revenue exceeded that which was owed under its contract, and the deposit of this excess into the city’s general fund violated MCL 125.1522(1) of the Single State Construction Code Act. Plaintiffs also stated that the city’s excess collection of fees violated the Headlee Amendment, as it was disguised as a tax. MTA participated in this case with the Michigan Municipal League at the state Court of Appeals, which ruled in favor of the city. On appeal, the state Supreme Court remanded the case to trial court, which found no violation of the Headlee Amendment or MCL 125.1522(1). The appeals court ruled in favor of the city, and the plaintiffs have file leave to appeal in the Supreme Court. A joint *amicus* will be prepared in opposition of the leave to appeal.

### Land use and zoning

**Charter Township of York v. Donald Miller, et al**—In this case, the state Court of Appeals upheld a circuit ruling that the township’s zoning ordinance prohibited outdoor medical marijuana growth, and was unenforceable because the prohibition was in direct conflict with the Michigan Medical Marijuana Act. The Court of Appeals ruling, however, turned this case into a broader zoning preemption case, seeming to leave no room for any zoning regulation. An LDF brief will be filed in support of application

**DeRuiter v. Byron Township**—When a primary caregiver established a marijuana growing facility in Byron Township’s commercial zoning district, the township sent a cease and desist letter as its zoning ordinance requires that primary caregivers operate only as a permitted home occupation. The Circuit Court ruled that the township zoning ordinance is preempted by the Michigan Medical Marihuana Act. MTA submitted an *amicus* brief for the Court of Appeals to consider.

**Fraser Township v. Harvey Haney**—When **Fraser Township** (Bay Co.) filed a complaint to stop a piggery from keeping animals on the property—citing a zoning violation—the appellant claimed that since it had operated since 2006, it was protected by the statute of limitations. The Bay County Circuit Court held that the statute of limitations does not apply against local governments bringing zoning enforcement violations; however, the Court of Appeals granted interlocutory leave to review this question. A reversal of the Circuit Court’s decision will have a negative statewide impact on municipalities attempting to enforce their zoning ordinance. The LDF agreed to support Fraser Township with an *amicus* brief.

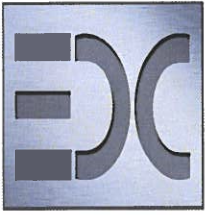
**Grandview Beach Association v. Cheboygan County and Cheboygan County Planning Commission**—The relevant *amicus* question presented in this case is whether an appeal of a planning commission’s action on a special land use permit and subsequent appeal by right to the Circuit Court is then appealable to the Court of Appeals as a matter of right or does it have to be on a request for leave to appeal. This issue has statewide implications due to the increased costs to municipalities if special land use appeals to the Court of Appeals are by right and not by leave.

## Medical marijuana

**People of City of Warren v. Bezy**—This case examines the extent to which the Michigan Medical Marihuana Act (MMMA) preempts local ordinances. The district court ruled that city zoning and other regulations were preempted by immunity under the MMMA, and the decision was upheld by the circuit court. The city argued that compliance with the MMMA does not preclude compliance with city zoning and other regulations. The concern is that an overbroad ruling that the city cannot impose any penalty against a person in compliance with the MMMA, preventing a municipality from enforcing zoning, building code, nuisance or other ordinances. MTA joined the Michigan Municipal League in an *amicus* brief supporting the city.

## Taxation

**Menard, Inc. v. City of Escanaba**—Continued support was approved in the form of a joint *amicus curiae* brief as the Michigan Supreme Court has scheduled oral argument on whether to grant the application for leave in this case involving the “dark store” assessing theory. The Michigan Tax Tribunal (MTT) allowed the petitioner big box store to use sales comparables presented by Menard that consisted of sales of out-of-business big box stores with deed restrictions sold for second generation uses. A state Court of Appeals ruling reversed the MTT decision and remanded it back to the tribunal with specific instructions for a new determination. The court concluded that the tribunal “committed an error of law” and “its decision was not supported by competent, material and substantial evidence” in the matter.



Economic Development Council of  
Livingston County

218 East Grand River Ave.  
Upper Level  
Brighton, MI 48116

# Invoice

Date	Invoice #
5/23/2022	1346

Bill To
Genoa Township 2911 Dorr Road Brighton, MI 48116

Quantity	Description	Rate	Amount
	Municipal Partnership Investment 2022	23,283.09	23,283.09
Thank you for your support!		<b>Total</b>	\$23,283.09

June 13, 2022

Mike,

We discussed this at the last board meeting and it was my understanding that it should be placed on the Agenda for Monday the 20<sup>th</sup> to be paid out of ARPA funds, otherwise the General Fund will need to pay the fees for years 6 through 10 related to our existing voting equipment.

Polly

# Final rule simplifies, broadens township use of ARPA funds

**T**ownships' ability to put American Rescue Plan Act (ARPA) dollars to use in their communities was clarified—and greatly broadened and simplified—under the final rule announced by the U.S. Department of Treasury in early January.

More than 98% of Michigan townships applied to access their allocation of State and Local Fiscal Recovery Funds (SLFRF) through ARPA, which allows millions of dollars to flow into local communities. In total, **townships will receive more than \$500 million in federal coronavirus relief money.** All townships have received their first “tranche” (portion) of the funds from the Michigan Department of Treasury. The second tranche will be distributed by Treasury “no later than 12 months after delivery of the first half of the allocation.” In addition, as nonentitlement units of government (NEUs)—municipalities less than 50,000 in population, so all but eight of Michigan’s largest townships—most townships also have received or will receive a supplemental, equitable disbursement of those funds that had been allocated to NEUs that declined or did not request the funding.

For months, local officials have been wondering and considering—and MTA has fielded questions on—exactly how townships can put these funds to use. And **we finally have the answers.**

## **New ‘standard allowance’ makes it easy**

Under the final rule, there remain four broad spending categories under which townships may spend their ARPA dollars. Perhaps the greatest (and surely most appreciated) change is in the “Revenue Loss” category—a new “standard allowance,” up to \$10 million, that townships (and all recipients) can elect to take to use the funds for “government services.” Previously, most general government services or projects could only be funded if the township could project or demonstrate “revenue loss” as defined in the ARPA and prior interim final rule. Now, under the final rule, **recipients that select the new “standard allowance may use that amount—in many cases their full award—for government services, with streamlined reporting requirement,”** without having to demonstrate any “revenue loss.”

Because all but one Michigan township has an allocation less than \$10 million, this means that **your township can elect to use its full allocation for general township services, projects**





**and uses.** We know that most townships have wanted clear guidance, and to be able to use their ARPA funds for “normal” Michigan township needs—that may or may not have any connection with the COVID pandemic. This new \$10 million “standard allowance” allows just that.

During a Q&A webinar that MTA hosted shortly after the final rule was released (which you can watch on [www.michigantownships.org/covidrelief.asp](http://www.michigantownships.org/covidrelief.asp)), participants filled the question-and-answer feed with questions about whether various expenditures were allowable uses under ARPA. As long as the expenditure is lawful for townships and not prohibited by ARPA, the simple answer is, yes. There is no way that we can list every possible use for ARPA funds. However, among the most frequent uses cited during the Q&A and asked of MTA—which would be considered allowable uses under ARPA—are:

- Township hall and facility construction, renovations and expansions
- Township facility equipment, systems and upgrades, including ventilation, security systems and features, parking lot paving, etc.
- Emergency services vehicles, and purchases for public safety departments such as personal protection equipment and turnout gear
- Cemetery maintenance or expansion
- Township maintenance vehicles
- Parks and recreation facilities, maintenance, expansion, etc.

- Computer equipment
- Road projects
- Recycling services
- Outdoor lighting
- Election equipment, including ballot dropboxes
- Feasibility studies
- Matching funds for non-federal programs

The key concept to remember is that, like all township expenditures, your **ARPA funds must be used for an expenditure that is lawful for townships** under state statute. If it is not a lawful expenditure for your township (that is expressly stated or fairly implied by Michigan law), you cannot spend your ARPA funds on it. This can be confusing, as information from U.S. Treasury is broad guidance for the entire nation, and what is lawful in one state may not be lawful in another. As a result, the U.S. Treasury guidance lists certain allowable expenditures, such as assistance to small businesses or donations to nonprofit organizations, that are not allowable for Michigan townships. To help guide our member townships, **MTA has created a Michigan-specific ARPA uses resource**, which is available on our ARPA webpage.

As MTA Staff Attorney Catherine Mullhaupt explained lawful expenditures during the MTA Q&A, “It’s like ‘Simon Says,’ the old playground game,” she said. “Can you find where ‘Simon Says’ in state statute that townships may spend money?” You can find additional guidance on lawful expenditures for townships via the “Index of Topics” under



PO Box 80649  
 Austin, Texas 78708-0649  
 Phone: (800) 223-4278  
 Fax: (800) 831-1485  
 AccountsReceivable@hartic.com

Please take a moment to update our address information:

Remittance Address:

Hart Intercivic, Inc.  
 Dept 0453  
 PO Box 120453  
 Dallas, Texas 75312-0453

Mailing Address

Hart Intercivic, Inc.  
 PO Box 80649  
 Austin, Texas 78708-0649

Physical Address

Hart Intercivic, Inc.  
 3800 Quick Hill Road  
 Building 1, Suite 200  
 Austin, Texas 78728

**INVOICE**

Invoice 0000097945  
 Invoice Date 06/07/2022  
 Customer ID GEN00002  
 Project VERM-000072

Page 1 of 1

BILL TO:	SHIP TO:
<b>Angie Williams</b> <b>Genoa Charter Township, MI</b> <b>2911 Dorr Rd.</b> <b>BRIGHTON, MI 48116</b>	<b>Mary Krencicki</b> <b>Genoa Charter Township, MI</b> <b>2911 Dorr Rd.</b> <b>BRIGHTON, MI 48116</b>

TERMS	SALESPERSON	PO NUMBER	CONTRACT NUMBER
Special			071B7700128

Effective Period: 08/01/2022 -- 09/30/2027

Invoice is due on or before beginning term date.

	<u>Units</u>	<u>Price</u>	<u>Amount</u>
A) Verity - Service and Maintenance Renewal (Year 6)	1.00	9,514.6700	9,514.67
B) Verity - Service and Maintenance Renewal (Year 7)	1.00	9,444.0000	9,444.00
C) Verity - Service and Maintenance Renewal (Year 8)	1.00	9,444.0000	9,444.00
D) Verity - Service and Maintenance Renewal (Year 9)	1.00	9,444.0000	9,444.00
E) Verity - Service and Maintenance Renewal (Year 10)	1.00	9,444.0000	9,444.00

<b>REMITTANCE ADDRESS</b>	<b>HART INTERCIVIC, INC.</b> Dept 0453 PO BOX 120453 Dallas, TX 75312-0453	<b>BILLING INQUIRIES</b>	<b>HART INTERCIVIC</b> PO BOX 80649 Austin, TX 78708-0649 800.223.HART * Fax:800.831.1485 AccountsReceivable@hartic.com TAX ID# 95-3248916	<b>Sales Total</b>	<b>47,290.67</b>
				<b>Sales Tax</b>	<b>0.00</b>
<b>ORIGINAL INVOICE</b>				<b>TOTAL</b>	<b>\$47,290.67</b>

**HPS and TOWNSHIP COOPERATIVE AGREEMENT FOR LAW ENFORCEMENT SERVICES**

**THIS AGREEMENT**, made and entered into on June 8, 2022 by and between the COUNTY OF LIVINGSTON, State of Michigan (hereinafter referred to as the "COUNTY"), and LIVINGSTON COUNTY SHERIFF (hereinafter referred to as the "SHERIFF"), and a Cooperative Contract with Howell Public Schools (hereinafter referred to as the "HPS"), Marion Township (hereinafter referred to as the "MTWP"), Howell Township (hereinafter referred to as the "HTWP"), Oceola Township (hereinafter referred to as the "OTWP") and Genoa Township (hereinafter referred to as the "GTWP").

**WITNESSETH:**

For and in consideration of the mutual covenants hereinafter contained, **IT IS HEREBY AGREED** as follows:

1. **Services to be Performed by SHERIFF.** The SHERIFF shall furnish police services as set forth in the attached Appendix A.
2. **Agreement Period.** This Agreement shall commence upon August 1, 2022, and shall continue until July 31, 2023, at which time it shall terminate.
3. **Insurance.** HPS, MTWP, HTWP, OTWP and GTWP shall be responsible for obtaining and maintaining its own property and liability insurance.
4. **Compensation.** The HPS, MTWP, HTWP, OTWP AND GTWP shall pay the COUNTY the sum of \$150,000 in total. HPS (\$50,000), MTWP (\$25,000), HTWP (\$25,000), OTWP (\$25,000) AND GTWP (\$25,000) will be invoiced bi-annually for the duration of the contract. Each entity will be billed in two equal bi-annual installments (August and February) as follows: HPS (\$25,000), MTWP (\$12,500), HTWP (\$12,500), OTWP (\$12,500) AND GTWP (\$12,500).
5. **Location Where Compensation is to be Paid.** The HPS, MTWP, HTWP, OTWP AND GTWP shall remit all payments to the Livingston County Sheriff's Office, 150 S. Highlander Way, Howell, MI, 48843, and Attn: Lt. Eric Sanborn
6. **Status of Sheriff Deputies Assigned Under Agreement.** The Sheriff Deputy assigned to the HPS, MTWP, HTWP, OTWP AND GTWP under this Agreement shall remain employees of the SHERIFF and under his supervision, direction, management and control.
7. **Removal of Sheriff Deputies for Emergencies.** The SHERIFF reserves the right, at his sole discretion, to remove any Sheriff Deputy, who is otherwise assigned to the HPS, MTWP, HTWP, OTWP AND GTWP, for emergencies that might exist outside the area designated by this Agreement.
8. **Nondiscrimination.** In carrying out the terms of this Agreement, the parties hereto shall adhere to all applicable Federal, State and local laws and regulations prohibiting discrimination. The parties hereto, as required by law, shall not discriminate against persons to receive services under this Agreement or against an employee or applicant for employment with respect to hire, tenure, terms, conditions or privileges of employment, or a matter directly or indirectly related to employment, because of race, color, religion, national origin, age, sex, disability that is unrelated to the individual's ability to perform the duties of a particular job or position, height, weight, or marital status. Breach of this covenant shall be regarded as a material breach of this Agreement.
9. **Complete Agreement.** This Agreement contains all the terms and conditions agreed upon by the parties hereto, and no other agreements, oral or otherwise, regarding the subject matter of this Agreement or any part thereof shall have any validity or bind any of the parties hereto.

Notwithstanding any other provision of this Agreement to the contrary, this Agreement may be terminated at any time by either the County, the Sheriff, or the HPS, MTWP, HTWP, OTWP AND GTWP collectively upon thirty (30) days prior written notice to the other parties.

**THE AUTHORIZED REPRESENTATIVES OF THE PARTIES HERETO HAVE FULLY SIGNED THIS AGREEMENT FOR LAW ENFORCEMENT SERVICES ON THE DAY AND YEAR FIRST ABOVE WRITTEN.**

**COUNTY OF LIVINGSTON**

By: \_\_\_\_\_  
**WES NAKAGIRI - CHAIRMAN** (Date)  
County Board of Commissioners

By: \_\_\_\_\_  
**MICHAEL J. MURPHY - SHERIFF** (Date)

**Howell Public Schools**

By: \_\_\_\_\_  
(Signature) (Date)

Name: \_\_\_\_\_  
(Print or Type)

Title: \_\_\_\_\_  
(Print or Type)

**Marion Township**

By: \_\_\_\_\_  
(Signature) (Date)

Name: \_\_\_\_\_  
(Print or Type)

Title: \_\_\_\_\_  
(Print or Type)

**Howell Township**

By: \_\_\_\_\_  
(Signature) (Date)

Name: \_\_\_\_\_  
(Print or Type)

Title: \_\_\_\_\_  
(Print or Type)

**Oceola Township**

By: \_\_\_\_\_  
(Signature) (Date)

Name: \_\_\_\_\_  
(Print or Type)

Title: \_\_\_\_\_  
(Print or Type)

**Genoa Township**

By: \_\_\_\_\_  
(Signature) (Date)

Name: \_\_\_\_\_  
(Print or Type)

Title: \_\_\_\_\_  
(Print or Type)

**BOILERPLATE APPROVED AS TO FORM FOR  
COUNTY OF LIVINGSTON:  
COHL, STOKER & TOSKEY, P.C.  
By: PETER A. COHL - 10/1/12**

## APPENDIX A

### DESCRIPTION OF SERVICES:

HOWELL PUBLIC SCHOOLS, MARION TOWNSHIP, HOWELL TOWNSHIP, OCEOLA TOWNSHIP AND GENOA TOWNSHIP HAVE ENTERED INTO A COOPERATIVE AGREEMENT FOR DEDICATED LAW ENFORCEMENT SERVICE FOR THE HOWELL PUBLIC SCHOOLS LOCATED IN THE TOWNSHIPS AND FOR ORDINANCE ENFORCEMENT AND ANY OTHER ADDITIONAL LAW ENFORCEMENT SUPPORT THE TOWNSHIPS MAY REQUEST. THE DEPUTY WILL BE RESPONSIBLE FOR MONITORING TRAFFIC ISSUES, EMERGENCY PLANNING, SCHOOL SAFETY WALK THROUGHS AND OTHER DUTIES AS ASSIGNED. FURTHER IT IS EXPECTED THE DEPUTY WILL VISIT AND CHECK IN WITH EACH SCHOOL AT LEAST DAILY TO ADDRESS CONCERNS.

THIS IS A PARTNERSHIP BETWEEN THE LIVINGSTON COUNTY SHERIFF'S OFFICE, HOWELL PUBLIC SCHOOLS, AND THE TOWNSHIPS OF MARION, HOWELL, OCEOLA AND GENOA. THIS DEPUTY WILL SERVE AS AN EXTENSION OF THE COMMUNITY OUTREACH UNIT.

**Resolution No. 5 – Timberview Private Drive Road Improvement  
Project (Winter 2022)**

**GENOA CHARTER TOWNSHIP**

At a regular meeting of the Township Board of the Genoa Charter Township, Livingston County, Michigan, (the “Township”) held at the Township Hall on June 20, 2022, at 6:30 p.m., there were

PRESENT:

ABSENT:

The following preamble and resolution were offered by        and seconded by        :

**Resolution Confirming Special Assessment Roll**

WHEREAS, the Board of Trustees of the Township has determined to proceed with the Timberview Private Drive Road Improvement Project (Winter 2022) within the Township as described in Exhibit A (the “Project”) and in accordance with Act No. 188, Michigan Public Acts of 1954, as amended;

WHEREAS, the Board of Trustees of the Township has determined to advance the costs of the Project from Township funds and to use special assessments to raise the money necessary to reimburse the Township for the advance of such funds;

WHEREAS, the Township Supervisor has prepared the Special Assessment Roll entitled Special Assessment Roll for Timberview Private Drive Road Improvement Project (Winter 2022) (the “Proposed Roll”) and has filed the Proposed Roll with the Township Manager and Township Clerk;

WHEREAS, the Township Board has scheduled a public hearing on the Proposed Roll and notice of the hearing has been properly provided;

WHEREAS, the Township Board conducted the public hearing on the Proposed Roll on June 20, 2022.

NOW, THEREFORE, BE IT RESOLVED THAT:

1. Roll Confirmed. In accordance with Act No. 188, Michigan Public Acts of 1954, as amended, and the laws of the State of Michigan, the Township Board hereby confirms the Special Assessment Roll for the Timberview Private Drive Road Improvement Project (Winter 2022) (the “Roll”) (Exhibit B).
2. Future Installments - Principal. The Township Board determines that each special assessment may be paid in ten installments. The first installment shall be due July 1, 2022.
3. Future Installments - Interest. All unpaid installments shall bear 2% interest.

4. Warrant. The Township Clerk is hereby directed to attach a warrant (in the form of Exhibit C to this resolution) to the Roll and to deliver such warrant and the Roll to the Township Treasurer, who shall thereupon collect the special assessments in accordance with the terms of this resolution, the Clerk's warrant and the statutes of the State of Michigan.

5. Inconsistent Prior Resolutions. All previously adopted resolutions that are in conflict with this resolution are repealed to the extent of such conflict.

A vote on the foregoing resolution was taken and was as follows:

YES:

NO:

ABSENT:

#### CLERK'S CERTIFICATE

The undersigned, being the duly qualified and acting Clerk of the Township, hereby certifies that (1) the foregoing is a true and complete copy of a resolution duly adopted by the Township Board at the June 20, 2022 meeting of the Township Board, at which meeting a quorum was present and remained throughout; (2) the original thereof is on file in the records in the Township Manager's office and my office; (3) the meeting was conducted, and public notice thereof was given, pursuant to and in full compliance with the Open Meetings Act (Act No. 267, Public Acts of Michigan, 1976, as amended); and (4) minutes of such meeting were kept and will be or have been made available as required thereby.

---

Paulette A. Skolarus, Genoa Charter Township Clerk

**EXHIBIT A**  
**TIMBERVIEW PRIVATE DRIVE ROAD IMPROVEMENT PROJECT (WINTER 2022)**  
**DESCRIPTION OF PROJECT**  
**A TEN-YEAR SPECIAL ASSESSMENT DISTRICT**  
**WITH PROJECTED COSTS AS FOLLOWS:**

- Total cost of the project: \$34,884
- Total parcels: 4
- Homeowners representing over 50% of property have signed petitions
- Total amount per parcel: 3 parcels @ \$11,628.00, 1 parcel @ \$3,066.00

TIMBERVIEW PRIVATE ROAD 2022	
PROJECT COST	\$35,950
ADMIN.	\$2,000
4200 Timberview Dr.	(3,066)
TOTAL	\$34,884
INTEREST %	2
PROPERTIES	3

	YEAR	PAYMENT	TO INTEREST	TO PRINCIPAL	OUTSTANDING
1	2021	\$1,395.36	\$232.56	\$1,162.80	\$10,465.20
2	2022	\$1,372.10	\$209.30	\$1,162.80	\$9,302.40
3	2023	\$1,348.85	\$186.05	\$1,162.80	\$8,139.60
4	2024	\$1,325.59	\$162.79	\$1,162.80	\$6,976.80
5	2025	\$1,302.34	\$139.54	\$1,162.80	\$5,814.00
6	2026	\$1,279.08	\$116.28	\$1,162.80	\$4,651.20
7	2027	\$1,255.82	\$93.02	\$1,162.80	\$3,488.40
8	2028	\$1,232.57	\$69.77	\$1,162.80	\$2,325.60
9	2029	\$1,209.31	\$46.51	\$1,162.80	\$1,162.80
10	2030	\$1,186.06	\$23.26	\$1,162.80	\$0.00
		\$12,907.08	\$1,279.08	\$11,628.00	

4200 TIMBERVIEW*		\$3,066			
	YEAR	PAYMENT	TO INTEREST	TO PRINCIPAL	OUTSTANDING
1	2022	\$367.92	\$61.32	\$306.60	\$2,759.40
2	2023	\$361.79	\$55.19	\$306.60	\$2,452.80
3	2024	\$355.66	\$49.06	\$306.60	\$2,146.20
4	2025	\$349.52	\$42.92	\$306.60	\$1,839.60
5	2026	\$343.39	\$36.79	\$306.60	\$1,533.00
6	2027	\$337.26	\$30.66	\$306.60	\$1,226.40
7	2028	\$331.13	\$24.53	\$306.60	\$919.80
8	2029	\$325.00	\$18.40	\$306.60	\$613.20
9	2030	\$318.86	\$12.26	\$306.60	\$306.60
10	2031	\$312.73	\$6.13	\$306.60	\$24.53
		\$3,403.26	\$337.26	\$3,066.00	

\*25% of Admin. Fee and 25% of approach

The project (the "Project") will consist of:

- Pulverize existing asphalt and haul away for road and private driveway approach
- Enhance existing aggregate base with 21 a crushed concrete
- Fine grade and compact
- Pave with 3 ½ inches compacted bituminous 36A asphalt, roll and compact



# EXHIBIT B SPECIAL ASSESSMENT ROLL

06/01/2022  
11:12 AM

Tentative Special Assessment Listing for GENOA TOWNSHIP

Page: 1/1  
DB: Genoa

Population: Special Assessment District (X051622)

PARCEL	ASSESSMENT NAME	ASSESSMENT	OWNER ADDRESS
4711-33-100-021	X051622, Timberview P	11,628.00p	STABY SCOTT R & AMY 4190 TIMBERVIEW DR
4711-33-100-024	X051622, Timberview P	11,628.00p	GETTY DAVID & CHRISTI 4170 TIMBERVIEW DR
4711-33-100-031	X051622, Timberview P	11,628.00p	BEHRENDT, MARK R. & JANET A. 4180 TIMBERVIEW DR
4711-33-101-016	X051622, Timberview P	3,066.00p	CHAPMAN, JEFFREY & COLLEEN 4200 TIMBERVIEW DR
# OF PARCELS: 4	TOTALS:	37,950.00	

---

**EXHIBIT C**

**Warrant**

---

WARRANT

TO: Treasurer  
Genoa Township  
Livingston County, Michigan

I certify that attached to this Warrant is a true copy of the special assessment roll for the Genoa Township Timberview Private Drive Road Improvement Project (Winter 2022) (the "Roll") confirmed by the Township Board on June 20, 2022 (the "Confirming Resolution"). You are hereby directed to proceed to collect the amounts due on such Roll in accordance with this Warrant, the Confirming Resolution and the statutes of the State of Michigan.

---

Paulette A. Skolarus  
Genoa Charter Township Clerk

# memorandum

**DATE:** June 14, 2022

**TO:** Genoa Township Board of Trustees

**FROM:** Jill Bahm, Partner, Giffels Webster  
 Sri Komaragiri, Senior Planner, Giffels Webster  
 Matt Wojciechowski, Senior Planner, Giffels Webster

**SUBJECT:** Genoa Township Master Plan Update – Releasing the final draft to the adjacent communities

## Introduction

The Planning Commission started the Master Plan update process in 2020, coinciding with updating the parks and recreation plan. Due to pandemic-related meeting restrictions, the Master Plan process slowed down but restarted in mid-2021 with a leadership advance session with all boards and commissions of the Township. Since then, we have worked with the Planning Commission on a regular basis in developing a draft master plan. Some of the key dates of the process are noted below.

Date	Topic/Discussion
June 2020	Consumer Spending Survey
July 27, 2021	Leadership Advance Meeting (All Boards and Commissions)
October 25, 2021	PC discussion about goals and objectives
November 10, 2021	Community Open House (in-person and online)
January 10, 2022	PC discussion of potential updates to the 2012 future land use map and vision for Grand River Corridor development plan
March 28, 2022	PC discussion of the Master Plan's updated future land use descriptions, map and redevelopment site concepts
April 20, 2022	PC discussion of action strategies
May 23, 2022	PC is satisfied with the final working draft document and made a motion to ask the Township Board to release the draft Master Plan to the adjacent communities and agencies as required in the Michigan Planning Enabling Act for the 63-day review period.
NEXT STEPS July/August (depending on date released)	Planning Commission holds Public Hearing on the Master Plan; Planning Commission adopts Master Plan
	Township Board adopts Master Plan
	After adoption, the Planning Commission will assign time frames or priorities to the action items. These time frames are intended as guides and may be adjusted as resources allow or as other issues arise. Generally, short time frames are intended as three years or less; medium-to-long time frames are more than three years.

A copy of the draft plan including the minor changes (see next section) is attached to this memo. Please refer to the Executive Summary of the Master Plan that outlines the process and important Plan highlights.

## Planning Commission Recommendation

Following our May PC meeting, we have made the following updates to the draft Master Plan:

### **CHANGES BASED ON PC MOTION FROM MAY 23, 2022, PC MEETING**

1. Listed surrounding communities under strategy 4.5 under Goal 4
  - a. Partner with county and state road agencies and the surrounding communities (Marion Township, Oceola Township, Brighton Township and Hamburg Township) to monitor the transportation network and coordinate potential road improvements in and around the Township to mitigate traffic congestion from changes in development.
2. Revised Future Land use map for added clarity with the following changes:
  - a. Clarified the maps to minimize confusion over the adjacent communities.
  - b. Removed the label “Nixon Road” at Latson/Crooked Lake
  - c. Added transition area to future land use map
3. Added Strategy 1.10.
  - a. Review zoning ordinance to review list of permitted, special land uses and consider whether there are uses that no longer are appropriate or uses that should be added. Consider if any uses could have specific conditions that may make review/approval clearer and more consistent.
4. Added action strategy 2.8 under Economic Development
  - a. Prioritize development in the GR corridor over other areas of the township.
5. Included I-96/Latson sub area plan pages from 2013 master plan to the Appendix.
6. Added action strategy 2.9
  - a. Prioritize development at the S Latson interchange area before extending south into transition area.
7. Modified the growth area boundary to show limits of the Township boundaries. No other changes to the map.

### **FORMATTING AND WRAP-UP CHANGES**

1. Added table of contents for maps, tables and figures.
2. Corrected references from CD to PD (Planning Department) in the action strategies tables.
3. Added executive summary

# Summary of 2022 Master Plan



## 1 | THE PLACE

The Master Plan starts with a review summary of long-term plans for Livingston County and the communities surrounding Genoa Township. It also identifies common objectives that will assist in identifying collaboration opportunities. It is followed by a summary of existing land use as well as information on local people and the economy. This information provides the background for the following chapters.



## 2 | THE PEOPLE

This section summarizes **public input** collected during the planning process. It also outlines the vision, goals and objectives for the long-term future of the Township. The Township started the update process with a joint meeting with members of all Boards and Commissions, to identify and prioritize the Township's strengths and weaknesses. The public input was gathered in two different phases:

- A **market assessment summary** in late 2020. The market assessment focused on both current and future market conditions for residential and non-residential activity. It included a consumer spending survey. This assessment was updated in 2021.
- An **open house (in-person and online)** was conducted on November 10, 2021. Open house participants were asked about the following: perception of the community, potential locations to identify gateways around the Township, preference of housing styles, recommended non-motorized transportation improvements, and general thoughts on the 2013 adopted Future Land Use map and proposed goals. The 'public input' chapter provides more information and findings.

The participants were in general agreement with the concepts and changes proposed and emphasized the importance of preserving the community's rural character and natural features.

The 2013 Master Plan included a variety of statements that are either objectives or action strategies geared at future improvements. The 2022 Master Plan reframes those statements as goals, objectives and action strategies to help the community better visualize the future and stay focused on the implementation. The **2022 Master Plan goals** are broken into the following categories:

- Housing & neighborhoods
- Economic development
- Natural features
- Transportation
- Public facilities and services

Each goal is further broken down into sub-categories. The chapter includes measures of success to help track the implementation progress.





### 3 | THE PLAN

The plan includes a **Future Land Use Plan Map**, an illustrated guide to how land will be used in the next 10-15 years based on the existing conditions analysis, public input, and goals and objectives. Except for the areas along Grand River corridor, there are no significant changes to future land uses compared to the 2013 Master Plan. Two mixed-use districts are recommended that covers most the Grand River Avenue to allow flexibility of land uses. In these areas, commercial and residential uses, provided with a horizontal or vertical mixed use development pattern, will complement each other, creating “hubs” or “districts” of mutually supportive uses.

The plan carries forward two recommendations from 2013 Master Plan, with an emphasis to prioritize development along the Grand River corridor before moving south of the Township.:

- **I-96/Latson interchange Subarea plan.**
- **Growth area boundary.** No changes proposed; it is recommended to revisit the growth zone boundaries with the next Master Plan update.

The **Housing Plan** focuses on current housing trends and provides general recommendations for alternative housing strategies between single-family homes and apartments to create diverse and quality housing stock in the Township - with a focus on smaller housing types closer to the Grand River Corridor where more compact and walkable development is envisioned. The plan also includes general guidelines and recommendations for non-motorized transportation linkages and sustainability principles.

The **Commercial Corridor Development plan** is divided into three sections:

- The Market Opportunities section will present opportunities for Genoa Township and begin to identify action strategies to capitalize on those opportunities.
- The Grand River corridor redevelopment section outlines a comprehensive vision for the redevelopment of the corridor.
- Three redevelopment sites were identified as currently vacant or under-utilized, given their location, unique features, and size. Concepts for redevelopment suggest key components that are envisioned and approaches to facilitate redevelopment.

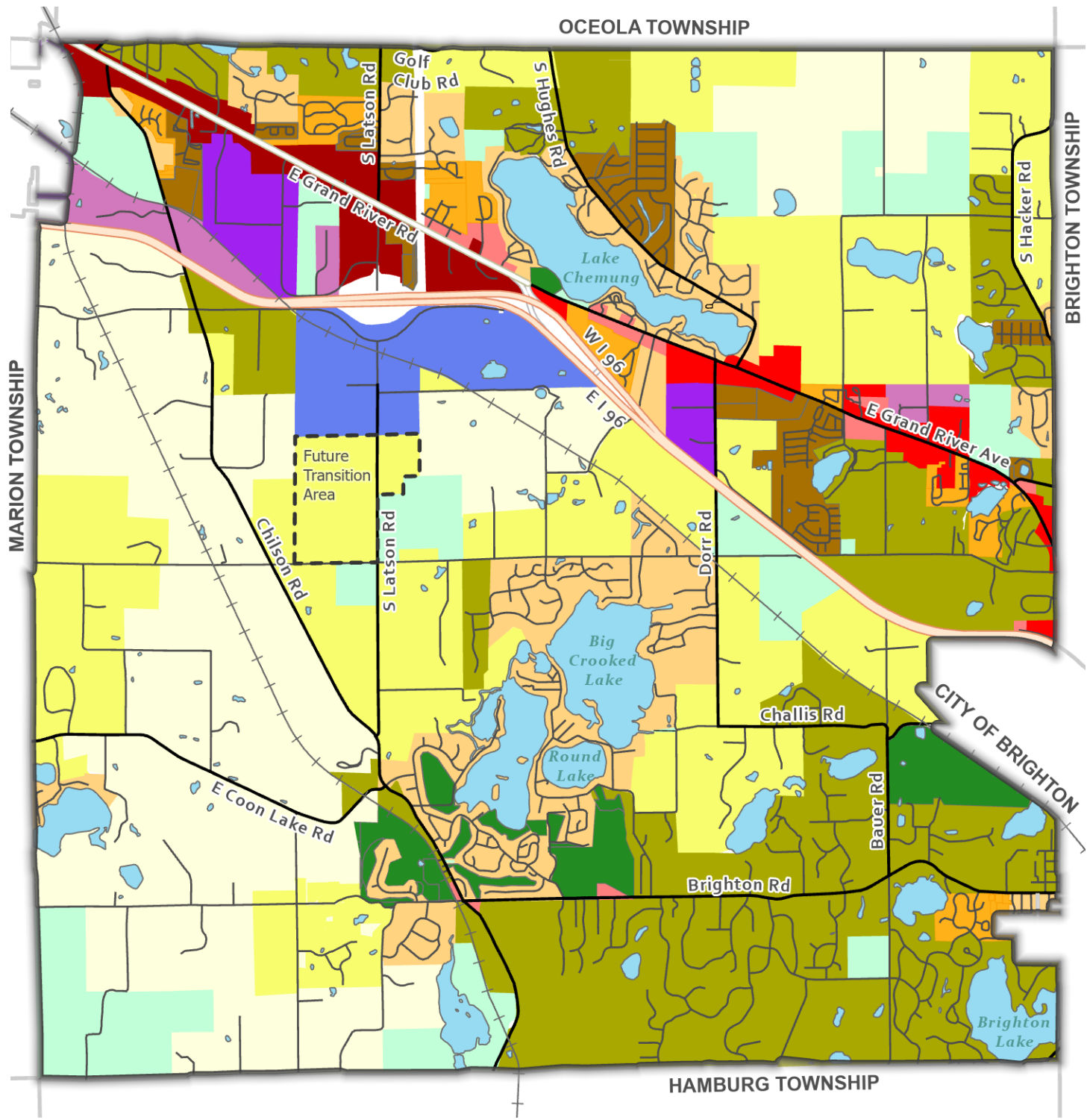


### 4 | THE PROGRAM

This section includes two items

- **Zoning plan**, that works as a road map for changes needed to the Zoning Ordinance that regulates development.
- **Action strategies**, that will help the Township implement the Master Plan’s key recommendations. These strategies are broken into categories that help the Township organize implementation. For example, most of the “zoning strategies” will begin with the Planning Commission. The Township Board and staff will incorporate the “advocacy” items through land use policy, discussions with applicants and interactions with residents.





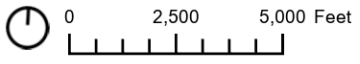
OCEOLA TOWNSHIP

BRIGHTON TOWNSHIP

MARION TOWNSHIP

HAMBURG TOWNSHIP

CITY OF BRIGHTON



The Future Land Use Map, along with the entire Master Plan document, is a policy guide for local land use decisions. The boundaries reflected on the map are general and are not intended to indicate precise size, shape, dimensions or individual parcels. In addition, where the Future Land Use Map and the Zoning Map are not in alignment, it does not necessarily suggest that that rezoning is imminent; rather, the Future Land Use Map sets forward recommendations to achieve long-range planning goals.

- Ag/Country Estate
- Large Lot Rural Res
- Low Density Res
- Small Lot Single Family Res
- Med Density Res
- High Density Res
- Neighborhood Commercial
- Mixed Use - East Grand River
- Mixed Use - West Grand River
- Industrial
- Research and Development
- Interstate Campus
- Public/Institutional/Utilities

Private Recreation

Interchange Transition Area - future land use and the utility service area will be reconsidered in this area concurrent with a proposal for actual campus uses (see Appendix)



# FUTURE LAND USE

## GENOA TOWNSHIP





# Acknowledgments

## Township Board of Trustees

Bill Rogers, Supervisor

Polly Skolarus, Clerk

Robin Hunt, Treasurer

Jean Ledford

Jim Mortensen

Terry Croft

Diana Lowe

## Planning Commission

Chris Grajek, Chairperson

Marianne McCreary, Secretary, Zoning Board of Appeals liaison

Jim Mortensen, Board of Trustees liaison

Jeff Dhaenens

Eric Rauch, Vice-Chairperson

Glynis McBain

Tim Chouinard

## Planning

Kelly VanMarter, AICP

Assistant Township Manager/Community Development Director

Amy Ruthig, Zoning Official



# Table of Contents

Purpose of the Master Plan.....	i
Summary of 2022 Master Plan.....	ii
<b>1  THE PLACE</b>	
A. History and Regional Setting.....	1.1
B. Demographics .....	1.13
C. Economy and Workforce.....	1.19
D. Community Facilities .....	1.27
E. Natural Features.....	1.35
F. Existing Land Use.....	1.51
<b>2  THE PEOPLE</b>	
A. Public Input Summary.....	2.1
B. Market Assessment Summary.....	2.10
C. Goals and Objectives.....	2.14
<b>3  THE PLAN</b>	
A. Future Land Use Plan.....	3.1
B. Housing Plan.....	3.10
C. Commercial Corridor Redevelopment.....	3.23
D. Complete Streets.....	3.41
E. Sustainability & Resiliency.....	3.50
<b>4  THE PROGRAM</b>	
A. Zoning Plan.....	4.1
B. Action Strategies.....	4.4
<b>A  APPENDIX</b>	
A. I-96/Latson Intersection Subarea Plan (2013).....	A.1

# List of Maps and Tables

MAPS		
No.	Title	Page
<b>1   THE PLACE</b>		
1.1	Genoa Township: Location	1.3
1.2	Population Density per Acre	1.16
1.3	Water System	1.31
1.4	Sanitary System	1.32
1.5	National Functional Classification	1.34
1.6	Soils	1.38
1.7	Tree Canopy	1.40
1.8	Wetlands	1.42
1.9	Livingston County Drains	1.44
1.10	Creeksheds in Genoa Township, Huron River Watershed	1.46
1.11	Watershed Basins	1.47
1.12	Impervious Surfaces	1.50
1.13	Existing Land Use	1.53
<b>3   THE PLAN</b>		
3.1	Changes to Future Land Use Map	3.6
3.2	Future Land Use Plan	3.7
3.3	2015 Growth Boundary	3.9
3.4	Age of Housing	3.13
3.5	Housing Density	3.14
3.6	Non-Motorized Facilities	3.49

TABLES		
No.	Title	Page
<b>1   THE PLACE</b>		
1.1	Population by Age	1.15
1.2	Surrounding Communities: Population Growth (2000-2018)	1.17
1.3	Surrounding Communities	1.18
1.4	Household Composition: Surrounding Communities	1.21
1.5	Top Five Industries	1.22
1.6	Distribution of Workforce by Industry Sector (Past, Current and Future)	1.23
1.7	Employment Workforce: Surrounding Communities	1.24
1.8	Income Data: Surrounding Communities	1.24
1.9	Percent Distribution of Existing Land Use Categories	1.54
<b>2   THE PEOPLE</b>		
2.1	Genoa Township Strengths and Weaknesses	2.2
2.2	Residential Strengths & Weaknesses	2.3
2.3	Non-Residential Strengths & Weaknesses	2.3
<b>3   THE PLAN</b>		
3.1	Housing Data: Surrounding Communities	3.12
3.2	Missing Middle Housing- Use Recommendations	3.18
<b>4   THE PROGRAM</b>		
4.1	Zoning Plan	4.3
4.2	Implementation Action Items	4.6
4.3	Implementation Matrix Categories	4.6

# List of Figures

FIGURES		
No.	Title	Page
<b>1   THE PLACE</b>		
1.1	Population Growth Year 2045	1.15
1.2	Population Distribution by Age (2015,2030, 2045)	1.15
1.3	Surrounding Communities: Population, Density, Older/Young Adults	1.17
1.4	Population Distribution by Age and Sex	1.18
1.5	Race Distribution: Surrounding Communities	1.18
1.6	Educational Attainment: Genoa	1.21
1.7	Household Composition: Genoa	1.21
1.8	Percent Bachelor's Degree or Higher: Surrounding Communities	1.21
1.9	Workforce Distribution in Genoa, 2020	1.22
1.10	Forecast: Industry Sector Distribution In 2045	1.23
1.11	Income Trends: Surrounding Communities	1.24
1.12	Mode Of Travel: Genoa	1.25
1.13	Car Ownership: Genoa	1.25
1.14	Travel Times: Genoa	1.25
1.15	Inflow-Outflow Commute Patterns: Genoa	1.26
<b>2   THE PEOPLE</b>		
2.1	Potential Gateways	2.5
2.2	Preferred Gateway Elements	2.5
2.3	Preferred Single Family Housing Styles	2.6
2.4	Preferred Missing Middle Housing Styles	2.6
2.5	Public Input-Grand River Corridor	2.7
2.6	Priority Goals	2.8
2.7	Composite Conservatively Estimated Opportunities	2.13
<b>3   THE PLAN</b>		
3.1	Year Householder Moved: Genoa	3.12
3.2	Year Housing Built: Genoa	3.12
3.3	Housing Types: Genoa	3.12
3.4	Traditional Neighborhood Unit Concept	3.19
3.5	Attainable Housing	3.20
3.6	Estimated Attainable Home Value for Genoa Township	3.21
3.7	Grand River Avenue Corridor - Aerial Image	3.24
3.8	Market Opportunities	3.25
3.9	Composite Conservatively Estimated Opportunities	3.43
3.10	Benefits of Complete Streets	3.44
3.11	All Ages and Abilities	3.45
3.12	Level of Traffic Stress and Type of Ridership	3.46

# Purpose of a Master Plan

This Master Plan Update represents an opportunity to affirm and update the course for new development and redevelopment in Genoa Township as identified and described in the 2013 Master Plan. This Plan contains the community's vision, goals, objectives, and strategies and it is intended to guide future decision-making processes related to Land Use and development, as well as overall community quality of life.

The Master Plan addresses future Land Uses and community development, and other community features in a coordinated fashion. It portrays a clear statement of community goals and objectives, establishes a vision of the future, and includes plans to achieve the vision. If followed carefully, the Master Plan will have a lasting impact on the built and natural environment. Decisions made when the Plan is developed will likely be implemented over short-term, medium-term, and long-term timelines as specified in the Implementation Plan.

The Master Plan is long-range in its view and is intended to guide development in the Township over a period of 10 to 20 years, with reviews and any necessary updates occurring every five years to maintain consistency with the Michigan Planning Enabling Act of 2008. The information and concepts presented in the Master Plan are used to guide local decisions on public and private uses of land and the provision of public facilities and services. A sound Master Plan promotes a Land Use pattern that reflects a community's goals. It establishes long-range general policies in a coordinated and unified manner, which can be continually referred to in decision-making.

Lastly, the Master Plan aims to provide a complete picture of the historic and ongoing Land Use and development-related issues facing Genoa Township so that the reader has a full understanding of what is occurring within the Township

**Frequent review and analysis of the Master Plan will strengthen the relevance and validity of local planning and zoning policies.**

This Master Plan represents a continual effort by the Planning Commission and Township Board. A series of joint public meetings were held by the Board and Planning Commission to discuss the recommendations of the plan. Citizens, landowners and interested members of the general public also attended meetings and were involved with the discussion on the plan. A public hearing to present the draft plan was conducted prior to its adoption by the Township Board.

Genoa Township's last comprehensive Master Plan was completed in 1998, with amendments made in 2000, 2003, 2006, and 2013.

The Township regularly refines its zoning ordinance and subdivision regulations in response to changing conditions, goals, and the law. Thus, this Master Plan represents the latest in a series of documents and ordinances which will help to ensure that the Township maintains its desired community character.



# Summary of 2022 Master Plan



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## History & Regional Setting



# Community Planning History

Historically Genoa Township was characterized by rural agricultural Land Uses, with resort-type development around Lake Chemung and the other 15 lakes in the region. In the early 1970's the rural character began to change. Suburbanites from the Detroit and Ann Arbor areas began looking at Livingston County as a convenient commute between this quiet lifestyle and metro area employment.

Following the residential growth have been supportive commercial and public facilities. The small town atmosphere associated with the cities of Brighton and Howell attracted residents, businesses and small industries to this area. Gradually the area began to establish its own healthy employment base. Providing sanitary sewer service in parts of Genoa Township has contributed to the rapid pace and intensity of its growth. According to Livingston County and Genoa Township figures, most of the recent development in Genoa Township has been residential.



The Township hall sits on property that originally belonged to the Carl Christian Conrad family. It was first purchased from the United States Government in 1830. After the Civil War, there was no one left to farm the land, and it was purchased by John Schoenhals.

John had three daughters and one son. The son was named Oscar. Oscar married Lyle's father's sister Anna. In 1950, Anna bought the brick two-story home on ½ acre just east of the farm on Brighton Road for \$10,000, and Lyle bought the 149-acre farm on Dorr and Crooked Lake for \$15,000. The 2-story brick home on Brighton Road still stands today.

The land was farmed from 1950 until 1962 when the Michigan State Highway came through and condemned eight different parcels in the Township to construct Interstate 96. The State Highway Department gave the homesteaders 30 days to get out of their way. The Herbst family received \$17,500 for their condemned 43.9 acres, which was then cut in half on a 45° angle.

The dairy business was no longer viable because there wasn't enough land close to the barn to take care of the cows; the barn was now on the north side of the expressway and the house was on the south side. That was when Mr. Herbst went into the beef business, purchasing cattle from Mr. Fisher of the General Motors Fisher Body family.

# Regional Setting

Genoa Charter Township is located in southeastern part of Livingston County, Michigan. It is located between the cities of Brighton and Howell. The Grand River Avenue corridor and I-96 Interchange provide connect the Township business district to cities of Brighton and Howell. The Township is centrally and strategically located within 45 miles of Detroit, Lansing, Ann Arbor, Flint and Toledo. The Township has a total area of 36.3 square miles, of which, 34.2 square miles of it is land and 2.1 square miles of it (5.78%) is water.

MAP 1.1. GENOA TOWNSHIP: LOCATION



# Regional Planning

## Livingston County Master Plan 2018

Livingston County Planning Department Staff in collaboration with the Livingston County Planning Commission have drafted this Livingston County Master Plan. All twenty municipalities in Livingston County have a Master Plan and a zoning ordinance. This county-wide plan is intended to guide the content of these local municipal plans. The plan focuses on identifying an issue such as housing, infrastructure, etc. and provides a general path with general goals and highlighting best practices implemented or considered in surrounding communities and beyond.

The plan does not make any recommendations specific to Genoa Township. However, this plan provides extensive references to best management practices and encourages the local communities to duplicate some recommendations in their respective Master Plans. In general, the plan recommends Southeast County to focus on promoting regional public transit options, regional trail connections, and to expand/improve recreational options/facilities. The plan refers to worksheet tools for evaluating stormwater ordinances, evaluating aging in place readiness, and using placemaking as a tool for economic development.

## Livingston County Transit Plan April 2019

The Livingston County Transit plan is prepared for Livingston County and Livingston Essential Transportation Service (LETS). This plan provides a set of short, mid, and long-term action plans and related funding and governance options for implementation over the next 5-10 years. The plan aims to improve the existing LETS transit system and services. LETS is currently headquartered west of Howell, but the bulk of its pick-ups and drop-offs occur further east in the Grand River Avenue / I-96 corridor from Howell to Brighton through Genoa Township.

The plan refers to two action items that could directly impact Genoa Township and necessary improvements should be planned accordingly.

1. The plan foresees a new bus route along Grand River Avenue through Genoa Township with three potential bus stop locations. It is crucial to complete the sidewalk network along Grand River Avenue and to the future stops to create more equitable access to these services.
2. LETS is also considering a second facility near the City of Brighton. This would require the local municipality's cooperation in locating/developing a site and monetary contribution. The new facility would include a fueling station, bathroom, secured parking for LETS vehicles, 10 to 15 parking spots for visitors, and space for dispatch staff. It is estimated to cost 6-7 million with an approximate local share of 56,000 dollars. The location is yet to be determined.

## Livingston County Parks and Open Space Plan 2019-2023

The plan is not intended to plan for the recreation needs of the local units of government in Livingston County. It is projected that the City of Brighton and Handy and Genoa Townships will experience the largest percent growth in population, with over 60% growth. This would result in increased demand for recreational facilities to serve the users.

Genoa Township hosts Fillmore County Park which consists of 198 acres of land in the southeast quadrant of Livingston County, where agriculture is more prominent. It is easily accessed off Grand River Avenue about midway between the cities of Howell and Brighton. The entire park parcel was recently rezoned to Public and Recreational Facilities. There is a Master Plan for a phased development of the park.

One of the goals of this plan is to 'build mutually beneficial relationships with public and private park and recreation providers to help establish Fillmore County Park.' The recommended implementation strategy to achieve this goal is to maintain good communication with Genoa Township to avoid duplication of recreation facilities within the Township.



## Southeast Livingston Greenways

November 2000

Southeast Livingston Greenways (SEL) plan is prepared by Southeast Michigan Greenways and the Livingston County Planning Department’s Greenway and Open Space initiative. The SEL Greenways plan primarily focuses on the development of non-motorized corridors and conservation areas within southeastern County. This plan believes that thoughtful conservation projects will enhance the quality of life without destroying the rural character of communities like Genoa Township. This plan identifies primary and secondary conservation areas, which are primarily existing natural areas that need to be protected and maintained. Non-motorized infrastructure is currently non-existent, and this plan provides a big picture to guide the non-motorized development.

Within Genoa Township, the plan identified a potential major greenway corridor along the railroad that runs north to south to the west of Chilson Road. An on-road non-motorized network is also recommended along Chilson Road that connects the City to the Brighton state recreation area. A network of on-road pathways is recommended that connect to the Chilson Road path. This plan recommends a list of approximately 22 non-motorized segments throughout the Township with a total estimated cost of 3,595,000 dollars. This plan was used as a reference in the Bike paths and Greenway’s chapter of Townships 2013 Master Plan. However, the Township Master Plan proposed major pathways along Nixon Road and Grand River Avenue to benefit from existing built non-motorized infrastructure.

## Grand River Avenue Access Management Study

June 30, 2014

The Grand River Access Management Plan is developed by the corridor communities in Livingston County along with the Michigan Department of Transportation (MDOT), the Livingston County Road Commission (LCRC), and the Southeast Michigan Council of Governments (SEMCOG). This plan provides a cooperative and coordinated approach to access for planned and existing development along the corridor.

The longest segment of the Grand River Avenue corridor extends through Genoa Township. The western half of the corridor in Genoa Township is under the jurisdiction of MDOT and the remainder under the LCRC. The Land Use along the corridor is mainly commercial with some industrial and single-family residential. Genoa Township’s 2013 Master Plan recommends reconstructing Grand River Avenue with a narrow median in the existing right-of-way. The access management plan recommends implementing best management practices such as limiting driveways and minimum driveway spacing requirements at certain locations along Grand River Avenue. The plan also recommends incorporating the Grand River Avenue Access Management Plan into communities’ local Master Plan either in total or by reference to provide a legal basis for requiring access design in the site plan review process. One of the plan goals is to promote continued coordination and communication among SEMCOG, MDOT, Livingston County, local governments, and the public during the development review process.

## Crosstown Trail- Howell Area Non-motorized Trail Study

### 2003

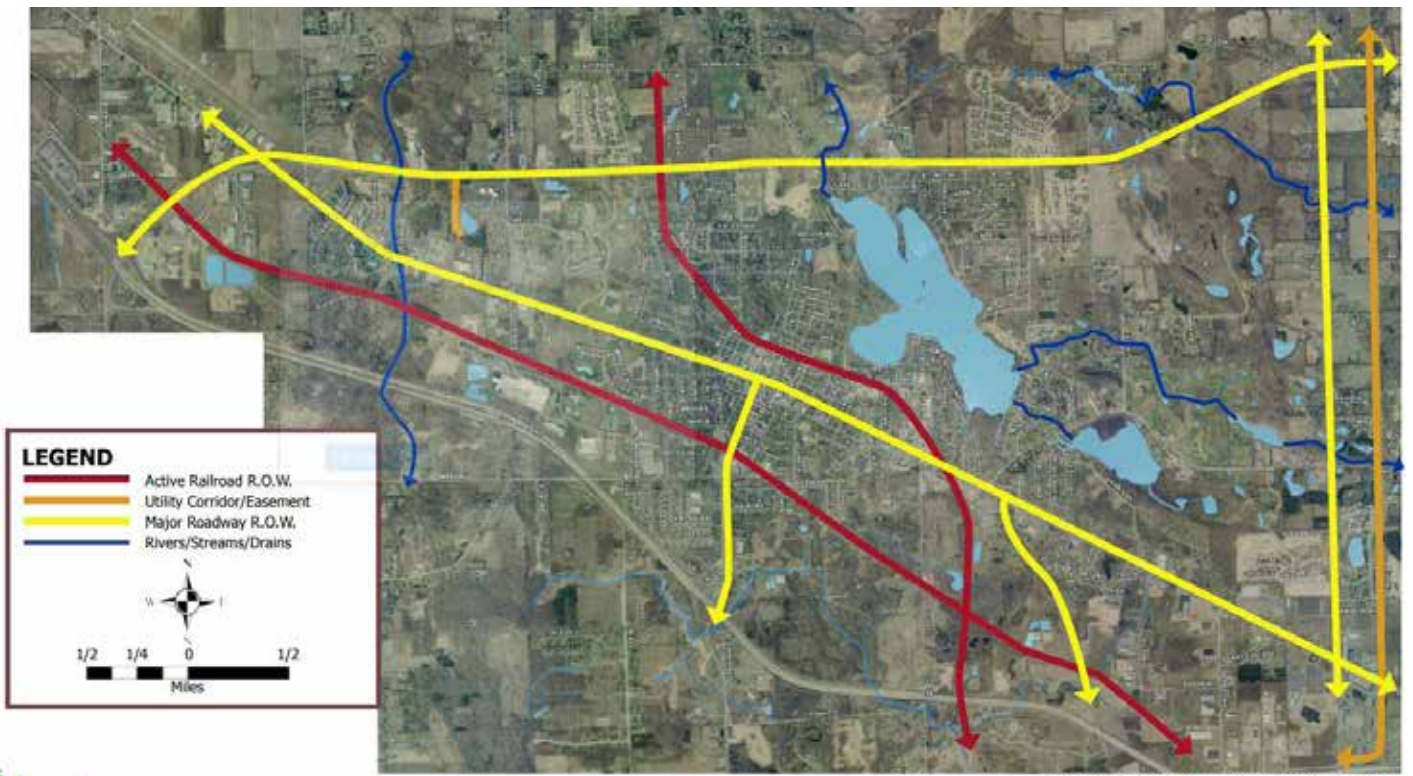
The city of Howell and MDOT developed this plan with a goal to creating a non-motorized transportation system connecting M-59, Latson Road, and I-96 BL (Grand River Avenue). The plan aims to use the Man-made corridors are areas such as road rights-of-way, active railroad rights-of-way, abandoned railroads, and utility corridors/easements to provide for safe non-motorized transportation. Genoa Township was one of the members of the steering committee.

The study area as defined in the plan includes areas immediately adjacent to and contained within the triangle created by M-59, Grand River Avenue, and the Detroit Edison utility corridor just east of Latson road. The area is contained entirely within Livingston County and within portions of the City of Howell, Howell Township, Genoa Township, Oceola Township, and Marion Township.

The eastern boundary of the crosstown trail loop. Referred to as Detroit Edison Corridor Spur is approximately 3.1 miles long that is located entirely within the Township and acts as the main north-south link between M-59 spur and Grand River Avenue Spur. This would be also connecting the Latson Interchange area near Grand River Avenue intersection to City of Howell.



Sketch of Proposed Detroit Edison Corridor Spur, Looking North from Aster Drive



INVENTORY & ANALYSIS: CORRIDORS MAP



# Adjacent Communities: Long Range Planning

## Oceola Township

2007

**Land Uses.** On western border with Genoa, Oceola Township has low/medium density residential and recreational uses planned. Agricultural and large lot residential uses are planned for the eastern half of the border with Genoa Township. This is compatible with the uses proposed along that border in Genoa, which include low-density residential, large lot rural residential, and agriculture/country estate.

**Goals.** Oceola and Genoa Townships are both highly auto-oriented communities. Both have goals to promote growth of residential areas near existing commercial nodes and major roadways and to promote nonmotorized transit through the development of greenways and trails. Both communities are interested in conserving open space and natural features, as well as adding and expanding industrial, technology, and research-based uses where appropriate.

**Transportation/Non-motorized.** Planning for a north to south greenways trail in the ITC corridor that connects with the Cross Town Trail is underway. This hike/bike trail would connect Genoa Township to the southwest corner of Oceola via Grand River.

**Implementation.** On western border with Genoa, Oceola Township has low/medium density residential and recreational uses planned. Agricultural and large lot residential uses are planned for the eastern half of the border with Genoa Township. This is compatible with the uses proposed along that border in Genoa, which include low-density residential, large lot rural residential, and agriculture/country estate.

**Other.** Oceola recognizes that many of their residents go to Genoa to shop

## Brighton Township

2020

**Land Uses.** The northern border with Genoa Township is zoned for single family residential, open space, and has some undeveloped land. The southern part of the border is zoned for institutional and commercial retail uses. This is compatible with Genoa’s future Land Uses in this area, which include large lot rural residential, low density residential, and small lot single family residential uses. General commercial and neighborhood commercial uses along Grand River in Genoa are compatible with Brighton Township’s zoning for the area.

**Goals.** Both Brighton Township and Genoa Township are interested in providing a variety of home types in well-designed neighborhoods with a suitable amount and variety of businesses to offer goods, services, and employment opportunities and a provide a sustainable tax base to meet current and future needs of residents. They are also interested in creating a safe, multi-modal transportation system and are committed to encouraging conservation of natural features, especially water bodies and wetlands. Both communities are committed to being able to provide parks and open space for resident use.

**Transportation/Non-motorized.** This Master Plan does not show any proposed future connections to Genoa Township. It does have a plan in place, including action items and responsible parties, for working towards transportation goals for motorized and nonmotorized transportation.

**Implementation.** Brighton Township mentions need to coordinate with adjacent communities on road improvements and design, watershed and stormwater management including developing a regional watershed plan and shared regulations.

**Other.** Clark Lake Park, located on the border with Genoa Township, proposed permitting public passive recreation access to Clark Lake Conservation Area for hikers and mountain bikers.

## Marion Township

2015 (2021 underway)

**Land Uses.** Marion Township permits low density residential uses along its border with Genoa Township. This is compatible with the uses in Genoa, which are agriculture/country estate and large lot rural residential uses.

**Goals.** Marion Township and Genoa Township both stated goals to balance growth and development with preserving natural features. Both communities also have goals specific to protecting environmentally sensitive areas such as wetlands and water bodies from the impacts of development. They are both committed to recreational opportunities, although Genoa wants to maintain theirs while Marion would like to expand their offerings. Encouraging development only in areas where there is currently adequate infrastructure (Marion) and providing utility improvements where development is best suited and creating a growth boundary (Genoa) are also similar goals. Both communities are also interested in having industrial activities where it is compatible with surrounding uses. Similar to Genoa, Marion Township is also committed to encouraging a variety of residential dwelling types to meet the needs of a changing population. Finally, Marion Township is also interested in providing safe multi-modal transit options for all user, including promotion of a greenway system.

**Transportation/Non-motorized.** This Master Plan does not show any proposed future connections to Genoa Township, nor any action items or responsible parties for working towards transportation goals for motorized and nonmotorized transportation.

**Implementation.** Marion Township's Master Plan has specific goals to "coordinate planning efforts with neighboring communities regarding shared resources such as corridors and commercial, conservation and development areas" as well as cooperating and cost sharing with other municipalities to provide public facilities and services. Another goal is to "encourage uniform or compatible Land Use planning and zoning across municipal boundaries by coordinating efforts with the surrounding Townships".

**Other.** The official Future Land Use Map is a large, display-sized document that is separate from the Master Plan text and maintained by the Township.

## Hamburg Township

2020

**Land Uses.** Hamburg's northern border with Genoa Township is planned to predominately allow public and private recreational facilities, with some conserved open space and low density residential. This is compatible with Genoa's planned uses of agriculture/country estates and low-density residential.

**Goals.** Hamburg Township and Genoa Township are both committed to preserving natural features while allowing development and growth where it is appropriate and conflict the least with surrounding uses. They are both invested in developing a mix of housing types to support all residents.

**Transportation/Non-motorized.** There is no set action plan for achieving the goals in this Master Plan. There are no proposed connections to Genoa Township.

**Implementation.** The Master Plan indicates an interest in working with the surrounding communities to expand mass transportation options in the area, particularly for the aging population.

**Other.** No relevant redevelopment strategies or area plans were discussed in the Master Plan.



## City of Howell

2015 (2021 underway)

**Land Uses.** The southeast border of the Loop Area borders or is close to the border with Genoa, and is zoned for industrial uses. Genoa's border with Howell has a small section of General Commercial uses at the northern-most section, followed by small lot single family residential which may not be compatible with uses in Howell. Further to the south is a small area for public/institutional/utility uses. The southern most part of the shared border is zoned for research and development uses.

**Goals.** Howell and Genoa Township are interested in making part of their industrial areas focused on technology. Both communities have noted an interest and need to protect natural features, particularly bodies of water and wetlands.

**Transportation/Non-motorized.** A truck by-pass, initiated by the City of Howell, is being planned. Additionally a non-motorized path system has been proposed, and a complete streets environment was suggested for the Grand River Area Plan.

**Implementation.** The City is encouraging Genoa Township to continue the Loop Road from Lucy Road eastward to Chilson Road, Grand Oaks Drive, and eventually Latson Road.

**Other.** No overall Land Use plan. Focus on small area plans, identifying opportunities, challenges etc. Two study areas that border Genoa include the Loop Area and East Grand River Area.

## City of Brighton

2020

**Land Uses.** The northern border with Genoa Township is zoned for innovation, and general and light industrial. The southern border with Genoa is a mix of moderate density mixed residential, single, family residential, and community service uses. This is not compatible with Genoa Township's planned residential (low density and large lot rural) and private recreation uses along Brighton's northwestern border. Uses are more compatible at the southern part of the border between the communities, where both communities have a mix of residential uses.

**Goals.** Both the City of Brighton and Genoa Township have goals to ensure that a range of attractive housing choices for all residents is available, and that residential options are accessible to neighborhood goods and services. Both communities emphasize the need to connect residential and commercial areas via motorized and non-motorized transportation, as well as the need for high quality site and building design in order to support neighborhoods, commerce, and employment centers. Goals to preserve open space and protect wetlands and woodlands are also common between the communities.

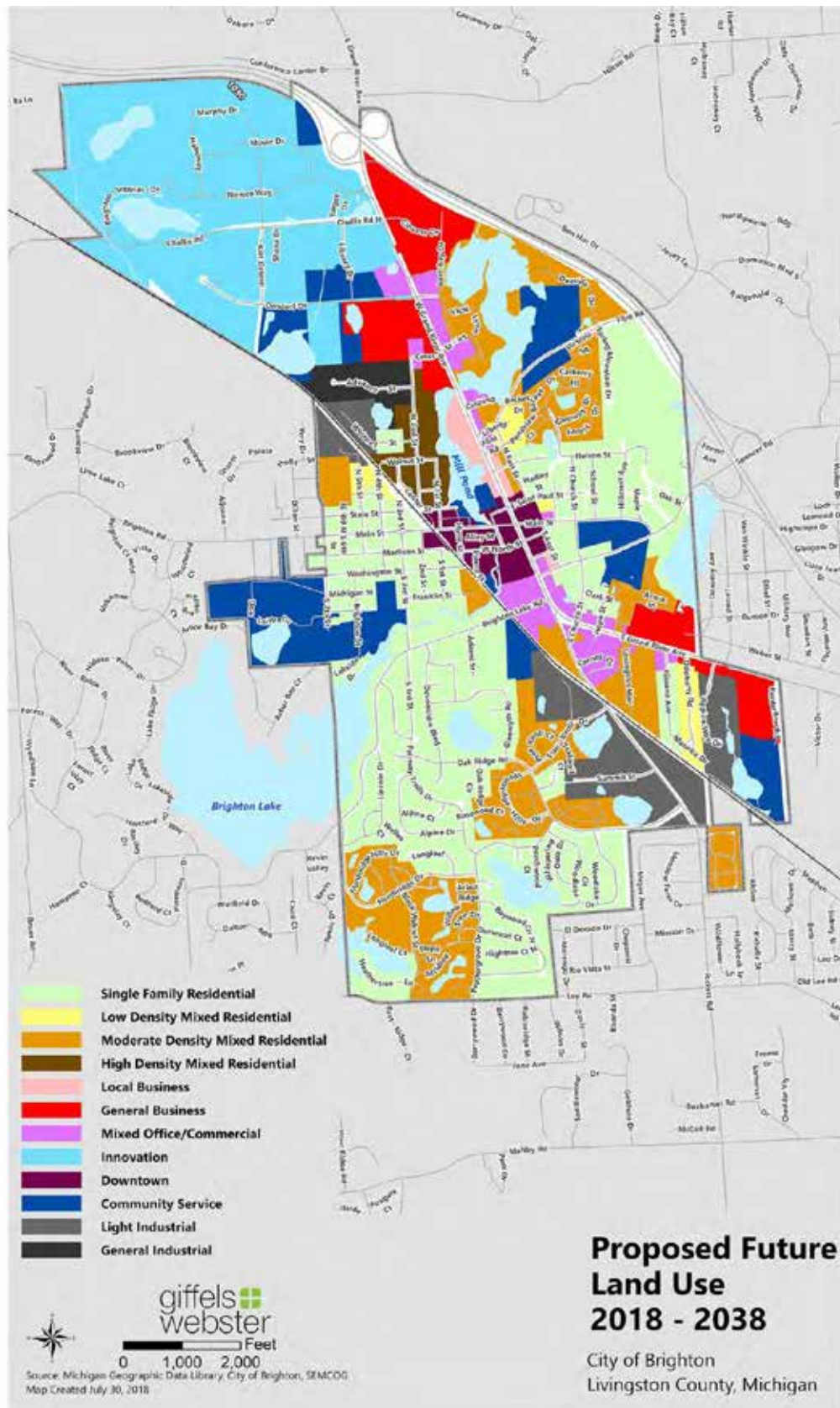
**Transportation/Non-motorized.** Brighton is proposing a bike route and a shared use path that nears the border with Genoa Township in two spots: the northwestern part of the city and just south of Brighton Lake. Their plan has an implementation matrix that outlines the action items under each goal, what plans it connects to, what groups are responsible for implementation, the time frame for completing the action item, potential funding sources, and supporting partners.

**Implementation.** During the visioning exercise for the City of Brighton's Master Plan, it was suggested that surrounding communities such as Genoa help finance additional parking options downtown.

**Other.** The City of Brighton has a specific downtown plan, which is a focus area for development.



Map FLU-1B: FUTURE LAND USE MAP



EXECUTIVE SUMMARY

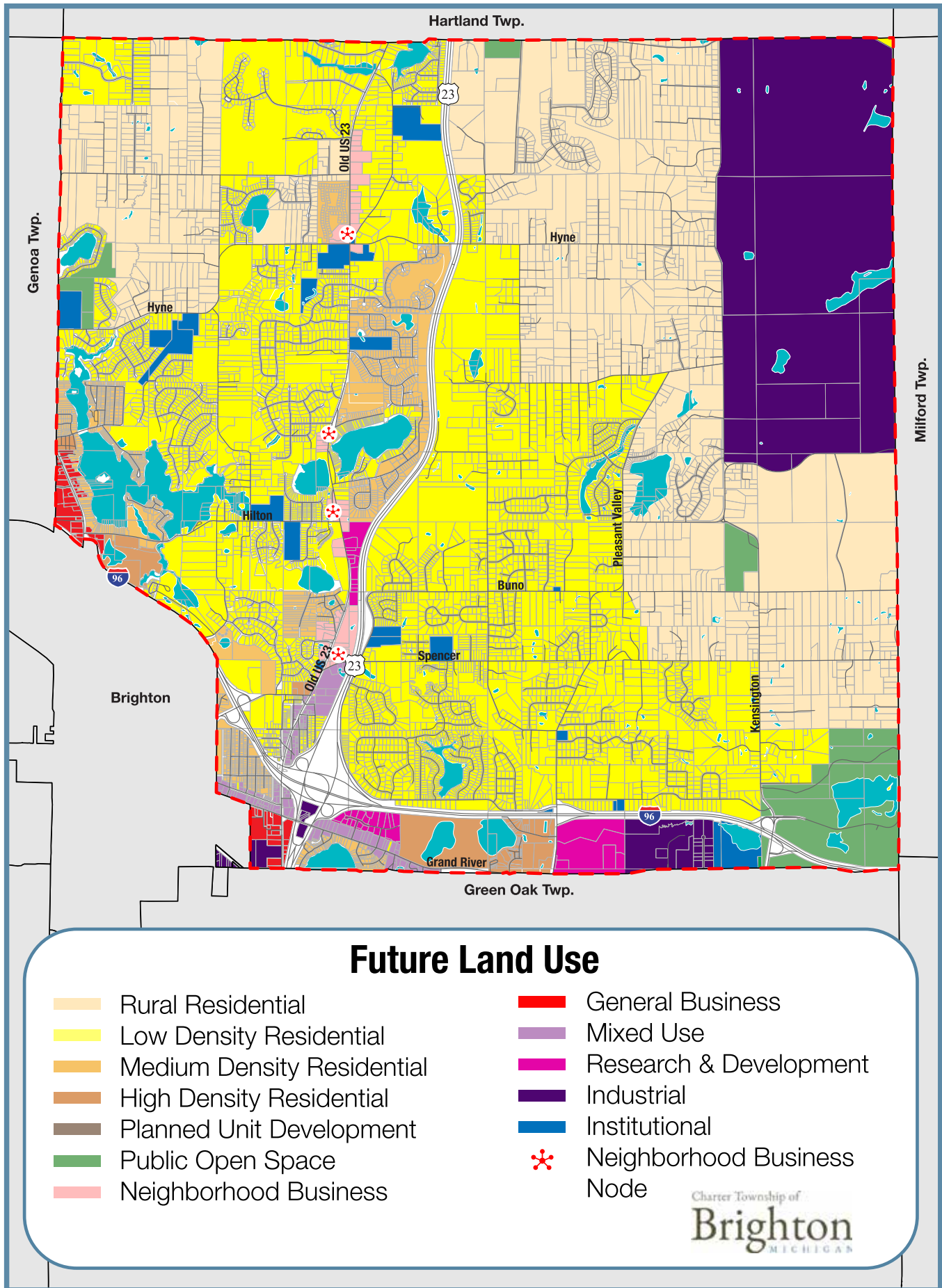
**MASTER LAND USE PLAN**

COMPLETE STREETS PLAN

DOWNTOWN PLAN

RECREATION PLAN

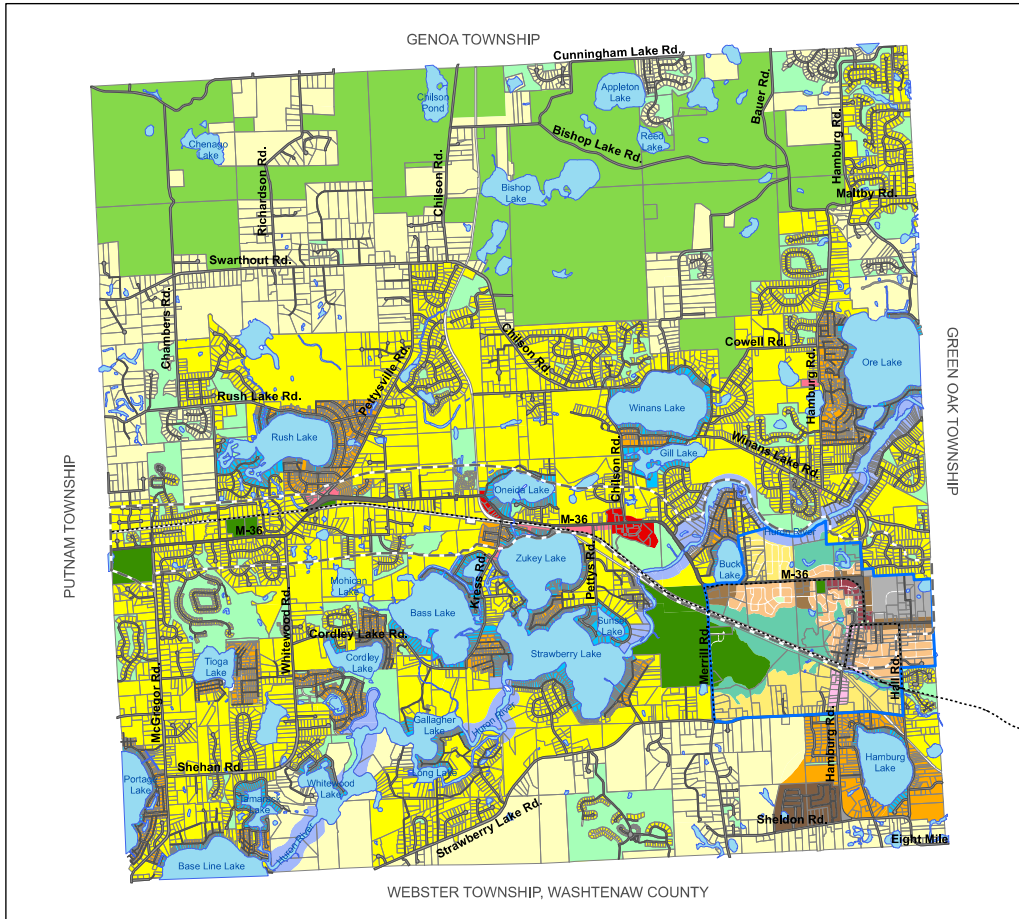
APPENDIX



### Future Land Use

- Rural Residential
- Low Density Residential
- Medium Density Residential
- High Density Residential
- Planned Unit Development
- Public Open Space
- Neighborhood Business
- General Business
- Mixed Use
- Research & Development
- Industrial
- Institutional
- Neighborhood Business Node





## Map 4 Future Land Use

Hamburg Township,  
Livingston County, Michigan

- High Density Residential
- Medium Density Residential
- Low Density Residential
- Multiple Family Residential
- Waterfront Residential
- Natural River Residential
- Neighborhood Commercial
- General Commercial
- Conserved Open Space
- Public and Private Recreational Facilities
- Public/Quasi-Public
- Water Bodies
- M-36 Corridor
- Trail

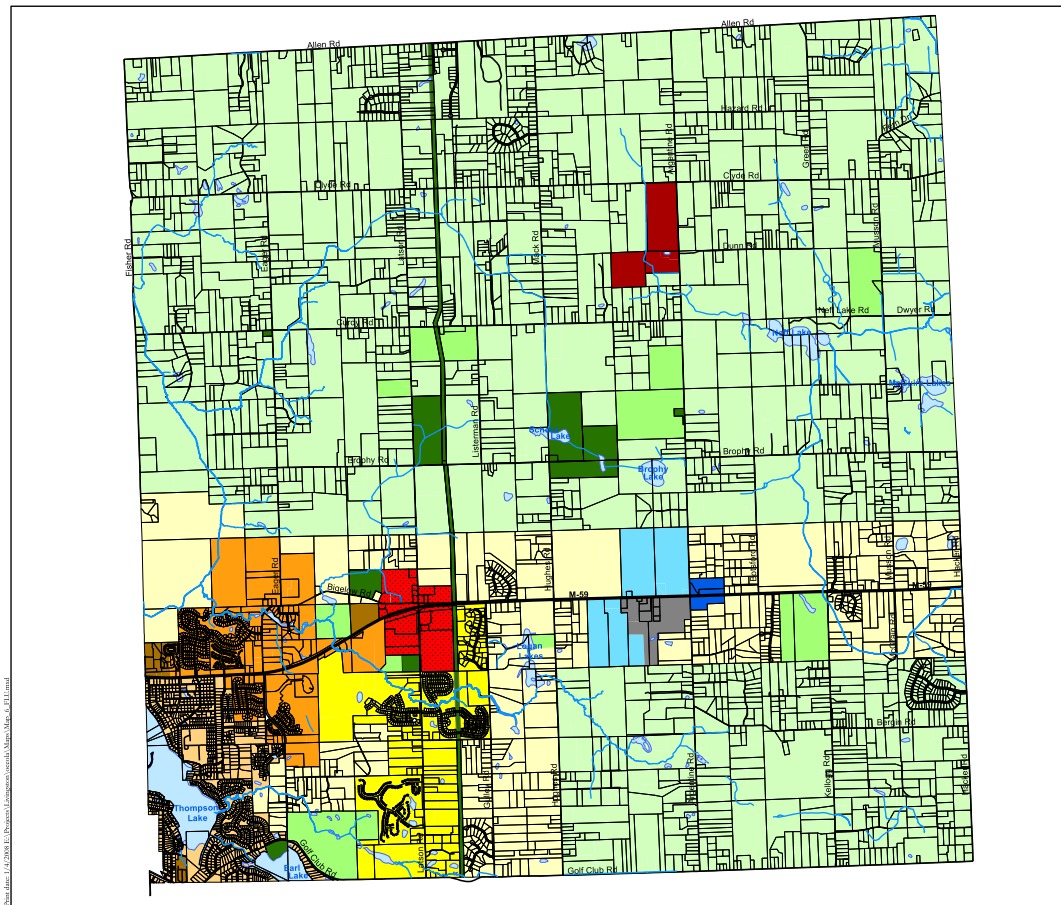
### Village Center Area

- Village Residential-2
- Village Residential-10
- Village Core
- Village Gateway
- Village Historic
- Village Transition
- Industrial
- Conservation District
- Parkland
- Village Boundary



Source: Hamburg Township, 2020

08/2020



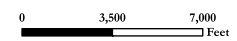
## Map 6 Future Land Use Plan

Oceola Township  
Livingston County, Michigan

- State Highways
- Roads
- Agriculture/Large Lot Residential
- Low Density Residential A
- Low Density Residential B
- Low/Medium Density Residential
- Medium Density Residential
- High Density Residential
- Village Center
- Rural Commercial
- Office
- Mixed Use
- Industrial
- Public/ Semi Public
- Recreation/Open Space
- Water

Base Map Source: Livingston County Road Commission and Livingston County GIS, March 2006.

Data Source: McKenna Associates, Inc., November 2006.

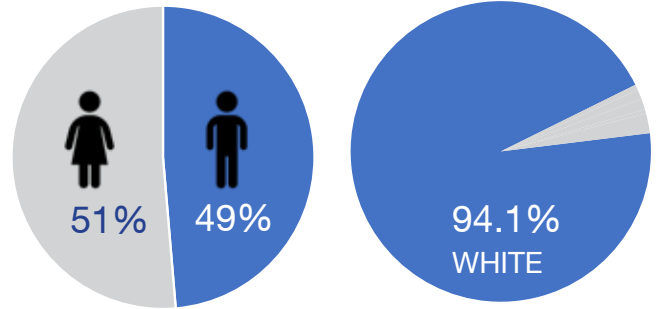


## Demographics

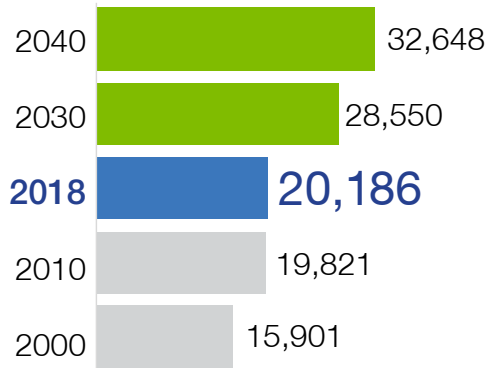
# Demographics

Understanding the demographics of a community is vital to sound policy making and planning. Demographics inform the trends in population, aging, migration, local economies, and much more. Master Plans rely on demographic analysis to better prepare for the issues and demands facing a community in the present and the future. The demographic makeup of a community contains valuable information that effects the types of resources, programming, and physical infrastructure required to meet the needs of residents and businesses.

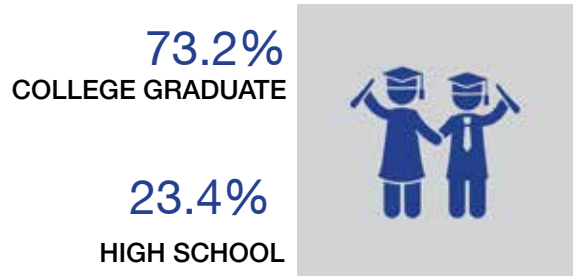
## POPULATION GENDER & RACE



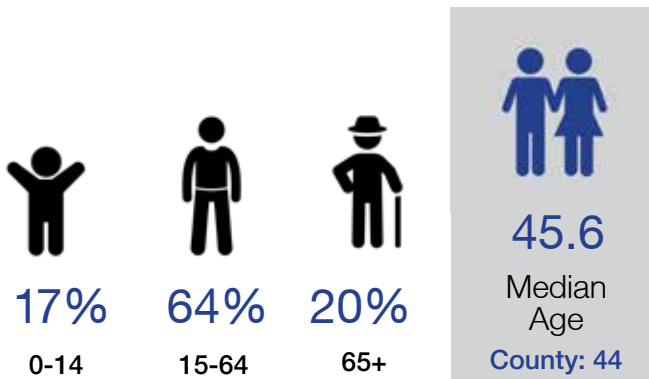
## POPULATION GROWTH



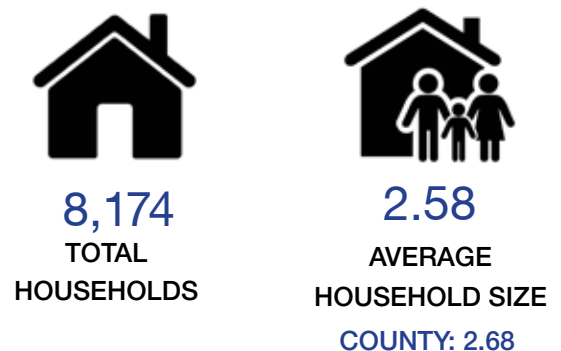
## EDUCATIONAL ATTAINMENT



## POPULATION AGE



## HOUSEHOLDS



Source: Bottom left corner

## Population

Proper planning for the future must consider the composition of the population and consider its likely future composition. Understanding where the Township has been and where it is likely to go is essential to projecting future needs.

### Population

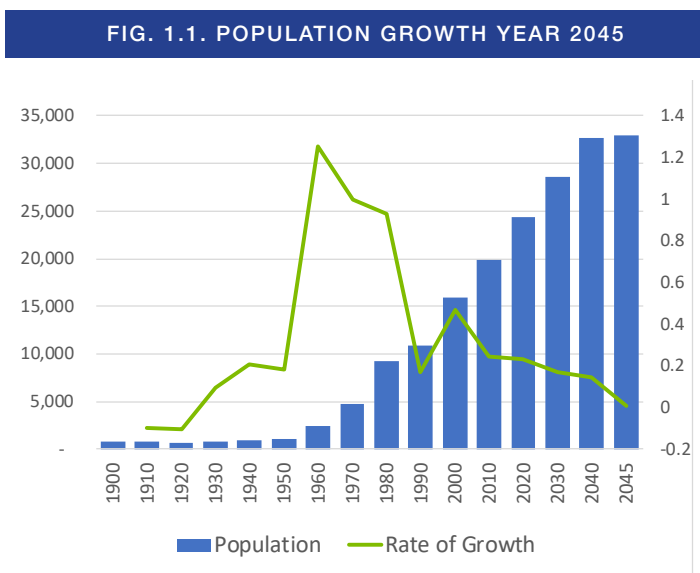
In 2018, the Township has a total population of 20,186. The table below provides a summary of general population characteristics for the Township.

POPULATION FORECAST BY AGE	
Total Population	20,186
Median Age	45.6
Male	9,822 (49%)
Female	10,364 (51%)

Source Text: ACS 2018

### Population Growth Rate

According to SEMCOG forecasts, the total population of the Township is naturally expected to increase by 61 percent by the year 2045. However, as shown in the graph below, the rate of population growth is projected to steadily decline from 2020. This decline usually happens with a higher death rate, lower birth rates, or higher migration rates.

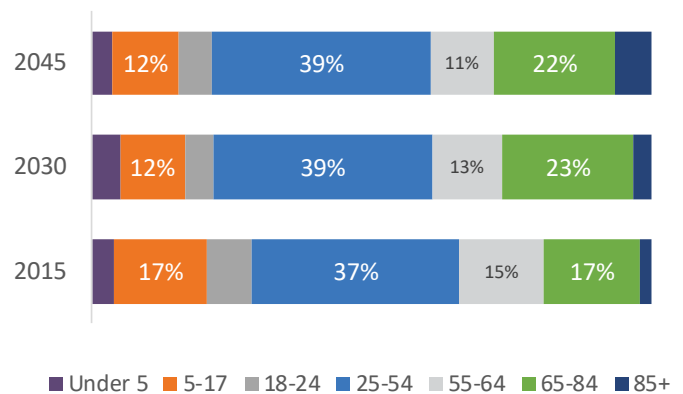


Source Text: SEMCOG Community Profiles

### Population Forecast

The chart and the table provide information about the percent distribution of age groups in 2015 and projected data for the years 2030 and 2040. The percent distribution of different age groups in Genoa is fairly consistent between 2030 and 2040, even though the numbers indicate an alarming rise in the older adult population by 2045 (a 400% increase), The Township’s largest population cohort are adults aged 35-59—people who are typically in the workforce and in their family-forming years (see Chart below). The percent share of older adults to the total population is projected for a 6 percent increase from 2015 to 2045. The Township should consider policies to accommodate the needs of aging adults within the community.

FIG.1.2. POPULATION DISTRIBUTION BY AGE (2015,2030, 2045)

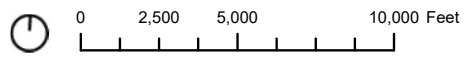
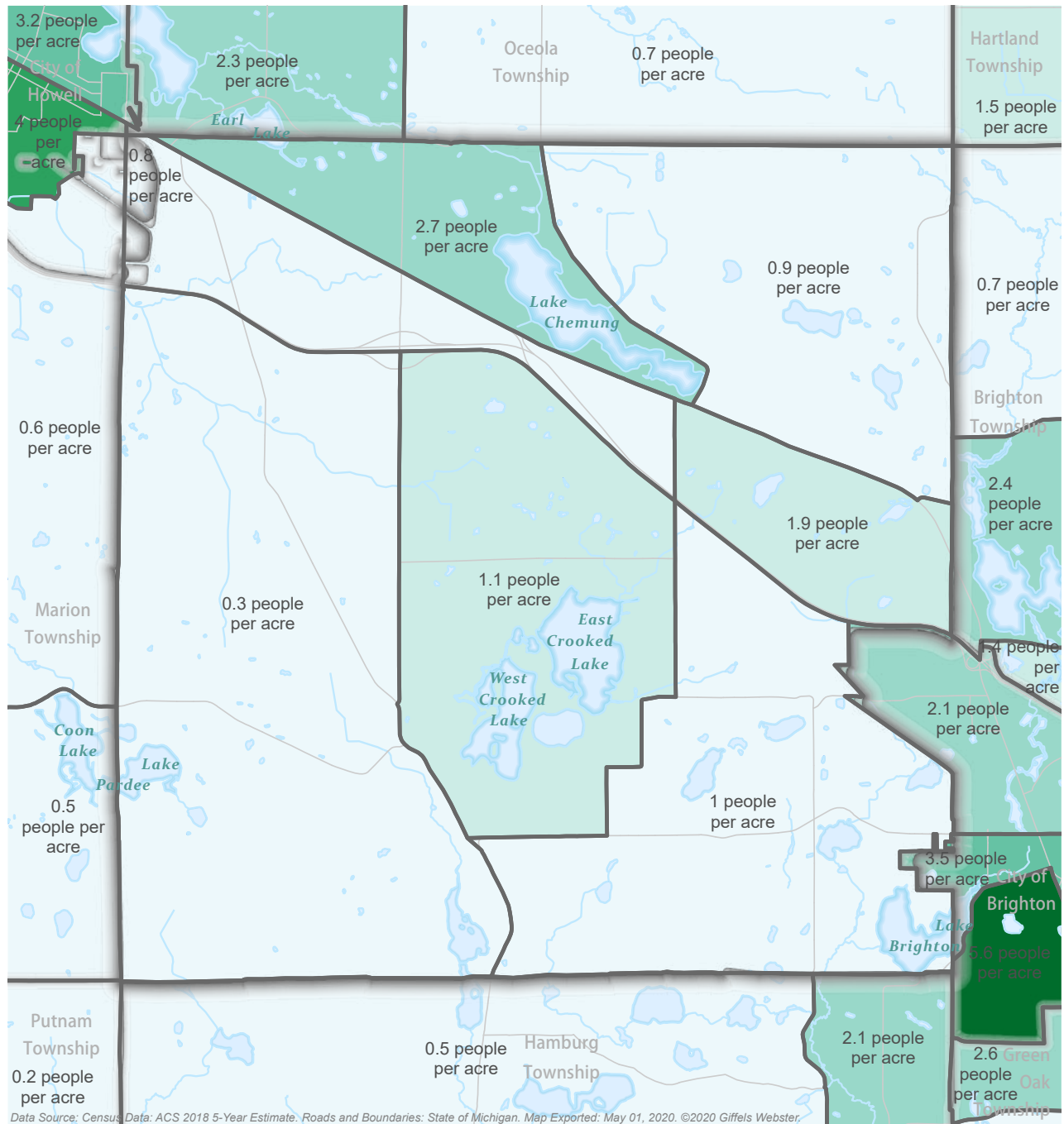


Source: SEMCOG Community Profiles

TABLE 1.1. POPULATION BY AGE				
Age Group	2015	2030	2045	Percent Change 2015 - 45
Under 5	796	1,404	1,188	49.2%
5-17	3,391	3,312	3,867	14.0%
18-24	1,646	1,470	1,993	21.1%
25-54	7,571	11,149	12,859	69.8%
55-64	3,091	3,609	3,735	20.8%
65-84	3,499	6,692	7,146	104.2%
85+	422	914	2,119	402.1%
<b>Total</b>	<b>20,416</b>	<b>28,550</b>	<b>32,907</b>	<b>61.2%</b>

Source Text: SEMCOG Community Profiles

MAP 1.2. POPULATION DENSITY PER ACRE



**Population Density Per Acre**  
GENOA TOWNSHIP

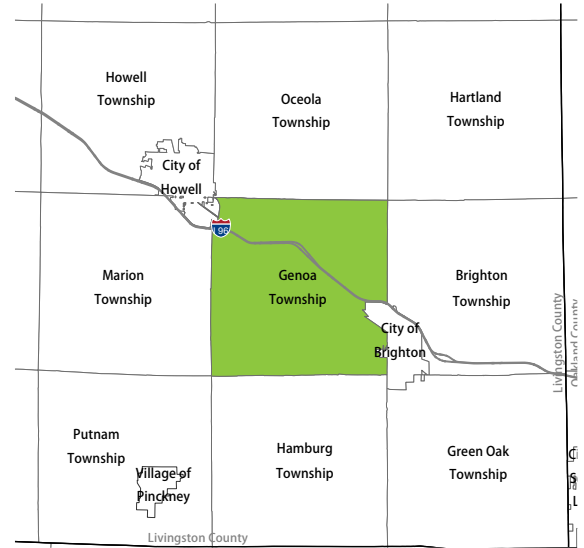
### Surrounding Communities

The demographic composition of the Genoa Township incorporates data about race, age, housing, population trends, income, education, and employment. This section compares the Township’s demographic characteristics to neighboring communities that share a border with Genoa.

### Persons per Acre

The cities of Howell and Brighton have higher population density (persons/acre) in the County which is expected for an urban community. Genoa maintains a similar density compared to surrounding Townships. See the graph below for more details.

TABLE 1.2. SURROUNDING COMMUNITIES: POPULATION GROWTH (2000-2018)				
	Population 2018	Population 2010	Population 2000	Population Change (2000-2018)
Oceola Twp	13,991	11,936	8,362	67%
Howell	9,597	6,702	6,702	43%
<b>Genoa Twp</b>	<b>20,186</b>	<b>19,821</b>	<b>15,866</b>	<b>27%</b>
Livingston County	188,482	180,957	156,951	20%
Brighton	7,626	7,444	6,730	13%
Marion Twp	10,851	9,996	9,996	9%
Brighton Twp	18,570	17,791	17,673	5%
Hamburg Twp	21,602	21,165	21,165	2%



Source: SEMCOG Community Profiles

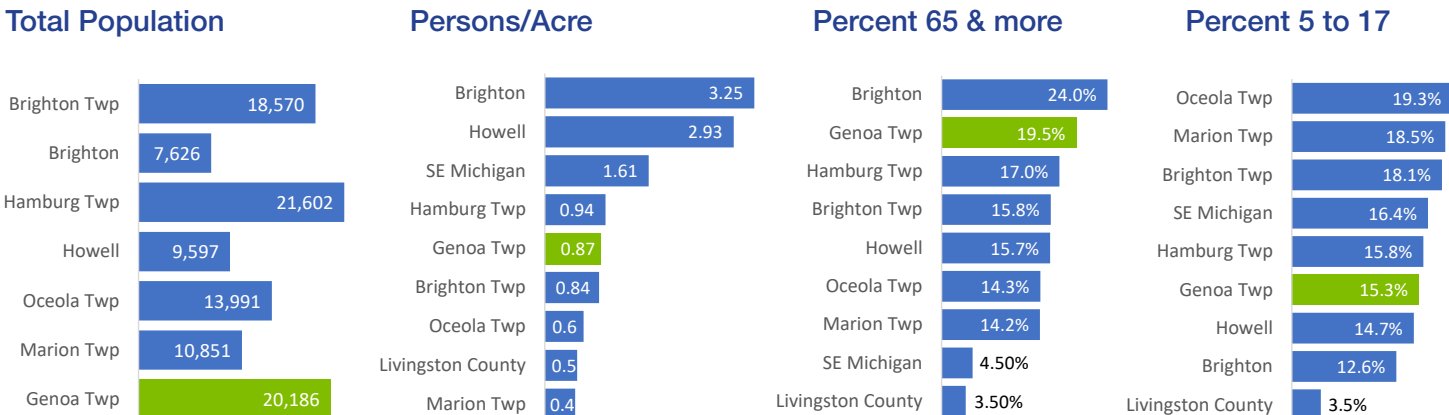
### Population Growth

Many communities surrounding Genoa have been experiencing an increase in population since 2000. Oceola Township and the City of Howell have experienced the highest population growth between 2000 and 2018 followed by Genoa Township. However, Genoa Township has the largest population in the County after Hamburg Township.

### Older and young adult population

Compared to surrounding communities, Genoa Township has a higher percentage of the aging population over 65 years and a comparable percentage of the population of people between ages 5 to 16. This distribution essentially focuses on dependent people who are unlikely the primary breadwinners. This indicates that there is a larger share of people dependent on the working-age group on the Township.

FIG. 1.3. SURROUNDING COMMUNITIES: POPULATION, DENSITY, OLDER/YOUNG ADULTS



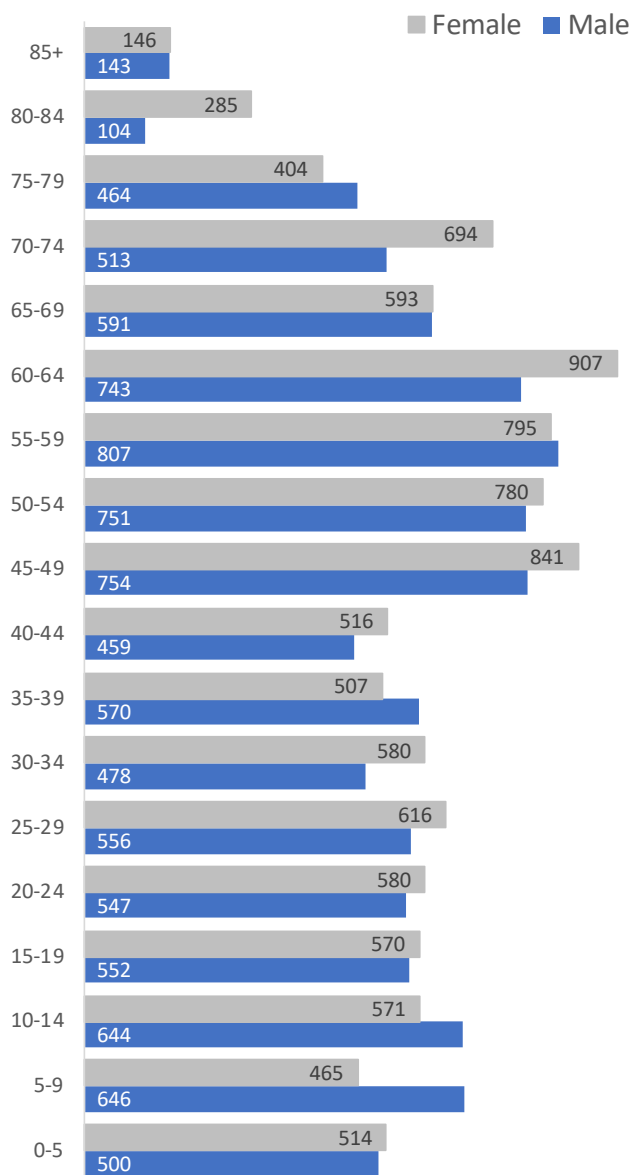
Source: SEMCOG Community Profiles



### Population Cohort Analysis

It is essential to understand the population’s composition by age and sex to have a proper insight into demographic conditions and socio-economic trends. Genoa has an almost equal distribution of male and female population on average. However, the ratio varies with age (see chart to the left). As they age, the ratio of females to males is increasing.

**FIG. 1.4. POPULATION DISTRIBUTION BY AGE AND SEX**



Source: ACS 2018

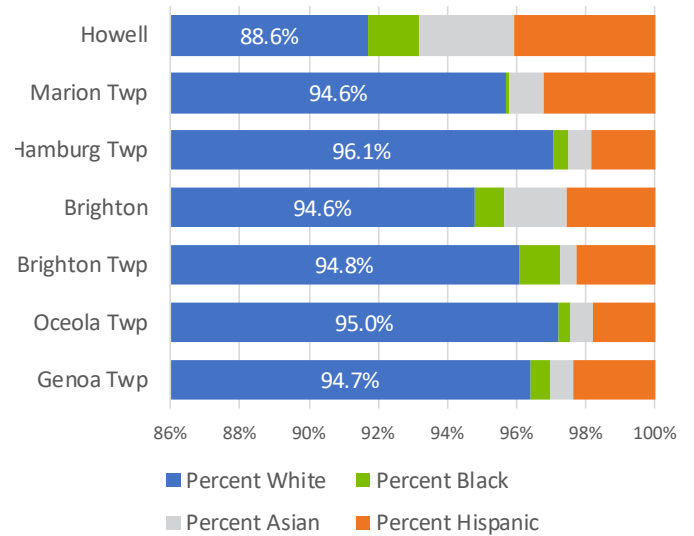
### Race

The racial composition in Genoa is predominantly white at 94.7%, Genoa’s racial distribution is consistent with most of the surrounding communities except for the more diverse city of Howell.



94.4%  
White

**FIG. 1.5. RACE DISTRIBUTION: SURROUNDING COMMUNITIES**



**TABLE. 1.3. SURROUNDING COMMUNITIES**

Race and Hispanic Origin	Census 2010	Percent of Population 2010	ACS 2018	Percent of Population 2018	Percentage Point Change 2010-2018
Non-Hispanic	19,398	97.9%	19,716	97.7%	-0.2%
White	18,758	94.6%	19,120	94.7%	0.1%
Black	121	0.6%	114	0.6%	0.0%
Asian	203	1.0%	132	0.7%	-0.4%
Multi-Racial	231	1.2%	255	1.3%	0.1%
Other	85	0.4%	95	0.5%	0.0%
Hispanic	423	2.1%	470	2.3%	0.2%
Total	19,821	100.0%	20,186	100%	0.0%

Source: SEMCOG Community Explorer

## Economy & Workforce

# Economy & Workforce

Identifying trends in employment can help a community project future need for land for certain use categories and assess potential opportunities for economic development. This section provides a brief overview of the Township's existing economic base. This plan also includes a market study that looks deeply at commercial demand and employment

## WORKFORCE

### TOP 5 INDUSTRIES (2020)

- 17% RETAIL
- 13% LEISURE&HOSPITALITY
- 13% INFORMATION & FINANCIAL ACTIVITIES
- 10% HEALTHCARE
- 9% CONSTRUCTION

## INCOME



**\$81,364**  
**MEDIAN HOUSEHOLD INCOME**  
 COUNTY: \$80,897



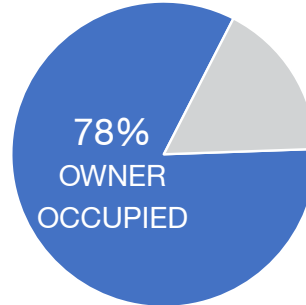
**\$45,356**  
**PER CAPITA INCOME**  
 COUNTY: \$38,399



**5.5%**  
**POVERTY RATE**  
 COUNTY: 5.6%

Source Text: Bottom left corner

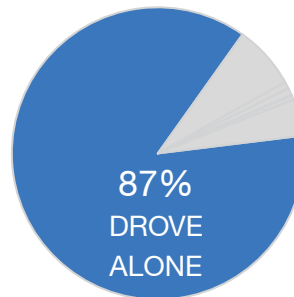
## HOUSING



**\$259,800**  
**MEDIAN HOUSEHOLD VALUE**  
 COUNTY: \$233,400

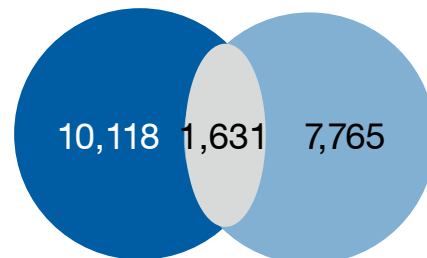
**\$1,101**  
**MEDIAN GROSS RENT**  
 COUNTY: \$1,011

## TRANSPORTATION



**29.3**  
**AVERAGE COMMUTE TIME IN MINUTES**  
 COUNTY: 32.5

## INFLOW-OUTFLOW

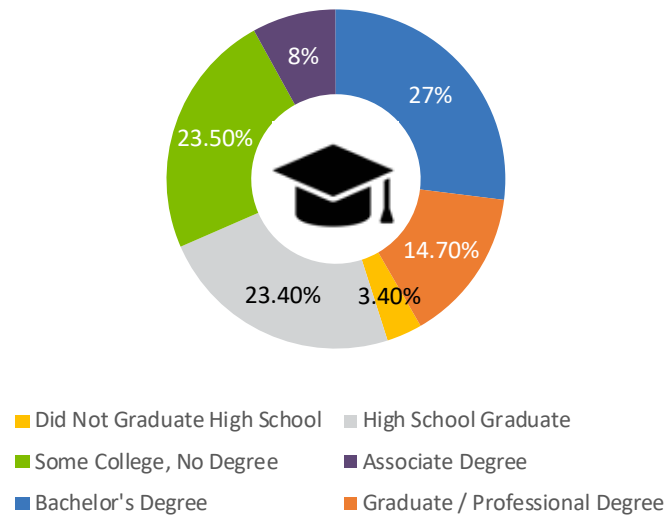


**LIVING IN GENOA EMPLOYED OUTSIDE**      **EMPLOYED IN GENOA LIVING OUTSIDE**

## Educational Attainment

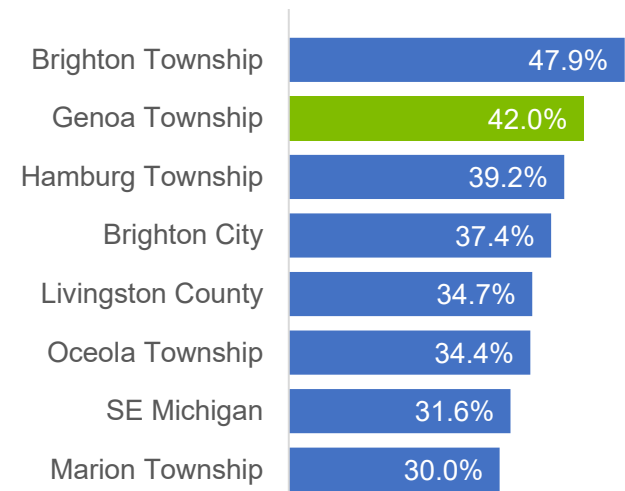
The highest levels of educational attainment result in a higher skill set and ultimately contribute to the local job growth. In general, about 73% of residents older than 25 years have some kind of associate or a higher degree past high school. Genoa has a higher percentage of bachelor degrees or higher graduates among the surrounding communities after Brighton Township.

**FIG 1.6. EDUCATIONAL ATTAINMENT: GENOA**



Source: SEMCOG Community Profiles

**FIG. 1.8. PERCENT BACHELORS DEGREE OR HIGHER: SURROUNDING COMMUNITIES**

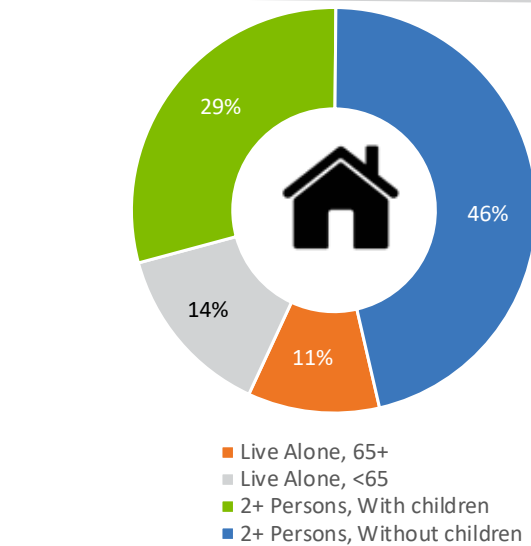


Source: SEMCOG Community Explorer

## Households

In 2018, there are a total of 8,174 households in Genoa. A majority of the households are younger couples with no children (46%). A quarter of the households are families with children. The remaining quarter is split between younger and older adults who live alone. The average household size is consistent with surrounding suburban communities, between two and three persons per household.

**FIG. 1.7. HOUSEHOLD COMPOSITION: GENOA**  
TOTAL HOUSEHOLDS: 8,174



Source: SEMCOG Community Profiles

**TABLE 1.4. HOUSEHOLD COMPOSITION: SURROUNDING COMMUNITIES**

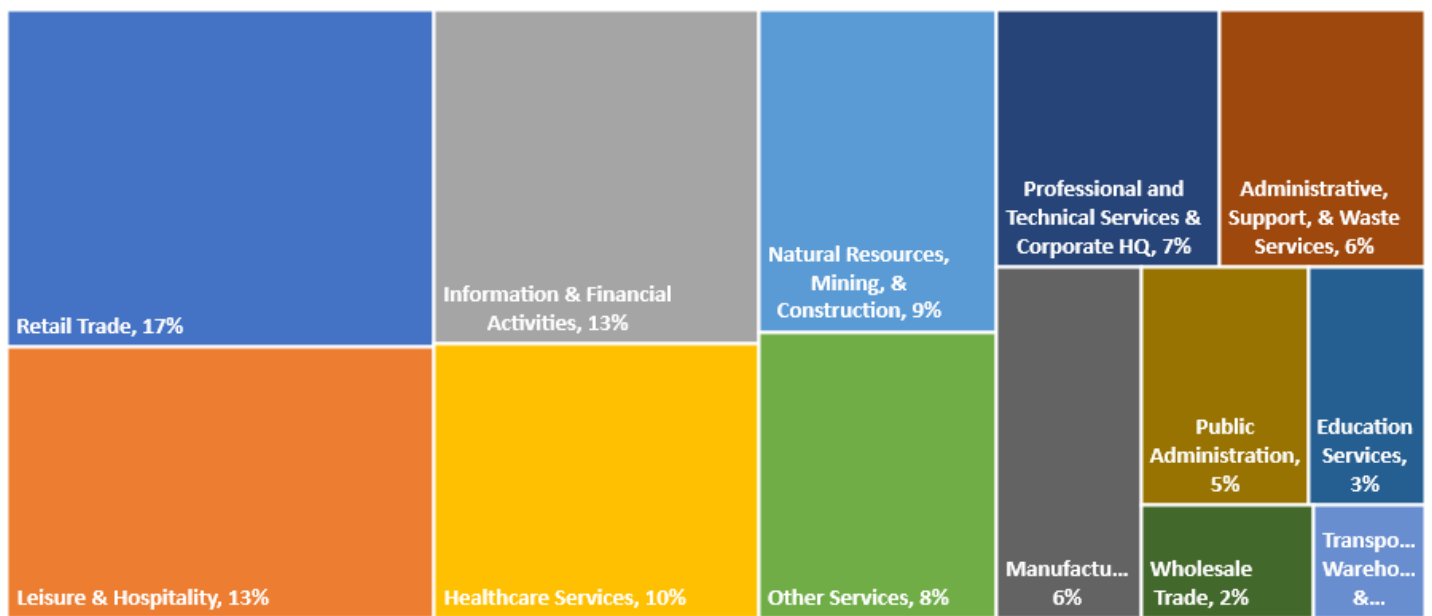
	Average Household Size	Percent Households with Seniors	Percent Households with Children	Percent Households with Internet Access
Livingston	2.63	28.9%	31.0%	85.7%
<b>Genoa Twp</b>	<b>2.47</b>	<b>33.1%</b>	<b>29.3%</b>	<b>90.8%</b>
Oceola Twp	2.87	26.5%	37.8%	95.6%
Brighton Twp	2.79	27.9%	34.6%	94.8%
Brighton City	2.03	37.0%	19.3%	87.2%
Hamburg	2.58	30.9%	30.3%	93.7%
Marion Twp	2.89	27.9%	31.8%	90.8%
Howell City	2.12	24.9%	27.6%	81.1%

Source: SEMCOG Community Explorer

## Workforce

In 2020, Genoa Township produced a total of 12,202 jobs. The chart below shows the distribution of employment sectors for the Township. There is no dominant sector that contributes majorly to the local economy, however, the retail and hospitality sectors make up 35% of the total workforce.

FIG. 1.9. WORKFORCE DISTRIBUTION IN GENOA, 2020



Source: SEMCOG Community Profiles

### 2040 SEMCOG Job Forecast by Sector

The percent contribution of each of these industries to the total employment within the Township is relatively identical since 2015 and is projected to remain the same with minimal variation in 2045. Refer to the table below for more details.

Overall, there is a slight growth in total number of jobs are projected from 2015 to 2045 by 12 percent. Manufacturing jobs are projected to decrease by 28% by 2045. Except for retail and manufacturing, the remaining three of the top five industries are projected to increase over 20% by 2045. Refer to the table and the chart in the next page for more details.

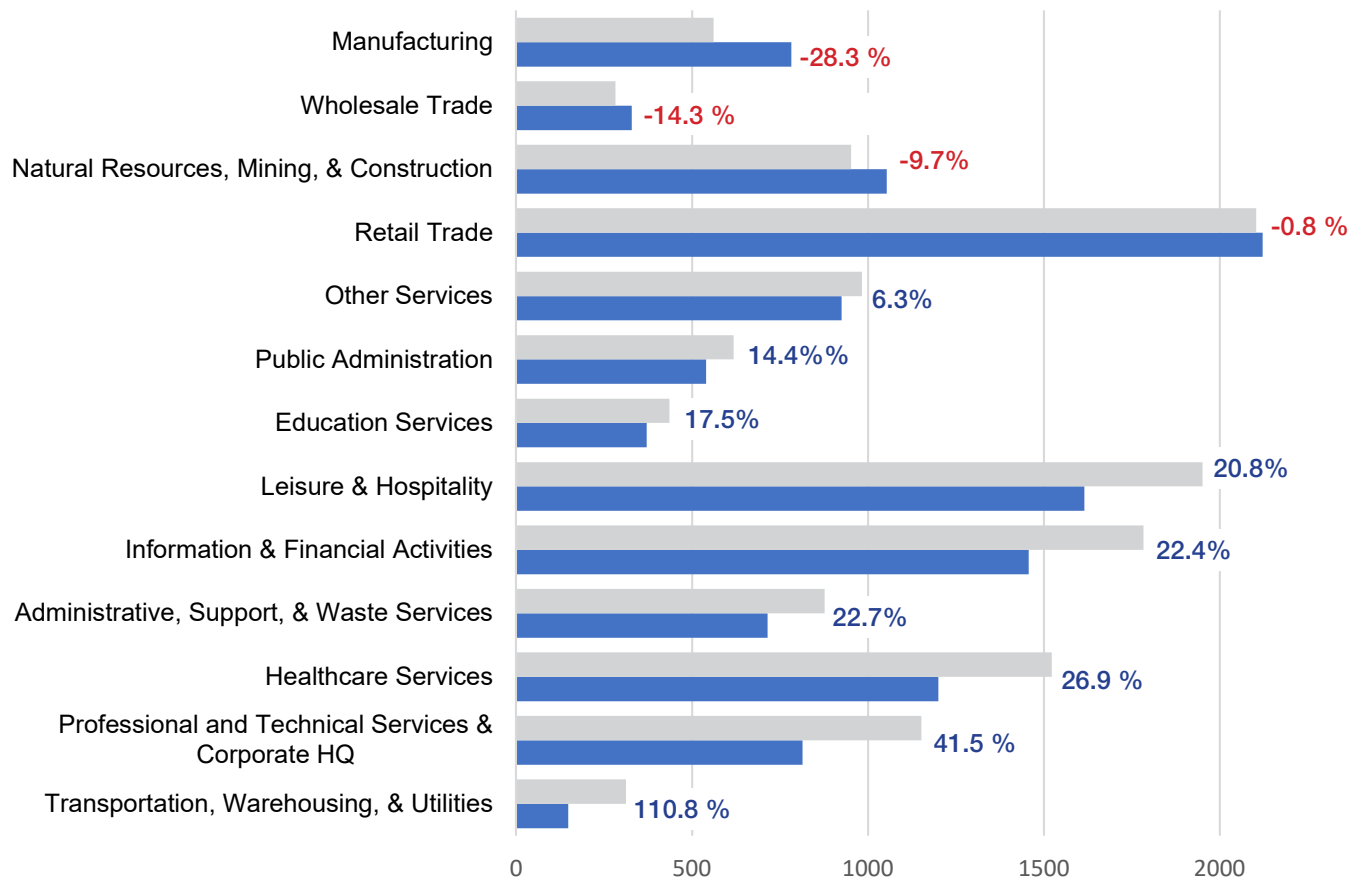
TABLE 1.5. TOP FIVE INDUSTRIES

Industry Sectors	% Contribution to Township workforce (2020)	Pct Change 2015-2045
Retail	17%	-0.8%
Leisure and Hospitality	13%	20.8%
Information & Financial Activities	13%	22.4%
Healthcare	10%	26.9%
Construction	9%	-9.7%

**TABLE 1.6. DISTRIBUTION OF WORKFORCE BY INDUSTRY SECTOR (PAST, CURRENT AND FUTURE)**

Industry Sector	2015	2020	2030	2040	2045	Change 2015-2045	Pct Change 2015-2045
Transportation, Warehousing, & Utilities	148	179	207	283	312	164	110.8%
Professional and Technical Services & Corporate HQ	814	808	932	1096	1152	338	41.5%
Healthcare Services	1,200	1261	1282	1455	1523	323	26.9%
Administrative, Support, & Waste Services	715	746	809	869	877	162	22.7%
Information & Financial Activities	1,457	1531	1608	1754	1783	326	22.4%
Leisure & Hospitality	1,615	1642	1772	1888	1951	336	20.8%
Education Services	371	393	406	424	436	65	17.5%
Public Administration	540	562	589	614	618	78	14.4%
Other Services	925	967	996	1000	983	58	6.3%
Retail Trade	2122	2032	1928	2177	2104	-18	-0.8%
Natural Resources, Mining, & Construction	1054	1086	993	963	952	-102	-9.7%
Wholesale Trade	329	276	264	280	282	-47	-14.3%
Manufacturing	782	719	621	584	561	-221	-28.3%
<b>Total Employment Numbers</b>	<b>12072</b>	<b>12202</b>	<b>12407</b>	<b>13387</b>	<b>13534</b>	<b>1,462</b>	<b>12.10%</b>

**FIG.1.10. FORECAST: INDUSTRY SECTOR DISTRIBUTION IN 2045**



Source: SEMCOG 2045 Regional Development Forecast

■ 2045 ■ 2015 % Change 2015-45

## Workforce

The total number of jobs in the Township makes up 14% of the total jobs in the County. The Township’s unemployment rate is higher than the County and the surrounding communities. However, the labor force participation rate at 66% is consistent with others and higher than the national average of 62.8%. A higher labor force participation rate and a lower unemployment rate indicate a successful local job market. These rates are impacted by demographic and economic trends. For example, adults aged 25-64, people who are typically in the workforce make up to 53% of the total Township population which explains the 66% labor participation rate. The percent share of this age group is projected to reduce to 50% in 2045.

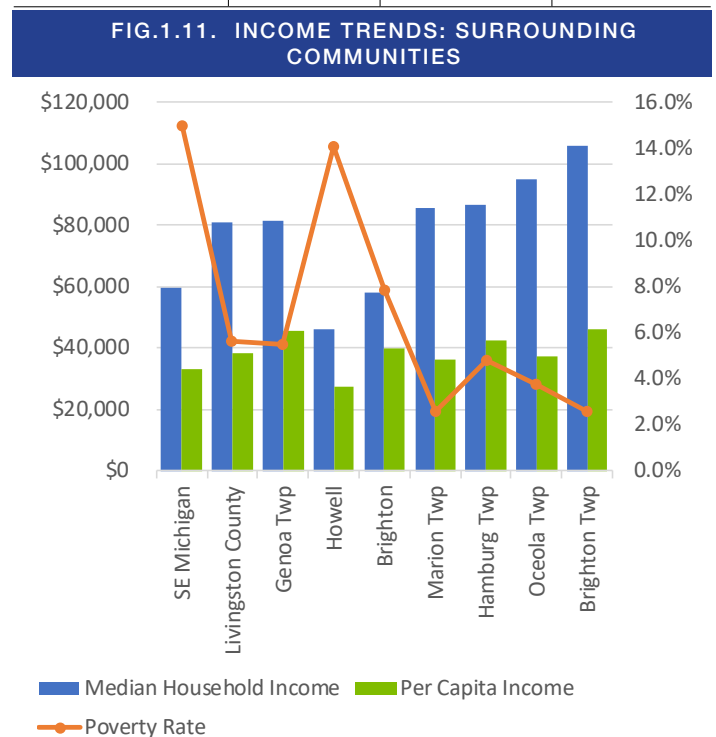
	Total Jobs	Percent Unemployed	Labor Force Participation Rate
SE Michigan	2,774,223	6.9%	63%
Livingston County	85,073	4.2%	66%
<b>Genoa Twp.</b>	<b>12,072</b>	<b>5.2%</b>	<b>66%</b>
Brighton Twp.	10,791	3.3%	66%
Brighton	10,772	2.2%	60%
Howell	10,365	4.4%	60%
Hamburg Twp.	5,527	3.8%	67%
Oceola Twp.	2,202	3.1%	68%
Marion Twp.	2,017	3.3%	68%

Source: SEMCOG Community Profiles

## Income

Median household income and per capita income are typical metrics to determine the standard of living in a community. Genoa has a median household income of \$81,364, which is almost equal to the county median. The Township has an average household size of 2.58 which explains the per capita income at 45,356, 44 percent lower than the household income. The Township has a lower poverty rate than the surrounding cities, but comparable to surrounding suburban Townships.

	Median Household Income	Poverty Rate	Per Capita Income
SE Michigan	\$59,494	\$33,125	15.0%
Livingston County	\$80,897	\$38,399	5.6%
<b>Genoa Twp</b>	<b>\$81,364</b>	<b>\$45,356</b>	<b>5.5%</b>
Howell	\$45,760	\$21,139	14.1%
Brighton	\$58,041	\$39,694	7.8%
Marion Twp	\$85,746	\$35,943	2.5%
Hamburg Twp	\$86,712	\$42,606	4.8%
Oceola Twp	\$95,071	\$37,329	3.7%
Brighton Twp	\$105,741	\$46,136	2.6%



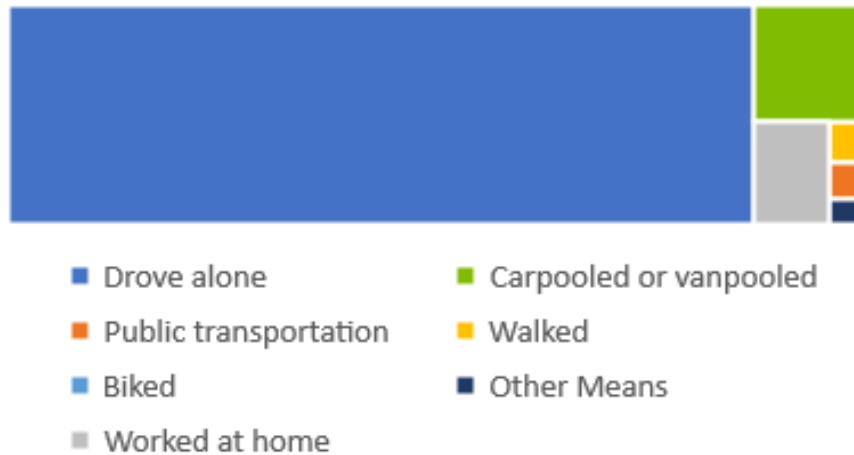
Source: SEMCOG Community Profiles

## Transportation

### Mode of Travel

In Genoa, the majority mode of travel to work is by car (approximately 87%) which is similar to national trends. This is followed by carpooling at 7%. The remaining modes of transportation are insignificant close to 1 percent each.

FIG.1.12. MODE OF TRAVEL: GENOA

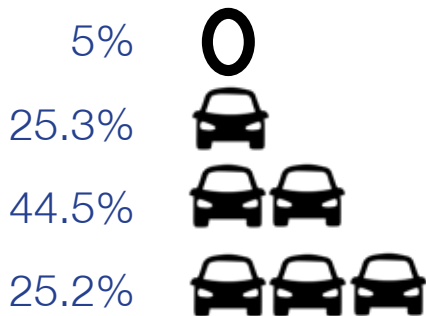


Source: SEMCOG Commuting Patterns

### Car Ownership

In Genoa, there are a total of 8,174 households. A majority of households (70%) have two cars available. A small percent(3%) do not own any motor vehicle.

FIG. 1.13. CAR OWNERSHIP: GENOA

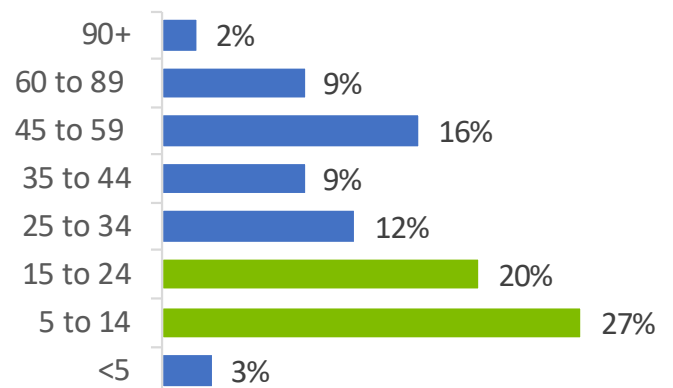


Percent distribution of number of vehicles owned in Genoa

### Travel Times

In 2018, the mean travel time for Genoa residents is about 28.1 minutes, which is 165% less than the county mean (27) and United states (26.1). Research has indicated that the amount of time spent commuting impacts quality of life. Genoa residents generally have short commute times with 47% of the residents having commutes shorter than 24 minutes. About 25% of the residents travel longer than 45 minutes.

FIG.1.14. TRAVEL TIMES: GENOA



Source: SEMCOG Commuting Patterns



FIG.1.15. INFLOW-OUTFLOW COMMUTE PATTERNS: GENOA

Genoa Township experiences an decrease in its population during the daytime, as the number of workers that leave the Township for work is more than the number that come to the Township for work. Overall, the Township daytime population is about 12% greater than its permanent population. Brighton City and Ann Arbor are the most common places of employment for Genoa residents outside the city.



## Community Facilities

# Community Facilities

## Community Center (Township Hall)

The Township owns approximately 72 acres containing Township Hall, featuring large open space areas, trails, parks, athletic fields, pavilions, sled hill, playground equipment, and wetlands. The surrounding land also provides the opportunity for other uses such as public open space, conservation and recreation. In addition, two sites located near Latson Road and Grand River Avenue were dedicated as open space. The Township is also seeking locations for future community parks, as detailed in the Parks and Recreation Plan.

## Fire + Police

Genoa Township is serviced by the Brighton Area Fire Authority, which services a district that includes a population of 46,000 residents within Genoa Township, Brighton Township and the City of Brighton. There are five stations within the 74 square mile service district, two of which are located in Genoa Township. Station 34 is located on Dorr Road at I-96, directly adjacent to Township hall and Station 35 is located on Chilson Road on the west side of the Township. Genoa Township does not have its own police force and is instead covered by the Livingston County Sheriff's Department and the Michigan State Police.



Source: Giffels Webster, 2020

## Utility Service Area

The availability of utilities has made a significant impact on development patterns. Most older developments use individual septic systems. A high density of septic systems in areas with unsuitable soils, high groundwater or near bodies of water can have significant impact on the quality of the Township's water resources. The septic tank leakage from older systems has most likely affected the quality of the Township's wells, lakes, wetlands, and groundwater and limits development potential.

In response to these problems, Genoa Township developed several public sanitary sewer systems for certain areas. The provision of sanitary sewer has helped to overcome some of the problems associated with septic tank systems. See Maps 1.5 and 1.6 for water and sewer coverage areas.

### Northwest portion of Township

Genoa and Oceola Townships jointly developed a sanitary sewer system, known as the Genoa-Oceola sanitary sewer system, that serves much of the Township along Grand River Avenue from the area around Lake Chemung to the City of Howell, north of I-96. The treatment plant is located on Chilson Road, just north of the railroad.

The plant was designed to accommodate future development of vacant land within the presently defined service district. The system is designed to accommodate the Land Uses indicated in the Master Plan. Only sanitary wastewater is accepted at the wastewater treatment plant. No industrial process flows are permitted.

The Township also has a public water supply system along the Grand River Avenue. The system serves areas north of I-96 between Lake Edgewood and the western Township border. The water system was developed as part of MHOG Water Authority, a four Township system that includes Marion, Howell, Oceola and Genoa Township. There is a 500,000-gallon water tower located by Cleary University in Genoa Township.

### Oak Pointe/Tri-Lakes

Sanitary sewer service was provided in the central portion of the Township around the Tri-Lakes area as a part of the Oak Pointe PUD. The treatment plant was constructed by the developer and dedicated to the Township. This system was combined with the Genoa-Oceola system with the Oak Pointe treatment plant being taken off-line and wastewater routed to the treatment plant on Chilson Road. The system serves the ultimate build-out of Oak Pointe, Northshore and the existing residential areas surrounding the Tri-Lakes. This system provided a benefit by not only serving the future development within the Oak Pointe PUD, but by also providing sanitary sewer service to the older lakefront subdivisions in the area.

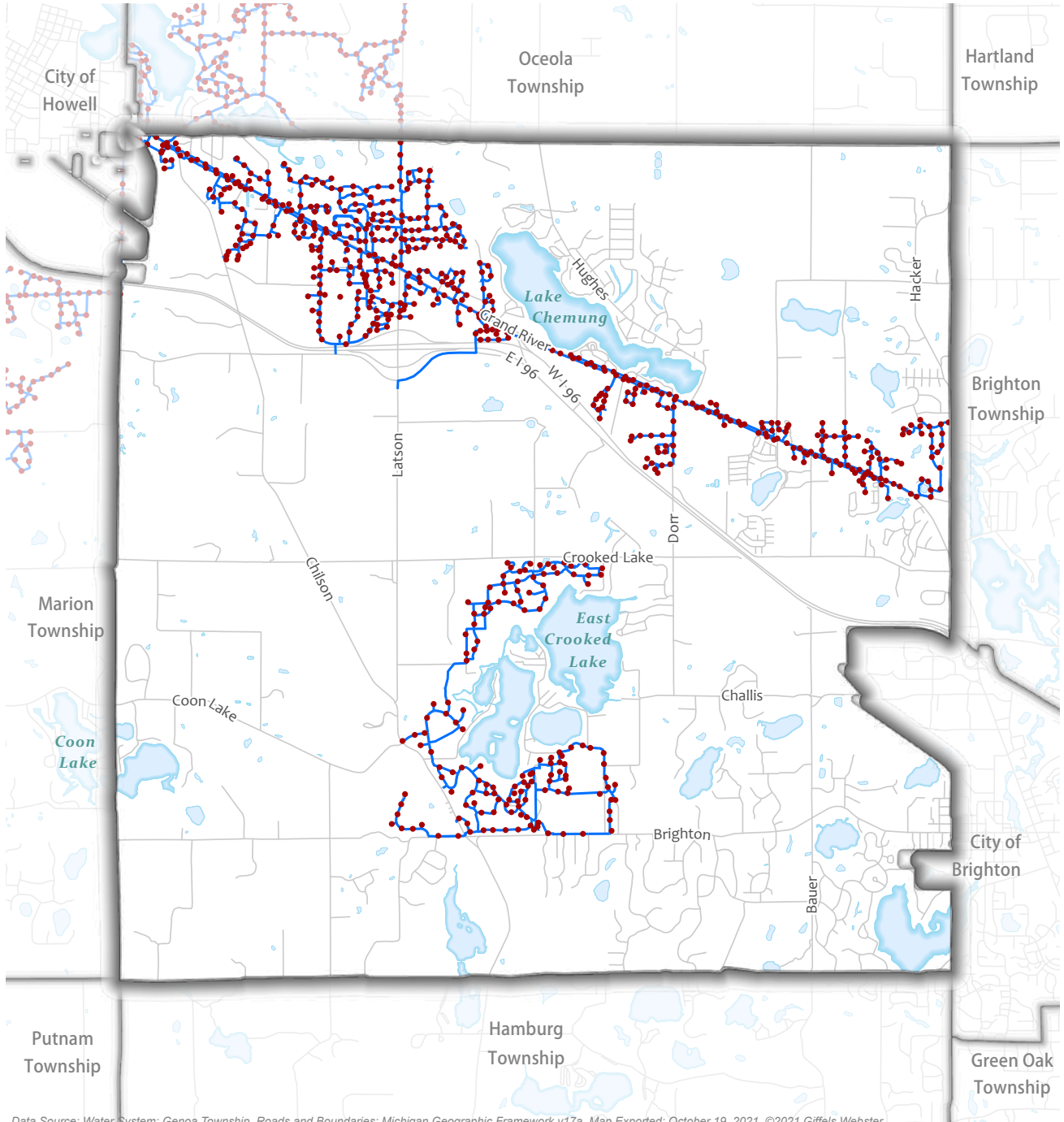
This has had a significant benefit for the water quality within the Tri-Lakes. As part of the Oak Pointe PUD, a public water system was also developed. The system serves the Oak Pointe development and has been extended around to the north end of Crooked Lake to serve the Northshore PUD. The system has an Iron removal facility and a 150,000 gallon elevated storage tank in the Oak Pointe Golf Course. The Oak Pointe/Tri-Lakes systems are at capacity and only infill/redevelopment are able to be accommodated

### Brighton

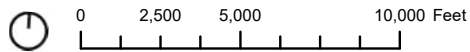
The Pine Creek PUD, adjacent to the City of Brighton, has public water and sanitary sewer service through a P.A. 425 agreement with the City. Water has also been extended to serve existing homes that had contamination problems with individual wells. There are currently no plans to extend Brighton water and sanitary sewer service to other areas of the Township. There is also a public water supply system at the eastern edge of the Township. This system was originally developed to serve the Lake Edgewood condominium development and the Brighton Village Mobile home park. This system has been extended southward along Grand River Avenue to the City of Brighton. This extension serves commercial development along Grand River Avenue near the Brighton I-96 interchange. There is a 500,000-gallon water tower on Conference Center Drive, adjacent to I-96. This water system is owned and operated by the City of Brighton.

### Lake Edgewood

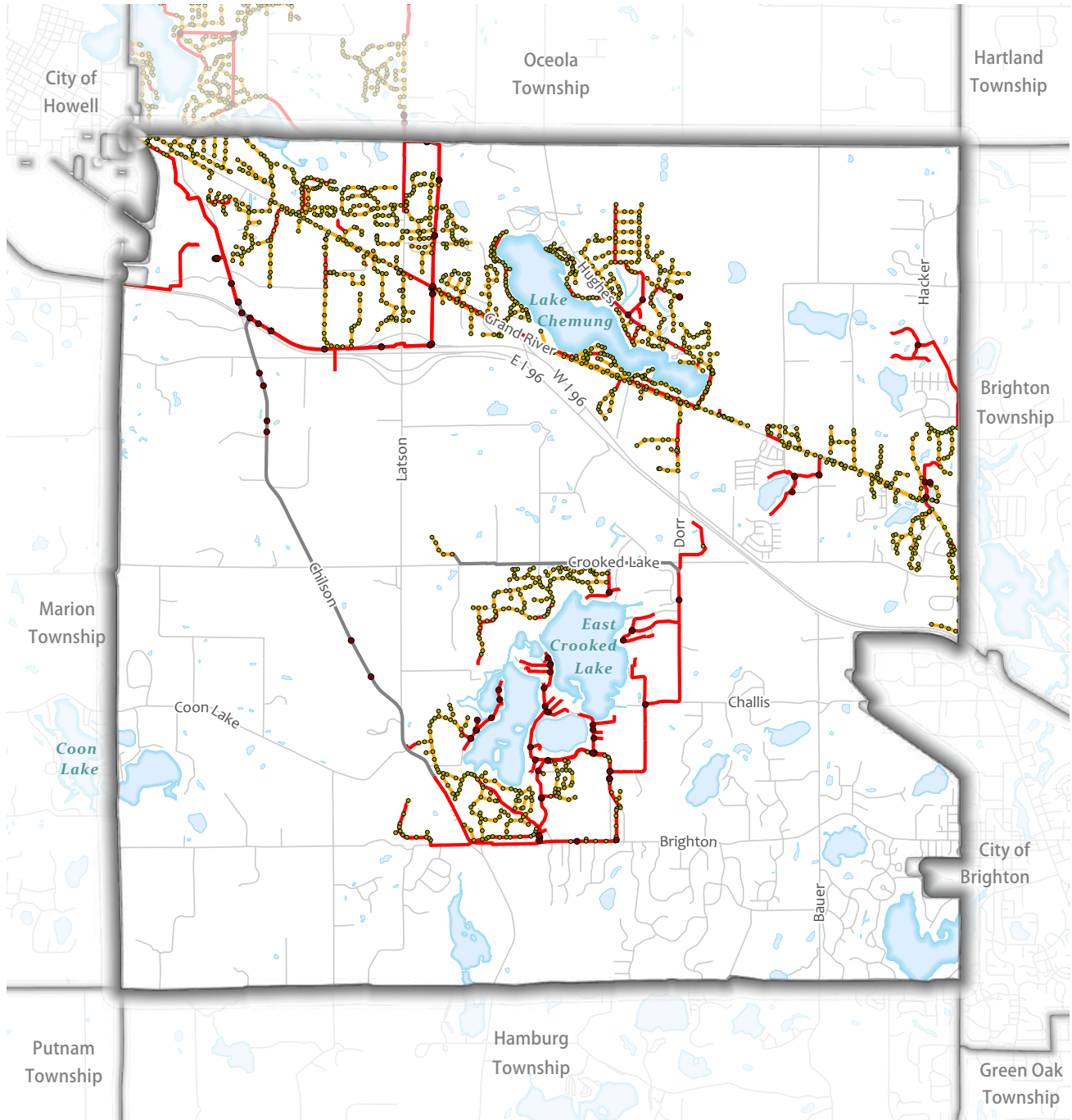
Sanitary sewers are provided in the eastern section of the Township, through a system known as the Lake Edgewood sanitary sewer system. The system serves the greater area along the eastern portion of the Grand River Avenue corridor, west to Sylvan Glen. The Sylvan Glen manufactured housing park is served by a private on-site package treatment plant, which ultimately will be connected to the Lake Edgewood system.



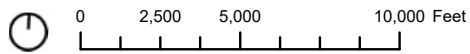
Data Source: Water System: Genoa Township. Roads and Boundaries: Michigan Geographic Framework v17a. Map Exported: October 19, 2021. ©2021 Giffels Webster.



- Hydrant
- Water Main



Data Source: Sanitary and Water System: Genoa Township. Roads and Boundaries: Michigan Geographic Framework v17a. Map Exported: October 20, 2021. ©2021 Giffels Webster



- Sanitary Valves
- Manholes
- Gravity Main
- Force Main
- Transmission Main- Not Operational



# Sanitary System

GENOA TOWNSHIP

## Transportation

### Roadway Functional Classification

Function, efficiency and safety of roadway movement in Genoa Township can be furthered through the establishment of a classification of roads and planning and designing these facilities for their specific purpose. A functional system or hierarchy of roads provides for movement of traffic as well as access to specific sites. This hierarchy will range from major arterials such as Grand River Avenue, which primarily serves for cross-town movement, to local subdivision streets which serve to access individual homes. See Map 1.7.

This system defines the roles of each street, in terms of operational requirements; which is in turn translated into planning, management and physical design features.

- **Expressway:** I-96 serves as the principal route between the residential population of Genoa Township and major activity centers throughout the region.
- **Major Arterial:** The Grand River Avenue Corridor is the major roadway through Genoa Township. This roadway serves a vital function towards connecting the Township with the adjacent cities of Brighton and Howell. Because of the amount of traffic on Grand River Avenue, commercial uses have developed along this corridor.
- **Minor Arterial:** There are a number of roadways which move traffic throughout the Township and provide connections with other adjacent communities including Brighton Rd., Chilson Rd., and Latson Rd. These roadways also provide access from other areas of Genoa Township to Grand River Avenue. These roadways serve for longer trips within the Genoa Township and adjacent communities. Like Grand River Avenue, the primary function of these roads is to move traffic. Access to these roads must be managed in order to maintain safe and effective movement.

- **Collector:** The collectors serve to assemble traffic from local subdivision streets of residential neighborhoods and deliver it to the arterial. Collectors will also serve to provide access to abutting properties. Many individual subdivisions will contain one or more collector streets which funnel traffic from the local streets and connects with adjacent neighborhoods.
- **Local Road:** Local streets serve primarily to provide access to property and homes. These roadways are generally short and discontinuous, and generally only provide connection to one or two collector streets.

### Constraints

Several natural and fiscal constraints impact the development and efficiency of Genoa Township’s public roadway network. In a featureless environment, where no financial hindrances to development are present, the roadway system will most likely resemble a grid system, much like that which has developed in many Midwestern communities. Genoa, however, is not a featureless environment, nor does it benefit from infinite resources.

As such, the following considerations must be examined to plan, prioritize and program the Township’s transportation system:

- I-96 limited access freeway;
- Water bodies;
- Wetlands;
- Topography;
- Rights-of-way;
- Financing availability; and
- Cost effectiveness of proposed improvements



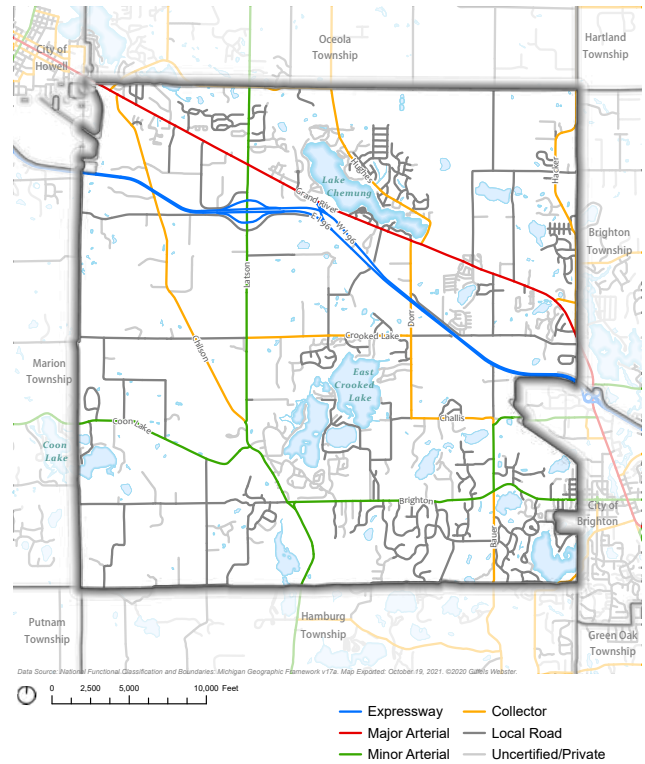
### Roadway Capacity and Volume

Livingston County’s 2001 Transportation and Land Use Plan included a brief discussion on road volume and efficiency. It was noted that the efficiency by which an area’s circulation system operates is typically measured by the degree to which motorists are delayed in their travel. Future traffic operations are analyzed by comparing projected traffic volumes to the capacity of the road network.

Capacity refers to the number of vehicles that can travel through an intersection or segment of roadway during a specified time period. Generally, roadway operations and capacity are analyzed during peak hours of traffic. A graduated scale of “A” through “F” is used by transportation engineers to describe the general flow of traffic (also known as Level of Service, or LOS) for a specific roadway segment. Typically, an LOS of “C” or better is considered acceptable. An LOS of “E” or “F” represents a roadway with long, inconvenient delays.

Roadway capacity is dependent on several factors: pavement condition and material, roadway width and number of lanes, topography, roadway design setting, the location and frequency of curb cuts, speed limits and other traffic controls, sight distance limitations, and intersection designs.

Genoa Township may wish to meet with the Livingston County Road Commission to better understand how their data concerning traffic volume counts (or vehicle “trips”) for county primary and local roads, translates into observed levels of service. This will help both the Township and road agency better plan for future development, as well as help residents understand how travel on their local roadways may change in the future.



**National Functional Classification**  
GENOA TOWNSHIP

## Natural Features

# Natural Features

Genoa Township is fortunate to have abundant natural resources, including lakes, open spaces, woodlands, and wetlands. These natural resources make up a local ecosystem that includes wildlife habitat and important components that contribute to clean water and air. The presence of these natural features add to the quality of life for Genoa Township residents, who benefit from not only their aesthetic beauty, but also from opportunities for active and passive recreation. With ongoing residential, commercial, and industrial development occurring in the Township over the past 20-plus years, there is a need to be proactive in the preservation of these natural features.

Soils, topography, woodlands, rivers, lakes, creeks, wetlands, and floodplains have a direct relationship with the Land Use in Genoa Township. Each type of Land Use is influenced by the Township's natural features. In the Master Planning process, the optimum arrangement of Land Uses should maintain the Township's natural resources and physical features for future generations, while balancing the needs of the community for housing and businesses.

The following is an overview of some of the major natural features that are prevalent throughout the Township. As development occurs, the following features should be considered in addition to other site-specific conditions that may be pertinent to each individual location.

## Geology

Since the last ice age (about 12,000 years ago), the soils in Genoa Township have formed as a result of a number of soil forming factors. These include water drainage, wind, slopes, climate, biological activity and human activity. The soils and geology in the Township are characteristic of glacially formed landscapes consisting mainly of moraines (hills of glacially deposited sands and gravel) and till plains (mixed soil materials deposited by glacier advance and retreats). These soil types can include a range of rock sizes from gravel to fine sand and may also include fine clay and silts. The underlying bedrock is a grey shale known as the Coldwater Formation.

## Topography

As noted in the previous Master Plan, there are areas of significant topography in the southern and eastern portions of the Township that may present constraints to development. Development in areas with steep slopes may result in a significant change in the natural functions of the hillside, whether by mechanical cuts and fills or the removal of natural vegetation. If drainage flows are altered, erosion can occur, causing further instability and sedimentation in waterways.

To protect against erosion, there should be proactive site planning prior to development that continues through construction. Care should be taken to ensure that grading is minimized and vegetation, and top soil are protected.

## Soils

Genoa Township was historically a resort and farming community. Over the years, much of the farmland has been converted to residential, commercial and industrial uses. There is still active farmland in the northeast corner of the Township and in the western portion of the Township. The prime farmland is in the northern portion of the Township.

Construction costs and risks to the environment can be minimized by developing areas with suitable soils. Poor soils present problems such as poor foundation stability and septic limitations.

### Drainage

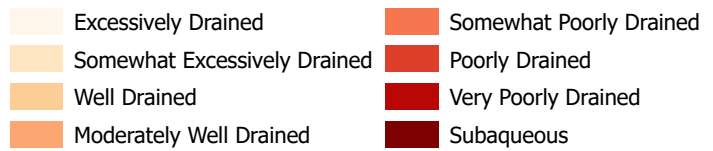
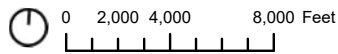
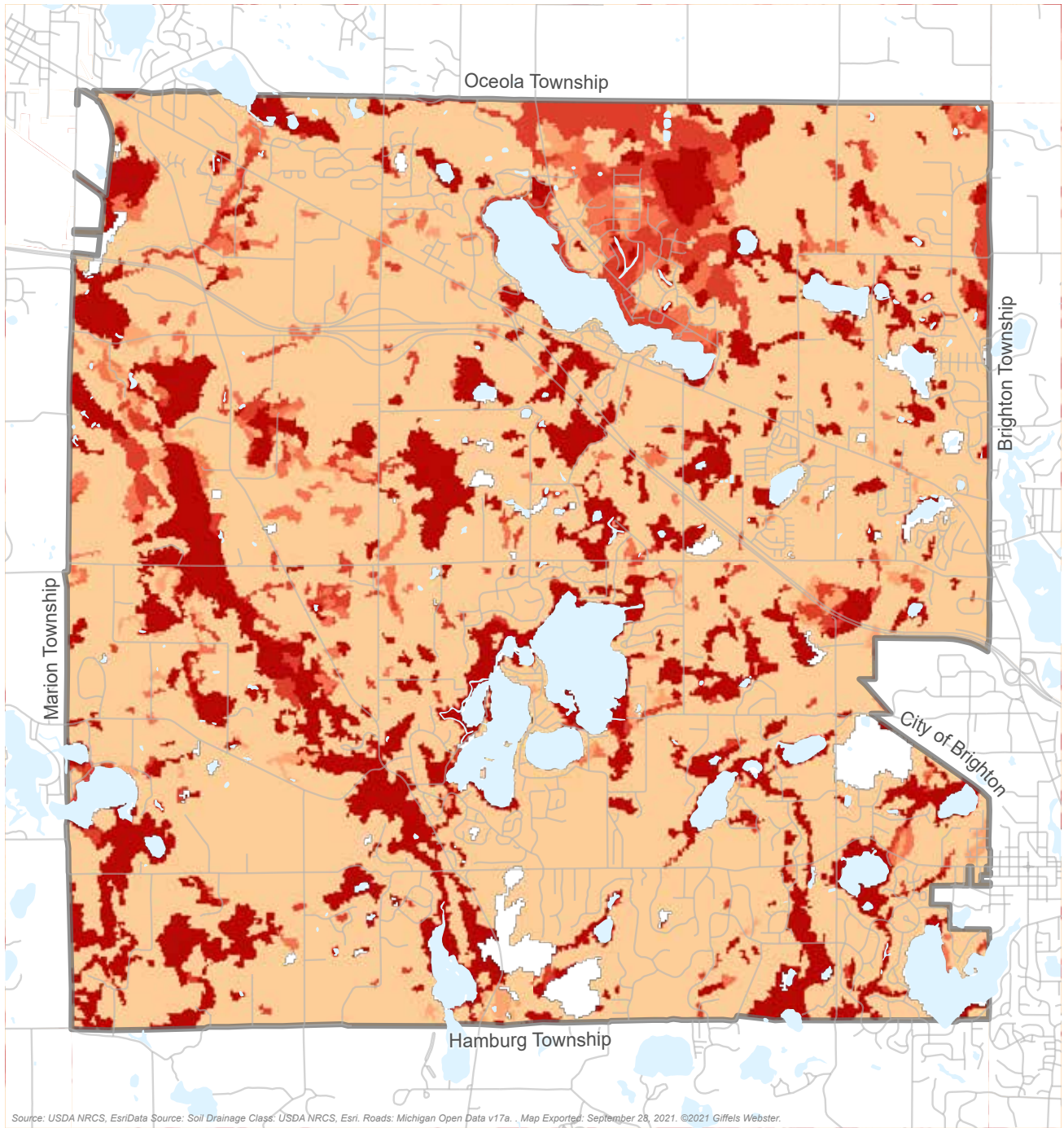
Development on poorly drained soils increases development costs, maintenance costs, and will lead to sanitary problems. Development costs are increased due to additional foundation, road and septic preparation. Maintenance costs and problems will be associated with septic field failures, flooded basements and impact to roads from frost action. Map 1.9 illustrates draining for soils, which range from “excessively drained,” where water is removed very rapidly, to “sub-aqueous,” which are soils under a body of water (there are only a few of these areas). Soils in the Township are generally considered “moderately well drained,” where soils are only wet for a short time. Along water courses, some less well-drained soils exist.

### Foundation Stability

Soil areas that do not provide stable foundations may experience shifting building foundations, cracked walls and cracked pavement and roadways. These problems often result in increased development and maintenance costs or, in extreme cases, structural failure.

### Septic Suitability

Because there are many areas of Genoa Township that rely on individual septic systems, the location of septic systems on proper soils is extremely important. Inspection and approval for use of a septic system is under Livingston County's jurisdiction and ultimately their responsibility to maintain high standards of review to prevent system complications or failures. Septic field failures are often the result of poor soil permeability, high water table or excessive slope. Soils such as compacted clays and silts will not allow wastewater to percolate, a high water table prohibits adequate filtering and excessive slope does not provide adequate percolation.



## SOIL DRAINAGE CLASS

GENOA TOWNSHIP



## Tree Canopy

Wooded areas can be found throughout the Township. Wooded areas also serve significant environmental functions that need to be acknowledged. These functions include watershed protection, air quality protection, noise abatement, and weather protection.

### Watershed Protection.

A wooded area can be of great value to a watershed area. The canopy of trees aid in breaking the force of precipitation, thereby decreasing erosion, which is further inhibited by the fibrous root system of the understory plants. Woodlands can also reduce the volume of stormwater runoff, which helps reduce flooding. In addition, precipitation is retained and recharged into groundwater reserves by the woodland.

### Air Quality Protection.

Woodlands improve air quality and afford protection from wind and dust. Leaves and branches moderate the strength of winds and, when moistened with dew or rainwater, reduce suspended particles in the air, which are later washed off with rainwater. Plants also serve to moderate the effect of chemical pollutants in the air by absorbing some ozone, carbon dioxide, and sulfur dioxide.

### Noise Abatement.

A dense stand of trees can significantly cut noise from adjacent factories or highways by six to eight decibels per 100 feet of forest. Moreover, the moderating effects of forests on temperature and wind can significantly cut the sound-carrying capacity of the atmosphere.

### Weather Protection.

The resilience of woodlands creates a micro-climate around the tree stand itself. Woodland qualities, which moderate and buffer temperature, precipitation, runoff, wind, and noise, are features of this micro-climate effect. The benefits of this micro-climate effect to surrounding urban and suburban areas can be significant.

An urban area devoid of vegetation is the exact opposite of the forest micro-climate. It increases the range of temperature fluctuations much like the climatic extremes of a desert. The sun's energy striking streets and buildings is changed into

heat, further increasing the temperature on a hot day; at night, the buildings lose heat and offer no protective cover from night chill or winter winds. Thus, if woodlands are interspersed among built-up areas, the effects of their micro-climates can be felt in adjacent urban areas, moderating fluctuations in temperatures by keeping the surrounding air cooler in the summer and daytime and warmer in the winter and evening.

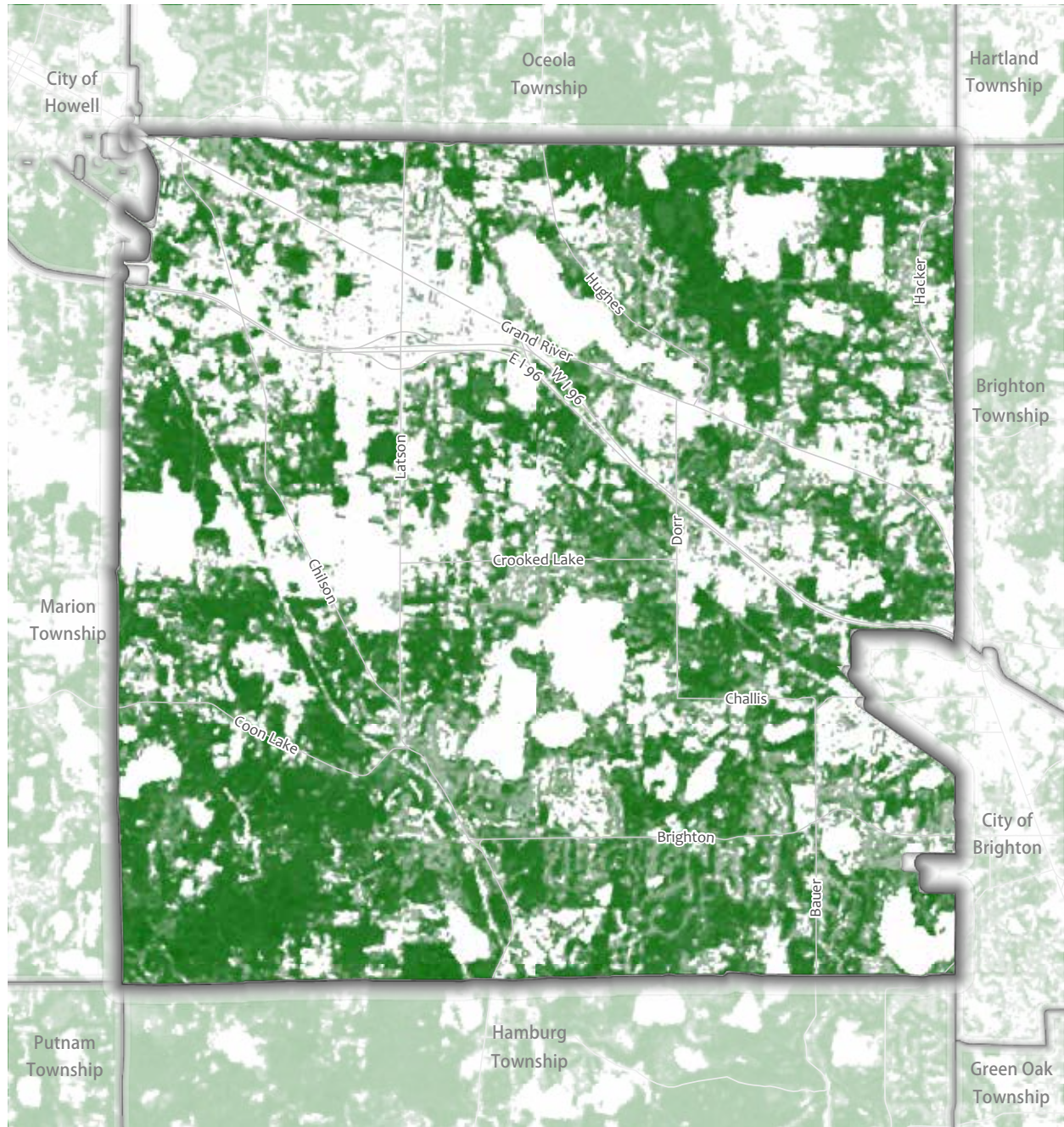
### Wildlife habitat.

Woodlands provide essential shelter and food for deer, raccoon, rabbits, pheasants and other birds and animals. The opportunity to observe wildlife in a natural setting has educational benefits for Township residents.

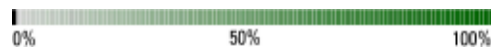
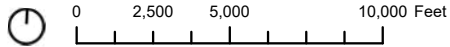
### Township's natural character.

There is a significant amount of mature vegetation along many of the road corridors that pass through the Township. Woodlands located near the roadway contribute to a natural/rural atmosphere in a number of ways. The impact of vegetation on the motorist will be greater because of the close proximity to the roadway. A greater mass of vegetation will be within the forward view of the motorist. Other features such as buildings will have a less dominant impact on the streetscape because they fall behind the vegetative foreground. Taller trees will provide a sense of enclosure, providing a defined space bounded by vegetation. There is also a significant amount of vegetation along most lakes and streams throughout the area.

The Township currently protects woodlands through provisions in the Zoning Ordinance that restrict clearing of woodlands on a site prior to site plan approval. During site plan review, woodlands are required to be inventoried and the design is required to demonstrate preservation of natural features. As a condition of site plan approval, trees are required to be protected during construction with root-zone fencing. The Township also has landscaping regulations that require the planting of greenbelts and street trees for any new development. Landscape materials used should be native to Michigan and a variety of species should be used for street trees to minimize the impact of disease.



Data Source: Tree Density National Land Cover Data. Roads: Michigan Open Data v17a. Map Exported: October 07, 2021. ©2021 Giffels Webster.



Total Tree Canopy Density of Sylvan Lake: 37.1%



# TREE CANOPY

GENOA TOWNSHIP

## Wetlands

Wetlands serve a variety of important functions which not only benefit the natural environment but also the community. Some of the primary values which wetlands contribute are as follows:

- Mitigate flooding by detaining surface runoff.
- Control soil erosion and sedimentation loading in rivers and lakes.
- Provide links with groundwater.
- Improve water quality which is degraded by such things as:
  - o Nutrients and chemicals from fertilizers and pesticides used in agriculture and landscaping/lawn care;
  - o Polluted urban run off from roads, parking lots, industrial and other commercial activities;
  - o Treated effluent from waste water treatment facilities;
  - o Erosion and sedimentation resulting from agricultural and construction activities.
- Function as highly productive ecosystems in terms of wildlife habitat and vegetation. Serve a variety of aesthetic and recreational functions.

The largest interconnected series of wetlands are located along the Chilson Creek corridor in the western portion of the Township. There are also numerous kettle depressions scattered throughout the Township. (See Map 4)

### Types of Wetlands

There are four types of wetlands predominate within the boundaries of Genoa Township:

1. (Emergent wetlands with rooted cattails, bulrushes and sedge grasses;
2. Scrub/shrub wetlands,
3. Bogs; and
4. Forested wetlands with an over-story of trees and an under-story of shrubs.

As water levels rise and fall from year to year, some ecological succession may be occurring as the wetlands shift from emergent marsh to forested wetlands.

## Development

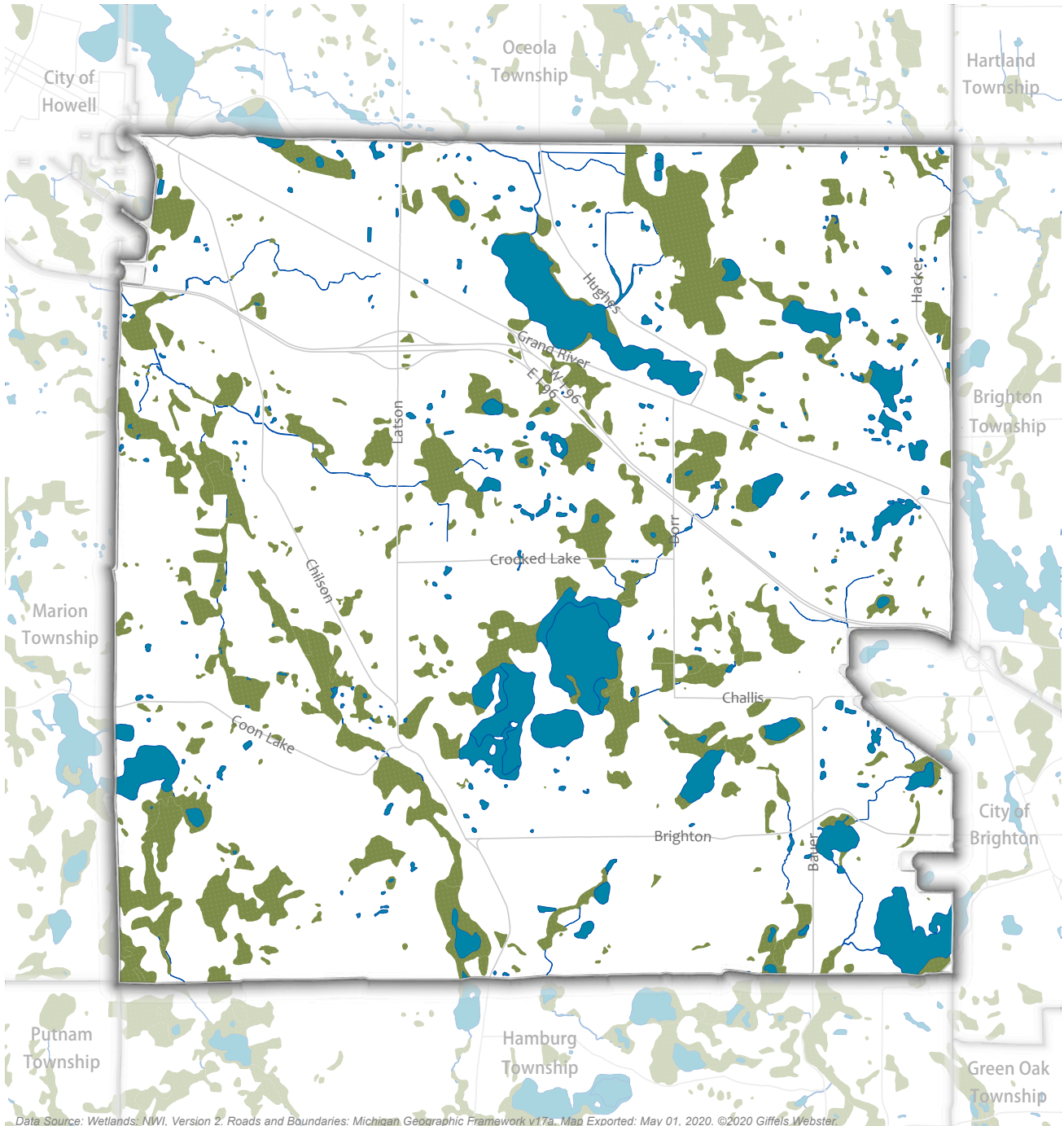
Future development in areas surrounding these wetlands could significantly impact wetland resources. Therefore, developers and Township officials should evaluate alternative designs to minimize any potential for impact. This is best done by initially considering wetland resources as constraints to development. The relative weight of these constraints must also account for other environmental and socio-economic constraints. Minimization of impacts to these resources should take into account the cost of avoidance and the property rights of the individual. If impact is unavoidable, then mitigation should include an analysis of retaining or enhancing the wetland values to be lost.

Wetland areas are valuable as natural buffers between residential and commercial Land Uses. They contribute significantly to the aesthetic character of the community. By incorporating wetlands as part of the future development, they will continue to maintain open and green space as well as contribute to retaining the rural setting.

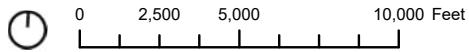
### Wetland Regulation

Any wetlands greater than five acres in size or contiguous with a waterway are regulated by the Michigan Department of Environment, Great Lakes and Energy (EGLE) through the Goemaere-Anderson Wetland Protection Act, Public Act 203, as amended. Any activity which requires these regulated wetlands be filled or drained requires a permit from EGLE. Permits will generally not be granted unless the issuance is in the public interest and necessary to realize the benefits derived from the activity. If a wetland fill permit is granted, mitigation should be required such as creating new wetlands within the same drainage way or enhancement of existing wetlands. In addition to this, Genoa Township Zoning Ordinance contains wetland standards that are stricter than the state in order to save wetlands over 2 acres plus a natural/undisturbed buffers adjacent to any regulated wetland.





Data Source: Wetlands: NWI, Version 2. Roads and Boundaries: Michigan Geographic Framework v17a. Map Exported: May 01, 2020. ©2020 Giffels Webster.



- Wetlands
- Surface Water



# Wetlands

GENOA TOWNSHIP

## Lakes, Rivers and Streams

Lakes are among the Township's most valuable natural resources of the community. The largest and most significant lakes in the Township are Lake Chemung, East Crooked Lake and West Crooked Lake. The numerous lakes provide recreational opportunities such as boating, fishing and swimming. The quality of these water features enhances the value of adjacent property for residential opportunities. Areas surrounding many of the larger lakes in the Township have been developed for smaller lot resort and residential uses. These areas were initially developed with resort cottages on small lots with individual septic drain fields. Over time these areas have been converted to year-round homes.

Areas surrounding the lakes have soil conditions that are not well suited for drain fields due to poor soil texture and a high water table. The combination of the natural soil characteristics and increased residential use of the lake areas may lead to significant problems with septic tank systems. The septic tank leakage began affecting the quality of wells and the lakes. In response to these problems, Genoa Township has provided sanitary sewer to serve the most intensely developed areas around Lake Chemung and the Tri-Lakes.

Chilson Creek is the major stream in the Township that flows from the north down to the Huron River in Hamburg Township in the south. Ore Creek in the southeastern corner of the Township, near the city of Brighton also drains to the Huron River in the south. Associated with the creeks are corridors of adjacent wetlands. The creeks and wetlands are important for surface drainage, groundwater recharge and wildlife habitat. Alteration of the creeks and wetlands can contribute to flooding, poor water quality, insufficient water supply and loss of valuable wildlife habitat.

## County Drains and Districts

The Township is part of eight drainage Special Assessment Districts (SAD), a majority of those are private. The County Drains for Marion & Genoa, and Genoa & Oceola are the largest drains. Refer to next page for location of these drains. For more information, please refer to <https://www.livgov.com/drain/Pages/county-drains.aspx>.

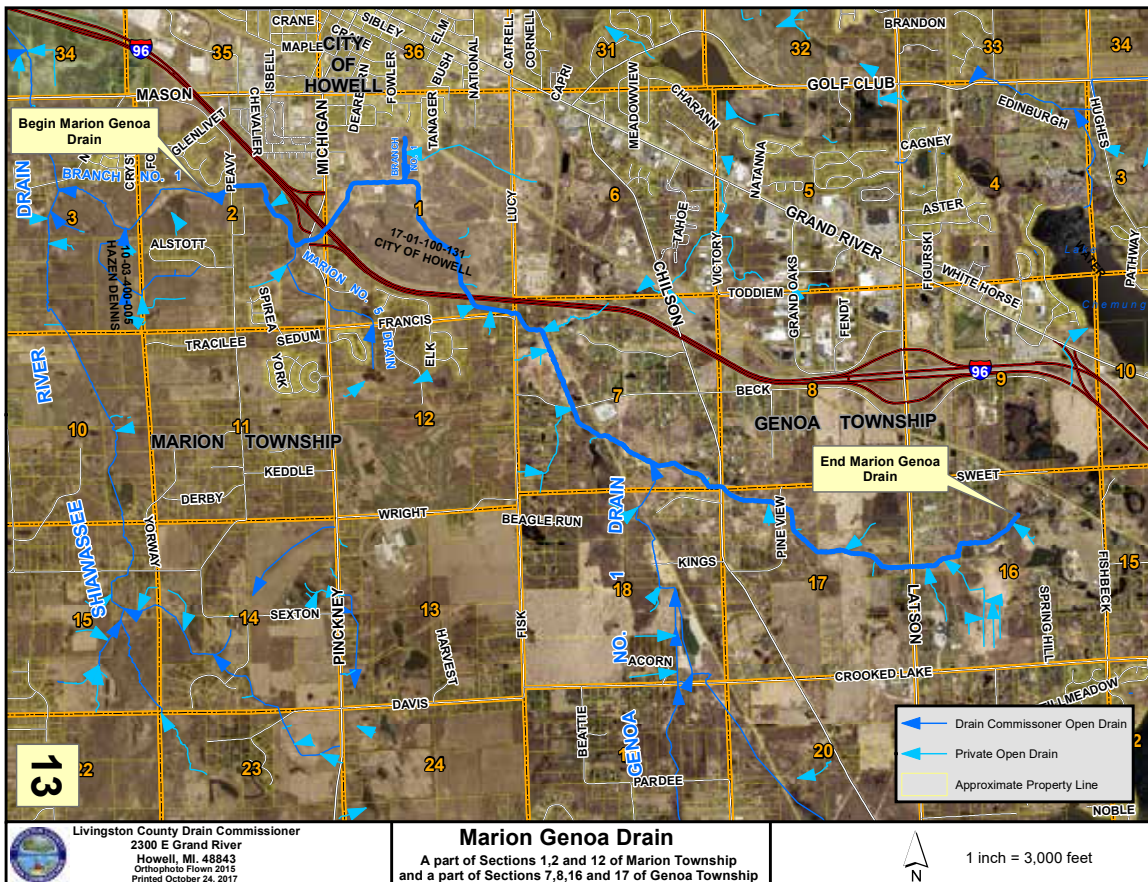
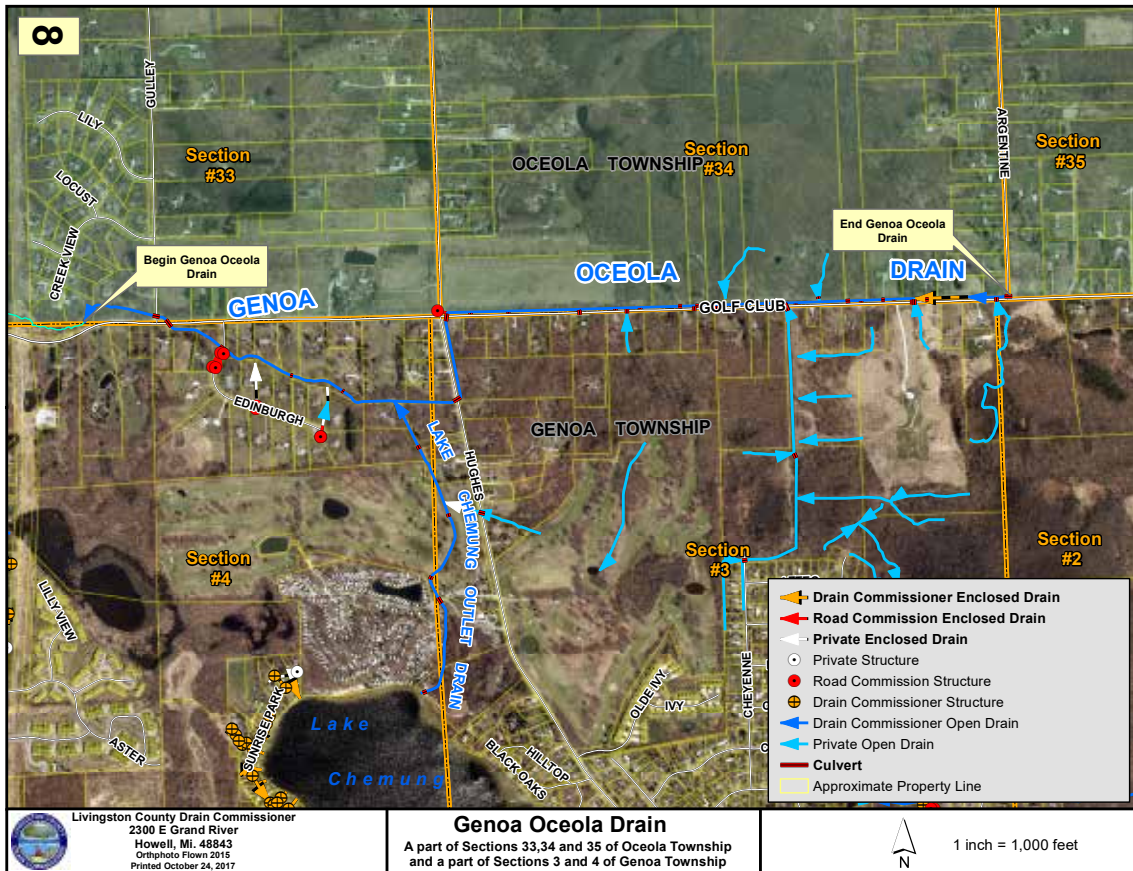
### Marion Genoa Drain

The Genoa Township is of the Marion Genoa drain drainage district which includes a part of Marion and Genoa Townships and the City of Howell. The county open drain is primarily located in the northwest corner of the Township.

According to Livingston County website, each drainage district is supported by a drain special assessment that covers the cost of maintaining the county-owned portion of the drainage system. A drainage district is a legally established area of land that benefits from a common outlet, which are determined by historical records and the natural topography of the land and rarely correspond to political boundaries, such as Townships.

### Genoa Oceola Drain

This drain runs along the Oceola and Genoa Township boundary. It is approximately 9,943 linear feet, of which approximately, 6,208 linear feet is located in the Oceola Township.



## Watersheds

The protection of regional watersheds is critical for maintaining wildlife habitat, mitigating stormwater and protecting groundwater. Genoa Township is comprised of land in both the Shiawassee and Huron River watersheds. This means that anywhere in Genoa Township, all of the water under or on a particular piece of the land drains to either the Shiawassee or Huron River. Generally, the northwest half of the Township belongs to the Shiawassee River Watershed, while the southeast half drains to the Huron River.

### Shiawassee River Watershed

According to the Shiawassee Conservation District, the Shiawassee River Watershed covers 742,400 acres of agriculture, urban, forest and natural areas. The Shiawassee Conservation District developed a Mid-Shiawassee River Watershed Plan in 2002, and updated it in 2012. This Watershed boasts many special resources including one of the best preserved warm-water river systems in the southern Great Lakes. The watershed supports 59 species of fish and 12 species of freshwater mussel. Three categories of wildlife support hunting and/or recreation in the watershed: Openland (quail, pheasant, rabbit, white-tailed deer); Woodland (squirrels, ruffed grouse, woodcocks, white-tailed deer); and Wetland (muskrat, beaver, ducks, geese, minks). There are six county parks within Shiawassee County and a 100-acre YMCA outdoor education center along the river. There are 11,000 acres of wetlands in the watershed, with an average size of 4.5 acres. There are approximately 12,000 septic systems in the watershed, in Shiawassee County.

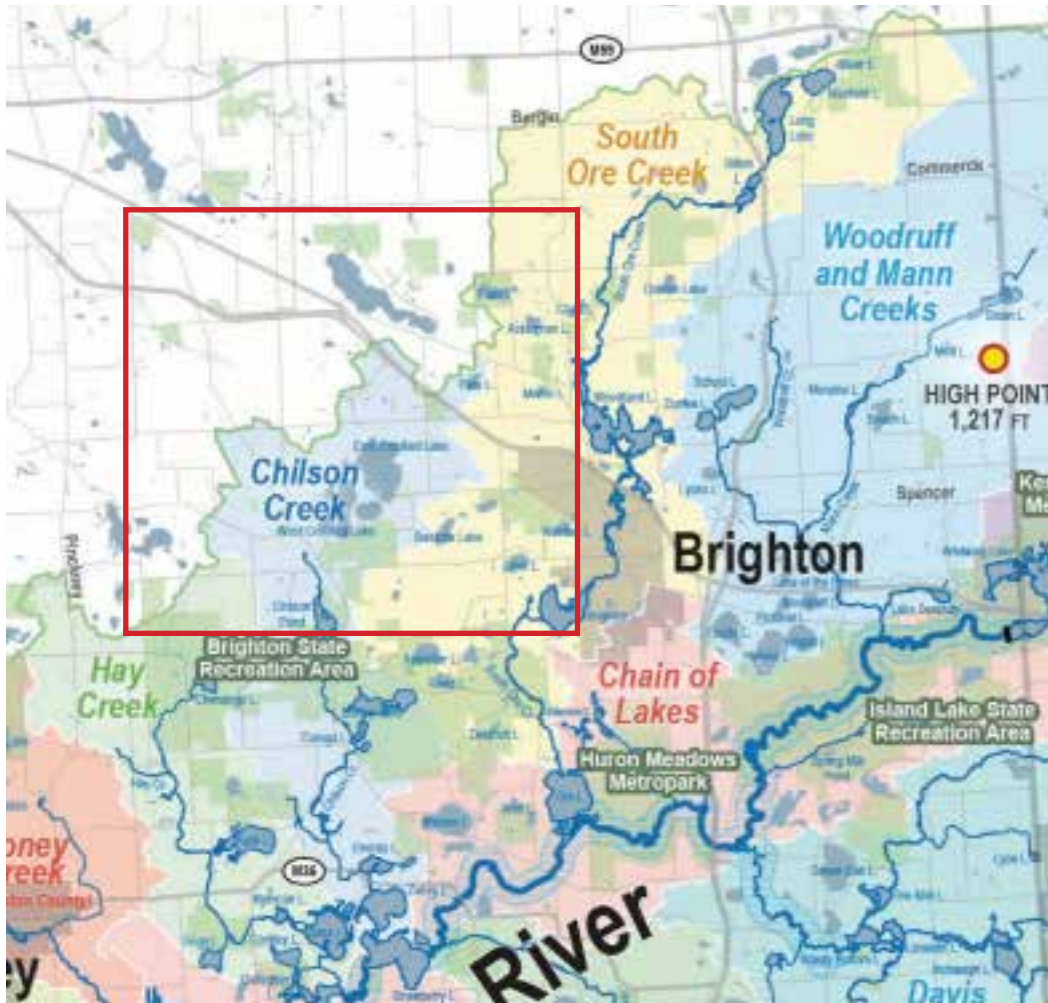
### Huron River Watershed

According to Huron River Watershed Council (hwrwc) website, the Huron River Watershed spans a land area of more than 900 square miles and drains water to the Huron River through hundreds of tributary creeks and streams. The river itself flows more than 125 miles from its headwaters at Big Lake, near Pontiac, to its mouth at Lake Erie. About 1200 miles of creeks and streams flow into the Huron's main branch. The river's drainage area includes seven Michigan counties (Oakland, Livingston, Ingham, Jackson, Washtenaw, Wayne, Monroe), 63 municipal governments, and six hundred and fifty thousand residents. The spectrum of Land Use and water environments ranges across remote natural preserves, cultivated farmland, urban and industrial centers, suburban sprawl, and an equal diversity of lakes, ponds, wetlands, creeks, and streams.

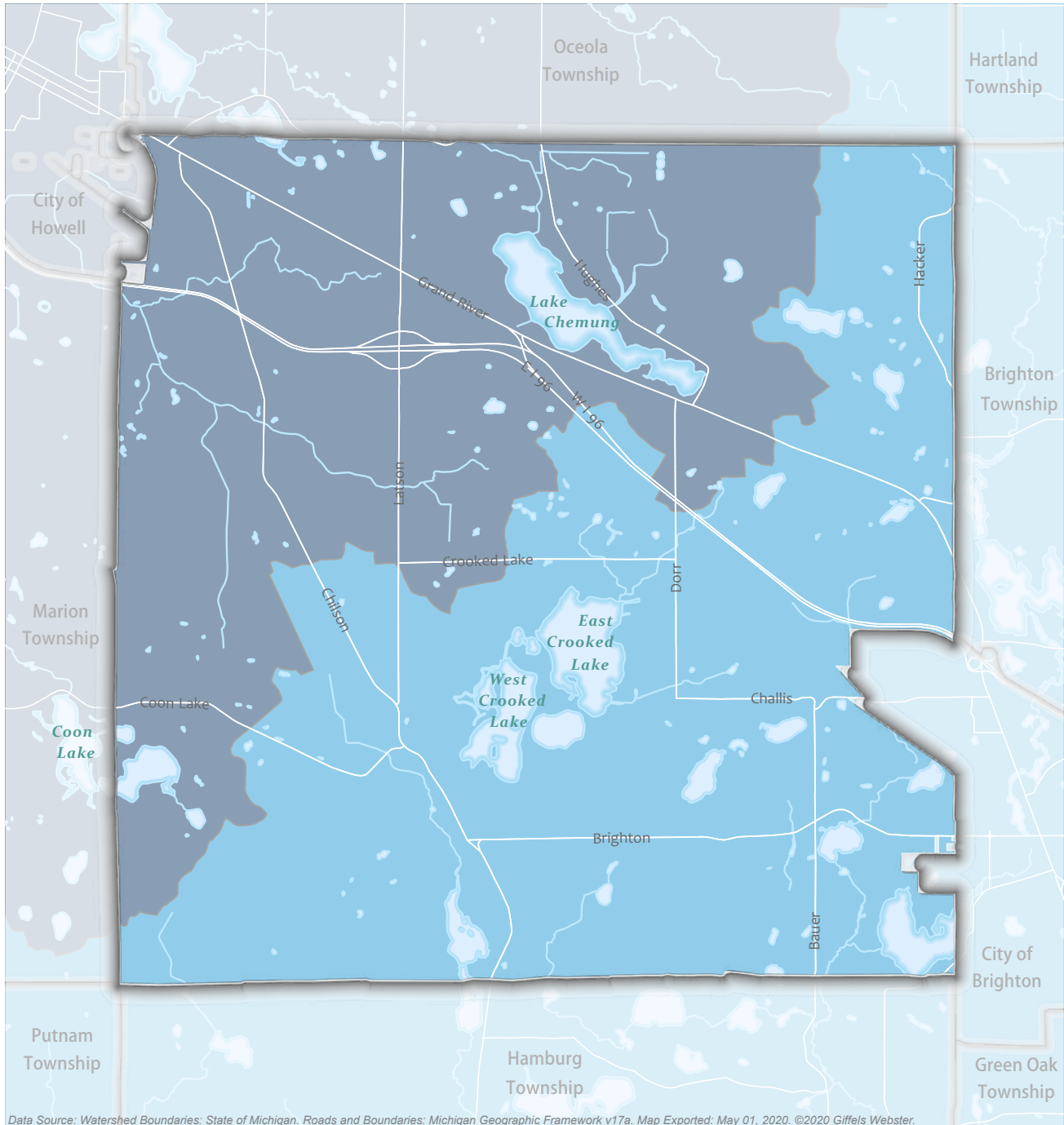
- Chilson Creekshed.** Chilson Creek flows through land enriched by glaciers with deep deposits of sand and gravel and is part of the lake belt that stretches through Livingston and Oakland Counties. It is one of the smaller major drainages in the Huron River, draining only 17 square miles. Chilson Creek eventually empties into Zukey Lake, which opens into Strawberry Lake, part of the Chain of Lakes of the Huron River. The entire creekshed lies in Hamburg and Genoa Townships, Livingston County.
- Hay Creekshed.** Hay Creek flows through land enriched by glaciers with deep deposits of sand and gravel. What was once oak-hickory forests and oak barrens on higher ground and inland wet prairie in low lying areas and along the creek was first converted to farm fields and today is mostly single family homes spread out throughout the landscape and clustered around the lakes, M-36, and Swarthout Road. The Hay creekshed is one of the smaller major drainages in the Huron River, draining only 12 square miles, 8 of which is considered the main branch. The majority of the creekshed is in Hamburg Township, Livingston County, with only the tips of a couple tributaries in Putnam and Genoa Townships. The Huron River Watershed Council asks local communities to help with data collection and monitoring in this creekshed.
- South Ore Creekshed.** South Ore Creek's main stem and its tributaries total 36 miles of waterways. The main branch starts at the outflow of Maxfield and Long Lakes. From there, flows south through the City of Brighton, through Brighton State Lake Recreation Area, and then drains into the main branch of the Huron River. Initial European settlement centered on the transformation of the open barrens for agricultural production and the forested areas for timber. Over the past few decades agriculture has been quickly diminishing as land has transferred to suburban uses. The Huron River Watershed Council notes that dams on the lower half of South Ore Creek are a likely cause of many of the creek's problems (which include altering the stream's hydrology and degrading fish and insect habitat) and recommends that the local governments in charge of these dams need to look carefully at these structures and determine if their presence is worth the environmental cost and if dam management could be conducted to mimic more natural stream flows.



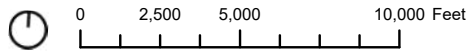
MAP 1.10. CREEKSHEDS IN GENOA TOWNSHIP, HURON RIVER WATERSHED



Source: Huron River Watershed Council



Data Source: Watershed Boundaries: State of Michigan. Roads and Boundaries: Michigan Geographic Framework v17a. Map Exported: May 01, 2020. ©2020 Giffels Webster.



- HURON
- SHIAWASSEE



# Watershed Basins

GENOA TOWNSHIP

## Ground Water

Important factors in the evaluation of groundwater are the quantity and quality of the water. Quantity or yield standards for a typical residential or commercial use range from 7 gallons per minute to 20 gallons per minute. Water is generally available in sufficient quantity and will not likely be a factor in limiting growth. Water quality is a more important factor than water availability. Water hardness, iron content, salinity and septic field contamination are hazards encountered in Genoa Township.

### Groundwater Contamination

Potential sources of groundwater contamination can result from all of the various Land Uses within Genoa Township. The level of threat of groundwater contamination will vary based on 1) the susceptibility of groundwater to contamination due to geologic features, 2) contamination loading rates based upon Land Use and hazardous materials management and 3) the amount and type of hazardous materials utilized within the Township.

Major sources of groundwater contamination are as follows:

- Buried wastes in landfills discharge liquids referred to as leachate which can enter groundwater.
- Agricultural fertilizers and pesticides often infiltrate the soil surface and enter groundwater.
- Urban storm water run-off from buildings, streets and parking lots contains contaminants that infiltrate the soil and enter waterways.
- Septic drain fields release sewage effluent into the soil through seepage beds.
- Spills and leakage of hazardous materials such as underground storage tanks and spills of hazardous materials will infiltrate the soil surface and enter groundwater if not properly contained. State and county requirements will need to be adhered to for any facility within the Township that involves the use, storage or disposal of hazardous materials. Facilities for storing hazardous materials should have secondary containment and a pollution incident prevention plan.

## Potential Environmentally Impacts Sites

According to Livingston County Health Department records, there are a few contaminated sites within the Township which pose environmental problems. Michigan Public Act 307 provides for identification, risk assessment, evaluation and cleanup of sites of environmental contamination in the State. Sites are identified through information from concerned citizens, environmental groups, industry, local health departments, EGLE staff and others. From this process a priority list was and will continually be, updated. This list is used in part to develop funding recommendations to undertake response activities utilizing state funds when the parties responsible for the contamination are unwilling or unable.

Six Act 307 Sites have been identified in Genoa Township. These are located in industrial and commercial areas, with the majority in the northwest corner of the Township near the city of Howell. These locations are planned to remain in industrial, commercial or public Land Uses.

A closed landfill is purported to be located on the south side of Brighton Road, east of Chilson Road.

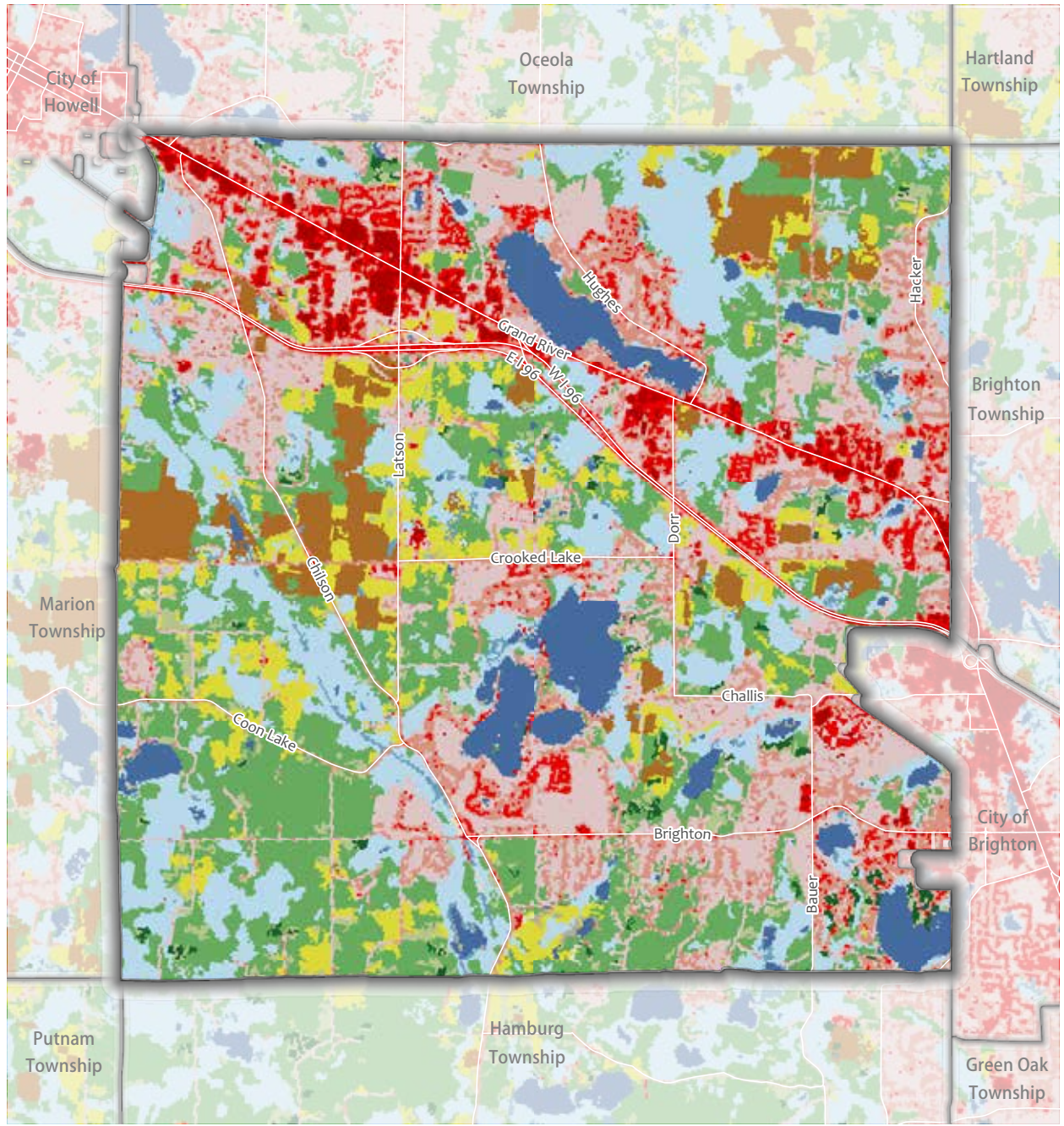
## Impervious Surfaces

Impervious surfaces include roads, buildings and other hard-packed surfaces that prevent rain and snow from being absorbed into the ground. This can have an effect on local streams, both in water quality and stream flow as well as flooding. As more stormwater runoff occurs, it is collected by drainage systems that combine curbs, storm sewers, and ditches to carry stormwater runoff directly to streams. The more developed a watershed area is, there is an increased likelihood of more frequent and more severe flooding as well as higher contamination of this water.

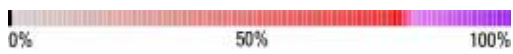
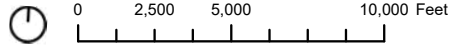
The Impervious Surfaces map illustrates areas of the Township that are built or otherwise developed, either with buildings, roads or other structures. The intensity with which land is developed coincides with the built environment - more intense commercial uses along the Grand River corridor, with less developed areas off the main roads.



MAP 1.12. IMPERVIOUS SURFACES



Data Source: Land Cover: USGS. Roads: Michigan Open Data v17a. Map Exported: October 07, 2021. ©2021 Giffels Webster.



Estimated Percentage of Impervious Surfaces based on Land Cover

- Open Water
- Developed, Open Space
- Developed, Low Intensity
- Developed, Medium Intensity
- Developed, High Intensity
- Barren Land
- Deciduous Forest
- Grassland/Herbaceous
- Cultivated Crops
- Woody Wetlands



**LAND COVER AND IMPERVIOUS SURFACES**  
GENOA TOWNSHIP

## Existing Land Use

# Existing Land Use

Genoa Township is predominantly comprised of single-family residential Land Uses (See Map 1.14). Non-residential development is concentrated largely in the north portion of the Township, along the Grand River corridor, where it is roughly anchored by the cities of Howell and Brighton. While some Land Use categories have changed in size over the past 8-10 years, most of this change has been to single family residential. Descriptions of the existing Land Uses are provided below and changes from the 2012 Master Plan are noted:



## Agricultural & Rural Residential

This Land Use category includes both lands actively used for agricultural purposes as well as large lot residential areas. This category totals 9,461 acres, or almost 41% of the Township.



## Single-Family Residential

This category includes single-family residential on lots less than three acres. This type of residential development is dispersed throughout the area. This category includes about 3,774 acres, or 16% of the Township.



## Multiple-Family Residential

This category includes attached townhomes, apartment buildings, and manufactured housing parks. There are approximately 450 acres of multiple family residential or about two percent of the Township.



## Commercial

Commercial uses in the Township are located primarily along the Grand River Avenue frontage. Grand River Avenue is the most heavily traveled roadway in Genoa Township. As a result, small regional shopping centers, individual business establishments and small offices have developed along this segment. Commercial/office use comprises about 940 acres



or four percent of the Township.

## Industrial

Existing industrial uses are located north of I-96 on the south side of Grand River Avenue between Chilson and Latson. There are a number of small to medium sized industrial uses dispersed along the Grand River Avenue corridor. The largest industrial area is the partially developed 200 acre Grand Oaks Industrial Park just west of Latson Road between I-96 and Grand River Avenue. In total, about 233 developed acres of industrial land, or about one percent, exist in the Township.



## Public/Quasi-Public

Areas designated as Public/Quasi-Public include public uses such as Township Hall, governmental buildings, churches and schools. These are dispersed throughout the Township with a high concentration of government facilities in the northwest corner towards the City of Howell. There is a total of about 438 acres of public land, or two percent in the Township.



## Parks

This classification includes areas such as golf courses, miniature golf centers, recreational vehicle campgrounds, parks, ski areas, MDNR lake access sites, playgrounds, trails, athletic fields, and the Brighton Recreation Area which together total 2,550 acres, or 11% of the Township.



## Vacant land

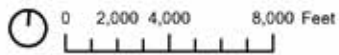
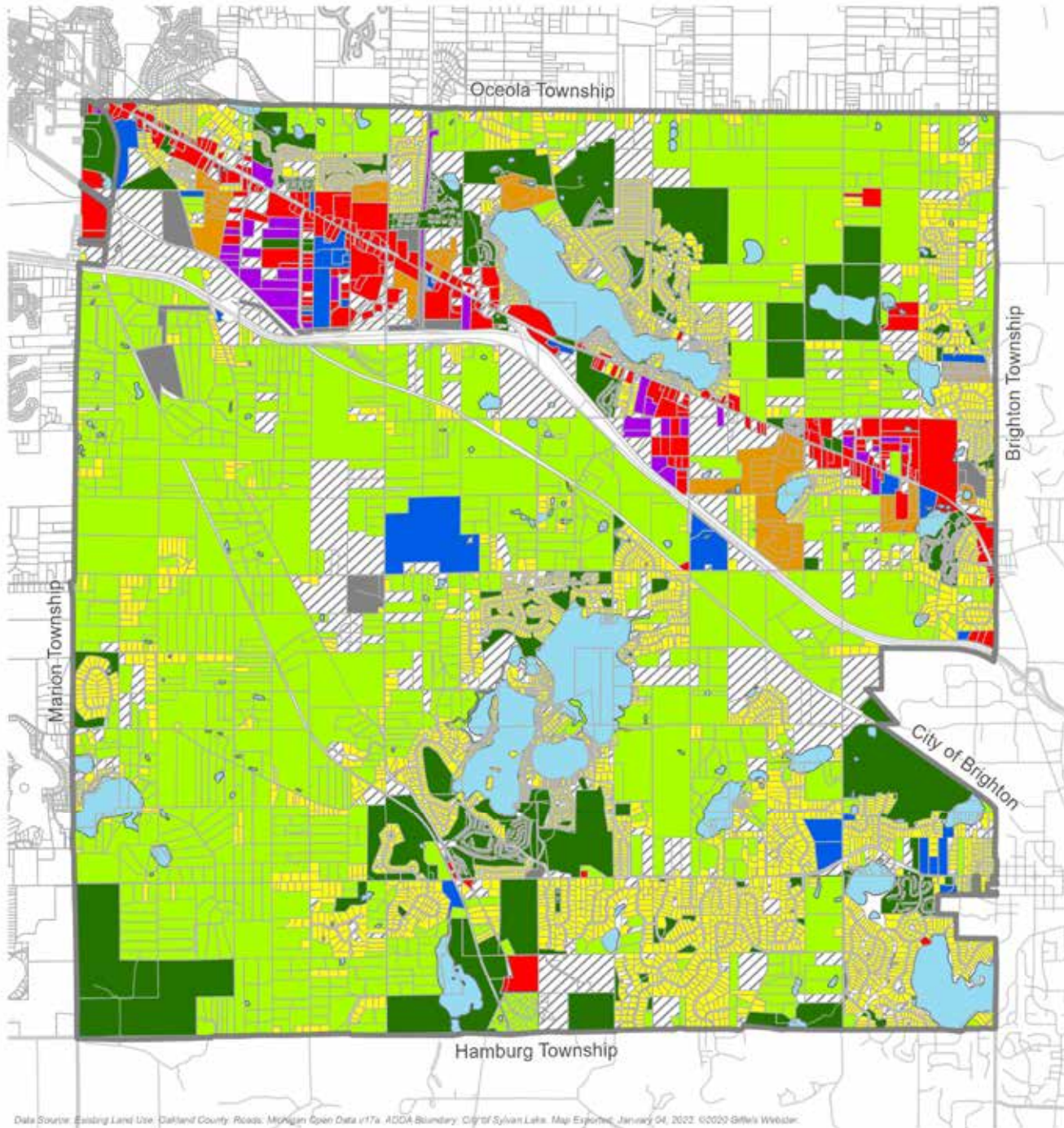
Vacant land comprises about 2,386 acres or ten percent of the Township.



## Transportation, Communication and Utilities

These uses comprise about 239 acres or one percent of the Township.

**Note.** A small amount of the Township is considered “not parceled” and is considered “miscellaneous.”













- |   |   |
|---|---|
|  Agriculture and Rural Residential |  Parks                 |
|  Multi-Family Residential          |  Single-Family Housing |
|  Commercial                        |  Transp/Comm/Utilities |
|  Industrial                        |  Vacant                |
|  Public                            |  Water                 |

## EXISTING LAND USE

GENOA TOWNSHIP



**TABLE 1.9. PERCENT DISTRIBUTION OF EXISTING LAND USE CATEGORIES**

 ELU category in GIS	Acres 2020	Percent of Land Use 2020
 Agricultural / Rural Residence	9461	40.7
 Multi Family Residential ( Condo, multi and mobile)	445	1.9
 Commercial (hospitality, medical, mixed, office, retail)	939	4.0
 Industrial	233	1.0
 Public (inst, Parking)	438	1.9
 Parks (recreation and golf)	2550	11.0
 Single Family Housing	3774	16.2
 Transportation/Communication/Utilities	239	1.0
 Vacant	2387	10.3
Water	1499	6.4
Not parceled	1307	5.6
<b>Total</b>	<b>23272</b>	<b>100.0</b>

## Public Input

# Leadership Visioning Summary

The Master Plan update process was re-started in July 2021 with a joint meeting with members of the Planning Commission, Township board, ZBA and Staff. The purpose of the “Leadership meeting” was to understand how the current leadership of the Township felt, and what board and committee members would like the Master Plan to focus on. The group completed two exercises in order to identify and prioritize Township’s strengths and weaknesses.

## Step 1. Identify

The first asked Individuals to write down what they felt were strengths and weaknesses within the community with a specific focus on residential and non-residential (primarily commercial) areas. Post-it notes were placed in two categories: strengths (“what’s working”) and weaknesses (“what needs work”).

## Step 2. Prioritize

For the second exercise, participants were given dots and asked to vote on the top 5 strengths and weaknesses as counted in the previous exercise.



**TABLE 2.1. GENOA TOWNSHIP STRENGTHS AND WEAKNESSES**

 <b>Strengths</b> What is working?	 <b>Weaknesses</b> What needs work?
<b>Residential</b>	
Variety of housing	Lack of starter/age in place homes
Zoning code enforcement	Affordability
High quality subdivisions (PUD)	Road/connectivity to commercial
Large lots	Pedestrian connections (sidewalks/bikes)
<b>Non-residential</b>	
Variety of businesses/divers tax base	Vacancies/state of buildings
Good zoning standards	/Lack of groceries/ variety of retail
Good planning	Traffic

Source: Giffels Webster

TABLE 2.2. RESIDENTIAL STRENGTHS &amp; WEAKNESSES

Strengths: What is working?		Weaknesses: What needs work?	
Topic	No. of votes	Topic	No. of votes
Variety of housing	9	Lack of starter/age in place home s	12
Zoning code enforcement	6	Affordability	6
High quality subdivisions (PUD)	5	Road/connectivity to commercial	6
Large lots	5	Pedestrian connections (sidewalks/bikes)	6
Waterfront homes	4	Small business growth / downtown	4
Location	4	Density/big city vibe	2
Tax base	3	Zoning restrictions	2
Natural feature preservation	2	Broadband	2
Variety of retail (near res)	1	Green development	1
Not many vacancies	1	Safety	1
Density	1	Lake access for non-residents	1
Schools	1		
Safe and Friendly	1		

TABLE 2.3. NON-RESIDENTIAL STRENGTHS &amp; WEAKNESSES

Strengths: What is working?		Weaknesses: What needs work?	
Topic	No. of votes	Topic	No. of votes
Variety of businesses/divers tax base	9	Vacancies/state of buildings	11
Good zoning standards	9	Lack of groceries/ variety of retail	6
Brighton-Howell connector (location)	5	Traffic	6
Good planning	5	Commercial zoning enforcement	5
Twp government/staff	2	Sidewalks/connectivity	4
Access to grand river bus.	2	Industrial/commercial requirements	2
Medical/professional services	2	Lack of professional jobs	2
Large commercial opportunities	1	Broadband/technology	2
Occupancy	1	Lack of senior center	1
Interest in area/demographics	1	Commercial outside GR corridor	1
		Cross easement disconnects	1
		Inconsistent tax rates	1
		"Rural forever" attitude	

Source: Giffels Webster





# Open House Summary

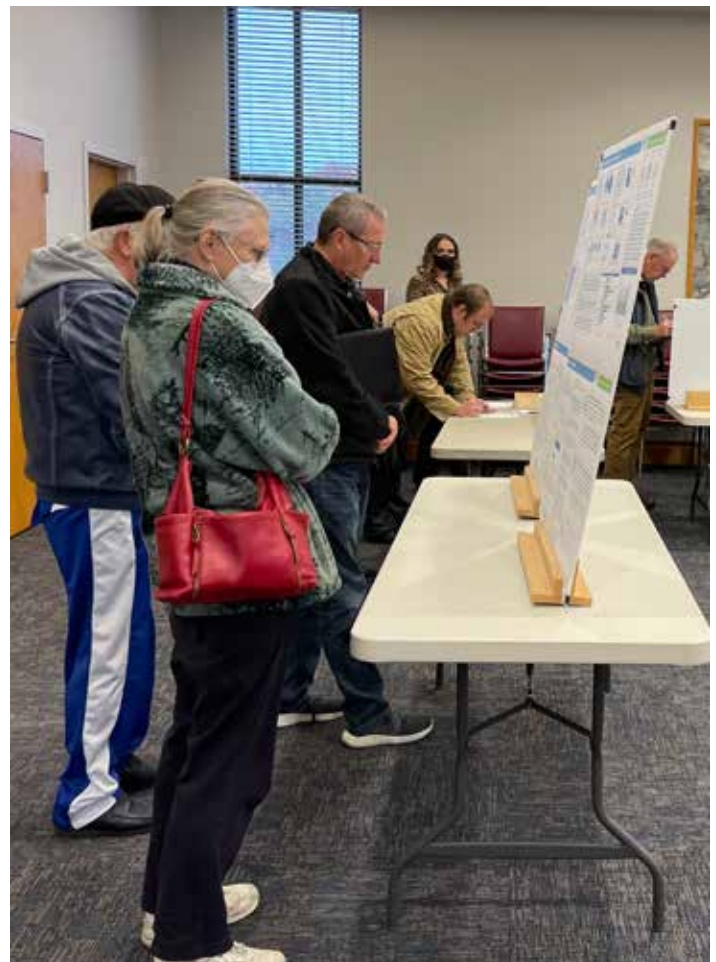
Genoa Township conducted an open house on November 10, 2021, at the Township Hall to collect input for the Master Plan update. A summary of existing conditions of the Township that includes current demographic data, local economy, natural features is provided for context. A summary of the market assessment summary that was initially conducted in 2020 and updated in 2021 is also included.

The information provided at the open house was hosted on a website that was made available for the residents for a week following the open house. The website included a survey with the same questions asked at the open house. This was intended to provide an extended opportunity for the residents to provide input at their convenience. Please refer to the appendix for a copy of the posters from the open house.

The information and the questions at the open house were framed based on Planning Commission's guidance and input from their October 25, 2021. At that meeting, the Planning Commission discussed the community's identity, vision, and goals for the next 10-15 years. They supported the idea of identifying and protecting the community character. Community character guides the way we regulate the development and redevelopment of land.

Open house participants (in-person and online) were asked about their perception of community, potential locations to identify gateways around the Township, preference about their housing styles, recommended non-motorized improvements, and their general thoughts of 2015 adopted future Land Use map and proposed goals. Majority of questions were rating-based.

Representatives from the Township's various boards and commissions attended the meeting. Approximately 40 people participated in-person; there were 285 views of the project website between November 7-December 7. Seventeen responses were gathered. A number of participants provided their responses in groups. Most participants are within the 55-74 age group living in a household of two adults and no kids.



Source: Giffels Webster, 2021



## Community Character.

Participants were asked to identify three things they identify/love about Genoa and things that would make people more connected with Genoa. A majority of residents identify the Township as a small town with access to nature, recreation and a quiet place to raise family with convenient access to urban communities. Participants supported maintaining the rural character, creating more annual community events and providing affordable housing. This was also the top priority goal.

## Gateways.

Gateways reinforce community identity. The respondents were provided potential gateway locations and precedent images of elements that contribute to a gateway. A majority of the responses supported creating gateways at entry points to the Township along Grand River Avenue by using landscape elements.

FIG. 2.1.POTENTIAL GATEWAYS

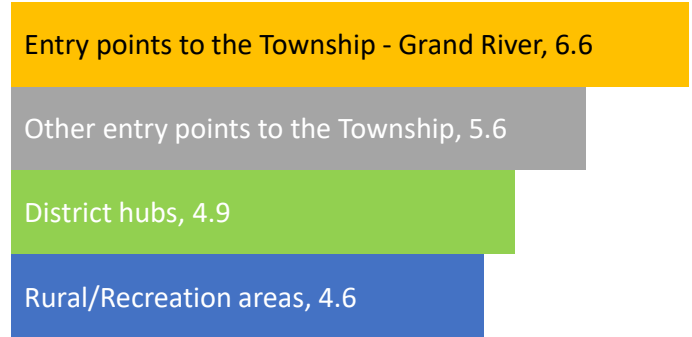
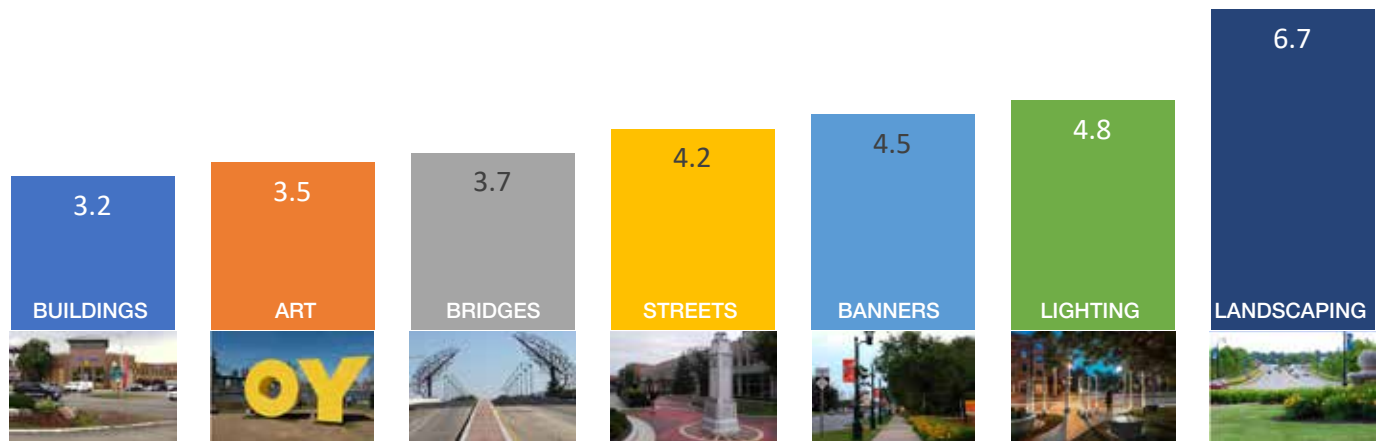


FIG. 2.2. PREFERRED GATEWAY ELEMENTS



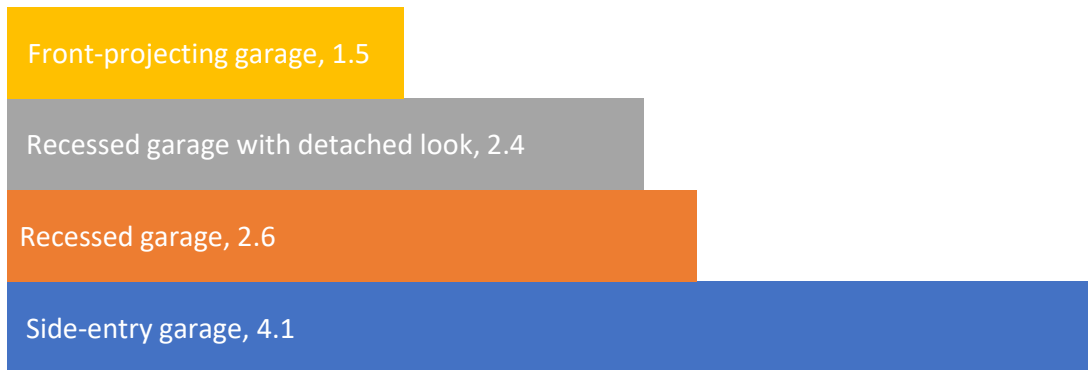
## Transportation Connectivity.

A greenways plan was prepared a number of years ago for southeast Livingston County. This plan illustrates a prioritized non-motorized system of paths and conservation corridors containing significant natural features. The respondents were asked if they agree with recommended priority ratings. The response was neutral. The responses indicate a strong support for sidewalk connections along Challis, Chilson Road and safe non-motorized access to elementary schools.

## Housing.

The residents were presented images of different single-family styles including the typical front projecting garage style. There was clear support for side-entry garage-style housing. The response was split when asked about their preference to allow accessory dwelling units within single-family districts.

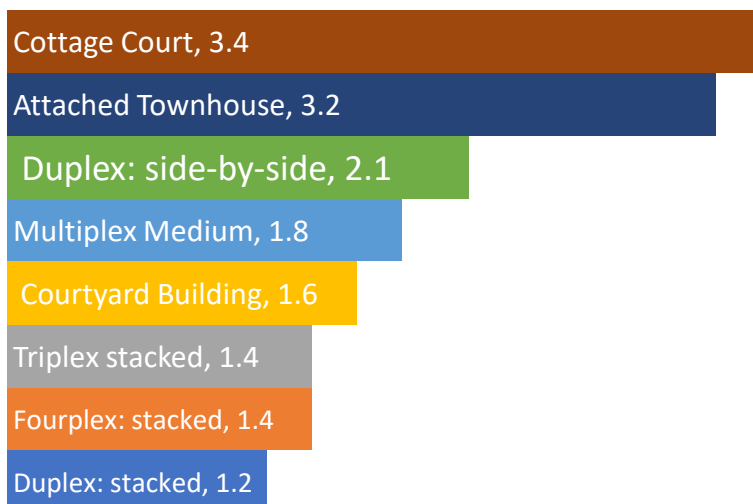
FIG. 2.3. PREFERRED SINGLE FAMILY HOUSING STYLES



## Missing Middle Housing.

It is a range of multi-unit or clustered housing types compatible in scale with single-family homes that help meet the growing demand for walkable urban living. The participants were introduced to different style of missing middle housing using precedent images and asked their like on a scale of 1 to 10 (1 being 'I don't like it all). They support a need for diverse housing in general within the Township with cottage court style and attached townhomes as their preferred style.

FIG. 2.4. PREFERRED MISSING MIDDLE HOUSING STYLES



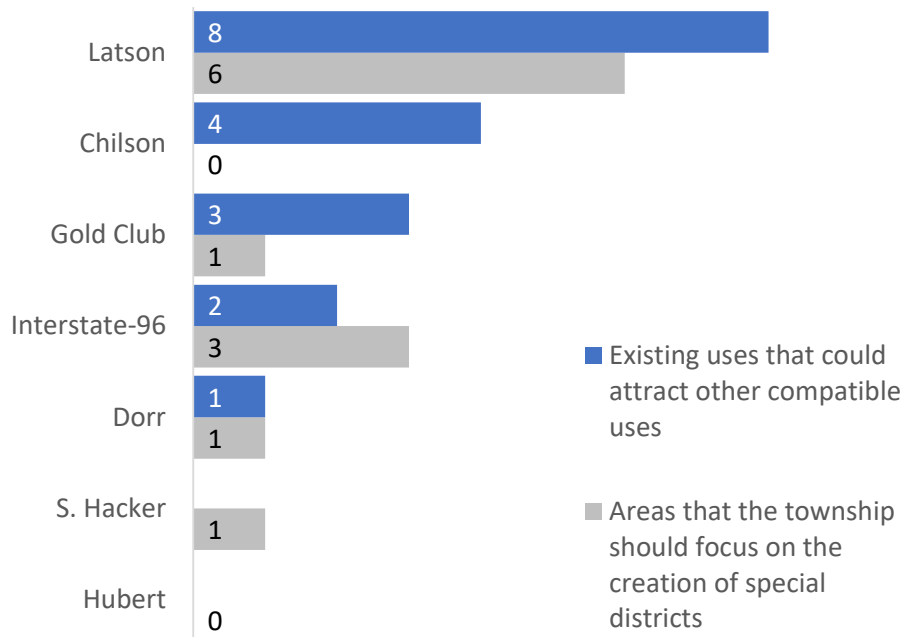


Source: Giffels Webster, 2021

### Grand River Corridor.

This poster was intended to get high-level input about identifying areas along Grand River Avenue for creating a potential special district (mixed-use town center developments). Seven locations were provided for input. Examples of potential uses are provided. There is strong support for Latson/Grand River intersection followed by Chilson/Grand River intersection.

FIG. 2.5. PUBLIC INPUT-GRAND RIVER CORRIDOR



## Future Land Use.

A copy of the 2015 Future Land Use Map was provided and the participants were asked to identify if there are any areas where they envision a different use in the Township than what is shown on the map currently. There were no areas recommended for change. However, a majority of respondents emphasized their support to keep the area near Brighton Lake Road and Chilson Road as low-density residential.

## Goals and Objectives.

The participants were provided a list of six goals (Housing is proposed to be added with this update, the rest of the goals were updated from the previous Master Plan). They were asked to rate them by their importance. The goal related to Natural feature is rated as most important by participants.



Source: Giffels Webster, 2021

FIG. 2.6. PRIORITY GOALS





Source: Giffels Webster, 2021

## Market Assessment Summary

# Market Assessment Summary

The following is a summary of the economic assessment, which was conducted throughout 2020 and early 2021 to reflect post-pandemic spending behavior. The evaluation is based on historical data, a survey of area residents conducted during this effort, property trends, and other information provided by the Chesapeake Group. The focus is on both current and future market conditions for residential and non-residential activity.

Genoa Township is located in Livingston County, between the cities of Brighton and Howell, and has an estimated population of about 20,300 in roughly 8,200 households, or about 11% of the county's population.

## Historical housing development

- Livingston County annually permitted a range of new housing units from a low of 174 units to 826 units between 2011 and 2020.
  - Genoa Township annually permitted a range from 6 units permitted in 2011 to 183 in 2017
- The County averaged 672 total units permitted and 78 multi-family structures from 2011 through 2020.
  - Genoa Township permitted an average of 28 single family units per year from 2010 to 2020
  - Genoa Township average 18 multi-family units per year, although all were constructed in 2017
- About 88 percent of the permitted units were single-family structures.
  - 77% of the units permitted in Genoa Township were single family

## Residential property trends

### Livingston County and Genoa Township

#### Home Sales

- For homes built before 2000, The average sale price is about \$456,000. The average unit is 2,527 square feet. The average sale price per square foot is \$181.
  - 78% of the housing stock in the Township was built prior to 2000
- For homes built from 2000 to 2020, the average price is about \$579,000. The average unit is 2,500 square feet. The average sale price per square foot is \$231.
  - 28% of the housing stock in the Township was built after 2000

#### Rentals

- The average one-bedroom unit is 795 square feet and rents for \$1,111 per month. The average rent per square foot is \$1.40 per month.
- The average two-bedroom unit is 1,075 square feet and rents for about \$1,325 per month. The average rent per square foot is \$1.25 per month.
- The average three-bedroom unit is 1,325 square feet and rents for about \$1,450 per month. The average rent per square foot is \$1.09 per month.
- The average rent in Genoa Township in 2020 was \$1,126 , indicating slightly lower prices in the Township than surrounding communities





## Residential Survey Findings

(Based on 270 unique survey responses)

- The annual mean average household income is \$149,600.
- The majority of households have incomes between \$30,000 and \$80,000.
- There is a range of household income levels from \$20,000 to more than \$250,000 annually.
- The majority have lived in their current home for at least ten years.
- Over 25% have lived in their home for less than five years, with 46% of these having lived there for two years or less.

### Commercial/Nonresidential market / Land Use

- Residents generally purchase goods in either Brighton or Howell.
- Meijer and Kroger dominate the grocery market. The combined market share for the two is 82 percent.
- 69% of respondents indicated their shopping habits will not change due to COVID-19
  - o 10% Now use pick-up service versus shopping in person and will likely continue after virus threat has diminished
- Pre Covid-19, more than one-half to two-thirds of all households purchased and ate dinner or lunch outside the home at least once a week.
  - o About one-third of lunch and dinner trips are to establishments in Genoa
  - o Most residents (91%) don't typically travel further than 15 minutes for dinner

### Entertainment and Outdoor recreation

- Before Covid-19, about one-third of the Genoa area households sought some form of entertainment outside the home at least twice a month.
  - o About 16 percent went to movie theaters at least twice a month.
- Many participate in some form of outdoor recreation regularly. Other than walking, about four in ten do not generally participate in outdoor recreation.

## Housing

- Key housing data for projections of future demand defined through the survey follows.
- The preponderance of homes in the area has three and four bedrooms.
- 99% of the responding households own their homes.
- 92% live there full-time, but 80 percent live there at least ten months in a year.
- The average respondent's home is about 2,500 square feet. However, about one in four live in homes less than 2,000 square feet.
- A significant minority - about 37 percent - defined a possible move to a different house in the next five years.
- Households likely to move are mainly, but not exclusively, those with primary income earners 55 years of age or older.
- The majority of those that may move are unlikely to move outside of Michigan.
  - o For those seeking larger units in the future, the current average unit is 1,650 square feet.
  - o For those seeking similar-sized units in the future, the current average unit is 2,300 square feet.
  - o For those seeking smaller units in the future, the current average unit is 2,650 square feet.
- Also, 17 percent of the households have one or more members that will probably move from their current home to create a separate household in the next three years. Those moving out create potential demand for new housing if the members can be captured in the Genoa area.

### Employment and labor force

- About 44 percent of the households responding to the survey did not have any member employed full-time. About one-half of these households had one or more employed part-time or employed at more than one part-time job.
- Almost one in three households defined Covid-19 as impacting current employment among their members. Impacts include unemployment, diminished hours, diminished contract work, etc.

## Demand Forecast

### Understanding Economic Forecasting Models and Marketable Opportunities

The economic forecasting methods used here, which model a potential range of marketable opportunities in commercial, office, and residential space, rely on property trends, historical, local and regional data, and a survey of area residents conducted during summer, 2020. They assess the overall Genoa market and its potential growth and determine how much potential economic activity that could occur inside the Township and is occurring outside of the Township.

No community will capture all marketable activity and space. Furthermore, economic conditions continue to change; in most cases, generally speeding processes already impacting the economy before Covid-19. Purchasing online was growing rapidly prior to Covid-19, resulting in the exportation of dollars; the online purchasing rate sped up since the pandemic. Large proportions of office and workspace were being built in or simply moved to homes, and more people were working from remote locations before Covid-19; as with spending habits, the speed of change has accelerated.

This is important context for understanding all forecasting numbers in this plan. The demand forecasts are not a simple estimate of what is expected to be built in Genoa Township, but are rather an estimate of what could be built in the market based on forecast demand; The Township will capture some fraction of this.

### Housing

Between 100 and 200 new non-single-family housing units could be added to the rooftops within the Township. The new housing units would be geared toward independent living for seniors and young households, with the latter containing workspace. Included could be semi-detached, townhome, duplex, and other related units. The units' locations should contribute to walkability and serve existing residents who would move to a previously defined scaled smaller unit from within the Genoa area. Such new units would most likely free up existing units to attract younger households.

### Retail goods and services

The survey indicates an opportunity to diminish the exportation of dollars from Genoa Township residents, particularly in food, food services, and linked entertainment activity. Genoa Township residents are expected to support between an additional 300,000 and 326,000 square feet of retail goods and related services space by 2030. Most commercial opportunities are appropriate for land/parcels/structures associated with the core of Genoa Township or vacant space near residential concentrations.

### Multi-tenant office space

New office space demand is sufficient to generate between 20,000 and 30,000 square feet of space, accommodated in vacant space, new development, and homes. The opportunity does not include those in the health care arena, such as outpatient infusion or surgery centers, or inclusion of higher educational institution space in Genoa Charter Township.

FIG 2.7. COMPOSITE CONSERVATIVELY ESTIMATED OPPORTUNITIES

The following figure summarizes the additional marketable activity for the Township by 2045.

The estimates are conservative, tending to understate demand to ensure Return-On-Investment for both the private and public sectors.



#### HOUSING 100-200

Additional non-single family units



#### RETAIL

150,000 - 170,000 sq. ft.  
+ Recapture of select categories; Retail Goods & Services, with appropriate entertainment



#### OFFICE

20,000- to 30,000 sq. ft.  
Including co-working space

## Goals and Objectives

# Goals and Objectives

**Goals** are general guidelines that explain what the community wants to achieve. Goals are usually long-term and represent global visions such as “protect the Township’s natural resources.” Goals define the “what,” “why,” and “where,” but not the “how.” Identifying obstacles to overcome is also useful in defining goals.

**Objectives** identify the milestones that mark progress in achieving goals and provide more of the “how” goals will be implemented. For example, with a goal of “protect the Township’s natural resources,” an objective to “maintain the Township’s tree cover” is something that may be measured and tracked over time.

**Action items** are more specific and define the steps to accomplish objectives and attain the identified goals. The most effective action strategies will include who will tackle that task and when it should be accomplished. Using the above example objective of maintaining tree cover, one action strategy might be: “Using the Township’s GIS data, map the current tree cover in the Township.”

## The overall goals of this Master Plan are to:

- Accommodate a variety of Land Uses in a logical pattern and complement community goals, the surrounding Land Uses, environment, capacity of roads and the sanitary sewer, and public water system capabilities.
- Provide land owners with reasonable use of their land in a manner that is compatible with adjacent Land Uses and the overall Land Use plan for the Township and the capacity of infrastructure.
- Promote harmonious and organized development consistent with adjacent Land Uses.
- Develop and maintain flexible codes and ordinances to meet the needs of current and future residents
- Manage development by maintaining a growth boundary to encourage efficient use of land, protect farmland and natural features, and allow the efficient provision of public services, utilities, and infrastructure.



# 1 Housing & Neighborhoods

**Pattern of Development.** Genoa Township is largely comprised of single-family homes, many of which are on large, rural lots. Housing is dispersed throughout the Township, with concentrations near the cities of Brighton and Howell.

**Character.** Housing and neighborhoods influence the character of the Township through the placement of homes on lots, the size of lots, the space between homes and the architectural designs, materials and colors of homes.

**Variety.** The housing types in Genoa Township are predominantly single-family, owner-occupied homes, but multi-unit housing options are available. To accommodate current and future residents, the Township will continue to offer a variety of home types in terms of size, style and location, ensuring that housing is available for a variety of ages, abilities and income levels.

**Infrastructure.** Neighborhoods will be strengthened by well-maintained infrastructure, including local roads, water, sewer and utilities that will be improved as needed to meet the needs of Township residents, while respecting the established natural features setbacks.

**Connectivity.** Neighborhoods near commercial nodes and connected neighborhoods will enable residents to minimize vehicular travel as well as maintain social networks with their neighbors.

## Objectives

- Allow the pattern of homes on large rural lots to continue where it exists, particularly south of I-96.
- Focus new housing on concentrated areas near already-developed areas
- Ensure new development is of high quality and design.
- Ensure that housing is available near transportation corridors, goods and services.
- Encourage student housing associated with Cleary College.
- Encourage housing for older residents near medical facilities as well as goods and services.
- Encourage the ongoing maintenance and upkeep of housing
- Support older residents who wish to stay in their homes as long as possible.
- Allow existing lakefront homes to be improved and expanded without compromising the established character of the lake neighborhoods or water quality.
- Limit impact of short-term housing rentals

**Measures of Success.** How can the Township track progress towards the goals?

- The variety of housing types (single-family, two-family, etc.) increases
- There is a range of housing at various price points
- The number of housing units within ½ mile of Grand River Avenue increases
- The amount of open space south of I-96 remains constant
- Tree cover increases
- Water quality of local water bodies improves



## 2 Economic Development

**Job Creation.** Grand River Avenue is a well-developed commercial and transportation corridor in the Township that provides local jobs and employment. Quality industrial and technology-based development near Grand River and at I-96 Interchange areas in the Township will help diversify the tax base with room for future expansion, where not in conflict with surrounding Land Uses. Utilities, including broadband services, support local businesses and residents with home-based businesses.

**Mix of Goods and Services.** Genoa Township is centrally located in Livingston County, offering a wide variety of goods, services and jobs to residents and visitors. The Township will strive to attract new businesses that lead towards the creation of “hubs” of activity. Work with hospitals and service providers to coordinate programming and leverage synergies to recruit compatible users that will promote the Grand River Corridor east as a community health hub

**Development.** Development and redevelopment will be strategically located, primarily along the Grand River corridor to provide employment, shopping and recreational opportunities for current and future residents of the Township. High-quality site and building design will contribute to strong neighborhoods, vital shopping districts, and desirable employment centers. Support residents who work from home, either on a full-time or part-time basis.

### Objectives:

- Allow flexibility of uses in the Grand River corridor.
- Ensure uses that rely on the interstate highway for logistics/transportation have adequate access.
- Work with property owners to identify and locate compatible/complementary users in concentrated areas to promote a thriving economic ecosystem.
- Strengthen the reputation of Genoa Township in the region for business development and job creation.
- Ensure adequate housing for the local workforce to support economic development.
- Support local broadband and technology services that will allow residents to work from their homes

**Measures of Success.** How can the Township track progress towards the goals?

- Commercial building permits increase
- Sign permits increase
- The number of jobs in the Township increases
- The number of residents who work in the Township increases
- The number of housing units within ½ mile of Grand River Avenue increases



# 3 Natural Features

**Environment.** The character of Genoa Township is distinctly defined by significant, sensitive natural amenities such as water bodies, wetlands, slopes, mature trees and natural ecosystems. This local ecosystem supports flora and fauna as well as the residents who call the Township home. The Township will engage the community with efforts to protect its local environment and protect the quality of the community's lakes and water resources from overcrowding and overuse.

**Sustainable Development.** The Township recognizes the importance of long-range planning combined with strategic actions to meet the current needs of residents and business owners without compromising the ability of future generations to meet their needs too. Particularly with respect to its many lakes, wetland and woodlands, the Township strives to protect and preserve the natural environment, recognizing the way in which it supports community health, promotes a prosperous economy, and a creates a vibrant and equitable community for all.

**Resiliency.** The Township seeks to be resilient with respect to environmental hazards, recognizing ways in which ongoing, persistent stresses, that impact the community over time as well as sudden, single events that disrupt the day-to-day functioning of the community.

## Objectives:

- Protect natural areas by limiting development to areas with existing infrastructure and strictly enforcing the natural features setback
- Create strategies to conserve water and energy and reduce waste
- Protect the Township's groundwater resources by increasing wellhead protection and undertaking measures to prevent groundwater pollution.
- Concentrate development so there is minimal conflict between the man-made and natural environment.
- Establish Land Uses that are compatible with designated open space
- Identify ongoing environmental stresses, such as invasive species, in the community and the potential for sudden events, such as flooding, and prepare plans to mitigate their impacts.
- Increase tree cover and reduce impervious surfaces in developed areas to better manage stormwater and mitigate impacts of climate change.
- Monitor septic capacity to ensure lake front properties are properly maintained and direct new development to areas that have sufficient facilities

**Measures of Success.** How can the Township track progress towards the goals?

- The amount of open space in the community remains constant
- Tree cover is maintained or increases
- Impervious surfaces decrease
- Water quality improves in local bodies of water



# 4 Transportation

**Multi-modal.** Genoa Township's transportation network is comprised of regional and local roads, highways, sidewalks and multi-use trails and pathways. Together, these modes of transportation offer residents and visitors the ability to work, shop, dine and recreate. Transit options will be accessible to support local residents and businesses.

**Cooperative.** A safe, equitable, efficient transportation system will be maintained, in conjunction with county and state road agencies, in a cost-efficient manner that enhances the character of the Township, supports multiple modes of travel and meets the mobility needs of residents of all ages and abilities. Regional traffic through Township will have minimal conflict on local streets, utilizing traffic calming techniques.

**Local.** Local roads will be maintained and improved to support safe travel within neighborhoods as well as to provide access to community facilities, goods and services. The development of new commercial and residential uses will be concentrated along the Grand River corridor to allow residents opportunities to walk rather than drive personal vehicles as well as accommodate walking between uses to reduce traffic congestion. Changes in development will be supported by related road improvements.

## Objectives:

- Maintain the pathway along Grand River Avenue through the Township.
- Allow and encourage the mix of commercial and residential uses along the Grand River corridor.
- Partner with county and state road agencies to support non-motorized travel, improve safety and mitigate traffic congestion.
- Partner with local and regional agencies to develop transit options.
- Create a Complete Street network in the Township to allow residents opportunities to safely access community destinations through a variety of modes, including additional pathways and crossings.
- Prioritize the Dorr Road highway crossing for pedestrian accommodations when improvements are made

**Measures of Success.** How can the Township track progress towards the goals?

- Traffic crashes decrease
- Pathways increase
- The number of residents with access to non-motorized transportation facilities increases
- The number of residents with access to transit services increases
- The number of residents who work in the Township increases
- The number of housing units within ½ mile of Grand River Avenue increases
- The number of bus stops increases (LETS)
- The number of pedestrian crossing signals in the Township increases



# 5 Public Facilities and Services

**Infrastructure.** The Township will continue to provide utility improvements only in locations best suited for development to support managed growth and provide a growth boundary to ensure development is consistent with infrastructure planning. The Township will encourage resilient and sustainable infrastructure facilities, including alternative energy production,

**Community-building.** The Genoa Township Park is a centrally located full-service park and open space area that will continue to meet the needs of current and future residents with a wide variety of active and passive recreational opportunities. This park serves as a hub for community activities and is an identifiable place that promotes the identity of Genoa Township.

**Partnerships.** Public services are provided by not only Genoa Township, but also with assistance from the adjacent Townships and the cities of Brighton and Howell to provide area residents with high quality community services and facilities.

## Objectives:

- Plan for infrastructure improvements and ongoing proactive management of local utilities, facilities and roads.
- Partner with local agencies to ensure long-term management of local infrastructure.
- Maintain and enhance recreational amenities at the Township Park to accommodate the needs of current and future residents of all ages and abilities.
- Partner with adjacent communities, local agencies and the county to provide recreational facilities and programs for residents.
- Identify alternative funding sources for infrastructure and recreation improvements.
- Encourage installation of alternative energy facilities, including solar.

**Measures of Success.** How can the Township track progress towards the goals?

- The number of residents using the Township Park increases
- Revenues from utilities cover associated expenses of maintenance and improvements
- The amount of alternative funding increases.
- The number of electric vehicle charging stations increases

# Future Land Use Plan

# Future Land Use Categories

## Housing

There are six residential Land Use designations intended to provide a variety of housing options in terms of style and price range for current and future residents of all ages and abilities in Genoa Township. Intended densities range from one dwelling per five acres to 8 dwellings per acre and are applied in a way that is consistent with the Township's goals. Areas intended to reinforce the rural character of the Township have limited utility access and will serve for large-lot residential homes; these areas are only intended for residential uses or small-scale neighborhood-serving non-residential uses. To advance the Township's walkability and economic development goals, different housing types, from small-lot single-family homes to multiplexes and mixed use residential, are envisioned in areas that can support such development, with available utilities, and offer destinations to which local residents can walk.

**Agricultural/Country Estate:** The intent of this designation is to protect lands for agricultural use or to permit limited development with single family homes. Many of the areas are prime farmland or have significant natural limitations such as wetlands or severe soil limitations. As these areas are not planned for sanitary sewer, they can only support low density residential development. This classification is recommended for single family residences on lots no smaller than 5 acres.

**Rural Residential:** This designation identifies areas to be developed as single family residential on large lots. Many of the areas have significant natural limitations such as wetlands or severe soil limitations and are not planned for sanitary sewer. These areas are only intended for residential uses or small-scale neighborhood-serving non-residential uses. This classification is recommended for single family residences on lots no smaller than 2 acres or clustered development with a net density of 1 unit per acre.

**Low Density Residential:** This designation is for single family residential development located between rural residential areas and the more developed areas of the Township. While these areas are not planned for sewer service, they have fewer environmental constraints found in the Rural Residential. These areas are only intended for residential uses or small-scale neighborhood-serving non-residential uses. Single family residential uses within these areas will be located on lots of at least 1 acre in size.

**Small Lot Single Family Residential:** This designation refers to two distinct groups of single family residential uses: the older homes around Lake Chemung and the Tri- Lakes area and newer, small lot, single family subdivisions located within the more urbanized area of the Township. Secondly are These areas will generally be, or are planned to be, served by public water and sanitary sewer. Single family residential uses located within these areas will typically be located on lots ranging from 14,520 square feet to 21,780 square feet in size or 2 to 3 units per acre.

**Medium Density Residential:** This designation refers to medium density duplexes, attached condominiums and other multiple-family dwelling units. This area may also be developed with single-family homes on smaller ¼ acre lots. This designation is found within areas served, or planned to be served, by public water and sanitary sewer. New residential development should be located close to goods, services and job centers and should accommodate residents of all ages and abilities. Development will be at a density consistent with the infrastructure and land capabilities but will not exceed a density of 5 units per acre.



**High Density Residential:** This designation refers to higher density condominiums, apartments and other multiple family dwellings. This designation is found within areas served, or planned to be served, by public water and sanitary sewer and should primarily be located along the Grand River Corridor. Development should respond to infrastructure and land capabilities and should not exceed 8 units per acre unless designed to minimize impacts on adjacent uses by limiting impervious surfaces, adding green space and including community gathering spaces. This designation includes existing manufactured housing/mobile home parks; no new mobile home park areas are anticipated.

## Commercial

The Township is planning for commercial development that serves both residents and visitors. A small-scale, low-intensity type of commercial closer to existing residential neighborhoods that may include goods, services and limited office uses will serve local residents. The Grand River Corridor will serve both local residents and, closer to the cities of Howell and Brighton as well as near the freeway, visitors and regional residents. In the corridor, commercial uses will include goods, services, offices and, in “hub” or “district” areas, residential uses.

**Neighborhood Commercial:** Retail and service establishments whose primary market area includes residents and employees from within a two-mile radius are designated by this category. These retail businesses and services are intended to serve the needs of nearby residential neighborhoods. Typical uses would include smaller general merchandising/retail establishments such as convenience stores, banks, dry cleaners, and beauty/barber shops, and small retail strips. Low trip-generating professional office uses (not medical) will serve not only local users of such services, but also will allow local residents the opportunity to work closer to home.

**Interchange Commercial:** Rather than typical interchanges where gas stations and fast food establishments are built piecemeal with little consideration for aesthetics, the intent of this designation is to promote planned development of these interchange commercial uses with high quality architecture. The Latson interchange is envisioned to be the premier exit for travelers along I-96: a destination where they can get out of their vehicles to walk around, dine, and shop.

- Appropriate uses include fast food, sit-down restaurants, gas stations, retail, and entertainment
- This area may be subject to design guidelines promoting walkability, increased landscaping standards, pedestrian-scale building siting and massing, and outdoor dining/gathering.
- Very few access points: each development shall provide access connections to adjacent properties so that there may be a shared access connection to a future traffic signal.

**Interchange Campus:** The intent is to create a district in the I-96 corridor that will accommodate large-scale institutional campuses close to the interchange without leap-frog development further south. The Future Land Use Map includes a “future transition area” south of this designated area. The Township will evaluate when it is appropriate to allow more intensive development in this area, based on surrounding development, demand for growth, and the ability for the area to accommodate the additional demands on utilities, transportation network and public services.

- Possible principal uses alone or in combination: medical center/clinics, higher education satellite, corporate offices, high-tech research & development (with no external impacts), indoor sports center, conference center/hotel, health clubs, office centers, or senior living. Ancillary uses that have a direct connection to the principal use are allowed and should be part of the overall plan, such as limited restaurants and professional services when included as part of an overall development.
- Any large-scale development should be a well-planned, campus-like setting, planned in close coordination with the Township. Upon submittal of the first development proposal for this area, an overall development plan must be provided. This plan shall guide development in the interchange campus area including signs, access/circulation, building design, landscape, and streetscape.

See the Appendix for additional information about this area as developed in the 2013 Master Plan

## Industrial

**Industrial:** The intent is to develop industrial uses such as research, wholesale and warehouse activities and light industrial operations which manufacture, compound, process, package, assemble and/or treat finished or semi-finished products from previously prepared material. The processing of raw material for shipment in bulk form, to be used in an industrial operation at another location is found only in very defined and limited portions of this area.

**Research and Development:** This area should be developed as a light industrial/R&D/office park. High quality building architecture should be utilized to convey a high-quality image. Enhanced landscaping and screening should be provided along adjoining major thoroughfares. Flexibility in some zoning requirements may be considered in exchange for these aesthetic enhancements. There are two areas designated as R&D: one in the eastern end of Grand River near Euler Road that is partially developed and the second in the northwest, bounded by I-96 and the railroad, bisected by Chilson Road. These may be good areas to consider for alternative energy facilities, notably solar energy. Particularly along the Chilson Road corridor, as the eastern portion is land-locked with the highway and railroad. This area could serve as workforce housing, if it had non-motorized access over the railroad to Victory Drive or Grand Oaks Drive.

## Other

**Public/Quasi-Public:** These are institutional land areas to be occupied by government, utility or civic uses such as churches, parks, state, county and municipal facilities and major utility lines.

**Private Recreational:** These are areas designated for private recreational facilities such as golf courses, campgrounds and private parks. Because they are primarily located in residential areas, should these uses cease, any future redevelopment is anticipated to be consistent with low density residential.

### Redevelopment of Public/Quasi-Public Sites:

Development pressures may lead to a demand for some public sites or private recreational property to be developed with other types of uses. If there is any redevelopment of

## What are “regional” uses?

Regional uses are typically located in geographic area, or “regional centers,” intended to serve as the focal points of regional commerce, identity, and activity. They cater to many neighborhoods and communities and serve a significantly larger population than the community in which they are located.

Regional centers contain a diversity of uses such as corporate and professional offices, retail commercial shopping centers and malls, government buildings (county or district-serving), major health facilities, major entertainment and cultural facilities and supporting services. Housing may be integrated with commercial uses to serve as workforce, support services, recreational uses, open spaces, and amenities.

Regional centers, typically, provide a significant number of jobs and many non-work destinations that generate and attract a high number of vehicular trips. They are typically high-density places whose physical form is substantially differentiated from the lower-density neighborhoods of the community. Such uses are ideally located with convenient access to major thoroughfares and freeways that can sustain high vehicle travel without generating traffic on local streets (i.e. contained to Grand River and 96)

public sites or private recreational lands, proper Land Use relationships must be maintained to ensure design and uses are compatible with the planned character of the surrounding area. In addition, since most of those sites have significant open space or natural features, some element of those features should be preserved. The Planned Unit Development (PUD) option contained in the Zoning Ordinance would be a good approach for this type of redevelopment. PUD provides design options to permit flexibility in the regulation of land development and innovation in design.



## Grand River Corridor Mixed-Use Districts

This designation generally covers most of Grand River Avenue as it runs east-west through the northern part of Genoa Township and intends to allow flexibility of Land Uses while ensuring quality development and redevelopment. In these areas, commercial and residential uses, provided in a horizontal or vertical mixed use development pattern, will complement each other, creating “hubs” or “districts” of mutually supportive uses. It is envisioned that people may live near their places of work as well as near goods, services and entertainment uses and visitors to the areas who arrive by car can park once and walk to a variety of destinations. Site layout, landscaping, building design and connectivity will be important. Throughout these areas, walkability is encouraged, and identifiable “places” will be created to reflect a unique identity to Genoa Township.

A mix of uses may occur as vertical mixed-use, horizontal mixed-use or a mix of the two in one development. Vertical mixed-use is intended to allow for a combination of different uses in the same building where non-residential uses occupy the bottom portion of the building and residential on upper floors. Horizontal mixed-use allows commercial and residential uses on adjacent parcels that together may create a “hub” or district. Buildings will range from one to three stories and be set back from single family neighborhoods when they’re adjacent to the corridor. Screening to buffer single family neighborhoods from noise, light and traffic will also be important; however, pedestrian access should be maintained. Placemaking elements, such as street lights, trees and furnishings, along with public art and signage, will help reinforce the identity of this important corridor.

A variety of housing is envisioned in these areas as an alternative to some of the larger lot residential areas elsewhere in the Township. Housing in the mixed use areas will be smaller homes on smaller lots and multi-family dwellings. This housing will generally be more affordable than larger homes on larger lots, easier to maintain and serve a broad range of age groups, from college students to young professionals and older residents.

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. See page 3.34 for more details.

### East Grand River District

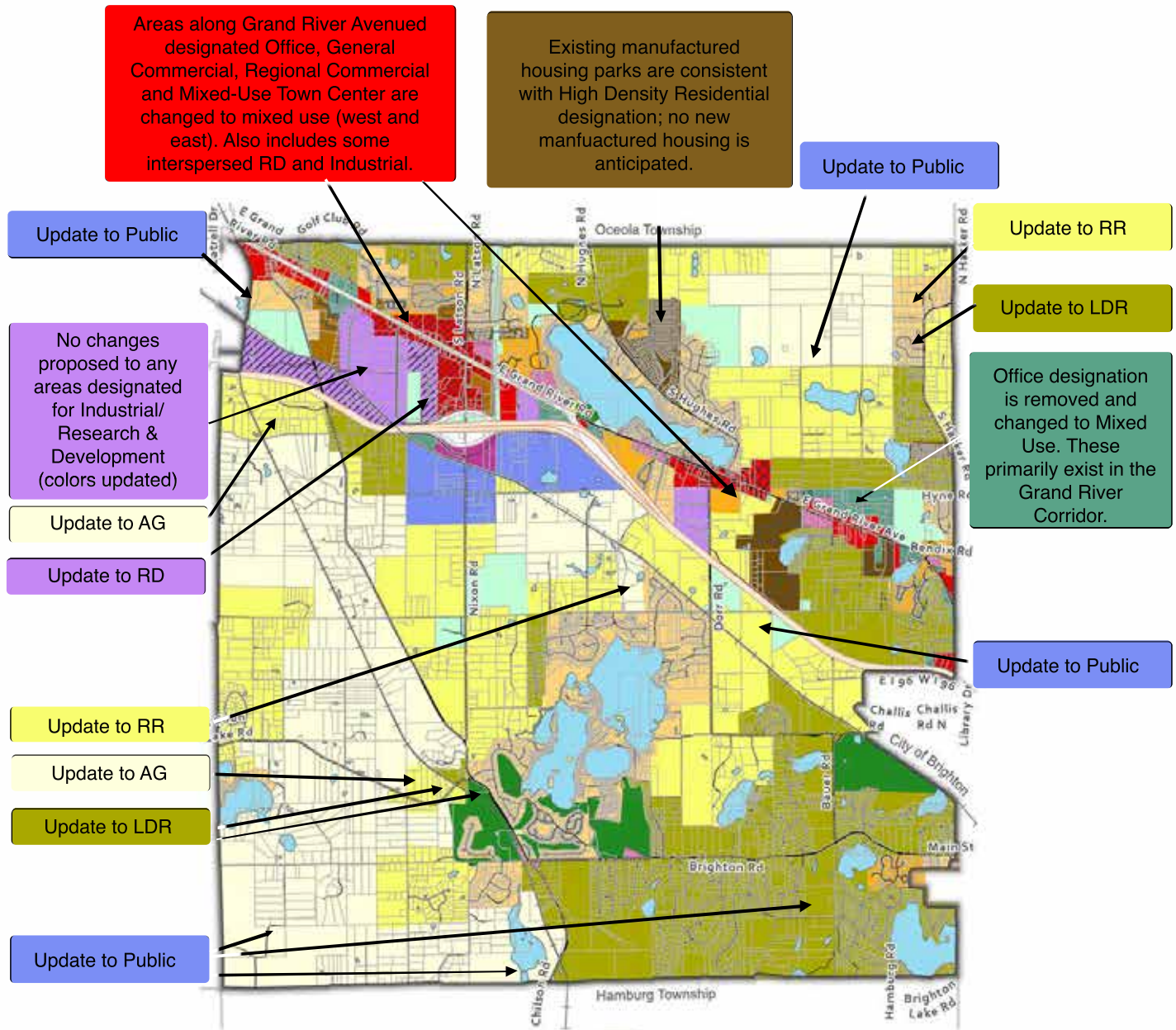
This district covers the area from the Township’s eastern border (north of Herbst) west to the I-96 interchange. It includes the “lake district,” where public access to Lake Chemung is provided on Grand River Avenue and also the “health hub,” which is a potential development area centered around St. Joseph Mercy Health Center. Both of these recognizable amenities offer opportunities to locate jobs, retailers, restaurants, recreation/entertainment, office and residential uses in a way that focuses on and supports community health. Buildings are intended to be one- to two-stories and sites developed in a way that minimizes the importance of the automobile and prioritizes the pedestrian. Housing in this area could focus on housing for older residents, providing them easy access to nearby medical facilities as well as other goods and services.

### West Grand River District

This district will reach from the I-96 interchange at the east end to the western boundary of the Township, west of Golf Club Drive. This area is envisioned for a higher intensity of commercial and residential uses than the East Grand River District. Currently developed with general commercial and office along Grand River, this area is intended to continue to promote these uses that are supported by area and regional residents as well as pass-by traffic along Grand River Avenue, including interchange traffic from I-96. Buildings of one- to three-stories are envisioned, with higher and larger buildings set back from single family residential. Residential uses could range from attached units to stacked flats and will contribute to the workforce and customer base for the district.



MAP 3.1. CHANGES TO FUTURE LAND USE MAP



Consolidate land use categories as noted on the map.

0 1,250 2,500 5,000 Feet

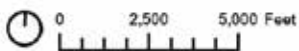
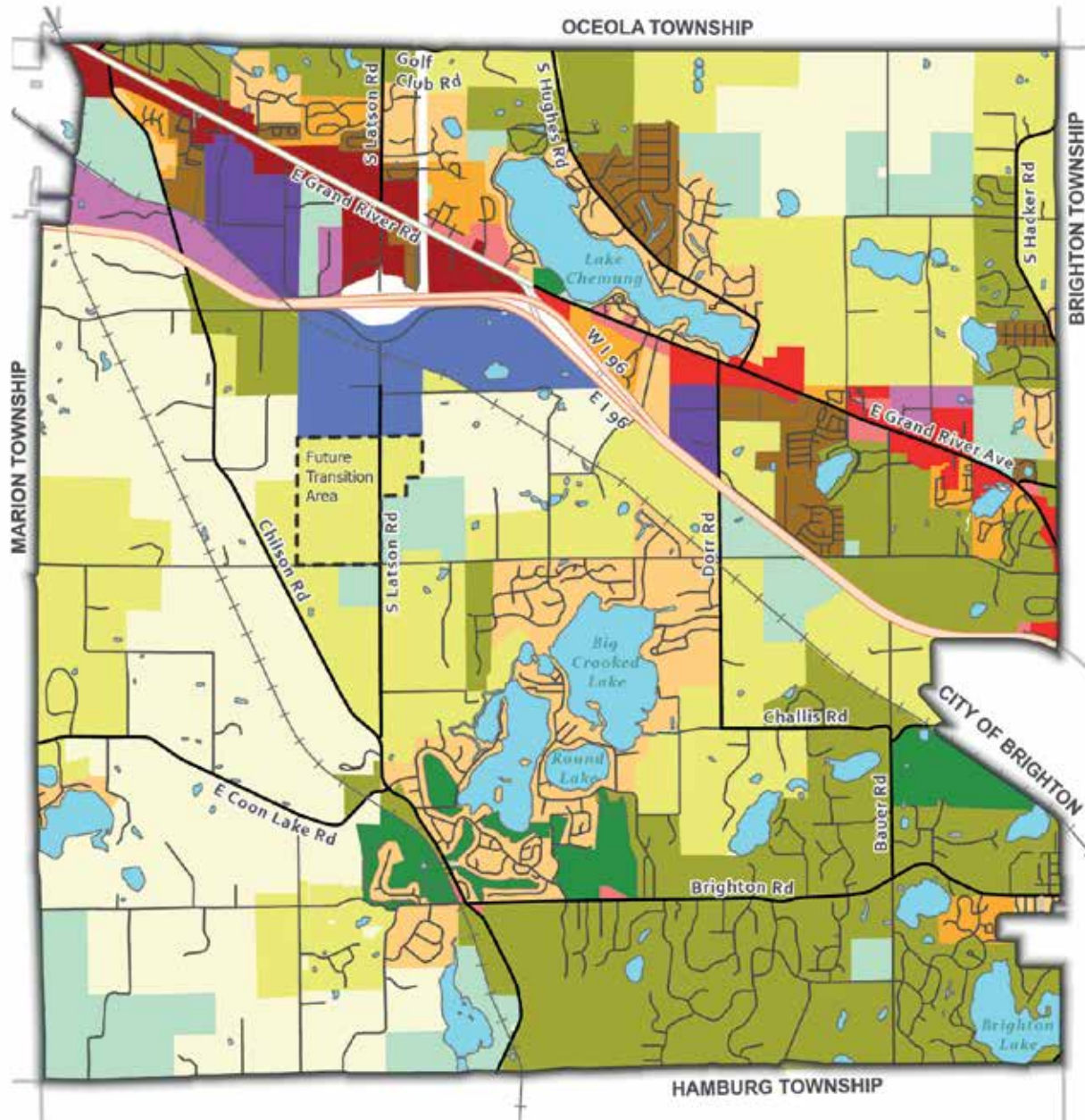
**FLU 2015**

Ag/Country Estate	Manufactured Housing	Research and Development
Large Lot Rural Res	Neighborhood Commercial	Public/Institutional/Utilities
Low Density Res	General Commercial	Private Recreation
Small Lot Single Family Res	Regional Commercial	Interchange Campus
Med Density Res	Mixed-Use Town Center	Interchange Commercial
High Density Res	Office	Industrial

**FUTURE LAND USE**  
GENOA TOWNSHIP



MAP 3.2. FUTURE LAND USE PLAN



The Future Land Use Map, along with the entire Master Plan document, is a policy guide for local land use decisions. The boundaries reflected on the map are general and are not intended to indicate precise size, shape, dimensions or individual parcels. In addition, where the Future Land Use Map and the Zoning Map are not in alignment, it does not necessarily suggest that that rezoning is imminent; rather, the Future Land Use Map sets forward recommendations to achieve long-range planning goals.

- Ag/Country Estate
- Large Lot Rural Res
- Low Density Res
- Small Lot Single Family Res
- Med Density Res
- High Density Res
- Neighborhood Commercial
- Mixed Use - East Grand River
- Mixed Use - West Grand River
- Industrial
- Research and Development
- Interstate Campus
- Public/Institutional/Utilities
- Private Recreation
- Interchange Transition Area - future land use and the utility service area will be reconsidered in this area concurrent with a proposal for actual campus uses (see Appendix)



**FUTURE LAND USE**  
GENOA TOWNSHIP



## Growth Area Boundary

The 2013 Master Plan establishes a growth boundary. Areas within the growth boundary include the Grand River Avenue/I-96 corridor between Brighton and Howell and areas surrounding the City of Brighton. This section includes the relevant text from the previous plan. The growth boundary is not intended to be static, but should be evaluated on a regular basis. In the future, the Township should consider updating the growth boundary based on the criteria listed in the following page.

At this time, there is considerable development pressure along Latson, south of the primary growth area to Crooked Lake Road, but the Township is not ready to extend the primary growth area nor infrastructure at this time. This is an area to be reviewed in the next 5-year review of the Master Plan.

The residents of Genoa Township have consistently said that preserving the natural beauty of the Township and controlling urban sprawl are important priorities for planning the community. The Township also desires to be able to provide efficient infrastructure services to support development. One of the most effective ways to meet both of these goals is with a “growth boundary.”

The growth boundary concept in the plan is designed to encourage the following:

- Efficient Land Use,
- Protection of farmland and natural areas,
- Efficient provision of utilities, services and infrastructure,
- An efficient transportation system,
- Locations for economic growth, and
- Diverse housing options.

The growth boundary marks the separation between rural and urban areas and defines land that can efficiently support urban services such as sewer, water and roads. Secondary growth areas are also provided adjacent to the City of Brighton for low density residential.

Development outside the boundary is not prohibited; however, because public utilities are not available in these areas, development needs to be maintained at a relatively low intensity and the character of development needs to not adversely impact natural features and agricultural uses.

Areas within the growth boundary include the Grand River Avenue/I-96 corridor between Brighton and Howell and areas surrounding the City of Brighton. Land within the growth boundary are separated into two distinct areas:

**Primary growth areas** are currently served or available to be served by public sewer and water. These areas include single family and multiple family residential at higher densities with public water and sewer, commercial centers, industrial parks and mixed-use centers.

**Secondary growth areas** do not have sewer and water, but due to their proximity to the cities of Brighton or Howell, are appropriate for infill with low density residential. Typical lot sizes will be around one acre or clustered developments at an overall density of two acres per dwelling.

**Rural Reserve areas** outside of the growth boundary should be maintained at a relatively low intensity rural character of development that will not adversely impact natural features and agricultural uses.

There is presently vacant or under-utilized land within the growth boundary that can be served by public water and sewer. By focusing new development in these areas, the Township and the County can more efficiently provide the necessary infrastructure to support new growth.

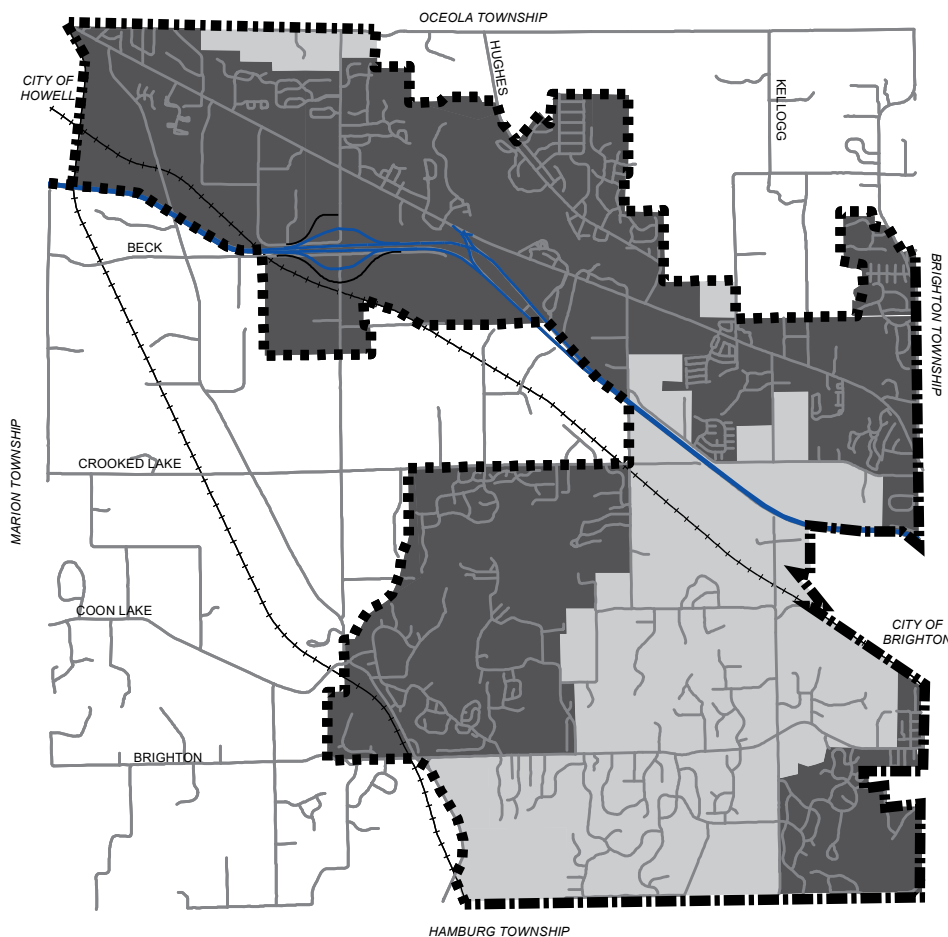
**Planned development.** This Master Plan Update plans for a mix of uses along Grand River, all of which is located inside the growth boundary and currently has the public utility and transportation infrastructure to support development. This higher density corridor will form compact, walkable areas for housing, shopping, employment, cultural and recreational activities.

An extension of utilities south of I-96 to the Latson subarea was a determining factor in the planned Land Uses for that area. After the interchange is completed, the area should be monitored annually for potential development and proposed expansion of the growth boundary south. This intent is supported by the associated zoning standards. These standards include evaluation factors to allow for expansion as the Township feels is appropriate.

## Criteria for updating growth boundary

- Amount and capacity of undeveloped or under-developed land currently within the growth boundary, which should be used to satisfy the demand for development prior to expanding the boundary.
- Projected population growth within the Township and demand for other land areas for commercial or industrial development.
- The ability to extend public water and sewer to serve new land areas outside of the growth boundary.
- The capacity and condition of the road system to support the new growth areas.
- The ability of the Township, County and other public agencies to provide necessary services to the new growth areas and the additional resulting population.
- The impact of higher density development from expanding the growth boundary will have on natural features, agricultural uses and rural character.
- Consistency with the goals and objectives of the Master Plan.

MAP 3.3. 2015 GROWTH BOUNDARY



**MAP 8**

**Growth Boundary**

Master Plan Update  
Genoa Township  
Livingston County, MI

- Growth Boundary
- Primary Growth Areas
- Secondary Growth Areas
- Rural Reserve Areas

December 2015

0 0.25 0.5 1 1.5 Miles

Sources: MCGI, Livingston County, Genoa Twp

# Housing Plan

# Housing Plan

The overall intent of the Housing Plan is to outline a strategy to ensure that the housing needs of Township's current and future residents will be met. The Housing Plan refines the residential Land Use designations identified in the Land Use Plan.



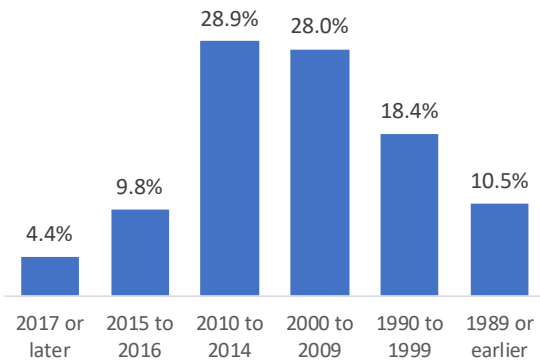
## Current Housing

Housing represents the strength of the local economy and overall community appeal. Older housing reflects the physical, historic and social context of a community. The age of housing influences local housing policies for rehabilitation and redevelopment. Older houses require additional maintenance and upkeep, and may also require upgrades to ensure energy efficiency, barrier free access and increased livability for aging adults. In 2018, of the Township’s 8,732 housing units, 78% were owner-occupied, 16% were occupied by renters and 6% remained vacant. This is consistent with the county rates (see table)

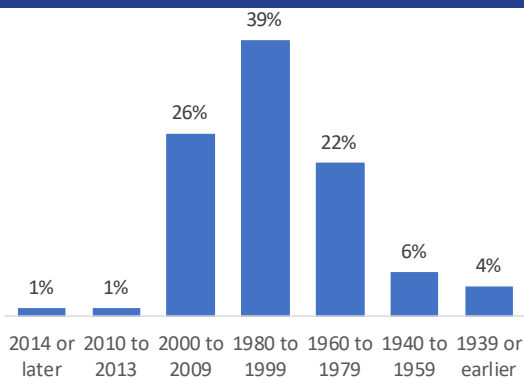
### Housing Age

Most householders moved into their homes between 2010 and 2014 (28.9%), followed by 2000 to 2009 (22.5%) (See Chart below). The inflow of new householders drastically dropped from 2016 to a low of 4.4% in 2017. This corresponds with the age of housing in Genoa. Most of the houses in the Township are older than 30-40 years older, a majority being built during the years 1980 to 1999. Housing construction almost stopped since 2010.

**FIG.3.1. YEAR HOUSEHOLDER MOVED: GENOA**



**FIG.3.2. YEAR HOUSING BUILT: GENOA**

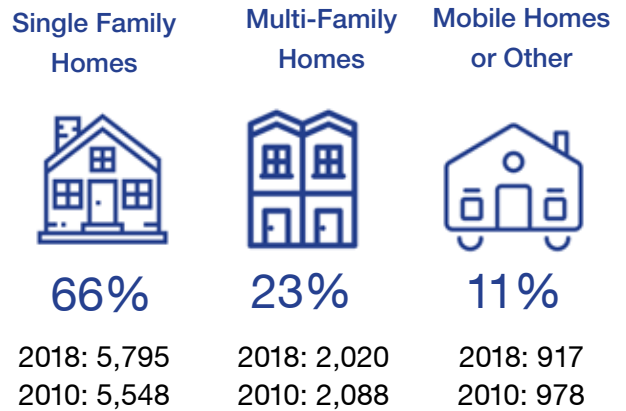


Source: SEMCOG Community Profiles

### Housing Types

Single-family detached housing is the predominant housing type in the Township, making up 66 % of all units. See the image below for more details. Since 2010, the number of single family homes increased while the other type of housing reduced. However, the change in both cases is insignificant.

**FIG.3.3. HOUSING TYPES: GENOA**

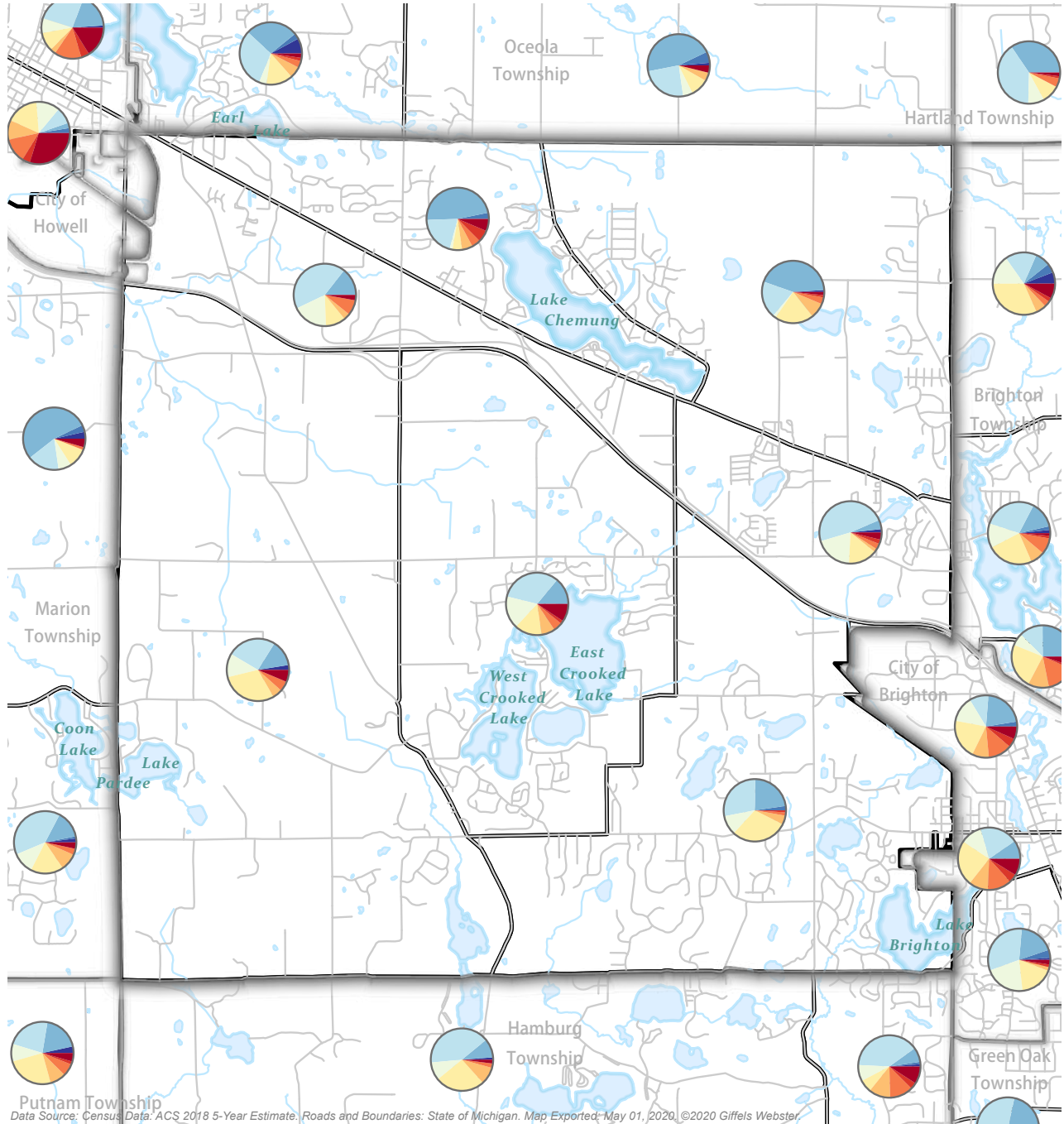


### Housing Value

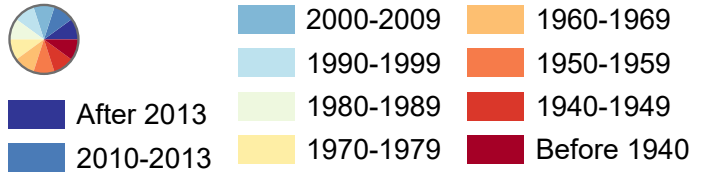
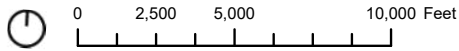
The median housing value in 2018 in Genoa Township was \$259,800 (see Table). The Township has seen a reduction of 3.6% in housing values since 2010. The Township housing and rental rates are comparable to surrounding communities. The median housing value is 78% higher than the state.

**TABLE 3.1. HOUSING DATA: SURROUNDING COMMUNITIES**

	Owner-Occupied housing unit rate, 2014-18	Median value of owner-Occupied Housing units, 2014-18	Median gross rent, 2014-18
United States	64%	\$204,900	\$1,023
Michigan	71%	\$146,200	\$850
Livingston County	85%	\$233,400	\$1,011
<b>Genoa Township</b>	<b>83%</b>	<b>\$259,800</b>	<b>\$1,101</b>
Oceola Township	90%	\$239,700	\$1,209
Brighton Township	96%	\$278,300	\$1,130
Brighton City	60%	\$194,600	\$1,005
Hamburg Township	93%	\$244,300	\$1,017
Marion Township	94%	\$244,300	\$1,017



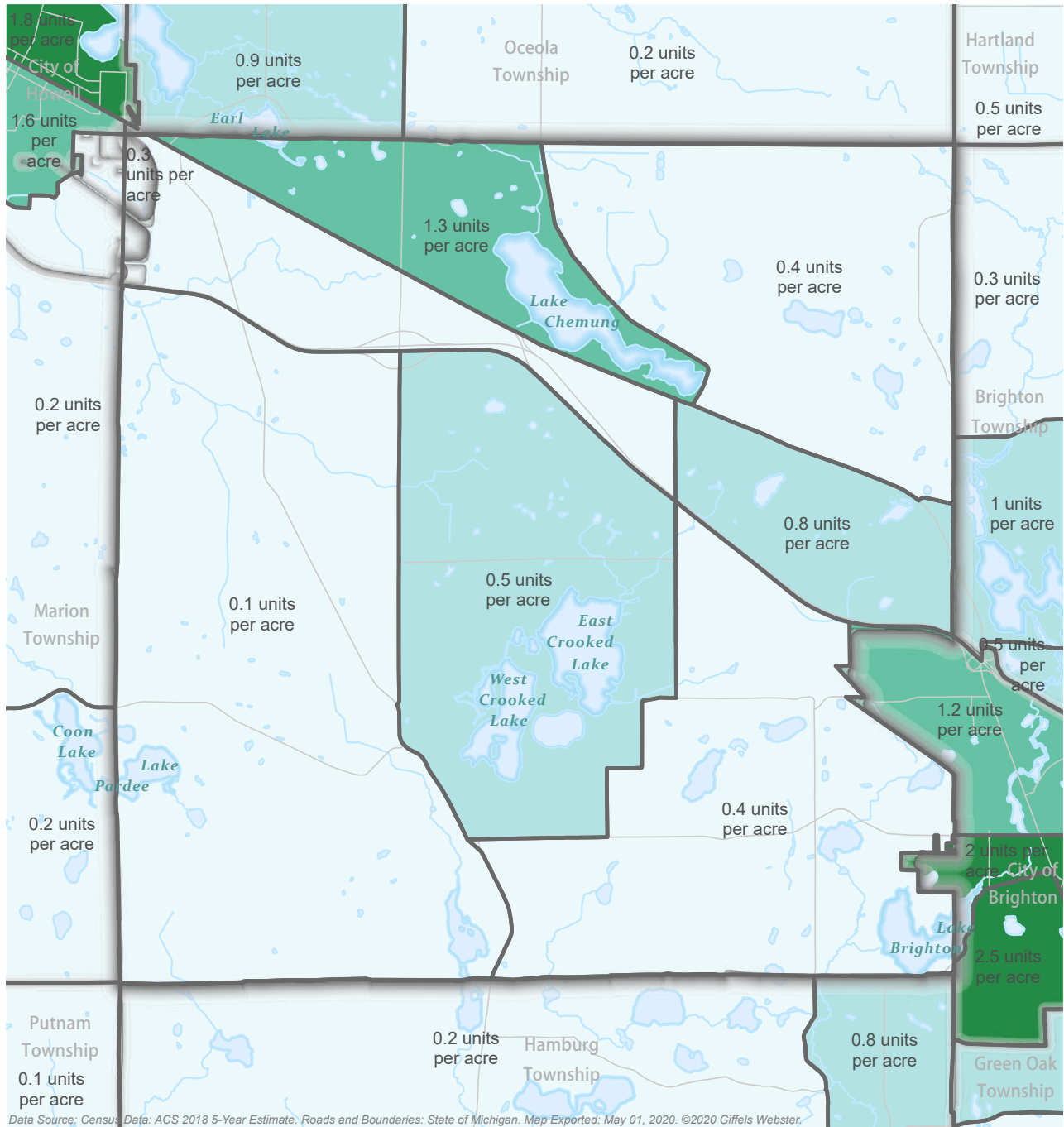
Data Source: Census Data: ACS 2018 5-Year Estimate, Roads and Boundaries: State of Michigan. Map Exported: May 01, 2020. ©2020 Giffels Webster



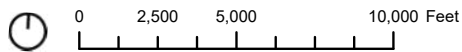
# Age of Housing

GENOA TOWNSHIP

MAP 3.5. HOUSING DENSITY



Data Source: Census Data: ACS 2018 5-Year Estimate. Roads and Boundaries: State of Michigan. Map Exported: May 01, 2020. ©2020 Giffels Webster.



- < .5 Units per acre
- .5 - 1 Units per acre
- 1.1 - 1.75 Units per acre
- 2.1 - 2.6 Units per acre

**Existing Housing Density**  
GENOA TOWNSHIP



## Housing Forecast

The Chesapeake Group conducted a market survey throughout 2020 and early 2021 to understand both current and future market conditions for residential and non-residential activity. Refer to 'Market Assessment Summary' on page for more details. The market assessment that followed the survey included some key housing data and future projections of housing demand.

As part of the current Master Plan update, an open house was conducted on November 10, 2021, at the Township Hall. Among other topics, the attendees were asked about their thoughts about future housing developments within the Township. There is a clear support for diverse housing in general within the Township such as cottage court style and attached townhomes.

The primary factors that contribute to housing demand are housing affordability and demographics shifts. Proximity to employment and better school districts also impact the housing demand. While the demand for single family homes is constant for families with kids, the demand for missing middle housing for aging population is growing, which is consistent with national trends.

According to the market survey, about thirty seven percent of total respondents, anticipate a possible move to a different house in the next five years, unlikely outside of Michigan. The primary reason for moving is either trying to downsize (those with primary income earners 55 years of age or older) or growing families or those who are ready to move out of their current home to create a separate household. The total population of older people aged between 64-85 is projected to increase by 104% by 2045 from 2015. This is a significant number that would be looking to downsize.

According to the assessment, approximately between 100 and 200 new non-single-family housing units could be added to the rooftops within the Township. The demand forecast is not a simple estimate of what is expected to be built in Genoa Township but are rather an estimate of what could be built in the market based on forecast demand; The new housing units would be geared toward independent living for seniors and young households, with the latter containing workspace. Included could be semi-detached, townhome, duplex, and other related units. The units' locations should contribute to walkability and serve existing residents who would move to a previously defined scaled smaller unit from within the Genoa area. Such new units would most likely free up existing units to attract younger households.





## Missing Middle Housing

“Missing Middle” housing” is a term coined by Daniel Parolek of Opticos Design, Inc. in 2010. Parolek defines this type of housing as follows:

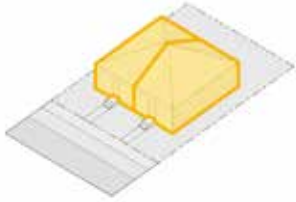
“Well-designed, simple Missing Middle housing types achieve medium-density yields and provide high-quality, marketable options between the scales of single-family homes and mid-rise flats for walkable urban living. They are designed to meet the specific needs of shifting demographics and the new market demand and are a key component to a diverse neighborhood. They are classified as “missing” because very few of these housing types have been built since the early 1940s due to regulatory constraints, the shift to auto-dependent patterns of development, and the incentivization of single-family home ownership.”

Missing Middle Housing is a range of multi-unit or clustered housing types compatible in scale with single-family homes that help meet the growing demand for walkable urban living. Characteristics of these housing types include:

- Walkable (homes are set in walkable context)
- Medium density but lower perceived density
- Smaller, well-designed units
- Smaller footprint and blended densities



## Missing Middle Housing Types



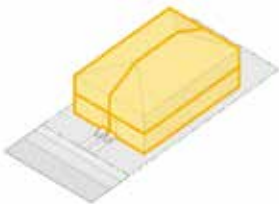
### Duplex Side-by-side

A small (1 to 2-story), detached structure that consists of two dwelling units arranged side-by-side, each with an entry from the street. This type may include a rear yard.



### Duplex Stacked

A small (2 to 2.5-story), detached structure that consists of two dwelling units arranged one above the other, each with an entry from the street.



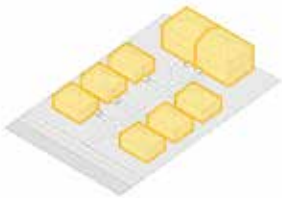
### Fourplex Stacked

A detached (2 to 2.5-story) structure with four dwelling units, two on the ground floor and two above, with shared or individual entries from the street. This type may include a rear yard.



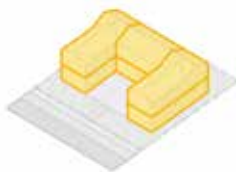
### Attached Townhouse

A small-to medium-sized attached structure that consists of 2 to 16 multi-story dwelling units placed side-by-side. Entries are on the narrow side of the unit and typically face a street or courtyard.



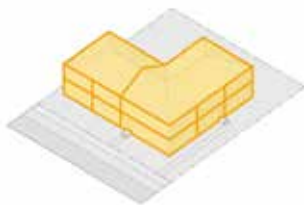
### Cottage Court

A group of small (1 to 1.5-story\*), detached structures arranged around a shared court visible from the street. The shared court is an important community-enhancing element and unit entrances should be from the shared court. It replaces the function of a rear yard.



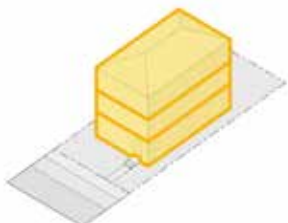
### Courtyard Multifamily

A medium-to-large sized (1 to 3.5-story\*) detached structure consisting of multiple side-by-side and/or stacked dwelling units oriented around a courtyard or series of courtyards. The courtyard replaces the function of a rear yard and is more open to the street in low intensity neighborhoods and less open to the street in more urban setting.



### Multiplex Medium.

A detached (2 to 2.5-story) structure that consists of 5 to 12 dwelling units arranged side-by-side and/or stacked, typically with a shared entry from the street.



### Triplex Stacked.

A small-to-medium (3 to 3.5-story) sized detached structure that consists of 3 dwelling units typically stacked on top of each other on consecutive floors, with one entry for the ground floor unit and a shared entry for the units above.

### Current Development Patterns

Genoa Township has longstanding interest in preserving and maintaining natural features and open spaces. The zoning tools that are available to maintain rural character within low-density residential areas include ones that encourages cluster and open space developments with a modest reduction in lot sizes and larger green buffers between the lots and the roads rights-of-way. The Township also recognizes the need for allowing for diverse housing within the community. The current zoning ordinance encourages two-family duplex homes where appropriate. Medium-density and higher-density districts allow for townhomes and apartment buildings. The density varies for medium/high-density districts vary from 5 to 8 units per acre. The ordinance allows for flexibility in design standards with a residential planned unit development, but this does not necessarily allow for an increase in density. Well-planned and designed residential developments are not always defined by density alone and the Township may wish to explore refining the PUD standards for additional flexibility.

The market analysis results indicate an increasing demand for smaller units in walkable settings for current residents in order to downsize. The table below provides a summary of recommended housing styles in applicable future Land Use categories. Minimum density for developments should be guided by the building form, open space standards and other design features consistent with the underlying zoning. Such flexibility in housing styles would allow for residents to age in place. It is noted that these housing types may be inconsistent with lake lots as they are typically smaller in size.

TABLE 3.2.MISSING MIDDLE HOUSING- USE RECOMMENDATIONS							
	Large Lot Rural Res	Low Density Res	Small Lot Single Family	Med Density Res	High Density Res	Grand River East	Grand River West
Duplex Side-by-side			Y	Y	Y	Y	Y
Duplex Stacked				Y	Y	Y	Y
Fourplex Stacked				Y	Y	Y	Y
Attached Townhouse				Y	Y	Y	Y
Cottage Court			Y	Y	Y	Y	Y
Courtyard Multi-family				Y	Y	Y	Y
Multiplex Medium				Y	Y	Y	Y
Triplex Stacked				Y	Y	Y	Y

### Applying Missing Middle Housing Strategies

The majority of existing Land Use in Genoa is rural residential (40.7%). Single-family housing occupies another 16 percent. Less than five percent is reserved for multiple family development along the Grand River corridor. The Township intends to preserve the agricultural/low-density areas south of Grand River Avenue. There is limited potential to meet the future needs of missing middle housing within existing residential districts. The Township may consider a permitting duplex and cottage court style housing within small lot single family districts to increase affordable housing stock, in appropriate locations, where additional density is supported by infrastructure and transportation facilities. More multi-family options in areas that are currently reserved for office development or underutilized for commercial development will help increase housing stock in the Township. The future Land Use plan recommends creating mixed-use districts along the Grand River corridor.

### Accessory Dwelling Units Recommendations

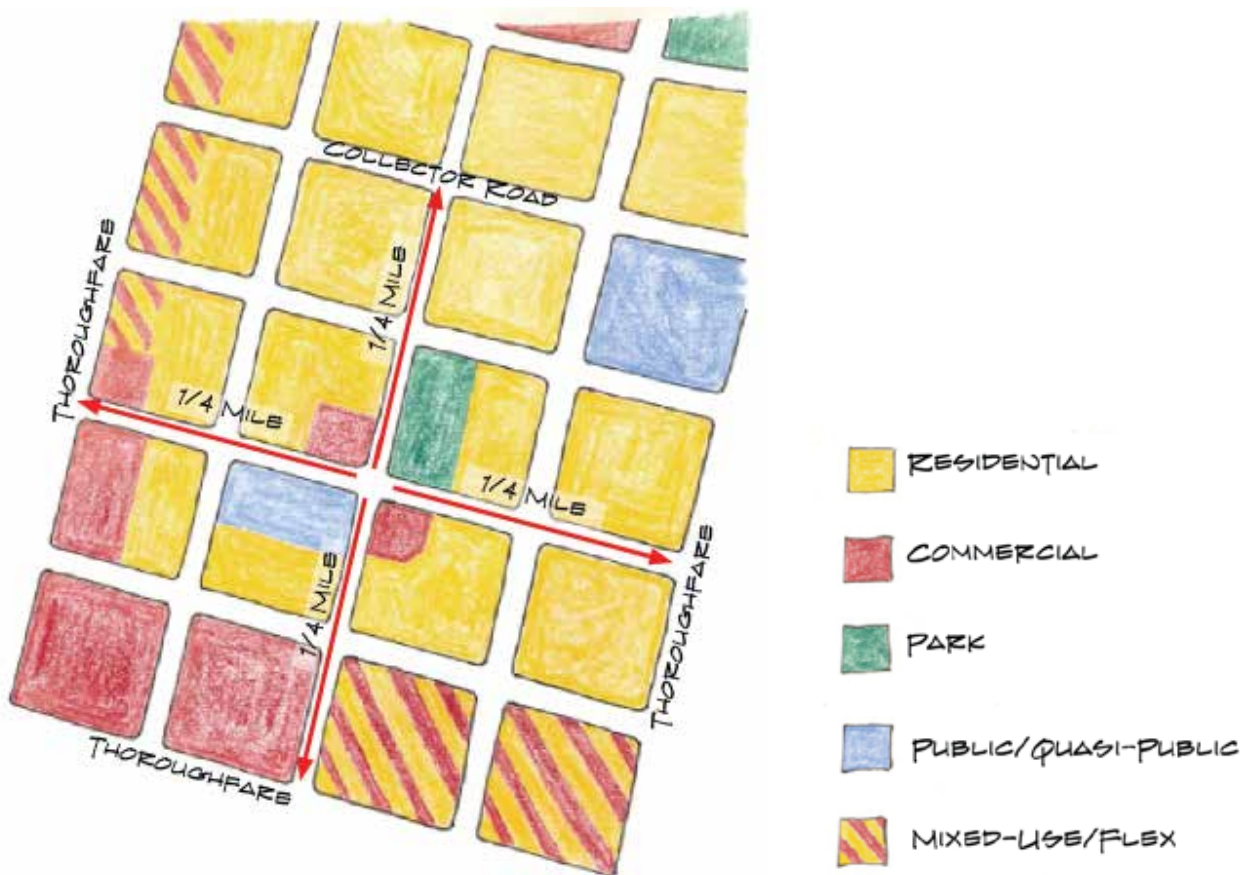
In neighborhoods with designs reflective of later suburban development styles, where attached garages are more typical, accessory dwelling units may be more appropriately permitted as additions to the principal home. In either case, owner occupancy of one of the units should be required. The Township may also consider phasing these units in by permitting only a small number per year to observe implementation and fine-tune its regulations accordingly.

## Traditional Neighborhood Development

Planning in the late 20th Century tended to emphasize the total separation of residential and non-residential uses. This led to a sprawling, auto-dependent development style that requires the use of a personal vehicle to accomplish even small daily errands. Modern planning often envisions **Traditional Neighborhood Development (TND)** as a method for developing new neighborhoods and communities in the style of a traditional village, with amenities in easy walking distance from most homes.

However, the same principles that guide TND in a new development context can also be used to guide infill development and redevelopment. In establishing its vision for complete neighborhoods, the plan recognizes that the non-residential uses that are desirable in neighborhoods are those that most directly serve the local residents of the neighborhood. Many of these same uses, such as corner shops, may also provide employment for people who live nearby. High intensity residential developments can support neighborhood commercial businesses as well.

FIG.3.4. TRADITIONAL NEIGHBORHOOD UNIT CONCEPT



Above figure illustrates in a generalized way how uses may mix in a traditional neighborhood, with a park and public or quasi-public use establishing a center with small-scale convenience uses. Thoroughfares at the edge of the neighborhood serve as boundaries, with more intensive non-residential uses along these roads. The neighborhood is roughly half a mile across, which provides for a ten-minute walk from end to the other. This is a general guideline and will not apply neatly to all neighborhoods.

## Attainable Housing

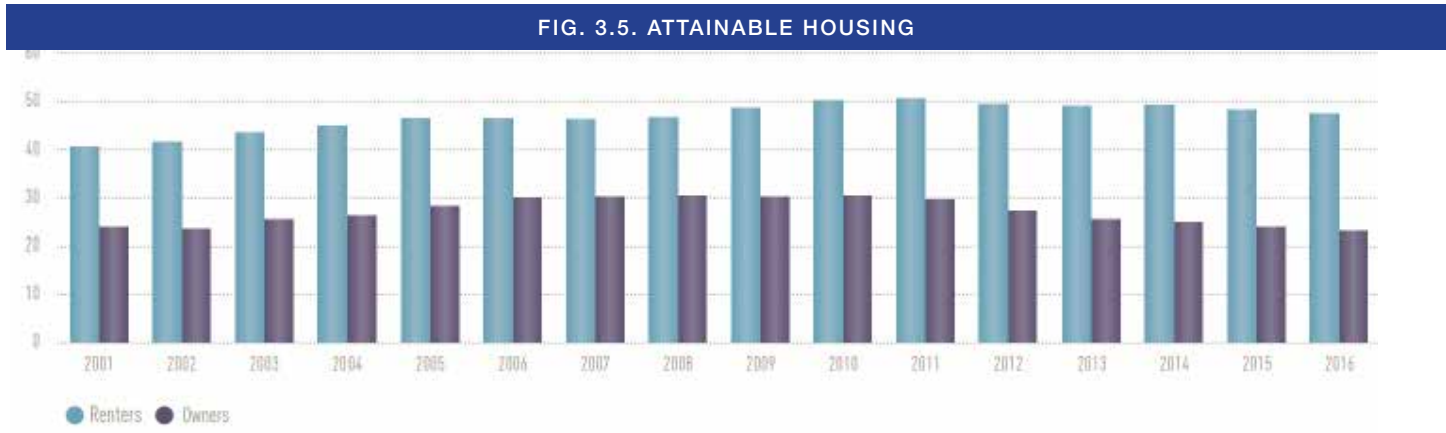
When communities have a wide spectrum of housing options to support residents, they can accomplish many goals. The availability of “attainable” housing helps accommodate everyone from young adults who are just beginning to live on their own, to families looking to grow, to older residents looking to downsize while staying in the community. It also provides for workforce housing. While there is no universal definition of “attainable housing,” the term was recently defined by the Urban Land Institute as “nonsubsidized, for-sale housing that is affordable to households with incomes between 80 and 120 percent of the area median income (AMI).”

## Overview

In many communities, young adults and the elderly have limited housing options due to a combination of their lower income levels along with the pricing and availability of housing. This kind of financial challenge can impact people of all ages.

The general rule of thumb based on guidance from the U.S. Department of Housing and Urban Development is to spend a maximum of 30% of a household’s income on housing costs, yet many people find themselves spending more on housing, leaving less of their income available for other household expenses. Finding attainable housing can be challenge and it can stress family finances.

The figure below demonstrates that nearly half of all renter households and about a quarter of owner households are cost burdened. Cost burdened is defined as households spending more that 30 percent of income on housing. In 2001, only slightly more that 40 percent of renters were cost burdened.



Source: Joint Center for Housing Studies at Harvard University, *The State of the Nation's Housing 2018*

## Housing Costs and Supply

Housing costs are on the rise. According to the National Association of Home Builders, the median price of a new-construction home was \$375,000 in April 2020, up from \$325,100 in October 2018. The median price for existing homes was \$280,600, up from \$257,500 in 2018. The cost of new construction is driving the overall cost of housing higher.

The supply of multifamily for-sale housing is decreasing. Multifamily for-sale housing has historically represented about 20 to 25 percent of total multifamily permits. This type of housing is often more attainable because of its lower cost. In the past 8 years, multifamily for-sale housing has represented 6 to 7 percent of total permits, reflecting a significant post-Great Recession decline.

New construction has delivered larger homes with more bedrooms even though household size was dropping. “Although one- or two-person households make up more than 60 percent of total households, nearly 50 percent of the homes delivered are four bedrooms or more. Less than 10 percent of the homes offer fewer bedroom options like one and two bedrooms,” as noted by ULI.

The same ULI report notes that small housing, under 1,400 square feet, has historically represented about 16 percent of new construction, but in the last cycle, it has averaged closer to 7 percent. When combined with the next size category, 1,400 to 1,800 square feet, the overall distribution of “small homes” has declined from just under 40 percent to 22 percent. Homes over 2,400 square feet have increased from 32 percent to 50 percent of new construction since 1999, according to the ULI .

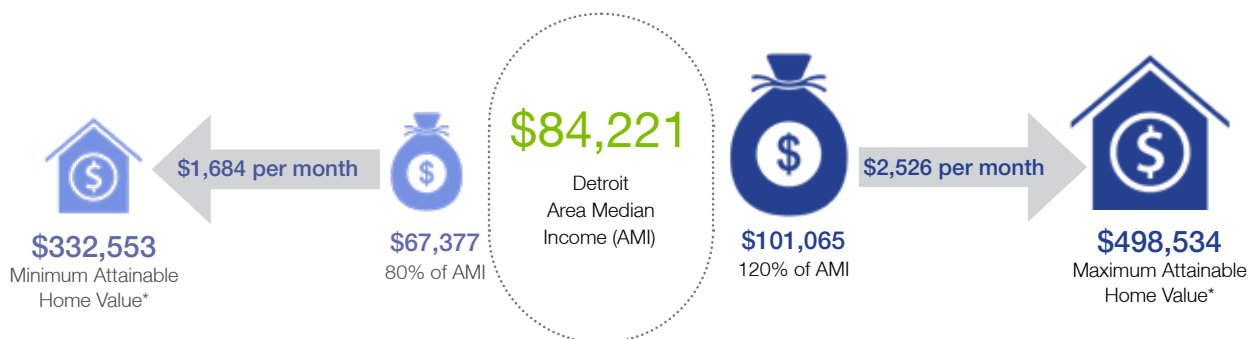
Urban Land Institute (ULI) is a leading provider of research and analysis on issues that affect housing .<https://bit.ly/AttainableHousing-ULI>

### What does this mean for Genoa Township?

As noted above, attainable housing has been defined as nonsubsidized, for-sale housing that is affordable to households with incomes between 80 and 120 percent of the area median income (AMI).” The Livingston County 2019 median household income was \$84,221 The numbers below and in Figure 18 are based on providing attainable housing in the Livingston County regional market:

- **MINIMUM VALUE.** 80% of the median family income = \$67,377. With 30% of income spent on housing, \$1,684 per month is available. A home loan valued about \$332,553 (based on 4.5% interest and 30 year mortgage) is attainable at this income level.
- **MAXIMUM VALUE.** 120% of the median income = \$101,065. With 30% of income spent on housing, \$2,526 per month is available. A home valued about \$498,534 (based on 4.5% interest and 30 year mortgage) is attainable at this income level.

FIG. 3.6. ESTIMATED ATTAINABLE HOME VALUE FOR GENOA TOWNSHIP



While housing alone is traditionally deemed affordable when consuming no more than 30% of income, the Center for Neighborhood Technology's Housing and Transportation Index (H+T Index) incorporates transportation costs—usually a household's second-largest expense—to show that location-efficient places can be more livable and affordable. It is suggested that transportation expenses total less than 15% of household income. The H +T Index calculates a variety of costs associated with transportation and includes car ownership and car use. Based on the expected miles driven per year for the area (25,000), an average of \$3.50 per gallon and a annual auto ownership cost of \$12,236 per vehicle, the H+T index estimates approximately \$16,300 per vehicle. Using the county's median income noted on the previous page, this transportation cost is approximately 20%.

The Master Plan addresses attainable housing by targeting a wide variety of housing options that go beyond single-family detached housing. Examples include multi-family dwellings, manufactured housing, and missing middle housing types, which are house-scale building with multiple units (duplexes, quadplexes and cottage court bungalows). This variety of housing types will expand the number of homes available across many price points.

Additionally, reducing the minimum square footage of requirement for new homes will provide builders and buyers with more variety, including small footprint homes that cost less to acquire and maintain.

Finally, providing opportunities for job creation and workplaces near residents may allow some residents to reduce their miles driven per year, making living in Genoa Township more affordable.

# Commercial Corridor Redevelopment

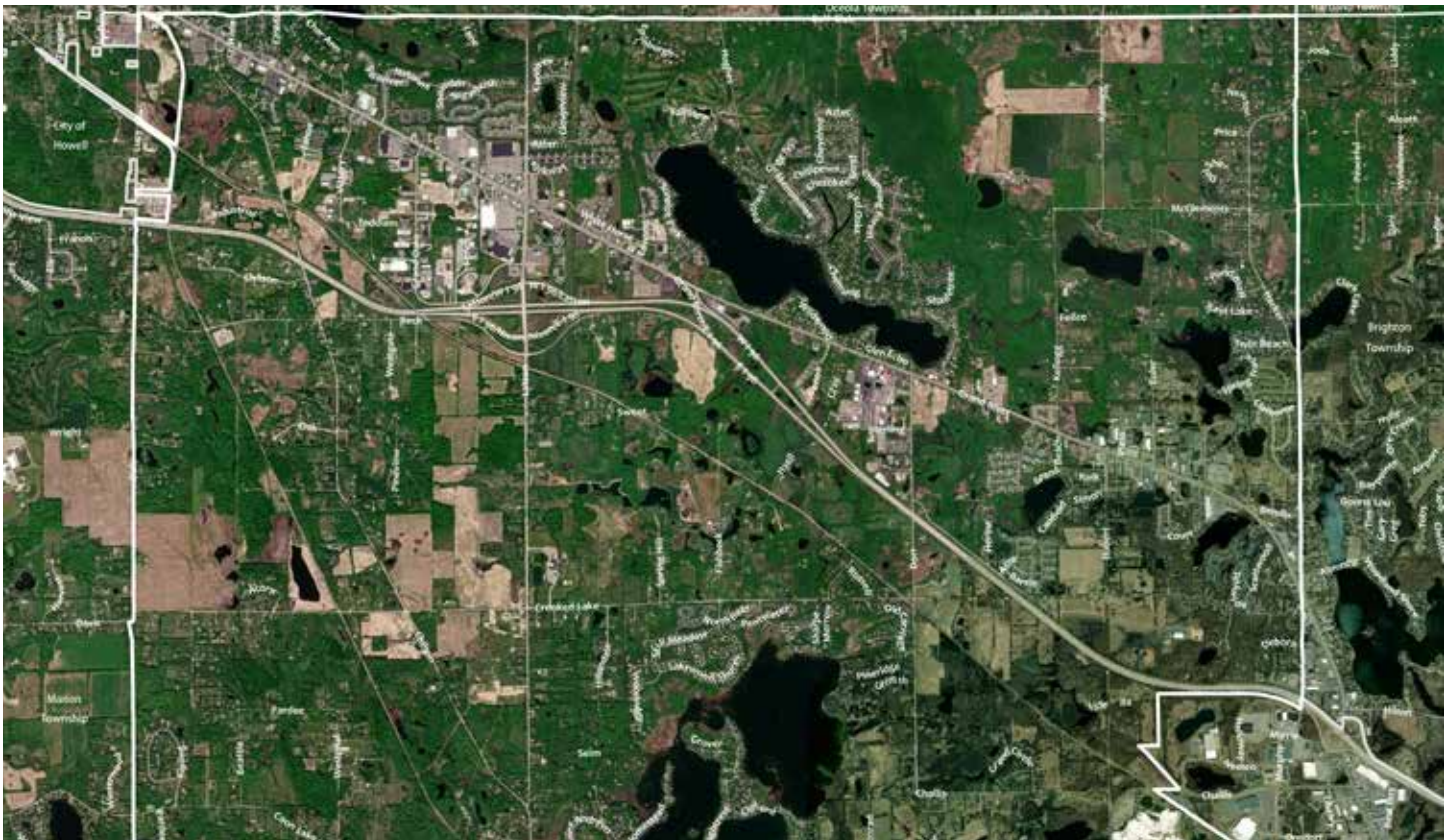


# Commercial Corridor Development

Economic development goals and policies are often found in community Master Plans. They provide general guidance, and some may include detailed action strategies to target specific geographic areas or programs. In Genoa Township, there is a history of focusing development and economic activity in and around the Grand River Corridor. This remains desirable – to make best use of existing infrastructure, build upon the successes of existing development and to provide opportunities for development where it is desired, alleviating development pressure in other parts of the Township.

This chapter is divided into three sections: Market Opportunities, Grand River Corridor Redevelopment and Redevelopment Sites. The Market Opportunities section will present opportunities for Genoa Township and begin to identify action strategies to capitalize on those opportunities. The Grand River Corridor Redevelopment section will present an overall vision for the redevelopment of the corridor. These first two sections provide the foundation for the final section that takes three sites and offers strategies for development that is consistent the overall goals of this Master Plan.

FIG. 3.7. GRAND RIVER AVENUE CORRIDOR - AERIAL IMAGE



## Market Opportunities

The Market Assessment chapter summarizes existing conditions and provides an economic forecast. The forecasting methods used here, which model a potential range of marketable opportunities in commercial, office, and residential space, rely on property trends, historical, local and regional data, and a survey of area residents conducted during the summer of 2020. While this survey took place in the early months of the COVID-19 health pandemic, respondents were prompted to consider activity pre-COVID. The assessment also considers the overall Genoa market and its potential growth to determine how much of the potential economic activity that could occur inside the Township may be occurring outside of the Township.

It's important to note that economic conditions continue to change; in most cases, generally speeding economic trends already impacting the economy before COVID-19. Purchasing online was growing rapidly prior to COVID-19, resulting in the exportation of dollars; the online purchasing rate sped up since the pandemic. Large proportions of office and workspace were being built in or simply moved to homes, and more people were working from remote locations before COVID-19; as with spending habits, the speed of change has accelerated. This is important context for understanding all forecasting numbers in this plan. The demand forecasts are not a simple estimate of what is expected to be built in Genoa Township but are rather an estimate of what could be built in the market based on forecast demand; The Township will capture some fraction of this. No community will capture all marketable activity and space.

FIG. 3.8.MARKET OPPORTUNITIES

### Housing



**Between 100 and 200 new non-single-family housing units could be added to the rooftops within the Township.** The new housing units would be geared toward independent living for seniors and young households, with the latter containing workspace. Included could be semi-detached, townhome, duplex, and other related units. The units' locations should contribute to walkability and serve existing residents who would move to a previously defined scaled smaller unit from within the Genoa area. Such new units would most likely free up existing units to attract younger households.



### Retail goods and services

The survey indicates an opportunity to diminish the exportation of dollars from Genoa Township residents, particularly in food, food services, and linked entertainment activity. **Genoa Township residents are expected to support between an additional 300,000 and 326,000 square feet of retail goods and related services space by 2030.** Most commercial opportunities are appropriate for land/parcels/structures associated in and around Grand River Avenue and I-96.



### Multi-tenant office space

**New office space demand is sufficient to generate between 20,000 and 30,000 square feet of space, accommodated in vacant space, new development, and homes.** The opportunity does not include those in the health care arena, such as outpatient infusion or surgery centers, or inclusion of higher educational institution space in Genoa Charter Township.

## Grand River Corridor Redevelopment

### Housing

To hold the existing residents and provide them with the opportunities they seek for living conditions; Genoa Township needs to ensure that development regulations afford the opportunity and foster in strategic locations housing for smaller units in a walkable environment.

Providing for densities supportive of townhomes, duplexes, and related physical forms and condominium or other non-traditional ownership positions allows for mitigation of the physical need and cost or burden on the individual household. Should an active adult community be acceptable to Genoa, the development would likely be between 700 and 1,500 housing units. The product would be primarily independent living but could support aging in place within the same development. This development would potentially pump millions of new dollars into the local economy, creating an increased demand for retail activity, including restaurants, and professional services. This increased demand would expand the opportunity for entrepreneurship and grow the labor force, attracting younger households. The East Grand River Area could be marketed as a “health hub,” serving older residents and businesses that support healthy living for all Genoa Township residents.

### Commercial

While the pandemic and ongoing labor market shortages are impacting restaurants, the preservation of existing restaurant kitchens is key to reinvigorating the market as soon as COVID-19’s impact wanes and the industry rebounds. The Township should work with property owners and restaurateurs to maintain kitchens, facilitating reopening or sales when the market returns. Outreach to hospitality and culinary programs and affiliated schools could facilitate a transition and assist with re-marketing the facilities and properties.

Genoa Township can differentiate itself from Brighton and Howell and generate excitement and activity through furthering pop-up space and incubator development. Off-street parking can be used to create temporary pop-up spaces that can spur outside visitation and entrepreneurship.

Temporary pop-up storefronts in stand-alone or strip commercial can also play a role in filling vacancies as they happen. Cargo trailers, sheds, and tents have all been used to create temporary spaces – and can be done in ways that look intentional, rather than ramshackle. In addition, big box and large-scale commercial buildings could be repurposed and divided myriad ways to support a variety of small businesses, from retailers to other business support services.

### Local Capacity investment

One of the biggest challenges for any start-up or growing business is access to capital. While banks, credit unions and other financial institutions can provide a traditional source of capital, new opportunities to raise funds exist through crowdfunding. This means building investment funds from a “crowd” of people and is especially important for women, people of color, startup businesses and those with little or a less than perfect credit history.

Most people are now aware of donation-based crowdfunding like Go-Fund-Me, in which people make a donation to support an individual, group or activity with no expectations of a return on that donation. Reward-based crowdfunding platforms like Kickstarter encourage donations in exchange for “perks” or other products. In contrast, an investment-based crowdfunding opportunity allows investors to invest in privately-owned businesses who offer a security through the Securities and Exchange Commission (SEC). There are federal regulations that support this type of investment. In Michigan, the Michigan Invests Locally Exemption (MILE), allows small businesses to raise capital by reaching out to Michigan residents to invest in their companies.

Another option employed by more than a handful of communities in Michigan is to form a local investment group that can purchase, invest, and inject dollars into projects where the investors can become partners or make loans to entities to facilitate investment. This is better managed on a smaller scale and may be more attractive than MILE due to lower reporting and SEC requirements.



## Redevelopment Sites



### Background

#### Location

The site is located on Grand River Avenue, on the southeast side of the intersection at Bendix Avenue, near the east end of the Township. The 4.24-acre site is currently vacant and is zoned OS - Office Service. Parcels south of this site are developed with office uses, with an automobile dealership and other auto-related uses further south, leading to the Grand River/I-96 interchange. There is an apartment complex to the north, across Bendix, and an attached single-family development south across Grand River Avenue.

#### Future Land Use.

In the previous Master Plan, this area was designated Office and envisioned various forms of office uses, including professional, medical and financial. However, with this Master Plan Update, this area is designated as mixed use, given the adjacency of the general commercial to the south and multifamily to the north.

### Redevelopment Concept

This site presents an opportunity to integrate a mix of uses on site within the context of a larger district. The medical/office campus to the north along Grand River, multifamily directly north, single family to the east and office/commercial to the south make this site an ideal area for a mixed-use transitional development. The market study indicated demand within the Township could support development between 700 and 1,500 assisted living housing units. The market study also suggested that new office space demand in Genoa Township is sufficient to generate between 20,000 and 30,000 square feet of space, accommodated in vacant space, new development, or within homes (work from home). Given the proximity to the medical and residential uses just north/west along Grand River, this site presents an opportunity to support new office or commercial space in a compact, walkable development anchored by larger users like the St. Joseph Mercy Brighton Health Center. A mix of uses that includes senior-focused housing could be combined with other uses to serve those residents.

### Building Form

Mixed use developments can take many different forms, including vertical mixed use that “stacks” uses among multiple stories in a building or buildings (left), as well as horizontal mixed use, which organizes uses in multiple building on a single site. Both development types should include project specific regulations designed to properly balance uses on site, provide pedestrian and vehicular connections, include shared open space or public spaces and recognize the importance of flexible parking requirements. Intentional site design to maximize the mobility of older residents should include safe, convenient and comfortable sidewalks and pathways, adequate lighting, barrier-free access to site furnishings such as benches, and bicycle parking.



### Transportation

All parts of the site should be served by a shared use pathway that connects to adjacent sidewalks/pathways, roadways and sites. It is anticipated that vehicular access will tap into the existing street network on both Grand River and Bendix.

### Sustainability

Development on this site should be based on a framework of sustainable building and site design practices that offers a model for development and redevelopment elsewhere in the Township. The use of low-impact design, pervious paving materials, and native landscape materials should be prioritized.

### Development of the District

Zoning for the parcel is currently OS: Office Service district and allows professional and medical office uses; retail and residential uses are not permitted. A new mixed use zoning district should be considered to allow for the flexibility of uses while ensuring that standards are in place to promote quality



**Background**

**Location**

This site is located on the south side of Grand River Ave west of Parkway Drive and is the site of the former Grand River Golf Range and Putt-Putt. The area around this site is developed with strip-type commercial and auto-oriented uses including fast-food restaurants with drive-throughs and auto-service uses. Some general/regional commercial uses, including Kohls and Tractor Supply, are also located nearby.

**Future Land Use.**

The previous Master Plan designated general commercial on this site, which envisioned clustered, rather than a commercial strip pattern of development, to create a buffer from nearby residential areas. Suggested uses included larger grocery stores, restaurants and retail shopping centers. This Master Plan Update designates this area as mixed use and anticipates a vertical and/or horizontal mixing of commercial and residential uses. On this site, with its limited visibility to Grand River Avenue, it is expected that this site would best accommodate residential uses.

**Redevelopment Concept**

Throughout the planning process, Genoa Township residents and officials cited the need to provide opportunities for investment and reinvestment along the Grand River Corridor. In addition, there is a need and desire for smaller housing units in a walkable environment. Given the Township’s interest in supporting current and future residents of all ages and abilities, development of this site may provide an opportunity for smaller housing units in a compact, yet natural setting. There are many existing businesses in this corridor that could serve residents’ daily needs at a development in this location. Grocery stores, drug stores, and restaurants are within easy reach. Smaller-scale commercial uses that serve the local community could be added as infill development to the east across Parkway Drive in a way that buffers new residential development. Commercial redevelopment of the driving range facility and parking lot could provide goods and services for local residents.

### Building Form

Here, a range of housing types is possible, including attached dwellings such as townhomes, row housing as well as stacked dwellings. Residential buildings could be 3-4 stories in height are consistent with the adjacent apartments to the west. New development should be made of high-quality building materials on all sides and provide green space for residents. Commercial development along Grand River should also be comprised of quality materials; while parking may be provided in the front of buildings, pedestrian-scaled buildings and features should be included.



### Transportation

The site is proximate to the I-96/Latson Road interchange and affords easy regional access. All parts of the site should be served by a shared use pathway that connects to adjacent sidewalks/pathways, roadways and sites. It is anticipated that vehicular access will maintain access to Grand River and Parkway Drive. Pedestrian connections between existing development and new housing would offer residents the opportunity to walk or bike to many businesses in the corridor. The ability to incorporate physical activity into their daily lives helps residents stay healthy; providing alternatives to driving offers older residents a sense of independence as well.

### Sustainability

Development on this site should be based on a framework of sustainable building and site design practices that offers a model for development and redevelopment elsewhere in the Township. The use of low-impact design, pervious paving materials, and native landscape materials should be prioritized.

### Development of the District

This type of development is currently zoned PRF, which only allows clustered residential development on the same site as a recreational use. This parcel could be rezoned to a new mixed use zoning district, which would allow for the flexibility of uses while ensuring that standards are in place to promote quality materials, walkability and protection of open spaces. The mixed use designation does not necessarily mean that every site should contain a mix of uses, but adjacent parcels should contain compatible uses aimed at promoting walkability for both local residents and regional visitors.

**SITE 3: GRAND RIVER @ CHILSON**



**Background**

**Location**

This 4.19-acre parcel is located on the south side of Grand River, east of Chilson Road. The ~43,000 sq.-ft commercial space is currently vacant and was previously used as the Great Escape Family Fun Center. The parcel is zoned General Commercial (GC) and has approximately 100 parking spaces on site. Surrounding uses include strip commercial and stand-alone commercial uses, including an automobile dealership to the east. Single family neighborhoods are found to the north of commercial uses on Grand River Avenue and between Chilson and commercial uses on the south side of Grand River Avenue.

**Future Land Use.**

In the previous Master Plan, this site was designated for general commercial uses, which include businesses that serve the requirements of the community at large including Genoa Township, Howell, Brighton, and pass-by traffic along Grand River. The current Master Plan designates this area as mixed use and intends to provide flexibility for reuse of existing commercial structures and sites along with a mix of residential and commercial uses.

**Redevelopment Concept**

It is envisioned that future redevelopment will seek to reuse the existing structure and parking area. Residential uses are not anticipated, but instead commercial activities that can provide needed goods and services are envisioned. This site could present an opportunity for startup uses, such as through a food truck lot or pop-up retail spaces that have the potential to move into other spaces along the corridor.



### **Building Form**

It is expected that the existing structure on the site will remain, at least in the near term.

### **Transportation**

Improvements to promote walkability, such as connections to the shared use path along Grand River and improved pedestrian connections between adjacent uses, are expected.

### **Sustainability**

The site could be improved by removing some of the asphalt parking area and adding more trees and enlarging landscape areas. Any new development on this site should be based on a framework of sustainable building and site design practices that offers a model for development and redevelopment elsewhere in the Township. The use of low-impact design, pervious paving materials, and native landscape materials should be prioritized.

### **Development of the District**

As noted previously, a new mixed use district should be created to promote the flexibility and mixing of uses intended. In this case, allowing for temporary pop-up uses, food trucks and other business incubation models, should be included.

## Pop Up, Temporary and Mobile Uses

**“The reinvention of retail is still in its early phases, but what is happening with the pop-up trend is a near-perfect microcosm of where retail is going in the Age of Experience.”**

*- 2019 report by real estate consulting firm Cushman Wakefield*

Recent economic and cultural trends show an explosion in the popularity of food trucks, mobile vendors, pop-up shops and other short-term commercial uses over the past several years. These uses may take up space in a vacant storefront, outdoor space or mobile unit. Holiday and seasonal shopping are frequently drivers of temporary or short-term retailing but increasingly, retailers and restaurateurs are using temporary spaces and mobile units to try out new ideas and business models. These may include new or even existing businesses trying experiential retailing, where the experience of shopping and dining are as important as the food, beverage and goods being sold.

Retail marketplaces—a concentrated area of multiple temporary vendors – can really generate interest in communities. One highly successful example is the Showfields in Manhattan (its flagship location – other Showfields locations include LA and Miami); this 15,000 square foot space where pop-up partners are curated and pay a monthly fee (rather than rent) to test out their businesses. Other examples include individual seasonal pop-up shops like those found in Detroit, Walloon Lake Village and Hyannis, MA.

Beyond traditional retail and restaurant uses, media companies are getting in on the action and experimenting with media/entertainment pop-ups. Netflix and other media companies are creating interactive, immersive events around popular TV shows, films and music that combine food, beverage and goods with pop culture sensations.

While the recent health pandemic accelerated trends in retailing that have been building in recent years, the pandemic itself hit the restaurant industry hard. Businesses and workers alike are trying to reinvent themselves and looking for new opportunities.



Walloon Lake



Town center food truck event

### Benefits of Temporary Retailing

Temporary retailing may offer low-cost way to wade into the pool of business ownership or grow existing businesses. Temporary retailing:

- Provides an opportunity to increase jobs and businesses without committing to buying or leasing space.
- Increases activity in struggling business districts by creating a dynamic environment where people gather around the availability of new and fresh food and other goods.
- Spreads the word about new activity through the use of social media by temporary vendors.
- Signals to other potential businesses that the community is adapting to the evolving economy and supporting entrepreneurship; communities that anticipate the demand from businesses and consumers may also find that this flexibility signals receptivity to new business models.
- They are a way for restaurateurs to test the local market for future bricks-and-mortar facilities. Mobile food trucks offer opportunities to interact with a potential market, to test recipes, pricing, and see if the restaurant is a fit with the community.
- Locating within or outside of existing businesses allow emerging businesses to benefit from greater exposure and foot traffic while existing retailers get the upside of increased foot traffic from curious shoppers interested in new offerings.



Showfields manhattan untapped, Newyork



Campus Martius Park, Detroit



Container Village 342 MLK Drive Bergen Lafayette Jersey City NJ. Source:Jersey City



Food truck event, Royal Oak  
JUNE 14, 2022 DRAFT



## Arts and culture

The earliest human experiences include expressions of art and the creation of cultures that define a group of people. There is no one definition of art; expressions of art include the visual, such as painting, drawing, photography or sculpture, as well as the performed, such as music, theater, dance and film. Art includes the spectrum from the written word and storytelling to animation and textiles. It includes industrial design, architecture and graphic design industries. The definition of “culture” is “all that is fabricated, endowed, designed, articulated, conceived or directed by human beings, as opposed to what is given in nature. Culture includes both material elements (buildings, artifacts, etc.) and immaterial ones (ideology, value systems, languages).”

According to the American Planning Association (APA), planners in the past have used art and culture as a “community revitalization tool,” but today, there is recognition that arts and cultural opportunities have tremendous potential to contribute to broader social, economic, and environmental aspects of community life. The APA states that arts and culture provide a medium to:

- Preserve, celebrate, challenge, and invent community identity;
- Engage participation in civic life;
- Inform, educate, and learn from diverse audiences; and
- Communicate across demographic and socioeconomic lines.

Arts & cultural activities – vast and innumerable – support individual health and wellbeing, promote community identity through placemaking and catalyze economic development.

The City of Fort Wayne’s Art Master Plan, Art for All, notes that “public art provides the intersection between our past, present, and future, and also has the power to transform a city because neighborhoods gain social, economic, and cultural value through public art.” The plan identifies the value art brings to a community:

**Economic Value:** Enhancing the identity and character of (the community) through public art directly supports cultural tourism and economic development strategies, which can attract and retain residents.

**Social Value:** When people see themselves reflected in their civic spaces, they have a sense of attachment that allows them to feel ownership and respect.

**Cultural Value:** Public art has the power to create uniqueness through the reflection of the local history and culture, which gives communities a sense of place and identity. Public art provides a visual mechanism for understanding other cultures and perspectives, creating social cohesion and encouraging civic engagement. Through the reinforcement of culture, public art acts as a catalyst for unity and social engagement.

## Health and Wellbeing

Over the past several years, studies throughout the world have shown the value of arts and culture on individual and community health. In a 2018 report, the United States Department of Art and Culture (USDAC), a non-governmental grassroots action organization, cites several of these studies that include wide-ranging data to support the power of art on health and wellness.

The report concludes, “we understand human connection, meaning-making, creativity, and purpose as key contributions to individual and collective well-being and therefore as powerful modes of prevention.” The report concludes with the following findings:

- The arts can help keep us well, aid our recovery and support longer lives better lived.
- The arts can help meet major challenges facing health and social care: aging, long-term conditions, loneliness and mental health.
- The arts can help save money in the health service and social care.

## Economic impact of arts and culture

The nonprofit organization Americans for the Art provides research data on the impact of arts and culture in communities. Their 2018 report on the economic impact of the arts (supported by the US Bureau of Economic Analysis) found that nonprofit arts and culture industries generated \$166.3 billion in total economic activity and supported 4.6 million jobs in 2015. The report notes that findings show that the arts are an “industry that supports jobs, generates government revenue and is a cornerstone of tourism.” The economic impacts are substantial in Michigan. In 2017, the arts and culture industries added 2.8% or \$13.9 billion to the state’s economy and employed 121,330 workers (about 3% of Michigan’s employment). These workers earned wages and benefits totaling over \$7.6 billion.

## Strategies for Communities

To support community health and wellness, placemaking efforts and the local economy, communities should look for ways to support local arts and cultural activities. Some strategies may include:

- **Understand the community’s arts and cultural assets:** identify arts-related organizations and for-profit businesses as well as cultural organizations.
- **Promote community arts and cultural assets:** Leverage assets to attract and retain residents and businesses.
- **Support arts-related businesses:** Tap into the skill sets and synergies of local arts-related businesses; facilitate discussions with businesses to identify opportunities for support.
- **Information Hub:** Encourage the development of an umbrella organization to serve as the “hub” of information on activities and events, as well as learning and volunteer opportunities.
- **Promote interaction in public space:** design, manage and program public space with people in mind. Include citizen participation in these elements to ensure buy-in and ongoing support.
- **Encourage civic celebrations:** Partner with community organizations to host annual or seasonal events such as festivals or farmers markets; tap into the social, ethnic, and economic diversity found in the community.
- **Encourage youth in the community:** Provide opportunities for young people to create and participate in arts and cultural events and activities. Keep in mind that engaging the youth of the community also often engages adults.
- **Resources:** Provide human and financial resources to support local arts and culture organizations.
- **Public art:** Support temporary and permanent public art projects; explore creating a public art fund tied to new development.
- **Incubator Spaces:** Create incubator space for arts-related organizations and for-profit businesses as well as cultural organizations.



## Community Character

Community character guides the way we regulate the development and redevelopment of land. For example, rules on building placement, like setbacks, have an impact on the spaces between buildings whether those spaces are private or public open space. In addition, community character can guide appearance and landscape standards and these can vary throughout the Township.

### Why is Civic Identity important?

Creating and nurturing civic identity is critical for effective and efficient local governance. A civic identity can instill pride in residents that encourages them to vote in local elections as well as participate as Township board/ commission members. A solid, recognizable civic identity works with community character to support economic development both for business attraction and retention. It can also support local institutions who may rely on people from outside the community to understand where they operate.

## Gateways

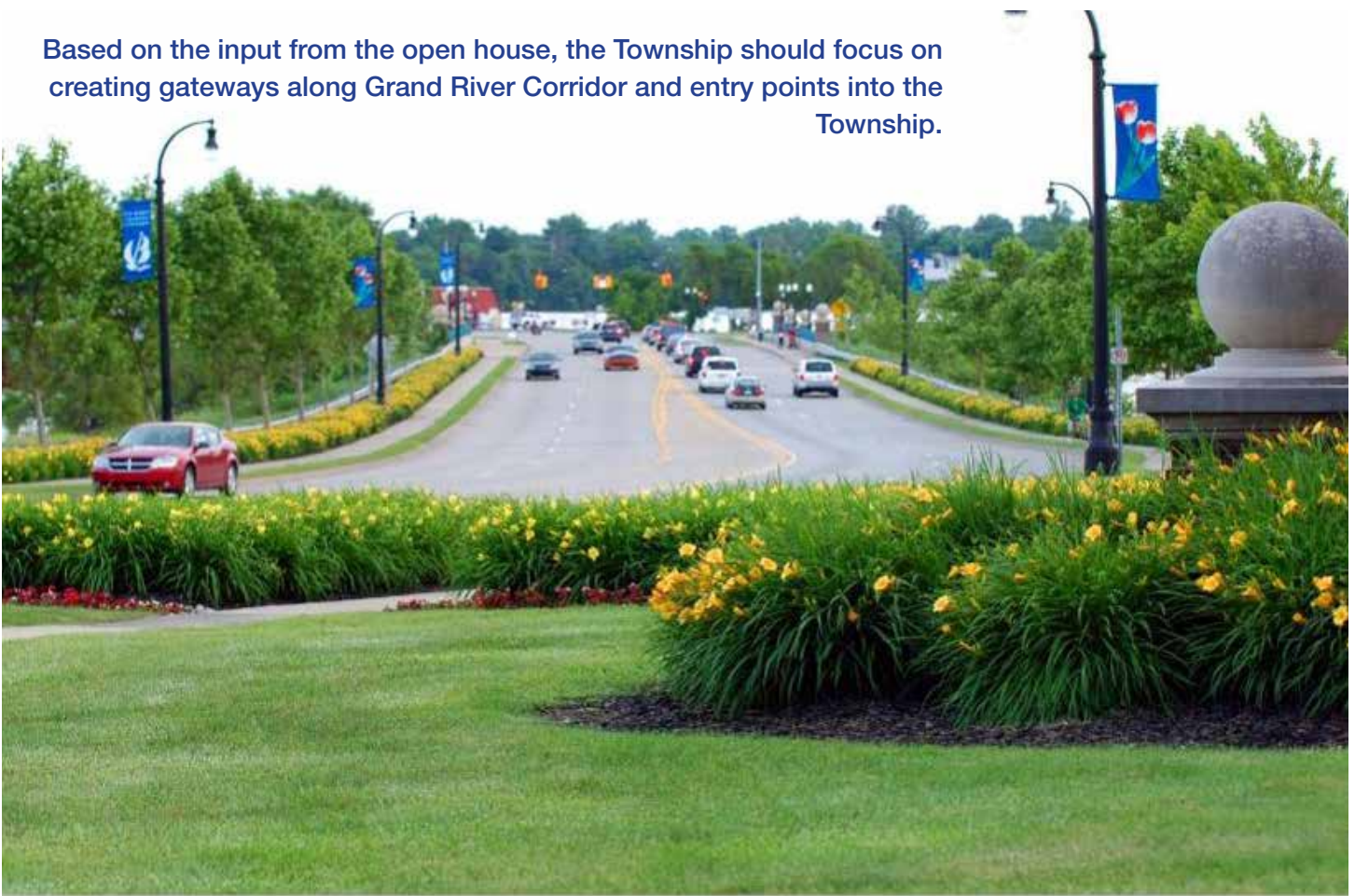
### What are Gateways?

- Announce a point of arrival
- They can be located on a public or private property (or combination)
- They could be for people arriving by vehicle or on foot/ bicycle

### Why are Gateways important?

- Reinforce community identity
- Creates anticipation for what is ahead
- Provide a sense of place Why is Community Character important?

**Based on the input from the open house, the Township should focus on creating gateways along Grand River Corridor and entry points into the Township.**



## Placemaking

Placemaking means intentionally creating quality places that people seek out to live, work and play. It is a process of creating and nurturing quality places that have a strong sense of place. As it becomes increasingly easier to live and work anywhere, people will choose quality places that are:

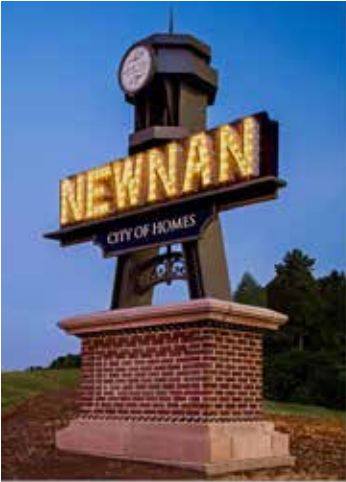
- Safe
- Connected
- Welcoming
- Conducive to authentic experiences
- Accessible; people can easily circulate within and to and from these locations
- Comfortable; they address cleanliness, character, and charm
- Sociable; they have a physical fabric that encourages people to connect with one another
- Able to promote and facilitate civic engagement.

Because authenticity is a critical component of placemaking, arts and culture unique to a community are key ingredients in creating quality places. The Kresge Foundation is a strong advocate for placemaking in communities and focuses on the role that art and culture play. They establish the following guiding premises :

- Creativity, aesthetic expression and the impulse to create meaning are evidence of our humanity and serve as community assets from which to build.
- Participation in arts and culture takes many forms and occurs in a wide range of venues—parks, community centers, churches and public spaces. People attend art events and buy art. But they also make, teach, learn and support arts and culture in myriad ways, from the amateur to professional realms.
- Our societal tendency is to focus on art products, but it is also imperative to recognize and appreciate the creative process. Process can be as important as, or in some cases, more important than art product.
- Artists have many kinds of relationships with communities, often helping people find their voice and expression or lending a different perspective when framing or devising solutions to community issues.
- Arts-and-culture activity is intrinsically important and contributes to a wide range of community dynamics, conditions and issues.







# Complete Streets

# Complete Streets

Complete Streets is a term used to describe a transportation network that includes facilities for vehicles, pedestrians, cyclists, and other legal users of all ages and abilities. In 2010, Michigan passed Complete Streets legislation to encourage and justify the development of Complete Streets in communities. At that time, Michigan's Planning Enabling Act was also amended to require comprehensive plans to address Complete Streets.

Over the past several years, Genoa Township has been working on completing its sidewalk/shared use path network. The Township recently completed the network on Grand River Avenue, allowing for pedestrian and bicycle travel along this important corridor. The Livingston County Planning Department has also prepared a greenway manual for the Livingston County Greenways Initiative. The manual outlines goals, and objectives of greenways and standards for greenway development within the county. This chapter provides a summary of relevant information the Township can refer to plan for the overall system of streets and roads in a community that provides for the movement of people and goods from places both inside and outside the community.

This chapter summarizes general recommendations and emphasizes the importance of communities adopting Complete Streets Policy. The 2013 Township Master Plan includes recommendations about motorized and non-motorized improvements within the Township. The Township should consider evaluating those recommendations and updating them as required. The Township should consider other planning and outreach efforts to prepare a comprehensive complete streets policy for the Township.

## Communities that adopt Complete Streets policies recognize that

- Complete Streets provide transportation choices, allowing people to move about their communities safely and easily.
- Complete Streets policies acknowledge the problems with current transportation facilities.
- Implementing Complete Streets strategies will make communities better places to live and work.

## Relevant Plan References

- Crosstown Trail- Howell Area Non-motorized Trail Study, 2003
- Southeast Livingston Greenways, 2000
- Grand River Avenue Access Management Study
- Bicycle and Pedestrian Travel Plan for Southeast Michigan: A Plan for SEMCOG and MDOT's Southeast Michigan Regions, 2014

Refer to page 1.5 for more details about the plan and related recommendations. The implementation strategies chapter summarizes corresponding complete street strategies.



**FIG 3.9. COMPOSITE CONSERVATIVELY ESTIMATED OPPORTUNITIES**

The graphic below illustrates elements of complete streets - but not every street needs to contain every element. In Genoa Township, many of these elements are not appropriate, but provided here for future reference and education. Throughout a community's transportation network, there may be opportunities to provide facilities for pedestrians, bicyclists and users of transit (where applicable).

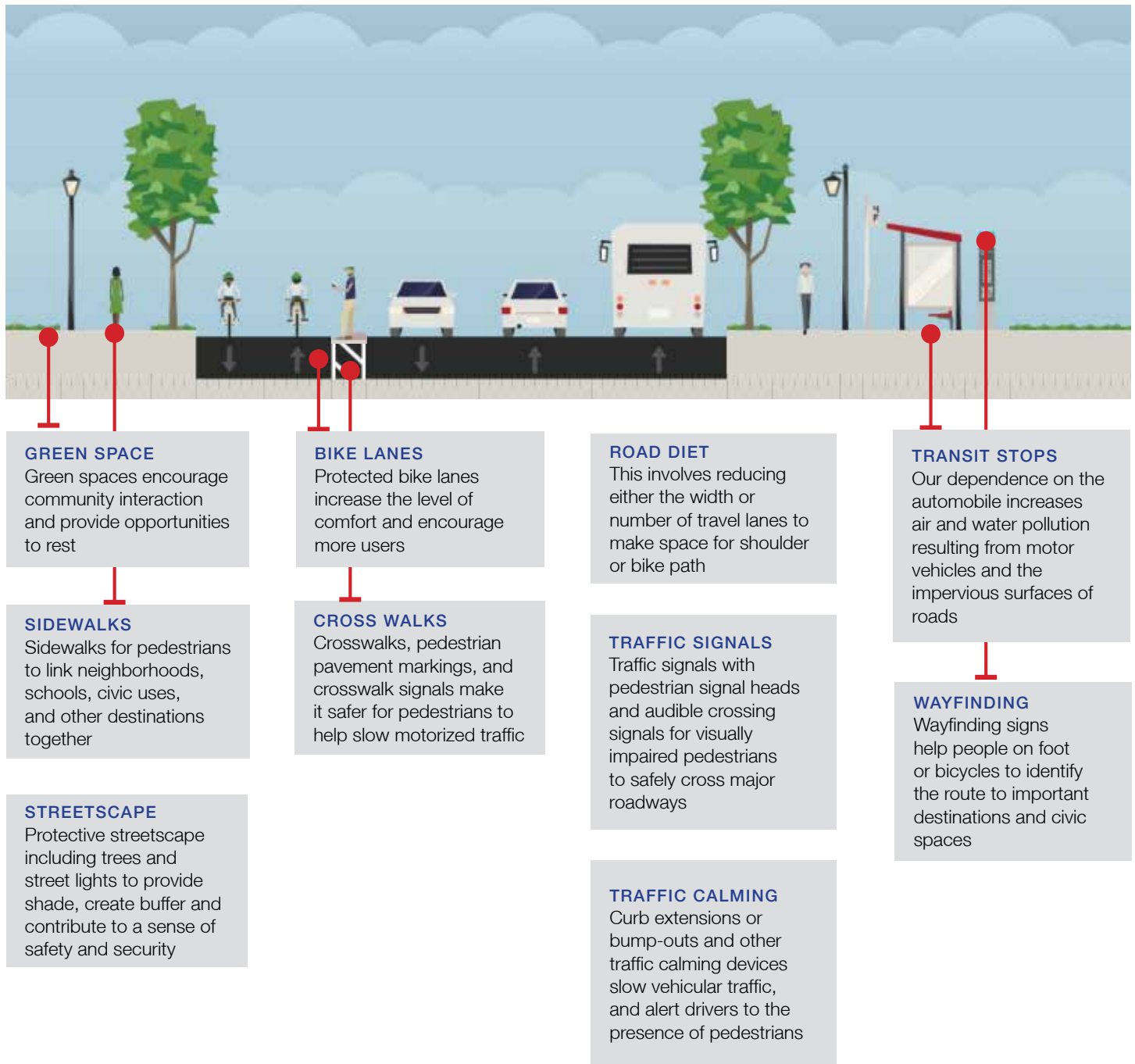


Image Source: Street Mix; Exhibit prepared by: Giffels Webster

FIG. 3.10. BENEFITS OF COMPLETE STREETS

## Safety



1. Reduce pedestrian accidents by increasing the safety factor.
2. Improve perceptions of the safety of non-motorized travel, which strongly influences decisions about alternative modes of travel for many.
3. Reduce either the width or number of travel lanes to make space for shoulder or bike paths will improve safety (road diet).



On an average, a pedestrian was killed in the US every **88 minutes** in traffic crashes in 2017

## Health



1. Promote walking or biking to school to lower child obesity rates.
2. Encourage activities to counteract a sedentary lifestyles, which have been shown to be associated with a host of long-term health problems.
3. Add sidewalks, bike paths and access to transit to increase levels of physical activity.



Between 1989 and 2018, **child obesity rates** rose dramatically, while the percentage of walking or biking to school dropped



**54%** of older American living in inhospitable neighborhoods say they would walk and ride more often if things improved



Carbon-dioxide emissions can be reduced by **20 pounds per day** or more than **4,800 pounds** in a year per each commuter by using transit instead of driving

## Access



1. Address equity concerns by designing facilities that are safe, accessible, and welcoming for all users, particularly for the elderly, the disabled, and children.

## Environment



1. Reduce dependence on the automobile to lower air and water pollution resulting from motor vehicles and the impervious surfaces of roads.
2. Promote a shift away from automobile travel. Studies have shown that 5 to 10 percent of urban automobile trips can reasonably be shifted to non-motorized transport.



Nearly **40 percent** of merchants reported increase in sales, and **60 percent** more area residents shopping locally due to reduced travel time and convenience

## Economy



1. Design residential and local business districts with traffic calming measures to provide safe pedestrian access and increase consumer activity.
2. Implement Complete Streets policies as placemaking strategies for economic development and community revitalization.

Prepared by *Giffels Webster*, data compiled from multiple sources.

## Design Considerations

The usage rate of any non-motorized facility by diverse groups of users depends on the level of comfort the path provides. Level of comfort typically depends on various stress factors such as vehicular traffic speed, volume and the time of the day. Safely designed pedestrian/bicycle lanes lead to more users and less accidents.

### Level of Traffic Stress

The Mineta Transportation Institute developed a rating system to rate the “stress levels” users experience. The ‘Level of Traffic Stress’ (LTS) ratings range from 1 (lowest stress) to 4 (highest stress and discomfort) and are based on factors such as the speed and volume of vehicle traffic, the number of travel lanes, the size and complexity of intersections, and the types of bicycle facilities provided.










### Type of Ridership

A study completed by Roger Geller for the Portland Office of Transportation identified Four type(s) of users which correlates with the LTS ratings. The type of riders are categorized by their level of comfort riding on different types of facilities.

### All Ages and Abilities

National Association of City Transportation Officials (NACTO) developed an ‘All Ages & Abilities’ criteria for selecting and implementing bike facilities. All Ages and Abilities facilities are defined by three primary factors: safety, comfortability and equitability. This guide helps communities design facilities with appropriate traffic calming measures based on contextual factors such as vehicular speeds and volumes, user type and level of comfort to reduce accidents and increase ridership. Another good resource for determining the right type of facility for a particular route is the ‘Bikeway Selection Guide’ created by US Department of Transportation Federal Highway Administration.

FIG. 3.11. ALL AGES AND ABILITIES

TYPE OF USERS	BARRIERS TO CONSIDER
 <b>Children</b>	Smaller and less visible from driver's seat
 <b>Seniors</b>	Lower visual acuity and slower riding speeds
 <b>Women</b>	Concerns about personal safety and traffic stress. Prefer buffers or barriers from vehicular traffic lanes
 <b>People Riding</b> <b>Bike Share</b>	Bike to transit or make one-way trips. Rely on comfortable and easily understandable bike structure
 <b>People of Color</b>	Fear of exposure to theft, assault or being a target for enforcement
 <b>Low-Income Riders</b>	Rely extensively on bicycles to ride to work. Access to continuous and safe facilities
 <b>People with Disabilities</b>	Use adaptive bicycles that require wider envelope and operate at lower speeds
 <b>People Moving Goods or Cargo</b>	Cannot be accommodated by facilities designed to minimal standards
 <b>Confident Cyclists</b>	Constitute a smaller percentage of total users, most often male. In the U.S., 76% of bike trips are made by men and 87% of competitive cyclists are male.

Source Text: National Association of City Transportation Officials (NACTO)

FIG. 3.12. LEVEL OF TRAFFIC STRESS AND TYPE OF RIDERSHIP

### LTS-1

Interested, but Cautious Riders



SHARED USE PATHS

1. Shared use paths are used by pedestrians as well as bicycle users
2. 8 feet min. width with 5-10 feet planted buffer
3. Ideal traffic speeds less than 25 miles per hour
4. Wider Right-of-way widths
5. Pavement surfaces should be based on anticipated usage volumes
6. **Comfortable for all ages and abilities**



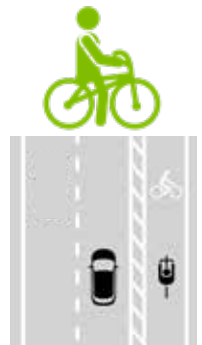
### LTS-2

Interested, but Concerned Riders



BUFFERED BIKE LANES

1. Bike lanes separated by buffers defined by pavement markings and parallel parking
2. 8 feet min. two-ways or 5 feet min. one-way with 5 feet painted buffer
3. Ideal traffic speeds from 20-25 miles per hour
4. Limited Right-of-way widths
5. Add vertical delineation such as candlestick bollards for increased level of perceived protection
6. **Comfortable for most adults**



### LTS-3

Enthusied and Confident Riders



BIKE LANES

1. Dedicated bike lanes that are adjacent to traffic lanes
2. 8 feet min. two-ways or 5 feet min. one-way with 5 feet
3. Ideal traffic speeds more than 25 miles per hour
4. Dedicated bike lanes that are adjacent to traffic lanes
5. Limited Right-of-way widths
6. Reduce curbside and intersection conflicts through access management
7. **Comfortable for confident bicyclists, who prefer not to share with the vehicles**



### LTS-4

Strong and Fearless Riders



BIKE ROUTES

1. Identifying a specific route as a 'Bike Route' is the simple alternative when immediate infrastructure improvements to roadway network are not feasible
2. Wayfinding signage such as 'share the road' or directional signage can be installed to guide the users to destinations or other connections
3. Traffic calming measures are required to manage speeds
4. **Uncomfortable for most users**



Prepared by Giffels Webster

Data Source: Mineta Transportation Institute & Roger Geller for the Portland Office of Transportation

## Ten Principles of Complete Streets Policy

<b>VISION</b>	<b>Vision and intent</b>	Includes an equitable vision for how and why the community wants to complete its streets. Specifies need to create complete, connected, network and specifies at least four modes, two of which must be biking or walking.
<b>DESIGN</b>	<b>Diverse users</b>	Benefits all users equitably, particularly vulnerable users and the most under-invested and underserved communities.
	<b>Design</b>	Directs the use of the latest and best design criteria and guidelines and sets a time frame for their implementation.
	<b>Land Use and context sensitivity</b>	Considers the surrounding community's current and expected Land Use and transportation needs.
<b>IMPLEMENTATION</b>	<b>Performance measures</b>	Establishes performance standards that are specific, equitable, and available to the public.
	<b>Commitment in all projects and phases</b>	Applies to new, retro-fit/reconstruction, maintenance, and ongoing projects.
	<b>Clear, accountable expectations</b>	Makes any exceptions specific and sets a clear procedure that requires high-level approval and public notice prior to exceptions being granted.
	<b>Jurisdiction</b>	Requires inter agency coordination between government departments and partner agencies on Complete Streets.
	<b>Project selection criteria</b>	Provides specific criteria to encourage funding prioritization for Complete Streets implementation.
	<b>Implementation steps</b>	Includes specific next steps for implementation of the policy.

Data Source: National Complete Streets Coalition (NCSC)





## Complete Streets Objectives for Genoa Township

The basic objectives of a “complete street” system in Genoa Township from 2013 Master Plan for Land Use are listed below. These objectives are consistent with other recommendations summarized in the preceding pages.

### Provide a Variety of Travel Routes.

Those walking or biking are more likely to do so when they feel safe and comfortable. Therefore, a variety of routes should be provided so non-motorized facilities are planned along roads with travel conditions that would naturally attract such activity. This involves providing connections from neighborhoods to schools, the Township Hall campus, and recreation in and near the Township. See page 3.41 for more details.

### Provide for Safe Travel Along the Street.

A variety of options may be considered to facilitate non-motorized and/or transit travel, in addition to moving vehicular traffic. Depending on the context, bike lanes, cycle tracks, sidewalks and pathways can all assist in moving pedestrian and bicycle traffic. See page 3.38 for more details.

### Provide for Safe Travel Across the Street.

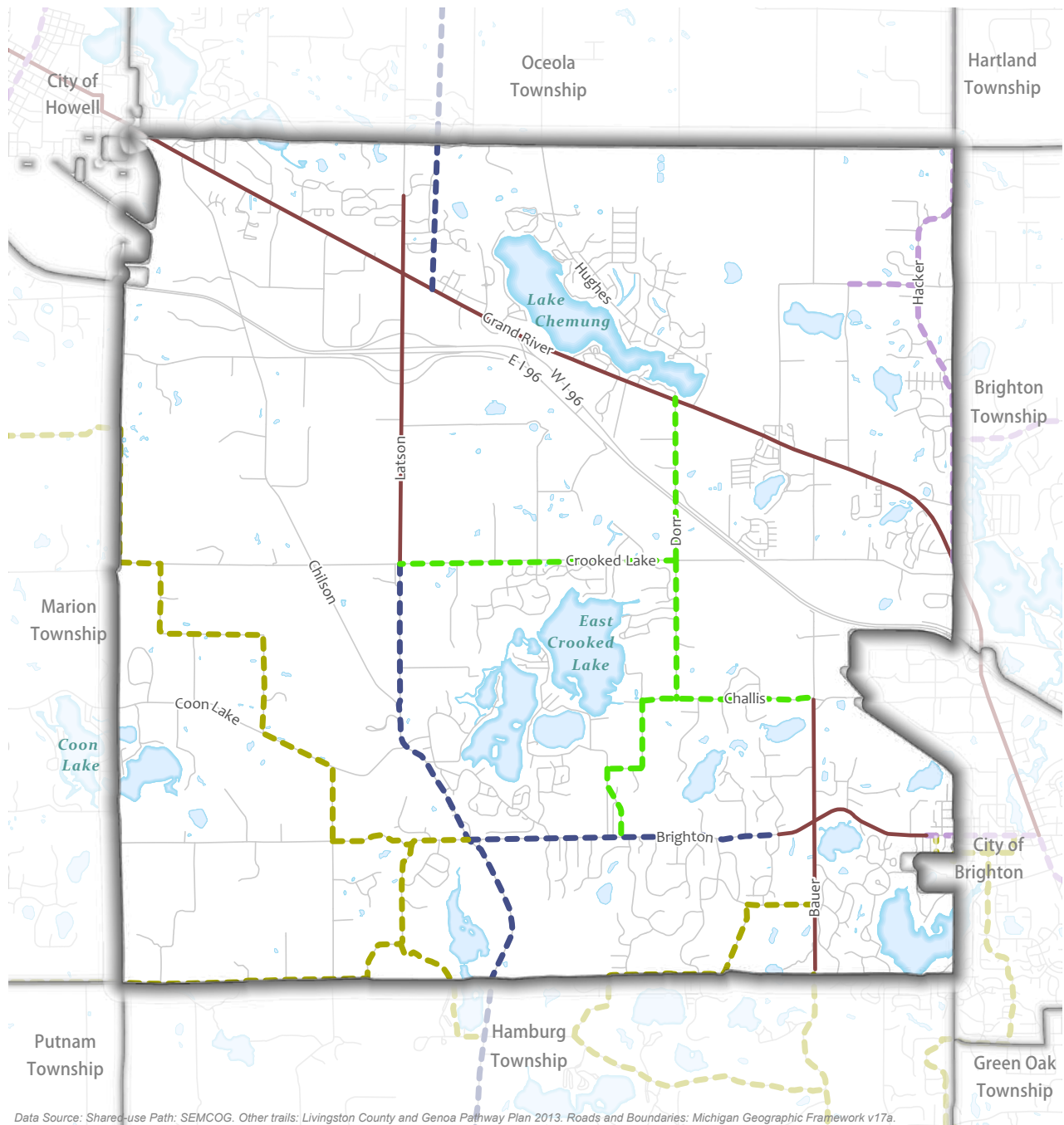
Where travel along the road is often considered in non-motorized planning, it is often the travel across the street that can deter non-motorized activity, such as busy arterials like Grand River. The goal is to provide some convenient places to cross where the pedestrian is very obvious to the driver. See page 3.39 for more details.

### Different Types for Different Folks.

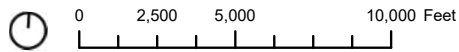
While experienced bicyclists prefer riding in the travel lane or along its right edge, less experienced riders prefer a bit more protection. Since one goal is to encourage people to bicycle more frequently, a system that meets the needs of those potential users is important. Therefore, bike lanes, buffered bike lanes, and separated pathways should be part of an overall bikeway system. See page 3.40 for more details.



MAP 3.6. NON-MOTORIZED FACILITIES



Data Source: Shared-use Path: SEMCOG. Other trails: Livingston County and Genoa Pathway Plan 2013. Roads and Boundaries: Michigan Geographic Framework v17a.  
 Map Exported: October 20, 2021. ©2020 Giffels Webster.



- Proposed Genoa Path
- Proposed County Priority Routes
- Proposed County Near Term Network
- Proposed County Long Term Network
- Existing Shared-Use Path



**Non-Motorized Network**  
 GENOA TOWNSHIP

# Sustainability & Resiliency

# Sustainability & Resiliency

It is becoming critical to include concepts of resiliency and sustainability into Land Use plans. Though they are related, resiliency and sustainability are not the same.



**Sustainability** is the well-established concept that focuses on decreasing or eliminating the detrimental future impacts of our current activity.



**Resiliency** recognizes that our built environment will be subject to stresses and is the practice of designing that environment in a way that can endure those stresses. Some threats are ongoing, persistent stresses, while others are sudden shocks or single events that disrupt the day-to-day functioning of the community.

As we plan for the future, many of the challenges we will face are related either directly or indirectly to our place in larger systems, both natural and man-made. We often have little direct local control over these systems, but adapting to change and discovering our role in contributing to the health of these systems is nonetheless essential to planning for a community that can survive and thrive even in the face of the most severe challenges. Resilient communities are not only preparing for weather and climate-related shocks, but are also preparing for economic and health shocks as well. In 2020, we saw the impacts of a global pandemic on local community health, education, recreation, commerce, technology and social connectivity. These impacts touched everyone's lives in big and small ways and may have lasting impacts in our communities.

## Effects of Climate Change

A changing climate has far-reaching implications for Michigan's agricultural and tourism economies, waterfront development, and communities with older stormwater management infrastructure. Locally, within the last decade, Oakland County has experienced multiple heavy rain events that have led to property damage and decreased mobility and must anticipate that more flooding will occur in the future, damaging property, impairing access to parts of the Township, and creating financial distress for local residents and businesses.

As the frequency and intensity of severe weather events continues to increase, communities will experience economic disruption. For instance, while the frost-free season has nominally increased, farmers in many of Michigan's agricultural communities have not benefited in recent years due to abnormally late frosts (such as those in mid-May, 2020) or heavy rain events, which have damaged early crops or delayed planting of late crops. Rising temperatures and more very hot days may affect the timing of summer festivals and tourism.

Communities must be prepared to anticipate the local effects of regional climate trends. According to the United States Environmental Protection Agency, climate change is already impacting many sectors of our communities. At a minimum, increases in air temperature and precipitation, combined with other factors, have caused impacts in the Great Lakes region including:

- Increased risk of heat-stress to equipment, infrastructure, and people, especially those who work outdoors or are otherwise vulnerable.
- Increased flooding and coastal erosion.
- Reduction in water quality due to increased occurrences of toxic algae blooms.
- Changes to the usability of water infrastructure like docks and piers.
- Economic impact to industries like forestry, fishing, crop production, tourism, manufacturing, energy production, and recreation.
- Expanded commercial navigation season as ice coverage continues to decline on the Great Lakes



This Master Plan recognizes the importance of additional planning efforts needed to ensure the Township is resilient and sustainable. Future planning should include a public outreach process in two basic parts: education and input. Education includes making community members aware of potential threats and the process of planning for them, with an emphasis on outreach to the most vulnerable members of the community. The input process should offer the opportunity for residents and other stakeholders such as municipal staff and business owners to engage in detailed, focused conversations regarding resiliency planning issues. It is important for the community to engage in vigorous outreach through multiple channels to get people involved.



**Extreme heat**

Average temperatures in the Great Lakes region rose 2.3 degrees Fahrenheit from 1951 through 2017. Extreme heat is dangerous for vulnerable populations and can also tax electrical infrastructure, leading to power outages, which in turn can increase the risk for the people most prone to succumbing to heat. Designating specific locations with backup power sources (such as municipal halls, libraries, and schools) as cooling stations can provide vulnerable residents with an essential escape from the heat. There may be a need to provide transportation to cooling stations for those with limited mobility options.

**Severe winter storms**

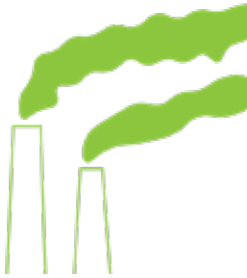
As temperatures rise, winter precipitation levels are anticipated to rise as well, and mixed precipitation events with more heavy ice may become more common. Severe winter storms can result in power outages, impeded mobility, damage to structures and trees, and lost economic productivity. Municipal costs for snow removal should be included in budget planning. While storms are the primary focus of future concern, communities also benefit from planning for extreme cold—locations designated as cooling stations in the summer can become warming stations in the winter.

**Heavy rain and flooding**

Heavy rain events are already more common in Michigan than they were in the mid-to-late 20th Century, having increased by 35 percent from 1951 to 2017, as total annual precipitation increased by 14 percent. They are anticipated to become even more common in the future.

**Public health emergencies**

The 2020 COVID-19 pandemic brought with it unprecedented economic disruption, forced short-term changes in social habits, destroyed numerous small businesses, and led to a very large increase in unemployment in a very short time period. Planning for public health emergencies needs to consider the many dimensions of the social fabric that are heavily impacted, including the availability of medical services, government’s ability to continue functioning under quarantines or stay-at-home orders, and the locations and numbers of vulnerable populations. Local police, fire, and ambulance services may be particularly taxed in a future public health emergency.



**Damage to natural systems**

Human activity is rarely in balance with the natural systems it occurs within. While resource extraction and pollution offer two very obvious examples of human activity, nearly all modern human development activity has some impact on natural systems, including loss of habitat, interruption of habitat, and increased emissions due to greater travel distances as development moves outward into wild places. A combination of rising temperatures and agricultural runoff that changes the nutrient balance in major water bodies has led to much higher frequency of toxic cyanobacteria and algae blooms, particularly in Lake Erie. These blooms can impair drinking water quality and limit recreational opportunities, including fishing and watersports.



**Unanticipated events**

No community can plan for every possible future event or scenario. This is why developing resiliency, improving sustainability, understanding vulnerabilities, and identifying emergency resources is so important.



**Drought**

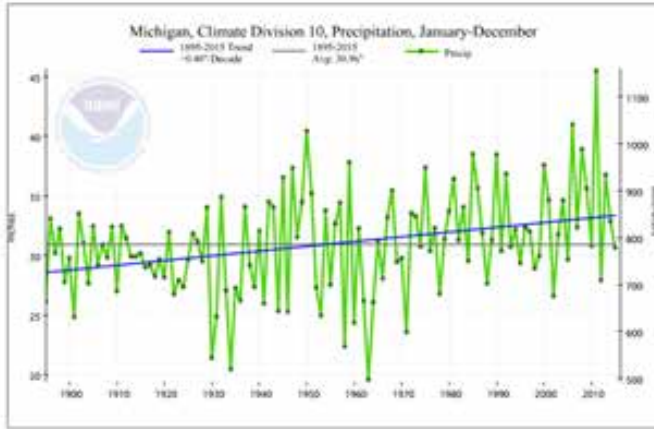
We most frequently think of drought as a prolonged period without precipitation. While this kind of drought is certainly possible in the future in Michigan, the more likely effects of the changes the state is experiencing will be changes in seasonal distribution of storms with precipitation. Winter rainfall will become more common, snowpack overall may decrease, and stream levels will peak earlier in the year, affecting water availability and the timing of groundwater recharge. Drought is exacerbated by higher temperatures, which lead to increased evaporation rates; even with higher average rainfall, land may become drier, and as rain becomes less frequent in the hottest summer months, mid-summer drought could become a regular challenge. Dry conditions bring with them the possibility of wildfires, which are not uncommon in rural Michigan but could grow in scale and intensity in coming years. It is important to understand the community’s water sources and how extended periods of drought might affect water availability.



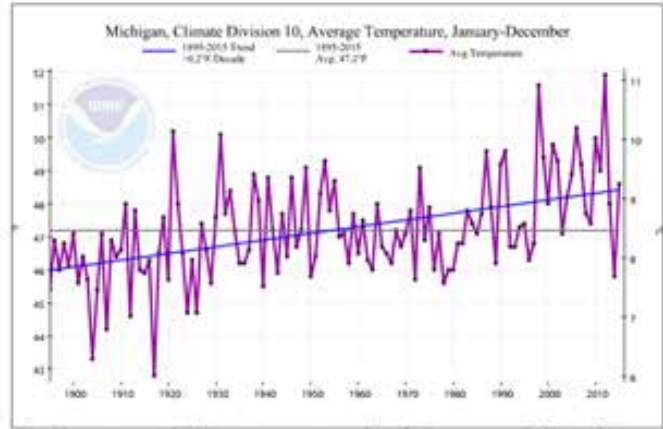
**Food systems**

As the climate changes and weather patterns shift accordingly, planting and harvesting conditions become less predictable, and the potential for crop losses increases. In 2019, unusually heavy rains across much of Michigan made planting during the typical time difficult for many farmers. While the number of frost-free days has increased by an average of 16 days across the Great Lakes region from 1951 to 2017, the timing of those extra days has not uniformly added to the growing season. In recent years, unexpected late freezes after earlier-than-usual warm weather lead to the loss of large portions of fruit crops such as apples and cherries.

Regional climate trends indicate that southeast lower Michigan is poised to see stronger and more frequent storms, in addition to higher temperatures. The figure below shows how these two measures have been trending steadily over the last 100 years. With increasing precipitation, more frequent extreme heat days and an overall rise in average temperature, communities should be planning for what this mean locally and how their most venerable populations are situated to survive.



Southeast Lower Michigan Annual Precipitation (In Inches) from 1895 to 2016. Source: NOAA Climate Divisions.



Southwest Lower Michigan Average Annual Air Temperatures from 1895 to 2016. Source: NOAA Climate Divisions.

## Addressing Resiliency: Identifying Vulnerable Populations

Resilient communities anticipate likely shocks, understand trends in stressors, and prepare for potential worst-case scenarios. Understanding where a community is physically most vulnerable to specific events and understanding which members of the community are likely to be most vulnerable in each case is key to effective planning. Vulnerability assessments have been used across Michigan to identify vulnerabilities within a community and to develop tools communities can use to foster resiliency in their policy decisions. A vulnerability assessment looks at exposure to risk and sensitivity to risk.

**Exposure** demonstrates the land, property, and neighborhoods that are most likely to be impacted by flooding, heat, or other severe weather. Low lying land, land near bodies of water, areas with large swaths of pavement, neighborhoods with few trees, and sections with older homes all suffer from high levels of exposure.

**Evaluating exposure to risk asks:** where is the environmental risk the greatest?

**Sensitivity** demonstrates the members of the population that are most likely to be impacted by severe weather. The most sensitive populations are the elderly, young children, people with medical conditions, those living in poverty (especially the homeless) and people who work outdoors. People who live alone, regardless of their economic status, are also at higher risk

**Evaluating sensitivity to risk asks:** who in my community is most likely to experience the adverse effects from that risk?

## Sustainable Development Strategies

### Mitigating Risks

Next to placing land into various zoning districts, site plan review is the most powerful planning and natural resource protection tool. Easily enforced, site plan review is a way for communities to ensure what is approved on a site plan is what will be built. When large projects are proposed or when small projects are proposed in or adjacent to sensitive natural resources, some communities require applicants to submit an environmental assessment, which details the impact of the proposed development on natural resources. Communities that have plans and zoning regulations based on a solid environmental inventory are able to set the threshold for future environmental assessments at a defensible level. Without such a basis, an environmental assessment may be considered arbitrary, as there is little context for the requirement. An environmental assessment can be a valuable source of information, and in some cases an important tool for ensuring that new development is designed in such a way that unavoidable environmental impacts are properly mitigated. Environmental assessment can also be viewed as an affirmative tool for helping a local government meet its responsibility for preventing pollution, impairment or destruction of the environment.

### Stormwater Management

The Township's existing water features play an important role in managing storm water. Several creeks and streams, which connect the Townships natural water system, meander through the Township, connecting lakes and wetlands with each other, and then conveying storm water run-off.

### Impervious Surfaces

Because development replaces pervious ground with impervious pavement and buildings, water runs off the surface rather than permeating naturally through the ground. As stormwater drains across pavement, it picks up pollutants such as automobile fluids, fertilizers, and sediment and conveys them into a storm drain. If a storm drain is directly connected to a creek, the creek receives polluted water which, in turn, can degrade water quality and wildlife habitat. This, in turn, degrades streams and water quality unless managed in an ecologically-sound manner. Ordinance standards that limit impervious surface coverage, or regulate materials used to construct impervious surfaces, can address this at a site plan individual site level.

Portions of southeast Michigan receive their drinking water from surface water sources. Because stormwater heats up the longer it sits on hot, impervious surfaces, it can also impact aquatic organisms that depend on cool or cold-water habitats. Lastly, water volume is greater for surface stormwater; Therefore, it reaches the stream much faster. The increased volume and speed erode stream banks and impairs the stream's ability to support aquatic vegetation and wildlife.

### Natural Shoreline Dynamics

Runoff is one of the primary concerns regarding the shoreline dynamics and water quality of inland lakes. Runoff can carry fertilizer and other undesirable substances into the water, some of which can cause an overgrowth of aquatic plants and alter the natural ecosystems in these lakes. It is crucial to protect natural ecosystems by managing development on the shoreline and in the watersheds of inland lakes. Communities can create best practices to protect inland lakes from erosion and runoff damage by encouraging the use of permeable pavement and growing native plants along the shoreline and in the watershed.



# Zoning Plan

# Zoning Plan

## RELATIONSHIP BETWEEN MASTER PLAN AND ZONING ORDINANCE

### Master Plan

#### Long range vision that guides community policy

Community Master Plans illustrate the vision for the future and contain guiding principles that help a community create land development policies and make Land Use decisions. In Michigan, the value of the Master Plan as an important community document is recognized, which is why the state of Michigan requires the Master Plan be reviewed every five years. The Township should check in on their progress regularly and ensure the vision and guiding principles are still relevant.

### Zoning Ordinance

#### Legal framework that regulates development

A zoning ordinance regulates the use of land. Adopting regulations that support the goals of the Master Plan helps ensure that future development will be in line with the community's goals and vision. It is also helpful to develop an itemized implementation guide for a Master Plan. The Zoning Ordinance is one of the primary tools for implementing a Master Plan; there should be a clear connection between Master Plan goals and the Zoning Ordinance. Many of the Land Use recommendations, goals and objectives found in the Master Plan can be aided by amendments to the Township's Zoning Ordinance.

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TABLE 4.1. ZONING PLAN

2022 Future Land Use Category	Zoning District	Notes
<b>Housing</b>		
Agricultural/Country Estate	Agricultural District (AG) Country Estate District (CE)	
Rural Residential	Rural Residential (RR)	
Low Density Residential	Low Density Residential (LDR) Lakeshore Resort Residential (LRR)	
Small Lot Single Family Residential	Suburban Residential (SR)	
Medium Density Residential	Urban Residential (UR) Medium Density Residential (MDR) Manufactured Housing Park (MHP)	
High Density Residential	High Density Residential (HDR)	
<b>Commercial</b>		
Neighborhood Commercial	Neighborhood Services District (NSD) General Commercial District (GCD)	
Interchange Commercial	Interchange Commercial (ICPUD) District	
Interchange Campus	Interchange Campus (CAPUD) District	
<b>Mixed Use</b>		
East Grand River District	Town Center Overlay District (TCOD)	New Category
West Grand River District	New Categories	New Category
<b>Industrial</b>		
Industrial	Industrial District (IND)	
Research and Development	Office Service District (OSD)	

## Action Strategies

# Action Strategies

The thoughtful preparation and adoption of any plan would be of diminished value without a program of implementation strategies. The implementation strategies of this chapter will assist the Township in putting the key recommendations of the Master Plan to work. The implementation program is based on the goals and objectives discussed earlier. A specific Zoning Plan outlines steps that can be taken toward implementation through amendments to the Zoning Ordinance.

The best plans are those that are implemented in a consistent, incremental, and logical manner. The implementation matrix that follows is designed to show how the goals of the Master Plan are fulfilled by action strategies. All boards, commissions, and authorities are encouraged to read through all of the strategies to understand how they all work together to create a better community to live, work, and play.



## Goals

Goals are general guidelines that explain what the community wants to achieve. Goals are usually long-term and represent global visions such as “encourage economic development” Goals define the “what,” “why,” and “where,” but not the “how.” Identifying obstacles to overcome is also useful in defining goals.



## Objectives

Objectives identify the milestones that mark progress in achieving goals and provide more of the “how” goals will be implemented. For example, with a goal of “encourage economic development,” an objective to “Develop strategies to maintain and enhance the Township’s industrial and commercial use.” is something that may be measured and tracked over time.



## Action Items

Action items are more specific and define the steps to accomplish objectives and attain the identified goals. The most effective action strategies will include who will tackle that task and when it should be accomplished. For the above example objective of developing strategies to enhance industrial and commercial uses, one action strategy might be “Coordinate land use decisions with community facility and utility planning.” This may be assigned as a staff item to be completed within one to three years.

## Implementation Matrices

In order to illustrate the connection between goals, objectives and action strategies, each of the implementation matrices that follow align with the goals, which are noted at the top of each matrix. Within each matrix, the action items are broken into subcategories intended to assist with identification and prioritization. Not all goals contain action items within each subcategory and some goals are repeated as they can advance more than one goal. The matrix subcategories include:

TABLE 4.2. IMPLEMENTATION ACTION ITEMS	
Action Strategy	Description
Zoning	These are items requiring zoning amendments and will generally be led by staff and the Planning Commission.
Advocacy	These will be items involving education of the community, including residents, business owners, property owners, developers and design professionals. They will be led by a combination of staff, boards and commissions. This may also involve Township staff and officials working with county and state officials to coordinate plans and funding, as appropriate.
Capital Improvement	These involve large capital investments, such as equipment, projects or studies, that require inclusion into the Township’s Capital improvement plans in order to determine the most efficient time and method of completion and may involve multiple municipal departments.
Other	Other items may involve research, study and further evaluation by staff and/or other boards and commissions.

The tables that follow assign actions to the goals and objectives, leaving room to establish priority levels for short-term, mid-term, and long-term items as the next step following adoption of this plan. This chapter should be reviewed periodically and at least annually to assess progress and adequately budget for specific strategies. Each action should have a “lead,” a board, commission, group, or individual who is responsible for project initiation and coordination.

TABLE 4.3. IMPLEMENTATION MATRIX CATEGORIES	
Matrix Categories	Definitions
Action Strategy	The actions necessary to carry out goals and objectives
Lead Body	Identifies the primary party responsible for accomplishing the action strategy
Time frame	Identifies and prioritizes the time frame for the action strategy to be implemented.
Supporting Partners	Identifies other parties involved in the accomplishment of the action strategy
Abbreviations	PD - Planning Department PC - Planning Commission TB - Township Board NA - Not Applicable LCRC - Livingston County Road Commission MDOT - Michigan Department of Transportation

After adoption, the Planning Commission will assign time frames or priorities to the action items. These time frames are intended as guides and may be adjusted as resources allow or as other issues arise. Generally, short time frames are intended as three years or less; medium-to-long time frames are more than three years.

## Goal 1 | HOUSING & NEIGHBORHOODS

### Objectives

- Allow the pattern of homes on large rural lots to continue where it exists, particularly south of I-96.
- Focus new housing on concentrated areas near already-developed areas
- Ensure new development is of high quality and design.
- Ensure that housing is available near transportation corridors, goods and services.
- Encourage student housing associated with Cleary College.
- Encourage housing for older residents near medical facilities as well as goods and services.
- Encourage the ongoing maintenance and upkeep of housing
- Support older residents who wish to stay in their homes as long as possible.
- Allow existing lakefront homes to be improved and expanded without compromising the established character of the lake neighborhoods or water quality.
- Limit impact of short-term housing rentals



Goal 1 | HOUSING & NEIGHBORHOODS

Type of Action Strategy		Lead Body	Time Frame	Supporting Partners
<b>Zoning Action Strategies</b>				
1.1	Review zoning map to ensure it is consistent with existing and planned utility extensions; prioritize any areas that should be updated.	PC		PD, TB
1.2	Review the Zoning Map to ensure that a variety of housing types are allowed within walking distance of shopping, dining, entertainment, recreation, and employment that encourage younger as well as older residents to remain.	PC		PD, TB
1.3	Consider how the zoning ordinance may need to change to permit smaller single-family homes and expand opportunities for attached single-family homes	PC		PD, TB
1.4	Explore ordinance changes to permit small attached accessory dwelling units with single-family homes.	PC		PD, TB
1.5	Consider adopting flexible alternative zoning standards that allow development projects to meet specific Master Plan goals, such as reducing parking standards for multi-family housing near transit stops or multi-modal transportation facilities (including shared use pathways).	PC		PD, TB
1.6	Update the zoning ordinance to encourage housing near Cleary College and medical facilities that promote and support a healthy walkable environment.	PC		PD, TB
1.7	Enable residents to age in place by creating zoning standards that encourage the development of active adult housing in a variety of styles, including single-family homes and mixed-use development.	PC		PD, TB
1.8	Update lakefront zoning regulations as needed to ensure new homes and additions to existing homes fit the context (mass and height) of lakefront neighborhoods and water and sewer systems can accommodate additional development.	PC		PD, TB
1.9	Develop appearance standards for residential dwellings to maintain high-quality architecture throughout the Township	PC		PD, TB
1.10	Review zoning ordinance to review list of permitted, special Land Uses and consider whether there are uses that no longer are appropriate or uses that should be added. Consider if any uses could have specific conditions that may make review/approval clearer and more consistent.	PC		
<b>Advocacy Action Strategies</b>				
1.10	Complement active-adult developments with nearby entertainment and community recreation opportunities.	TB		PD
1.11	Support older residents who wish to age in place by identifying home repair program resources for residents and consider sourcing volunteer labor to assist homeowners who are unable to perform work themselves.	TB		PD
1.12	Work with local elected officials and state representatives to promote the Townships position “regarding short term rental regulation” at the state level and explore options for local regulation.	TB		PD
1.13	Work with local elected officials and state representatives to promote the Townships position at the state level and explore options for local regulation.	PD		PC, PD
1.14	Promote policies and programs to make housing more accessible to the elderly and mobility challenged individuals.	TB		
1.15	Pursue strategies to make Genoa Township an “Age-Friendly Community,” including supporting public transportation, attracting goods and services that support a variety of ages in the community, promoting community health strategies, encouraging social and civic engagement for people of all ages.	TB		PD
<b>Capital Improvement Action Strategies</b>				
1.16	Evaluate infrastructure, including broadband, water, sewer, roads and multi-use pathways, to ensure housing is connected and supported as appropriate.	TB		PD



## Goal 2 | ECONOMIC DEVELOPMENT

### Objectives

- Allow flexibility of uses in the Grand River corridor.
- Ensure uses that rely on the interstate highway for logistics/transportation have adequate access.
- Work with property owners to identify and locate compatible/complementary users in concentrated areas to promote a thriving economic ecosystem.
- Strengthen the reputation of Genoa Township in the region for business development and job creation.
- Ensure adequate housing for the local workforce to support economic development.
- Support local broadband and technology services that will allow residents to work from their homes

Type of Action Strategy	Lead Body	Time Frame	Supporting Partners
<b>Zoning Action Strategies</b>			
2.1	Assess the Zoning Ordinance and amend as needed to provide for small neighborhood uses, including retail, food establishments, and office spaces, adjacent to residential areas to encourage walkability and minimize traffic congestion	PC	PD, TB
2.2	Create mixed use overlay zoning district(s) in designated areas along Grand River to promote a mix of uses and ensure building and site design support the desired walkable, vibrant district hubs.	PC	PD, TB
2.3	Assess the Zoning Ordinance and amend as needed to reinforce appearance standards for new development	PC	PD, TB
<b>Advocacy Action Strategies</b>			
2.4	Develop a property inventory by working with property owners to provide information on available properties on the Township's website	PD	
2.5	Establish regular meeting dates with the Livingston County Road Commission to monitor and discuss the local road network and identify areas for desired improvement	PD	LCRC
2.6	Develop a business retention and recruitment program to support the ongoing health and sustainability of the local businesses district.	TB	PD
2.7	Develop annual survey to better understand the needs of the business community and ways in which the Township can provide support.	PD	
2.8	Prioritize development in the Grand River corridor over other areas of the Township.	TB	PD
2.9	Prioritize development at the S Latson interchange area before extending south into transition area.	TB	PD
<b>Capital Improvement Action Strategies</b>			
2.8	Evaluate infrastructure, including broadband, water, sewer, roads and multi-use pathways, to ensure housing is connected and supported as appropriate.		

Goal 3 | NATURAL FEATURES

Objectives

- Protect natural areas by limiting development to areas with existing infrastructure and strictly enforcing the natural features setback
- Create strategies to conserve water and energy and reduce waste
- Protect the Township’s groundwater resources by increasing wellhead protection and undertaking measures to prevent groundwater pollution.
- Concentrate development so there is minimal conflict between the man-made and natural environment.
- Establish Land Uses that are compatible with designated open space
- Identify ongoing environmental stresses, such as invasive species, in the community and the potential for sudden events, such as flooding, and prepare plans to mitigate their impacts.
- Increase tree cover and reduce impervious surfaces in developed areas to better manage stormwater and mitigate impacts of climate change.
- Monitor septic capacity to ensure lake front properties are properly maintained and direct new development to areas that have sufficient facilities

Type of Action Strategy		Lead Body	Time Frame	Supporting Partners
<b>Zoning Action Strategies</b>				
3.1	Create a Zoning overlay district to encourage and allow for flexible site design to further reduce impervious surface within and adjacent to lakes, floodplains and wetlands	PC		PD, TB
3.2	Review the existing residential Cluster Option standards in conjunction with constructed projects to gauge how they have achieved the intended open space preservation; evaluate if any refinements to standards are needed.	PC		PD, TB
3.3	Assess the Zoning Ordinance standards for stormwater management to ensure alignment with best practices.	PC		PD, TB
<b>Advocacy Action Strategies</b>				
3.4	Promote cluster developments where development pressure exists to preserve open space, natural features and viewsheds.	TB		PD
<b>Capital Improvement Action Strategies</b>				
3.5	Identify parcels adjacent to the environmentally sensitive areas and budget for grant and funding opportunities for acquisition and enhancement as appropriate.	TB		PD

Goal 4 | TRANSPORTATION

Objectives

- Maintain the pathway along Grand River Avenue through the Township.
- Allow and encourage the mix of commercial and residential uses along the Grand River corridor.
- Partner with county and state road agencies to support non-motorized travel, improve safety and mitigate traffic congestion.
- Maintain local roads under Township jurisdiction.
- Partner with local and regional agencies to develop transit options.
- Create a Complete Street network in the Township to allow residents opportunities to safely access community destinations through a variety of modes, including additional pathways and crossings.
- Prioritize the Dorr Road highway crossing for pedestrian accommodations when improvements are made

Type of Action Strategy	Lead Body	Time Frame	Supporting Partners
<b>Zoning Action Strategies</b>			
4.1	Update the zoning standards for non-motorized pathways and sidewalks to increase the width of shared use paths (called “bike paths” in the ordinance to 10 feet wide.	PC	PD
4.2	Update parking standards to promote adaptive reuse of unused parking areas, promote the installation of EV infrastructure, and accommodate the recent trends of drive up and curbside pickup uses while mitigating the impacts to pedestrian circulation.	PC	PD
<b>Advocacy Action Strategies</b>			
4.3	Adopt a complete streets policy and ordinance as recommended in this plan.	TB	PD
4.4	Work with the Livingston County Road Commission to ensure the safe sharing of the road for motorized and non-motorized activity.	TB	PD. LCRC
4.5	Partner with county and state road agencies and the surrounding communities (Marion Township, Oceola Township, Brighton Township and Hamburg Township) to monitor the transportation network and coordinate potential road improvements in and around the Township to mitigate traffic congestion from changes in development.	TB	PD
<b>Capital Improvement Action Strategies</b>			
4.6	Coordinate non-motorized improvements with other capital improvements to create cost efficiencies.	TB	PD
4.7	Address pedestrian connectivity through the Latson interchange areas.	PC	PD
4.8	Coordinate with MDOT and the Livingston County Road Commission to ensure the reconstruction of any bridge within the Township, particularly Dorr Road and others traversing I-96, should be designed and built to accommodate non-motorized infrastructure	TB	TB, LCRC & MDOT

## Goal 5 | PUBLIC FACILITIES AND SERVICES

### Objectives

- Plan for infrastructure improvements and ongoing proactive management of local utilities, facilities, and roads.
- Partner with local agencies to ensure long-term management of local infrastructure.
- Maintain and enhance recreational amenities at the Township Park to accommodate the needs of current and future residents of all ages and abilities.
- Partner with adjacent communities, local agencies, and the county to provide recreational facilities and programs for residents.
- Identify alternative funding sources for infrastructure and recreation improvements.
- Encourage installation of alternative energy facilities, including solar.

Type of Action Strategy	Lead Body	Time Frame	Supporting Partners
<b>Zoning Action Strategies</b>			
5.1 Identify areas that are suitable for alternative energy facilities and create/update the zoning ordinance standards to accommodate solar, wind and electric vehicle charging facilities.	PC		PD
<b>Advocacy Action Strategies</b>			
5.2 Review and update the Township recreation plan every five years, consistent with the Michigan Department of Natural Resources standards	TB		PD
5.3 Ensure that parks and recreation facilities are accessible for residents of all ages and abilities by conducting an accessibility audit and incorporating needed upgrades into future recreation plans	TB		PD
5.4 Develop a marketing plan, and work with state utility providers, such as DTE and Consumers Energy, to attract solar energy facilities to identified areas in the Township.	TB		PD
<b>Capital Improvement Action Strategies</b>			
5.5 Coordinate capital improvement plans (CIP) with Parks and Recreation projects to maximize efficiency	TB		PD
5.6 Establish a capital improvement policy and update it annually to align with Township budget approval	TB		PD
5.7 Identify grant opportunities and include matching funds in CIP budgeting	TB		PD
5.8 Explore the development of combined or adjoining school, park, and recreational facilities to ensure maximum and efficient use and to reduce land costs	TB		PD

APPENDIX

## I-96/Latson Road Subarea Plan (2013)

## E. I-96/Latson Road Subarea Plan

At the time this Master Plan update was prepared, a new full service I-96 interchange was under construction at Latson Road. The new interchange includes an overpass connecting Latson and Nixon Roads and a widening to five lanes between Grand River Avenue and the C.S.X. Railroad tracks. Nixon Road, renamed to S. Latson Road, would be improved to a paved, two lane roadway from the railroad south to Chilson Road. Grand Oaks Drive and Beck Road have been realigned to accommodate the interchange ramps.

With the development of the new interchange, Latson Road will be an important gateway to both north and south Genoa Township. Access to the area south of I-96 will dramatically change, necessitating a specific subarea plan to guide development decisions. The subarea plan is intended to address the following:

- Manage traffic around the new I-96 interchange and the intersection of Latson and Grand River Avenue to maintain a level of service that will meet the needs of travelers, protect the significant investment of the interchange, and allow some well-managed intensification of land use near the interchange.
- Encourage high-quality design for the land uses surrounding the interchange to create a gateway that presents a positive image to the community for residents, businesses and visitors.
- Protect the established rural and suburban residential areas south of I-96 through preservation of natural features, limiting density and preventing the intrusion of nonresidential uses outside of identified boundaries where land use change has been planned.
- Identify a secondary area along S. Latson Road where some additional land use change may be considered once a principal use has been established and approved.

The Latson Road Subarea Plan includes the following recommendations for when the interchange is completed, as illustrated on the subarea map (See Map 10):

- The land on the east and west side of Latson Road between I-96 and Grand River Avenue is planned for Regional Commercial and will be rezoned for a mixed-use PUD (NR-PUD). This PUD should include the following:
  - A diversified mixture of uses that may include commercial and office/research and development.
  - A mixture of uses that will diversify traffic generated from the site by spreading out the peak hour over times that minimize impact to the interchange's peak hour traffic.

### *Planning for the Latson/Nixon Road Corridor when the I-96 interchange is completed:*

- *Manage traffic and access around interchange.*
- *Create community gateway with distinctive character.*
- *Diversified mixture of land uses.*
- *High quality architecture.*
- *Streetscape and landscaping improvements along Latson and Grand River.*
- *Protect character of rural residential neighborhoods south of I-96.*
- *Reevaluate the plan yearly to respond to development and market factors.*



- Access management that will minimize the number of driveways and protect the efficiency of traffic flow along Latson Road between the interchange and Grand River Avenue.
- Distinct and prominent architectural features of enhanced character, which reflect the importance of the site’s location and create a positive visual landmark for this gateway to the community.
- Extensive landscaping along Latson Road and Grand River Avenue to enhance the appearance of these corridors and the gateway to the community.
- Uniformity in design through coordination of architectural styles, landscaping, ornamental lighting, pedestrian circulation and vehicular access.
- The areas immediately south of the interchange along S. Latson Road are planned for Interchange Commercial, as described in Section B above. This area is intended to accommodate the needs of interstate traffic and should complement, not duplicate the commercial areas north a long Latson and Grand River.
- The areas adjacent to the Interchange Commercial area as depicted on the map are planned for Interchange Campus uses. This area can be served by utility extensions and is intended to be a well-planned, campus setting.
- Residential development along S. Latson Road south of the Interchange Campus area will remain at large lot residential densities. The intent is to protect the residential character and natural features through lower density development (Future Transition Area on Map X).
- As the areas designated for Interchange Commercial and Campus are approved for significant development, areas south currently planned residential should be reevaluated for potential supporting uses, conditional upon the utility and roadway capacities, as shown as Future Transition Area on Map 10. This plan is intended to be flexible, balancing the impacts of new development on the infrastructure system, accommodating new uses dependent on surrounding uses, and limiting the negative impacts on existing nearby uses.

*Interchange Commercial Examples*



**South Latson Interchange Design Guidelines**

***Streetscape***

Streetscape improvements, such as street lights, landscaping, wayfinding signage, and pathways, should be integrated into the interchange commercial and campus developments. This will contribute to the unified, high-quality development the Township would like to project at the new interchange.

- As part of the development of the South Latson campus, a landscaped median should be installed south of the railroad. This will not only help beautify the corridor but improve safety by restricting left-turns.

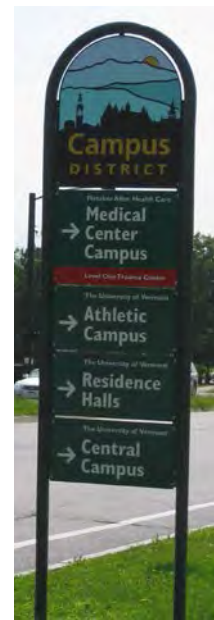
- Ornamental street lighting should be included along South Latson and within the new development itself to contribute toward the site’s unified design.
- South Latson should be well landscaped, not only in the median, but along the frontage, with street trees and knee walls or hedgerows screening parking.
- Gateway and wayfinding signs should be installed at the interchange welcoming visitors to the Township and directing them to major landmarks. This signage should be consistent with that proposed along Grand River and for the Town Center. Elements of a gateway entrance sign should include lighting, landscaping, and masonry material.
- Pathways should be installed on both sides of South Latson and connect to the interior of the site. Buildings and parking should all have pedestrian connections to the pathway network.



**Access and Circulation**

In order to efficiently accommodate new traffic that is likely to result from new development, having a coordinated circulation and access plan is essential.

- A signalized intersection should be located approximately ¼ mile south of the railroad at Sweet Road. This should be the primary entrance to campus Area A as identified on the Subarea Map.
- An additional entrance to Area A should be located halfway between the signalized intersection and the railroad tracks and be right-in/right-out.
- Area A’s ring road should be sensitive of the wetland/wooded area in its southeast corner and provide stub roads for future connections to the south.
- Area B should be accessed via the newly realigned Beck Road which can be extended and configured into a loop road.
- Area B’s loop road should be sensitive to the wetland/natural areas at the south of the site.
- Auxiliary campus uses on the east side of South Latson across from Area A should be primarily accessed via the signalized intersection. Additional access points north and south of the signalized intersection should be right-in/right-out. A frontage road will help provide convenient access for these businesses and should continue south for future connections.
- No access points other than Beck Road should be allowed on South Latson at the interchange north of the railroad tracks. Businesses fronting South Latson at this location should share access off Beck Road.



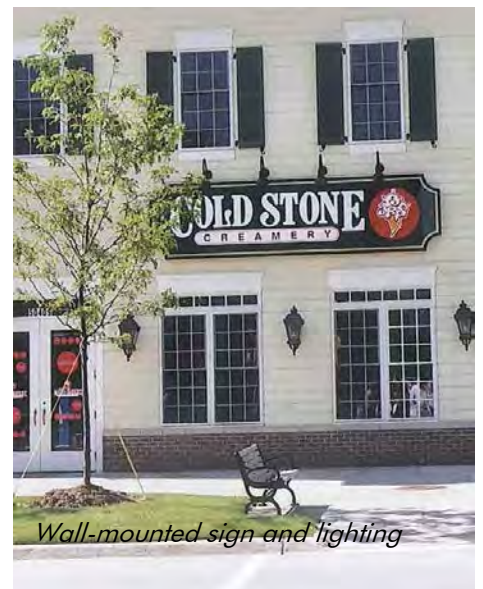


- Access to the Future Transition Area should be integrated into the overall circulation plan for Areas A and B.
- Further access management standards are included in the Township's zoning ordinance and MDOT's Access Management Manual

### ***Building and Site Design***

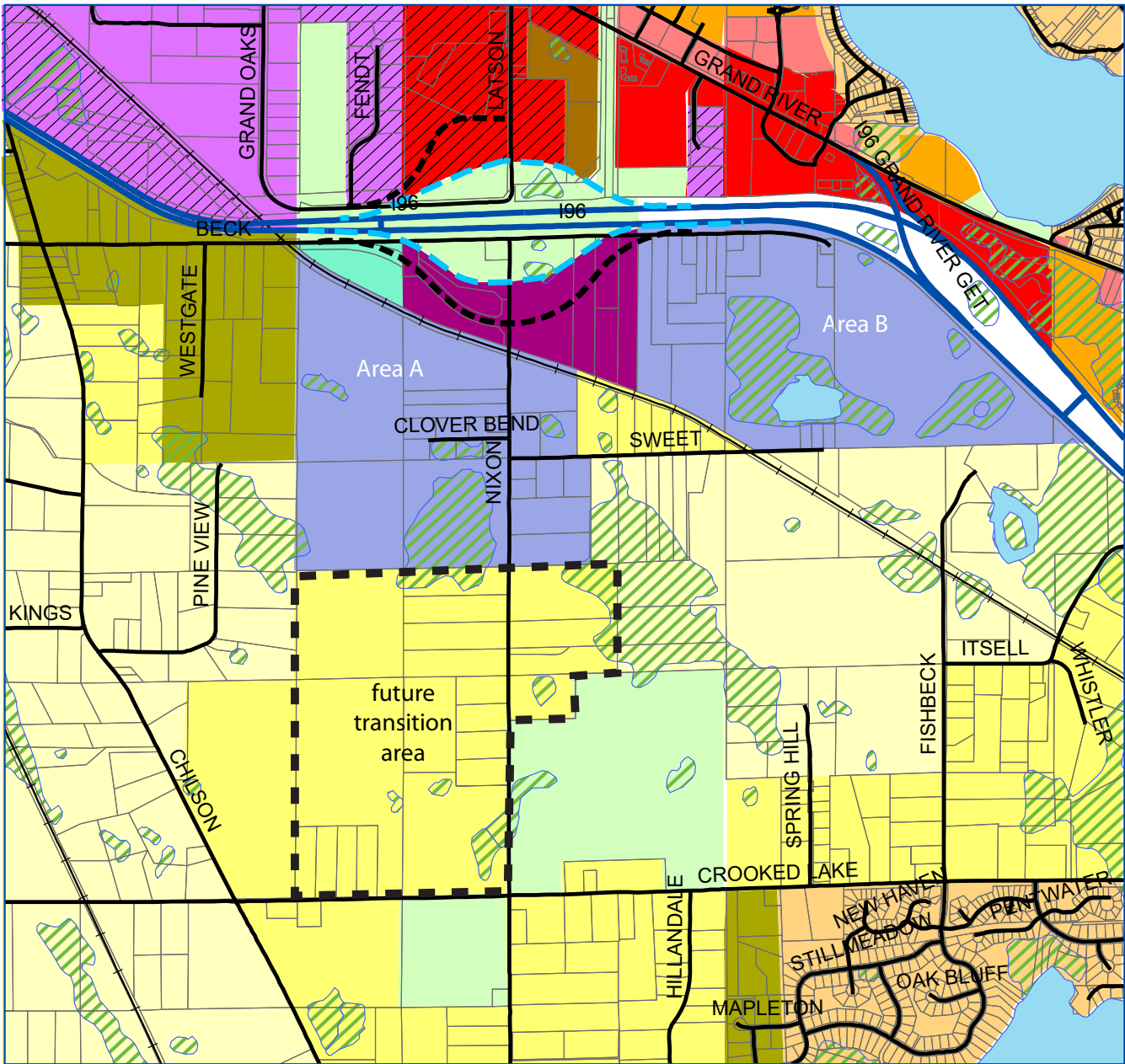
In order to establish a cohesive, high-quality campus at the South Latson interchange, it will be important to have consistent building and site design features.

- Entrances should be well defined and easily accessible by pedestrians.
- Buildings should orient toward South Latson where possible with parking given a less dominant presence along the corridor.
- Parking should be buffered with landscaping or decorative fencing.
- Understanding that a user like a hospital may need several stories for its patient wings, this plan seeks not to require a maximum building height. More importantly, any new building built along South Latson fronting the corridor should be built at a pedestrian scale at its Latson frontage.
- Stormwater should be consolidated and treated through low-impact design and retention ponds that contribute to the existing natural character of the site.
- Building orientation should be sensitive to wetlands and existing natural features and be situated to maximize the sight lines and pedestrian access to enjoy them.
- Materials should be of high quality brick, stone, glass, or similar, reflective of a well-designed modern research park or medical campus.
- Loading zones and waste receptacles should be well delineated and appropriately screened (see zoning ordinance).
- Lighting should be directed downward and fully shielded to eliminate an outward or upward glare, providing for adequate public safety without overly illuminating a site or building.
- Site lighting should consist of decorative fixtures, such as goose neck fixtures, and be architecturally integrated with the building style, materials and color. Pole fixtures should be located within landscaped islands or behind the curb or sidewalk.
- Monument signs should be well landscaped and have masonry bases.



- Signs should be comprised of an interesting design that adds interest to the business and the streetscape. Signs that have the appearance of a box sign are discouraged.
- Signs should be architecturally integrated with their surroundings in terms of size, shape, color, texture and lighting and not promote visual competition with other signs in the area.





- |   |                                |                                |  |
|---|--------------------------------|--------------------------------|--|
| AGRICULTURE/COUNTRY ESTATE - 5 acres per unit               | NEIGHBORHOOD COMMERCIAL        | INTERCHANGE CAMPUS             | interchange transition area - future land use and the utility service area will be reconsidered in this area concurrent with a proposal for actual campus uses |
| LARGE LOT RURAL RESIDENTIAL - 2 acres per unit              | GENERAL COMMERCIAL             | INTERCHANGE COMMERCIAL         |  |
| LOW DENSITY RESIDENTIAL - 1 acre per unit                   | REGIONAL COMMERCIAL            |                                |  |
| SMALL LOT SINGLE FAMILY RESIDENTIAL - 2 to 3 units per acre | MIXED-USE TOWN CENTER          | Beck and Grand Oaks Relocation |  |
| MEDIUM DENSITY RESIDENTIAL - 5 units per acre               | OFFICE                         | New Ramps                      |  |
| HIGH DENSITY RESIDENTIAL - 8 units per acre                 | INDUSTRIAL                     | I-96                           |  |
| MANUFACTURED HOUSING  | RESEARCH AND DEVELOPMENT       | Wetlands                       |  |
|   | PUBLIC/INSTITUTIONAL/UTILITIES |                                |  |
|   | PRIVATE RECREATION             |                                |  |

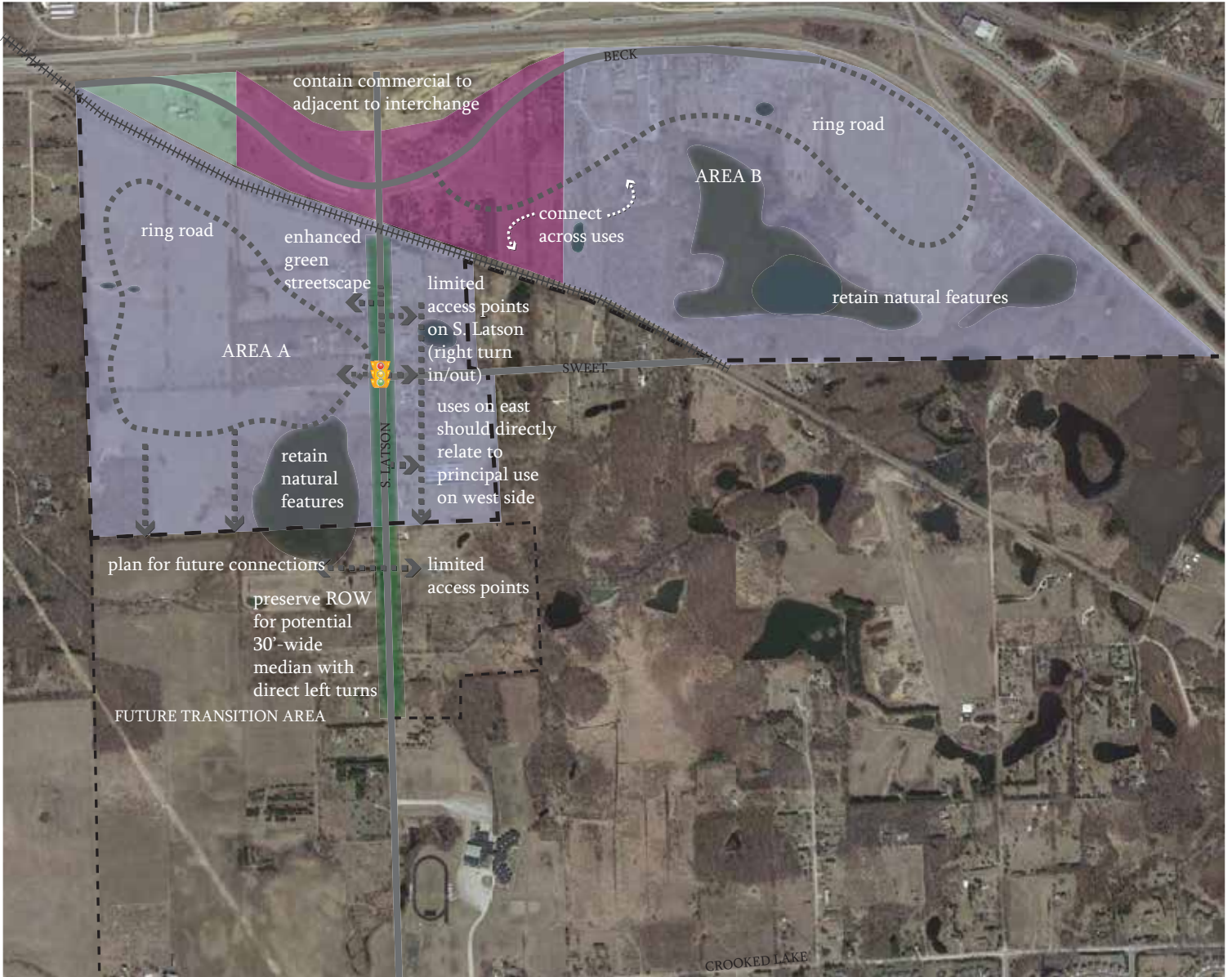
**Map 10:  
I-96 Interchange  
Latson/Nixon Road Subarea Plan**



October 2013

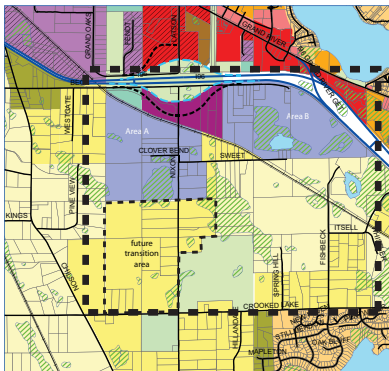
Data Sources:  
Base Map: Genoa Township





## I-96/Latson Subarea Schematic Plan

- Office
- Interchange Campus
- Interchange Commercial



Future Transition Area - future land use and the utility service area will be reconsidered in this area as the campus area is developed with primary uses



Draft: 10-17-13

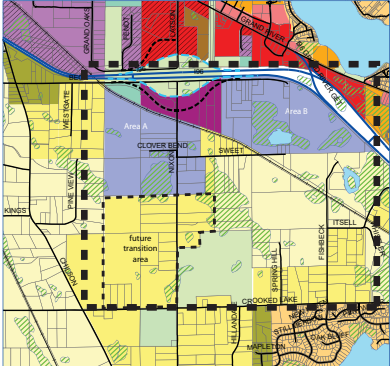
Image Source: Google





I-96/Latson Subarea  
**Concept Plan**  
 Map 12

This Concept Plan is meant to illustrate the principles of the Future Land Use categories of Interchange Campus and Commercial. This is not intended to be a detailed plan that will be built as indicated, but as a reference for the general circulation, building, greenspace, and connectivity/access concepts for the redevelopment of this area.



Future Transition Area - future land use and the utility service area will be reconsidered in this area as the campus area is developed with primary uses



10-22-13



Image Source: Google





PREPARED BY:

Giffels Webster - 1025 East Maple, Suite 100 | Birmingham, MI  
48009



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

## MEMORANDUM

**TO:** Honorable Board of Trustees

**FROM:** Kelly VanMarter, Assistant Manager/Community Development Director

**DATE:** June 15, 2022

**RE:** Brighton Motors Parking Lot Expansion – 7100 Grand River Avenue, Brighton  
Special Land Use, Site Plan and Impact Assessment

**MANAGERS REVIEW:** 

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Attached please find the project case file for a special land use and site plan review project authorizing an expansion of parking for the Brighton Motors automobile dealership located at the southeast corner of Grand River and Hubert Drive in Brighton. The applicant proposes to add 107 parking spaces on an existing vacant lot south of the existing dealership. The subject property is zoned General Commercial District (GCD).



### SUPERVISOR

Bill Rogers

### CLERK

Paulette A. Skolarus

### TREASURER

Robin L. Hunt

### TRUSTEES

Jean W. Ledford  
H. James Mortensen  
Terry Croft  
Diana Lowe

### MANAGER

Michael C. Archinal

June 15, 2022

**Brighton Motors Parking Expansion – Special Land Use**

Page 2 of 2

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. This project was heard before the Planning Commission on June 13, 2022 and the Commission recommended conditional approval. Based on that recommendation I offer the following for your consideration:

**SPECIAL USE PERMIT**

Moved by \_\_\_\_\_, Supported by \_\_\_\_\_ to APPROVE the Special Land Use permit to expand the parking for the automobile dealership because it has been found that the requested use meets the requirements of Sections 19.03 and 7.02.02(c) of the Township Ordinance

**ENVIRONMENTAL IMPACT ASSESSMENT**

Moved by \_\_\_\_\_, Supported by \_\_\_\_\_ to APPROVE the Environmental Impact Assessment dated January 18, 2022 as submitted.

**SITE PLAN**

Moved by \_\_\_\_\_, Supported by \_\_\_\_\_, to APPROVE the site plan dated May 3, 2022 with the following conditions:

1. Any site plan fee exceedances associated with the additional meetings and consultant reviews as indicated on the site plan and special land use applications shall be paid prior to issuance of the land use permit.
2. The two parcels will be combined into a single parcel prior to issuance of a land use permit.
3. A revised landscape plan shall be provided which corrects the discrepancies between the plan and the planting table.
4. The lighting plan shall be revised to include shielding on the light fixtures at the rear of the site to protect the residential properties and the light intensity shall be reduced to meet the ordinance standard of no more than 10 foot-candles.
5. The applicant must address the comments of the Livingston County Road Commission from their letter dated May 20, 2022.

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

Sincerely,



Kelly VanMarter





# GENOA CHARTER TOWNSHIP

## Special Land Use Application

This application **must** be accompanied by a site plan review application and the associated submittal requirements. (The Zoning Official may allow a less detailed sketch plan for a change in use.)

APPLICANT NAME & ADDRESS: Mark Shamoun 4505 Forest Edge West Bloombief Mi 48323  
*Submit a letter of Authorization from Property Owner if application is signed by Acting Agent.*

APPLICANT PHONE: ( 248 )225-3939 EMAIL: mshamoun@yahoo.com

OWNER NAME & ADDRESS: Ray Shamoun 8065 Locklin Commerce Mi

SITE ADDRESS: 7100 Grand River Brighton Mi PARCEL #(s): ID#4711-13-100-039

OWNER PHONE: 248 )231-2147 EMAIL: rayshamoun@hotmail.com

**Location and brief description of site and surroundings:**

Located at 7100 grand river behind the Brighton Motors car dealership. Undeveloped land approximatley 2 acres

**Proposed Use:**

The applicant is in need of additional parking for the dealership.

The parcels can be combined or kept seperated upon recomendation of the township.

**Describe how your request meets the Zoning Ordinance General Review Standards (section 19.03):**

- a. Describe how the use will be compatible and in accordance with the goals, objectives, and policies of the Genoa Township Comprehensive Plan and subarea plans, and will promote the Statement of Purpose of the zoning district in which the use is proposed.

This parcel is currently zoned commercial. Additional parking would be little to no impact on the surrounding areas

- b. Describe how the use will be designed, constructed, operated, and maintained to be compatible with, and not significantly alter, the existing or intended character of the general vicinity.

A paved parking lot with storm management and landscaping will have similar characteristics as surrounding business.

- c. How will the use be served adequately by essential public facilities and services such as highways, streets, police and fire protection, drainage structures, water and sewage facilities, refuse disposal and schools?

There will be little to no additional public services needed.

d. Will the use involve any uses, activities, processes, or materials potentially detrimental to the natural environment, public health, safety, or welfare by reason of excessive production of traffic, noise, vibration, smoke, fumes, odors, glare, or other such nuisance? If so, how will the impacts be mitigated?

There will not be any impacts.

e. Does the use have specific criteria as listed in the Zoning Ordinance (sections 3.03.02, 7.02.02, & 8.02.02)? If so, describe how the criteria are met.

unknown

I HEREBY CERTIFY THAT ALL INFORMATION AND DATA ATTACHED TO AND MADE PART OF THIS APPLICATION ARE TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF. I AGREE TO DESIGN, CONSTRUCT AND OPERATE, AND MAINTAIN THESE PREMISES AND THE BUILDINGS, STRUCTURES, AND FACILITIES WHICH ARE GOVERNED BY THIS PERMIT IN ACCORDANCE WITH THE STATED REQUIREMENTS OF THE GENOA TOWNSHIP ZONING ORDINANCE, AND SUCH ADDITIONAL LIMITS AND SAFEGUARDS AS MAY BE MADE A PART OF THIS PERMIT.

THE UNDERSIGNED Mark Shamoun STATES THAT THEY ARE THE FREE OWNER OF THE PROPERTY OF PROPERTIES DESCRIBED ABOVE AND MAKES APPLICATION FOR THIS SPECIAL LAND USE PERMIT.

BY: Mark Shamoun

ADDRESS: 4505 Forest Edge West Bloomfield Mi 48323

**Contact Information** - Review Letters and Correspondence shall be forwarded to the following:

Mark Shamoun of S2 Construction Management at mshamoun@yahoo.com  
Name Business Affiliation Email

**FEE EXCEEDANCE AGREEMENT**

As stated on the site plan review fee schedule, all site plans are allocated two (2) consultant reviews and one (1) Planning Commission meeting. If additional reviews or meetings are necessary, the applicant will be required to pay the actual incurred costs for the additional reviews. If applicable, additional review fee payment will be required concurrent with submittal to the Township Board. By signing below, applicant indicates agreement and full understanding of this policy.

SIGNATURE:  DATE: 1-27-2021

PRINT NAME: Mark Shamoun PHONE: 248-225-3939



**GENOA CHARTER TOWNSHIP**  
**Application for Site Plan Review**

**TO THE GENOA TOWNSHIP PLANNING COMMISSION AND TOWNSHIP BOARD:**

APPLICANT NAME & ADDRESS: JOSHUA TAURIAINEN 25678 ISLAND LAKE DR NOVI, 48374  
*If applicant is not the owner, a letter of Authorization from Property Owner is needed.*

OWNER'S NAME & ADDRESS: JOSHUA TAURIAINEN 25678 ISLAND LAKE DR. NOVI, MI 48374

SITE ADDRESS: 7100 GRAND RIVER, BRIGHTON 48114 PARCEL #(s): \_\_\_\_\_

APPLICANT PHONE: (248) 245-3656 OWNER PHONE: (248) 245-3656

OWNER EMAIL: JOSHUAT@505@GMAIL.COM

LOCATION AND BRIEF DESCRIPTION OF SITE: 7100 GRAND RIVER, ADJACENT TO EXISTING BUSINESS, CURRENTLY RAW LAND.

BRIEF STATEMENT OF PROPOSED USE: IMPROVEMENT WILL BE TO PARKING LOT FOR EMPLOYEE PARKING AND THE STORAGE OF INVENTORY

THE FOLLOWING BUILDINGS ARE PROPOSED: NO BUILDINGS TO BE CONSTRUCTED - JUST PARKING LOT. REQUESTING AN ALLOWANCE TO PARK ON THE LAND PRIOR TO FINAL INSTALL OF ASPHALT; FINAL ASPHALT WILL BE COMPLETED AFTER FROST LAWS LIFT.

**I HEREBY CERTIFY THAT ALL INFORMATION AND DATA ATTACHED TO AND MADE PART OF THIS APPLICATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.**

BY: 

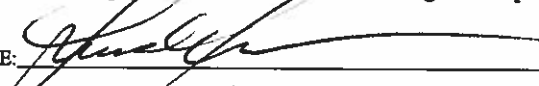
ADDRESS: 25678 ISLAND LAKE RD. NOVI, MI 48374

**Contact Information** - Review Letters and Correspondence shall be forwarded to the following:

1.) MARK SHAMOUN of SZ CONSTRUCTION MANAGEMENT at M.SHAMOUN@YAHOO.COM  
Name Business Affiliation E-mail Address

**FEE EXCEEDANCE AGREEMENT**

As stated on the site plan review fee schedule, all site plans are allocated two (2) consultant reviews and one (1) Planning Commission meeting. If additional reviews or meetings are necessary, the applicant will be required to pay the actual incurred costs for the additional reviews. If applicable, additional review fee payment will be required concurrent with submittal to the Township Board. By signing below, applicant indicates agreement and full understanding of this policy.

SIGNATURE:  DATE: 11/8/2021  
PRINT NAME: JOSHUA TAURIAINEN PHONE: (248) 245-3656  
ADDRESS: 25678 ISLANDLAKE DR, NOVI, MI 48374

**GENOA CHARTER TOWNSHIP  
PLANNING COMMISSION  
PUBLIC HEARING  
JUNE 13, 2022  
6:30 P.M.  
MINUTES**

CALL TO ORDER: Chairman Grajek called the meeting of the Genoa Charter Township Planning Commission to order at 6:30 p.m. Present were Chris Grajek, Jeff Dhaenens, Marianne McCreary, Eric Rauch, Glynis McBain, Tim Chouinard and Diana Lowe. Also present was Kelly VanMarter, Community Development Director/Asst. Township Manager, Brian Borden of Safebuilt, and Shelby Byrne of Tetra Tech.

Chairman Grajek introduced the newest Planning Commissioner, Diana Lowe. She is also a trustee for the Township Board.

PLEDGE OF ALLEGIANCE: The pledge of allegiance was recited.

APPROVAL OF AGENDA:

**Moved** by Commissioner Lowe, seconded by Commissioner Dhaenens, to approve the agenda as presented. **The motion carried unanimously.**

DECLARATION OF CONFLICT OF INTEREST: None

CALL TO THE PUBLIC:

The call to the public was made at 6:31 pm with no response.

OLD BUSINESS:

**OPEN PUBLIC HEARING # 1...**Consideration of a special use application, environmental impact assessment and site plan for an expansion of an existing automobile dealership to expand a parking/vehicle storage lot located at 7100 Grand River Avenue, southeast corner of Grand River Avenue and Hubert Drive. The request is petitioned by Joshua Tauriainen.

- A. Recommendation of Special Use Application.
- B. Recommendation of Environmental Impact Assessment (1-18-22)
- C. Recommendation of Site Plan (5-3-22)

Mr. Joshua Tauriainen and Mr. Wayne Perry of Desine, Inc. were present. Mr. Perry stated they have changed the plans per the comments from the Planning Commission and township consultants. They have expanded the buffers on the north and east sides, reconfigured the parking lot, moved the detention basin, and reduced the amount of impervious surface.

Mr. Borden reviewed his letter dated June 8, 2022.

1. The special land use standards of Section 19.03 of the zoning ordinance are generally met, though the applicant must address any comments raised by the Township Engineer and/or the Brighton Area Fire Authority.
2. To comply with the use conditions of Section 7.02.02(c) of the zoning ordinance, the applicant must combine the two parcels.
3. The rear yard buffer zone is deficient by 11 evergreen trees; however, the overall landscape plan for the site provides more trees than required by at least 13 trees.
4. The discrepancies between the landscape plan and planting table must be corrected.
5. The applicant will need to ensure that shielding is provided for the light fixtures at the rear of the site to protect the adjacent residential properties.
6. Overall lighting intensity must be reduced to meet ordinance standards, which is no more than 10 footcandles.

Mr. Perry agrees with Mr. Borden's comment regarding the landscaping and he requested the Planning Commission approve the deficiency. He will ensure that the lighting issues are addressed.

Ms. Byrne stated that all of her previous concerns have been addressed.

The May 25, 2022 letter from the Fire Marshal states that all of his previous concerns have been addressed by the applicant.

Commissioner Dhaenens asked the applicant if they received the letter from the Livingston County Road Commission. Mr. Perry stated they are working with the Road Commission and will have it resolved prior to their presentation to the Township Board.

The call to the public was made at 6:42 pm.

Mr. Kristian Smith 6972 Rink Drive asked if the retention pond will be standing water. Mr. Perry stated that this plan complies with the updated Livingston County Drain Commissioner code. Part of it does include standing water. Mr. Smith stated that Mr. Tauriainen has made improvements to the site since he has taken ownership and he appreciates the increased plantings.

The call to the public was closed at 6:44 pm.

**Moved** Commissioner Rauch, seconded by Commissioner Lowe, to recommend to the Township Board approval of the Special Use Application for an expansion of an existing automobile dealership to expand a parking/vehicle storage lot located at 7100 Grand River Avenue, southeast corner of Grand River Avenue and Hubert Drive as the Commission finds

that the special land use standards of Section 19.03 of the zoning ordinance are met. **The motion carried unanimously.**

**Moved** Commissioner Rauch, seconded by Commissioner Dhaenens, to recommend to the Township Board approval of the Environmental Impact Assessment dated January 18, 2022 for an expansion of an existing automobile dealership to expand a parking/vehicle storage lot located at 7100 Grand River Avenue, southeast corner of Grand River Avenue and Hubert Drive. **The motion carried unanimously.**

**Moved** Commissioner Rauch, seconded by Commissioner Lowe, to recommend to the Township Board approval of the Site Plan dated May 3, 2022 for an expansion of an existing automobile dealership to expand a parking/vehicle storage lot located at 7100 Grand River Avenue, southeast corner of Grand River Avenue and Hubert Drive with the following conditions:

- The two parcels shall be combined
- The Planning Commission finds the tree plantings as noted and located on the landscape plan to be appropriate, although deviating slightly from the requirements of the zoning ordinance.
- The petitioner shall update the landscape count on the plan and table.
- The sight lighting plan shall be updated so the shielding on the lights on the south side protects the adjacent residential properties.
- The site lighting intensity must be reduced to meet ordinance standards of no more than 10 footcandles.
- All conditions of the township engineer, Brighton Area Fire Authority, Drain Commissioner and Road Commission shall be met.

**The motion carried unanimously.**

### **NEW BUSINESS:**

**OPEN PUBLIC HEARING #2...** Consideration of a rezoning application and environmental impact assessment to rezone 20-acres from Rural Residential (RR) to Country Estates (CE) for property located at 5320 Richardson Road on the west side of Richardson Road, south of Brighton Road. The request is petitioned by Andrea Sydor.

- A. Recommendation of Environmental Impact Assessment (5-31-22)
- B. Recommendation of Rezoning (5-31-22)

Mr. and Mrs. Jason and Andrea Sydor were present. They would like to change their zoning from Rural Residential (RR) to Country Estates (CE). Their property is 20 acres and they are adjacent to CE to the rear and RR is on either side. They would like to build a 60 x 80 barn; however, they are not able to build that size due to their current zoning. They would also like to develop and maintain a small hobby farm to grow local organic garlic.

**GENOA CHARTER TOWNSHIP  
PLANNING COMMISSION  
PUBLIC HEARING  
FEBRUARY 14, 2022  
6:30 P.M.  
MINUTES**

CALL TO ORDER: Chairman Grajek called the meeting of the Genoa Charter Township Planning Commission to order at 6:30 p.m. Present were Chris Grajek, Jim Mortensen, Marianne McCreary, Eric Rauch, Glynis McBain, Jeff Dhaenens, and Tim Chouinard. Also present was Kelly VanMarter, Community Development Director/Asst. Township Manager, Brian Borden of Safebuilt, and Shelby Byrne of Tetra Tech.

PLEDGE OF ALLEGIANCE: The pledge of allegiance was recited.

APPROVAL OF AGENDA:

Ms. VanMarter stated that "DECLARATION OF CONFLICT OF INTEREST" needs to be added to the agenda.

**Moved** by Commissioner Dhaenens, seconded by Commissioner McCreary, to approve the agenda with the addition of "DECLARATION OF CONFLICT OF INTEREST". **The motion carried unanimously.**

DECLARATION OF CONFLICT OF INTEREST: Ms. McCreary stated that she does not have a conflict of interest; however, she wanted it to be known that she has done business with Wonderland Marine in the past.

CALL TO THE PUBLIC: The call to the public was made at 6:32 pm.

Mr. Craig Leslie of 5680 Griffith Drive asked the Planning Commission to look at the contrast between the outcome of the gravel pit review and the outcome of the asphalt plant review with the recommendations from this commission to the Board with regard to the discussions regarding the Master Plan. There seems to be a disconnect between how the Planning Commission and the Board are reviewing it. It should be in balance.

Mr. John Palmer of 560 Black Oaks Trails asked why the Township only has industrial zoning and not heavy and light industrial. He is confused how some Townships can avoid heavy industrial, but Genoa is obligated to have industrial uses.

Mr. Tom Reader of 3478 Snowden Lane is an architect and has been before hundreds of Planning Commission meetings. He does not think the asphalt plant request should have been sent to the Township Board. It should not have been recommended for approval by the Planning Commission.

Ms. Dawn Condon of 3466 Snowden Lane watched the Tyrone Township Planning Commission meeting and the request from Capital Asphalt was reviewed there. They did their due diligence,



and this Planning Commission did not. She submitted the information from the Tyrone Township review.

Ms. Christine Wetsel of 390 Natanna Drive asked that if the Planning Commission voted unanimously for an asphalt plant, what other uses will be approved.

The call to the public was closed at 6:44 pm.

**OPEN PUBLIC HEARING # 1**...Consideration of a special use application, environmental impact assessment and site plan for an expansion of an existing automobile dealership to expand a parking/vehicle storage lot located at 7100 Grand River Avenue, southeast corner of Grand River Avenue and Hubert Drive. The request is petitioned by Joshua Tauriainen.

- A. Recommendation of a Special Use Application
- B. Recommendation of an Environmental Impact Assessment (1-18-22)
- C. Recommendation of a Site Plan (1-3-22)

Mr. Joshua Tauriainen, the applicant, and Mr. Mark Shamoun, the general contractor for the project, were present.

Mr. Borden reviewed his letter dated February 8, 2022.

He noted that this site has had past ordinance violations, so this project is being proposed to address those violations. He added that the violations preceded the current owner. Due to the scope of the project, approval of a revised Special Land Use is required.

- The special land use standards of Section 19.03 are generally met, though the applicant must address any comments raised by the Township Engineer and the Brighton Area Fire Authority.
- Additionally, given the request for a major amendment to an existing special land use and the history of Ordinance violations at this site, he suggests the applicant familiarize themselves with past special land use and site plan approvals and provide the Township with an assurance that they will maintain their expanded operation in accordance with past approvals, as well as any conditions applied to the current request, if approved.
- Most of the use conditions of Ordinance Section 7.02.02(c) are met; however, the applicant must combine the two parcels, and required buffer zones must be provided unless a waiver or alternate buffer is authorized by the Planning Commission.
- Section 14.06.07 requires looped striping for parking spaces; however, the Planning Commissioner can waive this requirement.
- The Planning Commission may approve a four-foot landscaped berm in lieu of a full Buffer Zone A along the south lot line.
- The landscape plan is deficient in terms of shrub plantings around the detention pond, though excess trees are provided.
- Any existing landscaping that is in poor condition should be replaced and brought into compliance with the ordinance.

Commissioner Mortensen questioned if irrigation is required for the landscaping. Ms. VanMarter stated the ordinance requires all landscaping to be irrigated. Mr. Shamoun agrees to irrigate all landscaped areas.

Ms. Byrne reviewed her letter dated February 9, 2022.

- The Petitioner has provided storm sewer calculations, but not all required information is provided. The proposed storm sewer calculations do not include the hydraulic grade line of the proposed system. The proposed pipe slopes do not match the provided invert elevations. With the provided pipe invert elevations, the pipes are below the required minimum slope of 0.32%. The provided calculations should be reviewed to ensure they match the requirements of the Township and Drain Commissioner. The Livingston County Drain Commissioner is in the process of updating their design standards, and the proposed storm improvements should meet those standards.
- The Livingston County Drain Commissioner's updated design standards also include changes to the required detention basin volume.
- All detention basins require a sediment forebay.
- The outlet structure design calculations should be provided.
- Details should be provided on the proposed catch basin design. Proposed catch basins should match Genoa Township's Engineering Standards.

Mr. Shamoun stated he will meet all requirements noted by Ms. Byrne.

Commissioner Mortensen asked if any of the engineering requirements will affect the plan. Ms. Byrne does not have the details; however, she stated it could change the layout of the parking lot.

The Brighton Area Fire Authority Fire Marshal Rick Boisvert's letter dated February 4, 2022 stated:

- Two-way emergency vehicle access roads shall be a minimum of 26-feet wide. Access roads shall be constructed to be capable of supporting the imposed load of fire apparatus weighing at least 84,000 pounds. The entrance to the new lot has been widened to 26-feet as required; however, the main drive widths have not been revised to accommodate the minimum width requirement. This includes the center drive, the southern drive, and the easternmost drive. The easternmost drive shall be signed as a fire lane every 50-feet along the curb line.

Mr. Shamoun stated he will revise the plans to accommodate this request, noting they may have to eliminate some parking spaces.

Commissioner Rauch questioned the site lighting. He asked for the details of the shielding of the lights. Mr. Shamoun stated they are only in the islands. They are downward directed lamps. Mr. Tauriainen stated they are left on overnight to deter theft; however, if the Township would like them to be off at night, they can accommodate that. Commissioner Rauch wants to ensure that they do not negatively affect the residential properties adjacent to this site.

He also would like to have the trash service pick-up and delivery schedules included in the Impact Assessment. Mr. Tauriainen stated that most of their vehicles are driven onto their site. They have vehicles delivered approximately once a month. Commissioner Rauch requested a clear loading and unloading zone be delineated on the site and in the plans.

Commissioner Dhaenens asked if the detention pond can be placed at the rear of the site so as to help with buffering the site from the adjacent residential properties and help to place the parking closer to the existing building. Mr. Shamoun stated he planned that; however, it was not feasible based on the slope of the property.

The Commission discussed the buffer requirements for the rear property line. Mr. Tauriainen suggested a taller berm with added fencing. Mr. Shamoun agrees with the berm instead of the fence. Commissioner McBain agrees.

Commissioner McCreary reiterated that the current owner and applicant did not own the property when the prior ordinance violations occurred; however, based on Mr. Borden's letter, she would like them to know what those violations were. Ms. VanMarter stated she can provide that information and the original Special Land Use and Site Plan to the applicant.

Chairman Grajek noted that there were two emails received by residents. One from Kristian Smith of 6972 Rink Drive and one from Heather Koons of 6960 Rink Drive. They were concerned about the additional lighting, the additional traffic and the test drives being done on Rink Drive.

The call to the public was made at 7:33 pm.

Mr. Kristian Smith of 6972 Rink Drive thanked the Commission for addressing the issues he noted in his email. He stated that the current owner has done a great job improving and maintaining the site better than previous owners. He stressed his request that test drives do not occur in their neighborhood.

Mr. Adam Nankee of 7025 Lindsey lives directly south of this site. He agrees with Mr. Smith's compliments to the current owner. He wants to ensure that the buffer is sufficient to block the parked cars and that the lights will be shielded toward his property.

Mr. Doug Koons of 6960 Rink Drive is concerned with what could happen to that property if the current owner sells the business. He is questioned if the retention pond will also have standing water.

Mr. Duncan of 6979 Rink Drive is concerned with the test drives that occur on Hubert. He asked if any buffer will be planted on the west side of the site. Mr. Tauriainen showed the site plans noting where the additional trees will be planted.

The call to the public was closed at 7:45 pm.

Commissioner Rauch advised that the retention pond will not always have water in it. He questioned if an additional berm and plantings could be added to the west side of the site to help shield the parking lot from the residents across Hubert. Mr. Shamoun agreed to add the berm and plant evergreens.

Commissioner Rauch thanked the applicant for their willingness to make revisions and be a good neighbor; however, he would like the applicant to revise the Environmental Impact Assessment to include more details of the operations as discussed this evening. Commissioner Chouinard agrees. He would also like to see additional details regarding the parking in the existing parking lot in the front of the site.

Commissioner Rauch noted the following items should be addressed:

- The applicants shall combine the parcels.
- The existing parking lots shall be striped as per the originally approved site plan
- A 4-foot berm shall be added to the south lot line of the site.
- The evergreens along the south lot line will be eight feet high at the time of planting and placed on top of the berm.
- A 2-3-foot berm shall be added to the west lot line of the site.
- The parking spaces shall utilize looped striping.
- Any existing landscaping that is deficient shall be replaced.
- The deficiency of landscaping of the retention pond shall be added.
- All landscape areas shall be irrigated.
- A loading area shall be identified on the front parcel.
- The sight lighting along the south property line shall have physical shields added to the light source to direct all light away from the lot line.
- A right-turn-only sign shall be placed at the exit onto Hubert Road.
- The Environmental Impact Assessment shall contain hours of operation and the hours of trash pickup, will be during business hours.
- The Environmental Impact Assessment shall contain the plan for the lighting, including hours when they will be on.
- The engineer's and Fire Marshal's issues shall be addressed.
- The Environmental Impact Assessment shall state that there will be no vehicles of disrepair stored on the site.

**Moved** by Commissioner Rauch, seconded by Commissioner Dhaenens, to table Open Public Hearing #1 until the March 14, 2022 Planning Commission meeting. **The motion carried unanimously.**

June 8, 2022

Planning Commission  
 Genoa Township  
 2911 Dorr Road  
 Brighton, Michigan 48116

<b>Attention:</b>	Kelly Van Marter, AICP Planning Director and Assistant Township Manager
<b>Subject:</b>	Brighton Motors – Special Land Use and Site Plan Review #3
<b>Location:</b>	7100 Grand River Avenue – southeast corner of Grand River and Hubert Drive
<b>Zoning:</b>	GCD General Commercial District

Dear Commissioners:

At the Township’s request, we have reviewed the revised submittal from Brighton Motors for an expansion of their operation onto the adjacent property south of the existing development (plans dated 5/3/22).

**A. Summary**

1. The special land use standards of Section 19.03 are generally met, though the applicant must address any comments raised by the Township Engineer and/or the Brighton Area Fire Authority.
2. To comply with the use conditions of Section 7.02.02(c), the applicant must combine the two parcels.
3. The rear yard buffer zone is deficient by 11 evergreen trees; however, the remainder of the site provides more trees than required (by at least 13 trees).
4. The discrepancies between the landscape plan and planting table must be corrected.
5. The applicant will need to ensure that shielding is provided for the light fixtures at the rear of the site to protect the adjacent residential properties.
6. Overall lighting intensity must be reduced to meet Ordinance standards (no more than 10 footcandles).

**B. Proposal/Process**

The applicant proposes an expansion of the existing automobile dealership, which requires special land use approval in accordance with Sections 7.02 and 19.06 of the Township Zoning Ordinance. The use conditions of Section 7.02.02(c) also apply to the request.

The application forms note that the development area is a separate parcel under common ownership with the existing dealership property. If the project is approved, the parcels must be combined.

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.

Additionally, the existing site conditions do not match the site plan approved in 2004. Specifically, parking areas have been added in front of the building and along the west side that were never part of an approved plan. Furthermore, these areas were not identified as part of the current request.

Options for the applicant include restoring the site to the conditions of the approved plan, or amending the current request to include these areas as part of this project. From a zoning standpoint, the drive aisles and parking spaces meet dimensional standards, though the spaces are not double striped and the easterly space along the front of the building does not abut a curb/sidewalk. There may also be circulation concerns for emergency access.



*Aerial view of site and surroundings (looking north)*

### 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 General Commercial, which is intended for businesses that “serve the requirements of the community at large including Genoa Township, Howell, Brighton, and pass-by traffic along Grand River Avenue.” This land use category also references outdoor storage.

The nature and location of the existing business and the proposed expansion, generally reflect the planned character of this area/land use category.

2. **Compatibility.** Properties fronting Grand River include a variety of commercial, office, and service uses, while the area to the south contains single-family residences.

The primary concern under this criterion is related to the potential impacts upon the residential uses south of the site.

In this instance, traffic concerns should be mitigated since there is no new vehicular access to/from Hubert Drive, and the development will retain use of the existing driveways (1 along Grand River and 1 along Hubert Road towards the intersection with Grand River).

Section 7.02.02(c) includes buffer zone requirements to help protect these residences from adverse impact. Provided these conditions are met, the proposal is generally expected to be compatible with the surrounding area.

3. **Public Facilities and Services.** Given that the site fronts Grand River and is developed, we anticipate that necessary public facilities and services are already 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 comments above, provided the use conditions are met, surrounding properties are not expected to be adversely impacted by the proposal.

- 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**

Automobile dealerships are subject to the use conditions of Section 7.02.02(c), as follows:

- 1. Sale space for used mobile homes, recreational vehicles and boats may only be carried on in conjunction with a regularly authorized new mobile home, recreational vehicle or boat sales dealership on the same parcel of land.**

The development site is adjacent to the existing business. As previously noted, the two parcels under common ownership must be combined as part of this project.

- 2. All outdoor storage areas shall be paved with a permanent, durable and dustless surface and shall be graded and drained to dispose storm water without negatively impact adjacent property. The Township Board, following a recommendation of the Planning Commission and the Township Engineer, may approve a gravel surface for all or part of the display or storage area for low intensity activities, upon a finding that neighboring properties and the environment will not be negatively impacted.**

The development area, which is for parking/vehicle storage, will be paved as part of this project.

- 3. No storage or display of vehicles shall be permitted in any landscape greenbelt area, provided the Township may permit a display pod for an automobile within the greenbelt area where it is integrated into the landscape design.**

The revised submittal does not include any vehicle storage within these areas.

- 4. The site shall include a building of at least five hundred (500) feet of gross floor area for office use in conjunction with the use.**

The notes on Sheet SP indicate that the existing building contains an area of 6,296 square feet.

- 5. All loading and truck maneuvering shall be accommodated on-site.**

The development area includes a vehicular connection to the existing developed site, and does not provide direct access to/from Hubert Drive.

- 6. All outdoor storage area property lines adjacent to a residential district shall provide a buffer zone A as described in Section 12.02. A buffer zone B shall be provided on all other sides. The Planning Commission may approve a six (6) foot high screen wall or fence, or a four (4) foot high landscaped berm as an alternative.**

A Buffer Zone A is required along the southerly lot line, while a Buffer Zone B is required along the easterly lot line.

The revised site plan provides more than sufficient widths for both buffer zones. (See review comments on landscape plan below with respect to compliance.)

**E. Site Plan Review**

- 1. Dimensional Requirements.** Given the nature of the proposal, the only GCD dimensional requirements that apply are parking lot setbacks and impervious surface lot coverage.

Front, side and rear parking setbacks are met, while the northerly setback will not apply upon completion of the parcel combination.

The revised submittal notes an impervious surface lot coverage ratio of 54%, is well within the 75% limitation allowed in the GCD.

**2. Pedestrian Circulation.** There is an existing public sidewalk along Grand River.

Per Section 12.05 and the Township’s Pathway Plan, neither a walk nor path is required along Hubert Drive.

**3. Vehicular Circulation.** The development area will be accessed by driveway connections to the existing operation. As previously noted, new access to/from Hubert Drive is not proposed.

The proposed layout is suitable for two-way travel throughout.

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

**4. Parking.** The submittal notes that the primary purpose for the proposal is to store vehicles in the applicant’s inventory, though some of the spaces are intended for employee parking.

As such, we do not believe the maximum parking standard of Section 14.02.06 applies. However, the layout and design are subject to the remaining standards of Article 14.

The lot itself provides the dimensions, paving, and curbing required by Article 14. The revised plan also depicts looped striping.

**5. Landscaping.** The revised landscape plan has been reviewed for compliance with the standards of Section 12.02, as shown in the following table:

Standard	Required	Proposed	Notes
Front yard greenbelt (total)	20’ width 23 canopy trees	20’ width 10 existing trees 23 proposed trees 100+ shrubs	In compliance
Buffer Zone “A” (south)	50’ width 14 canopy trees 28 evergreen trees 56 shrubs 6’ wall OR 4’ berm	106’ width 14 canopy trees 17 evergreen trees 56 shrubs 4’ berm	Deficient by 11 evergreen trees
Buffer Zone “B” (east)	20’ width 11 canopy trees 11 evergreen trees 43 shrubs 6’ wall OR 3’ berm	20’ width 13 existing trees 12 canopy trees 9 evergreen trees 85 shrubs 4’ berm	In compliance
Parking lot (rear yard only)	9 trees 890 SF landscaped area	9 trees Approx. 1,000 SF landscaped area	In compliance
Detention Pond	10 trees 50 shrubs	10 trees 106 shrubs	In compliance

The following discrepancies between the landscape plan and plant materials table need to be corrected for consistency: Amur Maple (32 noted; 38 depicted), Colorado Spruce (24 noted; 29 depicted), Medora Juniper (73 noted; 125 provided), and Shirobana Spirea (32 noted; 64 depicted).



- 6. Exterior Lighting.** The revised lighting plan depicts 12 new light poles (9 of which have double fixtures) with a fixture mounting height of 20 feet.

Fixture details note the use of downward directed, cut-off LED fixtures. The applicant will need to ensure that shielding is provided for the fixtures at the rear of the site to protect the adjacent residential properties.

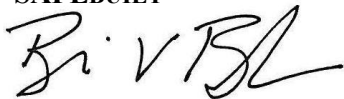
The photometric plan identifies a maximum on-site intensity of 22.2 footcandles, which exceeds the Ordinance limit (10 footcandles). Intensities along property lines meet current standards, but the overall lighting intensity needs to be reduced for full compliance.

- 7. Impact Assessment.** The revised submittal did not include a new Impact Assessment.

Based on the document included with the previous submittal, the Assessment noted that the proposed project is not expected to have an adverse impact upon natural features or public services/utilities.

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

Respectfully,  
**SAFEBUILT**



Brian V. Borden, AICP  
Michigan Planning Manager



June 8, 2022

Ms. Kelly Van Marter  
Genoa Township  
2911 Dorr Road  
Brighton, MI 48116

**Re: Brighton Motors Parking Lot  
Site Plan Review No. 3**

Dear Ms. Van Marter:

Tetra Tech conducted a third review of the proposed Brighton Motors Parking Lot Addition site plan last dated May 3, 2022. The plans were completed by Desine, Inc. on behalf of MLC Motor Cars. The site is on a vacant 2-acre parcel located on the east side of Hubert Road, just west of Harte Drive. The Petitioner is proposing a parking lot that will connect to the existing parking lot on the parcel to the north.

The plans have been revised to include updated storm drainage calculations and a revised site layout and all previous comments have been addressed. We have no further engineering related concern with the proposed development.

Please call or email if you have any questions.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Gary Markstrom'.

Gary J. Markstrom, P.E.  
Vice President

Attachment

A handwritten signature in blue ink, appearing to read 'Shelby Byrne'.

Shelby Byrne  
Project Engineer



# BRIGHTON AREA FIRE AUTHORITY

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

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May 25, 2022

Kelly VanMarter  
Genoa Township  
2911 Dorr Road  
Brighton, MI 48116

RE: Brighton Motors Parking Lot  
7100 Grand River  
Genoa Twp., MI

Dear Kelly:

The Brighton Area Fire Department has reviewed the above-mentioned site plan. The plans were received for review on May 10, 2022 and the drawings are dated May 3, 2022. The project is based on the proposed redevelopment of an existing vacant parcel into additional vehicle parking for an existing automobile dealership. The plan review is based on the requirements of the International Fire Code (IFC) 2021 edition.

**All previous comments have been revised and are reflected on the latest drawing.**

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, FM, CFPS  
Fire Marshal

cc: Amy Ruthig [amy@genoa.org](mailto:amy@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](http://www.livingstonroads.org)

May 20, 2022

Steve Baibak  
Desine, Inc.  
2183 Pless Drive  
Brighton, MI 48114

Re: Brighton Motors Parking Expansion, Genoa Township, Section 13  
LCRC APP-220009

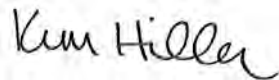
Dear Mr. Baibak:

The application to work within the county road right-of-way to tap the existing storm sewer in the Herbst Road right-of-way for the Brighton Motors Parking Expansion was received. I have completed the review of the plans, dated May 3, 2022, and offer the following comments.

1. The LCRC does not permit private utilities within the road rights-of-ways. Therefore, the storm water discharge pipe will need to terminate outside of the Herbst Road right-of-way.
2. Per the LCRC's specifications, the discharge of the storm water into the LCRC right-of-way shall not present an increase in the **rate or volume** of storm water entering the county right-of-way. Calculations of the pre-development discharge rate and volume will need to be shown on the plans along with the post-development rate and volume calculations. Those calculations should verify there is not an increase in the rate of volume of storm water being discharged to the road right-of-way.

Please revise the plans and re-submit in the Oxcart application. If you have any questions, please do not hesitate to contact me.

Sincerely,



Kim Hiller, P.E.  
Utilities and Permits Engineer

Cc: File  
Kelly VanMarter, Genoa Township (via email)  
Ken Recker, Livingston County Drain Commissioner's Office (via email)



**NOTICE OF PUBLIC HEARING – JUNE 13, 2022  
(SPECIAL USE)**

May 27, 2022

To Whom It May Concern:

Please be advised that the Planning Commission of Genoa Charter Township will conduct a public hearing on **Monday, June 13, 2022 commencing at 6:30 p.m.** As required by state law, you are receiving this notice because you have been identified as an owner or occupant of real property within 300 feet of the subject parcels.

The property in question is located at 7100 Grand River Avenue, on the southeast corner of Grand River Avenue and Hubert Drive. **The applicant is requesting a special land use permit to expand a parking/vehicle storage lot for an existing automobile dealership. The request is petitioned by Joshua Tauriainen.**

You are invited to attend this hearing. Members of the public will be able to speak during the public hearing portions of the meeting. If, prior to the meeting, members of the public have certain questions or wish to provide input on any business that will be addressed at the meeting then such persons may contact the Planning Commissioners through Kelly VanMarter, Township Community Development Director by email to [Kelly@genoa.org](mailto:Kelly@genoa.org), or by mail at 2911 Dorr Road, Brighton, Michigan 48116.

Genoa Charter Township will provide necessary reasonable auxiliary aids and services to individuals with disabilities at the meeting/hearing upon seven (7) days' notice to the Township. Individuals with disabilities requiring auxiliary aids or services should contact the Township in writing or by calling at (810) 227-5225.

Sincerely,

Kelly VanMarter,  
Assistant Township Manager / Community Development Director

2911 Dorr Road  
Brighton, MI 48116  
810.227.5225  
810.227.3420 fax  
[genoa.org](http://genoa.org)

**SUPERVISOR**

Bill Rogers

**CLERK**

Paulette A. Skolarus

**TREASURER**

Robin L. Hunt

**TRUSTEES**

Jean W. Ledford

H. James Mortensen

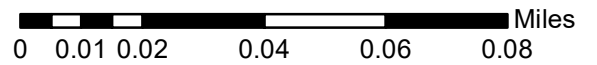
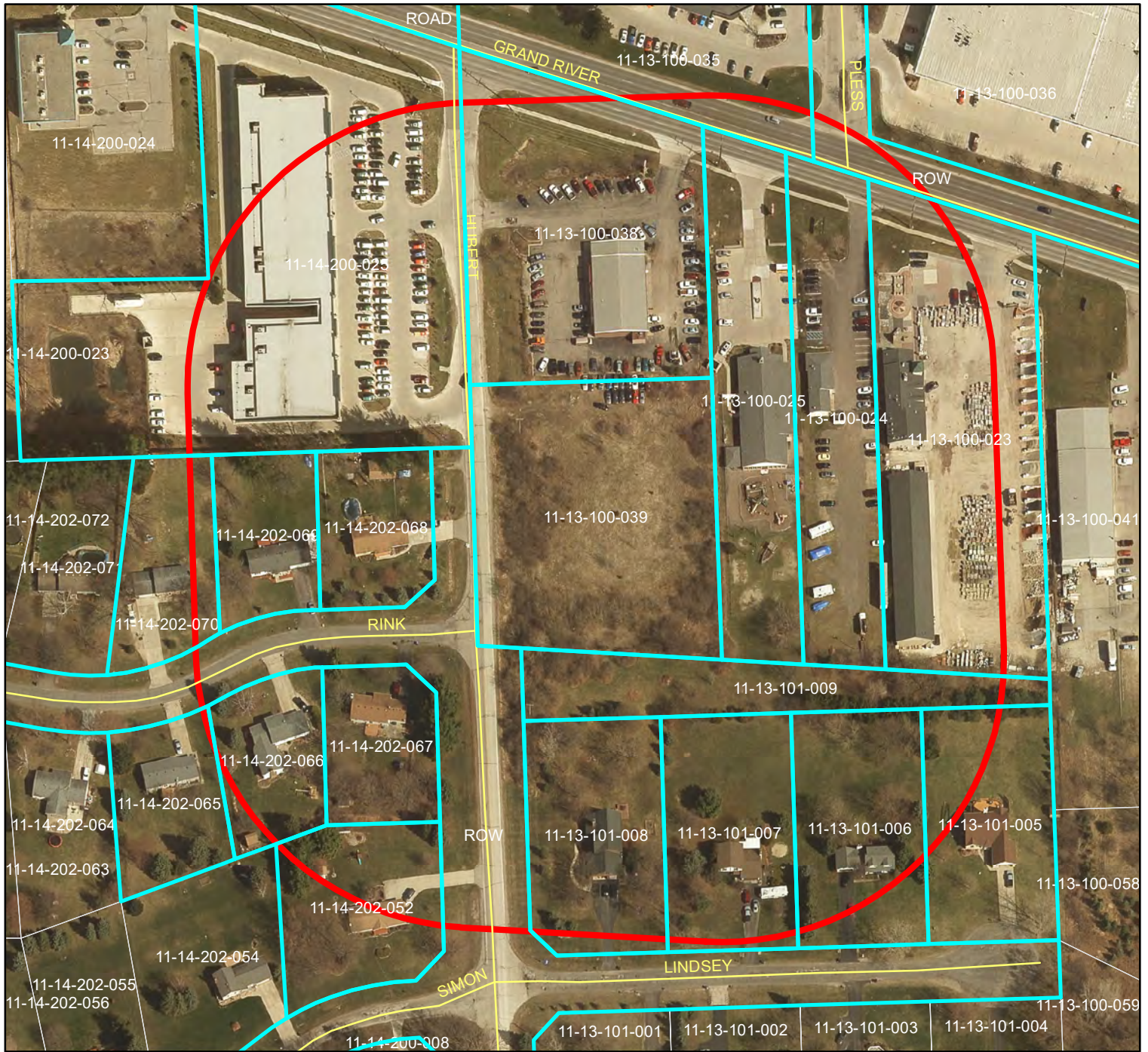
Terry Croft

Diana Lowe

**MANAGER**

Michael C. Archinal

# 300 Foot Buffer for Noticing



Special Use Application: Brighton Motors Parking

Address: 7100 Grand River

Parcel: 4711-13-100-039

Meeting Date: February 14, 2022



**From:** [Kelly VanMarter](#)  
**To:** [chrisgrajek@comcast.net](mailto:chrisgrajek@comcast.net); [Eric Rauch \(Eric.d.rauch@gmail.com\)](mailto:Eric.d.rauch@gmail.com); [Glynis McBain](#); [Jeff Dhaenens \(jeffdha@yahoo.com\)](mailto:Jeff.Dhaenens@jeffdha@yahoo.com); [Mortensen](#); [msmccreary@comcast.net](mailto:msmccreary@comcast.net); [Patty Thomas](#); [Tim Chouinard \(chouinardcustomhomes@gmail.com\)](mailto:Tim.Chouinard@chouinardcustomhomes@gmail.com)  
**Cc:** [Amy Ruthig](#)  
**Subject:** FW: Brighton Motors Parking lot expansion  
**Date:** Monday, February 14, 2022 9:41:47 AM

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Please see below email below regarding the Brighton Motors project on tonight's agenda.

[Kelly VanMarter, AICP](#)  
[Assistant Township Manager/Community Development Director](#)

[Genoa Charter Township](#)  
2911 Dorr Road, Brighton, Michigan 48116  
Direct: (810) 588-6900, Phone: (810) 227-5225, Fax: (810) 227-3420  
E-mail: [kelly@genoa.org](mailto:kelly@genoa.org), Url: [www.genoa.org](http://www.genoa.org)

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**From:** KRISTIAN SMITH <[racecarkris@comcast.net](mailto:racecarkris@comcast.net)>  
**Sent:** Monday, February 14, 2022 9:30 AM  
**To:** Kelly VanMarter <[Kelly@genoa.org](mailto:Kelly@genoa.org)>  
**Subject:** Brighton Motors Parking lot expansion

Hi Kelly,

My name is Kristian Smith (6972 Rink Dr.) and I am writing to express my concerns over the expansion of the car dealer (Brighton Motors) per your request to do so.

My concerns about the parking lot expansion are these:

What type of barrier, and how high will it be, will be placed between the lot and the homes adjacent to, and across the street from it? The view from my living room window looks directly at what is now a vacant lot, and I do not wish to see a bunch of junk vehicles that inevitably end up in the back of car lots.

Lights. When they updated the lights after purchasing the lot, it took complaints from myself and other households in Grand Beach Estates, to get them to point the lights downward. The light pollution from the dealer was more than enough to cast shadows in my yard and light up my living room. They have adjusted them since, and it is better, but I am concerned about more lights creating more light pollution in our residential area.

Garbage. This past summer, the dealer had a pile of garbage on a trailer that sat there for weeks. Not a small pile either. I believe there is still a white plastic shelving unit in the lot. We complained about it, :I know my other neighbors did too. We shouldn't have to be subjected to that, hence the need for a barrier of some kind.

Traffic. More cars, more sales, more business. I get it. But please, the amount of "test drives" through our neighborhood is ridiculous. Cars with no plates, cars going too fast. More times than I can count, cars speeding up and down Hubert road. Just over a week ago, a gentleman wearing a suit and tie, roared up and down Hubert on a white quad from the dealer (during a snow storm). I would be against another entrance to the lot just for the fact of keeping traffic on Hubert to a minimum.

Loading and unloading. How many times is a car hauler going to stop on Hubert to load and unload cars? Or use Rink as a turn around point? Our street is crumbling already, lets not make it worse.

I know its progress, its his right to try to build his business. I am just trying to limit the impact it will have on not only my property value, but most importantly, on our way of life in what has been a quiet, old school family neighborhood.

Thanks for listening to my rant, and I look forward to seeing you at the meeting.

Sincerely,

Kristian Smith  
6972 Rink Dr.  
313-268-3686



***Environmental Assessment***

***For***

***Brighton Motors  
7100 Grand River  
Brighton, MI 48114***

***Proposed raw land improvement project***

***Josh Tauriainen – Owner  
(248) 245-3656***

***Mark Shamoun – Project Lead  
(248) 225-3939***

## Table of Contents

- I. Project Description Purpose and Need
- II. Primary Beneficiaries and Related Activities
- III. Description of the Project Area
- IV. Environmental Impacts Resource Criteria
  - 1. Surface Water, Water Supply Quality, Groundwater, and Storm Water
  - 2. General Land Use
  - 3. Energy

### **I. PROPOSED PROJECT DESCRIPTION PURPOSE AND NEED**

- *This project would propose the improvement of the current raw land located at 7100 Grand River to a fully buffered and engineered parking lot for the use of storing additional inventory and provide employee parking.*
- *The need for this project is paramount for the success of the current business operating at 7100 Grand River to address the current lack of parking for customers, employees and inventory. This improvement would allow the business to continue operating and maintain a sound business model.*

### **II. PRIMARY BENEFICIARIES AND RELATED ACTIVITIES:**

- a. *The existing business located at 7100 Grand River will be the primary beneficiary of this proposed improvement project as it allows for the continued expansion to maintain viability. The lot use would allow for current employees to maintain employment, current and future customers to have compliant areas to park and allow the business to maintain adequate on-site inventory levels to be profitable.*

### **III. DESCRIPTION OF THE PROPOSED PROJECT AREA:**

- a. *The present use of the area is raw land with no discernable use currently. The area is adjacent to the existing business located at 7100 Grand River. The property is near some residential structures that also back up to existing parking areas for other adjoining businesses in the immediate area. The portions of the raw land that would be improved will contain several buffers and landscaping to both maintain an improved area that is visually presentable and to allow for its incorporation into the surrounding areas with the most beneficial aesthetics.*

## **IV. ENVIRONMENTAL IMPACTS RESOURCE CRITERIA**

### **1. SURFACE WATER, WATER SUPPLY QUALITY, AND GROUNDWATER:**

#### Assessment Questions:

1. Are there visual or other indications of water quality problems on or near the site? No
2. Will the proposal involve discharge of sewage effluent into surface water bodies? No
3. Will the proposal involve a substantial increase in impervious surface areas? Yes If so, have runoff control measures been included in the design to insure protection of surface water? Yes

### **2. GENERAL LAND USE**

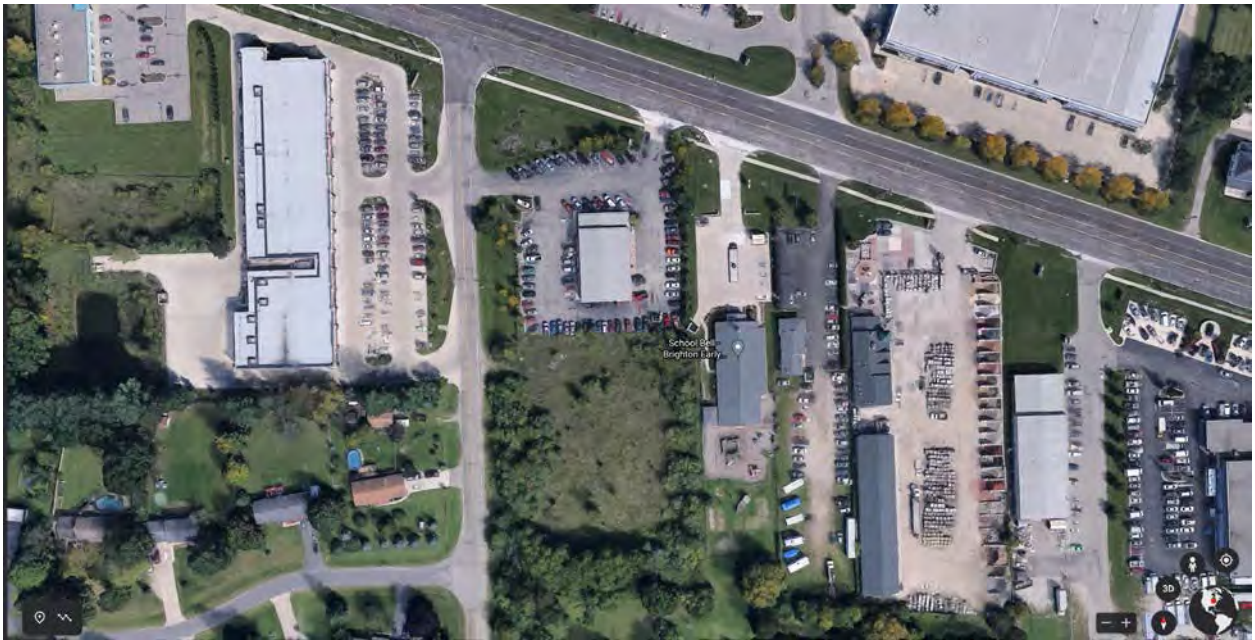
#### Assessment Questions:

1. Is the proposal consistent with local, regional or state comprehensive plans, policies, ordinances, and goals? Yes
2. Does the proposal comply with existing zoning regulations? Yes

### **3. ENERGY**

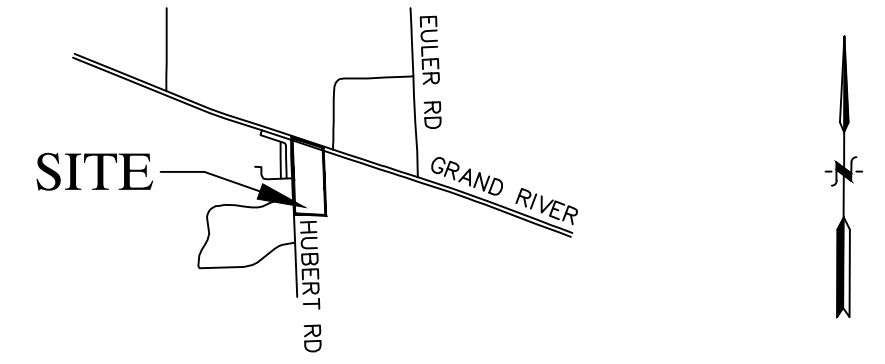
#### Assessment Questions:

1. Will the proposal require an increase in use of the area's energy resources (electricity, natural gas, coal, or fuel)? Yes Will there be a need for increased capacity of any energy resources supply due to the proposal? No
2. Discuss any steps taken by the proposal to conserve energy: LED Lighting efficiency.

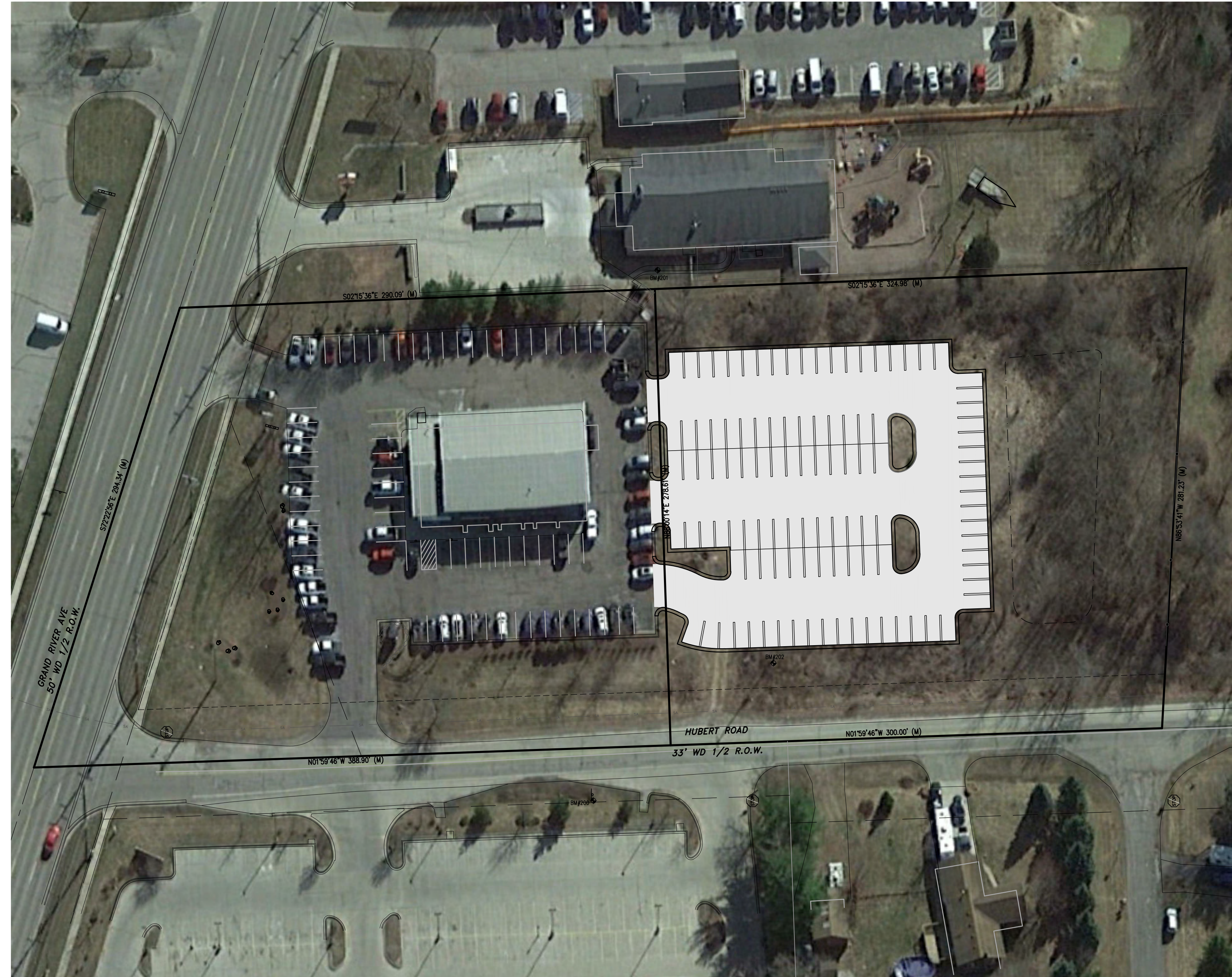


# SITE PLAN FOR BRIGHTON MOTORS GENOA TOWNSHIP

**A PART OF THE NW 1/4 OF SECTION 13, T 2 N, R 5 E,  
GENOA TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN**



**LOCATION MAP**  
SCALE: 1" = 2000'



## LEGAL DESCRIPTION

**PARCEL NO. 1:**  
Part of the Northwest 1/4 of Section 13, Town 2 North, Range 5 East, Genoa Township, Livingston County, Michigan, more particularly described as follows:  
Commencing at the West 1/4 corner of said Section 13;  
thence along the West line of Section 13 and the centerline of Hubert Road, said line also being the West line of HERBST ESTATES, a subdivision as duly laid out, platted and recorded in Liber 21 of Plats, pages 5, 6 and 7 of the Livingston County Records, N01°59'46"W (SPCS) (recorded as N00°45'20"W) (platted as N02°24'22"E), 647.77 feet to the Northwest corner of said subdivision;  
thence continuing along said West Section line and centerline, N01°59'46"W (SPCS) (recorded as N00°45'20"W) 300.00 feet to the POINT OF BEGINNING of the Parcel to be described;  
thence continuing along said Section line and centerline N01°59'46"W (SPCS) (recorded as N00°45'20"W) 388.80 feet;  
thence along the centerline of Grand River Avenue S72°22'56"E (SPCS) (recorded as S71°08'30"E) 294.34 feet;  
thence S02°15'38"E (SPCS) (recorded as S01°10'10"E) 290.09 feet;  
thence N88°00'14"E (SPCS) (recorded as S89°14'40"W) 278.61 feet to the Point of Beginning.  
Tax ID No.: 4711-13-100-038

**PARCEL NO. 2:**  
Part of the Northwest 1/4 of Section 13, Town 2 North, Range 5 East, Genoa Township, Livingston County, Michigan, more particularly described as follows:  
Commencing at the West 1/4 corner of said Section 13; thence along the West line of Section 13 and the centerline of Hubert Road, said line also being the West line of HERBST ESTATES, a subdivision as duly laid out, platted and recorded in Liber 21 of Plats, pages 5, 6 and 7, Livingston County Records, N01°59'46"W (SPCS) (recorded as N00°45'20"W) (platted as N02°24'22"E), 647.77 feet to the POINT OF BEGINNING of the parcel to be described;  
thence continuing along said Section line and centerline N01°59'46"W (SPCS) (recorded as N00°45'20"W) 300.00 feet;  
thence N88°00'14"E (SPCS) (recorded as N89°14'40"E) 278.61 feet;  
thence S02°15'38"E (SPCS) (recorded as S01°10'10"E) 324.88 feet;  
thence along the North line of said HERBST ESTATES, N88°52'41"W (SPCS) (recorded as N88°59'15"W) (platted as N02°22'27"W) 391.23 feet to the Point of Beginning.  
Tax ID No.: 4711-13-100-039

## BENCHMARKS

DATUM BASED ON NOS OPUS SOLUTION REPORT,  
DATED MARCH 22, 2022 AT 9:37 AM

**BENCHMARK #200**  
TOP OF FLARED END SECTION, LOCATED ON WEST SIDE OF HUBERT ROAD, 320± FEET SOUTH OF GRAND RIVER AND NORTH OF 2ND ENTRANCE TO #7000 GRAND RIVER.  
ELEVATION = 981.21 (NAVD 88)

**BENCHMARK #201**  
NAIL IN THE WEST SIDE OF WALK, LOCATED 13± FEET WEST OF #7172 AND ELY OF DUMPIER AREA.  
ELEVATION = 983.73 (NAVD 88)

**BENCHMARK #202**  
MDOOT SPIKE IN THE WEST SIDE OF AN UTILITY POLE, LOCATED ON EAST SIDE OF HUBERT ROAD AND ACROSS FROM THE 2ND DRIVE ENTRANCE TO #7000.  
ELEVATION = 983.88 (NAVD 88)

**OWNER/DEVELOPER**  
**RJ INVESTMENTS GENOA LLC**  
7100 GRAND RIVER AVE.  
BRIGHTON, MI, 48114

**CIVIL ENGINEER/LAND SURVEYOR**  
**DESINE INC.**  
2183 PLESS DRIVE  
BRIGHTON, MI. 48114  
(810) 227-9533

## SHEET INDEX

- EX EXISTING CONDITIONS & DEMOLITION PLAN
- SP SITE PLAN
- UT1 UTILITY PLAN
- UT2 STORM SEWER PROFILES AND CALCULATIONS
- UT3 DETENTION BASIN DETAILS AND CALCULATIONS
- GR GRADING PLAN
- SE1 SOIL EROSION CONTROL PLAN
- SE2 SOIL EROSION NOTES AND DETAILS
- LA1 LANDSCAPE PLAN, NORTH AREA
- LA2 LANDSCAPE PLAN, SOUTH AREA
- LA3 LANDSCAPE NOTES & DETAILS
- DT1 GENERAL NOTES & DETAILS
- DT2 STORM SEWER NOTES & DETAILS

1 of 1 LIGHTING PLAN

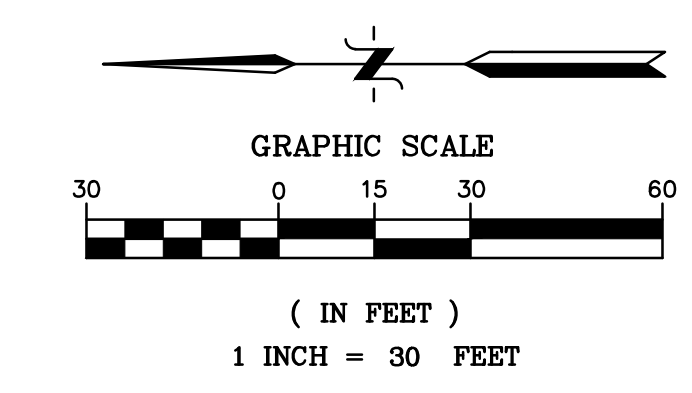


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OR VISIT CALL811.COM

REVISED	SCALE: N/A
	PROJECT No.: 224245
	DWG NAME: 4245 COV
	PRINT: MAY 3, 2022

**DESINE INC.**  
(810) 227-9533  
CIVIL ENGINEERS  
LAND SURVEYORS  
2183 PLESS DRIVE  
BRIGHTON, MICHIGAN 48114



- LEGEND**
- = PARCEL BOUNDARY
  - - - = SETBACK LINE
  - - - = RIGHT OF WAY
  - - - = BUILDING LINE
  - = BOLLARD
  - ⊕ = STOP SIGN
  - ⊕ = SIGN / MONUMENT SIGN
  - ⊕ = SOIL BORING
  - ⊕ = LIGHT BASE
  - ⊕ = UTILITY METERS & BOXES (ELECTRIC METER, GAS METER, WATER METER, PHONE BOX, CATV BOX, MAIL BOX, UTIL. BOX)
  - ⊕ = AIR CONDITIONER UNIT
  - ⊕ = UTILITY POLE W/GUY WIRE
  - ⊕ = OVERHEAD UTILITY LINES (ELECTRIC/PHONE/CABLE)
  - ⊕ = U/G UTILITY LINES (PHONE/FIBER OPTIC/ELECTRIC/CABLE TV/MISC UTILITIES)
  - ⊕ = EDGE OF BRUSH LINE
  - ⊕ = DECIDUOUS TREE W/IDENTIFIER
  - ⊕ = CONIFEROUS TREE W/IDENTIFIER
  - ⊕ = BUSH / SHRUB
  - ⊕ = FENCE (CHAIN LINK UNLESS OTHERWISE STATED)
  - ⊕ = EX. EDGE OF GRAVEL
  - ⊕ = EX. CONCRETE CURB (UNLESS OTHERWISE STATED)
  - ⊕ = SANITARY SEWER MANHOLE W/IDENTIFIER
  - ⊕ = SANITARY SEWER PIPE
  - ⊕ = CLEAN OUT
  - ⊕ = ROOF DRAIN
  - ⊕ = STORM WATER MANHOLE W/IDENTIFIER
  - ⊕ = CATCH BASIN W/IDENTIFIER
  - ⊕ = CONTROL STRUCTURE
  - ⊕ = FLARED END SECTION
  - ⊕ = STORM WATER DRAINAGE PIPE
  - ⊕ = HYDRANT
  - ⊕ = WATER SHUT OFF
  - ⊕ = WATER GATE VALVE WELL / MANHOLE
  - ⊕ = WATER VALVE BOX
  - ⊕ = WATER MAIN
  - ⊕ = GAS MANHOLE
  - ⊕ = GAS SHUT OFF
  - ⊕ = U/G GAS
  - ⊕ = EX. 1' CONTOUR
  - ⊕ = EX. 5' CONTOUR

**BENCHMARK**  
DATUM BASED ON NGS OPUS SOLUTION REPORT, DATED MARCH 22, 2022 AT 9:37 AM

BENCHMARK #200  
TOP OF FLARED END SECTION, LOCATED ON WEST SIDE OF HUBERT ROAD, 320± FEET SOUTH OF GRAND RIVER AND NORTH OF 2ND ENTRANCE TO #7000 GRAND RIVER.  
ELEVATION = 981.21 (NAVD 88)

BENCHMARK #201  
NAIL IN THE WEST SIDE OF WALK, LOCATED 13± FEET WEST OF #7172 AND ELY OF DUMPTER AREA.  
ELEVATION = 983.73 (NAVD 88)

BENCHMARK #202  
MDOOT SPIKE IN THE WEST SIDE OF AN UTILITY POLE, LOCATED ON EAST SIDE OF HUBERT ROAD AND ACROSS FROM THE 2ND DRIVE ENTRANCE TO #7000.  
ELEVATION = 983.88 (NAVD 88)

4711-14-200-025  
7000-7038 GRAND RIVER AVE  
ZONED: NSD  
JWS PROPERTIES LLC  
44700 N. ORCHARD HWY  
CLINTON TOWNSHIP, MI  
48036

4711-14-202-068  
ZONED: SR  
DUNCAN, CHARLES K. & DEBRA D.  
6887 RINK DR.  
BRIGHTON, MI  
48114

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DESIGN:SVB	REVISION #	DATE	REVISION-DESCRIPTION	REVISION #	DATE	REVISION-DESCRIPTION
DRAFT: OBM						
CHECK: WMP						

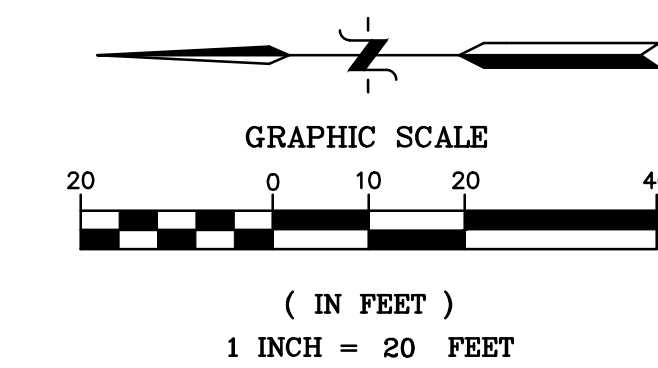
**BRIGHTON MOTORS  
PARKING EXPANSION**

**EXISTING  
CONDITIONS**

CLIENT:  
S2 CONSTRUCTION MANAGEMENT  
12596 TEN MILE ROAD  
SOUTH LYON, MICHIGAN 48178  
248-225-3939

SCALE: 1in. = 30ft.  
PROJECT No.: 224245  
DWG NAME: 4245 EX  
ISSUED: **MAY 3, 2022**

**EX**



- LEGEND**
- = PARCEL BOUNDARY
  - - - = SETBACK LINE
  - - - - - = RIGHT OF WAY
  - - - - - = BUILDING LINE
  - ⊙ = BOLLARD
  - ⊘ = STOP SIGN
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  - ⊙ = SOIL BORING
  - ⊙ = LIGHT BASE
  - ⊙ = UTILITY METERS & BOXES (ELECTRIC METER, GAS METER, WATER METER, PHONE BOX, CATV BOX, MAIL BOX, UTIL. BOX)
  - ⊙ = AIR CONDITIONER UNIT
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  - ⊙ = BUSH / SHRUB
  - ⊙ = FENCE (CHAIN LINK UNLESS OTHERWISE STATED)
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  - ⊙ = EX. CONCRETE CURB (UNLESS OTHERWISE STATED)
  - ⊙ = SANITARY SEWER MANHOLE W/IDENTIFIER
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  - ⊙ = GAS SHUT OFF
  - ⊙ = U/G GAS
  - ⊙ = EX. 1' CONTOUR
  - ⊙ = EX. 5' CONTOUR
  - ⊙ = PROP. CONCRETE CURB
  - ⊙ = PROP. CONCRETE CURB (REVERSE PITCH)
  - ⊙ = PROP. LIGHT POLE

**SITE DATA:**

PROJECT AREA: 4.17 ac. (GROSS)  
 CURRENT ZONING: GCD GENERAL BUSINESS  
 PROPOSED USE: AUTOMOBILE SALES  
 GROUND FLOOR AREA: 6,296 sq.ft.

BUILDING HEIGHT:	PROPOSED SEE ARCH. PLANS	REQUIRED 35 FEET
PARKING SETBACKS:	FRONT 20.0' SIDE 10.0' REAR 10.0'	20 FT. 10 FT. 10 FT.

PERCENT OF LOT COVERAGE OF BUILDINGS:  
 6,296 S.F./146,045 S.F. (NET) = 4.0%

IMPERVIOUS AREA: 1.81 A.C./3.35 A.C. (NET) = 54%

**PARKING CALCULATIONS**

**PARKING REQUIREMENTS:**  
 1 SPACE/800 S.F. GROSS LEASABLE FLOOR AREA, PLUS 2 SPACES PER EACH VEHICLE SALES SERVICE BAY.  
 1 LOADING SPACE, PLUS 1 SPACE PER EACH ADDITIONAL 20,000 S.F. GFA.

**PROPOSED GROSS LEASABLE FLOOR AREA:** 5,352 S.F.  
 5,352 S.F./800 S.F. = 6 SPACES  
 4 SERVICE BAYS X 2 SPACES = 8 SPACES  
 1 LOADING SPACE (REQUIRED)  
 15 TOTAL SPACES (REQUIRED)

**CALCULATED PARKING:**  
 BUILDING SPACES: 13 PARKING SPACES + 1 BARRIER FREE + 1 LOADING

**PARKING REQUIRED:** 14 SPACES + 1 LOADING SPACE  
**PARKING PROVIDED:**  
 65 SPACES (EXISTING)  
 107 SPACES (EXPANSION LOT)  
 172 SPACES (TOTAL PROVIDED)

**BENCHMARK**  
 DATUM BASED ON NGS OPUS SOLUTION REPORT, DATED MARCH 22, 2022 AT 9:37 AM

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 TOP OF FLARED END SECTION, LOCATED ON WEST SIDE OF HUBERT ROAD, 320± FEET SOUTH OF GRAND RIVER AND NORTH OF 2ND ENTRANCE TO #7000 GRAND RIVER.  
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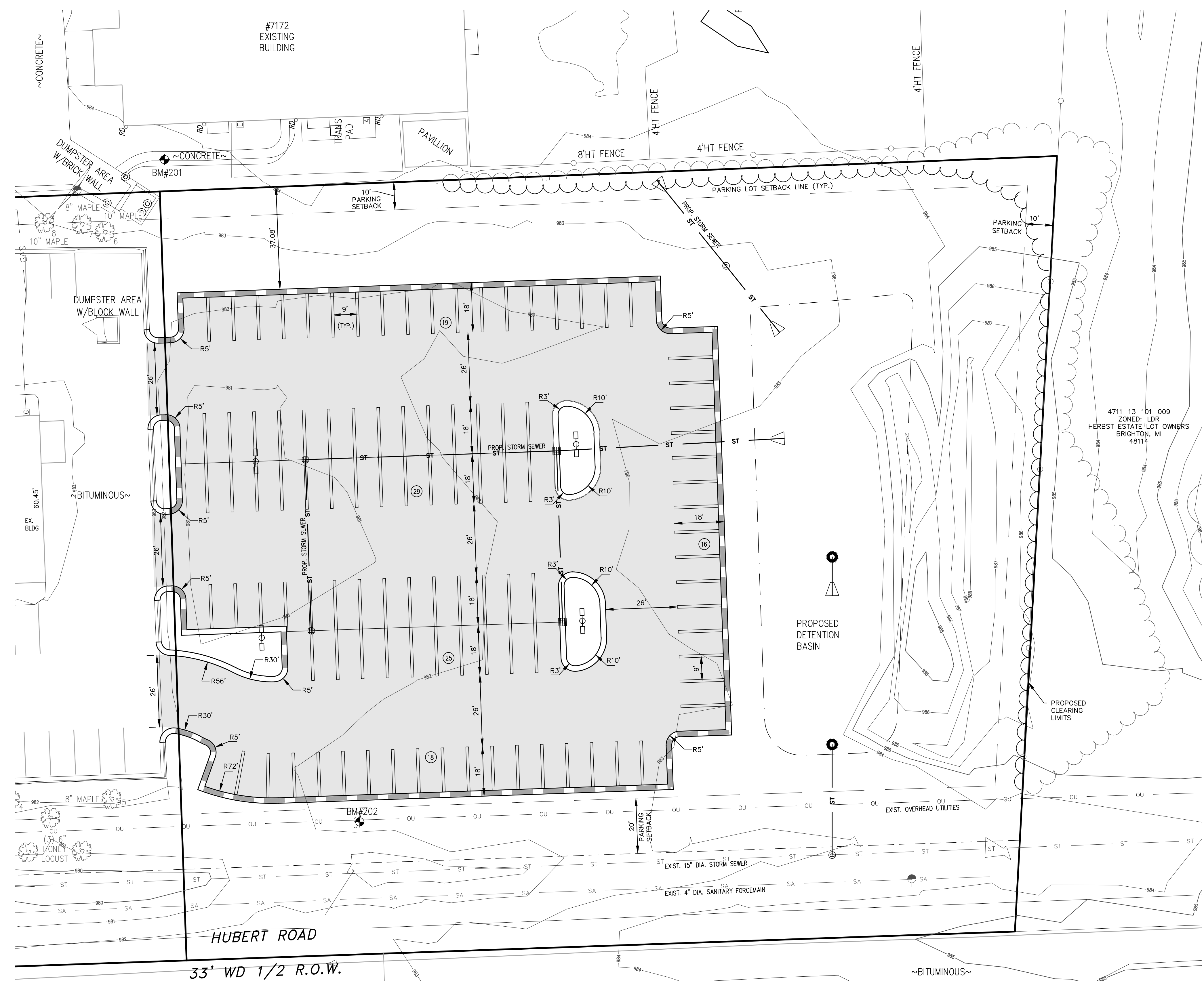
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 ELEVATION = 983.73 (NAVD 88)

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 WOOD SPIKE IN THE WEST SIDE OF AN UTILITY POLE, LOCATED ON EAST SIDE OF HUBERT ROAD AND ACROSS FROM THE 2ND DRIVE ENTRANCE TO #7000.  
 ELEVATION = 983.88 (NAVD 88)

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 BRIGHTON, MICHIGAN 48114



DESIGN/SVB	REVISION #	DATE	REVISION-DESCRIPTION	REVISION #	DATE	REVISION-DESCRIPTION
DRAFT: JHG						
CHECK: WMP						

**BRIGHTON MOTORS  
 PARKING EXPANSION**

**SITE PLAN**

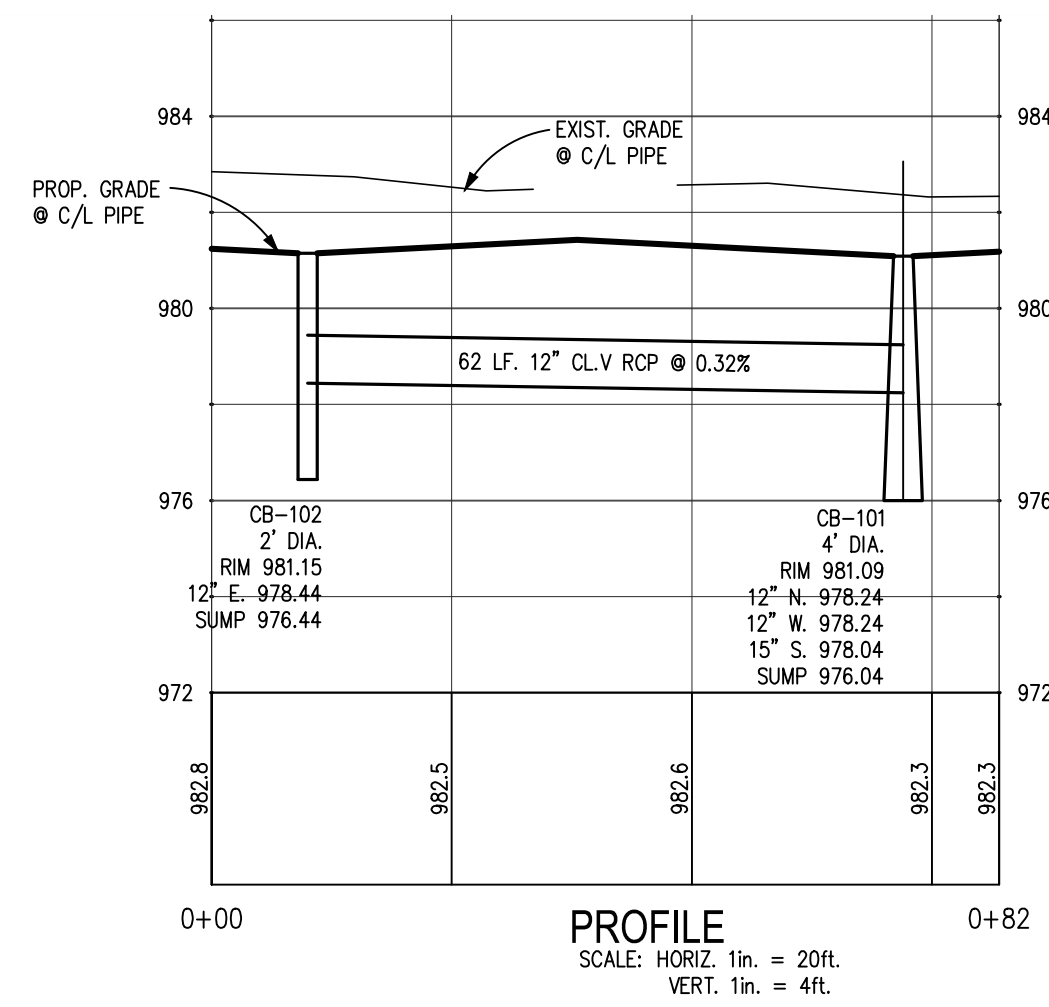
CLIENT: S2 CONSTRUCTION MANAGEMENT  
 12596 TEN MILE ROAD  
 SOUTH LYON, MICHIGAN 48178  
 248-225-3939

SCALE: 1in. = 20ft.  
 PROJECT No.: 224245  
 DWG NAME: 4245 SP  
 ISSUED: MAY 3, 2022

**SP**

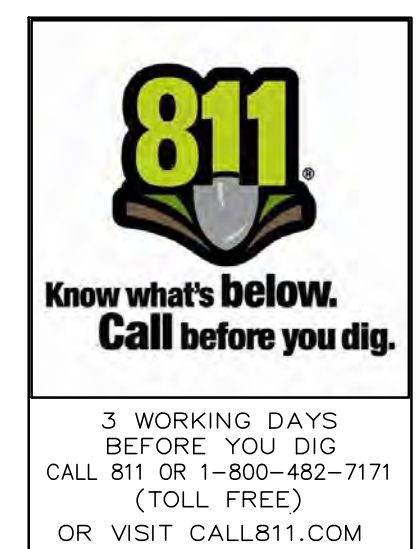
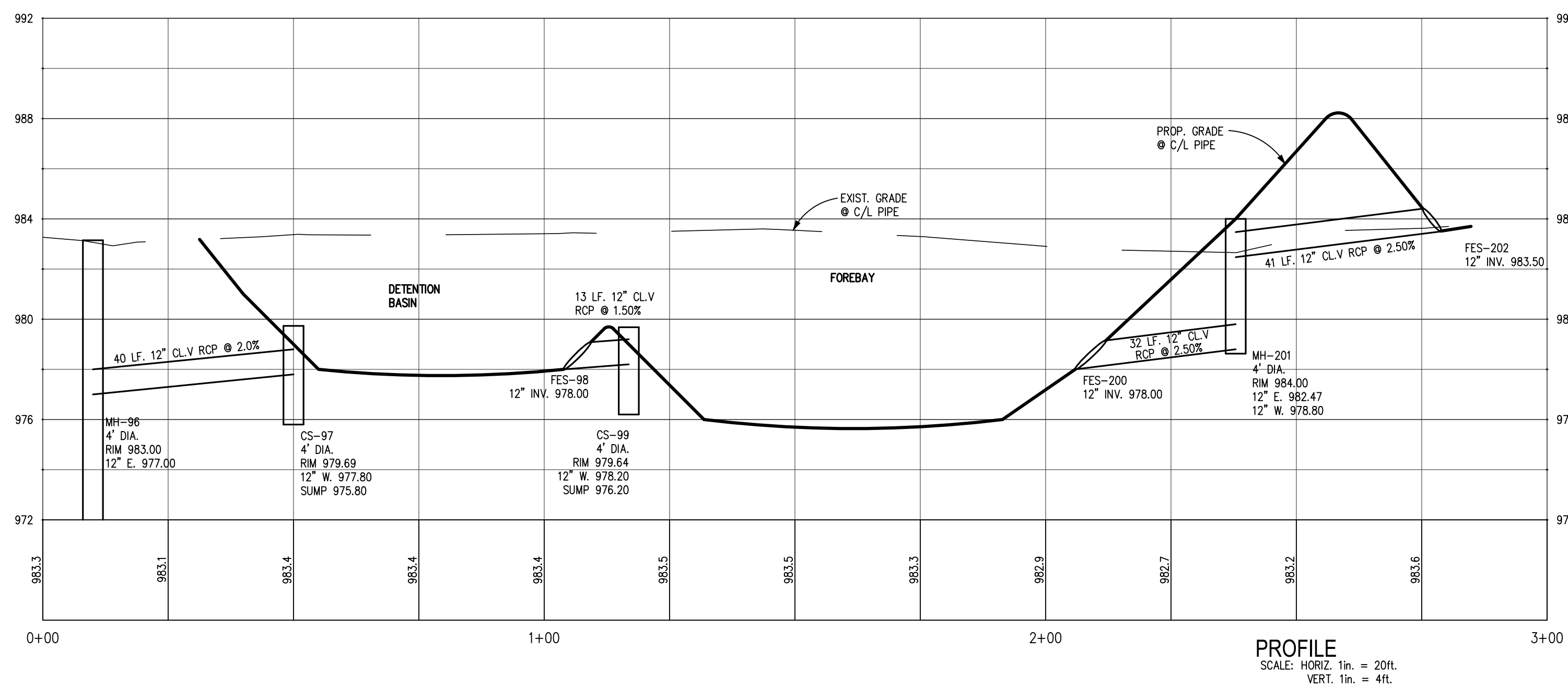
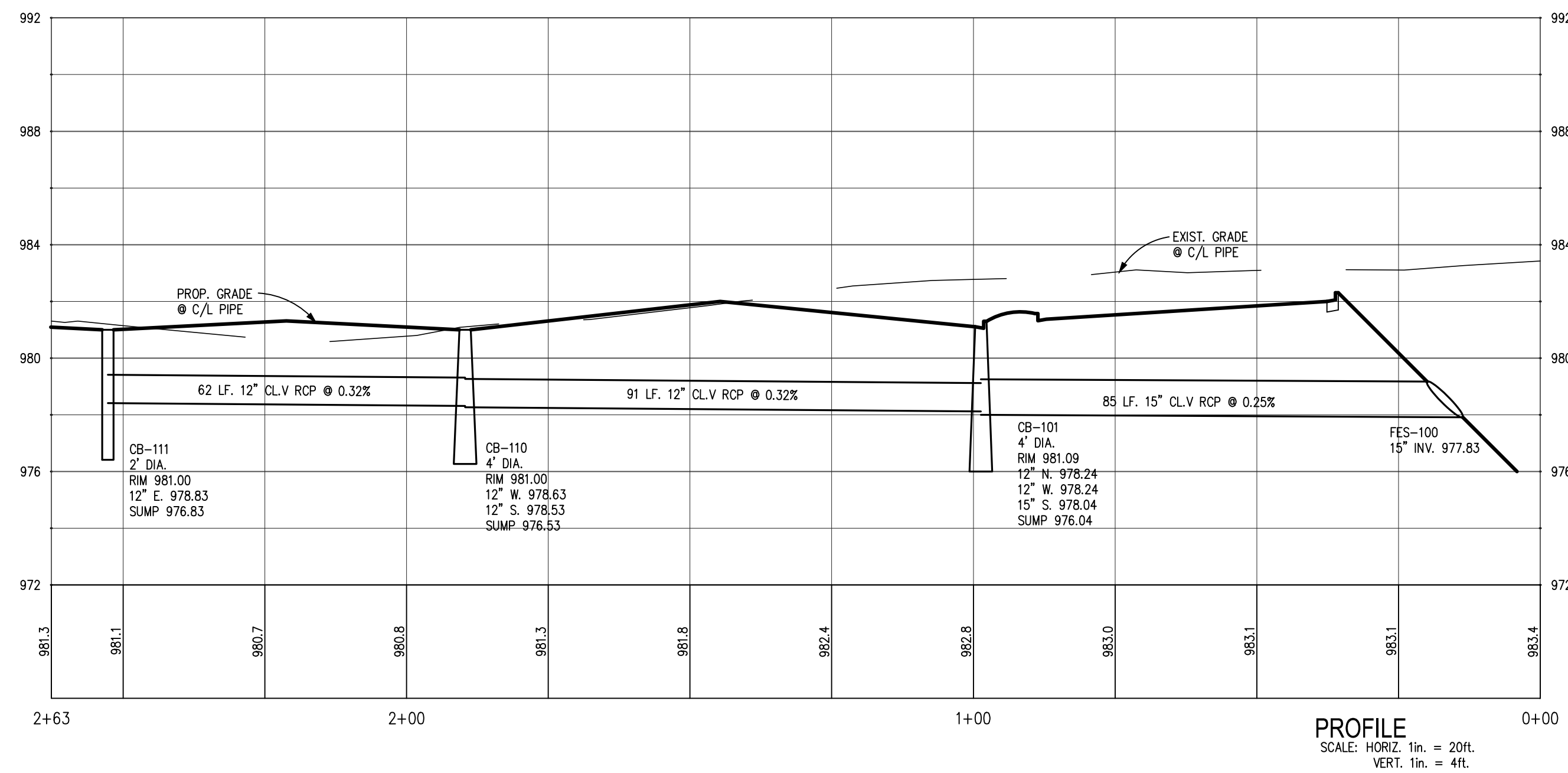






Design Criteria: 10 year event (I = 175/t + 25) RCP n= 0.013 HDPE n= 0.013

From MH# CB# FES#	To MH# CB# FES#	Inc. Acres		Eqv. Area 100% CA	Total Area 100% CA	T Time Min.	I Inch Per Hour	Q (CIA) c.f.s.	Qa (Additional flow) c.f.s.	Qt (Total flow) c.f.s.	Dia. of pipe inch	Slope pipe %	Slope H.G. %	Length of line ft.	Vel. Flow full ft./sec.	Time of flow min.	Cap of pipe c.f.s.	H.G. Elev. upper end	Ground Elev.		Invert Elev.		
		Upper end	Lower end																Upper end	Lower end			
111	110	0.21	0.87	0.18	0.18	20.0	3.89	0.71		0.71	12	0.32	0.04	62	2.57	0.4	2.02	980.07	981.00	981.00	978.83	978.63	
110	101	0.37	0.60	0.22	0.40	20.4	3.85	1.55		1.55	12	0.32	0.19	91	2.57	0.6	2.02	980.04	981.00	981.09	978.53	978.24	
102	101	0.23	0.84	0.19	0.19	20.0	3.89	0.75		0.75	12	0.32	0.04	62	2.57	0.4	2.02	979.90	981.15	981.09	978.44	978.24	
101	100	0.27	0.72	0.19	0.79	21.0	3.80	3.01		3.01	15	0.25	0.22	83	2.63	0.5	3.23	979.87	981.09	977.83	978.04	977.83	
202	201	0.33	0.20	0.07	0.07	20.0	3.89	0.26		0.26	12	2.50	0.01	41	7.17	0.1	5.63	983.50	983.50	984.00	983.50	982.47	
201	200	0.00	0.00	0.00	0.07	20.1	3.88	0.26		0.26	12	2.50	0.01	32	7.17	0.1	5.63	979.00	984.00	978.00	978.80	978.00	
99	98	0.00	0.00	0.00	0.00	20.0	3.89	0.00		0.00	12	1.50	0.00	13	5.56	0.0	4.36	979.00	979.68	978.00	978.20	978.00	
97	96	0.00	0.00	0.00	0.00	20.0	3.89	0.00		0.00	12	2.00	0.00	40	6.42	0.1	5.04	978.00	979.73	983.00	977.80	977.00	
																			979.69	Downstream HWL			



DESIGN:SVB	REVISION #	DATE	REVISION-DESCRIPTION	REVISION #	DATE	REVISION-DESCRIPTION
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CHECK: WMP						

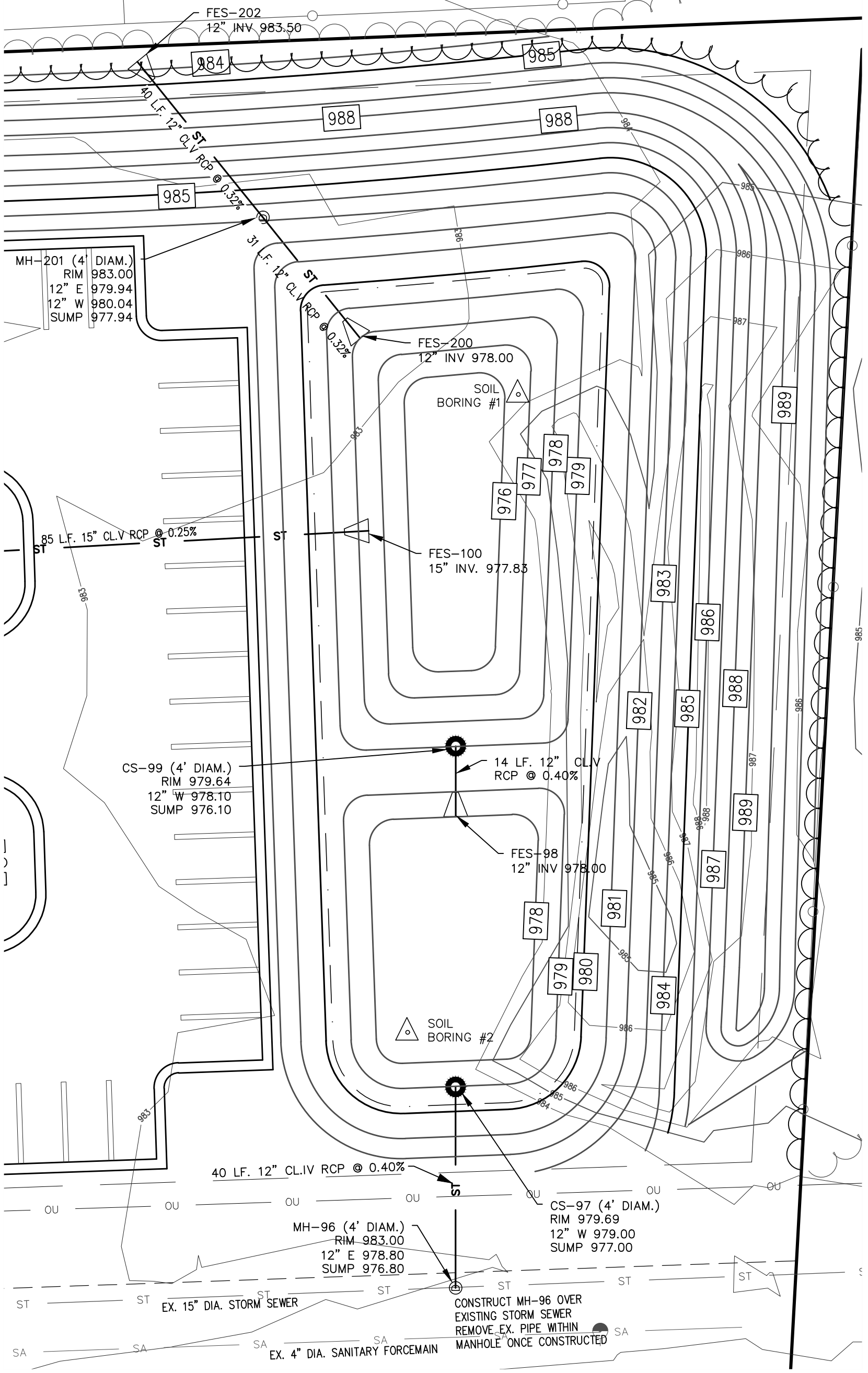
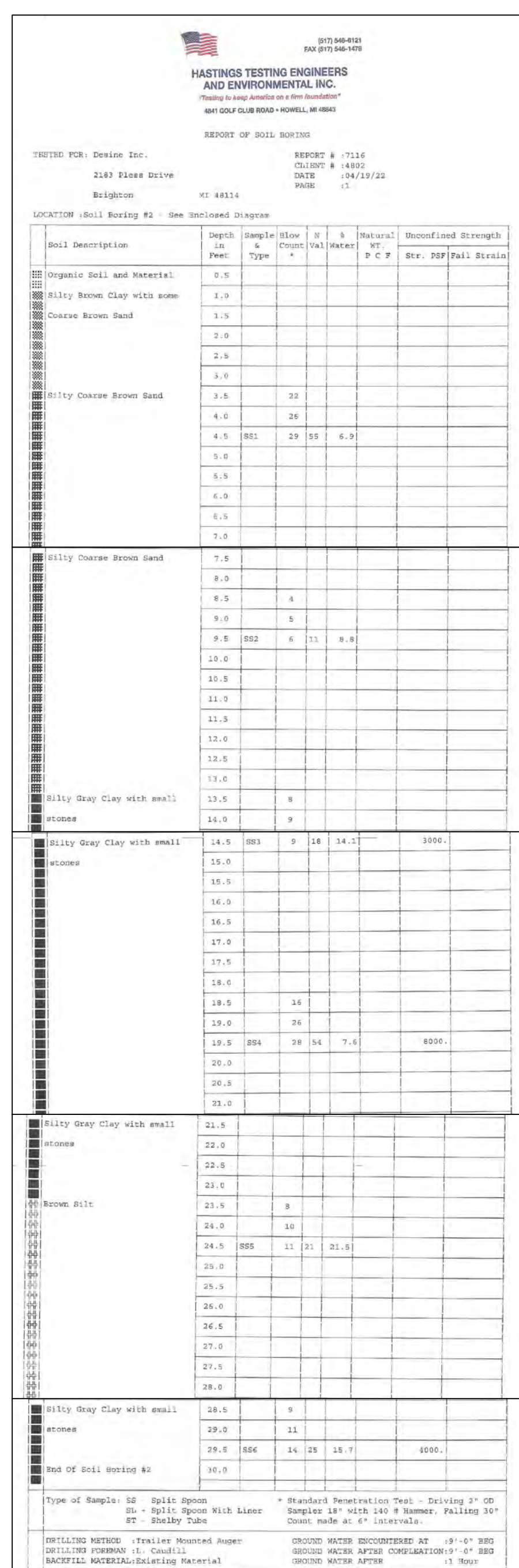
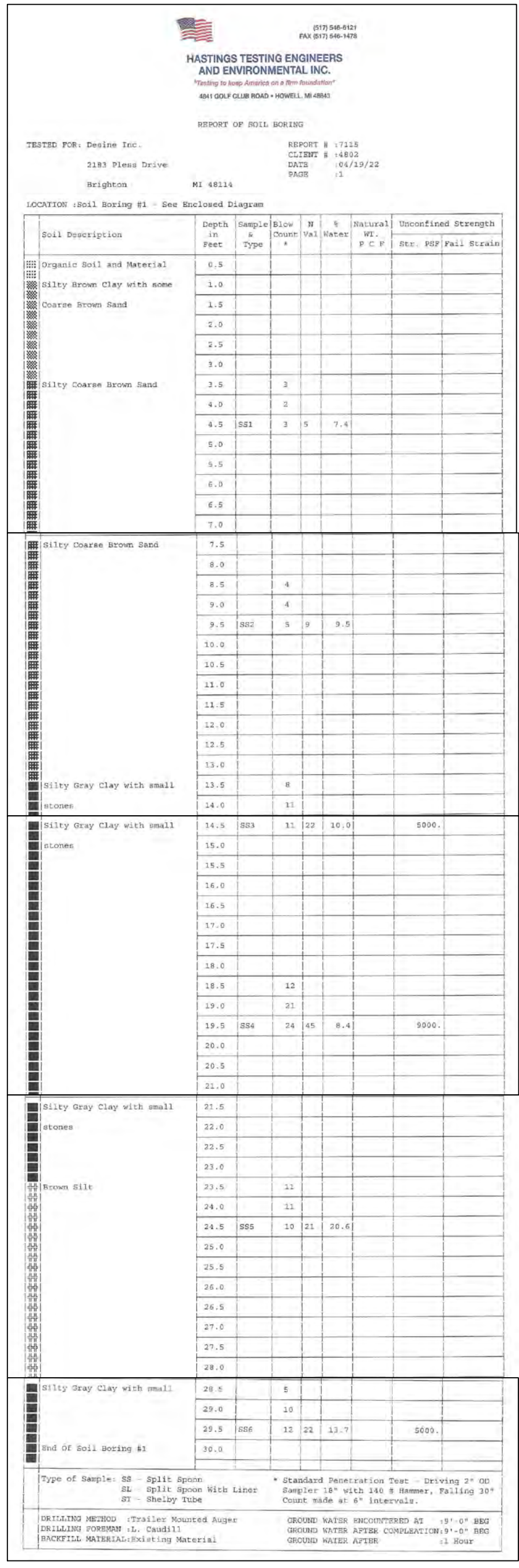
# BRIGHTON MOTORS PARKING EXPANSION

## STORM PROFILES & CALCULATIONS

CLIENT: S2 CONSTRUCTION MANAGEMENT  
12596 TEN MILE ROAD  
SOUTH LYON, MICHIGAN 48178  
248-225-3939

SCALE: N/A  
PROJECT No.: 224245  
DWG NAME: 4245 UT  
ISSUED: MAY 3, 2022

# UT2



**DETENTION BASIN DETAIL**  
NOT TO SCALE

**Detention Basin CONTROL STRUCTURE CALCULATIONS**

Tributary Area:	A = 1.56 Acres
Compound Runoff Coefficient:	C = 0.57
Orifice Flow Coefficient:	c = 0.60
Allowable Outflow Rate:	Qa = 1.58 CFS
100 Year Detention Volume =	V100 = 6,257 CF
Extended Detention Volume =	Ved = 6,133 CF
Channel Protection Volume =	Vcp = 4,196 CF
Low Water Level:	LWL = 976.00
Channel Protection Elevation:	Xcp = 979.31
Extended Detention Elevation:	Xed = 979.67
100 Year Storage Elevation:	X100 = 979.69

Extended Detention: Ved \* (1 / 48 hrs) \* (1 / 3600 sec) = 0.0355 CFS  
 Hed = Xed - Xcp = 0.35 FT  
 Aed = Qed / (c \* SQRT(2 \* 32.2 \* Hed)) = 0.0124 SF  
 D = Orifice Diameter = 1.500 inch dia.  
 Ned = Aed / D = 1.01 Orifices  
 Use Ned = 1 Orifices at Centerline Elevation = 979.38  
 Approx. Extended Detention Discharge Duration = 48.41 hours

**PROPOSED DETENTION BASIN VOLUME**

POND DEPTH (FT)	ELEV.	DETENTION CONTOUR AREA (SF)	DETENTION BASIN VOLUME (CF)	FOREBAY CONTOUR AREA (SF)	FOREBAY BASIN VOLUME (CF)	TOTAL STORAGE VOLUME (CF)
LWL	975.00	0	0	0	0	0
1.0	976.00	0	0	0	0	0
2.0	977.00	0	0	0	0	0
3.0	978.00	1,540	516	0	0	516
4.0	979.00	2,428	2,489	4,287	0	4,346
5.0	980.00	9,219	7,949	5,762	5,006	14,922

**100 Yr. Detention Storage Elevation Calculation:**

ELEV.	VOLUME	VOLUME REQ.	ELEVATION
Lower	979.00	2,489	979.69
Higher	980.00	7,949	

**Extended Detention Storage Elevation Calculation:**

ELEV.	VOLUME	VOLUME REQ.	ELEVATION
Lower	979.00	2,489	979.67
Higher	980.00	7,949	

**Channel Protection Elevation Calculation:**

ELEV.	VOLUME	VOLUME REQ.	ELEVATION
Lower	979.00	2,489	979.31
Higher	980.00	7,949	

**Forebay Storage Elevation Calculation:**

ELEV.	VOLUME	VOLUME REQ.	ELEVATION
Lower	979.00	0	979.64
Higher	980.00	5,006	

**Forebay FOREBAY CONTROL STRUCTURE CALCULATIONS**

Tributary Area:	A = 1.56 Acres
Compound Runoff Coefficient:	C = 0.57
Orifice Flow Coefficient:	c = 0.60
Allowable Outflow Rate:	Qa = 1.58 CFS
Forebay Storage Volume =	Vf = 5,006 CF
Low Water Level:	LWL = 976.00
Forebay Storage Elevation:	Xf = 979.64

**Forebay Outlet Control:**  
 Qf = Vf \* (1 / 24 hrs) \* (1 / 3600 sec) = 0.0579 CFS  
 Hf = Xf - LWL = 3.64 FT  
 Af = Qf / (c \* SQRT(2 \* 32.2 \* Hf)) = 0.0063 SF  
 D = Orifice Diameter = 1.125 inch dia.  
 N = Af / D = 0.91 Orifices  
 Use Nf = 1 Orifices at Centerline Elevation = 976.05

**DETENTION VOLUMES: POST DEVELOPMENT 100 YEAR STORM DETENTION**

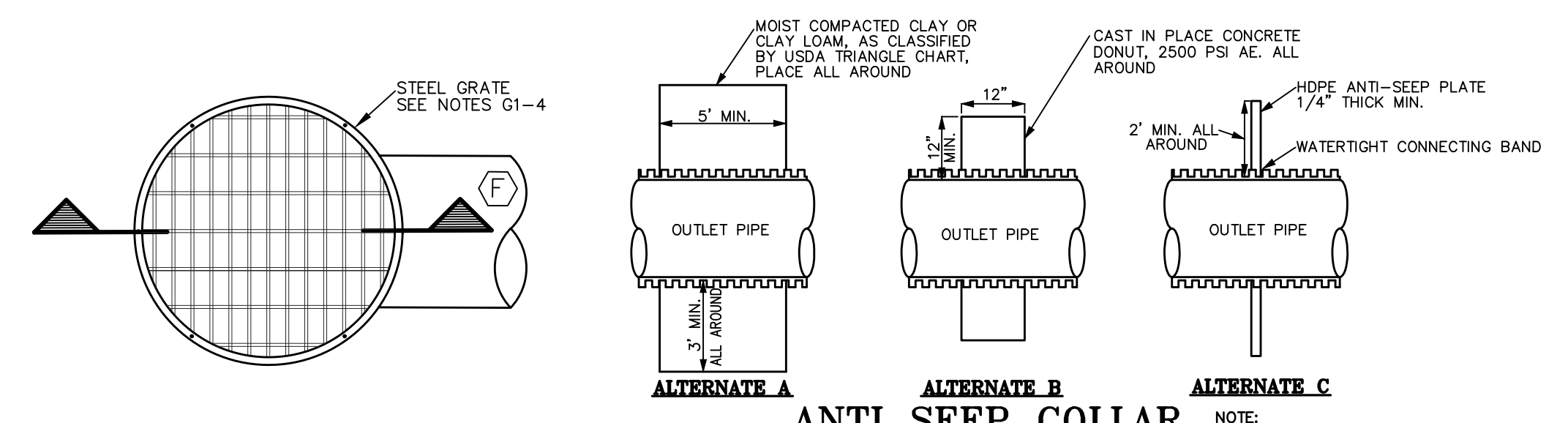
Tributary Area (A) =	1.56 Acres
Compound Runoff Coefficient (C) =	0.57
<b>Water Quality Control Volume:</b>	(3,630)(A)(C) = 3,228 cf
<b>Channel Protection Volume:</b>	(4,719)(A)(C) = 4,196 cf
<b>Extended Detention Volume:</b>	(6,897)(A)(C) = 6,133 cf
<b>Forebay Volume:</b>	5,006 cf
Downstream Infiltration Provided = V <sub>in</sub> =	3,228 cf
Upstream Infiltration (15% of WQC Vol) =	484 cf

**100 Year Storm Outlet Rate calculation:**  
 $T_r = 21.0$  (from storm sewer calculations)  
 $Q_{100} = 4.74$  cfs

**100 Year Storm Outlet Rate calculation:**  
 Allowed Outlet Rate is lesser of  $Q_{100}$  or restricted release rate for the drain  
 County Drain Restricted Rate =  $INA$  cfs  
 Variable Release Rate =  $Q_{100} = 1.58$  cfs  
 (Variable Release Rate capped at 1.0 cfs/acre for Area < 2 acres)  
 (Variable Release Rate = 0.15 cfs/acre for Area > 100 acres)  
**ALLOWABLE 100 YEAR OUTLET RATE =  $Q_{100} = 1.58$  cfs**

**100 Year Required Storm Detention Volume calculation:**  
 Storage Curve Factor = R = 0.37  
 100 Year Storage Volume In =  $V_{100in} = 16,881.46$  cf  
 Calculated 100 Year Storage Volume =  $V_{100out} = 6,257$  cf  
**REQUIRED VOLUME:  $V_{100out} > V_{100in} = 6,257$  cf**

**Extended Detention Discharge Rate:**  $V_{ed} / 172,800 = 0.04$  cfs



**ANTI SEEP COLLAR**  
NOT TO SCALE

NOTE: LOCATE ONE COLLAR AROUND OUTLET PIPE AT CENTER OF BASIN BERM: INCIDENTAL TO CONTROL STRUCTURE.

**KEY**

CONTROL STRUCTURE DESIGNATION	CS-99	CS-97
A MATERIAL TYPE - SEE NOTE 2	HDPE	HDPE
B STRUCTURE INSIDE DIAMETER	4'	4'
C RIM ELEVATION WITHOUT GRATE	979.64	979.69
D INVERT ELEVATION OUTLET PIPE	978.20	977.80
E TOP OF STONE ELEVATION	979.55	979.55
F OUTLET PIPE DIAMETER	12"	12"
G OUTLET PIPE MATERIAL	HDPE	HDPE
H STRUCTURE HEIGHT WITHOUT GRATE	3.48'	3.93'
J SUMP HEIGHT	2'	2'
K CENTERLINE ELEV. OF BOTTOM ROW HOLES	979.38	
L NUMBER OF HOLES & SIZE IN BOTTOM ROW	1 @ 1.5"	

**BASIN CONTROL STRUCTURE (CS)**  
NOT TO SCALE

DESIGN:SVB	REVISION #	DATE	REVISION-DESCRIPTION	REVISION #	DATE	REVISION-DESCRIPTION
DRAFT: OBM						
CHECK: WMP						

**BRIGHTON MOTORS  
PARKING EXPANSION**

**STORM WATER BASIN  
CALCULATIONS AND DETAILS  
SOIL BORING LOGS**

CLIENT: S2 CONSTRUCTION MANAGEMENT  
12596 TEN MILE ROAD  
SOUTH LYON, MICHIGAN 48178  
248-225-9339

PROJECT No.: 224245  
DWG NAME: 4245 UT  
ISSUED: MAY 3, 2022

**UT3**







Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BtA	Boyer-Osherno loamy sands, 0 to 2 percent slopes	0.5	7.5%
MoA	Wawasee loam, 0 to 2 percent slopes	2.4	36.9%
MoB	Wawasee loam, 2 to 6 percent slopes	3.6	55.6%
<b>Totals for Area of Interest</b>		<b>6.4</b>	<b>100.0%</b>

LEGAL DESCRIPTION

**PARCEL NO. 1:**  
Part of the Northwest 1/4 of Section 13, Town 2 North, Range 5 East, Genoa Township, Livingston County, Michigan, more particularly described as follows:  
Commencing at the West 1/4 corner of said Section 13;  
thence along the West line of Section 13 and the centerline of Hubert Road, said line also being the West line of HERBST ESTATES, a subdivision as duly laid out, platted and recorded in Liber 21 of Plats, pages 5, 6 and 7 of the Livingston County Records, N01°59'46"W (SPCS) (recorded as N02°42'32"E), 647.77 feet to the Northwest corner of said subdivision;  
thence continuing along said West Section line and centerline, N01°59'46"W (SPCS) (recorded as N02°42'32"E) 300.00 feet to the POINT OF BEGINNING of the Parcel to be described;  
thence continuing along said Section line and centerline N01°59'46"W (SPCS) (recorded as N02°42'32"E) 388.80 feet;  
thence along the centerline of Grand River Avenue S72°22'22"E (SPCS) (recorded as S71°09'32"E) 294.34 feet;  
thence S02°15'36"E (SPCS) (recorded as S01°10'10"E) 290.09 feet;  
thence N88°00'14"E (SPCS) (recorded as S89°14'40"W) 278.61 feet to the Point of Beginning.  
Tax ID No.: 4711-13-100-038

**PARCEL NO. 2:**  
Part of the Northwest 1/4 of Section 13, Town 2 North, Range 5 East, Genoa Township, Livingston County, Michigan, more particularly described as follows:  
Commencing at the West 1/4 corner of said Section 13, thence along the West line of Section 13 and the centerline of Hubert Road, said line also being the West line of HERBST ESTATES, a subdivision as duly laid out, platted and recorded in Liber 21 of Plats, pages 5, 6 and 7 of the Livingston County Records, N01°59'46"W (SPCS) (recorded as N02°42'32"E) (platted as N02°42'32"E), 647.77 feet to the POINT OF BEGINNING of the parcel to be described;  
thence continuing along said Section line and centerline N01°59'46"W (SPCS) (recorded as N02°42'32"E) 300.00 feet;  
thence N88°00'14"E (SPCS) (recorded as S89°14'40"W) 278.61 feet;  
thence S02°15'36"E (SPCS) (recorded as S01°10'10"E) 294.34 feet;  
thence along the North line of said HERBST ESTATES, N88°53'41"W (SPCS) (recorded as N85°39'15"W) (platted as N82°39'22"W) 281.23 feet to the Point of Beginning.  
Tax ID No.: 4711-13-100-039

MAINTENANCE NOTES FOR SOIL EROSION CONTROL MEASURES:

The Construction Site and all Soil Erosion Control Measures shall be inspected periodically in accordance with the appropriate local municipality authority and the Michigan ECL & NPDES rules and regulations. At a MINIMUM, inspections shall be performed once a week and within 24 hours following a storm event resulting in 1" of rainfall or greater. Inspections shall be performed throughout the duration of the construction process and until the site is completely stabilized. Following construction, the owner (or its assigned) shall periodically inspect all permanent soil erosion control measures to ensure proper operation.

**SEEDING:** Newly seeded areas shall be inspected until substantial vegetative growth is obtained. Seeded areas shall be inspected to ensure erosion is not occurring in the seeded area and vegetative growth is promoted. Eroded areas shall be finish graded as necessary to removal erosion channels or gulleys and new seed placed as soon as weather permits.

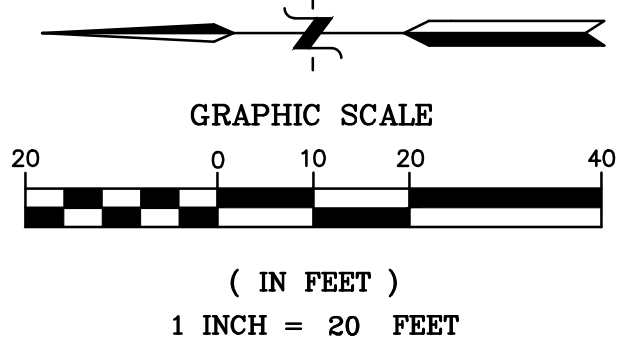
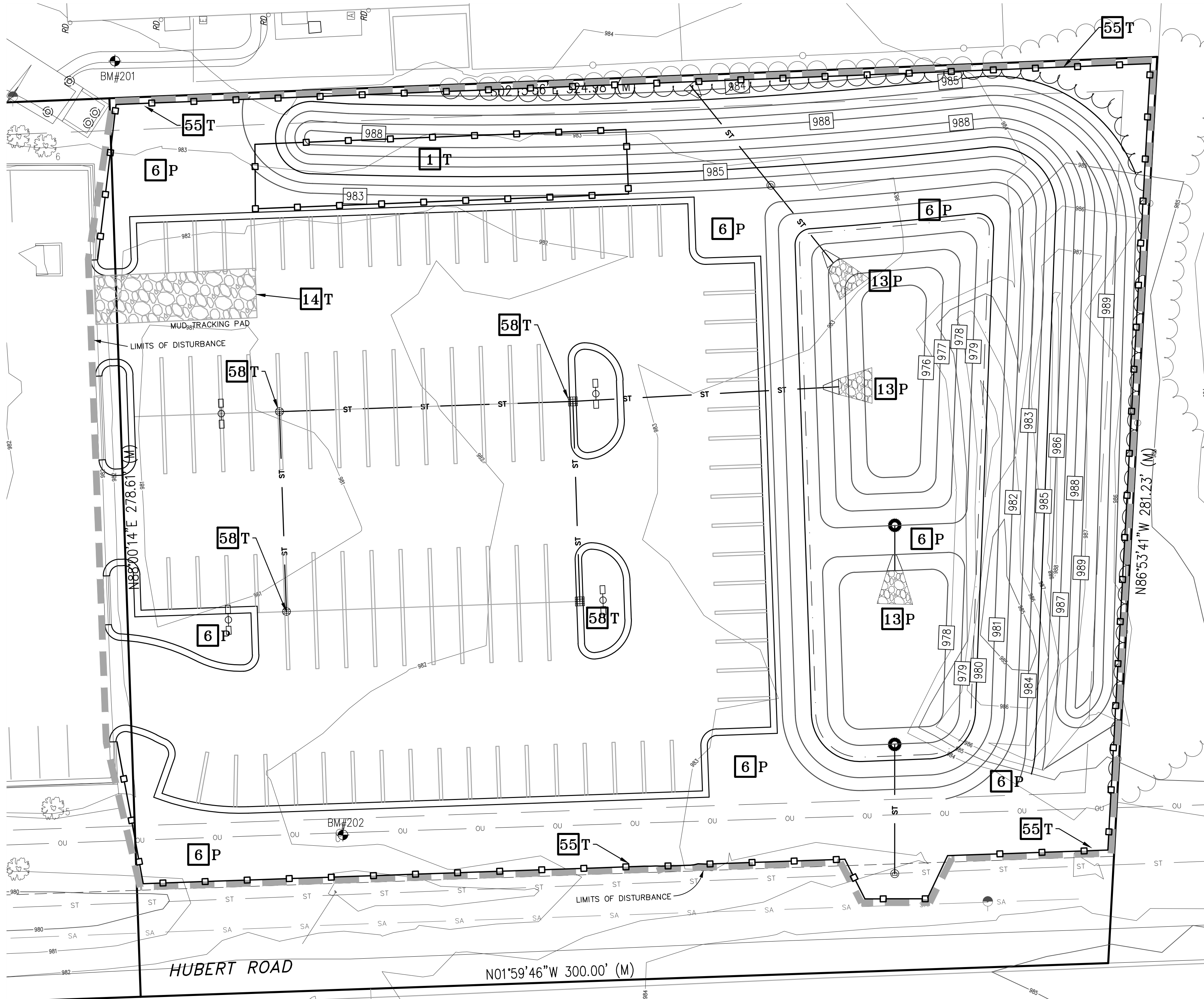
**SILT FENCE:** Silt fencing shall be inspected for soil accumulation/clogging, undercutting, overtopping and sagging. Soil accumulation shall be removed from the face of the silt fence each time it reaches half the height of the fence. Removed sediment shall be disposed of in a stable upland site or added to a spoils stockpile. When undercutting occurs, grade out areas of concentrated flow upstream of the silt fence to remove channels and/or gulleys and repair or replace silt fence ensuring proper trenching techniques are utilized. Silt fencing, which sags, falls over or is not staked in shall be repaired or replaced immediately. Silt fencing fabric, which decomposes or becomes ineffective, shall be removed and replaced with new fabric immediately. Silt fencing shall be removed once vegetation is well established and the up-slope area is fully stabilized.

**SOD:** Newly sodded areas shall be inspected to ensure sod is maturing. Sod shall be inspected for failure, erosion or damage. Slipping or eroding sod on steep slopes shall be immediately repaired or replaced and staked in place. Damaged or failed sod shall be immediately replaced.

**SPILLWAYS:** Spillways shall be inspected to ensure that erosion is not occurring within and/or around the spillway. The discharge point shall be inspected to ensure that concentrated flows are not causing erosion downstream. Inspect the spillway for cracked concrete, uneven and/or excessive settling, and proper function. Repair or replace failing spillways immediately. Address vegetation and/or erosion concerns as soon as weather permits.

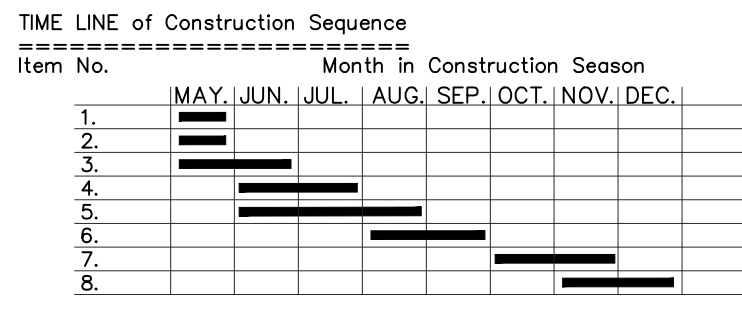
**STOCKPILES:** Temporary and permanent topsoil and spoils stockpiles shall be seeded to promote vegetative growth. Stockpiles shall be inspected to ensure excessive erosion has not occurred. When runoff or wind erosion is evident, reduce the side slopes of the stockpile or stabilize the stockpile with pieces of staked sod laid perpendicular to the slope. When filter fencing is used around a stockpile, the fencing shall be inspected to ensure piping has not occurred under the fencing and to ensure the fencing has not collapsed due to soil slippage or access by construction equipment. Repair or replace damaged fencing immediately. Berms at the base of stockpiles, which become damaged, shall be replaced.

**STORM STRUCTURE INLET FILTER:** Inlet filters shall be inspected for sediment accumulation, clogging and damage. When stone is used in conjunction with inlet filter fabric, replace the stone each time it becomes clogged with sediment. Clean or replace the inlet filter fabric each time it becomes clogged with sediment. Reinstall or replace fallen filter fabric immediately. Replace damaged filter fabrics immediately.



**LEGEND**

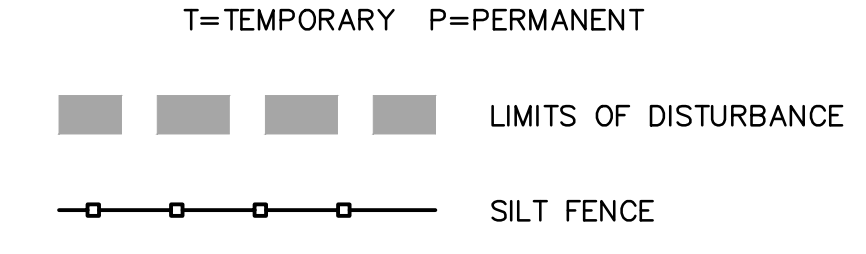
- = PARCEL BOUNDARY
- - - = SETBACK LINE
- - - - - = RIGHT OF WAY
- = BUILDING LINE
- = BOLLARD
- = STOP SIGN
- = SIGN / MONUMENT SIGN
- = SOIL BORING
- = LIGHT BASE
- = UTILITY METERS & BOXES (ELECTRIC METER, GAS METER, WATER METER, PHONE BOX, CATV BOX, MAIL BOX, UTIL. BOX)
- = AIR CONDITIONER UNIT
- = UTILITY POLE W/ GUY WIRE
- = OVERHEAD UTILITY LINES (ELECTRIC/PHONE/CABLE)
- = U/G UTILITY LINES (PHONE/FIBER OPTIC/ELECTRIC/CABLE TV/MISC UTILITIES)
- = EDGE OF BRUSH LINE
- = DECIDUOUS TREE W/IDENTIFIER
- = CONIFEROUS TREE W/IDENTIFIER
- = BUSH / SHRUB
- = FENCE (CHAIN LINK UNLESS OTHERWISE STATED)
- = EX. EDGE OF GRAVEL
- = EX. CONCRETE CURB (UNLESS OTHERWISE STATED)
- = SANITARY SEWER MANHOLE W/IDENTIFIER
- = SANITARY SEWER PIPE
- = CLEAN OUT
- = ROOF DRAIN
- = STORM WATER MANHOLE W/IDENTIFIER
- = CATCH BASIN W/IDENTIFIER
- = CONTROL STRUCTURE
- = FLARED END SECTION
- = STORM WATER DRAINAGE PIPE
- = HYDRANT
- = WATER SHUT OFF
- = WATER GATE VALVE WELL / MANHOLE
- = WATER VALVE BOX
- = WATER MAIN
- = GAS MANHOLE
- = GAS SHUT OFF
- = U/G GAS
- = EX. 1' CONTOUR
- = EX. 5' CONTOUR
- = PROP. CONCRETE CURB
- = PROP. CONCRETE CURB (REVERSE PITCH)
- = PROP. LIGHT POLE
- = LIMITS OF DISTURBANCE
- = SILT FENCE



- SOIL EROSION CONTROL AND CONSTRUCTION SEQUENCE**
- Obtain all necessary Soil Erosion and Sedimentation Control related permits from the appropriate Local, County and/or State Agencies. Refer to the General Notes on the project plans for additional requirements.
  - Prior to commencement of any earth disruption install Silt Fence and Mud Tracking Control (Devic) in accordance with the Soil Erosion and Sedimentation Control Plan.
  - Construct Retention/Detention and Sedimentation Basins, including associated spillways, in accordance with the project plans. Finish grade and establish vegetative growth in Retention/Detention and Sedimentation Basins prior to massive earth disruption. Install temporary Soil Erosion Control Measures as necessary to stabilize Retention/Detention and Sedimentation Basins.
  - Strip and stockpile topsoil. Perform mass grading and land balancing. Install appropriate Soil Erosion Control Measures in accordance with the Soil Erosion and Sedimentation Control Plan.
  - Install proposed underground utilities, (i.e., storm and sanitary sewer, water main, etc.) Install appropriate Soil Erosion Control Measures in accordance with the Soil Erosion and Sedimentation Control Plan.
  - Construct roadways and/or parking areas. Install appropriate Soil Erosion Control Measures in accordance with the Soil Erosion and Sedimentation Control Plan.
  - Finish grade all disturbed areas outside of pavement. Perform final restoration, including placement of topsoil and establishment of vegetative growth outside of pavement.
  - Following establishment of sufficient vegetative ground cover and receipt of approval from the Permitting Agency, remove all temporary Soil Erosion Control Measures, clean all storm sewer enclosures and repair all permanent Soil Erosion Control Measures.

SOIL EROSION MEASURES

1	SHORING & STOCKPILE TOSPOIL	TOSPOIL MAY BE STOCKPILED ABOVE BORROW AREAS TO ACT AS A DIMENSION STOCKPILE SHOULD BE TEMPORARILY SEEDED
6	SEEDING WITH MULCH MATS	ESSENTIAL ESTABLISHMENT OF VEGETATIVE COVER EFFECTIVE FOR ORGANISMS WITH LOW RESILUITY EVERY PATCH IN SMALL QUANTITIES BY EXPERIENCED PERSONNEL SHOULD BE USED AS NECESSARY
13	BERM, STABLE MOUND	USE WHERE EROSION IS NOT EASILY PREVENTED EFFECTIVE FOR HIGH VELOCITY OR HIGH CONCENTRATION FLOWS SUBJECT TO WINDBLOWN SOIL SHOULD BE COVERED WITH MULCH MATS
14	AGGREGATE COVER	STABILIZES SOIL SURFACE, TRAPS WINDING EROSION FORMS CONSTRUCTION TRAFFIC IN AREAS WHERE MULCH MATS ARE NOT FEASIBLE
55	GEOTEXTILE SILT FENCE	USES AGGREGATE AND PILES OR POLES MAY BE CONSTRUCTED BY PERSONNEL EASY TO CONSTRUCT AND LOCATE AS NECESSARY
58	MET SEDIMENT TRAP	USES PREPACKAGED GEOTEXTILE SPODS FILTERS SEDIMENT FROM RUNOFF AT CATCH BASIN MEET EASY TO INSTALL AND MAINTAIN



DISTANCE TO WETLAND/WATER = 980'±  
TOTAL DISTURBANCE AREA = 1.80 AC.

**BENCHMARK**  
DATUM BASED ON NGS OPUS SOLUTION REPORT, DATED MARCH 22, 2022 AT 9:37 AM

BENCHMARK #200  
TOP OF FLARED END SECTION, LOCATED ON WEST SIDE OF HUBERT ROAD, 320± FEET SOUTH OF GRAND RIVER AND NORTH OF 2ND ENTRANCE TO #7000 GRAND RIVER.  
ELEVATION = 981.21 (NAVD 88)

BENCHMARK #201  
NAIL IN THE WEST SIDE OF WALK, LOCATED 13± FEET WEST OF #7172 AND E'LY OF DUMPTER AREA.  
ELEVATION = 983.73 (NAVD 88)

BENCHMARK #202  
MDO1 SPIKE IN THE WEST SIDE OF AN UTILITY POLE, LOCATED ON EAST SIDE OF HUBERT ROAD AND ACROSS FROM THE 2ND DRIVE ENTRANCE TO #7000.  
ELEVATION = 983.88 (NAVD 88)

**811**  
Know what's below. Call before you dig.  
3 WORKING DAYS BEFORE YOU DIG  
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OR VISIT CALL811.COM

**DESIGN INC.**  
(810) 227-9533  
CIVIL ENGINEERS  
LAND SURVEYORS  
2183 PLEURS DRIVE  
BRIGHTON, MICHIGAN 48114

DESIGN:SVB	REVISION #	DATE	REVISION-DESCRIPTION	REVISION #	DATE	REVISION-DESCRIPTION
DRAFT: OBM						
CHECK: WMP						

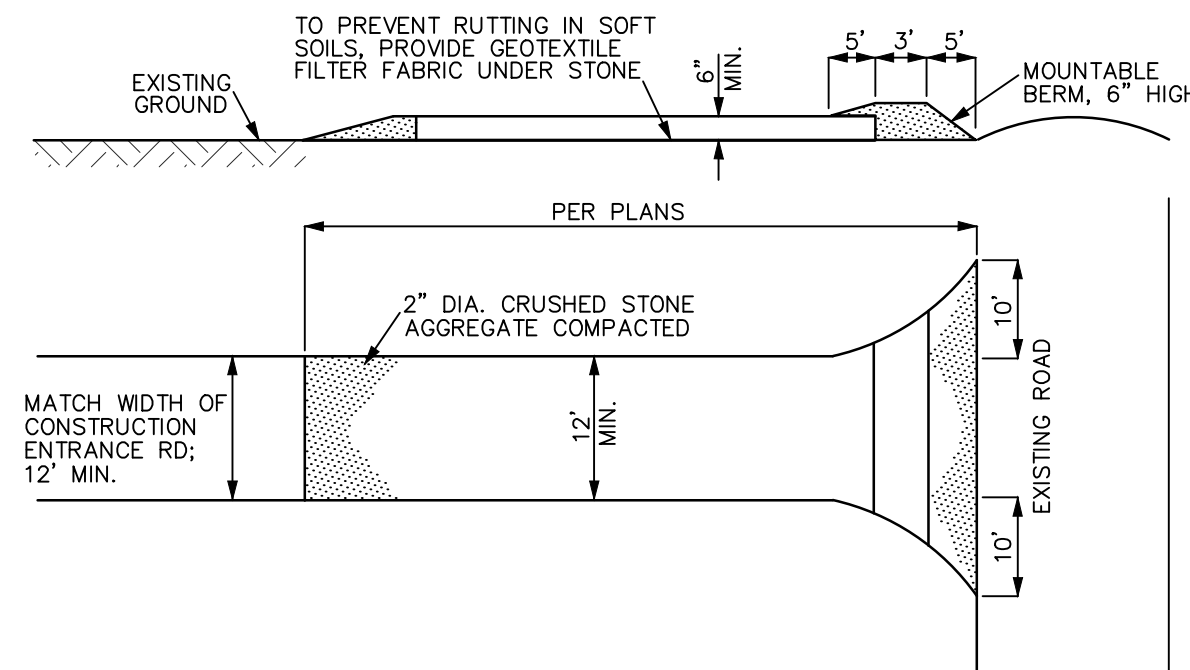
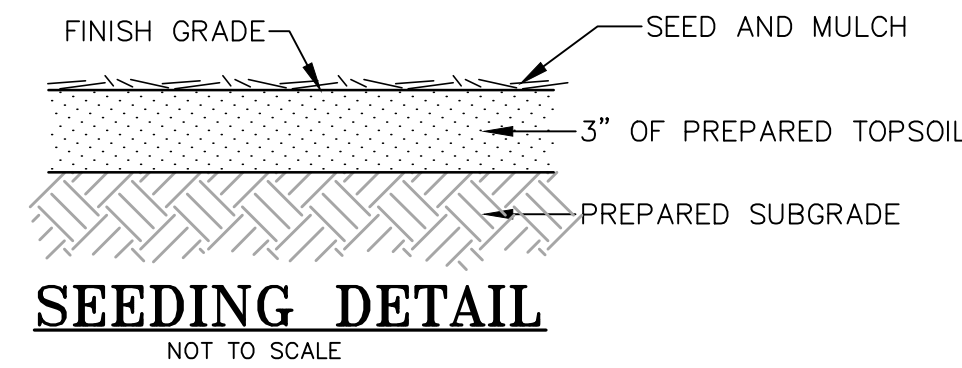
BRIGHTON MOTORS  
PARKING EXPANSION

SOIL EROSION &  
SEDIMENTATION  
CONTROL PLAN

CLIENT:  
S2 CONSTRUCTION MANAGEMENT  
12596 TEN MILE ROAD  
SOUTH LYON, MICHIGAN 48178  
248-225-9399

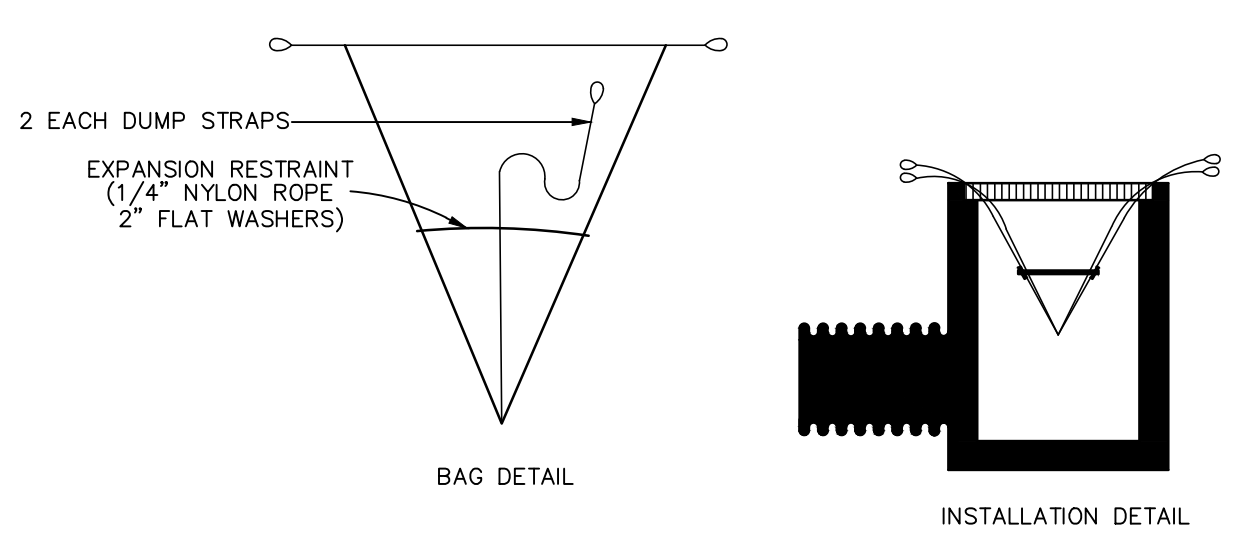
SCALE: 1in. = 20ft.  
PROJECT No.: 224245  
DWG NAME: 4245 SE  
ISSUED: MAY 3, 2022

SE1



**14 MUD TRACKING CONTROL DEVICE**  
NOT TO SCALE

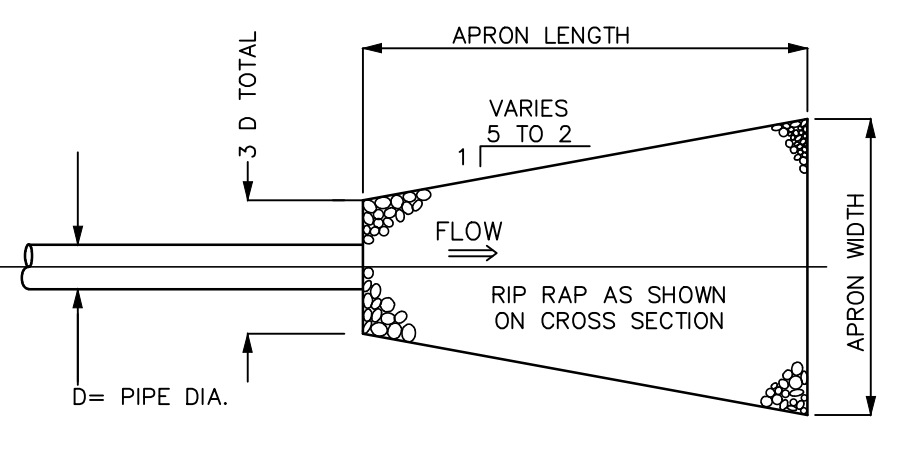
NOTE:  
WHEN ACCEPTABLE TO ENGINEER, CONTRACTOR MAY INSTALL STONE BELOW THE SUBGRADE ELEVATION; THUS STONE MAY BE LEFT IN PLACE BELOW PAVEMENT.



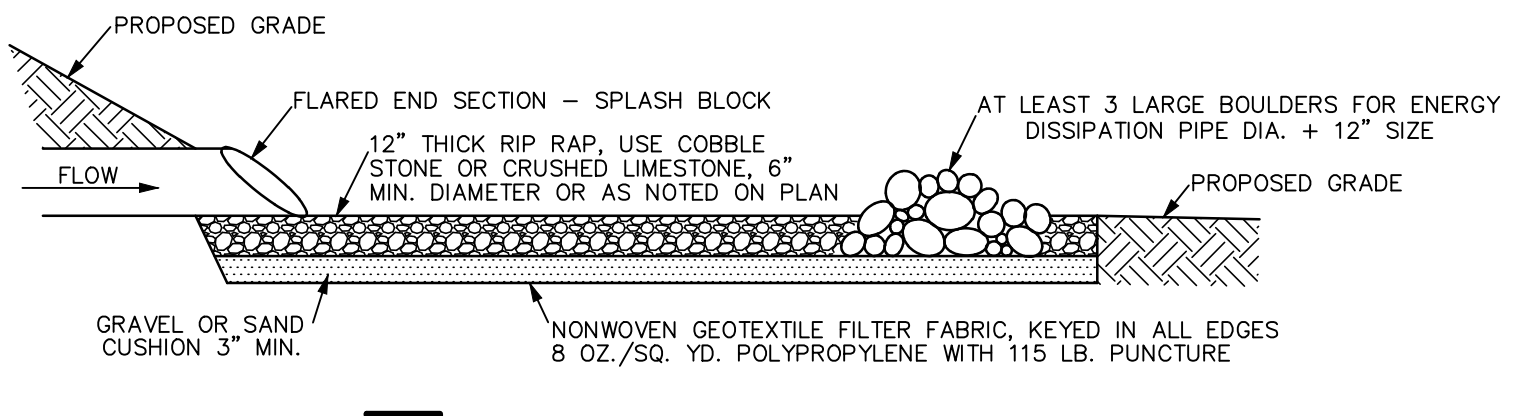
**58 INLET SEDIMENT FILTER**  
NOT TO SCALE

**MIN. RIP RAP DIMENSIONS**

PIPE DIAMETER (inch)	APRON		(2) ALTERNATE	
	LENGTH (feet)	WIDTH (feet)	WIDTH (feet)	WIDTH (feet)
12	12	8	16	16
15	15	10	20	20
18	18	12	24	24
21	21	14	28	28
24	24	16	32	32
30	30	20	40	40
36	36	24	48	48
42	42	28	56	56

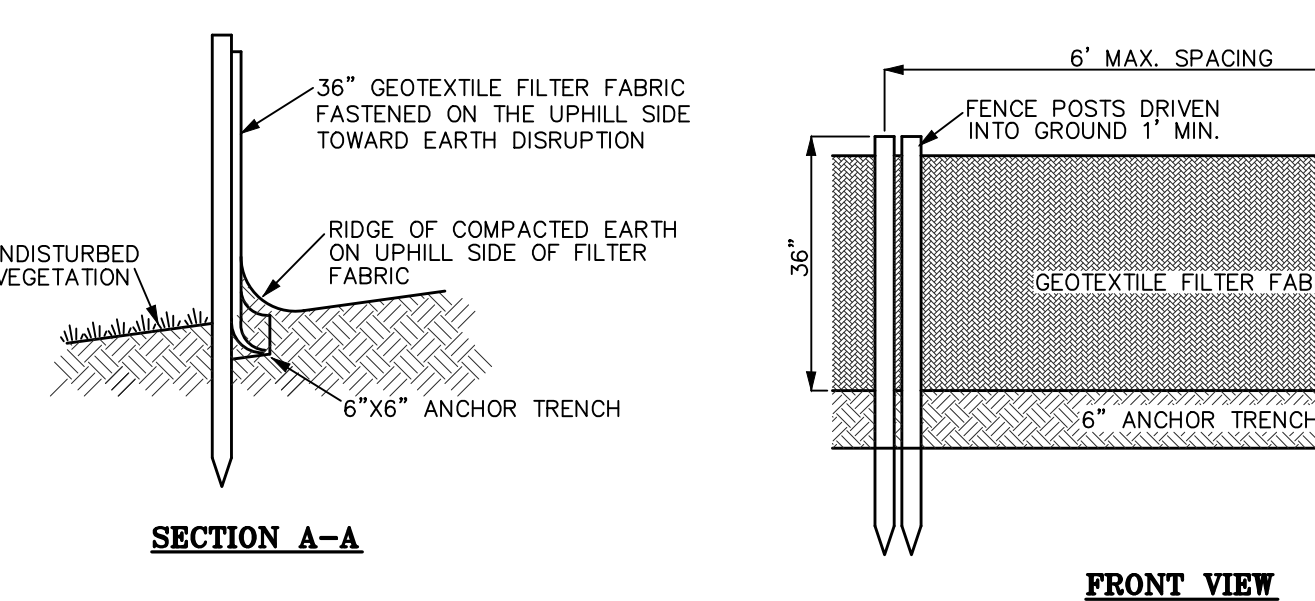
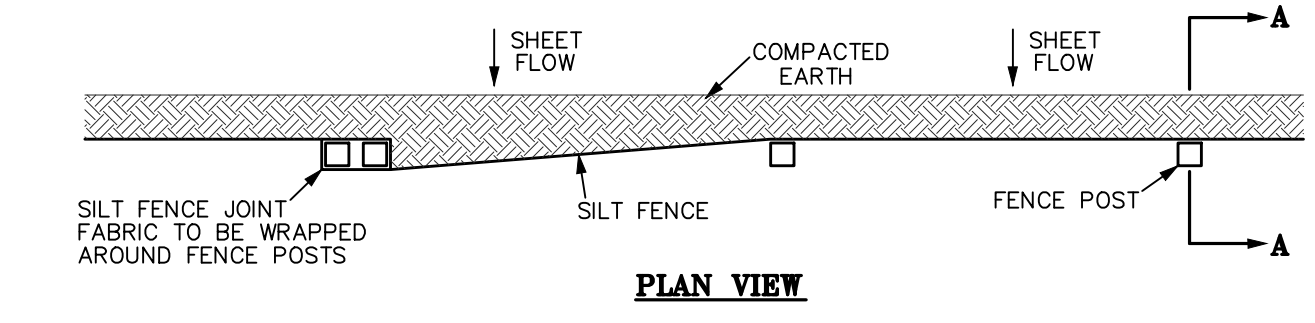


**13 RIP RAP PLAN**  
NOT TO SCALE



**13 RIP RAP CROSS SECTION**  
NOT TO SCALE

NOTES:  
1. GROUT RIP RAP WITH A 6\"/>



**55 SILT FENCE**  
NOT TO SCALE

NOTES:  
1. REPAIR AND REPLACE SILT FENCE AS NEEDED, INCIDENTAL.  
2. FIELD LOCATE SILT FENCE TO FOLLOW CONSTANT CONTOUR ELEVATIONS.  
3. OVERLAP FENCES AT JOINTS.  
4. INSTALL FILTER BERM AT LOW POINTS WHERE INDICATED ON PLANS.

**SOIL EROSION CONTROL AND CONSTRUCTION SEQUENCE:**

1. Obtain all necessary Soil Erosion and Sedimentation Control related permits from the appropriate Local, County and/or State Agencies. Refer to the General Notes on the project plans for additional requirements.
2. Prior to commencement of any earth disruption install Silt Fence and Mud Tracking Control Device(s) in accordance with the Soil Erosion and Sedimentation Control Plan.
3. Construct Retention/Detention and Sedimentation Basins, including associated spillways, in accordance with the project plans. Finish grade and establish vegetative growth in Retention/Detention and Sedimentation Basins prior to massive earth disruption. Install temporary Soil Erosion Control Measures as necessary to stabilize Retention/Detention and Sedimentation Basins.
4. Strip and stockpile topsoil. Perform mass grading and land balancing. Install appropriate Soil Erosion Control Measures in accordance with the Soil Erosion and Sedimentation Control Plan.
5. Install proposed underground utilities, (i.e. storm and sanitary sewer, water main, etc.) Install appropriate Soil Erosion Control Measures in accordance with the Soil Erosion and Sedimentation Control Plan.
6. Construct building(s) if required on the project plans. Install appropriate Soil Erosion Control Measures in accordance with the Soil Erosion and Sedimentation Control Plan.
7. Construct roadways and/or parking areas. Install appropriate Soil Erosion Control Measures in accordance with the Soil Erosion and Sedimentation Control Plan.
8. Finish grade all disturbed areas outside of pavement. Perform final restoration, including placement of topsoil and establishment of vegetative growth outside of pavement.
9. Following establishment of sufficient vegetative ground cover and receipt of approval from the Permitting Agency, remove all temporary Soil Erosion Control Measures, clean all storm sewer structures and repair all permanent Soil Erosion Control Measures.

**SOIL EROSION AND SEDIMENTATION CONTROL NOTES:**

1. The Soil Erosion and Sedimentation Control Specifications of the appropriate Local, County and/or State Agencies are a part of this work. Refer to the General Notes on the Project Plans for additional requirements.
  2. The Soil Erosion and Sedimentation Control (SESC) Permit Holder shall be responsible for compliance with the SESC Permit requirements for the duration of the project and until receipt of final approval from the Permitting Agency. For any site with an earth disturbance area of 1 acre or greater, the SESC Permit Holder shall retain a Certified Storm Water Operator in accordance with the SESC Permit requirements. The Certified Storm Water Operator shall perform routine inspections of the site and the SESC measures and file inspection reports in accordance with the SESC permit requirements. For any site with an earth disturbance area of 5 acres or greater, the SESC Permit Holder shall file a National Pollutant Discharge Elimination System (NPDES) Notice of Coverage Form with the State DEQ prior to any earth disruption.
  3. The Contractor shall install the appropriate Soil Erosion Control Measures in accordance with the Project Plans prior to massive earth disruption, including but not limited to silt fences, mud tracking control mats and sediment filters on existing storm sewer structures. Demolition work may be necessary prior to installation of some soil erosion control measures. In such cases, postpone installation of affected soil erosion control measures until immediately following demolition work. Refer to the Project Plans and the Soil Erosion Control and Construction Sequence for additional requirements.
  4. The Contractor shall schedule work so as to minimize the period of time that an area is exposed and disturbed. The Contractor shall observe the grading limits and limits of disturbance in accordance with the Project Plans. The Contractor shall maintain an undisturbed vegetative buffer around the work when shown on the Project Plans.
  5. The Contractor shall install and maintain Soil Erosion Control Measures in accordance with the Project Plans during the appropriate phases of construction. The Project Plans show the minimum requirements for Soil Erosion Control Measures. The Contractor shall install additional Soil Erosion Control Measures as necessary due to site conditions and as directed by the Permitting Agency and/or Engineer. The Contractor shall perform routine inspection and maintenance of all Soil Erosion Control Measures to ensure compliance with the permit requirements and proper operation of the Soil Erosion Control Measures.
  6. The Contractor shall strip and stockpile topsoil from all areas of proposed disturbance. Topsoil stockpiles shall be located in accordance with the Project Plans. Topsoil stockpiles shall be stabilized with vegetative growth (or matted with straw during the non-growing season) to prevent wind and water erosion. A temporary diversion berm and/or silt fence shall encompass all earthen material stockpiles, including but not limited to topsoil, sand and gravel.
  7. The Contractor shall install Soil Erosion Control Measures associated with the proposed storm sewer system during storm sewer construction. Inlet structure filters shall be installed immediately following completion of each storm inlet structure. Riprap shall be installed immediately following the installation of each flared end section with the following exception: Storm drain outlets that do NOT empty into a Retention, Detention or Sedimentation Basin shall have a temporary 5' wide x 10' long x 3' deep sump installed at the termination of the storm sewer. Upon completion of the stabilization work, the sump area shall be filled and riprap shall be installed in accordance with the Project Plans.
  8. The Contractor shall install filter stone around the storm basin control structure(s) in accordance with the Project Plans immediately following installation of the control structure(s). The filter stone shall be monitored for sediment build up. The filter stone may need to be cleaned and/or replaced as site conditions require and as directed by the Permitting Agency and/or the Engineer.
  9. All disturbed areas outside of paved areas shall be restored within 15 days of finish grading. Proposed vegetative areas shall be restored with a minimum of 3-inches of topsoil, then seeded and mulched, unless noted otherwise on the Project Plans. During the non-growing season, temporary stabilization shall be provided using straw matting or as directed by the Permitting Agency and/or the Engineer.
- Seeding, Fertilizer and Mulch Bare Ground Ratio:**  
This information is provided as minimum guidance for acceptable application rates. Actual amounts depending on soil conditions and site topography shall be detailed on the construction plans.
- Topsoil** 3 inches in depth.  
**Grass Seed** 210 lbs. per acre.  
**Fertilizer** 150 lbs. per acre.  
**Straw Mulch** 3\"/>
  10. Following complete site restoration and stabilization; sediment shall be removed from all storm sewer structures, paved areas and storm basins. The SESC Permit Holder shall contact the Permitting Agency to request closure of the SESC Permit. For any site with an earth disturbance area of 5 acres or greater, the SESC Permit Holder shall file a NPDES Notice of Termination Form with the State DEQ.

**MAINTENANCE NOTES FOR SOIL EROSION CONTROL MEASURES:**

- The Construction Site and all Soil Erosion Control Measures shall be inspected periodically in accordance with the appropriate local municipality/authority and the Michigan EGLE NPDES rules and regulations. At a MINIMUM, inspections shall be performed once a week and within 24 hours following a storm event resulting in 1\"/>

**BASIN PERFORMED STANDPIPES / CONTROL STRUCTURES:** Standpipes shall be inspected to ensure erosion is not occurring along the inlet locations, banks and/or bottom of the basin and for sediment accumulation. Regular maintenance of the basin includes routine mowing of the buffer/filter strip, side slopes and basin floor and removal of litter and debris accumulation. Address vegetation and/or erosion concerns as soon as weather permits. Remove sediment from basin every 5 to 10 years or sooner if sediment accumulation adversely affects the operation of the basin. Sediment that is removed shall be disposed of offsite or at an upland area and stabilized so that it does not re-enter the drainage course.

**CATCH BASINS:** Catch basins shall be inspected for accumulation of solids and sediment. Solids and sediment shall be removed from the catch basins by vacuum or adductor cleaning. Cleaning should be performed before the catch basin sumps are half full.

**MUD TRACKING CONTROL DEVICE / CONSTRUCTION ACCESS:** Mud tracking control devices shall be inspected for significant mud accumulation and to ensure the access is not eroding into public rights of way or drainage features. Add additional layers of stone or remove and replace stone each time the stone becomes covered with mud. All sediment dropped or eroded onto public rights of way shall be removed immediately. Sweeping of the public rights of way and/or paved access route shall be performed as necessary to maintain the access route free of sediment and debris.

**DETENTION BASIN (DRY BOTTOM):** Dry bottom detention basins shall be inspected to ensure erosion is not occurring along the inlet locations, banks and/or bottom of the basin and for sediment accumulation. Regular maintenance of the basin includes routine mowing of the buffer/filter strip, side slopes and basin floor and removal of litter and debris accumulation. Address vegetation and/or erosion concerns as soon as weather permits. Remove sediment from basin every 5 to 10 years or sooner if sediment accumulation adversely affects the operation of the basin. Sediment that is removed shall be disposed of offsite or at an upland area and stabilized so that it does not re-enter the drainage course.

**DETENTION BASIN (WET BOTTOM):** Wet bottom detention basins shall be inspected to ensure erosion is not occurring along the inlet locations, banks and/or bottom of the basin and for sediment and/or algae accumulation. Regular maintenance of the basin includes routine mowing of the buffer/filter strip and side slopes and removal of litter and debris accumulation. Address vegetation and/or erosion concerns as soon as weather permits. Sediment that is removed shall be disposed of offsite or at an upland area and stabilized so that it does not re-enter the drainage course. Excessive algae shall be removed as necessary to prevent odors and to maintain nutrient removal capacity.

**RETENTION BASIN:** Retention basins shall be inspected to ensure erosion is not occurring along the inlet locations, banks and/or bottom of the basin and for sediment accumulation. Regular maintenance of the basin includes routine mowing of the buffer/filter strip, side slopes and basin floor and removal of litter and debris accumulation. Address vegetation and/or erosion concerns as soon as weather permits. Sediment that is removed shall be disposed of offsite or at an upland area and stabilized so that it does not re-enter the drainage course.

**RIPRAP:** Inspect riprap immediately following the first rainfall event following installation of the riprap. Continue to perform inspections of the riprap at each periodic site inspection. Riprap shall be inspected to ensure erosion is not occurring within and/or around the riprap. The discharge point shall be inspected to ensure that concentrated flows are not causing erosion downstream. Displaced riprap shall be removed from downstream locations and the riprap beds shall be repaired or replaced. Significant sediment buildup shall be removed from riprap beds. Repair or replace failing or displaced riprap immediately. Address vegetation and/or erosion concerns as soon as weather permits.

**SEDIMENTATION BASINS:** Sedimentation basins shall be inspected to ensure erosion is not occurring along the inlet locations, banks and/or bottom of the basin and for piping, seepage, sediment accumulation and/or other mechanical damage. Regular maintenance of the basin includes routine mowing of the buffer/filter strip, side slopes and basin floor and removal of litter and debris accumulation. Address vegetation and/or erosion concerns as soon as weather permits. Sediment that is removed before it accumulates to 50% of the design depth of the basin. Sediment that is removed shall be disposed of offsite or at an upland area and stabilized so that it does not re-enter the drainage course.

**SEEDING:** Newly seeded areas shall be inspected until substantial vegetative growth is obtained. Seeded areas shall be inspected to ensure erosion is not occurring in the seeded area and vegetative growth is promoted. Eroded areas shall be finish graded as necessary to removal erosion channels or gulleys and new seed placed as soon as weather permits.

**SILT FENCE:** Silt fencing shall be inspected for soil accumulation/clogging, undercutting, overtopping and sagging. Soil accumulation shall be removed from the face of the silt fence each time it reaches half the height of the fence. Removed sediment shall be disposed of in a stable upland site or added to a spoils stockpile. When undercutting occurs, grade out areas of concentrated flow upstream of the silt fence to remove channels and/or gulleys and repair or replace silt fence ensuring proper trenching techniques are utilized. Silt fencing, which sags, falls over or is not staked in shall be repaired or replaced immediately. Silt fencing fabric, which decomposes or becomes ineffective, shall be removed and replaced with new fabric immediately. Silt fencing shall be removed once vegetation is well established and the up-slope area is fully stabilized.

**SOD:** Newly sodded areas shall be inspected to ensure sod is maturing. Sod shall be inspected for failure, erosion or damage. Slipping or eroding sod on steep slopes shall be immediately repaired or replaced and staked in place. Damaged or failed sod shall be immediately replaced.

**SPILLWAYS:** Spillways shall be inspected to ensure that erosion is not occurring within and/or around the spillway. The discharge point shall be inspected to ensure that concentrated flows are not causing erosion downstream. Inspect the spillway for cracked concrete, uneven and/or excessive settling and proper function. Repair or replace failing spillways immediately. Address vegetation and/or erosion concerns as soon as weather permits.

**STOCKPILES:** Temporary and permanent topsoil and spoils stockpiles shall be seeded to promote vegetative growth. Stockpiles shall be inspected to ensure excessive erosion has not occurred. When runoff or wind erosion is evident, reduce the side slopes of the stockpile or stabilize the stockpile with pieces of staked soil laid perpendicular to the slope. When filter fencing is used around a stockpile, the fencing shall be inspected to ensure piping has not occurred under the fencing and to ensure the fencing has not collapsed due to soil slippage or access by construction equipment. Repair or replace damaged fencing immediately. Berms at the base of stockpiles, which become damaged, shall be replaced.

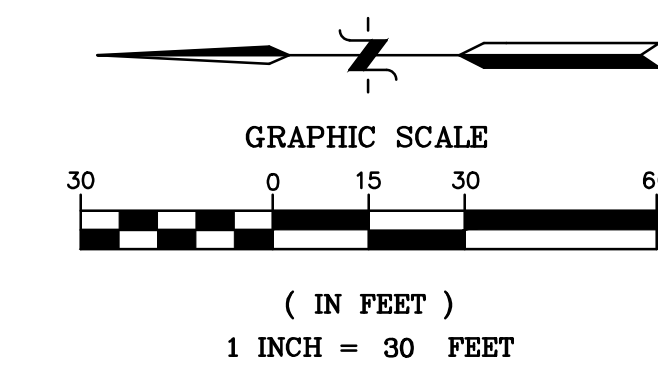
**STORM STRUCTURE INLET FILTER:** Inlet filters shall be inspected for sediment accumulation, clogging and damage. When stone is used in conjunction with inlet filter fabric, replace the stone each time it becomes clogged with sediment. Clean or replace the inlet filter fabric each time it becomes clogged with sediment. Reinstall or replace failed filter fabrics immediately. Replace damaged filter fabrics immediately.

DESIGN:SVB	REVISION #	DATE	REVISION-DESCRIPTION	REVISION #	DATE	REVISION-DESCRIPTION
DRAFT: OBM						
CHECK: WMP						

**BRIGHTON MOTORS  
PARKING EXPANSION**

**SOIL EROSION &  
SEDIMENTATION CONTROL  
NOTES & DETAILS**

CLIENT: S2 CONSTRUCTION MANAGEMENT 12596 TEN MILE ROAD SOUTH LYON, MICHIGAN 48178 248-225-9399	SCALE: 1in. = 20ft. PROJECT No.: 224245 DWG NAME: 4245 SE ISSUED: MAY 3, 2022	<b>SE2</b>
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**REQUIRED LANDSCAPE CALCULATIONS**

East Property Line: General commercial  
 South property line: Single family residential  
 Buffer zone B required

**B**  
 20 feet wide  
 6 foot high continuous wall or 3 foot high berm  
 1 canopy tree, 1 evergreen tree and 4 shrubs per each thirty (30) linear feet along the property line, rounded upward

East  
 324.98 feet of property line = 10.83, rounded to 11 landscape units  
 11 canopy trees  
 11 evergreens  
 44 shrubs

South  
 248.07 feet of property line = 8.269, rounded to 9 landscape units  
 9 canopy trees  
 9 evergreens  
 36 shrubs

Street Frontage Greenbelt  
 20 foot wide  
 1 canopy tree per 40 linear feet of frontage  
 302.94 linear feet of frontage  
 7.57, rounded to 8 canopy trees

Parking Lot Landscaping  
 1/3 of trees shall be placed in the interior of the parking area  
 Remainder must be within 18 feet  
 101 through 200 spaces: 1 canopy tree and 100 square feet of landscaped area per 12 spaces  
 109 spaces / 12 = 9.08 = 10  
 10 canopy trees and 1,000 square feet of landscaping

If parking is located in required front yard, hedgerow or 3 foot masonry wall or berm required. Hedgerow shall be 2' tall shrubs, 2.5' off center

Parking island standards

Minimum size	One hundred (100) square feet
Minimum width	Ten (10) feet, at least half of the islands shall be twenty (20) feet wide in parking lots with over 200 spaces
Required depth	Two (2) feet shorter than adjacent parking space to improve maneuvering
Required radii	Minimum ten (10) feet at ends facing main aisles, fifteen (15) feet preferred. One (1) foot for radii not adjacent to main circulation aisles
Planting type	Canopy trees with a mature caliper not over five (5) inches, with a clear area between the ground and a height of four feet, six inches.
Tree location	Located so as not to be damaged by maneuvers or door swing of any surrounding vehicle.

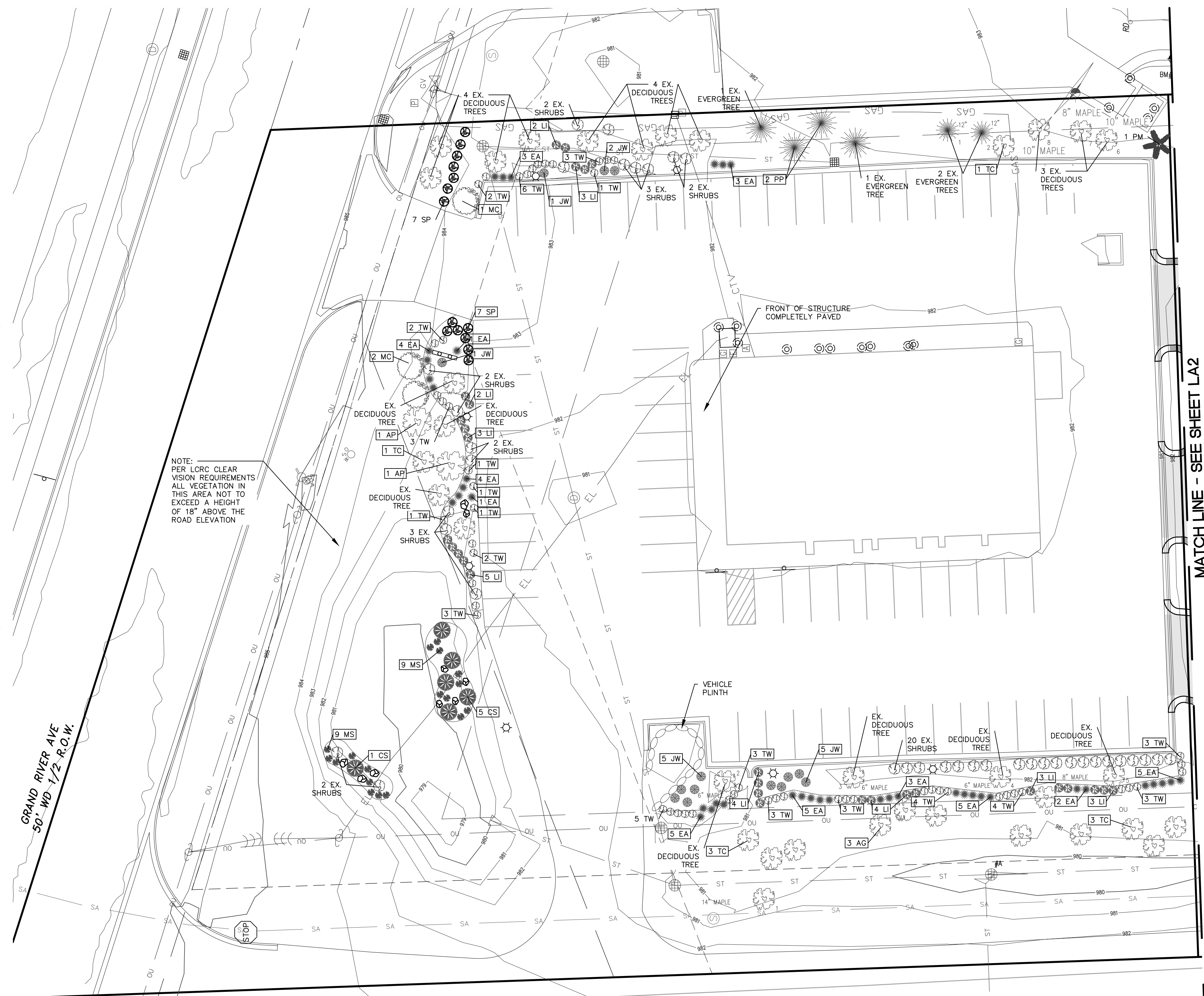
Detention basin landscaping  
 1 deciduous tree + 10 shrubs per 50 linear feet of perimeter at top of bank

**BENCHMARK**  
 DATUM BASED ON NGS OPUS SOLUTION REPORT, DATED MARCH 22, 2022 AT 9:37 AM

BENCHMARK #200  
 TOP OF FLARED END SECTION, LOCATED ON WEST SIDE OF HUBERT ROAD, 320± FEET SOUTH OF GRAND RIVER AND NORTH OF 2ND ENTRANCE TO #7000 GRAND RIVER.  
 ELEVATION = 981.21 (NAVD 88)

BENCHMARK #201  
 NAIL IN THE WEST SIDE OF WALK, LOCATED 13± FEET WEST OF #7172 AND ELY OF DUMPIER AREA.  
 ELEVATION = 983.73 (NAVD 88)

BENCHMARK #202  
 WOOD SPIKE IN THE WEST SIDE OF AN UTILITY POLE, LOCATED ON EAST SIDE OF HUBERT ROAD AND ACROSS FROM THE 2ND DRIVE ENTRANCE TO #7000.  
 ELEVATION = 983.88 (NAVD 88)



NOTE: PER LCRC CLEAR VISION REQUIREMENTS ALL VEGETATION IN THIS AREA NOT TO EXCEED A HEIGHT OF 18" ABOVE THE ROAD ELEVATION

- LEGEND**
- = PARCEL BOUNDARY
  - - - = SETBACK LINE
  - - - - - = RIGHT OF WAY
  - - - - - = BUILDING LINE
  - = BOLLARD
  - ⊘ = STOP SIGN
  - ⊘ = SIGN / MONUMENT SIGN
  - ⊘ = SOIL BORING
  - ⊘ = LIGHT BASE
  - ⊘ = UTILITY METERS & BOXES (ELECTRIC METER, GAS METER, WATER METER, PHONE BOX, CATV BOX, MAIL BOX, UTIL. BOX)
  - ⊘ = AIR CONDITIONER UNIT
  - ⊘ = UTILITY POLE W/GUY WIRE
  - ⊘ = OVERHEAD UTILITY LINES (ELECTRIC/PHONE/CABLE)
  - ⊘ = U/G UTILITY LINES (PHONE/FIBER OPTIC/ELECTRIC/CABLE TV/MISC UTILITIES)
  - ⊘ = EDGE OF BRUSH LINE
  - ⊘ = DECIDUOUS TREE W/IDENTIFIER
  - ⊘ = CONIFEROUS TREE W/IDENTIFIER
  - ⊘ = BUSH / SHRUB
  - ⊘ = FENCE (CHAIN LINK UNLESS OTHERWISE STATED)
  - ⊘ = EX. EDGE OF GRAVEL
  - ⊘ = EX. CONCRETE CURB (UNLESS OTHERWISE STATED)
  - ⊘ = SANITARY SEWER MANHOLE W/IDENTIFIER
  - ⊘ = SANITARY SEWER PIPE
  - ⊘ = CLEAN OUT
  - ⊘ = ROOF DRAIN
  - ⊘ = STORM WATER MANHOLE W/IDENTIFIER
  - ⊘ = CATCH BASIN W/IDENTIFIER
  - ⊘ = CONTROL STRUCTURE
  - ⊘ = FLARED END SECTION
  - ⊘ = STORM WATER DRAINAGE PIPE
  - ⊘ = HYDRANT
  - ⊘ = WATER SHUT OFF
  - ⊘ = WATER GATE VALVE WELL / MANHOLE
  - ⊘ = WATER VALVE BOX
  - ⊘ = WATER MAIN
  - ⊘ = GAS MANHOLE
  - ⊘ = GAS SHUT OFF
  - ⊘ = U/G GAS
  - ⊘ = EX. 1' CONTOUR
  - ⊘ = EX. 5' CONTOUR
  - ⊘ = PROP. CONCRETE CURB
  - ⊘ = PROP. CONCRETE CURB (REVERSE PITCH)
  - ⊘ = PROP. LIGHT POLE
  - ⊘ = PROP. LANDSCAPE PLANTING LABEL

**PLANTING SCHEDULE**

TREES		SHRUBS		
QTY	SYM	BOTANICAL NAME	COMMON NAME	SIZE
2	AP	ACER PLATANOIDES "CRIMSON"	COLUMNAR RED MAPLE	2.5" CAL.
8	TC	TILIA CORDATA "GREENSPIRE"	LITTLE LEAF LINDEN	2.5" CAL.
3	AG	ACER GINNALA	AMUR MAPLE	2.5" CAL.
3	MC	MALUS "CORALBURST"	CORALBURST CRAB	2" CAL.
2	PP	PICEA PUNGENS "GLAUCA"	COLORADO BLUE SPRUCE	6 FT.
1	PM	PSEUDOTSUGA MANZIESII	DOUGLAS FIR	6 FT.
18	MS	MISCANTHUS SINENSIS PURPURASCENS	MAIDEN GRASS (PERIN.)	24" SPD
6	CS	CORNUS SERICEA 'ISANTI'	ANTHONY WATERER SPIREA	2" CAL
54	TW	THUJA OCCIDENTALIS 'WOODWARDII'	SHIROBANA SPIRAEA	24" HT.
29	LI	LIGUSTRUM	GOLDEN VICARY	24" HT.
41	EA	EUONYMUS ALATUS COMPACTA	BURNING BUSH	24" HT.
14	JW	JUNIPERUS HORIZ. WILTONII	BLUE RUG JUNIPER	18-24" SPD
14	SP	SYRINGA MEYERI PALABIN	DWARF KOREAN LILAC	24" HT.

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 CIVIL ENGINEERS  
 LAND SURVEYORS  
 2183 PLESS DRIVE  
 BRIGHTON, MICHIGAN 48114

DESIGN:SVB	REVISION #	DATE	REVISION-DESCRIPTION	REVISION #	DATE	REVISION-DESCRIPTION
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CHECK: WMP						

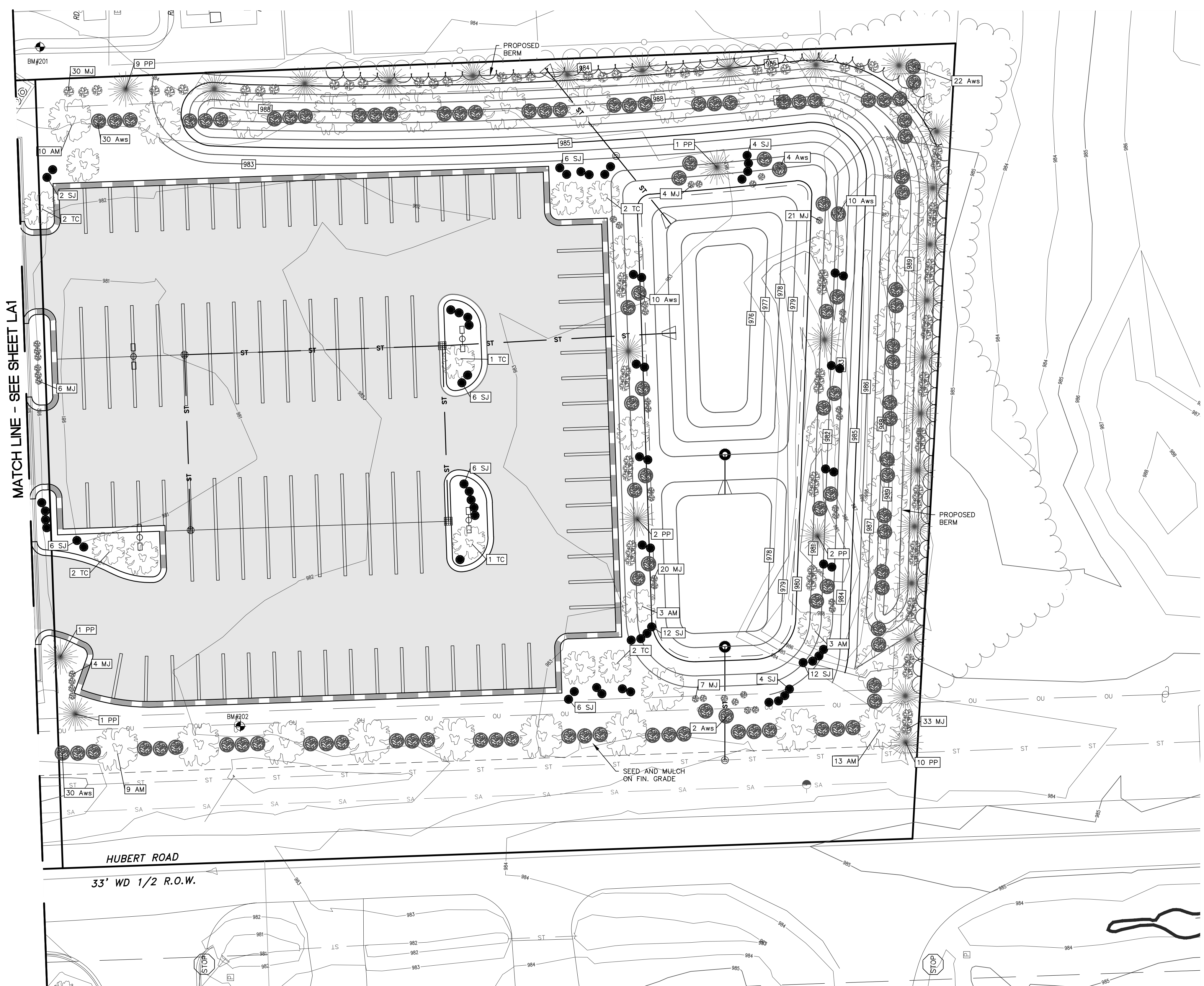
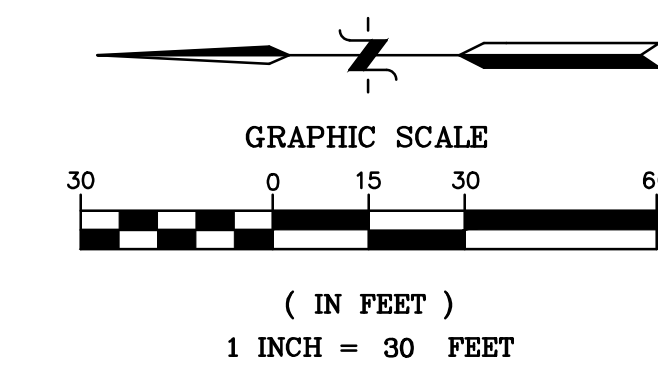
**BRIGHTON MOTORS  
 PARKING EXPANSION**

**LANDSCAPE PLAN  
 NORTH AREA**

CLIENT: S2 CONSTRUCTION MANAGEMENT  
 12596 TEN MILE ROAD  
 SOUTH LYON, MICHIGAN 48178  
 248-225-3939

SCALE: 1in. = 20ft.  
 PROJECT No.: 224245  
 DWG NAME: 4245 LA  
 ISSUED: MAY 3, 2022

**LA1**



- LEGEND**
- = PARCEL BOUNDARY
  - - - = SETBACK LINE
  - - - - - = RIGHT OF WAY
  - = BUILDING LINE
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  - = UTILITY POLE W/GUY WIRE
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  - = PROP. CONCRETE CURB (REVERSE PITCH)
  - = PROP. LIGHT POLE
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**PLANTING SCHEDULE**

TREES					
QTY	SYM	BOTANICAL NAME	COMMON NAME	SIZE	
32	AM	QUERCUS RUBRA	AMUR MAPLE	3" CAL.	
10	TC	TILIA CARDATA "GREENSPIRE"	LITTLE LEAF LINDEN	2.5" CAL.	
24	PP	PICEA PUNGENS	COLORADO SPRUCE	3" CAL.	
SHRUBS					
QTY	SYM	BOTANICAL NAME	COMMON NAME	SIZE	
73	MJ	JUNIPERUS SCOPULORUM "MEDORA"	MEDORA JUNIPER	3' HT.	
82	Aws	SPIRAEA BUMALDA "AWS"	ANTHONY WATERER SPIREA	24" HT.	
32	SJ	SPIRAEA J. "SHIROBANA"	SHIROBANA SPIRAEA	24" HT.	

**BENCHMARK**  
 DATUM BASED ON NGS OPUS SOLUTION REPORT, DATED MARCH 22, 2022 AT 9:37 AM

**BENCHMARK #200**  
 TOP OF FLARED END SECTION, LOCATED ON WEST SIDE OF HUBERT ROAD, 320± FEET SOUTH OF GRAND RIVER AND NORTH OF 2ND ENTRANCE TO #7000 GRAND RIVER.  
 ELEVATION = 981.21 (NAVD 88)

**BENCHMARK #201**  
 NAIL IN THE WEST SIDE OF WALK, LOCATED 13± FEET WEST OF #7172 AND ELY OF DUMPIER AREA.  
 ELEVATION = 983.73 (NAVD 88)

**BENCHMARK #202**  
 MDOT SPIKE IN THE WEST SIDE OF AN UTILITY POLE, LOCATED ON EAST SIDE OF HUBERT ROAD AND ACROSS FROM THE 2ND DRIVE ENTRANCE TO #7000.  
 ELEVATION = 983.88 (NAVD 88)

DESIGN:SVB	REVISION #	DATE	REVISION-DESCRIPTION	REVISION #	DATE	REVISION-DESCRIPTION
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CHECK: WMP						

**BRIGHTON MOTORS  
 PARKING EXPANSION**

**LANDSCAPE PLAN  
 SOUTH AREA**

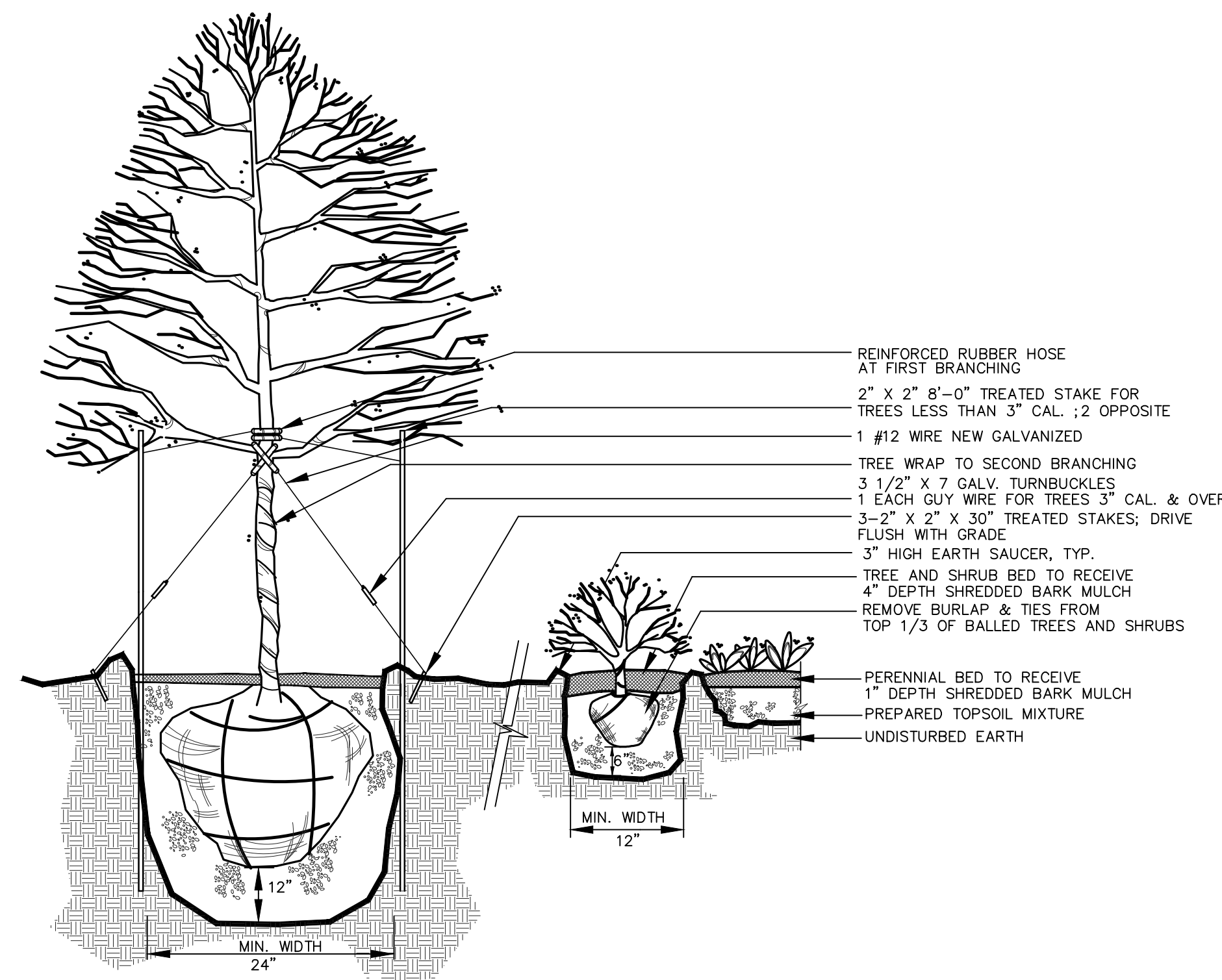
CLIENT: S2 CONSTRUCTION MANAGEMENT  
 12596 TEN MILE ROAD  
 SOUTH LYON, MICHIGAN 48178  
 248-225-3939

SCALE: 1in. = 20ft.  
 PROJECT No.: 224245  
 DWG NAME: 4245 LA  
 ISSUED: MAY 3, 2022

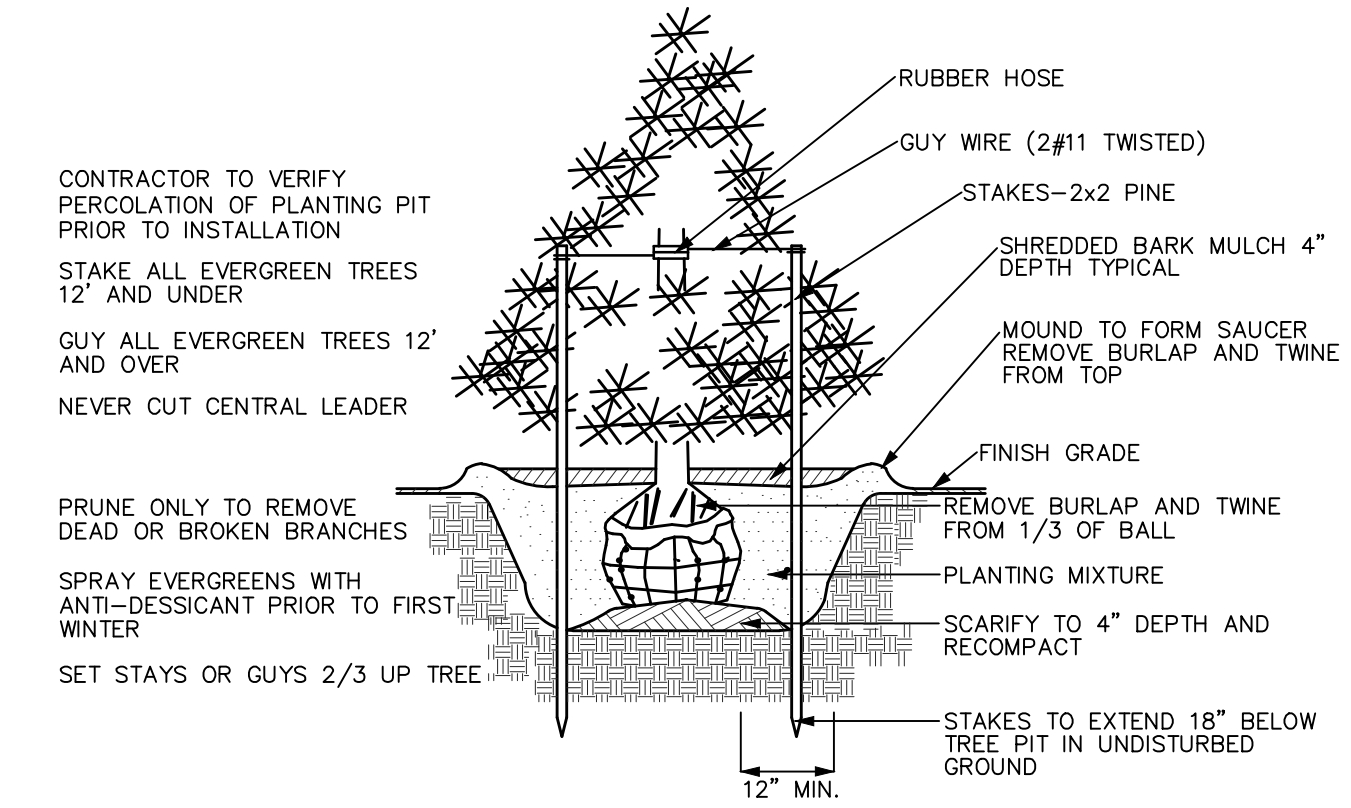
**LA2**

**LANDSCAPE NOTES:**

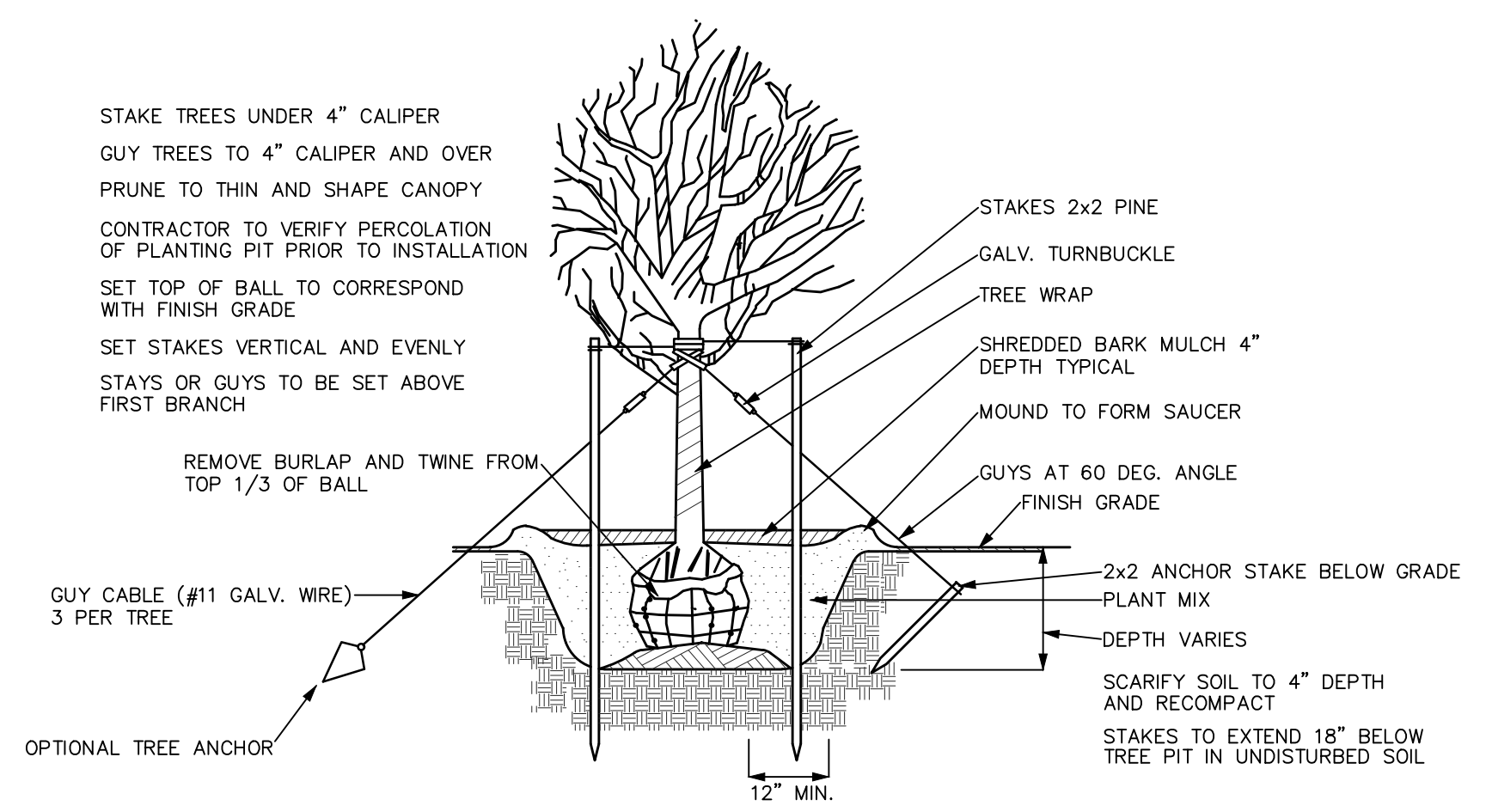
- All minimum planting sizes specified on the Project Plans shall be at the time of planting.
- All landscape materials shall be as specified on the Project Plans or approved equal. Substitutions shall not be made without prior written approval from the Project Engineer and receipt of the Owner's Authorization.
- All plant material shall be free of disease and insects and shall conform to the American Standard of Nursery Stock of the American Association of Nurserymen.
- All landscape plantings shall be planted and maintained in a healthy condition and shall be guaranteed by the Landscape Contractor and/or Supplier for a minimum period of 1 year from the time of planting. Any plantings that die or become diseased during the guarantee period shall be removed and replaced by the Landscape Contractor and/or Supplier at no cost to the Owner.
- Excavations for container or balled plantings shall be no deeper than the root ball or container and shall be at least twice the diameter of the root ball or container.
- Excavations for bare root plantings shall be no deeper than the longest roots and shall be at least twice the diameter of the root spread.
- The sides of planting excavations in heavy and/or wet soils shall be scarified with a fork, pick or shovel to eliminate glazing.
- Landscape planting backfill shall consist of a prepared mixture of peat moss, composted manure and topsoil or suitable excavated native soil material mixed with the appropriate soil conditioners that are compatible with the native soil and plant species. The type and mixture ratio of soil conditioners shall be in accordance with the Landscape Supplier's recommendations.
- The Landscape Contractor shall stake and reinforce all trees to prevent wind damage. The Landscape Contractor shall remove all tree reinforcement and stakes upon expiration of the guarantee period.
- Perennials shall be planted on a 3" minimum bed of prepared peat moss, composted manure and topsoil mixture.
- Ground cover within landscape beds shall be decorative stone. Decorative stone shall be 2" to 4" diameter washed river rock placed 4" deep.
- Ground cover within landscape beds shall be placed over a landscape fabric weed barrier. Landscape fabric shall be non-woven, 4 oz. per sq. yd. minimum weight, with UV protection. Landscape fabric shall be installed in strict accordance with the Manufacturer's specifications and recommendations. Landscape fabric shall not be installed over or within 12 inches of perennial plantings.
- Lawn areas shall be established with 3" minimum depth of prepared topsoil and hydroseeded. The Landscape Contractor shall guarantee all lawn areas for a minimum period of 1 year from time of seeding. All lawn areas that do not take root or die during the guarantee period shall be re-hydroseeded as appropriate by the Landscape Contractor at no cost to the Owner. All lawn areas that become diseased during the guarantee period shall be removed and re-hydroseeded as appropriate by the Landscape Contractor at no cost to the Owner.
- Topsoil shall be a dark, organic, natural surface soil free of clay lumps, peat, muck, subsoil, noxious weeds and other foreign material such as roots, sticks and rocks over 1/2" diameter. Topsoil shall not be frozen or muddy. All earthen areas to receive topsoil shall be finish graded and properly trimmed. Topsoil shall be spread on the prepared areas to a depth of 3 inches. After spreading, any large clods and lumps of topsoil shall be broken up and pulverized. Stones and rocks over 1/2" in diameter, roots, litter and all foreign matter shall be raked up and disposed of by the Landscape Contractor. Seed and mulch shall be placed within 5 days of topsoil placement.
- Seed mixture for lawn areas shall consist of 10% Kentucky Blue Grass, 20% Perennial Rye Grass, 30% Hard Fescue and 40% Creeping Red Fescue. Hydroseed shall be placed within 5 days of topsoil placement and shall be placed to provide complete and uniform coverage. Fertilizer shall be placed at 80 pounds per acre, hydro mulch at 1,200 pounds per acre and water at 500 gallons per acre unless otherwise specified by the Seed Distributor/Manufacturer. All over spray areas shall be properly cleaned and restored at no expense to the contract.
- Seed and mulch may be substituted for hydroseed when authorized by the Owner. Seed mixtures shall meet the requirements for lawn areas as outlined above. Seed shall be uniformly applied at a rate of 220 lbs per acre unless otherwise recommended by the seed Distributor/Manufacturer. Seed mixture shall be fertilized. Fertilizer shall be uniformly applied at of 240 pounds per acre of chemical fertilizer nutrients in equal portions (10-10-10) of Nitrogen, Phosphoric Acid and Potash.
- All seeded areas with a slope less than 1:4 shall be stabilized with straw mulch placed at 2 tons per acre unless otherwise recommended by the seed Distributor/Manufacturer. Erosion control blankets shall be substituted for straw mulch in roadway greenbelts, lawn areas adjacent to heavy traffic, lawn areas subject to high winds, slopes of 1:4 or greater and within ditches, swales and other areas exposed to concentrated overland storm water flow. Erosion control blankets shall consist of 100% straw fiber matrix with photodegradable polypropylene netting and have a 12-month minimum longevity rating. Erosion control blankets shall be pinned with biodegradable pins and shall be installed in accordance with the Manufacturer's recommendations.
- The Landscape Contractor shall be responsible for watering non-irrigated plantings and sod during dry weather conditions throughout the guarantee period as necessary to promote growth and establishment.



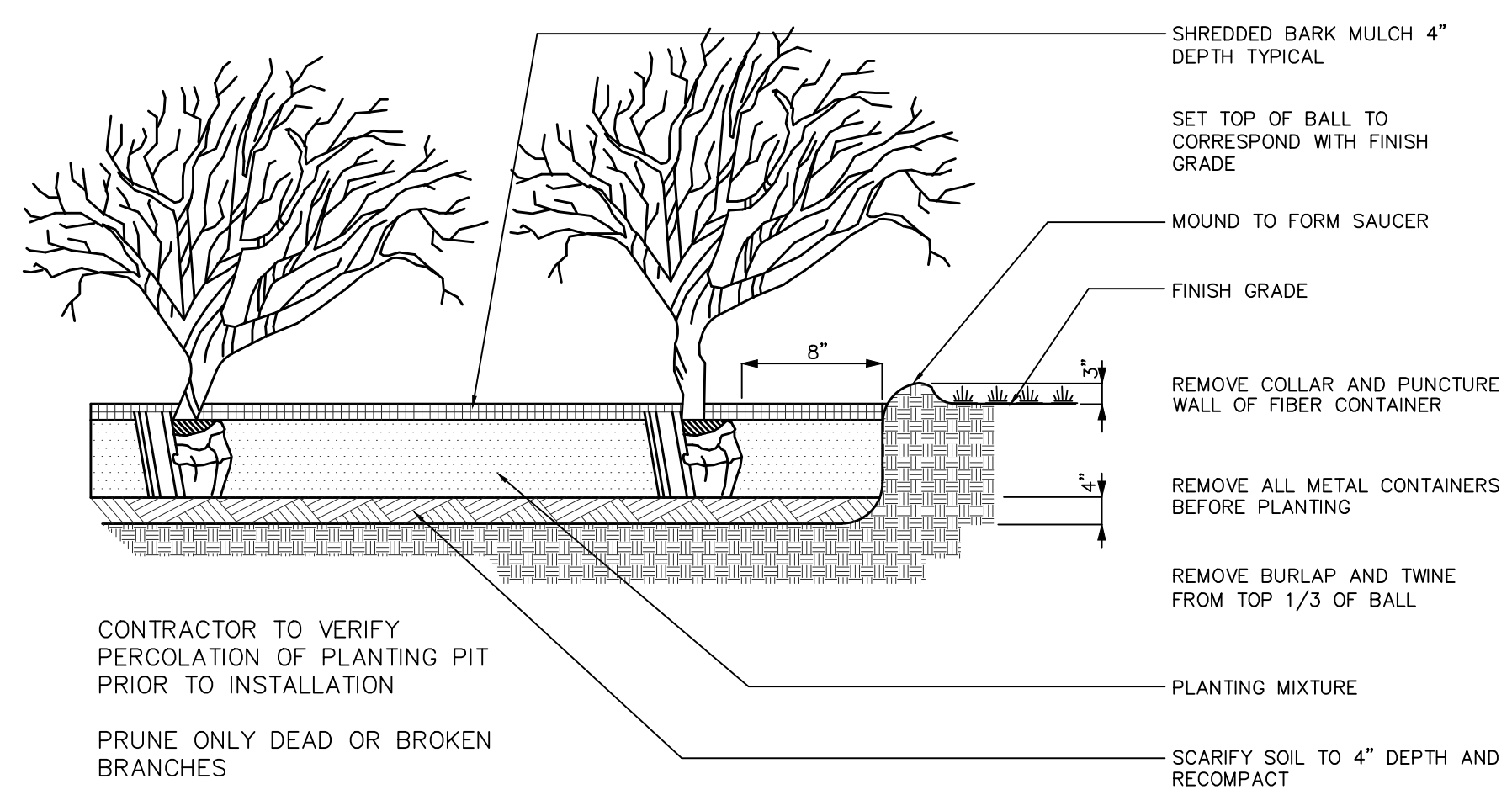
**TYPICAL TREE/SHRUB/PERENNIAL PLANTING**  
NOT TO SCALE



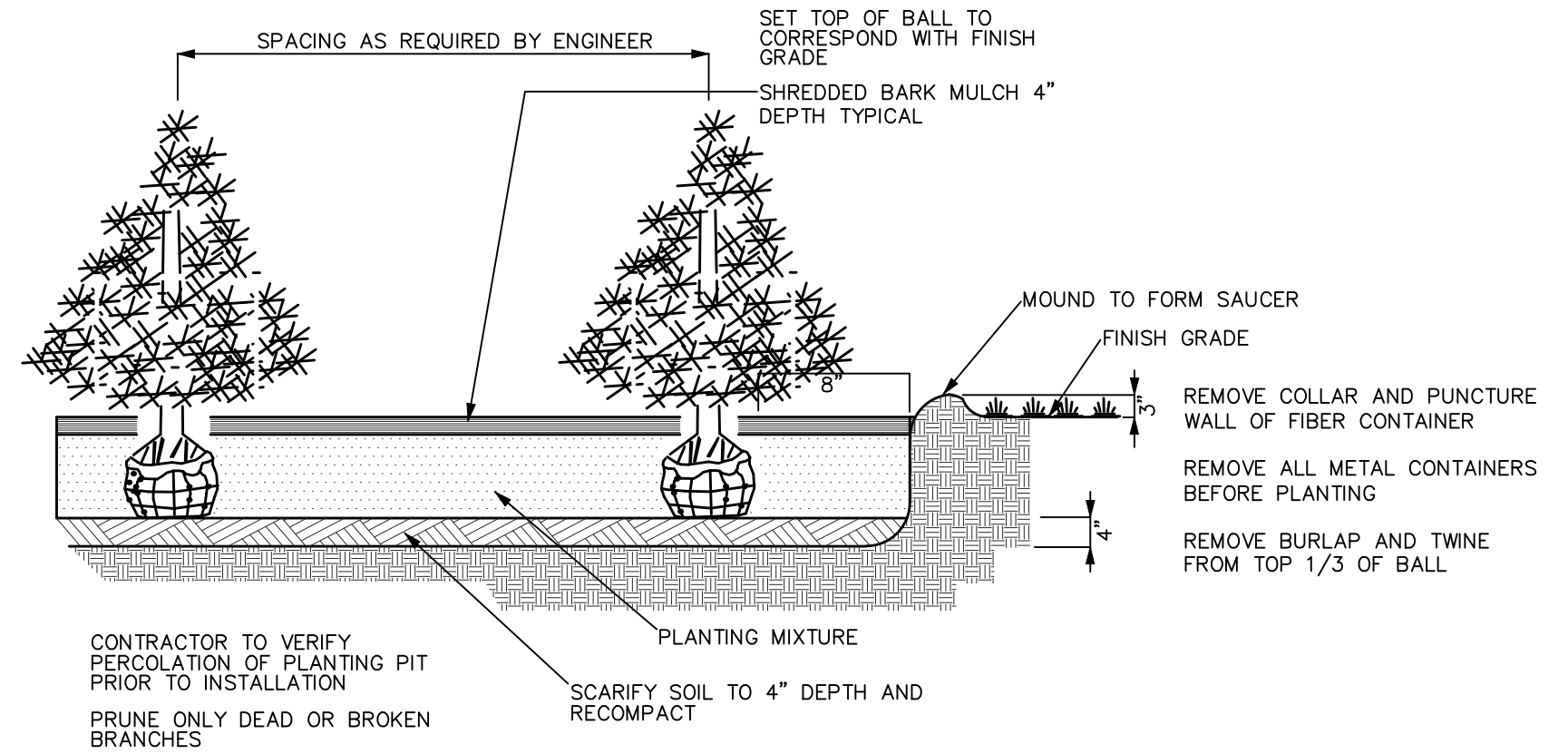
**TYPICAL EVERGREEN TREE PLANTING**  
NOT TO SCALE



**TYPICAL DECIDUOUS TREE PLANTING**  
NOT TO SCALE



**TYPICAL SHRUB PLANTING**  
NOT TO SCALE



**TYPICAL EVERGREEN SHRUB PLANTING**  
NOT TO SCALE

DESIGN:SVB	REVISION #	DATE	REVISION-DESCRIPTION	REVISION #	DATE	REVISION-DESCRIPTION
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**BRIGHTON MOTORS  
PARKING EXPANSION**

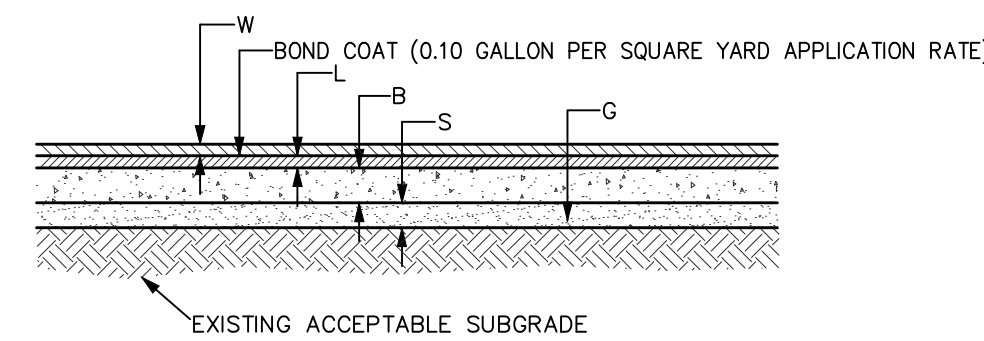
**LANDSCAPE  
NOTES & DETAILS**

CLIENT:  
S2 CONSTRUCTION MANAGEMENT  
12596 TEN MILE ROAD  
SOUTH LYON, MICHIGAN 48178  
248-225-3939

SCALE:  
PROJECT No.: 224245  
DWG NAME: 4245 LA  
ISSUED: **MAY 3, 2022**

**LA3**



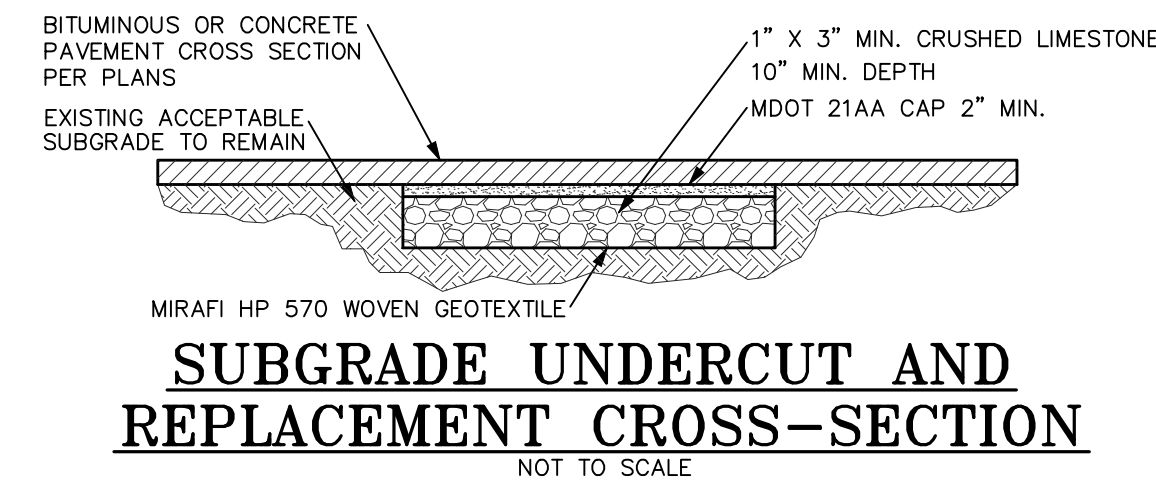


**STANDARD DUTY BITUMINOUS PAVEMENT CROSS SECTION**  
NOT TO SCALE

KEY	DESCRIPTION	MATERIAL SPECIFICATION	MINIMUM COMPACTED THICKNESS
W	WEARING COURSE	MDOT 36A	1.5"
L	LEVELING COURSE	MDOT 13A	1.5"
B	AGGREGATE BASE	MDOT 21AA (SEE NOTES 4&7)	8"
S	GRANULAR SUBBASE	MDOT CLASS II (SEE NOTES 4&6)	12"
G	GEOGRID	N/A	N/A

**BITUMINOUS PAVEMENT NOTES:**

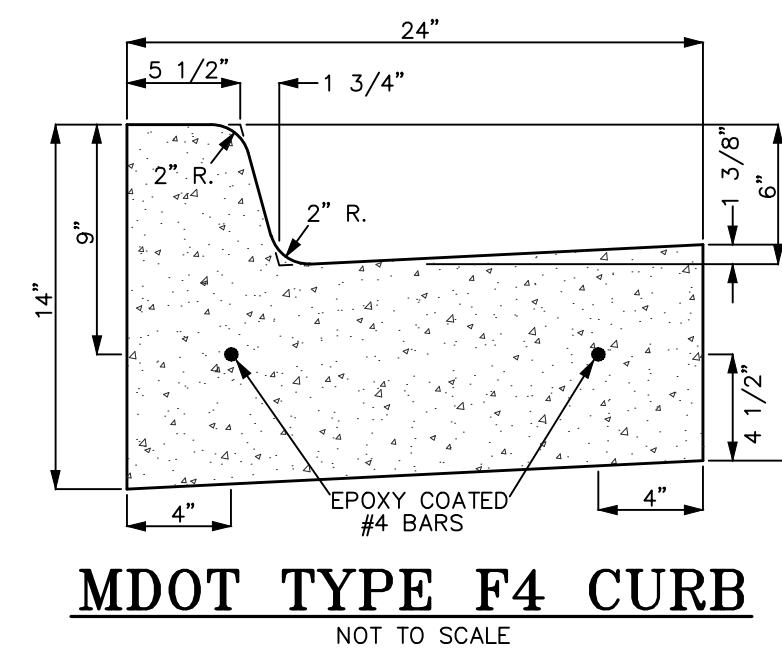
- The construction specifications of the appropriate Local Municipality are a part of this work. Refer to the General Notes, Road and/or Parking Lot Construction Notes and Typical Road and/or Pavement Cross Section details on the project plans for additional requirements.
- Unsuitable soils found within the 1 on 1 influence zone of the pavement, such as muck, peat, topsoil, marl, silt or other unstable materials shall be excavated and replaced up to the proposed subgrade elevation with MDOT Class III granular material compacted to 95% maximum unit weight, modified proctor.
- Contractor shall proof roll prepared subgrade as directed by Engineer. Unacceptable areas of subgrade shall be undercut and replaced as directed by Engineer.
- Owner/Developer may delay placement of the bituminous wearing course outside of the public road right of way. Repair of the bituminous leveling course may be necessary due to any delay in placement of the bituminous wearing course. Substantial repair to the bituminous leveling course may be necessary if placement of the bituminous wearing course is delayed for more than 12 months after placement of the bituminous leveling course. The bituminous leveling course shall be repaired as directed by Engineer prior to placement of the bituminous wearing course.



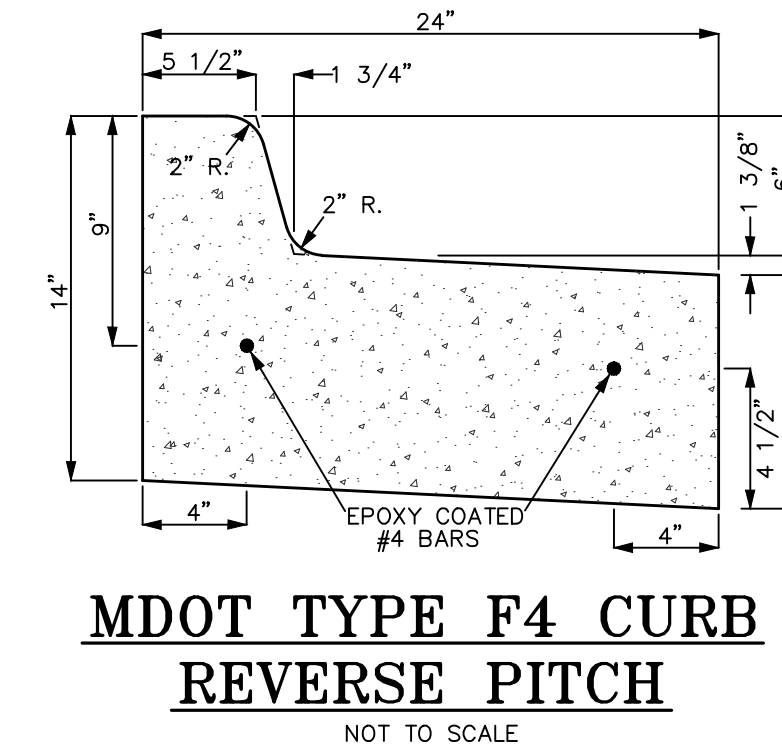
**SUBGRADE UNDERCUT AND REPLACEMENT CROSS-SECTION**  
NOT TO SCALE

**PAVEMENT SUBGRADE UNDERCUT NOTES:**

- Areas of pavement subgrade that do not pass a proof roll inspection shall be undercut when directed by the Material Testing Engineer and/or Project Engineer. All undercut work shall be witnessed and field measured by the Material Testing Engineer and/or Project Engineer. Copies of the field notes depicting the field measurements of the undercut areas shall be provided to the General Contractor and/or Earthwork Subcontractor and Owner.
- Undercut areas shall be excavated to a depth of 12" below the proposed subgrade elevation using an Excavator or Backhoe with a Smooth Edged Ditching Bucket so as not to scarify the underlying soils. Undercut areas shall remain free of all construction traffic and equipment to avoid rutting and/or tracking of the underlying soils.
- Mirafi HP 570 Woven Geotextile Fabric (or approved equal) shall be placed over all undercut areas per the Manufacturer's specifications. Overlap all seams a minimum of 12" unless specified otherwise by the Manufacturer.
- Backfill the undercut areas with 1" x 3" minimum size crushed angular limestone and cap with 21AA crushed angular limestone up to the proposed subgrade elevation. Crushed concrete material shall NOT be substituted for crushed limestone material. The backfill material shall be spread with a Wide Track Dozer to minimize loading on the underlying soils. Static roll the backfill material with a large smooth drum roller.
- Construct the appropriate Bituminous or Concrete Pavement Cross Section over the undercut areas per the Project Plans.



**MDOT TYPE F4 CURB**  
NOT TO SCALE



**MDOT TYPE F4 CURB REVERSE PITCH**  
NOT TO SCALE

**CONCRETE CURB NOTES:**

- Refer to the project plans for the proposed locations of the specific curb types.
- The construction specifications of the appropriate Local Municipality are a part of this work. Refer to the General Notes and Curb Cross Section Details on the project plans for additional requirements.
- Extend the base and/or subbase material of the appropriate adjacent pavement cross-section horizontally to 1 foot behind the back of curb. Concrete curb shall be constructed on no less than 6" of combined depth of compacted base/subbase material.
- Concrete material shall meet or exceed the specification requirements of the appropriate Local Municipality. If not specified by the Local Municipality, then the concrete material shall be MDOT P1 (I-A) 6.0 sack concrete pavement mixture with a minimum 28 day design compressive strength of 4,000 PSI and 6.5% (+/-1.5%) entrained air. Contractor shall submit concrete mix design and aggregate mechanical analysis report to the Local Municipality and Engineer for review and approval prior to use.
- Install transverse contraction control joints in accordance with the Local Municipality requirements. If not specified by the Local Municipality, then install transverse contraction control joints in curb with 1" minimum depth at 10' on center. Tool joints in fresh concrete or saw cut within 8 hours.
- Install transverse expansion control joints in accordance with the Local Municipality requirements. If not specified by the Local Municipality, then install transverse expansion control joints in curb as follows: 400' maximum on center, at spring points of intersecting streets and within 10' on each side of catch basins. Transverse expansion control joints shall be 1" thick asphalt fiber joint filler matching entire curb cross section.
- Provide 1" asphalt fiber control joint between back of curb and all other concrete structures, such as concrete sidewalks and concrete driveways.
- Curb Contractor shall provide final adjustment of catch basin castings in curb line. Castings shall be tucked pointed to structure water tight with concrete or mortar inside and outside of casting.
- Install curb cuts for all existing and proposed sidewalks and pedestrian ramps in accordance with the American Disabilities Act and the Barrier Free Design requirements of the appropriate Local, County and/or State Agency. Refer to MDOT Standard Plan R-28, latest revision. Install curb cuts for all existing and proposed vehicular ramps and drives as noted on the project plans.

**GENERAL NOTES:**

- Contractor shall perform the work in accordance with the requirements of the appropriate Local, County and State Agencies and all other Government and Regulatory Agencies with jurisdiction over the project. Contractor shall notify the appropriate Agencies in advance of each stage of work in accordance with each Agency's requirements.
- Contractor shall comply with all permit, insurance, licensing and inspection requirements associated with the work. Prior to construction, Contractor and Owner/Developer shall determine who is responsible for obtaining each required permit. Contractor shall verify that the each required permit has been obtained prior to commencement of the stage of work associated with the required permit(s).
- Contractor shall furnish liability insurance and property damage insurance to save harmless the Owner, Developer, Architect, Engineer, Surveyor and Government Agencies for any accident occurring during the construction period. Refer to the appropriate Local, County and State Agencies for additional requirements. Copies of insurance certifications shall be made available to the Owner/Developer.
- Contractor shall conduct and perform work in a safe and competent manner. Contractor shall perform all necessary measures to provide for traffic and pedestrian safety from the start of work and through substantial completion. Contractor shall determine procedures and safety equipment such as traffic controls, warning devices, temporary pavement markings and signs as needed. Contractor shall comply with the safety standards of the State Department of Labor, the occupational health standards of the State Department of Health and safety regulations of the appropriate Local, County, State and Federal Agencies. Refer to the safety specifications of the appropriate Regulatory Agencies. The Contractor shall designate a qualified employee with complete job site authority over the work and safety precautions; said designated employee shall be on site at all times during the work.
- Contractor shall coordinate scheduling of all work in the proper sequence, including work by Subcontractors. Additional costs due to improper planning by Contractor or work done out of sequence as determined by standard acceptable construction practices, shall be Contractor's responsibility.
- Contractor shall contact the 811 Underground Public Utility Locating System or other appropriate local underground utility locating Agency, a minimum of three (3) working days prior to construction. Existing utility information on the project plans may be from information disclosed to this firm by the Utility Companies, Local, County or State Agencies, and/or various other sources. No guarantee is given as to the completeness or accuracy thereof. Prior to construction, locations and depths of all existing utilities (in possible conflict with the proposed improvements) shall be verified in the field.
- Contractor shall coordinate scheduling a Pre-Construction Meeting with Engineer prior to commencement of work.
- The Local Municipality, County and/or State in which the project is located may require an Engineer's Certification of construction of the proposed site improvements. Contractor shall verify the certification requirements with Engineer prior to commencement of work. Contractor shall coordinate construction staking, testing, documentation submittal and observation with the appropriate Agency, Surveyor and/or Engineer as required for Engineer's Certification and Government Agency Acceptance. All materials used and work done shall meet or exceed the requirements of certification and acceptance, the contract documents and the material specifications noted on the project plans. Any materials used or work done that does not meet said requirements, contract documents and/or specifications shall be replaced and/or redone at Contractor's expense. The Owner/Developer may wait for test results, certifications and/or Agency reviews prior to accepting work.
- Engineer may provide subsurface soil evaluation results, if available, to Contractor upon request. Subsurface soil evaluation results, soils maps and/or any other documentation does NOT guarantee existing soil conditions or that sufficient, acceptable on-site granular material is available for use as structural fill, pipe bedding, pipe backfill, road subbase or use as any other granular material specified on the project plans. On-site granular material that meets or exceeds the material specifications noted on the project plans may be used as structural fill, pipe bedding, pipe backfill and/or road subbase material. On-site granular material shall be stockpiled and tested as acceptable to the appropriate Agency and/or Engineer prior to use.
- During the performance of their work, Contractor shall be solely responsible for determining soil conditions and appropriate construction methods based on the actual field conditions. Contractor shall furnish, install and maintain sheeting, shoring, bracing and/or other tools and equipment and/or construction techniques as needed for the safety and protection of the workers, pedestrians and vehicular traffic and for protection of adjacent structures and site improvements.
- Contractor shall install temporary and permanent soil erosion and sedimentation control devices at the appropriate stages of construction in accordance with the appropriate regulatory Agencies. Refer to Soil Erosion and Sedimentation Control Plans and Notes on the project plans.
- Structural fill shall be placed as specified on the project plans and within the 1 on 1 influence zone of all structures, paved areas and other areas subject to vehicular traffic. Structural fill shall be placed using the controlled density method (12" maximum lifts, compacted to 95% maximum unit weight, modified proctor). Fill material shall meet or exceed the specifications noted on the project plans or as directed by Engineer when not specified on the project plans.
- All existing monuments, property corners, ground control and benchmarks shall be protected and preserved; and if disturbed by Contractor, shall be restored at Contractor's expense. Contractor shall notify Surveyor of any conflicts between existing monuments, property corners, ground control and/or benchmarks and the proposed site improvements.
- Contractor shall notify Owner/Developer and Engineer immediately upon encountering any field conditions, which are inconsistent with the project plans and/or specifications.
- When noted on the project plans for demolition and/or removal, Contractor shall remove existing structures, building and debris and recycle and/or dispose of in accordance with Local, County, State and Federal regulations.
- Contractor shall remove excess construction materials and debris from site and perform restoration in accordance with the project plans and specifications. Disposing of excess materials and debris shall be performed in accordance with Local, County, State and Federal regulations.
- Construction access to the site shall be located as acceptable to the Owner/Developer and to the appropriate Local, County and/or State Agency with jurisdiction over the road(s) providing access to the site. Construction access shall be maintained and cleaned in accordance with the appropriate Local, County and/or State Agencies and as directed by Owner/Developer and/or Engineer.
- Contractor shall take necessary precautions to protect all site improvements from heavy equipment and construction procedures. Damage resulting from Contractor actions shall be repaired at Contractor's expense.

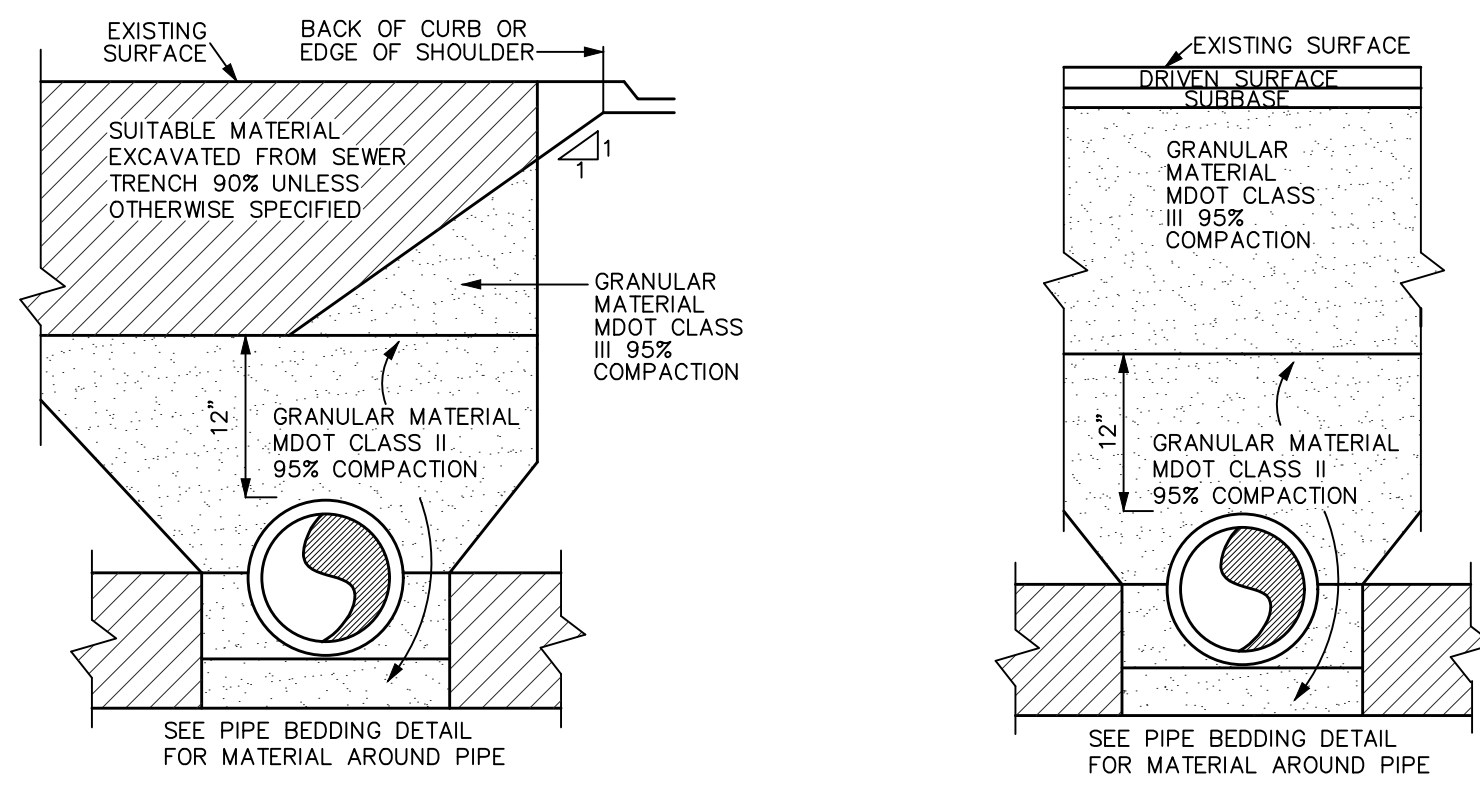
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CHECK: WMP						

**BRIGHTON MOTORS  
PARKING EXPANSION**

**SITE & PAVEMENT  
NOTES AND DETAILS**

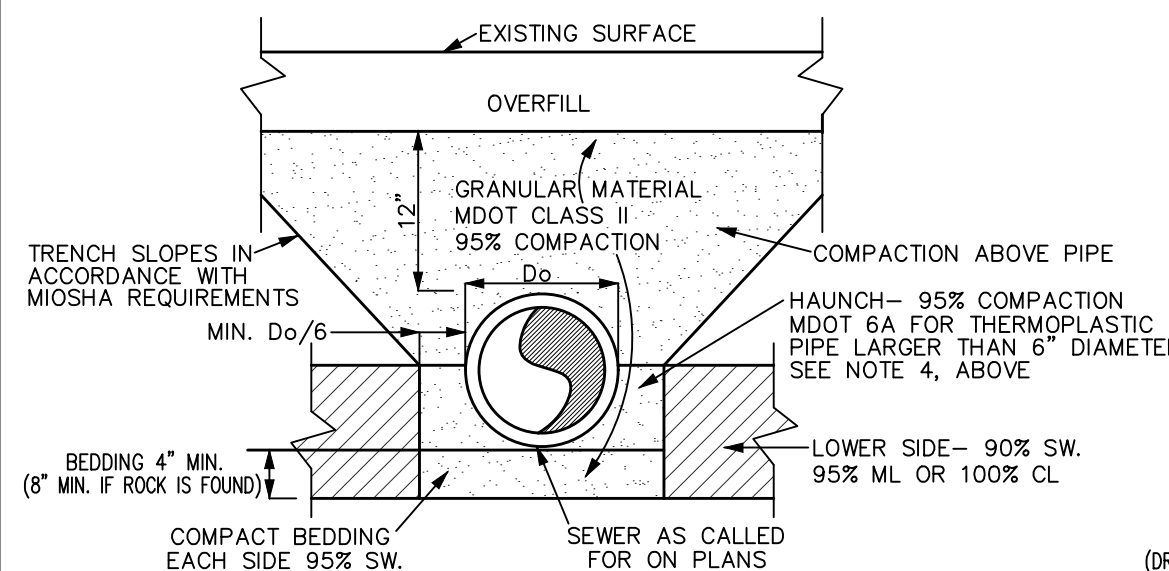
CLIENT: S2 CONSTRUCTION MANAGEMENT 12596 TEN MILE ROAD SOUTH LYON, MICHIGAN 48178 248-225-3939	SCALE: N/A PROJECT No.: 224245 DWG NAME: 4245 DT ISSUED: <b>MAY 3, 2022</b>
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**DT1**

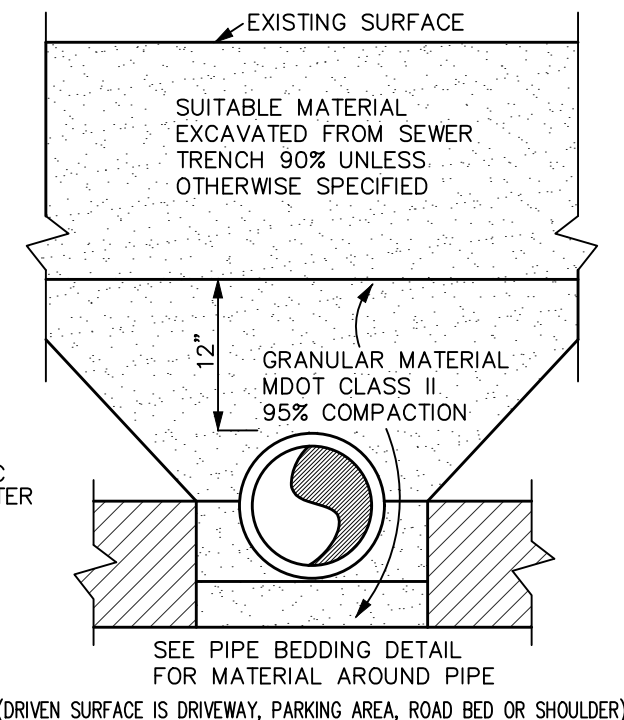


**TRENCH A - PIPE UNDER OR WITHIN INFLUENCE OF DRIVEN SURFACE**  
NOT TO SCALE

- NOTES:
1. COMPACTION PRESENTED AS STANDARD PROCTOR VALUES.
  2. SOIL TYPES: AASHTO DESIG. GRAVEL SANDY (SW) A1, A3; SANDY SILTY (ML) A2, A4; SILTY CLAY (CL) A5, A6, A7.
  3. SOIL IN HAUNCH AND LOWER SIDE ZONES OUTSIDE OF  $D_o/6$  FROM SPRING LINE SHALL BE COMPACTED TO AT LEAST THE SAME COMPACTION AS THE SOIL IN THE OVERFILL ZONE.
  4. MATERIALS AROUND THERMO. PLASTIC PIPE WITH DIAMETER 6 INCHES SHALL PASS 0.5 INCH SIEVE. MATERIALS AROUND OTHER PIPES SHALL PASS 1.5 INCH SIEVE.

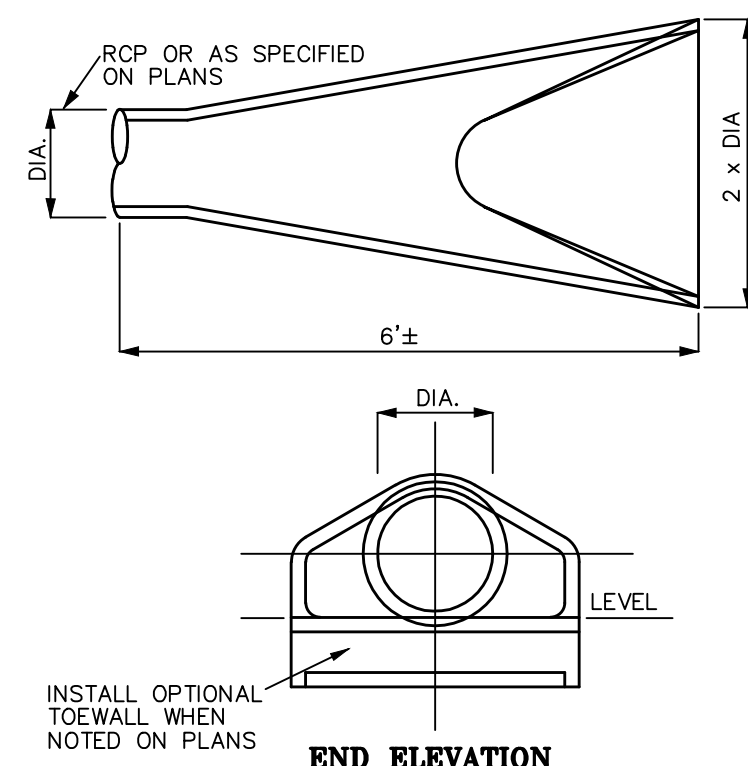


**PIPE BEDDING DETAIL**  
NOT TO SCALE



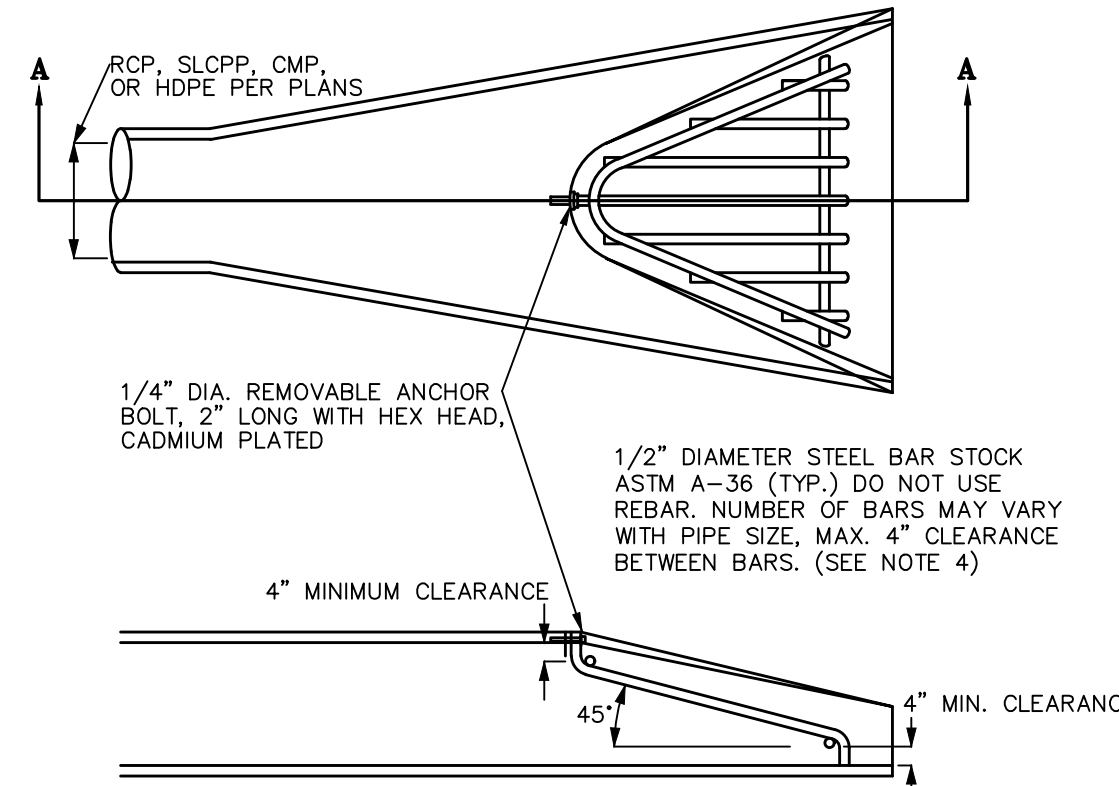
**TRENCH B - PIPE NOT UNDER DRIVEN SURFACES**  
NOT TO SCALE

**TRENCH DETAILS**  
NOT TO SCALE



**FLARED END SECTION**  
NOT TO SCALE

- NOTES:
1. RCP FLARED END SECTION SHOWN, PROVIDE SIMILAR FLARED END SECTION FOR CMP, SLOPP OR HDPE PIPE.
  2. PROVIDE RIP-RAP PER RIP-RAP DETAILS FOR ALL OUTLET FLARED END SECTIONS.
  3. INSTALL FLARED END SECTION WITH INVERT ELEVATION ELEVATION LEVEL AS VIEWED FROM END.



**ANIMAL GUARD**  
NOT TO SCALE

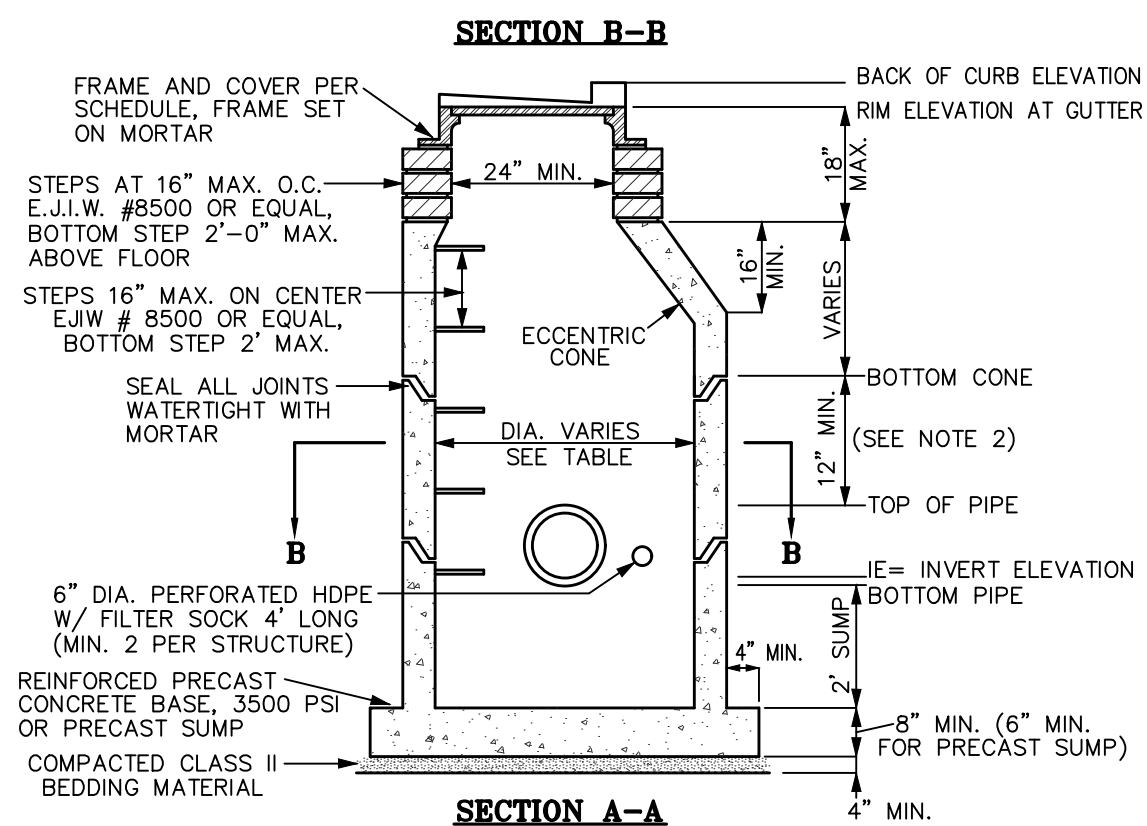
- NOTES:
1. ANIMAL GUARD REQUIRED ON ALL FLARED END SECTIONS OF 15" DIAMETER PIPE OR GREATER.
  2. CONTRACTOR MAY SUBSTITUTE ALTERNATE GRATING LAYOUT AS APPROVED BY OWNER/ENGINEER/AGENCY PRIOR TO INSTALLATION.
  3. DETAIL SHOWN FOR RCP FLARED END SECTION. PROVIDE SIMILAR ANIMAL GUARD FOR FLARED END SECTIONS ON CMP, HDPE, AND SLOPP.
  4. WELD ALL CONNECTIONS FULL STRENGTH PER AMERICAN WELDING SOCIETY STANDARDS.

PIPE SIZE	MIN. CATCH BASIN DIA.
12"-24"	4'-0" MIN.
24"-36"	5'-0" MIN.
42"-48"	6'-0" MIN.

(SEE NOTE 1)

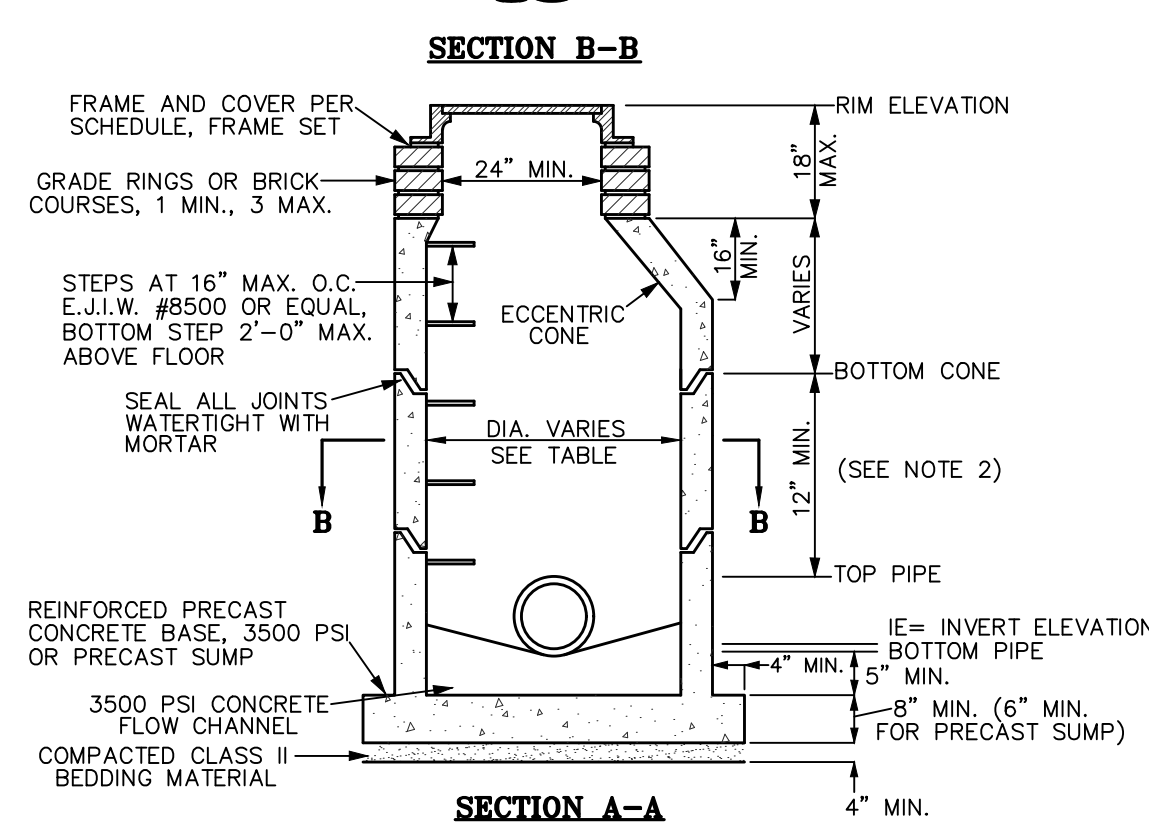
PIPE SIZE	MIN. MANHOLE DIA.
12"-24"	4'-0" MIN.
24"-36"	5'-0" MIN.
42"-48"	6'-0" MIN.

(SEE NOTE 1)



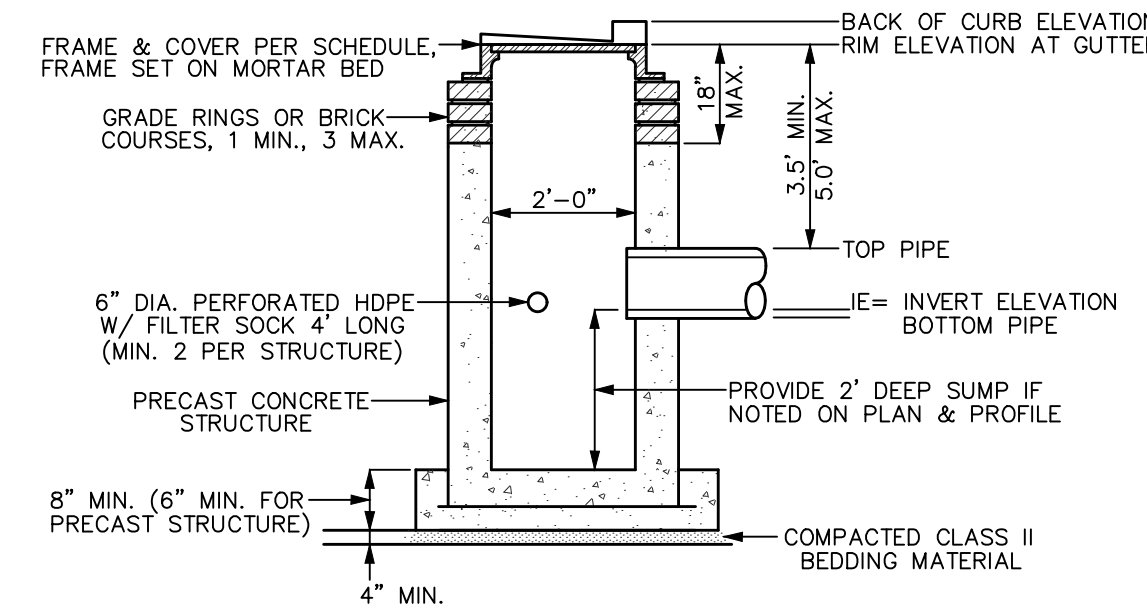
**STORM STRUCTURE "A"  
STANDARD CATCH BASIN**  
NOT TO SCALE

- NOTES:
1. FURNISH LARGER STRUCTURE DIAMETER AS NEEDED TO MAINTAIN 6" MIN CLEAR BETWEEN PIPE OPENINGS.
  2. FURNISH LOW PROFILE STRUCTURE ONLY WHEN NECESSARY TO MAINTAIN PROPER CLEARANCE ABOVE PIPES.



**STORM STRUCTURE "B"  
STANDARD MANHOLE**  
NOT TO SCALE

- NOTES:
1. FURNISH LARGER STRUCTURE DIAMETER AS NEEDED TO MAINTAIN 6" MIN CLEAR BETWEEN PIPE OPENINGS.
  2. FURNISH LOW PROFILE STRUCTURE ONLY WHEN NECESSARY TO MAINTAIN PROPER CLEARANCE ABOVE PIPES.



**STORM STRUCTURE "C"  
2' DIAMETER CATCH BASIN**  
NOT TO SCALE

- NOTES:
1. FURNISH LARGER STRUCTURE DIAMETER AS NEEDED TO MAINTAIN 6" MIN CLEAR BETWEEN PIPE OPENINGS.
  2. FURNISH LOW PROFILE STRUCTURE ONLY WHEN NECESSARY TO MAINTAIN PROPER CLEARANCE ABOVE PIPES.

**STORM SEWER NOTES:**

1. The storm sewer and stormwater management specifications of the Local Municipality are a part of this work. Refer to the General Notes on the project plans for additional requirements.
2. Storm sewer work shall include clearing of vegetation and tree stumps, stripping and stockpiling of topsoil for reuse, excavation of pipe trench, placement of pipe bedding, placement of pipe and structures including castings, connection to existing structures, tuck pointing of structures, backfill of pipe trench, compaction of backfill, finish grading to provide positive drainage to structures, adjustment of castings to match finish grade, topsoil placement, seed & mulch, site cleanup and restoration, and other work as shown on the project plans and specifications.
3. Existing and proposed grades shown in profile view, when provided on the project plans, may be in relation to the centerline of road or item other than the centerline of pipe. The pipe lengths and grades shown in profile view on the project plans may not be to scale.
4. RCP when shown on the project plans shall be reinforced concrete pipe and shall conform to the specifications for reinforced concrete pipe per ASTM C76. RCP pipe joints shall be bell-and-spigot with rubber gaskets conforming to ASTM C433. Non-gasketed joints shall only be utilized when authorized by the Owner, Engineer AND Municipality. Non-gasketed joints of pipe having a diameter of 30 inches or greater shall be tuck-pointed on the inside with cement mortar after the backfill process is complete. Install reinforced concrete end sections incidental to work. Saw cut pipes to length as needed. When pipe class is not shown on the project plans, provide the following:  

Pipe cover to proposed grade:	0 to 4 feet	Class V
	4.1 to 10 feet	Class III*
	10.1 to 18 feet	Class IV
	18.1 feet and greater	Class V
5. CMP when shown on the project plans shall be corrugated metal pipe and shall conform to the specifications for corrugated metal pipe per ASTM C76. CMP shall be 16-gauge steel minimum for 24 inch diameter or smaller and 14-gauge steel minimum for 30 inch diameter or greater. Install galvanized steel end sections and connection bands, incidental to work. Connection bands for CMP pipe joints located under paved surfaces shall be gasketed couplers. Saw cut pipes to length as needed.
6. HDPE - Type S when shown on the project plans shall be high density polyethylene pipe with a smooth interior and shall conform to the specifications for high density polyethylene pipe per AASHTO Designation M252 Type S for pipes of 3" to 10" diameter and per AASHTO Designation M294 Type S for pipes of 12" to 60" diameter. HDPE - Type C when shown on the project plans shall be high density polyethylene pipe with a corrugated interior and shall conform to the specifications for high density polyethylene pipe per AASHTO Designation M252 Type C for pipes of 3" to 10" diameter and per AASHTO Designation M294 Type S for pipes of 12" to 60" diameter. HDPE - Type S pipe joints shall be bell-and-spigot type conforming to ASTM D3212 with rubber gaskets conforming to ASTM F477. Tamp backfill at spring line of HDPE - Type S pipe. Install high density polyethylene end sections incidental to work. Saw cut pipes to length as needed.
7. HDPE - Type C when shown on the project plans shall be high density polyethylene pipe with a corrugated interior and shall conform to the specifications for high density polyethylene pipe per AASHTO Designation M252 Type C for pipes of 3" to 10" diameter and per AASHTO Designation M294 Type S for pipes of 12" to 60" diameter. HDPE - Type C pipe joints shall be bell-and-spigot type conforming to ASTM D3212 with rubber gaskets conforming to ASTM F477. Tamp backfill at spring line of HDPE - Type C pipe. Install high density polyethylene end sections incidental to work. Saw cut pipes to length as needed.
8. CPVC when shown on the project plans shall be corrugated polyvinyl chloride pipe and shall conform to the specifications for corrugated polyvinyl chloride pipe per ASTM F794 and F949. CPVC pipe joints shall be bell-and-spigot type conforming to ASTM D3212 with rubber gaskets conforming to ASTM F477. Tamp backfill at spring line of CPVC pipe. Install high density polyethylene end sections incidental to work. Saw cut pipes to length as needed.
9. PVC when shown on the project plans shall be polyvinyl chloride pipe and shall conform to the specifications for polyvinyl chloride pipe per ASTM D2751, maximum SDR of 26. PVC pipe joints shall be bell-and-spigot type conforming to ASTM D3212 with rubber gaskets conforming to ASTM F477 or solvent welded type conforming to ASTM D2564. Tamp backfill at spring line of PVC pipe. Saw cut pipes to length as needed.
10. Concrete storm structures shall be pre-cast and shall conform to the specification of pre-cast concrete structures per ASTM C478. Joints of concrete storm structure sections shall be bell-and-spigot with rubber gaskets conforming to ASTM C433. Brick, concrete block or cast in place storm structures may be substituted for pre-cast storm structures ONLY when authorized by the Owner, Engineer AND Municipality; refer to MDOT standard plan R-1, latest revision. Pipe openings in pre-cast structures shall be factory installed. All temporary openings in storm structures shall be tuck-pointed watertight with cement mortar. Refer to MDOT standard plan R-2, latest revision, for alternate on-line storm structure details when pipe exceeds 42 inch diameter.
11. Tap existing structures as acceptable to the Engineer and Municipality, incidental to work. All temporary openings in storm structures shall be tuck-pointed watertight with cement mortar.
12. Backfill all storm sewer in accordance with the Pipe Trench details provided on the project plans. Provide pipe bedding that meets or exceeds both the specifications of the Pipe Trench details on the project plans and the recommendation of the pipe manufacturer, incidental to work.
13. When edge drains and/or under drains are shown on the project plans, connection to storm structures is incidental to work. During storm sewer construction, install first 10 linear feet of edge drain and/or under drain from the storm structures in each specified direction and install temporary cap at end. Complete installation of edge drain following preparation of the subgrade when under paved surface or following finish grade when not under paved surface.
14. Install removable plugs in storm sewer stubs as acceptable to Engineer and Municipality, incidental to work. Mark the end of all storm sewer stubs with a 2" x 4" wooden stake extending a minimum of 12" above finish grade, incidental to work.
15. Storm structure castings shall be coated with water based asphaltic paint by the manufacturer. Seams and temporary openings between storm structures and castings shall be tuck-pointed water tight with cement mortar. Coordinate correct curb box / hood / "T" back as needed to match curb profile. See casting schedule on project plans for additional requirements.
16. Provide 3.5' minimum cover from the top of pipe of all roof drain pipes to the proposed finish grade when site conditions allow. When pipe cover is less than 3.5', install 2" thick by 24" wide Styrofoam insulation centered over the top of pipe at 12" above top of pipe or as required by the Local Municipality.

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DESIGN:SVB	REVISION #	DATE	REVISION-DESCRIPTION
DRAFT: OBM			
CHECK: WMP			

REVISION #	DATE	REVISION-DESCRIPTION

**BRIGHTON MOTORS  
PARKING EXPANSION**

**STORM SEWER  
NOTES AND DETAILS**

CLIENT:	S2 CONSTRUCTION MANAGEMENT 12596 TEN MILE ROAD SOUTH LYON, MICHIGAN 48178 248-225-9399
SCALE:	N/A
PROJECT No.:	224245
DWG NAME:	4245 DT
ISSUED:	MAY 3, 2022

**DT2**

Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lumens Per Lamp	Light Loss Factor	Wattage
□	A	5	Lithonia Lighting	DSX2 LED P4 40K TTFM MVOLT	DSX2 LED P4 40K TTFM MVOLT	33388	0.9	540
□	B	4	Lithonia Lighting	DSX2 LED P4 40K T5W MVOLT	DSX2 LED P4 40K T5W MVOLT	34437	0.9	540
□	C	3	Lithonia Lighting	DSX2 LED P4 40K BLC MVOLT	DSX2 LED P4 40K BLC MVOLT	27374	0.9	270

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min	Avg/Max
Back Lot	✕	5.4 fc	13.1 fc	1.5 fc	8.7:1	3.6:1	0.4:1
East Row	✕	10.6 fc	17.5 fc	3.8 fc	4.6:1	2.8:1	0.6:1
Front Row	✕	15.0 fc	22.2 fc	7.3 fc	3.0:1	2.1:1	0.7:1
Grade	+	3.2 fc	22.2 fc	0.0 fc	N/A	N/A	0.1:1
Property Line	+	0.1 fc	0.4 fc	0.0 fc	N/A	N/A	0.3:1
West Row	✕	12.8 fc	20.1 fc	2.3 fc	8.7:1	5.6:1	0.6:1

**General Note**

- SEE SCHEDULE FOR LUMINAIRE MOUNTING HEIGHT.
- CALCULATIONS ARE SHOWN IN FOOTCANDLES AT: 0' - 0"
- LIGHTING ALTERNATES REQUIRE NEW PHOTOMETRIC CALCULATION AND RESUBMISSION TO CITY FOR APPROVAL.

THE ENGINEER AND/OR ARCHITECT MUST DETERMINE APPLICABILITY OF THE LAYOUT TO EXISTING / FUTURE FIELD CONDITIONS. THIS LIGHTING LAYOUT REPRESENTS ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY APPROVED METHODS. ACTUAL PERFORMANCE OF ANY MANUFACTURER'S LUMINAIRE MAY VARY DUE TO VARIATION IN ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, AND OTHER VARIABLE FIELD CONDITIONS. MOUNTING HEIGHTS INDICATED ARE FROM GRADE AND/OR FLOOR UP.

THESE LIGHTING CALCULATIONS ARE NOT A SUBSTITUTE FOR INDEPENDENT ENGINEERING ANALYSIS OF LIGHTING SYSTEM SUITABILITY AND SAFETY. THE ENGINEER AND/OR ARCHITECT IS RESPONSIBLE TO REVIEW FOR MICHIGAN ENERGY CODE AND LIGHTING QUALITY COMPLIANCE.

UNLESS EXEMPT, PROJECT MUST COMPLY WITH LIGHTING CONTROLS REQUIREMENTS DEFINED IN ASHRAE 90.1 2013. FOR SPECIFIC INFORMATION CONTACT GBA CONTROLS GROUP AT ASG@GASSERBUSH.COM OR 734-266-6705.

FOR ORDERING INQUIRIES CONTACT GASSER BUSH AT QUOTES@GASSERBUSH.COM OR 734-266-6705.

THIS DRAWING WAS GENERATED FROM AN ELECTRONIC IMAGE FOR ESTIMATION PURPOSE ONLY. LAYOUT TO BE VERIFIED IN FIELD BY OTHERS.

MOUNTING HEIGHT IS MEASURED FROM GRADE TO FACE OF FIXTURE. POLE HEIGHT SHOULD BE CALCULATED AS THE MOUNTING HEIGHT LESS BASE HEIGHT.

**D-Series Size 2 LED Area Luminaire**

**Specifications**

- EPA: 1.1 ft<sup>2</sup> (0.10m<sup>2</sup>)
- Length: 40" (1016mm)
- Width: 15" (381mm)
- Height: 7.14" (181mm)
- Height to: 3.5"
- Weight: 36lbs

**Introduction**

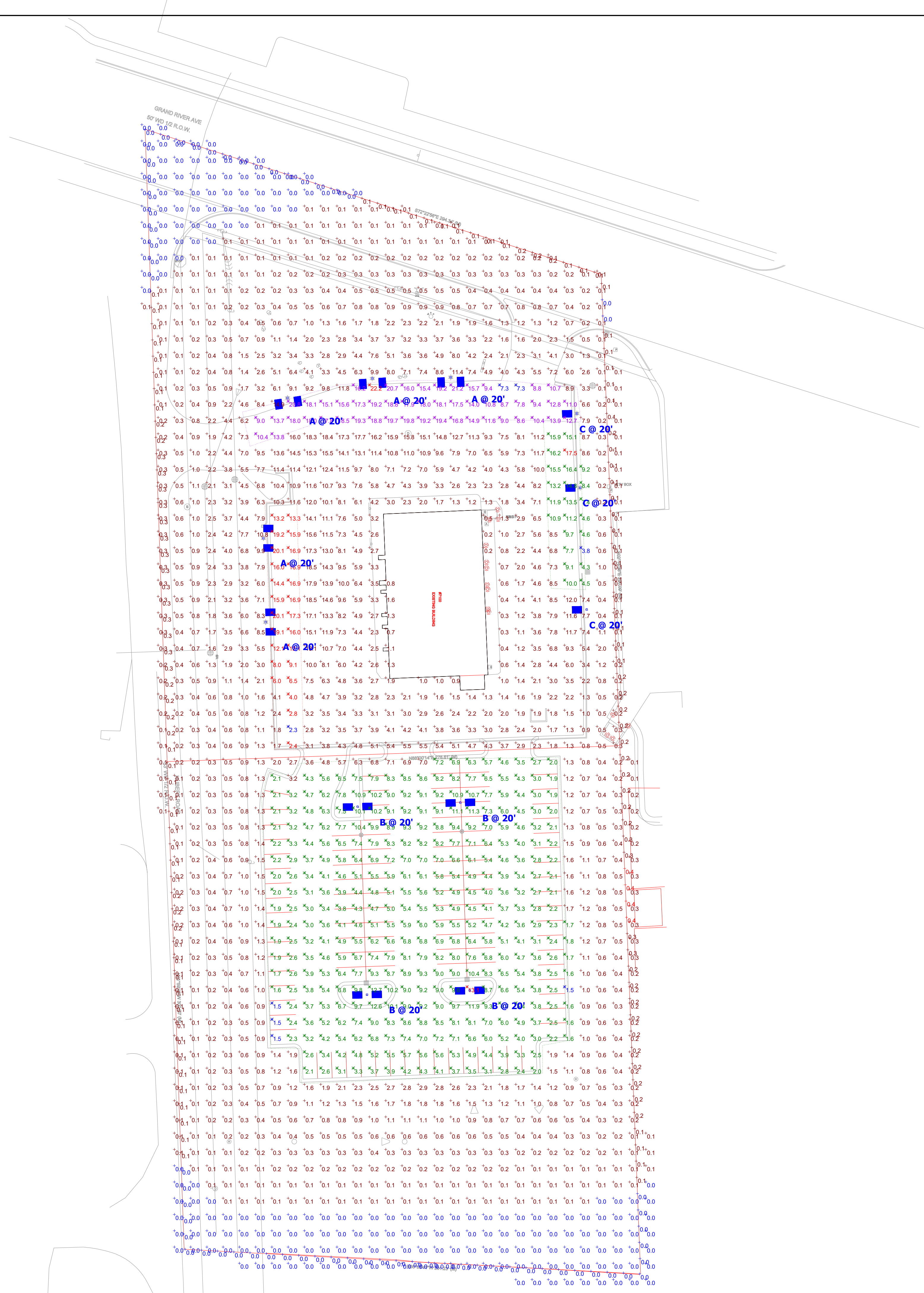
The modern styling of the D-Series is striking yet unobtrusive - making a bold, progressive statement even as it blends seamlessly with its environment.

The D-Series distills the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire. The outstanding photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. The Size 2 is ideal for replacing 400-1000W metal halide in area lighting applications with energy savings of up to 80% and expected service life of over 100,000 hours.

Ordering Information

EXAMPLE: DSX2 LED P7 40K T3M MVOLT SPA NLTAR2 PIRHN DBDXB

Symbol	Label	Color temperature	Beam/diameter	Height	Mounting	Notes
DSX2 LED						
P1	P5	30K	T10	Type V Very Short	MVOLT	Shipped included
P2	P6	40K	T25	Type V Short	308"	SFA Square pole mounting
P3	P7	5000K	T2M	Type II Medium	308"	RFA Round pole mounting
P4	P8		T5W	Type V Wide	240"	WEA Wall bracket
P5	P9		T3M	Type II Medium	227"	SPUMBA Square pole universal mounting adapter
P6	P10		T4M	Type II Medium	340"	RPMWBA Round pole universal mounting adapter
P7	P11		T7FM	Tri-axial/Flare Medium	460"	Shipped separately
P8	P12					KMAI DBDXB II Mount arm (mounting bracket above canopy body)



Plan View  
Scale - 1" = 35ft



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

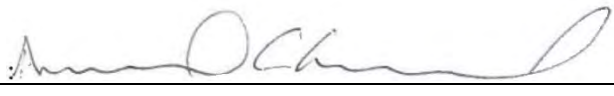
## MEMORANDUM

**TO:** Honorable Board of Trustees

**FROM:** Kelly VanMarter, Assistant Township Manager

**DATE:** June 15, 2022

**RE:** **Sylvan Glen Clubhouse Expansion – 6600 Grand River Avenue, Brighton**

**MANAGER’S REVIEW:**   
 \_\_\_\_\_

In the following pages please find the project case file for a renovation and expansion of the clubhouse facility within the Sylvan Glen manufactured home community. The project also includes construction of a new swimming pool with deck surround, trellis, equipment storage building and additional parking spaces. The site is located at 6600 Grand River Avenue on the south side of Grand River, east of Dorr Road.

Procedurally, the Planning Commission has review and approval authority over the site plan, and the Township Board has the final approval authority over the Impact Assessment. The impact assessment was recommended for approval and the site plan was approved by the Planning Commission on June 13, 2022. Based on this approval I offer the following motion for your consideration:

**Moved by \_\_\_\_\_, support by \_\_\_\_\_ to approve the environmental impact assessment dated May 3, 2022 with the condition that all requirements of the site plan approval by the Planning Commission be satisfied prior to issuance of a land use permit for the project.**

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

Sincerely,  
  
 Kelly VanMarter  
 Assistant Township Manager/Community Development Director

- SUPERVISOR**  
Bill Rogers
- CLERK**  
Paulette A. Skolarus
- TREASURER**  
Robin L. Hunt
- TRUSTEES**  
Jean W. Ledford  
H. James Mortensen  
Terry Croft  
Diana Lowe
- MANAGER**  
Michael C. Archinal



**GENOA CHARTER TOWNSHIP**  
**Application for Site Plan Review**

**TO THE GENOA TOWNSHIP PLANNING COMMISSION AND TOWNSHIP BOARD:**

APPLICANT NAME & ADDRESS: Mr. Mike Barnett Sun Communities, 2777 Franklin Road Suite 200 Southfield, MI 48034  
*If applicant is not the owner, a letter of Authorization from Property Owner is needed.*

OWNER'S NAME & ADDRESS: Mr. Mike Barnett Sun Communities, 2777 Franklin Road Suite 200 Southfield, MI 48034

SITE ADDRESS: 6600 Grand River, Brighton, MI 48114 PARCEL #(s): 4711-14-200-004

APPLICANT PHONE: ( 248 ) 208-2500 OWNER PHONE: ( 248 ) 208-2500

OWNER EMAIL: mbarnett1@suncommunities.com

LOCATION AND BRIEF DESCRIPTION OF SITE: \_\_\_\_\_

Located on the south side of Grand River between Dorr Rd. and Grand Beach Drive.

Site is the location of an existing clubhouse for Sylvan Glen Estates,  
a mobile home community.

BRIEF STATEMENT OF PROPOSED USE: \_\_\_\_\_

Existing clubhouse renovation to include: new pool and deck,  
restroom addition and fitness center. Site work to include 10 additional  
parking spaces and storm water management system.

THE FOLLOWING BUILDINGS ARE PROPOSED: \_\_\_\_\_

Restroom and fitness center additions totaling 1,090 sf

**I HEREBY CERTIFY THAT ALL INFORMATION AND DATA ATTACHED TO AND MADE PART OF THIS APPLICATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.**

BY: Mark Melchi/ AR Brouwer Company


ADDRESS: 2830 Baker Road Suite 100, Dexter, MI 48130

**Contact Information** - Review Letters and Correspondence shall be forwarded to the following:

1.) Mark Melchi of AR Brouwer Company at markmelchi@arbrouwer.com  
Name Business Affiliation E-mail Address

**FEE EXCEEDANCE AGREEMENT**

As stated on the site plan review fee schedule, all site plans are allocated two (2) consultant reviews and one (1) Planning Commission meeting. If additional reviews or meetings are necessary, the applicant will be required to pay the actual incurred costs for the additional reviews. If applicable, additional review fee payment will be required concurrent with submittal to the Township Board. By signing below, applicant indicates agreement and full understanding of this policy.

SIGNATURE:  DATE: 05.03.22  
PRINT NAME: Mark Melchi PHONE: 734.426.9980  
ADDRESS: 2830 Baker Road Suite 100, Dexter, MI 48130

**Moved** by Commissioner Dhaenens, seconded by Commissioner Lowe, to recommend to the Township Board approval of the rezoning dated May 31, 2022 to rezone 20-acres from Rural Residential (RR) to Country Estates (CE) for property located at 5320 Richardson Road on the west side of Richardson Road, south of Brighton Road as the Planning Commission finds that the Country Estates zoning is generally consistent with the rezoning criteria of Section 22.04 of the zoning ordinance, the request is consistent with the goals of the Township Master Plan, the request is anticipated to be compatible with the surrounding area and the host of uses permitted in Country Estates are compatible with existing and planned uses in the surrounding area. This recommendation is conditioned upon the following:

- All conditions of the township engineer, Brighton Area Fire Authority, Drain Commissioner and Road Commission shall be met.

**The motion carried unanimously.**

**OPEN PUBLIC HEARING #3...** Consideration of an environmental impact assessment and site plan for a proposed renovation and addition to the existing clubhouse located inside the Sylvan Glen Manufactured Housing Park. The park is located at 6600 Grand River Avenue, south side of Grand River, east of Dorr Road. The request is petitioned by Mike Barnett, Sun Communities.

- A. Recommendation of Environmental Impact Assessment (5-3-22)
- B. Disposition of Site Plan (5-26-22)

Mr. Robert Miller of M Architects provided a review of the project. They will be adding a pool and a small addition to the clubhouse to include bathrooms and a fitness room. They will also be making improvements to the office and reception area.

Mr. Borden reviewed his letter dated June 7, 2022.

1. The applicant should provide elevation views for the remaining two sides of the equipment storage building.
2. The elevations are mislabeled on Sheet A301.
3. The applicant should be prepared to submit material samples and color samples for the Commission's consideration.
4. The applicant must include a typical light pole detail demonstrating that the maximum height requirement of 20 feet is met.
5. The applicant must address comments provided by the Township Engineer and/or Brighton Area Fire Authority.

Ms. Byrne reviewed her letter dated June 8, 2022.

1. The plans need to be signed and sealed by a professional engineer.
2. The petitioner is proposing swales and a riprap area to control the additional drainage from the site. The riprap area is intended to fill up and overflow across the site drive during a storm event. The storm management for the site should be designed so that overflow stormwater is not being conveyed across the access drive to the site. A culvert will be needed to direct flow to the west side of the existing drive.

The June 3, 2022 letter from the Fire Marshal states that all of his previous concerns have been addressed by the applicant.

Mr. Miller submitted a drawing of the side elevations to the Planning Commission. He showed the proposed materials.

Commissioner McCreary asked how the safety of the pool and the building is handled. Ms. Anita Haddock, the property manager, stated this is for the residents only. There will be a lifeguard on duty and there will be pool monitors. There will always be someone in the office while the pool is open.

The call to the public was made at 7:19 pm with no response.

**Moved** by Commissioner Rauch, seconded by Commissioner Lowe, to recommend to the Township Board approval of the Environmental Impact Assessment dated May 3, 2022 for a proposed renovation and addition to the existing clubhouse located inside the Sylvan Glen Manufactured Housing Park. **The motion carried unanimously.**

**Moved** by Commissioner Rauch, seconded by Commissioner Dhaenens, to approve the Site Plan dated May 26, 2022 for a proposed renovation and addition to the existing clubhouse located inside the Sylvan Glen Manufactured Housing Park, with the following conditions:

- The elevation views for the remaining two sides of the equipment storage building shall be supplied to staff for review & approval
- The mislabeling of the elevations on Sheet A301 shall be corrected.
- The material samples and colors viewed this evening are acceptable to the Planning Commission and shall be submitted and become property of the Township.
- The light pole height must conform to the requirements of a maximum height of 20 feet. The light pole details shall be submitted to staff for review & approval.
- The items listed in the township's engineer letter dated June 8, 2022 shall be met, specifically, to accommodate for the overflow of the stormwater management system
- The applicant must address comments provided by the Brighton Area Fire Authority.

**The motion carried unanimously.**

**OPEN PUBLIC HEARING #4...**Consideration of an amendment to the master deed and bylaws for Chestnut Springs to allow a detached accessory structure on lot 25. The property in question is located on the east side of Chilson Road, South of Brighton Road along the southern Township boundary with Hamburg Township. The request is petitioned by Chestnut Development LLC.

A. Recommendation of Master Deed and Bylaws amendment

Ms. Catherine Riesterer of Cooper & Riesterer, the attorney for the applicant, and Christian Bugeja of Chestnut Development were present. This was a development built by the Chestnut Group. Most of the homes are on 1-2 acre lots and there is one large 25-acre parcel; however,



June 7, 2022

Planning Commission  
Genoa Township  
2911 Dorr Road  
Brighton, Michigan 48116

<b>Attention:</b>	Kelly Van Marter, AICP Planning Director and Assistant Township Manager
<b>Subject:</b>	Sylvan Glen Clubhouse – Site Plan Review #2
<b>Location:</b>	6600 Grand River Avenue– south side of Grand River, east of Dorr Road
<b>Zoning:</b>	MHP Manufactured Housing Park District

Dear Commissioners:

At the Township’s request, we have reviewed the request from Sylvan Glen to renovate and expand their existing clubhouse, and construct a pool and deck (revised plans dated 5/25/22).

**A. Summary**

1. The applicant should provide elevation views for the remaining 2 sides of the equipment storage building.
2. The elevations are mislabeled on Sheet A301.
3. The applicant should be prepared to submit material samples and color samples for the Commission’s consideration.
4. The applicant must include a typical light pole detail demonstrating that the maximum height requirement is met (20’).
5. The applicant must address comments provided by the Township Engineer and/or Brighton Area Fire Authority.

**B. Proposal/Process**

The applicant proposes renovation and expansion of an existing clubhouse building, and construction of a pool, deck surround, trellis, equipment storage building, and additional parking spaces.

Section 4.02 lists community buildings for use by tenants as a permitted use in the MHP.

Procedurally, the Planning Commission is to review the site plan and Environmental Impact Assessment. The Commission has approval authority over the site plan, while the Impact Assessment is subject to review and approval by the Township Board (following a recommendation from the Planning Commission.)



*Aerial view of site and surroundings (looking north)*

### C. Site Plan Review

- 1. Dimensional Requirements.** The existing building and proposed project comply with the minimum setbacks and maximum building height for the MHP District.
- 2. Building.** The existing building is comprised of brick, wood siding, and glass, with EIFS and metal accents. The proposed additions are primarily faced with EIFS.

The revised submittal includes drawings for 2 sides of the equipment storage building, which is faced with vertical wood siding. The applicant should provide elevation views of the remaining 2 sides.

Additionally, the elevations on Sheet A301 appear to be mislabeled and there are 2 plan sheets numbered A301.

The applicant should be prepared to submit material samples and color samples for the Commission's consideration as part of this site plan review.

- 3. Pedestrian Circulation.** Per Section 12.05, a 5-foot wide sidewalk is required along Grand River Avenue. The revised submittal includes the required sidewalk along Grand River with a connection to the existing sidewalk immediately east of the site.

Internally, the project includes new sidewalks around the building and along the edge of the proposed parking spaces.

- 4. Vehicular Circulation.** The existing drive aisles on each side of the building are of sufficient width for the established one-way circulation pattern.

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

- 5. Parking.** Based on the parking requirement for a private club, 25 spaces are required by Ordinance. The proposal provides 25 spaces, including the required barrier-free space.

The proposed spaces meet the dimensional requirements of the Ordinance, and the revised submittal includes looped (double striped) spaces for the new parking.

6. **Landscaping.** The revised submittal includes a detailed landscape plan for the project, which proposes 12 trees, 155 shrubs, and a variety of ornamental perennials and grasses. Additionally, the existing trees around the project area will be preserved.
7. **Exterior Lighting.** The revised submittal includes a full lighting plan, which depicts 24 new light poles along the ingress/egress drives. Fixture details note the use of downward directed, cut-off LED fixtures.

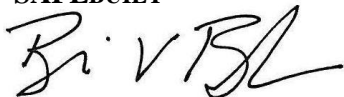
Maximum light intensities (both on-site and along property lines) meet Ordinance standards, though the applicant must provide a typical light pole detail to ensure that the maximum height of 20' is met.

8. **Impact Assessment.** The submittal includes the required Environmental Impact Assessment (dated 5/3/22).

In summary, the Assessment notes that the proposed project is not expected to adversely impact natural features, stormwater, surrounding land, public services/utilities, or traffic and pedestrians.

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



# BRIGHTON AREA FIRE AUTHORITY

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

June 3, 2022

Kelly VanMarter  
Genoa Township  
2911 Dorr Road  
Brighton, MI 48116

RE: Sylvan Glen Clubhouse Renovation  
6600 Grand River  
Genoa Twp., MI

Dear Kelly:

The Brighton Area Fire Department has reviewed the above-mentioned site plan. The plans were received for review on June 1, 2022 and the drawings are dated May 4, 2022 with latest revisions dated May 25, 2022. The project is based on the proposed addition of a new outdoor in-ground swimming pool area and associated building addition of 1,090 square feet. The additions will include a fitness center and restrooms for the pool area. Additional renovation is not proposed for the clubhouse, however, determination of the level of alteration will be left to the building department.

The plan review is based on the requirements of the International Fire Code (IFC) 2021 edition.

**All comments and recommendations from the previous submittal have been addressed or acknowledged on the most recent submittal.**

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 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, FM, CFPS  
Fire Marshal

cc: Amy Ruthig [amy@genoa.org](mailto:amy@genoa.org)

**From:** [Matt Bolang](#)  
**To:** [Amy Ruthig](#)  
**Cc:** [Aaron Aumock](#); [Heather Blair](#)  
**Subject:** RE: Sylvan Glen Clubhouse Reno Site Plan  
**Date:** Thursday, May 5, 2022 1:17:05 PM  
**Attachments:** [image002.png](#)  
[image003.png](#)  
[image004.png](#)  
[image005.png](#)  
[Sun Sylvan Glen Site Plans Submission 05-04-22.pdf](#)  
[Sylvan Glen Impact Assessment 05-03-22.pdf](#)  
[Application.pdf](#)

---

Amy,

If approved by the township, the applicant would need to follow the requirements of the State of Michigan to construct a public swimming pool. More information can be found here:  
<https://www.michigan.gov/egle/about/organization/drinking-water-and-environmental-health/public-swimming-pools>

Since Sylvan Glen operates their own wastewater treatment and public drinking water, LCHD does not have jurisdiction for the clubhouse renovations.

Thanks,  
Matt

**Matt Bolang, MSA, REHS**  
**Deputy Health Officer**  
**Director of Environmental Health**  
Livingston County Health Department  
2300 East Grand River  
Howell, MI 48843

517-552-6870 | [www.lchd.org](http://www.lchd.org)



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**From:** Amy Ruthig <amy@genoa.org>  
**Sent:** Thursday, May 5, 2022 9:37 AM  
**To:** Matt Bolang <MBolang@livgov.com>  
**Subject:** [EXT] Sylvan Glen Clubhouse Reno Site Plan

05.03.22

**Impact Assessment**

Sylvan Glen Estates Clubhouse Addition  
6600 Grand River Avenue  
Genoa Township, Livingston County, MI

Prepared for:  
Sun Communities, Sylvan Glen Estates  
2777 Franklin Road  
Southfield, MI 48034

*A. Name(s) and address(es) of person(s) responsible for preparation of the impact assessment and a brief statement of their qualifications.*

Prepared by:  
AR Brouwer Company  
2830 Baker Road, Suite 100  
Dexter, MI 48130

AR Brouwer Company is a design-build construction company located in Dexter, MI and is responsible for coordinating the site planning, design, permitting and construction of the facility.

*B. Map(s) and written description/analysis of the project site including all existing structures, manmade facilities, and natural features. The analysis shall also include information for areas within 10 feet of the property. An aerial photograph or drawing may be used to delineate these areas.*

The site is located on the south side of Grand River Avenue, directly across from Cortland Boulevard, and 650 feet west of Kellogg Road. Existing site features include a clubhouse with parking, and several paved outdoor spaces. The property to the west is vacant, and the property to the east is residential property under the same ownership. See attached aerial map.

*C. Impact on natural features: A written description of the environmental characteristics of the site prior to development and following development, i.e., topography, soils, wildlife, woodlands, mature trees (eight-inch caliper or greater), wetlands, drainage, lakes, streams, creeks or ponds. Documentation by a qualified wetland specialist shall be required wherever the Township determines that there is a potential regulated wetland. Reduced copies of the Existing Conditions Map(s) or aerial photographs may accompany written material.*

The existing site includes a clubhouse facility surrounded by lawn areas and paved recreation areas. It is encircled by streets that lead into the development. 15 parking spaces are located in front of the building, and there are several mature trees located in the lawn areas.

*D. Impact on stormwater management: Description of measures to control soil erosion and sedimentation during grading and construction operations and until a permanent ground cover is established. Recommendations for such measures may be obtained from the Livingston County Drain Commission at (517) 546-0040.*

Surface runoff from the disturbed area of the site will be controlled by proper methods set forth by the Livingston County Drain Commissioner, including silt fence and inlet protection as necessary. A storm water management system will be designed to meet the Drain Commissioner's standards.

*E. Impact on surrounding land used: Description of the types of proposed uses and other man-made facilities, including any project phasing, and an indication of how the proposed use conforms or conflicts with existing and potential development patterns. A description shall be provided of any increases of light, noise or air pollution which could negatively impact adjacent properties.*

The use of the facility as a clubhouse will not change, and a swimming pool and deck will be added for the benefit of the residents. The development will improve the existing condition of the building and grounds and will not negatively impact adjacent properties.

*F. Impact on public facilities and services: Describe the number of expected residents, employees, visitors, or patrons, and the anticipated impact on public schools, police protection and fire protection. Letters from the appropriate agencies may be provided, as appropriate.*

The clubhouse addition and swimming pool is for the benefit of the residents of Sylvan Glen Estates. The facilities will bring increased visits by the residents to make use of the new pool and fitness center. There will be no impact on schools, police or fire protection.

*G. Impact on public utilities: Describe the method to be used to service the development with water and sanitary sewer facilities, the method to be used to control drainage on the site and from the site, including runoff control during periods of construction. For sites serviced with sanitary sewer, calculations for pre- and post development flows shall be provided in comparison with sewer line capacity. Expected sewage rates shall be provided in equivalents to a single family home. Where septic systems are proposed, documentation or permits from the Livingston County Health Department shall be provided.*

The building addition will be served by existing sewer and water utilities. The utilities are sized to handle the minor increase in usage created by the new restrooms. Drainage from the site will be handled by a storm water management system approved by the Drain Commissioner, and soil erosion control measures will be in place during the construction period.

*H. Storage and handling of any hazardous materials: A description of any hazardous substances expected to be used, stored or disposed of on the site. The information shall describe the type of materials, location within the site and method of containment. Documentation of compliance with federal and state requirements, and a Pollution Incident Prevention Plan (PIPP) shall be submitted, as appropriate.*

There will be no hazardous materials onsite.

*I. Impact on Traffic and Pedestrians: A description of the traffic volumes to be generated based on national reference documents, such as the most recent edition of the Institute of Transportation Engineers Trip Generation Manual, other published studies or actual counts of similar uses in*

*Michigan.*

Traffic volumes will not be impacted, as the clubhouse and addition serve the existing residents of Sylvan Glen Estates.

*J. Special Provisions: General description of any deed restrictions, protective covenants, master deed or association bylaws.*

N/A

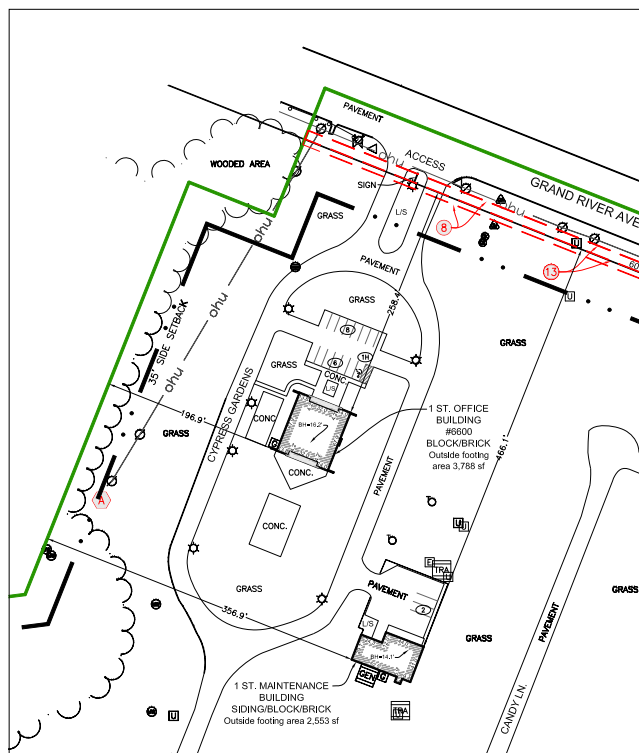
*K. A list of all sources shall be provided.*

N/A





Sylvan Glen Estates  
Clubhouse Renovation  
Existing Aerial



Sylvan Glen Estates  
Clubhouse Renovation  
Existing Survey



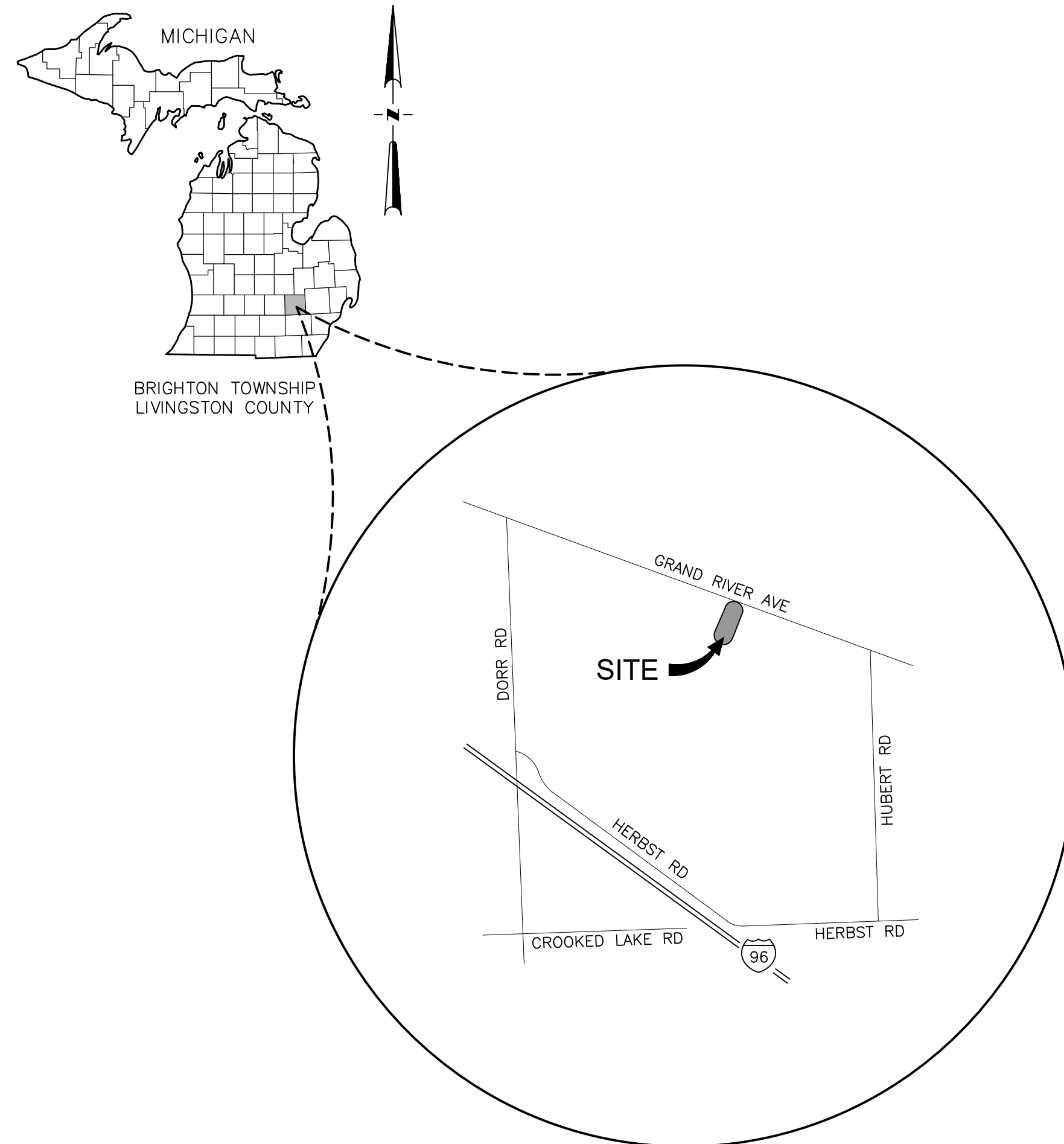
LEGAL DESCRIPTION (AS PROVIDED)

(PER: ALTA SURVEY BY: MICHIGAN SURVEYING, INC., JOB NO.: 21-7135, DATED: 4/15/2021)

LAND SITUATED IN THE TOWNSHIP OF GENOA IN THE COUNTY OF LIVINGSTON IN THE STATE OF MICHIGAN COMMENCING AT THE WEST 1/4 CORNER OF SECTION 14, TOWN 2 NORTH, RANGE 5 EAST, GENOA TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN; THENCE N 02°16'19" W (RECORDED AS N 00°15'00" W) 142.39 FEET ALONG THE WEST LINE OF SAID SECTION AND THE CENTERLINE OF DORR ROAD FOR A PLACE OF BEGINNING; THENCE CONTINUING N 02°16'19" W (RECORDED AS N 00°15'00" W) 414.81 FEET ALONG SAID SECTION AND CENTERLINE; THENCE N 87°17'00" E (RECORDED AS N 89°18'20" W) 1830.29 FEET; THENCE N 02°01'19" W (RECORDED AS N 00°15'00" E) 518.76 FEET; THENCE S 87°58'41" W (RECORDED AS WEST) 175.00 FEET; THENCE N 02°01'19" W (RECORDED AS NORTH) 482.18 FEET; THENCE N 82°59'37" E (RECORDED AS N 85°14'00" E) 1268.16 FEET; THENCE N 21°55'21" E (RECORDED AS N 23°47'00" E) 483.63 FEET; THENCE S 68°04'39" E (RECORDED AS S 68°13'00" E) 100 FEET; THENCE N 21°55'21" E (RECORDED AS N 23°47'00" E) 150.00 FEET; THENCE S 68°04'39" E (RECORDED AS S 68°13'00" E) 809.69 FEET; THENCE S 01°52'09" E (RECORDED AS S 01°45' W) 1036.53 FEET ALONG THE EAST LINE OF THE WEST 1/2 OF THE NORTHEAST 1/4 OF SECTION 14 AND THE WESTERLY RIGHT-OF-WAY OF GRAND BEACH DRIVE AS RECORDED IN THE PLAT OF GRAND BEACH, LIBER 2 OF PLATS, PAGE 5, LIVINGSTON COUNTY RECORDS; THENCE S 75°13'02" W 363.41 FEET (RECORDED AS S 75°10' W 369.3 FEET) ALONG THE NORTHERLY RIGHT-OF-WAY OF SAID GRAND BEACH DRIVE; THENCE S 55°53'02" W (RECORDED AS S 59°30' W) 337.00 FEET ALONG THE NORTHWESTERLY RIGHT-OF-WAY OF SAID GRAND BEACH DRIVE; THENCE S 01°26'58" E (RECORDED AS S 02°30' W) 570.86 FEET; THENCE N 87°44'36" E (RECORDED AS S 89°51'33" E) 634.24 FEET; THENCE S 40°52'48" W 811.70 FEET (RECORDED AS S 42°57' W 815.00 FEET) ALONG THE NORTHWESTERLY LINE OF GRAND BEACH NO. 2 A SUBDIVISION AS RECORDED IN LIBER 11 OF PLATS, PAGE 17, LIVINGSTON COUNTY RECORDS; THENCE S 48°49'14" W (RECORDED AS S 50°57' W) 60.00 FEET ALONG THE NORTHWESTERLY LINE OF SAID GRAND BEACH NO. 2; THENCE S 12°32'58" E (RECORDED AS S 10°16' E) 289.90 FEET ALONG THE WESTERLY LINE OF SAID GRAND BEACH NO. 2; THENCE S 02°18'19" E (RECORDED AS S 00°17' E) 70.63 FEET ALONG THE WESTERLY LINE OF SAID GRAND BEACH NO. 2; THENCE N 88°20'04" E (RECORDED AS S 89°34' E) 571.95 FEET ALONG THE SOUTHERLY LINE OF SAID GRAND BEACH NO. 2; THENCE S 01°49'21" E 1658.06 FEET (RECORDED AS S 00°15'23" E 1657.85 FEET); THENCE S 87°53'31" W 699.42 FEET (RECORDED AS S 89°58'11" W 699.55) ALONG THE SOUTH LINE OF SAID SECTION AND THE CENTERLINE OF HERBST ROAD; THENCE N 02°06'29" W (RECORDED AS N 00°01'49" W) 50.00 FEET; THENCE S 87°53'31" W 125.19 FEET (RECORDED AS S 89°58'11" W 120.55 FEET); THENCE N 53°28'50" W 1085.80 FEET; THENCE N 02°19'22" W 1007.36 (RECORDED AS N 00°29'14" W 1007.04 FEET); THENCE N 01°37'39" W 922.92 FEET (RECORDED AS N 00°04'19" E 932.50 FEET); THENCE S 87°44'38" W (RECORDED AS 89°30'56" W) 2060.49 FEET ALONG THE EAST -WEST 1/4 LINE OF SAID SECTION; THENCE 211.96 FEET ALONG THE ARC OF A 500.74 FOOT RADIUS CURVE TO THE LEFT, HAVING A CENTRAL ANGLE OF 24°15'11" AND A LONG CHORD WHICH BEARS N 60°07'59" W 210.38 FEET; THENCE N 72°15'35" W 89.26 FEET TO THE PLACE OF BEGINNING.

THE PROPERTY DESCRIBED IN THIS SURVEY IS THE SAME PROPERTY AS DESCRIBED IN THE COMMITMENT FOR TITLE INSURANCE ISSUED BY FIRST AMERICAN TITLE INSURANCE COMPANY, ORDER NO: C000124057; COMMITMENT DATE: MARCH 17, 2021, 8:00 AM.

# PRELIMINARY SITE PLAN DRAWING FOR SYLVAN GLEN ESTATES CLUBHOUSE & POOL EXPANSION



LOCATION MAP

Table with columns: SHEET, GENERAL, SURVEY, CIVIL DEMOLITION, SITE PLAN, UTILITY, SECS AND GRADING, STORM WATER MANAGEMENT, DETAILS, SPECIFICATIONS, LANDSCAPE, LIGHTING, ARCHITECTURE, SWIMMING POOL, INCLUDED SHEETS. Includes a 'SHEET INDEX' table at the top right.

DESIGN ENGINEER



MONUMENT ENGINEERING GROUP ASSOCIATES, INC

INNOVATIVE GEOSPATIAL & ENGINEERING SOLUTIONS

298 VETERANS DRIVE, FOWLerville, MI 48836 ALLAN W PRUSS, PE, PS PHONE: 517-223-3512

CLIENT

AR BROUWER COMPANY 2830 BAKER ROAD, SUITE 100 DEXTER, MI 48114 POC: JEFF LOVELAND PHONE: 734-426-9980

POOL DESIGNER

HOUSE-SEAMAN ARCHITECTS PLLC P.O. BOX 1844 BRIGHTON, MI 48116 POC: KELLY HOUSE-SEAMAN PHONE: 810-531-1902

ARCHITECT

M ARCHITECTS 114 RAYSON ST. SUITE 20 NORTHVILLE, MI 48167 POC: ROBERT MILLER PHONE: 248-349-2708

OWNER

SUN COMMUNITIES, INC. 24444 FRANKLIN RD, SUITE 200 SOUTHFIELD, MI 48034 POC: MICHAEL BARNETT PHONE: 248-864-0358



DRAFT signature

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CLIENT: AR BROUWER COMPANY 2830 BAKER ROAD, SUITE 100 BRIGHTON, MI 48130 JEFF LOVELAND

COVER SYLVAN GLEN ESTATES CLUBHOUSE & POOL EXPANSION PART OF NE 1/4, SEC 14, T02N, R05E BRIGHTON TOWNSHIP, LIVINGSTON COUNTY, MI

Table with columns: DATE, PLAN SUBMITTALS/REVISIONS, SITE PLAN REVIEW, REVISION PER COMMENTS. Includes a 'NOT FOR CONSTRUCTION' stamp on the right side.

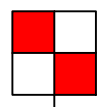
ORIGINAL ISSUE DATE: 05/04/2022

PROJECT NO: 22-093

SCALE: N/A 0 1/2" 1"

FIELD: (BY OTHERS) DRAWN BY: MV DESIGN BY: TDB CHECK BY: AP

G-10

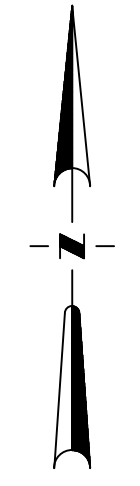


**AERIAL SOURCE**

AERIAL IMAGE PER ESRI/DIGITAL GLOBE  
DATE: UNKNOWN

**SURVEY SOURCE**

ALTA SURVEY BY: MICHIGAN SURVEYING, INC.,  
JOB NO.: 21-7135, DATED: 4/15/2021.



INNOVATIVE GEOSPATIAL & ENGINEERING SOLUTIONS

298 VETERANS DRIVE  
FOWLERVILLE, MICHIGAN 48836  
(OFFICE) 517-223-3512  
MONUMENTENGINEERING.COM

SERVICE DISABLED VETERAN OWNED  
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**DRAFT**

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**CLIENT :**

**AR BROUWER COMPANY**

2830 BAKER ROAD, SUITE 100  
BRIGHTON, MI 48130  
JEFF LOVELAND

**TOPOGRAPHIC SURVEY (OVERVIEW)**

SYLVAN GLEN ESTATES  
CLUBHOUSE & POOL EXPANSION  
PART OF NE 1/4, T02N, R05E  
BRIGHTON TOWNSHIP, LIVINGSTON COUNTY, MI

PLAN SUBMITTALS/REVISIONS	DATE
SITE PLAN REVIEW	05/04/2022
REVISED PER COMMENTS	05/25/2022

ORIGINAL ISSUE DATE:  
05/04/2022

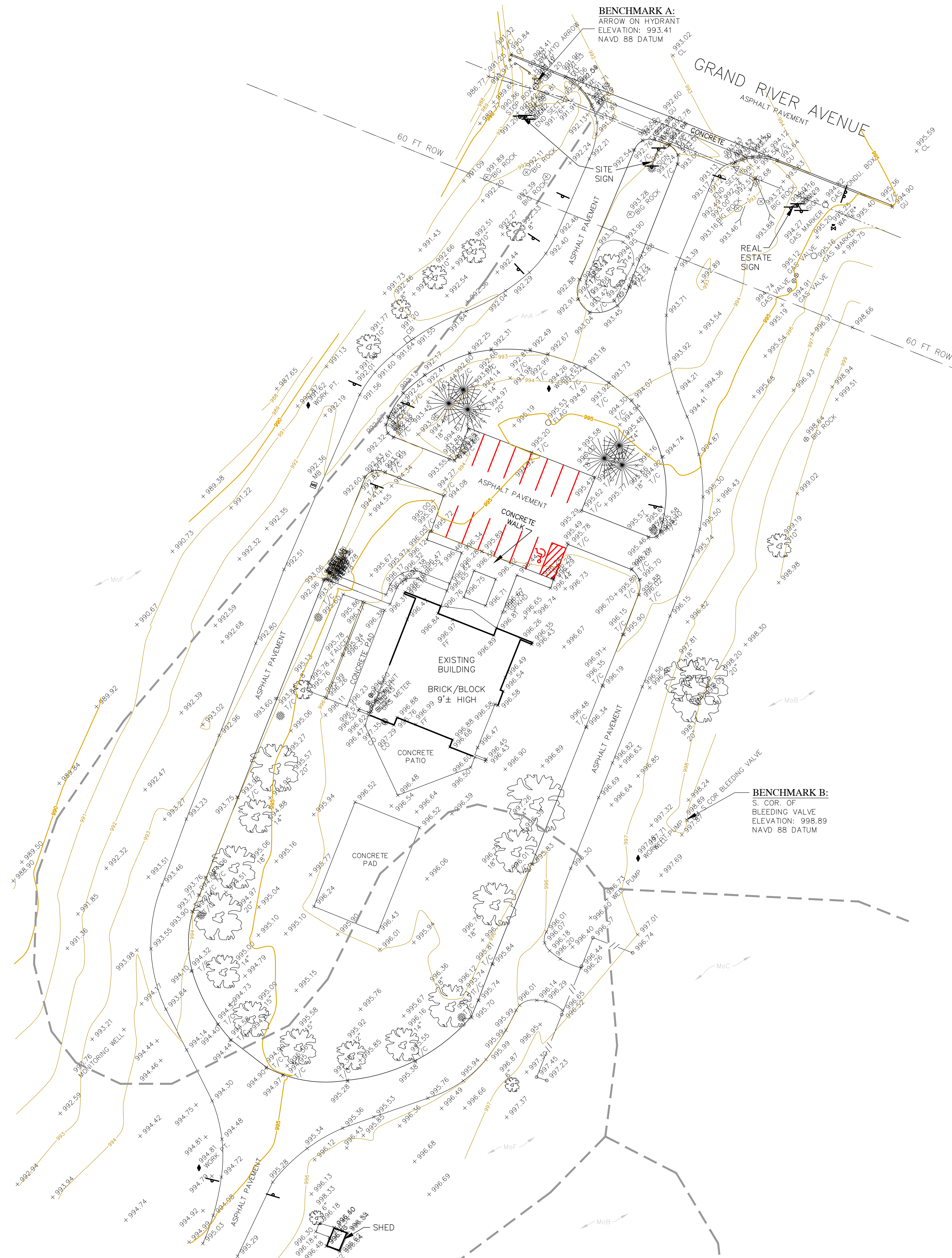
PROJECT NO: 22-093

SCALE: 1" = XX'

FIELD: (BY OTHERS)  
DRAWN BY: MV  
DESIGN BY: TDB  
CHECK BY: AP

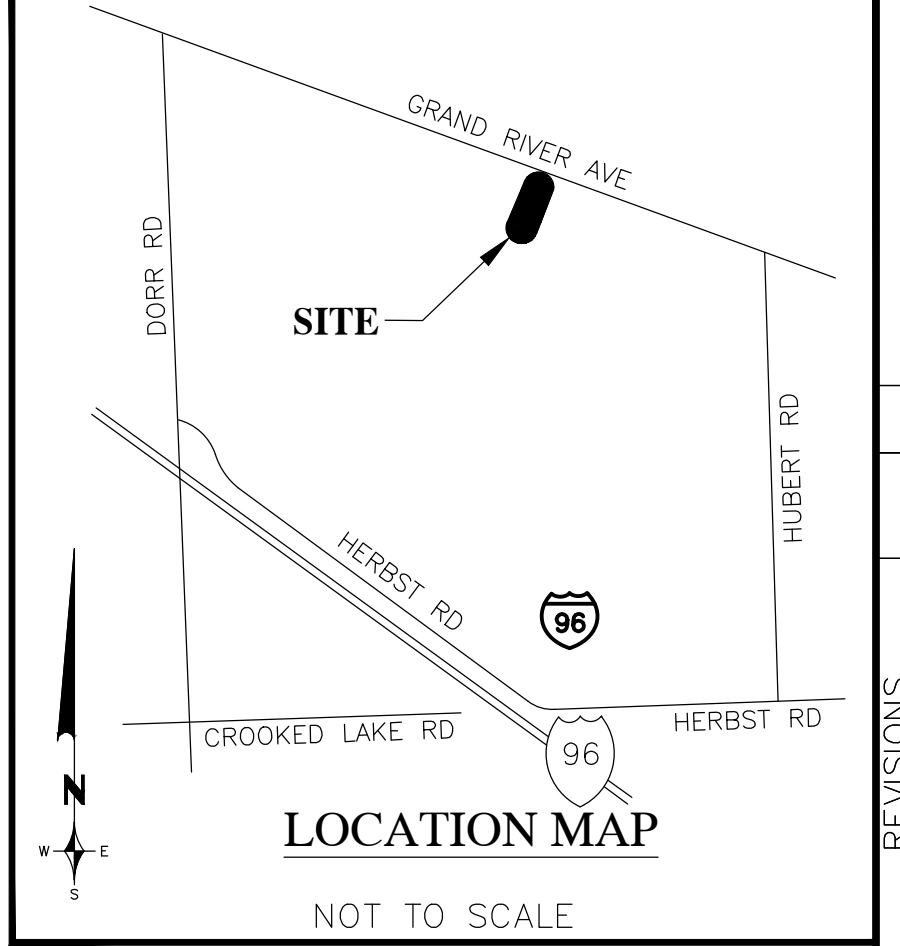
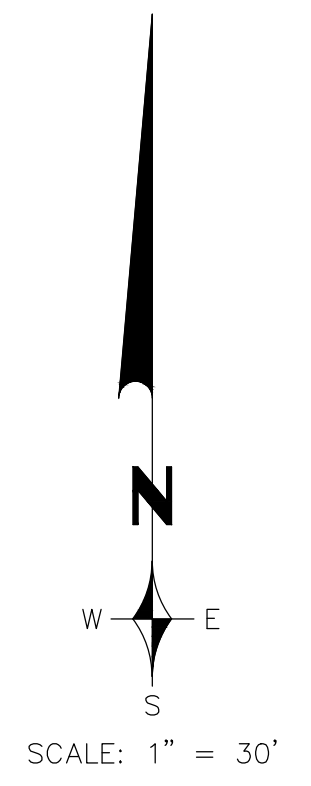
**V-10**

NOT FOR CONSTRUCTION



**BENCHMARK A:**  
 ARROW ON HYDRANT  
 ELEVATION: 993.41  
 NAVD 88 DATUM

**BENCHMARK B:**  
 S. COR. OF BLEEDING VALVE  
 ELEVATION: 998.89  
 NAVD 88 DATUM



**SOILS INFO**

SOIL TYPES ARE ACCORDING TO THE USDA SOIL SURVEY WEB SITE  
 (<https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>)

- MoB: WAWASEE LOAM, 2-6% SLOPES
- MoC: WAWASEE LOAM, 6-12% SLOPES
- MoF: MIAMI LOAM, 25-35% SLOPES

**BENCHMARKS**

DATUM: NAVD88  
 BENCHMARK A:  
 ARROW ON HYDRANT  
 ELEV = 993.41  
 BM B:  
 S. COR. OF BLEEDING VALVE  
 ELEV = 998.89

DATE:	BY:	REVISIONS:
SCALE: HOR: 1" = 30'		
VER: 1" = 30'		
JOB NO. 21137		
SHEET NO. T-1		
FIELD BOOK 1123		
RECORD #		
DRAWN BY: PTC		
PROJECT SPONSOR:		
TOPOGRAPHIC SURVEY		
6600 GRAND RIVER AVENUE		
BRIGHTON		MICHIGAN
ZEMET Wozniak & Associates Civil Engineers & Land Surveyors 5000 HUNTER ROAD, SUITE 100 BRIGHTON, MICHIGAN 48116 P: (248) 437-5099 F: (248) 437-5222 www.zemetwomak.com		

**ZONING INFORMATION**

THIS ZONING INFORMATION IS TAKEN FROM GENOA TOWNSHIP ZONING ORDINANCE  
DATED: 03/05/10

SUBJECT PARCEL ZONING: (MHP) MANUFACTURED HOUSING PARK	SUBJECT PARCEL		PROPOSED BUILDING		MAXIMUM HEIGHT OF BUILDING		BUILDING SETBACKS (FT)			PARKING SETBACKS (FT)			SIGN SETBACK	MAXIMUM % LOT AREA COVERED BY ALL BUILDINGS	MAXIMUM % OF IMPERVIOUS SURFACE
	AREA (AC)	WIDTH AT BUILDING SITE (FT)	BLDG A AREA (SF)	BLDG B AREA (SF)	IN STORIES	IN FEET	FRONT (N)	SIDE (S,E,W)	REAR (N,S,E,W)	FRONT (N,S,E,W)	SIDE (N,S,E,W)	REAR (N,S,E,W)			
REQUIRED	NA	50	5,500	5,500	1	14	50	35	35	50	35	35	NA	NA	NA
PROVIDED	4.58	280	300	1,086	9	NA	274	123	NA	180	120	NA	NA	NA	NA

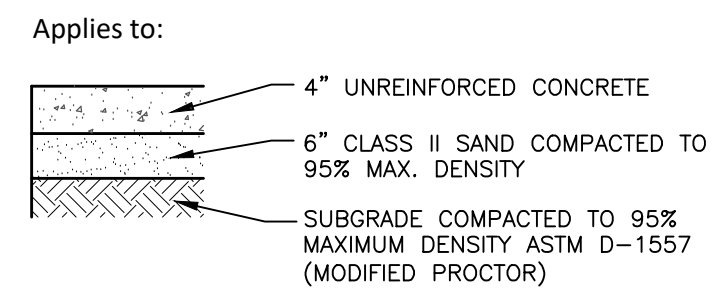
**ADJACENT ZONING**

NORTH: (MDR) MEDIUM DENSITY RESIDENTIAL  
SOUTH: (NA) NOT APPLICABLE  
EAST: (NA) NOT APPLICABLE  
WEST: (OS) OFFICE SERVICE

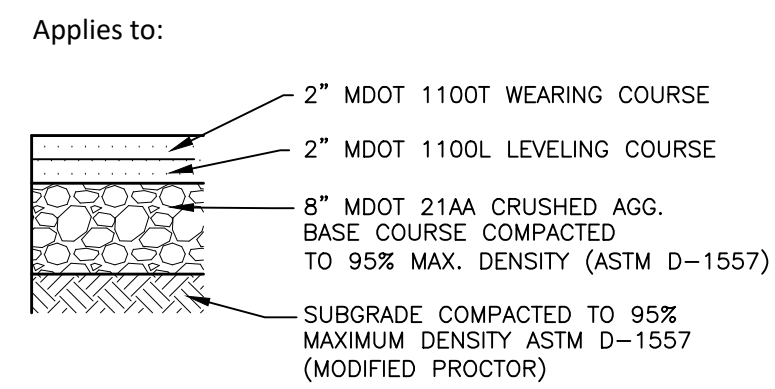
**% OF IMPERVIOUS SURFACES**

% OF BUILDINGS AND IMPERVIOUS SURFACES IS NOT APPLICABLE. PROJECT SITE IS ONLY A PORTION OF THE PROPERTY. % OF IMPERVIOUS SURFACES HOLDS NO WEIGHT.

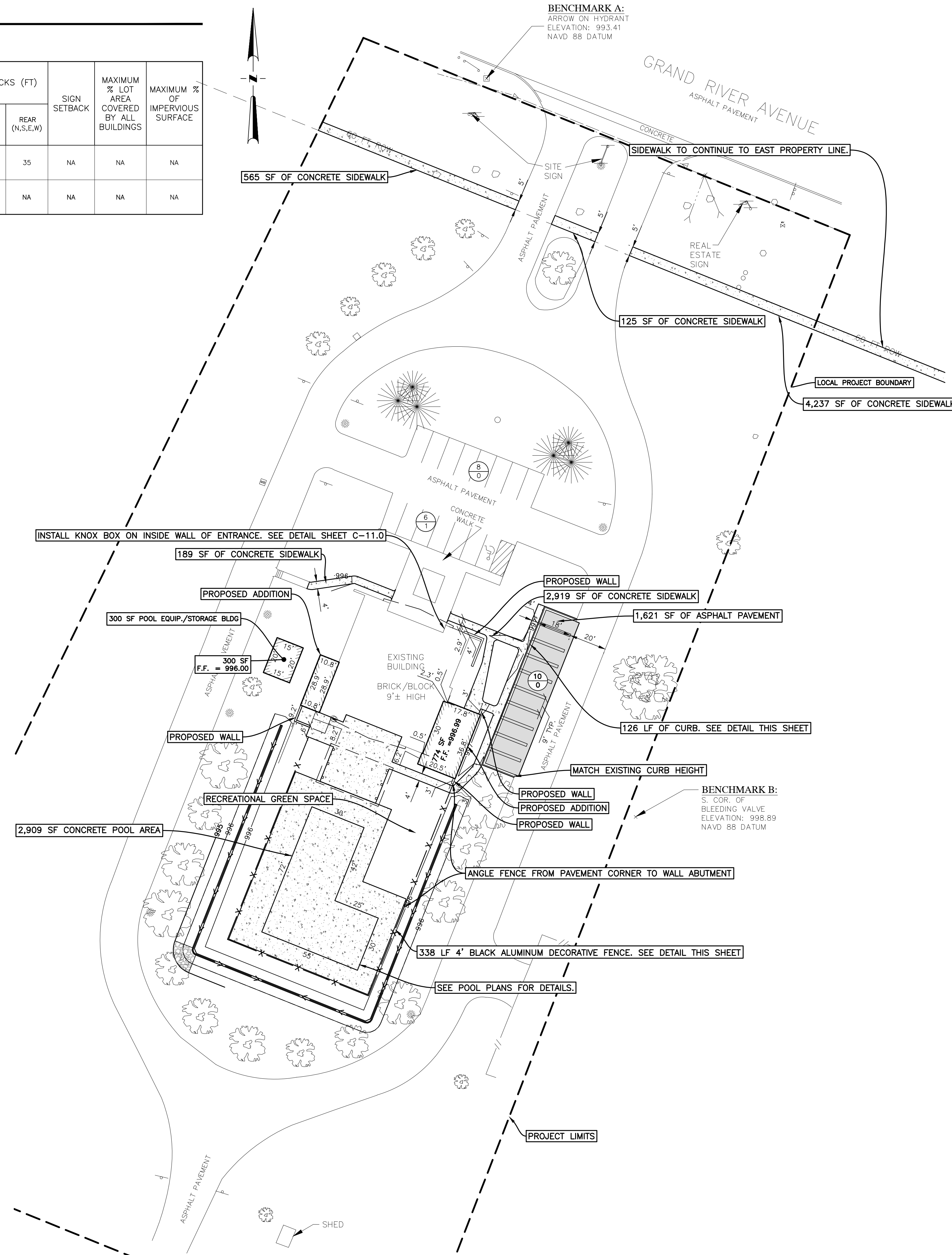
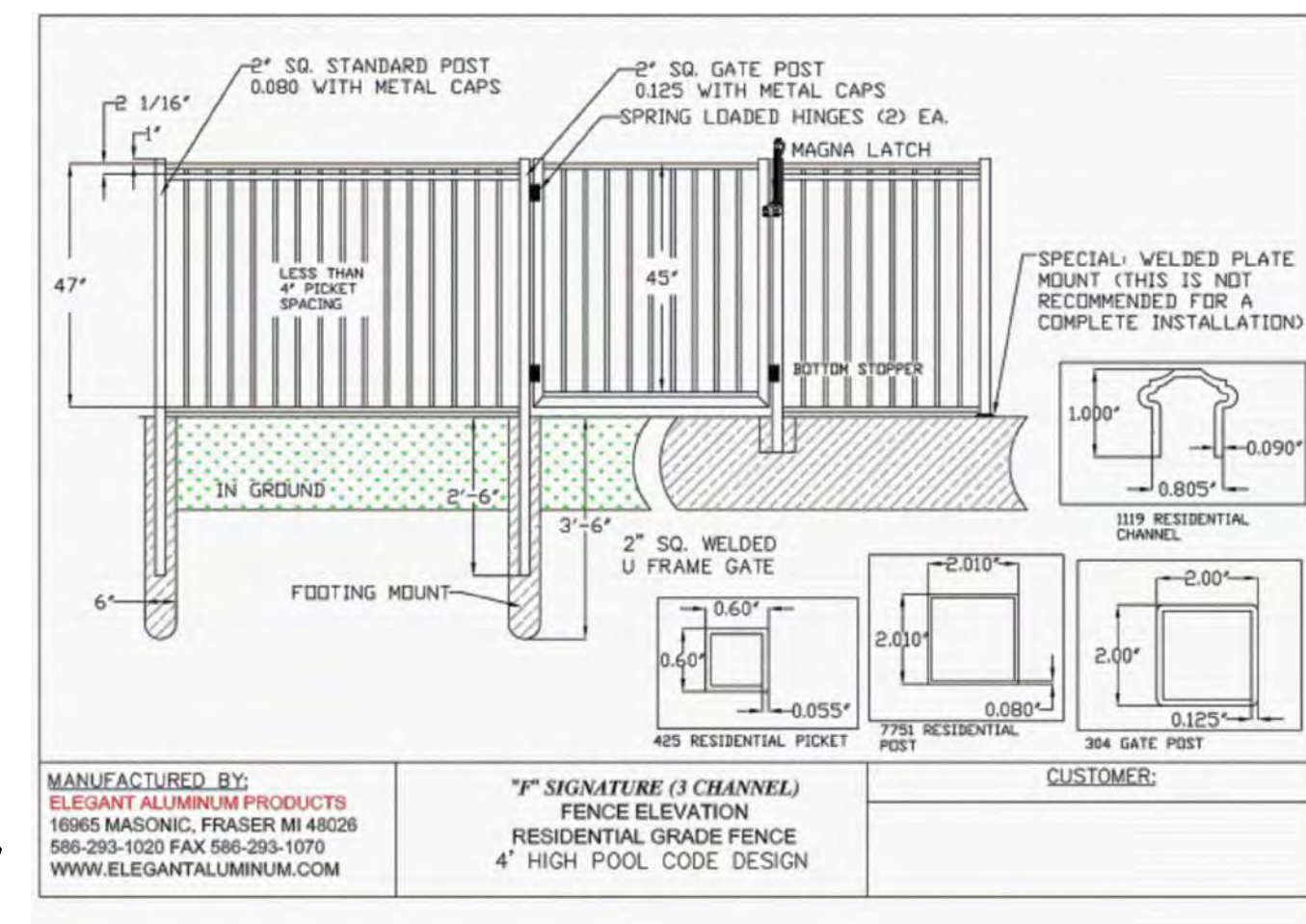
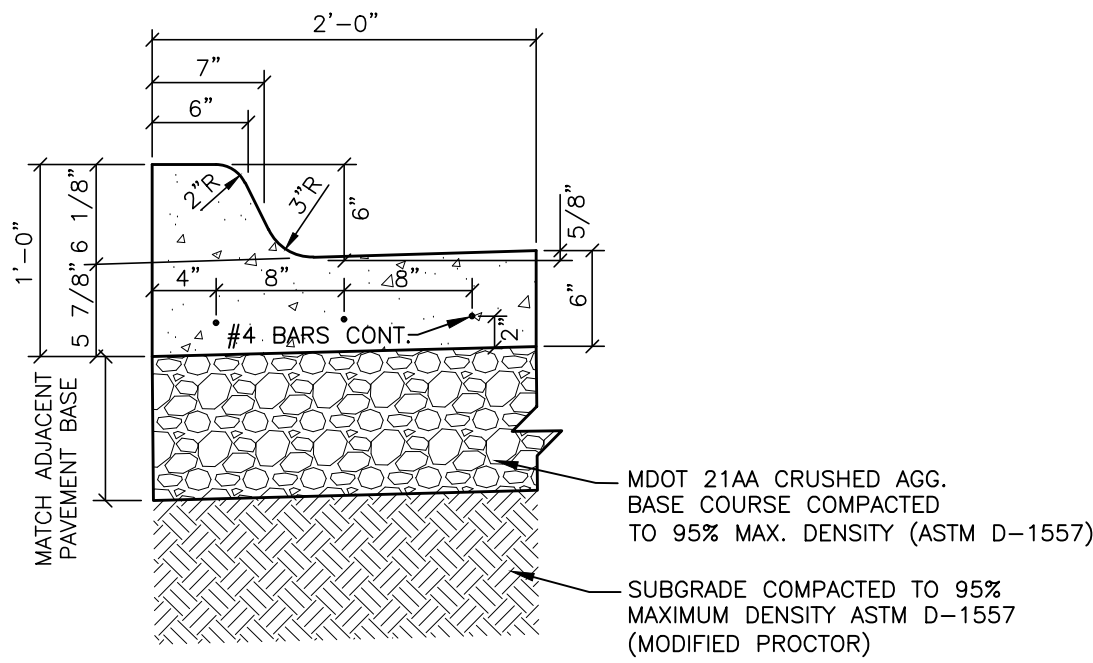
**CONCRETE SIDEWALK SECTION**



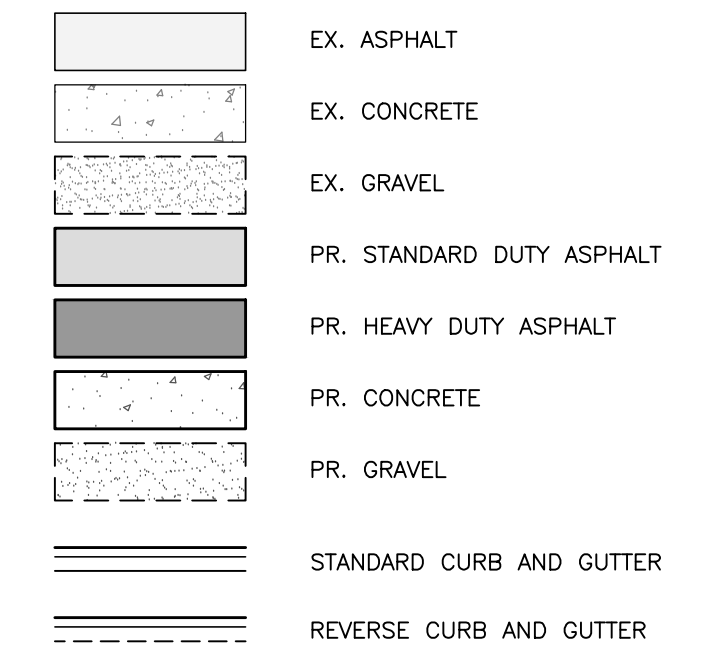
**STANDARD DUTY PAVEMENT SECTION**



**CURB AND GUTTER DETAIL - CONCRETE - STANDARD - 24" W 6" H 12" D**

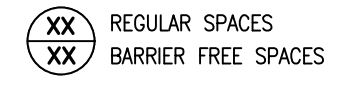


**PAVEMENT LEGEND**



**PROPOSED PARKING**

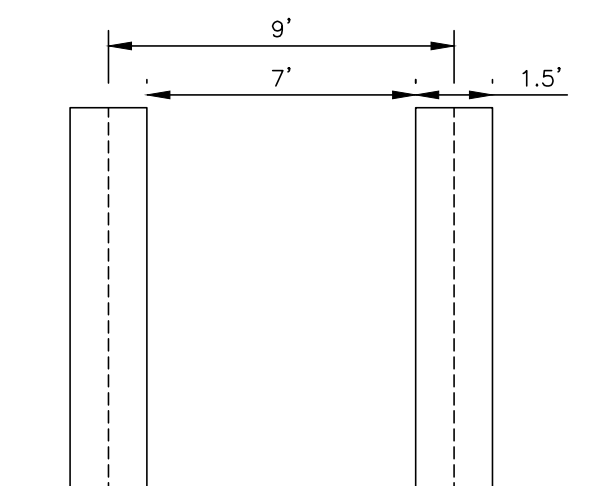
REQUIRED PARKING FOR PRIVATE CLUB:  
1 SPACE PER 3 OCCUPANTS = 75 OCCUPANTS / 3 = 25 SPACES  
EX. REGULAR SPACES: 14  
EX. BARRIER FREE SPACES: 1  
PROPOSED REGULAR SPACES: 10  
TOTAL PARKING PROVIDED: 25



**NOTES**

- SCREENING SHALL BE PROVIDED FOR ALL MECHANICAL EQUIPMENT.
- PARKING LOT ISLANDS SHALL BE FINISHED IN GRASS, GROUND COVER OR MULCH.
- CONTRACTOR TO MARK PERIMETER OF THE PROJECT SITE WITH FLAGGED STAKES TO ASSIST TOWNSHIP OFFICIALS AND STAFF IN VIEWING THE SITE.
- INSTALL KNOX BOX NO HIGHER THAN 6FT FROM GROUND AND NO FURTHER THAN 10FT FROM MAIN ENTRANCE.
- DURING THE CONSTRUCTION PROCESS, THE BUILDING WILL BE EVALUATED FOR EMERGENCY RESPONDER RADIO SIGNAL STRENGTH. IF COVERAGE IS FOUND TO BE QUESTIONABLE OR INADEQUATE, THE CONTRACTOR OR THE BUILDING OWNER SHALL HIRE AN APPROVED CONTRACTOR TO CONDUCT 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.
- STRIPING SHALL BE WHITE OR YELLOW PAINT STRIPING WILL BE 4" LINES SPACED 2' APART. SEE STRIPING DETAIL.

**CITY STRIPING DETAIL**



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1-800-482-7171  
www.missdig.org

CLIENT :  
**AR BROUWER COMPANY**  
2830 BAKER ROAD, SUITE 100  
BRIGHTON, MI 48130  
JEFF LOVELAND

**DIMENSION AND PAVING PLAN**  
SYLVAN GLEN ESTATES  
CLUBHOUSE & POOL EXPANSION  
PART OF NE 1/4, SEC 14, T02N, R05E  
BRIGHTON TOWNSHIP, LIVINGSTON COUNTY, MI

DATE	PLAN SUBMITTALS/REVISIONS
05/04/2022	SITE PLAN REVIEW
05/25/2022	REVISED PER COMMENTS

DATE	REVISIONS

ORIGINAL ISSUE DATE: 05/04/2022

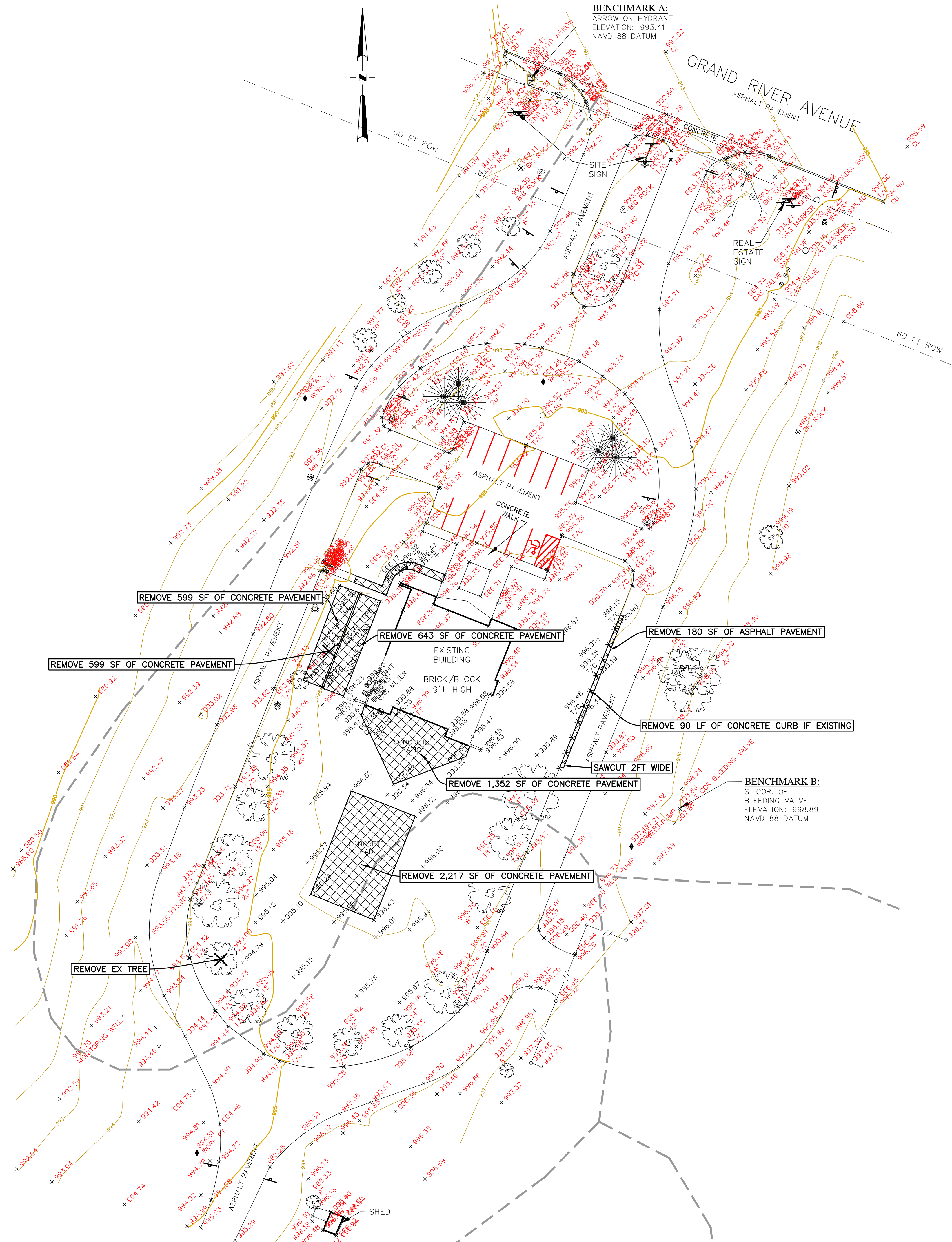
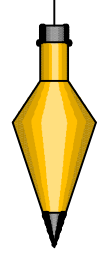
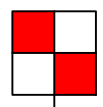
PROJECT NO: 22-093

SCALE: 1" = 30'

FIELD: (BY OTHERS)  
DRAWN BY: MK  
DESIGN BY: TDB  
CHECK BY: AP

**C-10**

NOT FOR CONSTRUCTION



### DEMOLITION LEGEND

.....	ABANDON IN PLACE
////	ABANDON LINEAR FEATURE
////	SAWCUT
-X-X-X-X-X-X-	REMOVE LINEAR FEATURE
---	LIMITS OF DISTURBANCE
X	REMOVE OBJECT
XXXX	REMOVE PAVEMENT

- ### DEMOLITION NOTES
- UTILITY OBJECTS SUCH AS GAS METER, TRANSFORMER, TELEPHONE PEDESTAL, UTILITY POLE & WIRES ARE TO BE REMOVED BY OTHERS IF APPLICABLE.
  - ANY TREES NOT MARKED PER PLAN ARE TO BE PROTECTED & PRESERVED DURING CONSTRUCTION.

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(OFFICE) 517-223-3512  
MONUMENTENGINEERING.COM

SERVICE DISABLED VETERAN OWNED  
SMALL BUSINESS (SDVOSB)

**DRAFT**

*Allyson*

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2830 BAKER ROAD, SUITE 100  
BRIGHTON, MI 48130  
JEFF LOVELAND

**DEMOLITION PLAN**

SYLVAN GLEN ESTATES  
CLUBHOUSE & POOL EXPANSION  
PART OF NE 1/4, SEC 14, T02N, R05E  
BRIGHTON TOWNSHIP, LIVINGSTON COUNTY, MI

DATE	DESCRIPTION
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05/25/2022	REVISIONS
	PLAN SUBMITTALS/REVISIONS
	SITE PLAN REVIEW
	REVISED PER COMMENTS

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PROJECT NO: 22-093

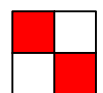
SCALE: 1" = 30'

0 1/2" 1"

FIELD: (BY OTHERS)  
DRAWN BY: MV  
DESIGN BY: TDB  
CHECK BY: AP

**CD-1.0**

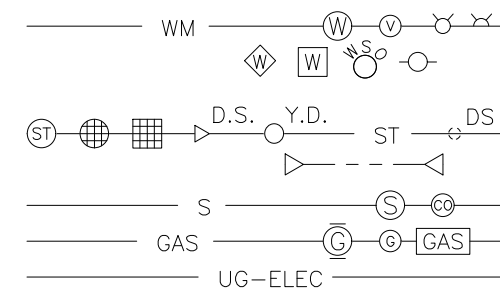
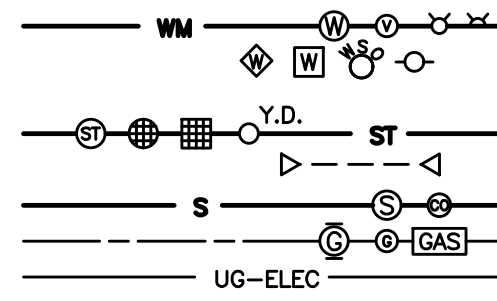
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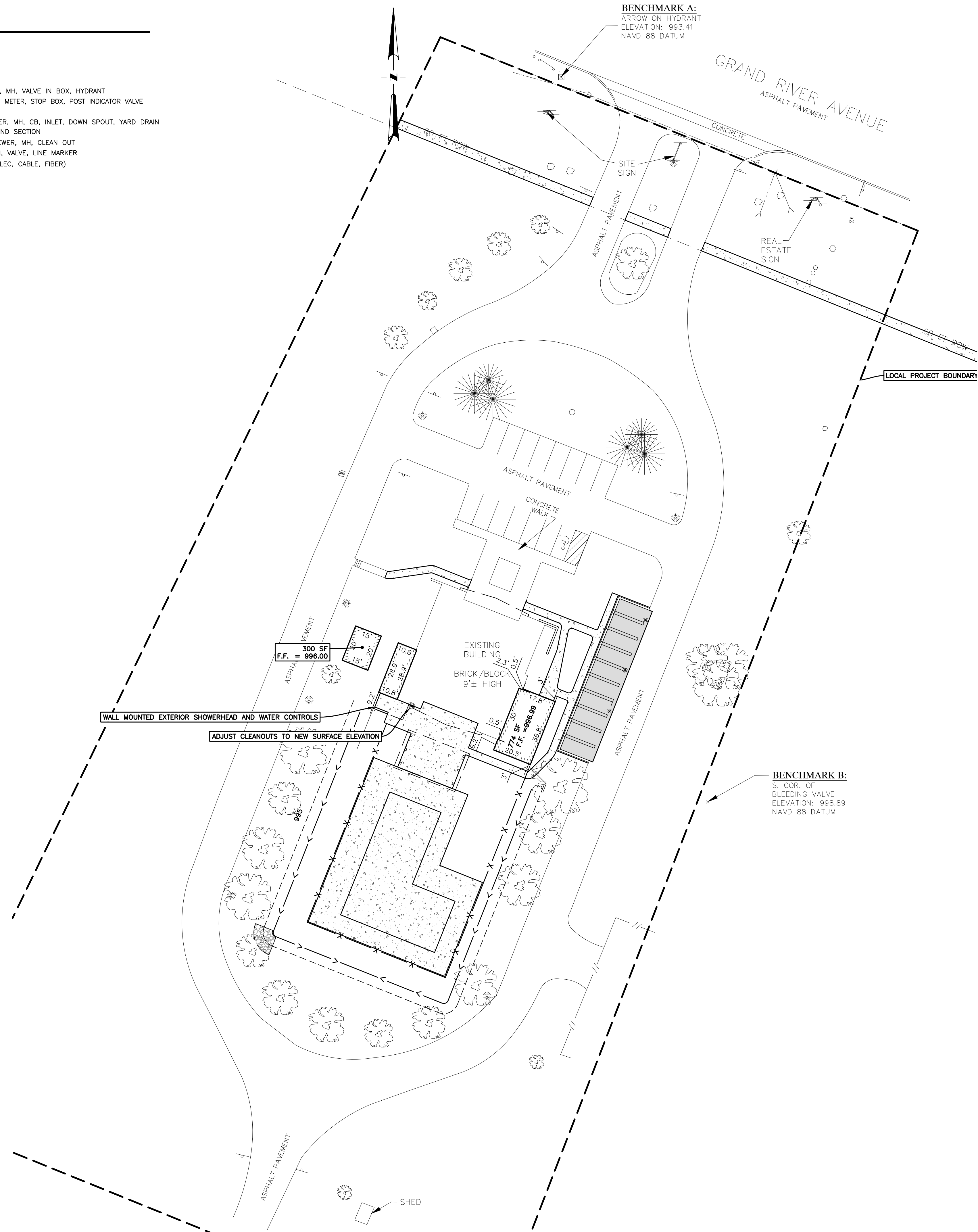
UTILITY LEGEND

PROPOSED

EXISTING



WATER MAIN, MH, VALVE IN BOX, HYDRANT  
WATER WELL, METER, STOP BOX, POST INDICATOR VALVE  
STORM SEWER, MH, CB, INLET, DOWN SPOUT, YARD DRAIN  
CULVERT/ END SECTION  
SANITARY SEWER, MH, CLEAN OUT  
UG GAS, MH, VALVE, LINE MARKER  
UG ELEC (ELEC, CABLE, FIBER)



BENCHMARK A:  
ARROW ON HYDRANT  
ELEVATION: 993.41  
NAVD 88 DATUM

BENCHMARK B:  
S. COR. OF  
BLEEDING VALVE  
ELEVATION: 998.89  
NAVD 88 DATUM

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DRAFT  
*Allyson*

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**UTILITY PLAN**  
SYLVAN GLEN ESTATES  
CLUBHOUSE & POOL EXPANSION  
PART OF NE 1/4, SEC 14, T02N, R05E  
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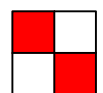
PROJECT NO: 22-093

SCALE: 1" = 30'  
0 1/2" 1"

FIELD: (BY OTHERS)  
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DESIGN BY: TDB  
CHECK BY: AP

**C-3.0**

NOT FOR CONSTRUCTION



CONSTRUCTION SEQUENCE	OPERATION TIME SCHEDULE - BEGINNING MONTH 2021					
	XXX	XXX	XXX	XXX	XXX	XXX
1 CONTRACTOR SHALL INSTALL SILT FENCE AS SHOWN ON APPROVED PLANS.						
2 DETENTION BASIN SHALL BE EXCAVATED, TOP SOILED, AND SEEDED IMMEDIATELY AFTER DEMOLITION WORK IS COMPLETED.						
3 REMOVE ALL TOPSOIL AND ORGANIC MATTER. TOPSOIL MAY BE STORED ON SITE IN DESIGNATED AREA TO BE USED FOR FUTURE PLANTING AND FILL AREAS. TRUCK REMAINING TOP SOIL OFFSITE AND PROPERLY DISPOSE.						
4 ROUGH GRADE AND INSTALL NEW UNDERGROUND UTILITIES. PLACE INLET FILTERS AT PROPOSED CATCH BASINS THROUGHOUT SITE.						
5 CONSTRUCT BUILDING(S).						
6 FINISH GRADE AROUND BUILDING(S) AND STABILIZE AS SOON AS POSSIBLE. STABILIZE ALL DISTURBED AREAS WITH CLASS A SEED AND MULCH. IN AREAS OF SLOPES OF 1:4 OR STEEPER, CONTRACTOR TO SEED AND INSTALL PEGGED IN PLACE EROSION CONTROL BLANKETS.						
7 REPAIR/CLEAN INLET FILTERS AS REQUIRED.						
8 INSTALL FINAL LANDSCAPING PER SEPARATE LANDSCAPE PLAN.						
9 STONE AROUND OUTLET STANDPIPE STRUCTURE SHALL BE REFRESHED.						
10 REMOVE TEMPORARY SOIL EROSION MEASURES ONCE SEEDED VEGETATION HAS BEEN ESTABLISHED. CLEAN ALL AFFECTED STORM STRUCTURES AS NECESSARY.						

**SOILS INFO**

SOIL TYPES ARE ACCORDING TO THE USDA SOIL SURVEY WEB SITE (https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm)

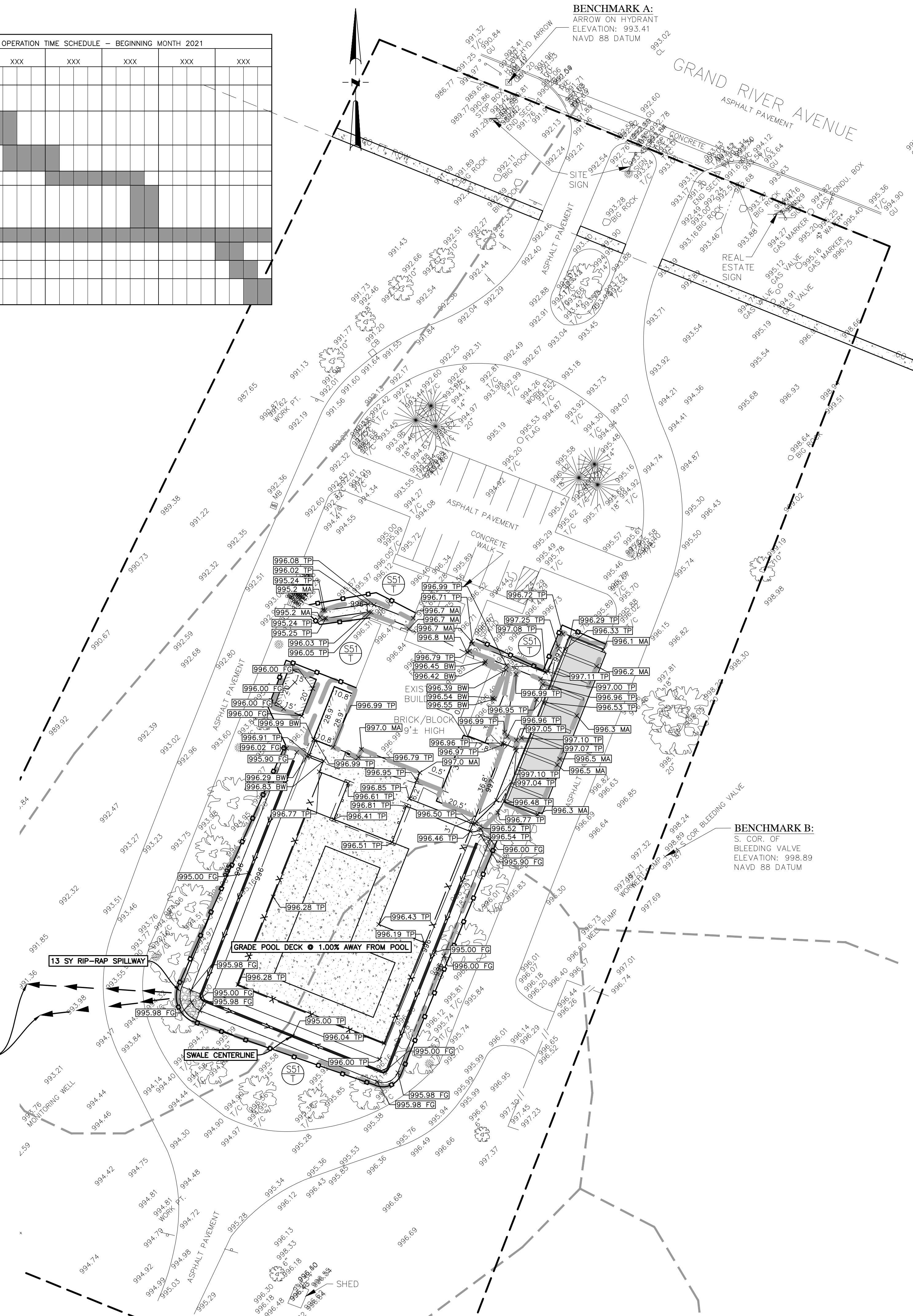
- SOIL TYPE LIMIT AND LABEL
- Mob: WAWASEE LOAM, 2-6% SLOPES
- MoC: WAWASEE LOAM, 6-12% SLOPES
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**BENCHMARKS**

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 BENCHMARK A:  
 ARROW ON HYDRANT  
 ELEV = 993.41  
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 S. COR. OF BLEEDING VALVE  
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BENCHMARK A:  
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 S. COR. OF  
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 ELEVATION: 998.89  
 NAVD 88 DATUM



**GRADING LEGEND**

- 940.00 TP PROPOSED TOP OF PAVEMENT GRADE
- 940.00 SW PROPOSED SIDEWALK GRADE
- 940.00 FG PROPOSED FINISH GRADE
- 940.00 GC PROPOSED TOP OF CURB GRADE
- 940.00 GP PROPOSED GUTTER PAN GRADE
- 940.00 TW PROPOSED TOP OF WALL GRADE
- 940.00 BW PROPOSED BOTTOM OF WALL GRADE
- 940.0 MA MATCH EXISTING GRADE
- 940.0 FFE PROPOSED FINISH FLOOR GRADE
- 940.0 RIM PROPOSED RIM GRADE
- 940.00 ADJ-RIM ADJUSTED RIM GRADE
- 940.00 INV PROPOSED INVERT GRADE
- R ADA COMPLIANT SIDEWALK RAMP
- L ADA COMPLIANT SIDEWALK LANDING
- 780.00 + EXISTING ELEVATION
- 900 EXISTING CONTOUR
- 900 PROPOSED CONTOUR
- SOIL TYPE LIMIT AND LABEL (FROM USGS SOIL SURVEY)
- LIMITS OF DISTURBANCE
- OVERFLOW ROUTE

**SESC LEGEND**

- SILT FENCE
- RIP RAP

**EROSION CONTROL QUANTITIES**

Disturbed Area: 0.50 Acres

QTY	UNIT	ITEM
657	LF	SILT FENCE
63	SY	RIP-RAP

NOTE: QUANTITIES ARE FOR ENTIRE SITE

**DTMB SOIL EROSION & SEDIMENTATION CONTROL MEASURES**

MICHIGAN DEPARTMENT OF TECHNOLOGY, MANAGEMENT, AND BUDGET (DTMB)

EROSION CONTROLS			
KEY	BEST MANAGEMENT PRACTICES	SYMBOL	WHERE USED
E6	MULCH		FOR USE IN AREAS SUBJECT TO ERODIVE SURFACE FLOWS OR SEVERE WIND OR ON NEWLY SEEDED AREAS.
E8	PERMANENT SEEDING		STABILIZATION METHOD UTILIZED ON SITES WHERE EARTH CHANGE HAS BEEN COMPLETED (FINAL GRADING ATTAINED).

SEDIMENT CONTROLS			
KEY	BEST MANAGEMENT PRACTICES	SYMBOL	WHERE USED
S51	SILT FENCE		USE ADJACENT TO CRITICAL AREAS, TO PREVENT SEDIMENT LADEN SHEET FLOW FROM ENTERING THESE AREAS.
S53	STABILIZED CONSTRUCTION ACCESS		USED AT EVERY POINT WHERE CONSTRUCTION TRAFFIC ENTERS OR LEAVES A CONSTRUCTION SITE.
S55	SEDIMENT BASIN		AT THE OUTLET OF DISTURBED AREAS AND AT THE LOCATION OF A PERMANENT DETENTION BASIN.
S58	INLET PROTECTION FABRIC DROP		USE AT STORMWATER INLETS, ESPECIALLY AT CONSTRUCTION SITES.

EROSION & SEDIMENT CONTROLS			
KEY	BEST MANAGEMENT PRACTICES	SYMBOL	WHERE USED
ES31	CHECK DAM		USED TO REDUCE SURFACE FLOW VELOCITIES WITHIN CONSTRUCTED AND EXISTING FLOW CORRIDORS.

XX T TEMPORARY XX P PERMANENT

**EROSION CONTROL STANDARDS**

- DAILY INSPECTION SHALL BE MADE BY THE CONTRACTOR FOR EFFECTIVENESS OF EROSION AND SEDIMENTATION CONTROL MEASURES, AND ANY NECESSARY REPAIRS SHALL BE PERFORMED WITHOUT DELAY.
- EROSION AND ANY SEDIMENTATION FROM WORK ON THIS SITE SHALL BE CONTAINED ON THE SITE AND NOT ALLOWED TO COLLECT ON ANY OFF-SITE AREAS OR IN WATERWAYS. WATERWAYS INCLUDE BOTH NATURAL AND MAN-MADE OPEN DITCHES, STREAMS, STORM DRAINS, LAKES AND PONDS.
- CONTRACTOR SHALL APPLY TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES WHEN REQUIRED AND AS DIRECTED ON THESE PLANS. CONTRACTOR SHALL REMOVE TEMPORARY MEASURES AS SOON AS PERMANENT STABILIZATION OF SLOPES, DITCHES AND OTHER CHANGES HAS BEEN ACCOMPLISHED.
- STAGING OF THE WORK WILL BE DONE BY THE CONTRACTOR AS DIRECTED IN THESE PLACES AND AS REQUIRED TO INSURE PROGRESSIVE STABILIZATION OF DISTURBED AREAS.
- SOIL EROSION CONTROL PRACTICES WILL BE ESTABLISHED IN EARLY STAGES OF CONSTRUCTION BY THE CONTRACTOR. SEDIMENT CONTROL PRACTICES WILL BE APPLIED AS A PERIMETER DEFENSE AGAINST ANY TRANSPORTING OF SILT OFF THE SITE.
- A CERTIFIED STORM WATER OPERATOR WILL BE NAMED ON THE MDEQ NOTICE OF COVERAGE FOR NPDES AS REQUIRED.
- ALL DISTURBED AREAS ARE TO BE TOP SOILED AND SEEDED WITH THE FOLLOWING MIN RATIO:  
 TOP-SOIL 3" IN DEPTH, GRASS SEED 210 LBS PER ACRE, FERTILIZER 150 LBS PER ACRE, STRAW MULCH 3" DEPTH 1.5 TO 2 TONS PER ACRE.

**SOIL EROSION CONTROL MAINTENANCE SCHEDULE AND NOTES.**

- EARTHWORK SHALL BE LIMITED TO THE PROPOSED SITE AS SHOWN ON THE PLAN.
- CONTRACTOR SHALL INSPECT THE SOIL EROSION/SEDIMENTATION CONTROL DEVICES ONCE A WEEK AND/OR WITHIN 24 HOURS OF A RAINFALL EVENT WHICH RESULTS IN A STORM WATER DISCHARGE FROM THE SITE. ANY DAMAGE TO EROSION CONTROL MEASURES MUST BE REPAIRED IMMEDIATELY.
- ALL MUD OR DEBRIS TRACKED ONTO EXISTING PUBLIC ROADS FROM THE SITE DUE TO CONSTRUCTION SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR.
- SILT FENCE MAINTENANCE SHALL INCLUDE THE REMOVAL OF ANY BUILT-UP SEDIMENT WHEN THE SEDIMENT HEIGHT ACCUMULATES TO 1/3 TO 1/2 OF THE HEIGHT OF THE FENCE. THE CONTRACTOR IS RESPONSIBLE TO REMOVE, REPLACE, RETRENCH OR RE-BACKFILL THE SILTATION FENCE SHOULD IT FAIL OR BE DAMAGED DURING CONSTRUCTION.
- PERMANENT STABILIZATION MUST BE COMPLETED WITHIN 30 DAYS OF FINAL GRADING.
- ACCESS ROADS MUST BE MAINTAINED AS NECESSARY, TO KEEP THEM EFFECTIVE, NEW LAYERS OF STONE MAY BE ADDED AS OLD LAYERS BECOME COMPACTED. STEPS SHOULD ALSO BE TAKEN TO REPAIR THE ACCESS ROADS IF RUTS OR PONDING WATER APPEARS.
- INLET FILTERS SHOULD BE INSPECTED FOR BUILDUP OF SILT AND OTHER DEBRIS. THIS IS EVIDENT IF GEOTEXTILE/SOD STRUCTURE IS CAUSING FLOODING. MAINTENANCE WOULD CONSIST OF REMOVING OF SEDIMENTS WITH A STIFF BRISTLE ROOM OR SQUARE POINT SHOVEL. IF INLET FILTER IS BEYOND THIS LEVEL OF REPAIR, IT MAY BE NECESSARY TO REPLACE BOTH THE SOD AND GEOTEXTILE FILTER.
- IF SOIL EROSION/SEDIMENT CONTROL MEASURES ARE INADEQUATE FOR THE SITE. THE PROPER EROSION CONTROL AUTHORITY MUST BE NOTIFIED.



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THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE INDIVIDUALLY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

CLIENT :  
**AR BURROW COMPANY**  
 2830 BAKER ROAD, SUITE 100  
 BRIGHTON, MI 48130  
 JEFF LOVELAND

**GRADING AND SESC PLAN**  
 SYLVAN GLEN ESTATES  
 CLUBHOUSE & POOL EXPANSION  
 PART OF NE 1/4, SEC 14, T02N, R05E  
 BRIGHTON TOWNSHIP, LIVINGSTON COUNTY, MI

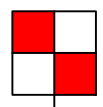
DATE	DESCRIPTION
05/04/2022	ORIGINAL ISSUE DATE
05/25/2022	REVISIONS
	PLAN SUBMITTALS/REVISIONS
	DATE REVIEW
	REVISION COMMENTS

PROJECT NO: 22-093  
 SCALE: 1" = 30'  
 0 1/2" 1"  
 FIELD: (BY OTHERS)  
 DRAWN BY: MV  
 DESIGN BY: TDB  
 CHECK BY: AP

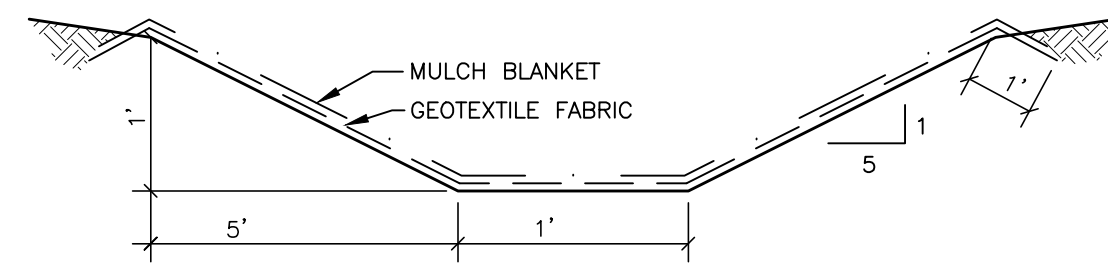
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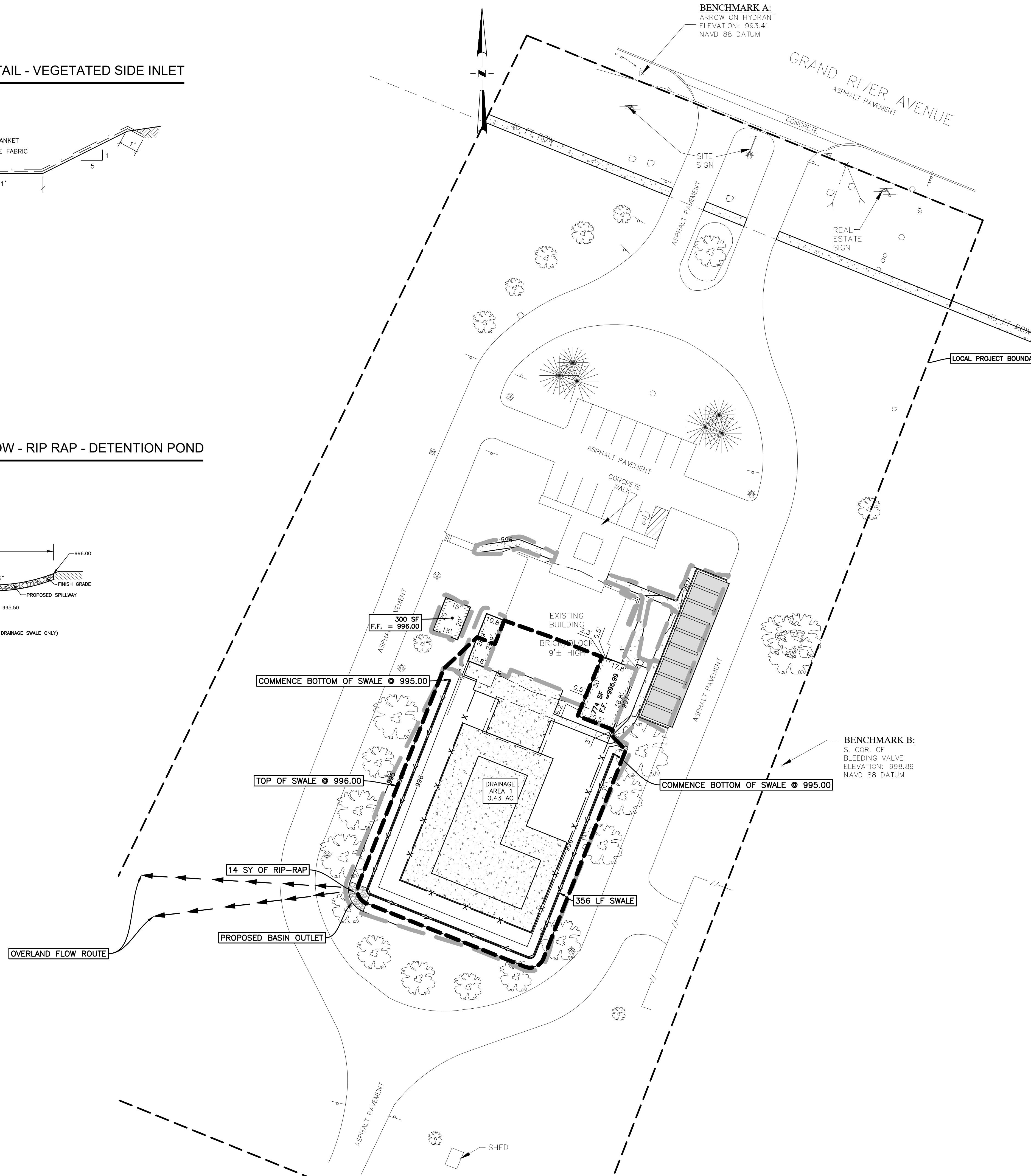
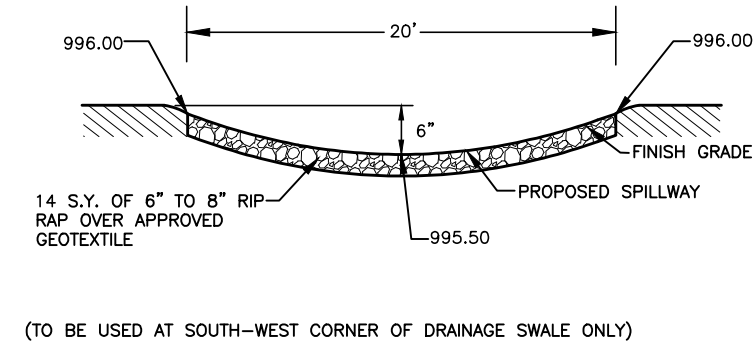




### FLAT BOTTOM CHANNEL DETAIL - VEGETATED SIDE INLET



### SPILLWAY DETAIL - OVERFLOW - RIP RAP - DETENTION POND



### NOTES

1. THE PROPOSED DRAINAGE SWALE WILL CAPTURE ALL RUNOFF FROM DRAINAGE AREA 1.
2. THE RUNOFF WILL BE DETAINED UNTIL THE WATER LEVEL REACHES ELEVATION 995.50, AT WHICH POINT THE CAPTURED RUNOFF WILL SPILL OUT OF THE SWALE OVER THE RIP-RAP IN THE GENERAL SOUTH-WEST DIRECTION.
3. THE SWALE IS SIZED TO DETAIN THE WATER QUALITY VOLUME.
4. THE WATER QUALITY VOLUME WAS CALCULATED USING THE AREA OF DRAINAGE AREA 1 ONLY.

### SITE INFO

OVERALL AREA	=	4.58 AC
CONTRIBUTING AREA (A)	=	0.25 AC
ALLOWABLE DISCHARGE (Qa)	=	0.20 CFS/AC
COMPOUND C	=	0.90

### COMPOUND RUNOFF COEFFICIENT FOR AREA 1

	AREA (SF)	AREA (AC)	CB11-CB10 C
OVERALL	18639	0.43	
CONTRIBUTING	18639	0.43	
FLOWING OFF	0	0.00	
EX BUILDING	1630	0.95	A x C
EX PAVEMENT	0	0.95	0
PR BUILDING	156	0.95	148.2
PR PAVEMENT	12358	0.95	11740.1
WATER	4495	1.00	4495
NATURAL AREAS	0	0.30	0
TOTALS	18639		17931.8

$$COMPOUND C = \frac{TOTAL A \times C}{CONTRIBUTING AREA} = \frac{17931.8}{18639} = 0.96$$

### REQUIRED WATER QUALITY VOLUME

$$V_{wq} = \frac{1}{12} \times 43560 \times A \times C = 817 CF$$

### PROPOSED SWALE GEOMETRY

BASE 1	=	1
BASE 2	=	11
HEIGHT	=	0.50
$A = \frac{(B_1 + B_2)}{2} \times H = 3$		
LENGTH	=	356
$V_{SWALE} = A \times L = 1068.00$		

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CLIENT :

**AR BROUWER COMPANY**  
2830 BAKER ROAD, SUITE 100  
BRIGHTON, MI 48130  
JEFF LOVELAND

**DRAINAGE AREA PLAN**

SYLVAN GLEN ESTATES  
CLUBHOUSE & POOL EXPANSION  
PART OF NE 1/4, SEC 14, T02N, R05E  
BRIGHTON TOWNSHIP, LIVINGSTON COUNTY, MI

DATE	PLAN SUBMITTALS/REVISIONS
05/04/2022	SITE PLAN REVIEW
05/25/2022	REVISED PER COMMENTS

ORIGINAL ISSUE DATE: 05/04/2022

PROJECT NO: 22-093

SCALE: 1" = 30'

FIELD: (BY OTHERS)  
DRAWN BY: MV  
DESIGN BY: TDB  
CHECK BY: AP

**C-9.0**

NOT FOR CONSTRUCTION





## GRADING AND EARTHWORK SPECIFICATIONS

1. ALTHOUGH A SUB-SURFACE INVESTIGATION MAY HAVE BEEN MADE BY THE OWNER, THE BIDDER AND ANY SUB-CONTRACTORS SHALL MAKE A PERSONAL INVESTIGATION OF SITE AND EXISTING SURFACE AND SUB-SURFACE CONDITIONS. THE CONTRACTOR IS RESPONSIBLE TO ACCOUNT HIMSELF WITH CONDITIONS OF THE WORK AREA. THE CONTRACTOR IS ADVISED TO DETERMINE THE SUB-SURFACE SOIL CONDITIONS AND GROUND WATER CONDITIONS TO HIS OWN SATISFACTION PRIOR TO BIDDING. NO MODIFICATIONS TO THE UNIT PRICES BID FOR ANY ITEM WILL BE MADE DUE TO VARIABLE SUB-SURFACE CONDITIONS. DETERMINING IF DETERMINED NECESSARY BY THE CONTRACTOR, BY WELL POINTING OR DEEP WELLS WILL BE INCIDENTAL TO THE INSTALLATION COST OF THE ITEM.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING DETERMINED TO HIS SATISFACTION PRIOR TO THE SUBMISSION OF HIS BID THE CONFIRMATION OF THE GROUND, THE CHARACTER AND QUALITY OF THE SUBSTRATA, THE TYPES AND QUANTITIES OF MATERIALS TO BE ENCOUNTERED, THE NATURE OF THE GROUNDWATER CONDITIONS, THE PROSECUTION OF THE WORK, THE GENERAL AND LOCAL CONDITIONS INCLUDING REGIONAL CLIMATIC CHANGES, THE TIME OF YEAR IN WHICH CONSTRUCTION WILL TAKE PLACE AND ALL OTHER MATTERS WHICH CAN IN ANY WAY AFFECT THE WORK UNDER THIS CONTRACT.

3. PRIOR TO COMMENCING THE EXCAVATION THE CONTRACTOR SHALL SUBMIT A PLAN OF HIS PROPOSED OPERATIONS AND TIME SCHEDULE TO THE OWNER & OWNERS REPRESENTATIVE FOR THEIR APPROVAL.

4. THE CONTRACTOR SHALL CONSIDER, AND HIS PLAN FOR EXCAVATION SHALL REFLECT, THE EQUIPMENT AND METHODS TO BE EMPLOYED IN THE EXCAVATION AND WHAT METHODS WILL BE USED WHEN WET CONDITIONS ARE ENCOUNTERED REQUIRING GROUNDWATER CONTROL OR OTHER MOISTURE CONDITIONING. THE CONTRACTOR SHALL SUBMIT AN OUTLINE OF HIS EARTHWORK METHODS WHICH SHALL TAKE INTO ACCOUNT THE OVERALL CONSTRUCTION SCHEDULE. THE UNIT PRICES ESTABLISHED IN THE PROPOSAL FOR THE WORK TO BE DONE SHALL REFLECT ALL COSTS PERTAINING TO THE WORK. NO CLAIMS FOR EXTRAS BASED ON SUBSTRATA OR GROUNDWATER TABLE CONDITIONS OR MOISTURE CONDITIONING WILL BE ALLOWED.

5. THE CONTRACTOR SHALL KEEP INFORMED AND THE OWNER'S REPRESENTATIVE INFORMED AT ALL TIMES AS TO A "FILL SURPLUS OR SHORTAGE" SITUATION. SHORTAGE OR SURPLUS OF SUITABLE MATERIAL AT THE CONCLUSION OF THE GRADING AND EARTHWORK OPERATION SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND HE WILL BE REQUIRED TO NOTIFY THE DEFICIENCY OR DISPOSE OF THE SURPLUS WITHOUT ADDITIONAL COST TO THE OWNER.

6. THE CONTRACTOR SHALL REMOVE VEGETATION, DEBRIS, UNSATISFACTORY SOIL MATERIALS, OBSTRUCTIONS, AND OTHER DELETERIOUS MATERIALS FROM GROUND SURFACE PRIOR TO CUT OR FILL OPERATIONS. SUCH MATERIAL SHALL BECOME PROPERTY OF THE CONTRACTOR TO BE DISPOSED OF IN A LEGAL MANNER OFF SITE.

7. MATERIALS FOR FILL OR BACKFILL REQUIRED TO GRADE THE SITE AND ACHIEVE DESIGN ELEVATIONS SHALL BE EITHER ON OR OFF-SITE SOLS WHICH ARE FREE OF ORGANIC MATTER AND DEBRIS. NO TOPSOIL SHALL BE USED AS ENGINEERED FILL.

8. NO FILL MAY BE PLACED UNTIL THE EXPOSED SURFACES HAVE BEEN APPROVED BY THE GEOTECHNICAL ENGINEER. ALL FILL MATERIALS SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT.

9. IF ANY UNKNOWN SUBSURFACE STRUCTURES ARE ENCOUNTERED DURING CONSTRUCTION, THEY SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE AND DESIGN ENGINEER PRIOR TO PROCEEDING.

10. ALL FILL MATERIAL SHALL BE PLACED AND COMPACTED AT THE OPTIMUM MOISTURE CONTENT OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER.

11. NO FROZEN MATERIAL SHALL BE USED AS FILL NOR WILL ANY FILL BE PLACED ON A FROZEN BASE.

12. NO ROCK OR SIMILAR MATERIAL GREATER THAN 6" DIAMETER SHALL BE PLACED IN THE FILL UNLESS RECOMMENDATIONS FOR SUCH PLACEMENT HAVE BEEN SUBMITTED BY THE GEOTECHNICAL ENGINEER IN ADVANCE AND APPROVED BY THE OWNER AND OWNER'S REPRESENTATIVE.

13. COMPACT FILL MATERIAL TO AT LEAST THE FOLLOWING PERCENTAGE OF MAXIMUM DRY DENSITY, AS DETERMINED BY ASTM D-1557 (MODIFIED PROCTOR). NO DEVIATION FROM THESE COMPACTATION DENSITIES WILL BE ALLOWED UNLESS SPECIFICALLY RECOMMENDED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE OWNER AND OWNER'S REPRESENTATIVE.

FILL AREAS	% OF MAXIMUM DRY DENSITY
FILL UNDER BUILDING (EXTENDING 5' BEYOND FOOTINGS AT A SLOPE OF 1 ON 1)	98%
FILL UNDER PAVEMENT OR SIDEWALKS	95%
FILL PLACED UNDER OR BEHIND RETAINING WALLS	95%
ALL OTHER FILL	90%

14. ALL FILL MATERIAL SHALL BE PLACED AND COMPACTED IN LIFTS, THAT WILL NOT EXCEED THE DEPTH SPECIFIED IN THE STANDARD SPECIFICATION. THE MAXIMUM DENSITY REQUIRED FOR THE ENTIRE DEPTH OF THE MATERIAL PLACED IN THE LIFT.

15. ALL AREAS WHERE FILL HAS BEEN PLACED ON THE EXISTING SOILS HAVE BEEN DISTURBED SHALL BE SUBJECT TO COMPACTATION TESTING BY THE GEOTECHNICAL ENGINEER AND SHALL BE TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER, OWNER AND OWNER'S REPRESENTATIVE.

16. FILL MATERIAL UNDER PAVEMENTS OR STRUCTURES SHALL BE FREE OF ORGANIC OR DELETERIOUS MATERIALS IT SHALL BE SUITABLE FOR SUPPORTING SUCH PAVEMENTS AND STRUCTURES WITHOUT ADVERSE SHRINKING OR SWELLING.

17. FILL MATERIAL IN BERMS AND LANDSCAPE AREAS SHALL BE SUITABLE TO SUPPORT GROWTH OF THE LANDSCAPING MATERIALS (TYPICAL FOR THE LOCAL CLIMATE) AND AS PROPOSED BY THE LANDSCAPE ARCHITECT.

18. THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OF, IN A LEGAL MANNER, ANY TREES, BRUSH OR DEBRIS THAT ARE WITHIN THE DESIGNATED CUTTING AND FILLING AREAS TO BRING THE SITE TO PROPOSED GRADES.

19. THE CONTRACTOR SHALL STOCKPILE EXCAVATED MATERIAL ONLY IN DESIGNATED AREAS AS DIRECTED BY THE OWNER OR OWNER'S REPRESENTATIVE.

20. DURING THE PERFORMANCE OF SITE GRADING OPERATIONS, THE SUBGRADE SHALL BE EXAMINED CRITICALLY, AND ANY AREAS DISCOVERED WHICH, IN THE OPINION OF THE OWNER'S REPRESENTATIVE OR GEOTECHNICAL ENGINEER, ARE SOFT AND UNSTABLE, SHALL BE EXCAVATED TO SUCH DEPTHS AS MAY BE NECESSARY TO INSURE SATISFACTORY SUPPORTING PROPERTIES AS DETERMINED BY THE GEOTECHNICAL ENGINEER. THESE AREAS OF EXCAVATION SHALL BE BACKFILLED IMMEDIATELY AND SHALL BE BROUGHT BACK TO THE ELEVATION OF THE SURROUNDING AREAS WITH APPROVED FILL MATERIAL AND IN ACCORDANCE WITH THE EARTH FILL CONSTRUCTION PROCEDURE.

21. NEWLY GRADED AREAS SHALL BE PROTECTED FROM THE ACTION OF THE ELEMENTS. ANY SETTLEMENT, DISPLACEMENT, PONDING OR OTHER DEFECT THAT MAY OCCUR PRIOR TO COMMENCING THE NEXT PHASE OF CONSTRUCTION SHALL BE REPAIRED, AND GRADES REESTABLISHED TO THE REQUIRED ELEVATIONS AND SLOPES.

22. THE FINISHED SUBGRADE SURFACE SHALL BE SHAPED TO INDICATED PROFILES AND SHALL BE REASONABLY SMOOTH AND FREE FROM IRREGULAR SURFACE CHANGES AND SHALL BE NO MORE THAN 1 INCH ABOVE OR BELOW THE INDICATED SUBGRADE ELEVATIONS.

23. THE GRADING CONTRACTOR SHALL BACKFILL ALL PARKING LOT PLANTERS AND LAWN AREAS TO WITHIN 2 INCHES OF THE TOP ADJACENT CURB GRADES. THE TOP 4 INCHES MINIMUM SHALL BE TOPSOIL, FREE FROM DEBRIS AND STONES LARGER THAN 1 INCH IN DIAMETER.

24. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY PUMPS, DITCHING, WELL POINT SYSTEMS AND OTHER MEANS FOR REMOVING WATER FROM EXCAVATIONS, TRENCHES, SUBGRADES AND OTHER PARTS OF THE WORK. THE CONTRACTOR SHALL CONTINUE DE-WATERING OPERATIONS UNTIL THE WATER HAS BEEN REMOVED ENTIRELY. UPON COMPLETION OF WATER REMOVAL THE CONTRACTOR SHALL TAKE APPROPRIATE ACTION TO DRY THE SOILS, REGRADE TO PROPOSED ELEVATIONS AND COMPACT SOILS TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER AND OWNER'S REPRESENTATIVE.

25. THE CONTRACTOR SHALL DISPOSE OF WATER IN A SAFE AND SANITARY WAY TO PREVENT FLOODING OR INJURY TO PUBLIC OR PRIVATE PROPERTY AND SHALL OBTAIN APPROVAL FROM THE APPLICABLE AUTHORITY BEFORE DISCHARGING RUN-OFF WATER TO THEIR SYSTEM. SEE EROSION CONTROL NOTES FOR ADDITIONAL REQUIREMENTS.

26. THE CONTRACTOR SHALL PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING GRADES AND NEW GRADES.

## BITUMINOUS PAVING SPECIFICATIONS

1. REFERENCE SPECIFICATIONS WHERE APPLICABLE TO WORK UNDER THIS SECTION ARE REFERRED TO BY ABBREVIATION AS FOLLOWS:

- AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO).
- THE ASPHALT INSTITUTE (TAI)
- MICHIGAN DEPARTMENT OF TRANSPORTATION/ CURRENT STANDARD SPECIFICATIONS FOR CONSTRUCTION (MDOIT)
- AMERICAN SOCIETY FOR TESTING MATERIALS (ASTM)

2. AGGREGATE BASE COURSE SHALL MEET THE REQUIREMENTS OF SECTION 902 OF THE MDOIT STANDARD SPECIFICATION FOR CONSTRUCTION AND SHALL CONSIST OF 21AA CRUSHED AGGREGATE. THE USE OF SLAG IS PROHIBITED.

3. TACK COAT SHALL BE EMULSIFIED ASPHALT MEETING REQUIREMENTS OF MDOIT SECTION 904, GRADE CSS-1H.

4. AGGREGATE SHALL CONSIST OF CRUSHED STONE, CRUSHED GRAVEL, A MIXTURE OF UNCRUSHED GRAVEL WITH EITHER CRUSHED STONE OR CRUSHED GRAVEL, OR OTHER INERT MATERIALS HAVING SIMILAR CHARACTERISTICS. IT SHALL BE COMPRISED OF CLEAN, TOUGH, DURABLE FRAGMENTS FROM AN EXCESS OF FLAT OR ELONGATED PIECES, AND SHALL BE FREE OF ORGANIC MATTER AND DELETERIOUS SUBSTANCES AND MEET THE REQUIREMENTS OF MDOIT STANDARD SPECIFICATIONS, SECTION 902, 21AA. CONTRACTOR MAY USE CRUSHED HMA AGGREGATE SCREENED TO MEET THE REQUIREMENTS OF MDOIT 21AA MATERIAL.

5. FINE AGGREGATE SHALL BE WELL GRADED FROM COARSE TO FINE AND CONSIST OF NATURAL SAND, STONE SCREENINGS, OR A BLEND OF NATURAL SAND AND ANGULAR GRAINS OF QUARTZ OR OTHER HARD DURABLE ROCK AND MEET THE REQUIREMENTS OF MDOIT STANDARD SPECIFICATIONS, SECTION 902 FOR CLASS II OR CLASS III GRANULAR MATERIAL. CONTRACTOR MAY USE CRUSHED HMA AGGREGATE SCREENED TO MEET THE REQUIREMENTS OF MDOIT CLASS II OR CLASS III MATERIAL.

6. ASPHALT CEMENT SHALL COMPLY WITH THE REQUIREMENTS OF MDOIT SECTION 904.

7. HOT MIXED ASPHALT (HMA) SHALL COMPLY WITH MDOIT SECTION 501 OF STANDARD SPECIFICATIONS FOR CONSTRUCTION.

8. BITUMINOUS LEVELING COURSE SHALL BE MDOIT HMA, 13A, UNLESS OTHERWISE REQUIRED BY THE MUNICIPALITY OR ROAD AGENCY WITH JURISDICTION.

9. BITUMINOUS WEARING COURSE SHALL BE MDOIT HMA, 36A UNLESS OTHERWISE REQUIRED BY THE MUNICIPALITY OR ROAD AGENCY WITH JURISDICTION. CONTRACTOR MAY SUBSTITUTE 13A WITH THE APPROVAL OF THE OWNER AND ENGINEER.

10. THE CONTRACTOR SHALL SUBMIT, TO THE OWNER, TWO COPIES OF MATERIALS CERTIFICATES SIGNED BY MATERIAL PRODUCER AND CONTRACTOR. CERTIFICATES SHALL STATE THAT EACH MATERIAL ITEM MEETS SPECIFIED REQUIREMENTS.

11. THE CONTRACTOR SHALL SUBMIT TO THE GEOTECHNICAL ENGINEER, JOB-MIX FORMULAS FOR EACH REQUIRED ASPHALT AGGREGATE MIXTURE. MIX DESIGNS SHALL BE WITHIN ALLOWABLE TOLERANCES AS SPECIFIED BY MDOIT FOR THE PARTICULAR APPLICATION.

12. SUBGRADE PREPARATIONS SHALL CONSIST OF THE FINAL MACHINING OF THE SUBGRADE IMMEDIATELY PRIOR TO PLACING THE BITUMINOUS BASE COURSE. THE SUBGRADE SHALL BE COMPACTED PER PLANS AND DETAILS. THE SUBGRADE SHALL BE TRUE TO LINE AND GRADE.

13. CRUSHED AGGREGATE BASE COURSE SHALL BE COMPACTED TO A DENSITY EQUAL TO AT LEAST 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D-1557 (MODIFIED PROCTOR).

14. BITUMINOUS CONCRETE PAVEMENT CONSTRUCTION METHODS SHALL CONFORM TO APPLICABLE PORTIONS OF SECTION 501 OF THE MDOIT STANDARD SPECIFICATIONS FOR CONSTRUCTION.

15. THE CONTRACTOR SHALL NOT PLACE THE AGGREGATE BASE COURSE OR THE BITUMINOUS BASE COURSE PRIOR TO THE APPROVAL OF THE SUBGRADE BY THE GEOTECHNICAL ENGINEER.

16. EACH LIFT AND COURSE OF BITUMINOUS CONCRETE SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER, PRIOR TO THE PLACEMENT OF A SUCCEEDING COURSE OR LIFT.

17. APPLY BITUMINOUS TACK COATS ONLY WHEN TEMPERATURE HAS NOT BEEN BELOW 35 DEGREES F. FOR 12 HOURS IMMEDIATELY PRIOR TO APPLICATION. CONSULT WITH THE GEOTECHNICAL ENGINEER CONCERNING WHEN ATMOSPHERIC TEMPERATURE IS ABOVE 40-DEGREES F AND RISING, AND PROCEEDING COURSE OR LIFT IS CLEAN AND DRY. BASE COURSE MAY BE LAID WHEN TEMPERATURE IS ABOVE 35 DEGREES F. AND RISING AND APPROVED BY THE GEOTECHNICAL ENGINEER.

18. THE BITUMINOUS CONCRETE SHALL BE TRANSPORTED FROM THE MIXING PLANT TO THE POINT OF USE IN VEHICLES CONFORMING TO THE REQUIREMENTS OF SECTION 501 OF THE MDOIT STANDARD SPECIFICATIONS FOR CONSTRUCTION. DELIVERIES SHALL BE SCHEDULED SO THAT SPREADING AND ROLLING OF ALL BITUMINOUS CONCRETE PREPARED FOR ONE DAY'S RUN CAN BE COMPLETED DURING DAYLIGHT, UNLESS ADEQUATE ARTIFICIAL LIGHTING IS PROVIDED. HAULING OVER FRESHLY PLACED BITUMINOUS MAT SHALL NOT BE PERMITTED UNTIL THE BITUMINOUS CONCRETE HAS BEEN COMPLETED, AS SPECIFIED, AND ALLOWED TO COOL TO ATMOSPHERIC TEMPERATURE.

19. UPON ARRIVAL, THE BITUMINOUS CONCRETE SHALL BE SPREAD TO A THICKNESS NOT TO EXCEED 3-INCHES AND TO THE FULL WIDTH BY AN APPROVED BITUMINOUS PAVEMENT. IT SHALL BE STRUCK OFF IN A UNIFORM LAYER OF SUCH DEPTH THAT, WHEN THE WORK IS COMPLETED, IT SHALL HAVE THE REQUIRED THICKNESS AND CONFORM TO THE GRADE AND CONTOUR INDICATED. THE SPEED OF THE PAVEMENT SHALL BE REGULATED TO ELIMINATE PULLING AND TEARING OF THE BITUMINOUS MAT. UNLESS OTHERWISE SPECIFIED, THE MIXTURE OF BITUMINOUS CONCRETE SHALL BEGAIN ALONG THE CENTERLINE OF A CROWNED SECTION OR ON THE HIGH SIDE OF AREAS WITH A ONE-WAY SLOPE.

20. THE BITUMINOUS CONCRETE SHALL BE PLACED IN CONSECUTIVE ADJACENT STRIPS HAVING A MINIMUM WIDTH OF 10 FEET, EXCEPT WHERE EDGE LANES REQUIRE LESS WIDTH TO COMPLETE THE AREA. TRANSVERSE JOINTS IN ADJACENT LANES SHALL BE OFFSET A MINIMUM OF 10 FEET. WHERE POSSIBLE, JOINTS SHALL BE LOCATED AT THE LANE EDGES.

21. ON AREAS WHERE IRREGULARITIES OR UNAVOIDABLE OBSTACLES MAKE THE USE OF MECHANICAL SPREADING AND FINISHING EQUIPMENT IMPRACTICAL, THE BITUMINOUS CONCRETE MAY BE SPREAD AND RAKED BY HAND TOOLS.

22. THE BITUMINOUS CONCRETE SHALL BE PLACED AT A TEMPERATURE OF NOT LESS THAN 250 NOR HIGHER THAN THE RECOMMENDED TEMPERATURE OF THE BINDER PRODUCER OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER.

23. THE BITUMINOUS CONCRETE MIXTURE SHALL BE THOROUGHLY AND UNIFORMLY COMPACTED BY ROLLING. THE SURFACE SHALL BE ROLLED WHEN THE BITUMINOUS MAT HAS ATTAINED SUFFICIENT STABILITY SO THAT THE ROLLING DOES NOT CAUSE UNIFORM DISPLACEMENT, CRACKING AND SHOWING. THE SEQUENCE OF ROLLING OPERATIONS SHALL BE AT THE DISCRETION OF THE CONTRACTOR.

24. THE SPEED OF THE ROLLER SHALL, AT ALL TIMES, BE SUFFICIENTLY SLOW TO AVOID DISPLACEMENT OF THE HOT BITUMINOUS CONCRETE. ANY DISPLACEMENT OCCURRING AS A RESULT OF REVERSING DIRECTION OF THE ROLLER, OR FROM ANY OTHER CAUSE, SHALL BE CORRECTED AT ONCE.

25. SUFFICIENT ROLLERS SHALL BE FURNISHED TO HANDLE THE OUTPUT OF THE PLANT. ROLLING SHALL CONTINUE UNTIL ALL ROLLER MARKS ARE ELIMINATED, THE SURFACE IS OF UNIFORM TEXTURE AND TRUE TO GRADE AND CROSS-SECTION, AND THE REQUIRED FIELD DENSITY IS OBTAINED.

26. TACK COAT SHALL BE APPLIED TO THE SURFACE OF PREVIOUS LIFTS AND COURSES OF BITUMINOUS CONCRETE AND TO SURFACES ABUTTING OR PROJECTING INTO THE BITUMINOUS CONCRETE.

27. IMMEDIATELY BEFORE PLACING A SUCCEEDING LIFT OR COURSE OF BITUMINOUS CONCRETE THE PRECEDING LIFT OR COURSE SHALL BE CLEARED OF ANY DEBRIS OR STANDING WATER BY APPROPRIATE METHODS.

28. TO PREVENT ADHESION OF THE BITUMINOUS CONCRETE TO THE ROLLER, THE WHEELS SHALL BE KEPT PROPERLY MOISTENED, BUT EXCESSIVE WATER WILL NOT BE PERMITTED.

29. IN AREAS NOT ACCESSIBLE TO THE ROLLER, THE BITUMINOUS CONCRETE SHALL BE THOROUGHLY COMPACTED WITH HOT HAND TAMPERS.

30. ANY BITUMINOUS CONCRETE THAT BECOMES LOOSE AND BROKEN, MIXED WITH DIRT, OR IN ANY WAY DEFECTIVE SHALL BE REMOVED AND REPLACED WITH FRESH HOT BITUMINOUS CONCRETE AND IMMEDIATELY COMPACTED TO CONFORM TO THE SURROUNDING AREA. THIS WORK SHALL BE DONE AT THE CONTRACTOR'S EXPENSE. SKIN PATCHING SHALL NOT BE ALLOWED.

31. THE CONTRACTOR SHALL PROVIDE AT LEAST TWO ROLLERS FOR EACH PAVEMENT OPERATING ON THE WORK. THE CONTRACTOR SHALL USE ADDITIONAL ROLLERS AS REQUIRED TO OBTAIN THE SPECIFIED PAVEMENT DENSITY.

## BITUMINOUS PAVING SPECIFICATIONS, CONTINUED

31. THE CONTRACTOR SHALL CAREFULLY MAKE JOINTS BETWEEN OLD AND NEW PAVEMENTS, OR BETWEEN SUCCESSIVE DAYS' WORK, TO ENSURE A CONTINUOUS BOND BETWEEN ADJOINING WORK. CONTRACT JOINTS TO HAVE THE SAME TEXTURE, DENSITY AND SMOOTHNESS AS OTHER SECTIONS OF THE BITUMINOUS CONCRETE COURSE. THE CONTRACTOR SHALL CLEAN CONTACT SURFACES OF SAND, DIRT, OR OTHER OBJECTIONABLE MATERIAL AND APPLY TACK COAT BEFORE MAKING THE JOINT.

32. THE CONTRACTOR SHALL TEST THE FINISHED SURFACE OF EACH BITUMINOUS CONCRETE COURSE FOR SMOOTHNESS, USING A 10 FOOT STRAIGHTEDGE APPLIED PARALLEL WITH AND AT RIGHT ANGLES TO CENTERLINE OF PAVED AREA. SURFACE SHALL NOT BE ACCEPTABLE IF EXCEEDING THE FOLLOWING TOLERANCES FOR SMOOTHNESS.

- LEVELING COURSE SURFACE: 1/4 INCH, PLUS OR MINUS 1/4 INCH.
- SURFACE COURSE: 1/4 INCH

33. THE CONTRACTOR SHALL TEST CROWNED SURFACES WITH A CROWN TEMPLATE, CENTERED AND AT RIGHT ANGLES TO THE CROWN. SURFACES WILL NOT BE ACCEPTABLE IF THE FINISHED CROWN SURFACES VARY MORE THAN 1/4 INCH FROM THE CROWN TEMPLATE.

34. AFTER FINAL ROLLING, THE CONTRACTOR SHALL NOT PERMIT VEHICULAR TRAFFIC ON THE BITUMINOUS CONCRETE PAVEMENT UNTIL IT HAS COOLED AND HARDENED, AND IN NO CASE SOONER THAN SIX HOURS OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER.

35. THE AGGREGATE BASE MUST EXTEND A MINIMUM OF 1' BEHIND THE BACK-OFF-CURB OR BEYOND EDGE OF PAVEMENT WHEN NO CURB IS PROPOSED.

## CONCRETE CURB, SIDEWALK AND PAVEMENT SPECIFICATIONS

1. THESE SPECIFICATIONS SHALL GOVERN THE CONSTRUCTION OF ALL PAVEMENTS, CURB AND GUTTER, SIDEWALKS, SERVICE WALKS, DRIVEWAY APPROACHES, AND LOADING DOCK AREAS, AS INDICATED ON THE DRAWINGS.

2. REFERENCE SPECIFICATIONS WHERE APPLICABLE TO WORK UNDER THIS SECTION ARE REFERRED BY ABBREVIATION AS FOLLOWS:

- AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO).
- AMERICAN CONCRETE INSTITUTE (ACI)
- MICHIGAN DEPARTMENT OF TRANSPORTATION/ CURRENT STANDARD SPECIFICATIONS FOR CONSTRUCTION (MDOIT)
- AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

3. THE FINE AGGREGATE SHALL MEET ALL REQUIREMENTS OF SECTION 902 OF MDOIT SPECIFICATION FOR NO. 2MS NATURAL SAND.

4. THE COARSE AGGREGATE SHALL MEET ALL REQUIREMENTS OF SECTION 902 OF MDOIT. SPECIFICATIONS FOR 6AA COARSE AGGREGATE.

5. THE CONTRACTOR SHALL SUBMIT, TO THE OWNER, TWO COPIES OF MATERIALS CERTIFICATES SIGNED BY MATERIAL PRODUCER AND CONTRACTOR. CERTIFICATES SHALL STATE THAT EACH MATERIAL ITEM MEETS SPECIFIED REQUIREMENTS.

6. THE CONTRACTOR SHALL SUBMIT TO THE GEOTECHNICAL ENGINEER, JOB MIX-FORMULAS FOR EACH REQUIRED CEMENT-AGGREGATE MIXTURE. MIX DESIGNS SHALL BE WITHIN ALLOWABLE TOLERANCES AS SPECIFIED FOR THE PARTICULAR APPLICATION.

7. CONCRETE MIX SHALL BE AIR-ENTRAINED AND PROPORTIONED TO PROVIDE THE FOLLOWING:

- COMPRESSIVE STRENGTH AT 28 DAYS: 3500 PSI MIN. OR AS INDICATED ON PLANS.
- TOTAL AIR CONTENT BY VOLUME: 5% TO 8%.
- SLUMP 3 INCH MAXIMUM, OR AS INDICATED ON PLANS.

8. THE CONTRACTOR SHALL AT HIS EXPENSE FURNISH SAMPLES OF FRESH CONCRETE AND PROVIDE SAFE AND SATISFACTORY FACILITIES FOR OBTAINING THE SAMPLES.

9. CONTRACT CONCRETE CURBING ONLY WHEN GROUND TEMPERATURE IS ABOVE 35 DEGREES F. AND BASE IS DRY.

10. ALL CEMENT USED IN CURB CONSTRUCTION SHALL BE PORTLAND CEMENT, TYPE I OR IA ASTM C-150.

11. WATER USED IN CONCRETE SHALL MEET THE REQUIREMENTS OF MDOIT SECTION 911.

12. AIR ENTRAINING ADMIXTURE SHALL BE SELECTED FROM THE MDOIT QUALIFIED PRODUCTS LIST.

13. ALL READY-MIXED CONCRETE SUPPLIERS MUST BE APPROVED BY THE OWNER AND MEET THE CURRENT REQUIREMENTS OF THE NATIONAL READY MIX CONCRETE ASSOCIATION (NRMA). IF REQUESTED BY THE OWNER, SUBMIT A WRITTEN DESCRIPTION OF PROPOSED READY-MIXED CONCRETE MANUFACTURER, GIVING QUALIFICATIONS OF PERSONAL, LOCATION OF BATCHING PLANT, LIST OF PROJECTS SIMILAR IN SCOPE OF SPECIFIED WORK, AND OTHER INFORMATION AS MAY BE REQUESTED BY THE OWNER.

14. THE CONTRACTOR SHALL SUBMIT A STATEMENT OF PURCHASE FOR READY-MIXED CONCRETE. PRIOR TO ACTUAL DELIVERY OF CONCRETE, SUBMIT TO THE GEOTECHNICAL ENGINEER FOUR COPIES OF STATEMENT OF PURCHASE, GIVING THE DRY WEIGHTS OF CEMENT AND SATURATED SURFACE DRY WEIGHTS OF FINE AND COARSE AGGREGATES AND QUANTITIES, TYPE AND NAME OF ADMIXTURES (IF ANY) AND OF WATER PER CU.YD., THAT WILL BE USED IN THE MANUFACTURE OF THE CONCRETE. THE CONTRACTOR SHALL ALSO FURNISH EVIDENCE SATISFACTORY TO THE GEOTECHNICAL ENGINEER THAT THE MATERIALS TO BE USED AND PROPORTIONS SELECTED WILL PRODUCE CONCRETE OF THE QUALITY SPECIFIED. WHATEVER STRENGTHS ARE OBTAINED, THE QUANTITY OF CEMENT USED SHALL NOT BE LESS THAN THE MINIMUM SPECIFIED.

15. READY-MIXED CONCRETE DELIVERY TICKETS: SUBMIT ONE COPY OF EACH TICKET TO THE GEOTECHNICAL ENGINEER AND CONTRACTOR IN ACCORDANCE WITH SECTION 16 OF ASTM C94.

16. READY-MIXED CONCRETE SHALL BE BATCHED, MIXED AND TRANSPORTED IN ACCORDANCE WITH ASTM C94, AND COMPLY WITH ACI 304 "RECOMMENDED PRACTICE FOR MEASURING, MIXING, TRANSPORTING AND PLACING CONCRETE," EXCEPT AS OTHERWISE SPECIFIED HEREIN.

17. READY-MIXED CONCRETE SHALL BE MIXED AND DELIVERED TO THE POINT OF DISCHARGE AT THE JOB BY MEANS OF A READY MIX CONCRETE TRUCK.

18. NO WATER FROM THE TRUCK WATER SYSTEM OR ELSEWHERE SHALL BE ADDED AFTER THE INITIAL INTRODUCTION OF THE MIXING WATER FOR THE BATCH. UNDER NO CIRCUMSTANCES SHALL WATER BE ADDED TO THE BATCH AFTER IT HAS EXCEEDED NOR SHALL THE SLUMP EXCEED THE MAXIMUM SPECIFIED.

19. DISCHARGE OF THE CONCRETE SHALL BE COMPLETED WITHIN 1-1/2 HOURS OR BEFORE THE DRUM HAS REVOLVED 300 REVOLUTIONS, WHICHEVER COMES FIRST. AFTER THE INTRODUCTION OF THE MIXING WATER TO THE CEMENT AND AGGREGATES OR THE INTRODUCTION OF THE CEMENT TO THE AGGREGATES.

20. IN HOT WEATHER (AIR TEMPERATURE 80-DEGREES F. AND ABOVE) OR UNDER CONDITIONS CONTRIBUTING TO QUICK STIFFENING OF THE CONCRETE, THE TIME SHALL BE REDUCED TO ONE HOUR.

21. THE CONCRETE SHALL BE DEPOSITED CONTINUOUSLY IN THE FORMS IN SUCH A MANNER AS TO AVOID SEGREGATION AND IT SHALL BE THOROUGHLY TAMPED OR VIBRATED SO THAT THE FORMS ARE ENTIRELY FILLED AND THE CONCRETE THOROUGHLY CONSOLIDATED. THE SLABS SHALL BE PLACED IN SECTIONS OR BLOCKS IN ONE OPERATION AS A MONOLITH.

22. THE CONCRETE SURFACE SHALL BE STRUCK OFF TO A PLANE SURFACE WITH A STRAIGHTEDGE. AFTER THE CONCRETE HAS BEEN FLOATED TO AN EVEN SURFACE, THE CONSTRUCTION JOINT SHALL BE CUT AND ALL SLAB EDGES PARALLEL WITH AND AT RIGHT ANGLES TO CENTERLINE OF PAVED AREA TO A WIDTH OF 2-INCHES. AFTER THE CONCRETE HAS SLIGHTLY SET, A BROOM SHALL BE BRUSHED LIGHTLY ACROSS THE SURFACE AT RIGHT ANGLES TO FORMS SO AS TO IMPART A ROUGH FINISH.

23. IN NO CASE SHALL THE MIXER OR TRUCK BE FLOUSED OUT ONTO THE STREET PAVEMENT OR IN A CATCH BASIN OR SEWER MANHOLE, OR IN ANY PUBLIC RIGHT-OF-WAY. SEE SOIL EROSION CONTROL PLAN FOR CONCRETE WASHOUT LOCATION.

24. REINFORCEMENT BARS SHALL BE PER MDOIT SECTION 905.

25. TIE WIRE SHALL BE BLACK, ANNEALED STEEL WIRE, NOT LESS THAN 16 GAUGE.

## CONCRETE CURB, SIDEWALK AND PAVEMENT SPECIFICATIONS, CONTINUED

26. BARS SUPPORTS SHALL CONFORM TO THE BAR SUPPORT SPECIFICATIONS CONTAINED IN CONCRETE REINFORCING STEEL INSTITUTE'S ("MANUAL OF STANDARD PRACTICE," PROVIDE CHAIRS, SPACERS AND OTHER DEVICES SUITABLE FOR PROPER SPACING SUPPORTING AND FASTENING REINFORCING BARS.

27. WHEN FORMS ARE USED AND THE CURB RADIUS IS LESS THAN 200 FEET, THE CURVED ALIGNMENT SHALL BE PROVIDED FOR BY EITHER STANDARD STEEL FORMS EQUIPPED WITH FLEXIBLE LINES OR BY FLEXIBLE FORMS. THE FORMS SHALL BE OF THE FULL DEPTH OF THE SECTION. CURB AND GUTTER FORMS SHALL BE SO CONSTRUCTED AS TO PERMIT THE INSIDE OF THE FORMS TO BE SECURELY FASTENED TO THE OUTSIDE FORMS.

28. ALL NEW CURB SHALL BE PLACED ONLY ON A PREPARED SUBGRADE, SMOOTH AND LEVELED TO THE GRADES ESTABLISHED BY THE ENGINEER.

29. COMPACT AND CUT-TO-GRADE SUBGRADE UNDER FORMS SO THAT FORMS WHEN SET WILL BE UNIFORMLY SUPPORTED FOR THE ENTIRE LENGTH. SECURELY STAKE AND BRACE OR THE FORMS TO PREVENT LEAKAGE OF MORTAR. BRACING WITH EARTH WILL NOT BE PERMITTED.

30. COAT SURFACES OF FORMS TO BE IN CONCRETE WITH A LIGHT CLEAR PARAFFIN OIL OR PARTING COMPOUND WHICH WILL NOT STAIN THE CONCRETE.

31. THE INTERIOR SURFACES OF CONCRETE CONVEYING EQUIPMENT SHALL BE MAINTAINED FREE OF HARDENED CONCRETE, DEBRIS, WATER, SNOW, ICE AND OTHER DELETERIOUS MATERIALS.

32. CURBING MAY BE CONSTRUCTED EITHER BY USE OF FORMS OR BY A MECHANICAL CURB AND GUTTER PAVEMENT, PROVIDED THE REQUIRED FINISH, AND CROSS-SECTION, ARE OBTAINABLE BY EITHER METHOD. THE CONTRACTOR SHALL PROVIDE ONE COURSE MONOLITHIC STRUCTURE WITHOUT THE USE OF MORTAR TOPPING OR SAND-CEMENT DRIER. CONCRETE SHALL BE SPADED OR VIBRATED SUFFICIENTLY TO ENSURE SATISFACTORY CONSOLIDATION.

33. PROVIDE REINFORCEMENT FOR CONCRETE CURB AS SHOWN ON THE DRAWINGS. REINFORCEMENT SHALL BE KEPT CLEAN AND FREE FROM OBJECTIONABLE RUST. BENDS OR KINKS IN REINFORCING BARS SHALL BE CORRECTED BEFORE PLACING. ALL REINFORCEMENT SHALL BE ACCURATELY LOCATED IN FORMS AND SECURELY HELD IN PLACE BEFORE AND DURING CONCRETE PLACING, BY SUPPORTS ADEQUATE TO PREVENT DISPLACEMENT DURING THE COURSE OF CONSTRUCTION.

34. THE CONCRETE CURB SURFACE SHALL BE STRUCK OFF THE REQUIRED CROSS-SECTION ALL TRAFFIC LANE AND PARKING LOT MARKINGS AS INDICATED IN THE CONSTRUCTION DOCUMENTS.

35. CONTRACTION JOINTS SHALL BE CUT IN CONCRETE CURBING AT MINIMUM 10' INTERVALS. THE JOINT SHALL CUT 1/4 INCH WIDE BY 1/3 THE DEPTH OF THE CONCRETE CURB SECTION. JOINTS SHALL ALSO BE LOCATED ADJACENT TO CURB DROPS.

36. ISOLATION JOINTS SHALL BE PLACED IN CURBING AT TANGENT POINTS IN CURB RETURNS AT INTERSECTIONS, AT BOTH SIDES OF STRUCTURES LOCATED IN THE AREA AND AT INTERSECTIONS OF CURB WITH OTHER STRUCTURES. ISOLATION JOINTS SHALL BE 1" THICK PRE-FORMED JOINT FILLER STRIPS. THE STRIPS SHALL EXTEND THE FULL DEPTH OF THE CONCRETE CURB SECTION. ISOLATION JOINTS SHALL BE PLACED AT THE END OF EACH DAYS POUR AND WHEN ABUTTING PREVIOUSLY POURED CURB.

37. THE CURING COMPOUND SHALL BE A WHITE PARAFIN BASE COMPOUND SELECTED FROM MDOIT'S QUALIFIED PRODUCTS LIST APPLIED AT 200 SQ.FT./GAL.

38. ALL CONTRACTION JOINTS IN CONCRETE CURB SECTIONS SHALL BE SEALED WITH EITHER HOT POURED JOINT SEALER OR COLD WEATHER JOINT SEALER.

39. SLIGHTLY UNDERFILL JOINT GROOVE WITH JOINT SEALER TO PREVENT EXTRUSION OF THE SEALER. REMOVE EXCESS JOINT SEALER MATERIALS AS SOON AFTER SEALING AS POSSIBLE.

40. FRESHLY PLACED CONCRETE SHALL BE PROTECTED AS REQUIRED TO MAINTAIN THE TEMPERATURE OF THE CONCRETE AT NOT LESS THAN 50 DEGREES F. NOR MORE THAN 80 DEGREES F. AND IN A MOST CONDITION CONTINUOUSLY FOR THE PERIOD OF CURING. OR A COMBINATION THEREOF AS REQUIRED TO MAINTAIN THE TEMPERATURE OF THE CONCRETE DURING CURING SHALL BE AS UNIFORM AS POSSIBLE AND SHALL NOT EXCEED 5 DEGREES F. IN ANY ONE HOUR, NOR 50 DEGREES F. IN ANY 24 HOUR PERIOD.

41. COLD WEATHER PROTECTION: WHEN THE TEMPERATURE OF THE ATMOSPHERE IS 40-DEGREES F. AND BELOW, THE CONCRETE SHALL BE PROTECTED BY HEATING, INSULATION COVERING, OR A COMBINATION THEREOF AS REQUIRED TO MAINTAIN THE TEMPERATURE OF THE CONCRETE AT OR ABOVE 50-DEGREES F. AND IN A MOST CONDITION CONTINUOUSLY FOR THE CONCRETE CURING PERIOD. COLD WEATHER PROTECTION SHALL MEET THE REQUIREMENTS OF ACI 308R "HOT WEATHER CONCRETING".

42. HOT WEATHER PROTECTION: WHEN THE TEMPERATURE OF THE ATMOSPHERE IS 90-DEGREES F. AND ABOVE, OR DURING OTHER CLIMATIC CONDITIONS WHICH WILL CAUSE TOO RAPID DRYING OF THE CONCRETE, THE CONCRETE SHALL BE PROTECTED BY WINDBREAKS, SHADING, FOG SPRAYING LIGHT COLORED MOISTURE RETAINING COVERING, OR A COMBINATION THEREOF AS REQUIRED TO MAINTAIN THE TEMPERATURE OF THE CONCRETE BELOW 90-DEGREE F. AND IN A MOST CONDITION CONTINUOUSLY FOR THE CONCRETE CURING PERIOD. HOT WEATHER PROTECTION SHALL MEET THE REQUIREMENTS OF ACI 308R "HOT WEATHER CONCRETING".

43. ALL FORMS, RAILS AND STAKES SHALL BE REMOVED WITHIN 24 HOURS AFTER PLACING THE CURB. EXPOSED EDGES OF CONCRETE SHALL BE IMMEDIATELY BACKFILLED OR SPRAYED WITH CURING COMPOUND.

44. AFTER COMPLETION OF CONCRETE CURBING IN AN AREA, REMOVE ALL WEATHER PROTECTION MATERIALS, RUBBISH AND DEBRIS RESULTING FROM SPECIFIED WORK, SWEEP CONCRETE CURBS CLEAN, AND SEAL JOINTS.

45. ALL CEMENT USED IN SIDEWALK CONSTRUCTION SHALL BE PORTLAND CEMENT, TYPE I OR IA ASTM C-150.

46. ALL NEW WALKS AND CONCRETE PAVEMENTS SHALL BE PLACED ONLY ON A PREPARED SUBGRADE, SMOOTHED AND LEVELED TO THE GRADES ESTABLISHED BY THE ENGINEER. IN THE CASE OF THE SIDEWALKS, THE SUBGRADE SHALL BE EXCAVATED 2-INCHES BELOW THE SIDEWALK BASE AND FILLED WITH APPROVED SAND MEETING MDOIT CLASS II, SAND DESIGNATION.

47. CONSTRUCT CONCRETE SURFACE COURSE ONLY WHEN GROUND TEMPERATURE IS ABOVE 35 DEGREES F. AND BASE IS DRY.

48. SIDEWALKS SHALL PITCH TOWARD THE STREET OR AWAY FROM BUILDINGS WITH A MINIMUM CROSS SLOPE OF 1/4-INCH PER FOOT OF WIDTH AND A MINIMUM CROSS SLOPE OF 1/8-INCH PER FOOT OF WIDTH. CROSS SLOPE DIRECTION TRANSITIONS SHALL BE ACCOMPLISHED IN LENGTHS OF 10 FEET OR LESS.

49. PRIOR TO PLACING THE CONCRETE, ALL DEBRIS, STONES, DIRT, ETC., SHALL BE REMOVED FROM THE SUBGRADE. THE SUBGRADE SHALL BE MOISTENED WITH WATER IN SUCH A MANNER AS TO THOROUGHLY WET THE MATERIAL WITHOUT FORMING PUDDLES OR POCKETS OF WATER. NO CONCRETE SHALL BE PLACED ON FROZEN SUBGRADE

client:  
**SYLVAN GLEN ESTATES**  
 6600 Grand River Ave  
 Brighton, Michigan  
 Ar Brouwer  
 734-604-8806

project:  
**SYLVAN GLEN ESTATES CLUB HOUSE IMPROVEMENT**

project location:  
 City of Brighton,  
 Michigan  
 6600 Grand River Ave

sheet title:  
**CLUBHOUSE LANDSCAPE IMPROVEMENT PLAN**

job no./issue/revision date:  
 LS22.058.04 SPA 5/2/2022

drawn by:  
 JP, DK

checked by:  
 FP  
 date:  
 4/28/2022

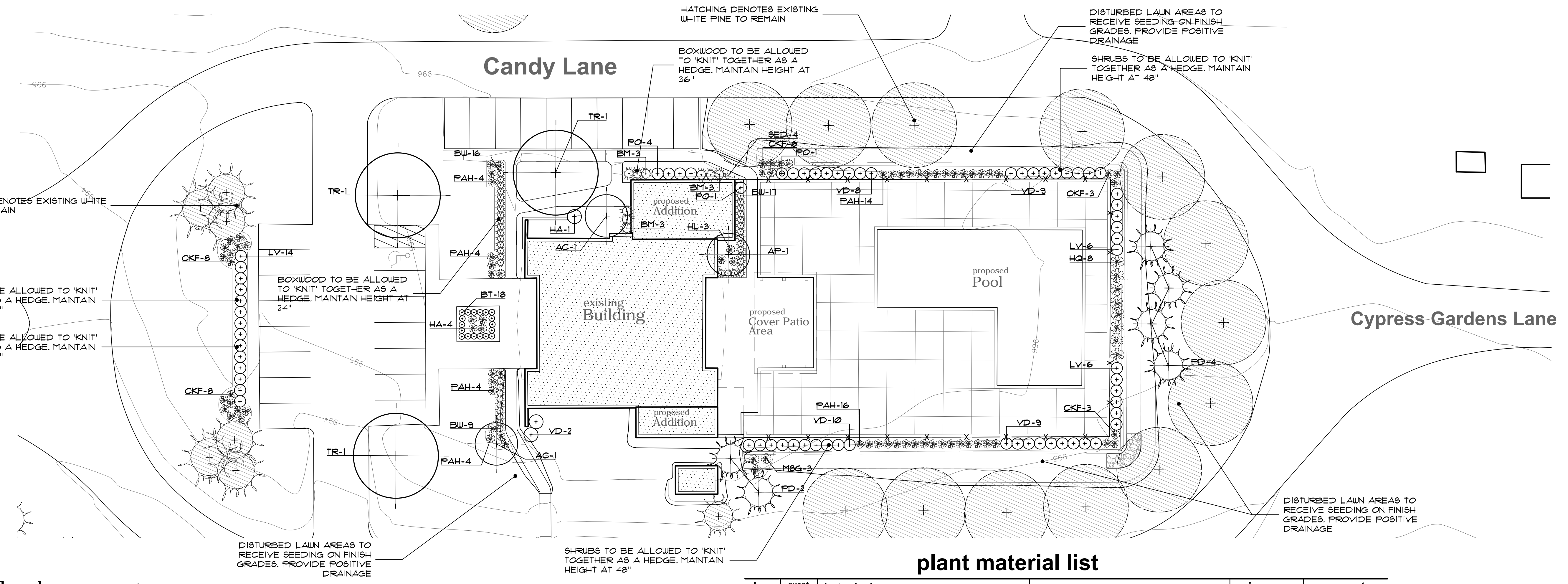
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**3 WORKING DAYS BEFORE YOU DIG**  
 CALL MISS DIG  
 1-800-482-7171  
 For free location of public utility lines

The location and elevations of existing underground utilities as shown on this drawing are only approximate. no guarantee is either expressed or implied as to the completeness of accuracy. contractor shall be exclusively responsible for determining the exact location and elevation prior to the start of construction

project no:  
 LS22.058.04

sheet no:  
**LS-1**



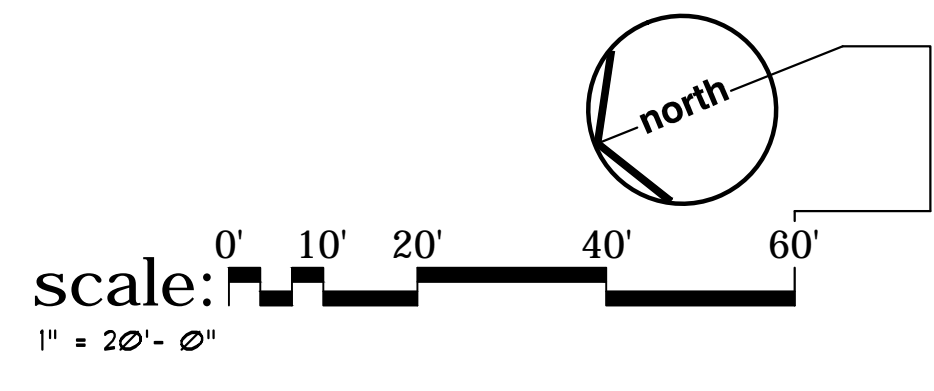
**general landscape notes:**

- LANDSCAPE CONTRACTOR SHALL VISIT THE SITE, INSPECT EXISTING CONDITIONS, REVIEW PROPOSED PLANTINGS AND RELATED WORK, CONTACT THE OWNER AND/OR LANDSCAPE ARCHITECT WITH ANY CONCERNS OR DISCREPANCY BETWEEN THE PLAN, PLANT MATERIAL LIST, AND/OR SITE CONDITIONS.
- PRIOR TO BEGINNING OF CONSTRUCTION ON ANY WORK, CONTRACTORS SHALL VERIFY LOCATIONS OF ALL ON-SITE UTILITIES, GAS, ELECTRIC, TELEPHONE, CABLE TO BE LOCATED BY CONTACTING MISS DIG 1-800-482-7171. ANY DAMAGE OR INTERRUPTION OF SERVICES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. COORDINATE ALL RELATED WORK ACTIVITIES WITH OTHER TRADES AND REPORT ANY UNACCEPTABLE JOB CONDITIONS TO OWNER PRIOR TO COMMENCING.
- NUMERICAL VALUES ON THE LANDSCAPE QUANTITIES SPECIFIED ON THE PLAN TAKE PRECEDENCE OVER GRAPHIC REPRESENTATION. VERIFY ANY CONCERN/DISCREPANCY WITH LANDSCAPE ARCHITECT.
- ALL CONSTRUCTION AND PLANT MATERIAL LOCATIONS TO BE ADJUSTED ON SITE IF NECESSARY.
- ALL SUBSTITUTIONS OR DEVIATIONS FROM THE LANDSCAPE PLAN MUST BE APPROVED BY THE CITY OF BRIGHTON AND LANDSCAPE ARCHITECT.
- ALL LARGE TREES AND EVERGREENS TO BE STAKED, GUYED AND WRAPPED AS DETAILED, SHOWN ON PLAN.
- PLANT BEDS TO BE DRESSED WITH MIN. 4" OF FINELY DOUBLE SHREDDED HARDWOOD MULCH.
- DIG SHRUB PITS 1' LARGER THAN SHRUB ROOT BALLS AND TREE PITS 2' LARGER THAN ROOT BALL. BACK-FILL WITH ONE PART TOP SOIL AND ONE PART SOIL FROM EXCAVATED PLANTING HOLE.
- NATURAL COLOR, FINELY SHREDDED HARDWOOD BARK MULCH REQUIRED FOR ALL PLANTINGS.
- REMOVE ALL TWINE WIRE AND BURLAP FROM TREE AND SHRUB EARTH BALLS, AND FROM TREE TRUNKS. 4" THICK BARK MULCH FOR TREES IN 4" DIA. CIRCLE WITH 3" PULLED AWAY FROM TRUNK. 4" THICK BARK MULCH FOR SHRUBS AND 4" THICK BARK MULCH FOR PERENNIALS.
- PLANT MATERIAL QUALITY & INSTALLATION SHALL BE IN ACCORDANCE WITH THE CURRENT AMERICAN ASSOCIATION OF NURSERYMEN LANDSCAPE STANDARDS.
- ALL TREE PITS TO BE TESTED FOR PROPER DRAINAGE PRIOR TO TREE PLANTING. PROVIDE APPROPRIATE DRAINAGE SYSTEM AS REQUIRED IF THE TREE PIT DOES NOT DRAIN SUFFICIENTLY.
- ALL PLANTING AREAS TO BE PREPARED WITH APPROPRIATE SOIL MIXTURES AND FERTILIZER BEFORE PLANT INSTALLATION.
- PLANT TREES AND SHRUBS GENERALLY NO CLOSER THAN THE FOLLOWING DISTANCES FROM SIDEWALKS, CURBS AND PARKING STALLS:
  - SHADE TREES 5 FT.
  - ORNAMENTAL AND EVERGREEN TREES (CRAB PINE, SPRUCE, ETC.) 10 FT.
  - SHRUBS THAT ARE LESS THAN 1 FOOT TALL AND WIDE AT MATURITY 2 FT.
- NO TREES OR EVERGREENS TO BE INSTALLED OVER ANY PROPOSED OR EXISTING UTILITY LINES AS SHOWN ON THE OVERALL LANDSCAPE PLAN. SEE ENGINEERING PLANS FOR LOCATION AND DETAILS.
- ALL LAWN AREAS AND LANDSCAPE BEDS TO BE FULLY IRRIGATED WITH AN AUTOMATIC UNDERGROUND SYSTEM. IRRIGATION SYSTEM TO HAVE SEPARATE ZONES FOR LAWN AREAS, PARKING ISLANDS, AND SHRUB BEDS WITH DIFFERENT CONTROL MOISTURE LEVEL ADJUSTMENTS PER ZONE AS REQUIRED.
- UNLESS NOTED OTHERWISE, LANDSCAPE BEDS ADJACENT TO LAWN TO SPADE EDGE UNLESS NOTED OTHERWISE.
- WATERING OF ALL PLANTS AND TREES TO BE PROVIDED IMMEDIATELY AND MULCHING WITHIN 24 HOURS AFTER INSTALLATION.
- THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL LANDSCAPE PLANT MATERIALS AND IRRIGATION INSTALLATION FOR A PERIOD OF TWO YEARS BEGINNING AFTER THE COMPLETION OF LANDSCAPE INSTALLATION DATE APPROVED BY THE CITY OR LANDSCAPE ARCHITECT. THE CONTRACTOR SHALL REPLACE DURING AND AT THE END OF THE GUARANTEE PERIOD, ANY DEAD OR UNACCEPTABLE PLANTS AS DETERMINED BY THE CITY OR LANDSCAPE ARCHITECT, WITHOUT COST TO THE OWNER.

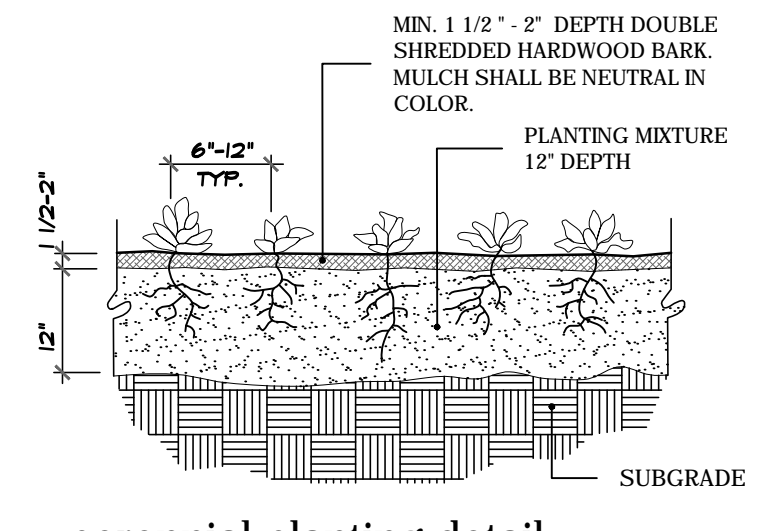
**plant material list**

key	quant.	botanical name	common name	size	comments
<b>LARGE AND SMALL DECIDUOUS TREES</b>					
TR	3	TILIA AMERICANA 'REDMOND'	REDMOND LINDEN	2 1/2" BB	
AC	2	AMELANCHIER CANADENSIS	SHADBLOW SERVICEBERRY	8" BB	
AP	1	ACER P. 'BLOODGOOD'	BLOODGOOD JAPANESE LACE LEAF MAPLE	8" BB	MULTI-STEM
PD	6	PICEA GLAUCA 'DENSATA'	BLACK HILL SPRUCE	8" BB	
<b>SHRUBS</b>					
BM	9	BUXUS M. 'GREEN MOUNTAIN'	GREEN MOUNTAIN BOXWOOD	36" BB	36" O.C. SPACING
LV	26	LIGUSTRUM X. 'VAGARYI'	GOLDEN VIGARY FRIVET	36" BB	48" O.C. SPACING
HA	5	HYDRANGEA 'ANNABELLE'	'ANNABELLE' HYDRANGEA	30" HIGH CONT.	36" O.C. SPACING
HL	3	HYDRANGEA 'LINDSEY ANN'	LA DREAMIN HYDRANGEA	30" HIGH CONT.	36" O.C. SPACING
HQ	6	HYDRANGEA P. 'BULK'	'QUICK FIRE' HYDRANGEA	30" HIGH CONT.	36" O.C. SPACING
PO	8	PHYSOCARPUS OPULIFOLIUS 'SEWARD'	SUMMER WINE NINEBARK	30" HIGH CONT.	36" O.C. SPACING
VD	38	VIBURNUM DENTATUM 'SYNESTVEDT'	CHICAGO LUSTRE ARROWWOOD VIBURNUM	30" HIGH CONT.	48" O.C. SPACING
BW	42	BUXUS S. 'VARDAR VALLEY'	VARDAR VALLEY BOXWOOD	18" BB	24" O.C. SPACING
BT	18	BERBERIS THUNBERGII 'A. NANAI'	CRIMSON PYGMY BARBERRY	15" HIGH CONT.	24" O.C. SPACING
<b>PERENNIALS AND GRASSES</b>					
CKF	28	CALAMAGROSTIS ACUTIFLORA 'KARL FOERSTER'	KARL FOERSTER FEATHER REED GRASS	* 3 CONT.	36" O.C. SPACING
PAH	46	PENNISETUM ALOPECUROIDES 'HAMELN'	DWARF FOUNTAIN GRASS	* 3 CONT.	36" O.C. SPACING
M&G	3	MISCANTHUS SINENSIS 'MORNING LIGHT'	MORNING LIGHT JAPANESE SILVER GRASS	* 3 CONT.	48" O.C. SPACING
SED	4	SEDUM X. 'NEON'	NEON SEDUM	* 1 POT	16" O.C. SPACING

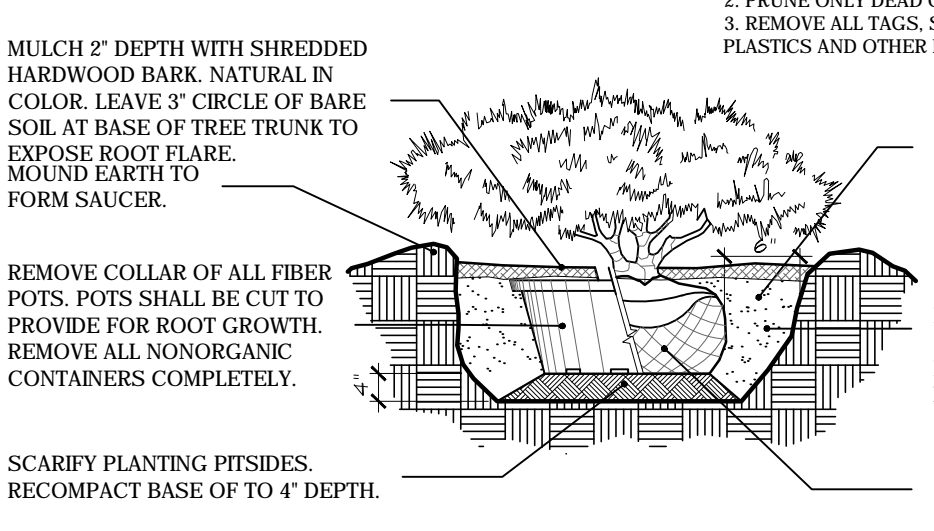
landscape improvement plan for:  
**“Sylvan Glen Estates Clubhouse”**  
 City of Brighton, Michigan



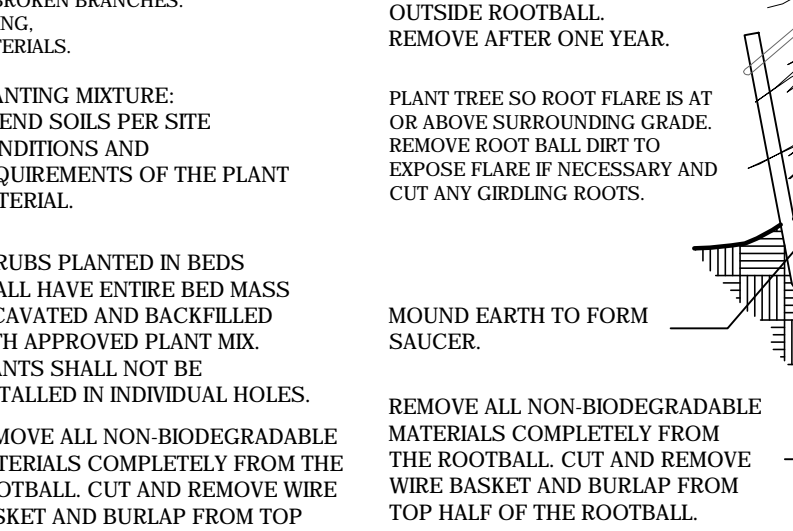
**note:**  
 unless noted otherwise, numerical value on landscape quantities specified on plan take precedence over graphic representation.



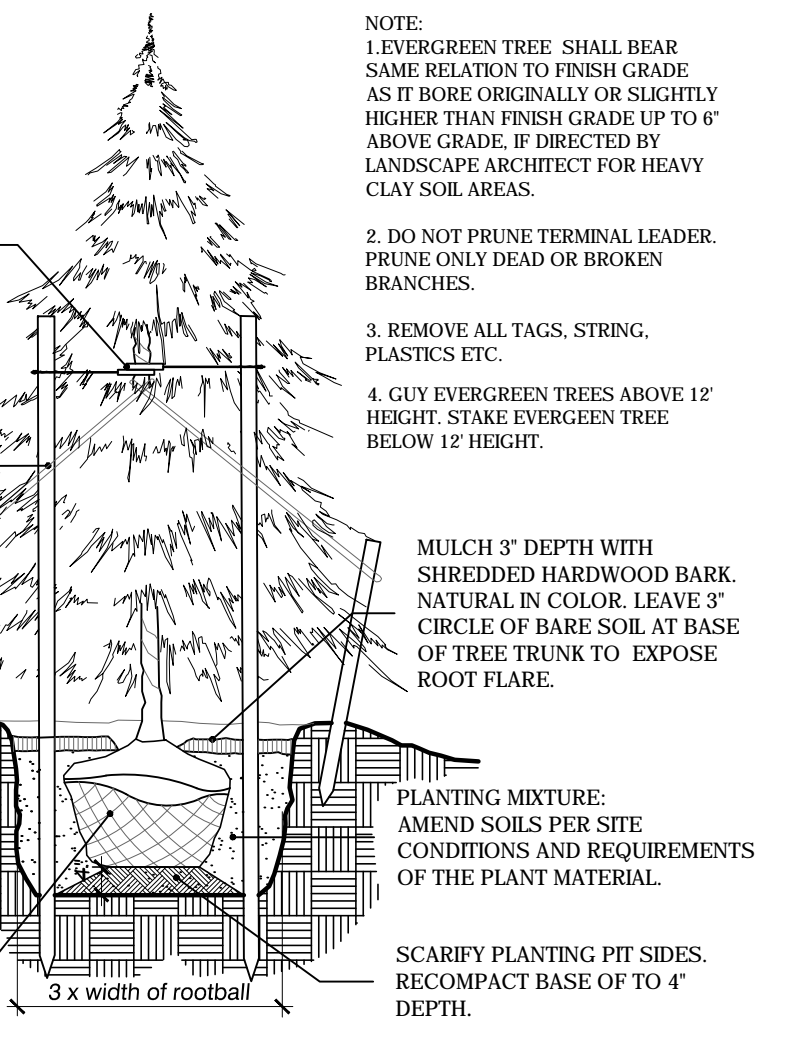
perennial planting detail  
 no scale



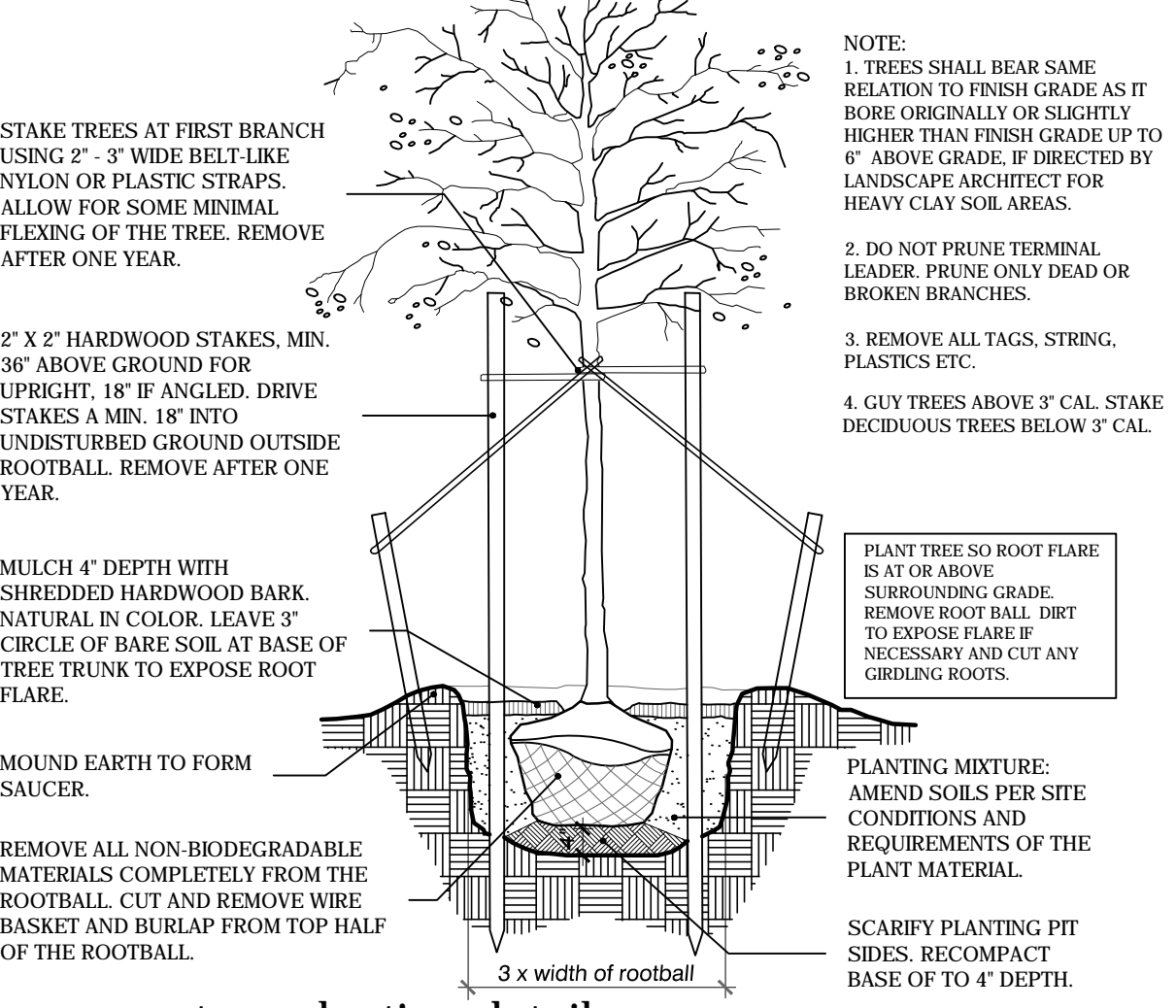
shrub planting detail  
 no scale



evergreen planting detail  
 no scale



tree planting detail  
 no scale



tree planting detail  
 no scale



PLAN VIEW: NOT TO SCALE

Schedule							
Label	Symbol	Qty	Manufacturer	Catalog Number	Light Loss Factor	Lumens Per Lamp	Watts
P1	□	24	LITHONIA DSX1 1	DSX1 LED P1 30K T4M MVOLT HS	0.900	4910	54

Statistics					
Description	Avg fc	Max fc	Min fc	Avg/Min (:1)	Max/Min (:1)
GRASS AREA	0.28	3.3	0.0	N.A.	N.A.
PARKING & ROADWAY CALC 3FT AFF	1.48	3.4	0.0	N.A.	N.A.
PROPERTY LINE CALC 3FT AFF	0.03	1.9	0.0	N.A.	N.A.

**GENERAL NOTE**  
 1. SEE SCHEDULE FOR LUMINAIRE MOUNTING HEIGHT.  
 2. CALCULATIONS ARE SHOWN IN FOOTCANDLES AT: 0' - 0", FOOD SERVICE AREA AT: 2' - 6", TREES SHOWN AT BOTTOM OF LEAVES  
 3. LIGHTING ALTERNATES REQUIRE NEW PHOTOMETRIC CALCULATION AND RESUBMISSION TO CITY FOR APPROVAL.

- THE ENGINEER AND/OR ARCHITECT MUST DETERMINE APPLICABILITY OF THE LAYOUT TO EXISTING / FUTURE FIELD CONDITIONS.  
 THIS LIGHTING LAYOUT REPRESENTS ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY APPROVED METHODS.  
 ACTUAL PERFORMANCE OF ANY MANUFACTURER'S LUMINAIRE MAY VARY DUE TO VARIATION IN ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, AND OTHER VARIABLE FIELD CONDITIONS. MOUNTING HEIGHTS INDICATED ARE FROM GRADE AND/OR FLOOR UP.

- THESE LIGHTING CALCULATIONS ARE NOT A SUBSTITUTE FOR INDEPENDENT ENGINEERING ANALYSIS OF LIGHTING SYSTEM SUITABILITY AND SAFETY.  
 THE ENGINEER AND/OR ARCHITECT IS RESPONSIBLE TO REVIEW FOR MICHIGAN ENERGY CODE AND LIGHTING QUALITY COMPLIANCE.  
 - UNLESS EXEMPT, PROJECT MUST COMPLY WITH LIGHTING CONTROLS REQUIREMENTS DEFINED IN ASHRAE 90.1 2013. FOR SPECIFIC INFORMATION CONTACT GBA CONTROLS GROUP AT ASG@GASSERBUSH.COM OR 734-266-6705.  
 - FOR ORDERING INQUIRIES CONTACT GASSER BUSH AT QUOTES@GASSERBUSH.COM OR 734-266-6705.  
 - THIS DRAWING WAS GENERATED FROM AN ELECTRONIC IMAGE FOR ESTIMATION PURPOSE ONLY. LAYOUT TO BE VERIFIED IN FIELD BY OTHERS.  
 - MOUNTING HEIGHT IS MEASURED FROM GRADE TO FACE OF FIXTURE. POLE HEIGHT SHOULD BE CALCULATED AS THE MOUNTING HEIGHT LESS BASE HEIGHT.

Sylvan Glen Site\_V1 #22-75378.AGI  
 Gasser Bush Associates / Applications  
 www.gasserbush.com

Designer: JC3  
 Date: 5/4/2022  
 Scale: NOT TO SCALE



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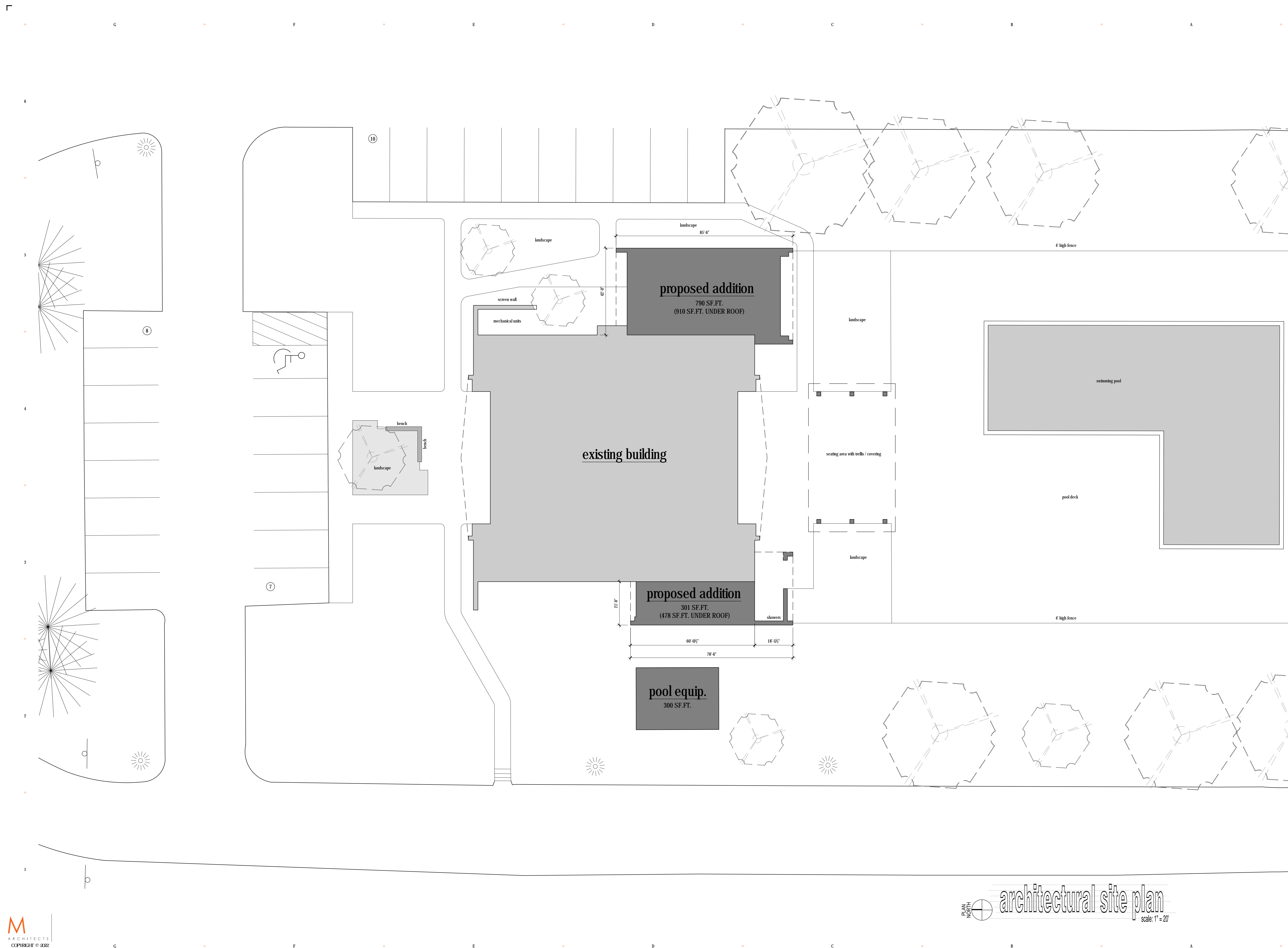
PROJECT  
CLUBHOUSE RENOVATION  
at  
Sun Communities  
Sylvan Glen Estates

PROJECT ADDRESS  
6600 Grand River Road  
Brighton, Michigan  
48114  
(Genoa Township)

PROJECT NUMBER  
21.17

SHEET NAME  
ARCHITECTURAL SITE PLAN

SHEET NUMBER  
AS101



**SIGNAGE NOTES**

1. ALL SIGNS THAT PROVIDE EMERGENCY INFORMATION, GENERAL CIRCULATION DIRECTIONS, OR IDENTIFY ROOMS & SPACES SHALL COMPLY WITH THE MICHIGAN BUILDING CODE - LATEST EDITION.
2. ALL SIGNAGE REQUIRED TO BE ACCESSIBLE MUST COMPLY WITH CBOIANS, A 117.1, SECTIONS 4.28.2, 4.28.3, AND 4.28.5 FOR CHARACTER PROPORTION, HEIGHT, FINISH AND CONTRAST. TACTILE SIGNAGE MUST ALSO COMPLY WITH SECTION 4.28.6 AND 4.28.7
3. PERMANENT SIGNAGE USED TO IDENTIFY ROOMS AND SPACES SHALL INCLUDE TACTILE CHARACTERS AND BRAILLE. TO BE MOUNTED ADJACENT TO THE DOOR.

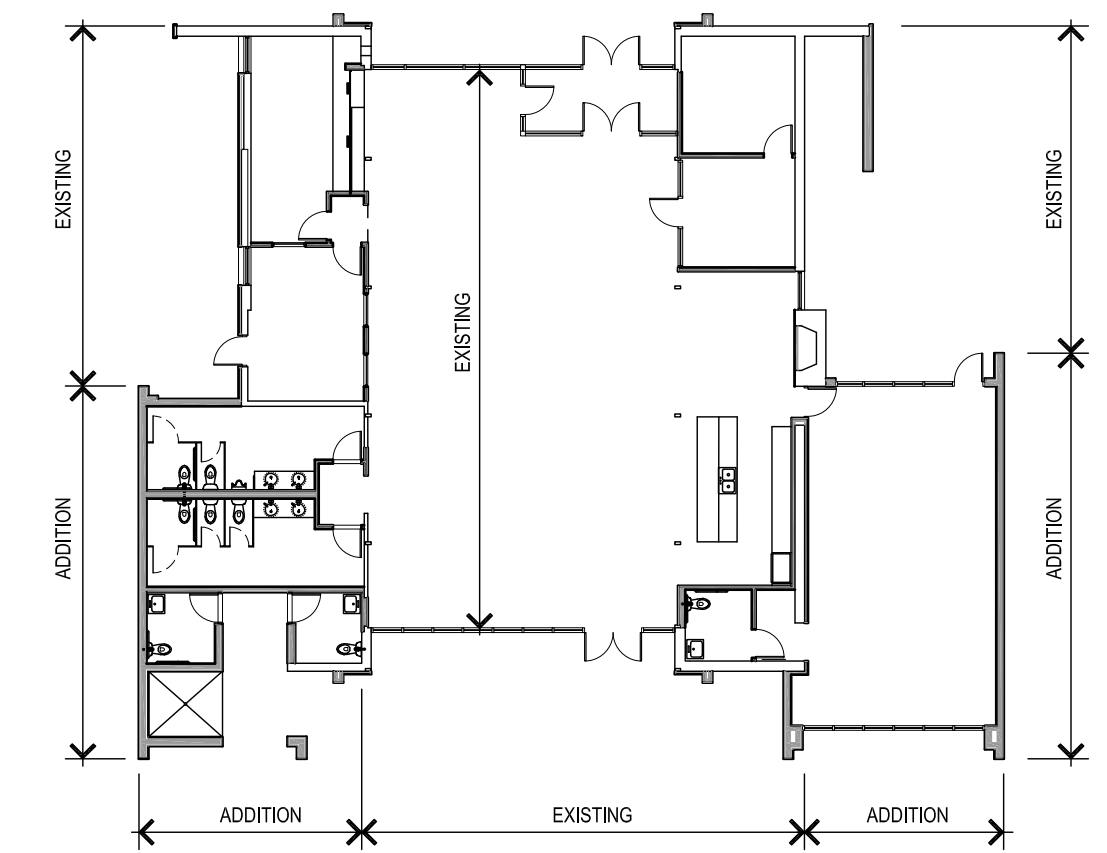
**FIRE EXTINGUISHER GENERAL NOTES:**

1. VERIFY FINAL LOCATIONS IN FIELD AND WITH LOCAL FIRE MARSHALL PRIOR TO INSTALLATION. NOTIFY ARCHITECT OF ANY DISCREPANCIES.
2. MOUNTING HEIGHTS TO ACCOMMODATE A FINISHED HEIGHT OF 48" TO THE HANDLE OF THE ACTUAL FIRE EXTINGUISHER.

**FE** FIRE EXTINGUISHER LOCATION - MOUNT EXTINGUISHER ON 2" HOOK MP-10, VERIFY WITH FIRE MARSHALL, BY LARSENS OR EQUAL.

**DIMENSION NOTE:**

1. INTERIOR DIMENSIONS TAKEN TO FACE OF STUD, U.N.O.
2. EXTERIOR DIMENSIONS AT AREAS WITH BRICK TAKEN TO FACE OF FINISHED BRICK, U.N.O.
3. EXTERIOR DIMENSIONS AT AREAS WITH SIDING TAKEN TO FACE OF STUD, U.N.O.



**2 BUILDING ADDITION KEY PLAN**  
A101 NTS

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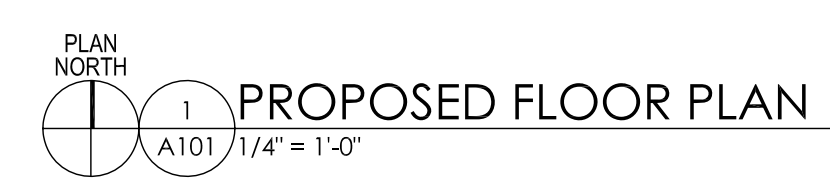
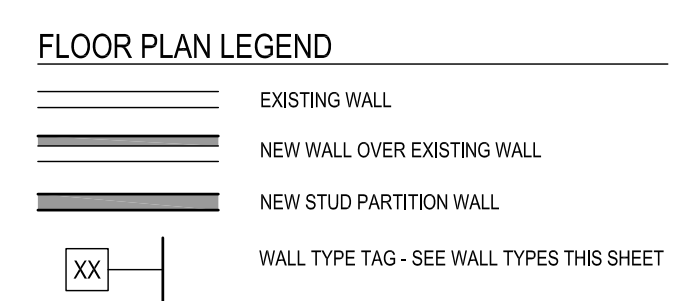
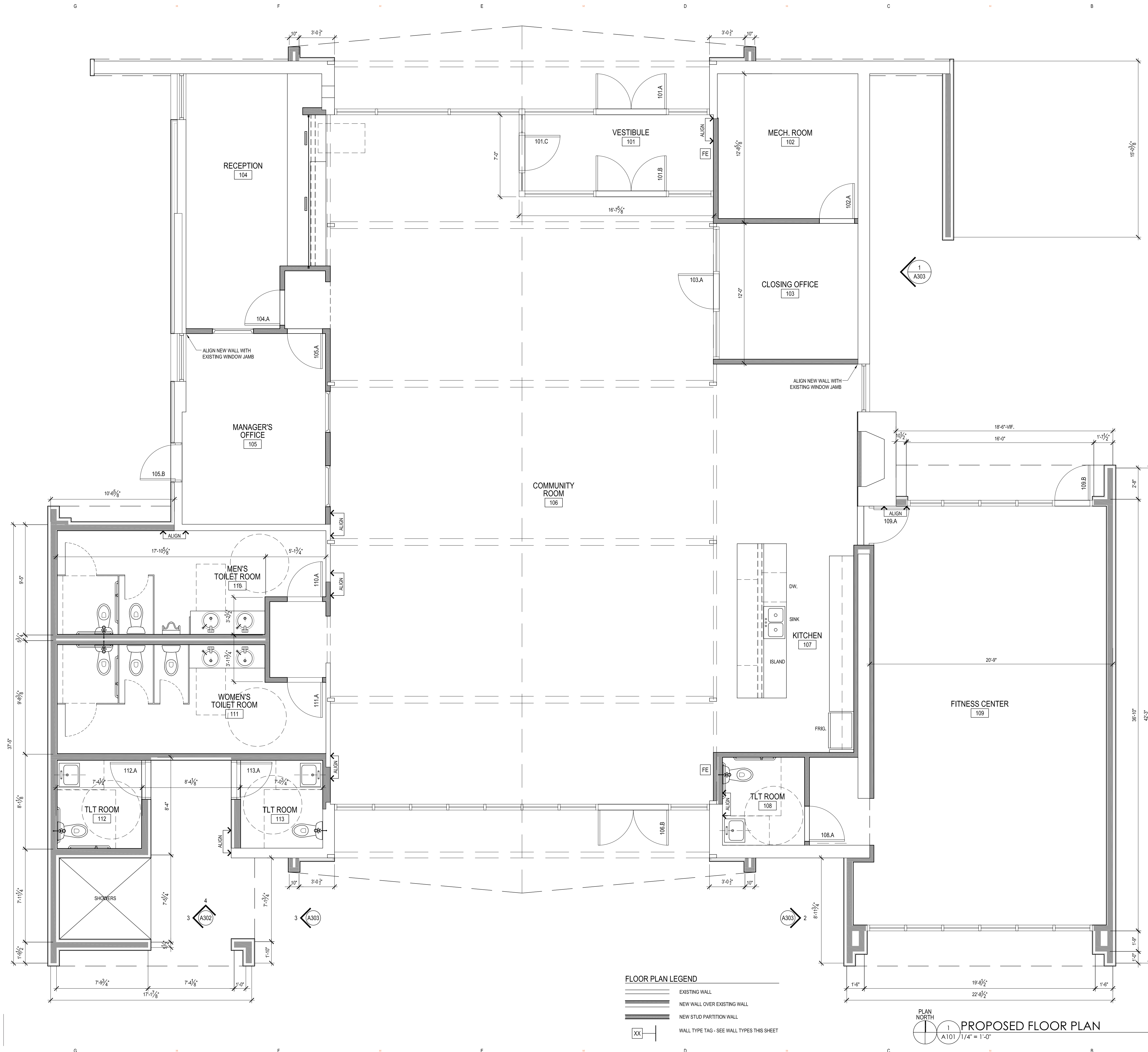
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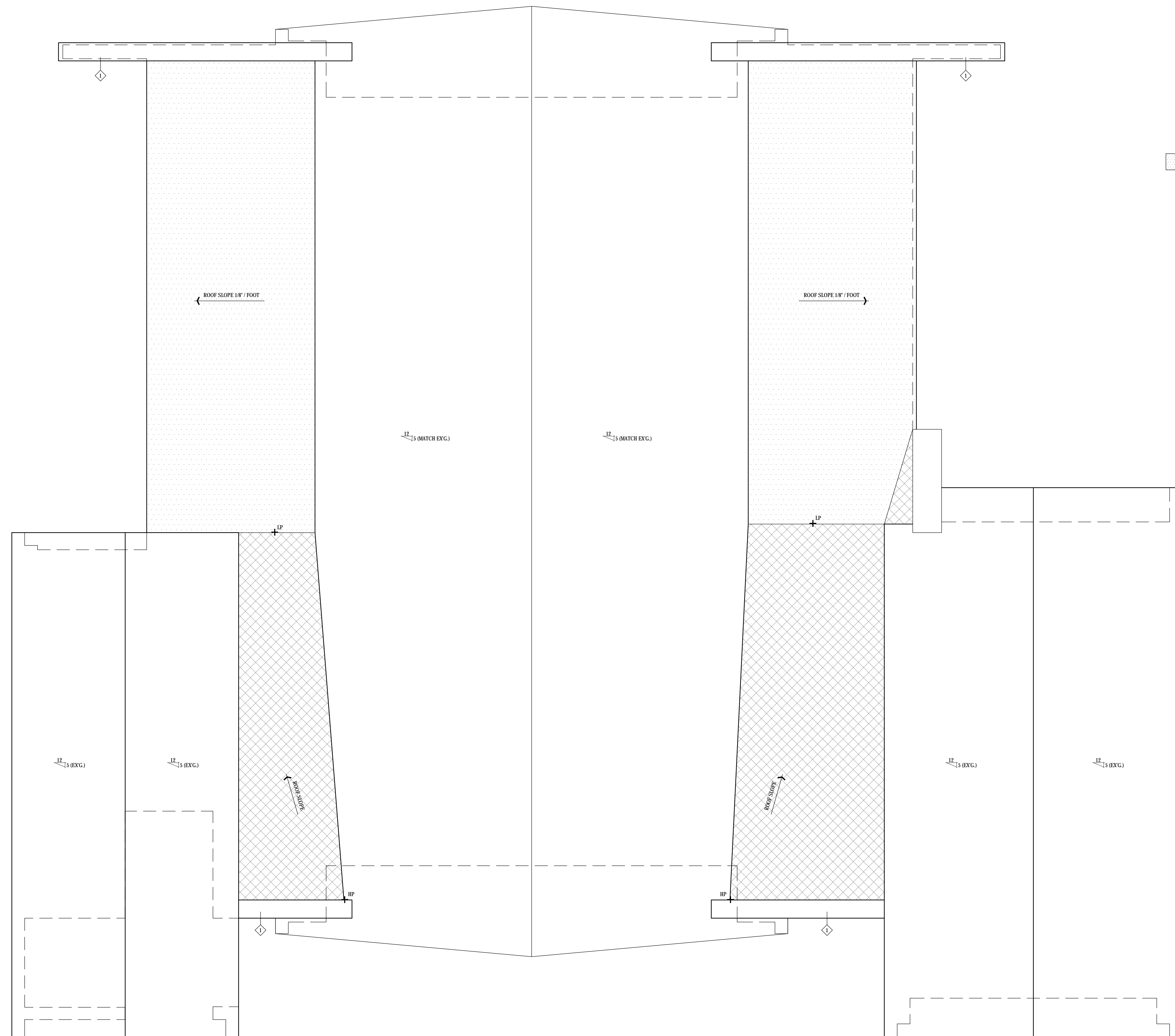
PROJECT NUMBER  
21.17

SHEET NAME  
PROPOSED FLOOR PLAN



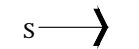
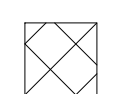
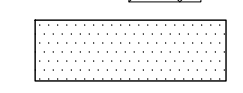
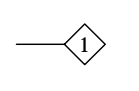
SHEET NUMBER  
A101







**ROOFING LEGEND**

-  ROOF DRAIN
-  SLOPE DUE TO TAPERED INSUL.
-  SLOPE DUE TO INSULATION
-  TAPERED INSULATION
-  MEMBRANE ROOF SYSTEM
-  PARAPET: PRE-FORMED METAL COPING

**ROOFING NOTES**

1. PROVIDE 1/2" PER FOOT SLOPE MIN. TYPICAL. SADDLES AND CRICKETS SHALL BE 1/2" PER FOOT U.N.O.
2. REFER TO PLUMBING DRAWINGS FOR ALL ROOF MOUNTED EQUIPMENT.
3. MINIMUM ROOF INSULATION THICKNESS SHALL BE 4" U.N.O.
4. PROVIDE ROOF MANUFACTURER STANDARD VENT TERMINAL AND PIPE PENETRATION FLASHING DETAILS FOR ROOF TYPE AND WARRANTY SPECIFIED.

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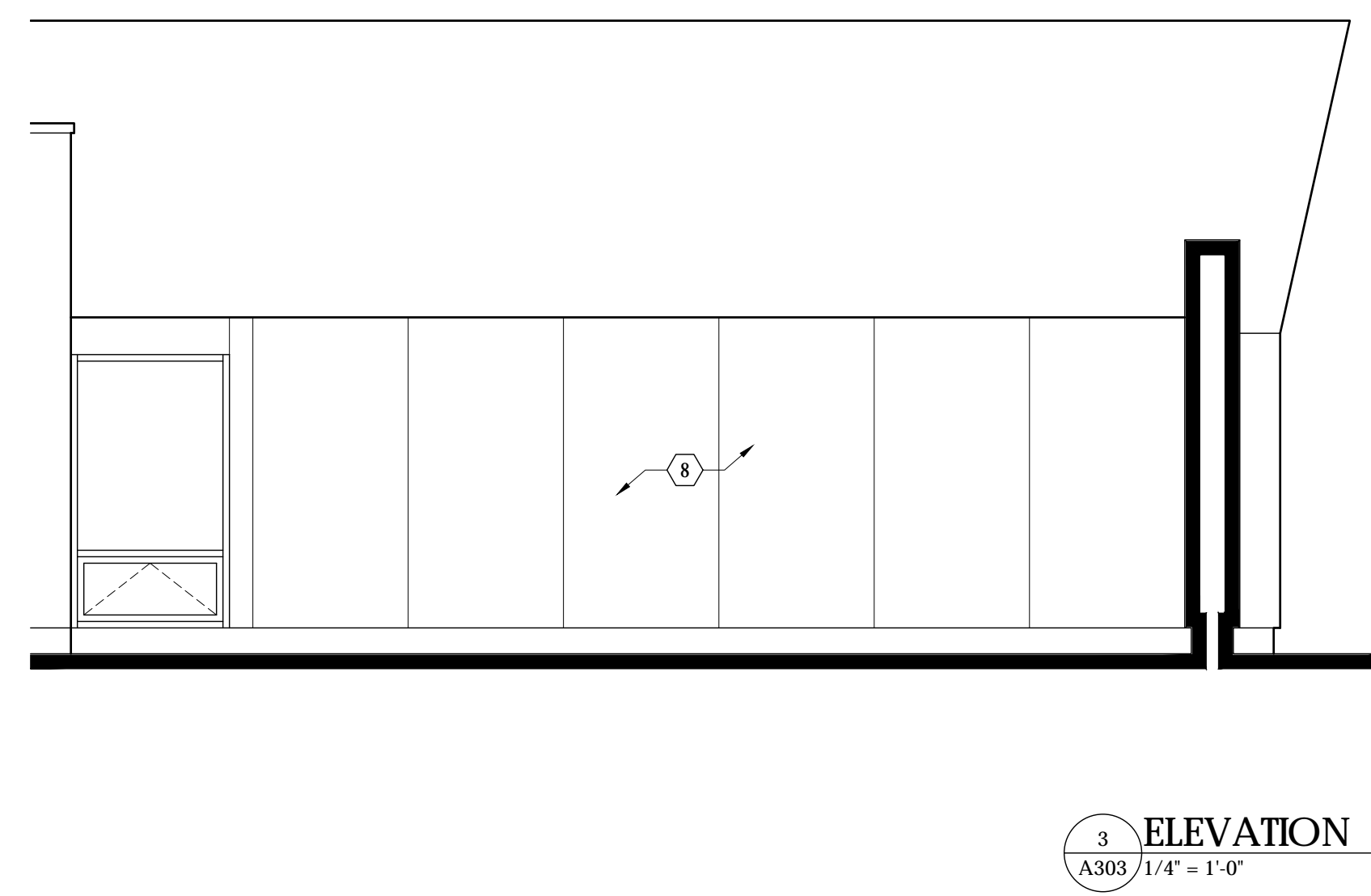
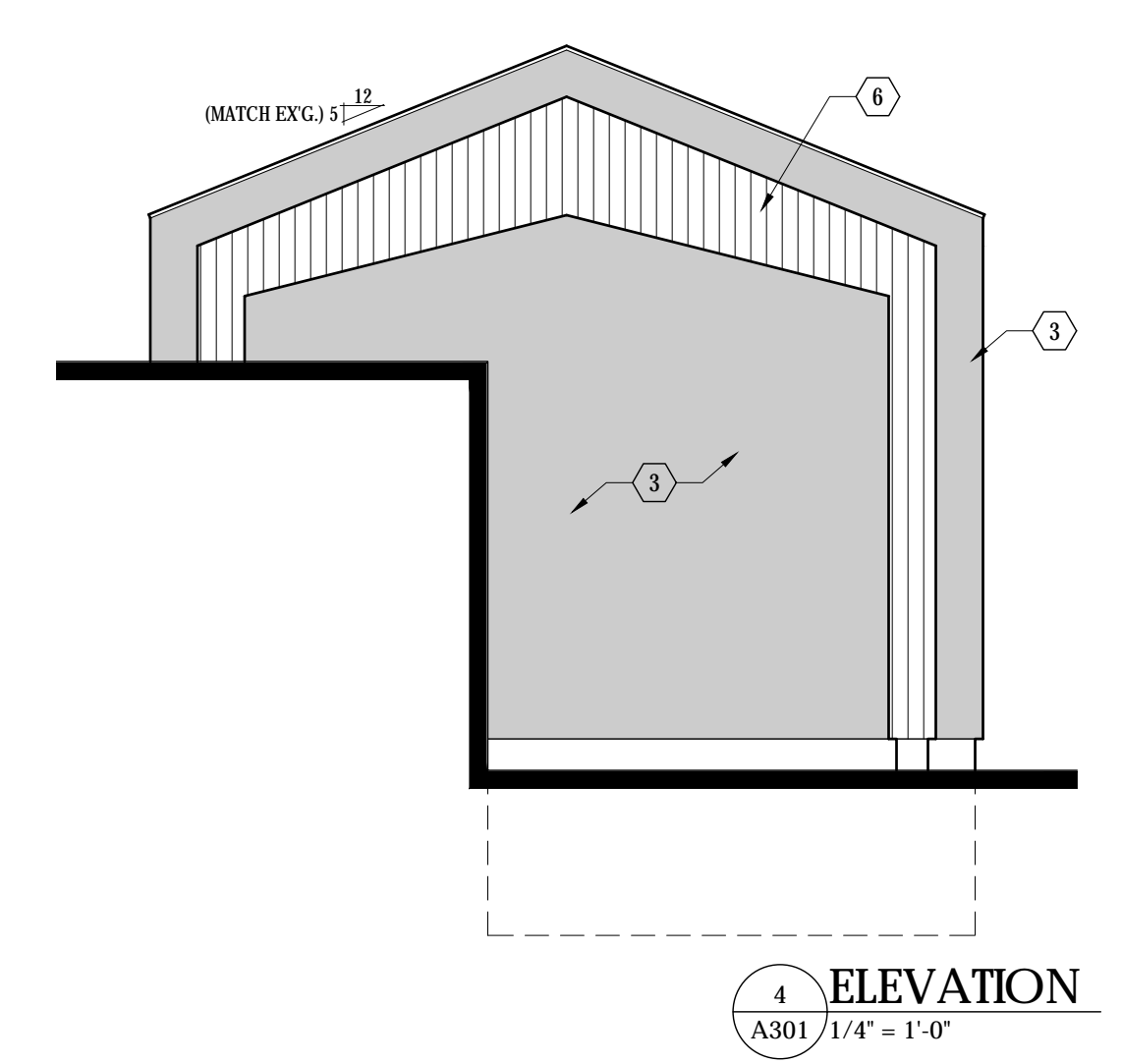
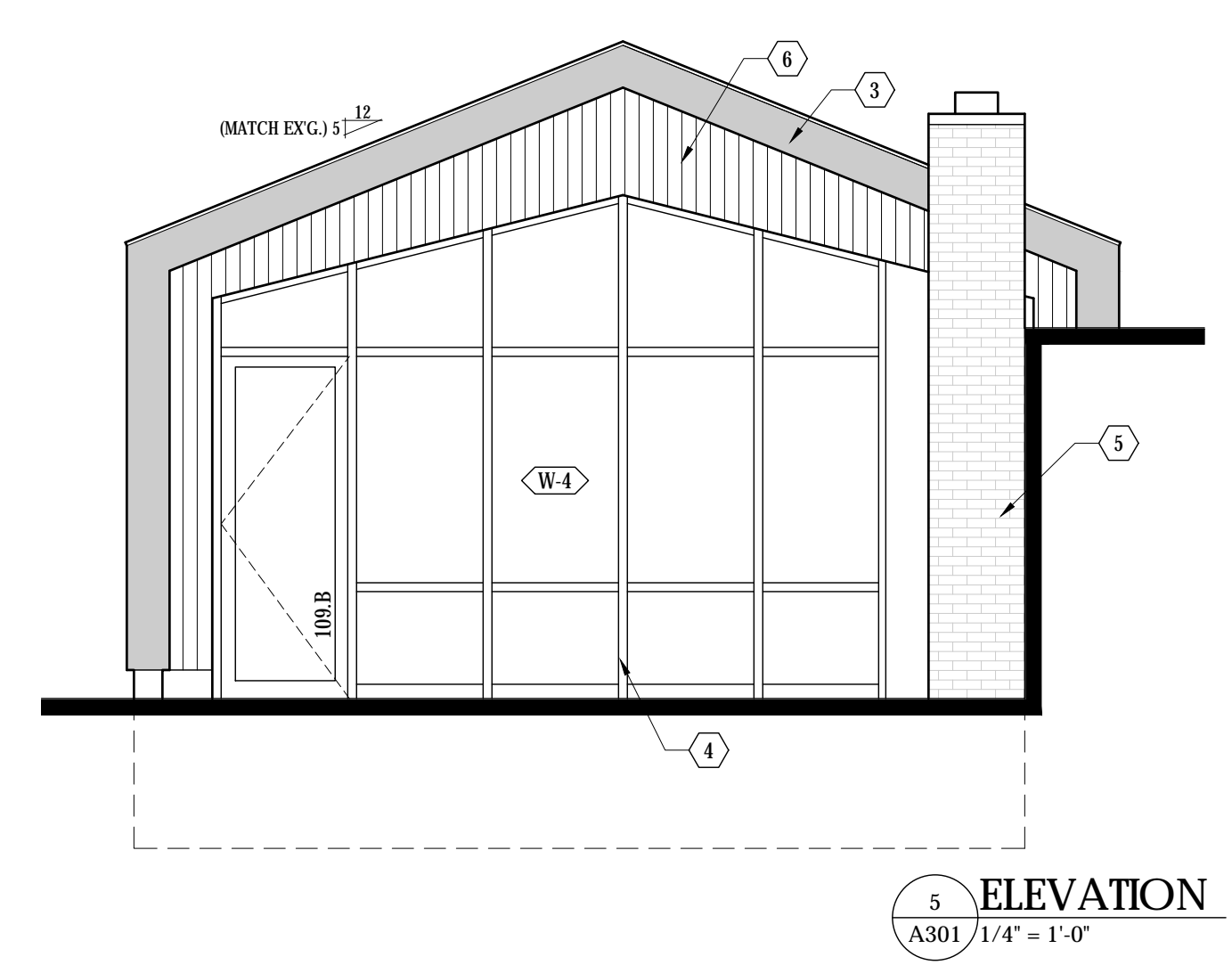
PROJECT NUMBER  
21.17

SHEET NAME  
PROPOSED ROOF PLAN

SHEET NUMBER  
A151

ELEVATION KEYNOTES, THIS SHEET:

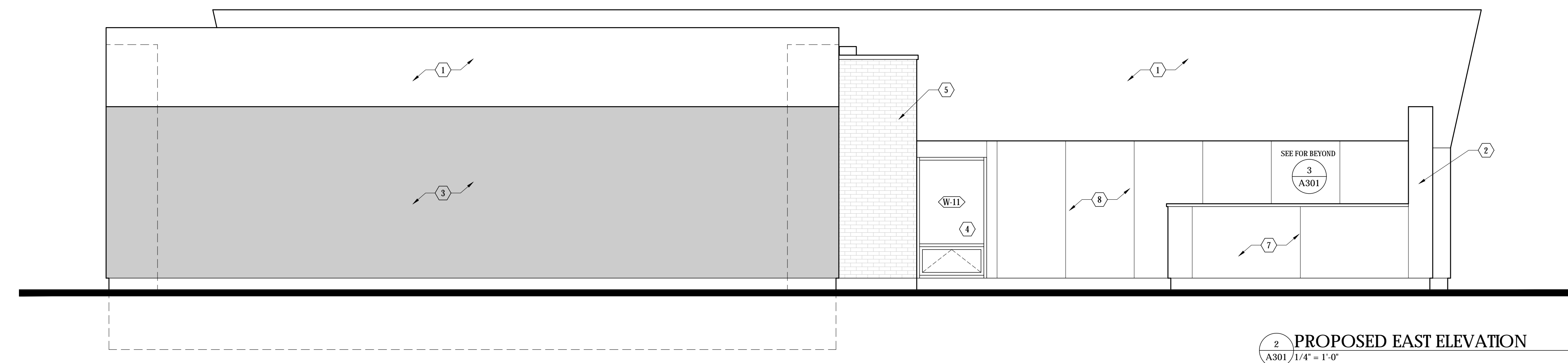
- 1 STANDING SEAM METAL ROOF
- 2 CONTINUOUS METAL COPING PER METAL ROOF MANUFACTURER. COLOR SIMILAR TO PAC-CLAD MATTE BLACK
- 3 SELF-DRAINING EFS SYSTEM, COLOR = SHERWIN WILLIAMS: SW7556 CREME
- 4 BLACK ANODIZED WINDOW FRAME WITH CLEAR GLASS
- 5 EXISTING BRICK TO BE STAINED, COLOR = 60% BLACK
- 6 6" VERTICAL WOOD PLANKING SIMILAR TO: THERMORY WHITE ASH, COLOR = BROWN WITH PRE-OILED FINISH
- 7 1" SMOOTH FIBER CEMENT PANEL, PAINTED SW7674 PEPPERCORN
- 8 METAL WALL PANELS SIMILAR TO: PAC-CLAD WEATHERED STEEL



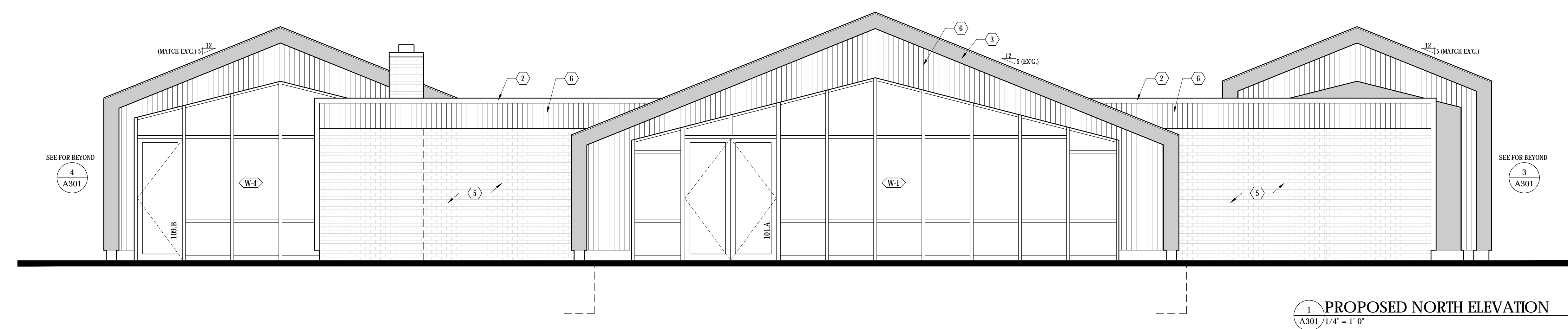
5 ELEVATION  
A301 1/4" = 1'-0"

4 ELEVATION  
A301 1/4" = 1'-0"

3 ELEVATION  
A303 1/4" = 1'-0"



2 PROPOSED EAST ELEVATION  
A301 1/4" = 1'-0"



1 PROPOSED NORTH ELEVATION  
A301 1/4" = 1'-0"

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SHEET NAME  
PROPOSED ELEVATIONS

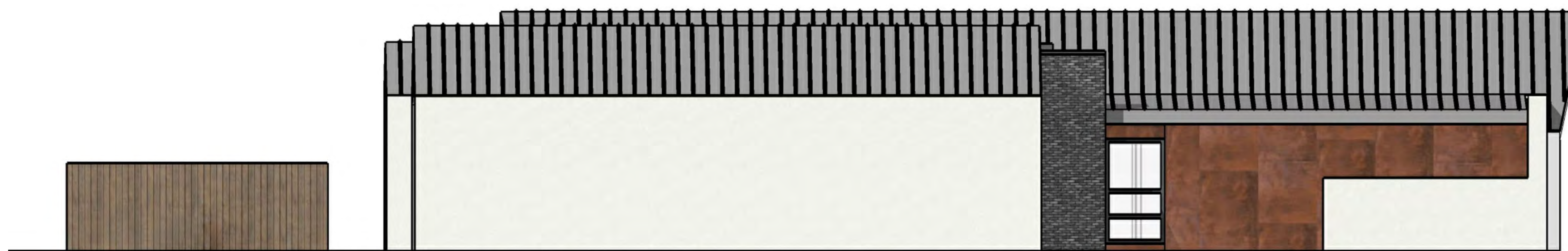
SHEET NUMBER  
A301



north elevation  
scale: 1/4" = 1'-0"



west elevation  
scale: 1/4" = 1'-0"



south elevation  
scale: 1/4" = 1'-0"



east elevation  
scale: 1/4" = 1'-0"

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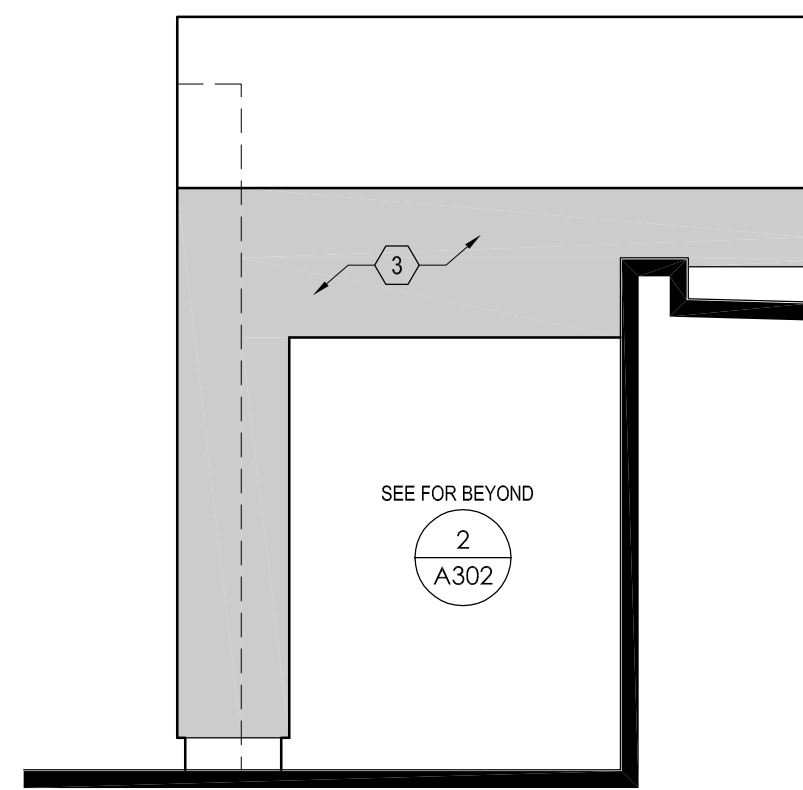
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SHEET NAME  
CONCEPTUAL ELEVATIONS

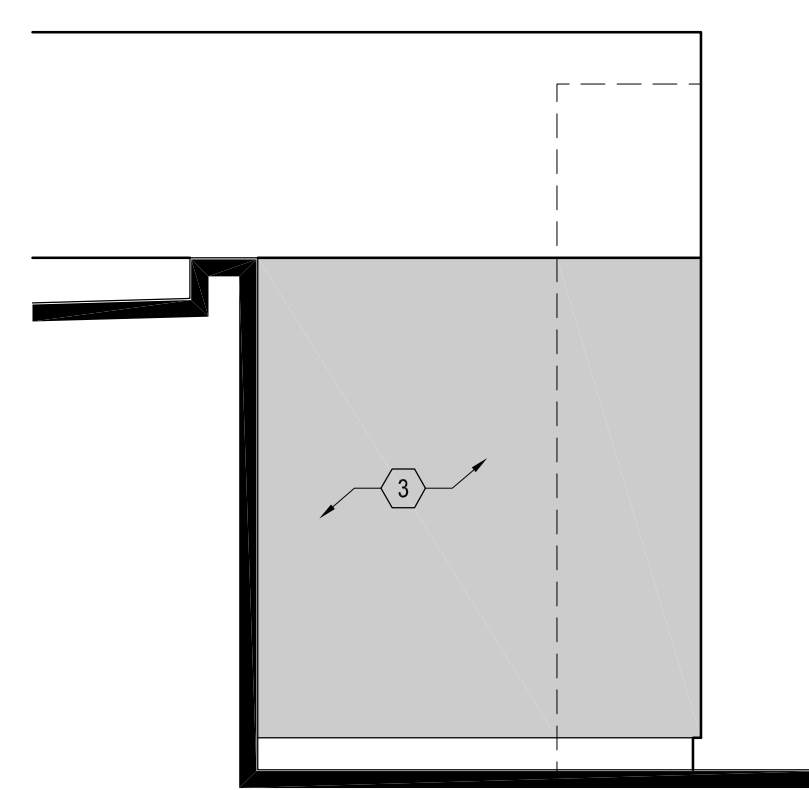
SHEET NUMBER  
A301

ELEVATION KEYNOTES, THIS SHEET:

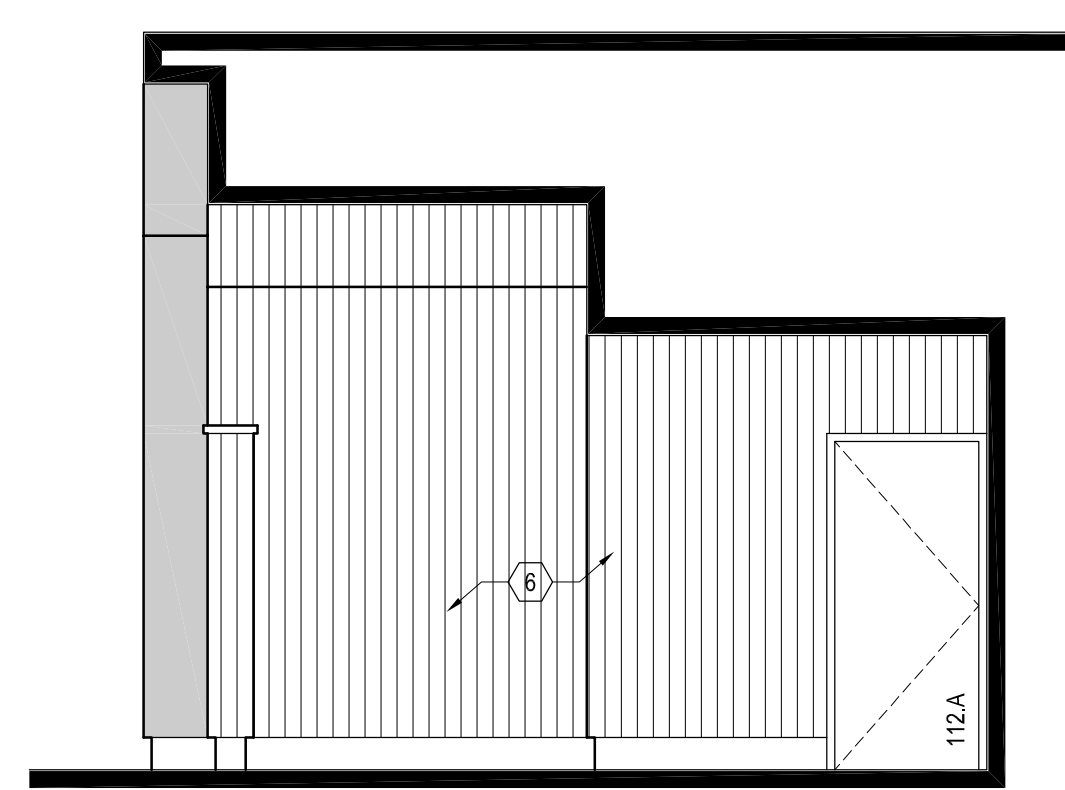
- ① STANDING SEAM METAL ROOF
- ② CONTINUOUS METAL COPING PER METAL ROOF MANUFACTURER, COLOR SIMILAR TO PAC-CLAD MATTE BLACK
- ③ SELF-DRAINING EIFS SYSTEM, COLOR = SHERWIN WILLIAMS: SW7556 CREME
- ④ BLACK ANODIZED WINDOW FRAME WITH CLEAR GLASS
- ⑤ EXISTING BRICK TO BE STAINED, COLOR = 60% BLACK
- ⑥ 6" VERTICAL WOOD PLANKING SIMILAR TO: THERMORY WHITE ASH, COLOR = BROWN WITH PRE-OILED FINISH
- ⑦ 1" SMOOTH FIBER CEMENT PANEL, PAINTED SW7674 PEPPERCORN
- ⑧ METAL WALL PANELS SIMILAR TO: PAC-CLAD WEATHERED STEEL
- ⑨ HOLLOW METAL DOOR AND FRAME, PAINTED SW7674 PEPPERCORN



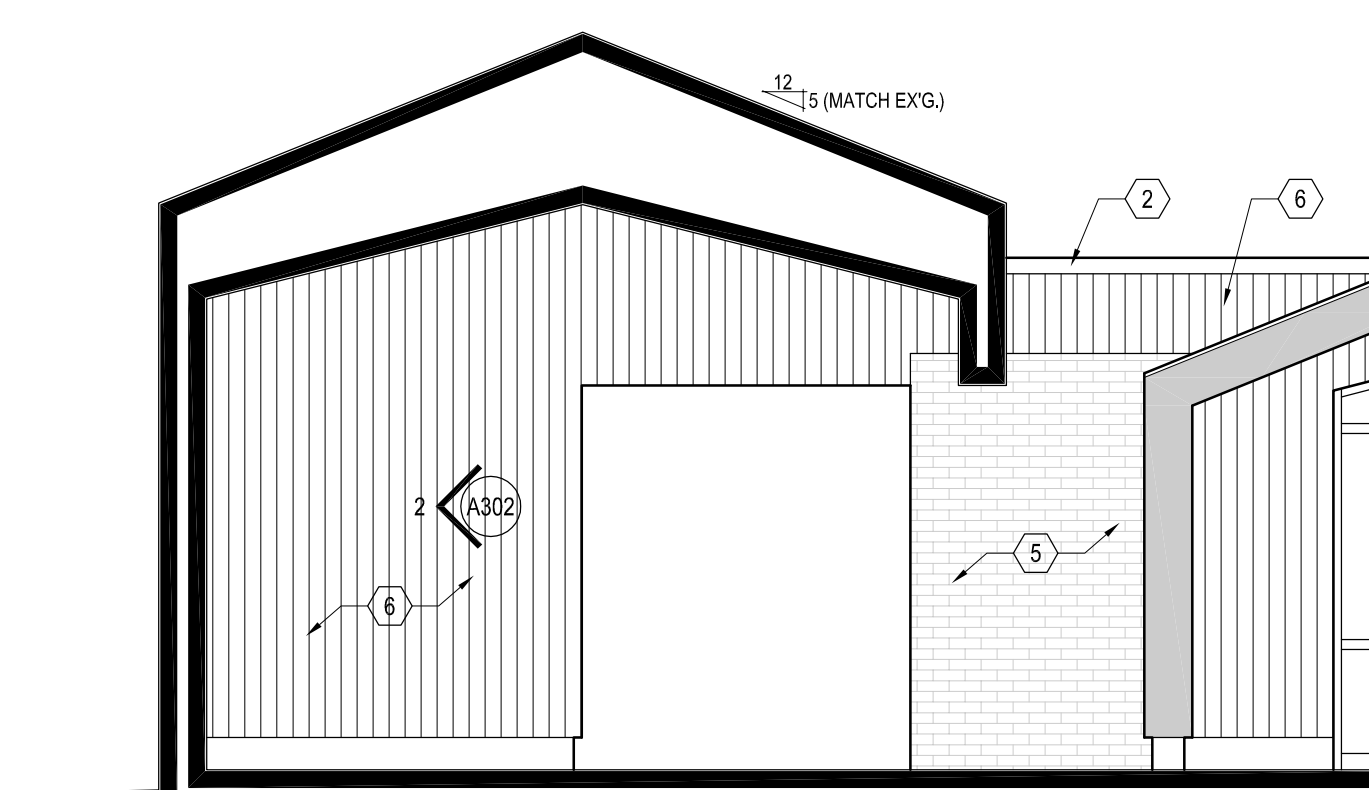
⑥ PARTIAL EAST ELEVATION  
A302 1/4" = 1'-0"



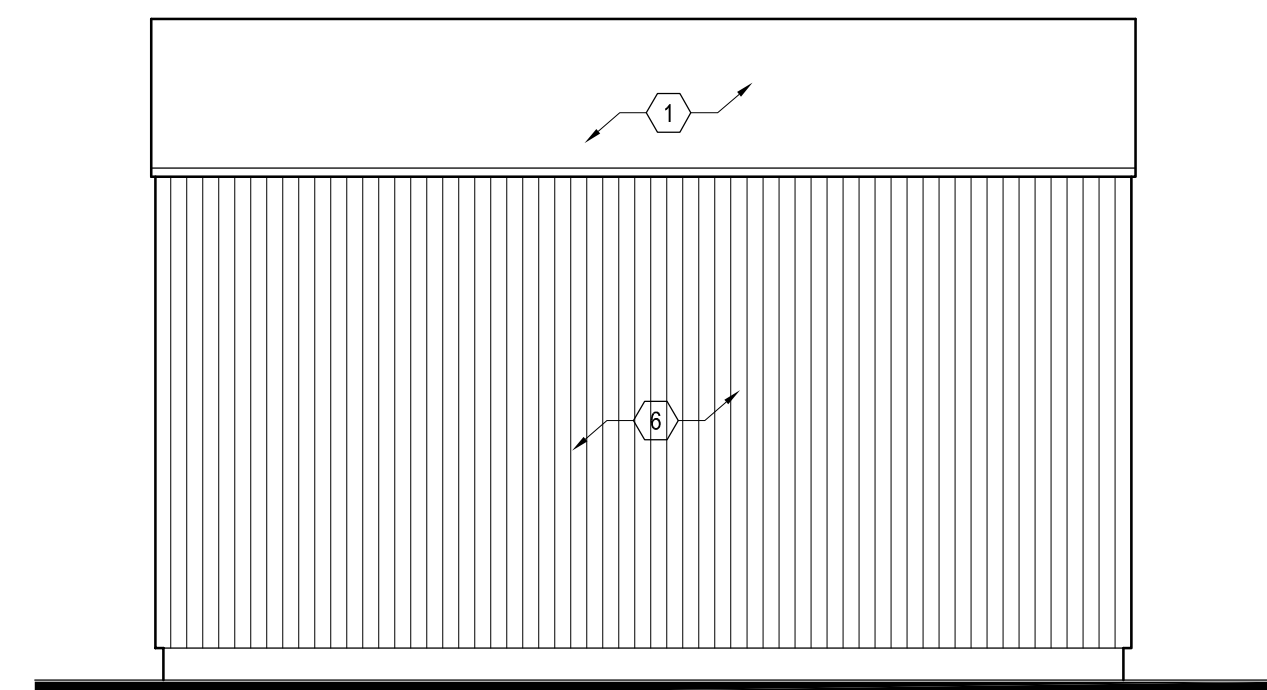
⑤ PARTIAL WEST ELEVATION  
A302 1/4" = 1'-0"



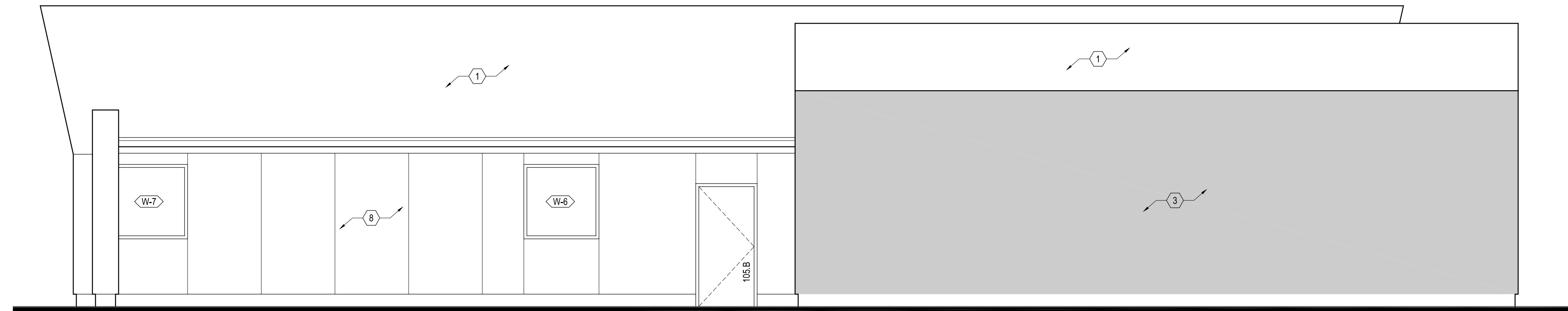
④ PARTIAL SOUTH ELEVATION  
A302 1/4" = 1'-0"



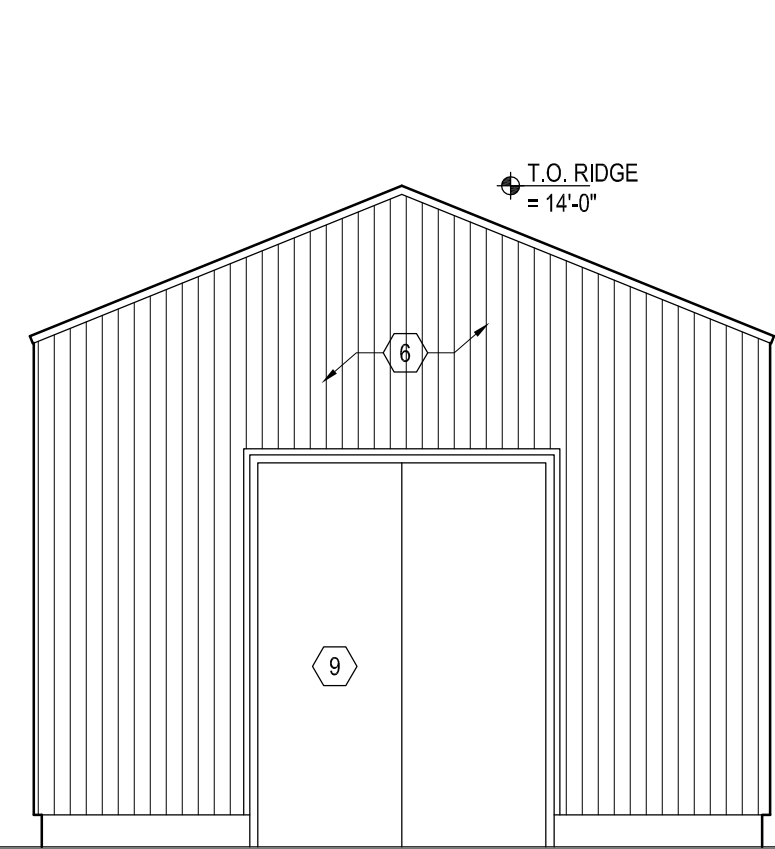
③ PARTIAL SOUTH ELEVATION  
A302 1/4" = 1'-0"



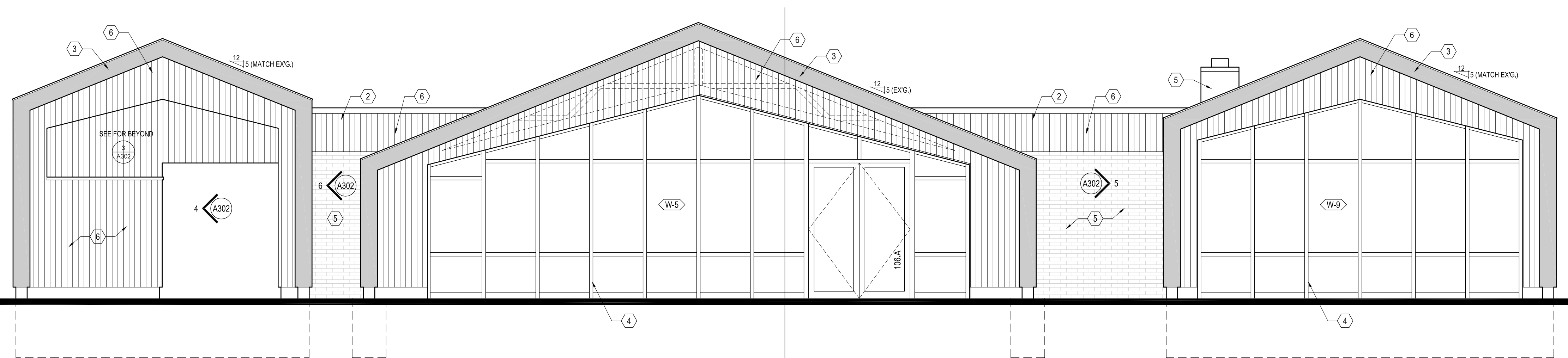
⑦ POOL EQUIPMENT BUILDING  
PROPOSED SIDE ELEVATION  
A302 1/4" = 1'-0"



② PROPOSED WEST ELEVATION  
A302 1/4" = 1'-0"



⑦ POOL EQUIPMENT BUILDING  
PROPOSED FRONT ELEVATION  
A302 1/4" = 1'-0"



① PROPOSED SOUTH ELEVATION  
A302 1/4" = 1'-0"

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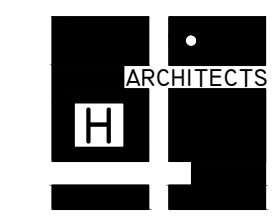
PROJECT  
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SHEET NAME  
PROPOSED ELEVATIONS

SHEET NUMBER  
A302



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 Brighton, MI 48116  
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 HOUSE-SEAMAN-ARCHITECTS.COM

project title  
**SYLVAN GLEN SWIMMING POOL**  
**6600 GRAND RIVER AVE**

Consultant:

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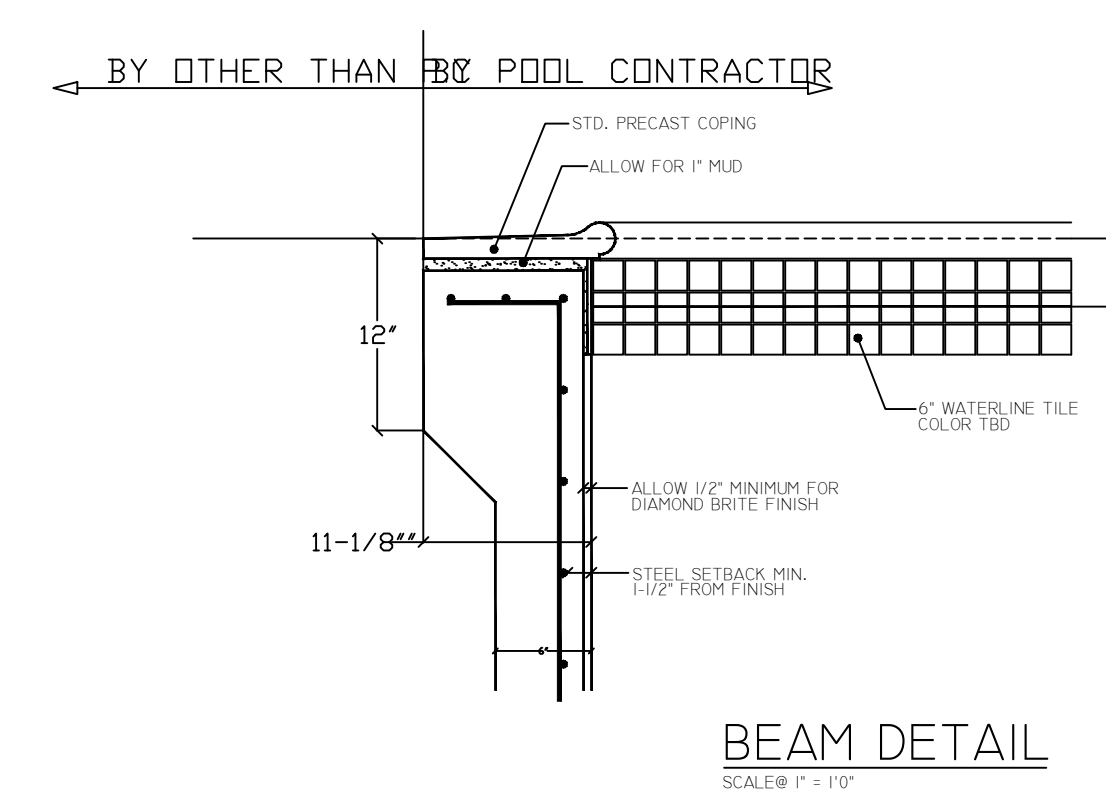
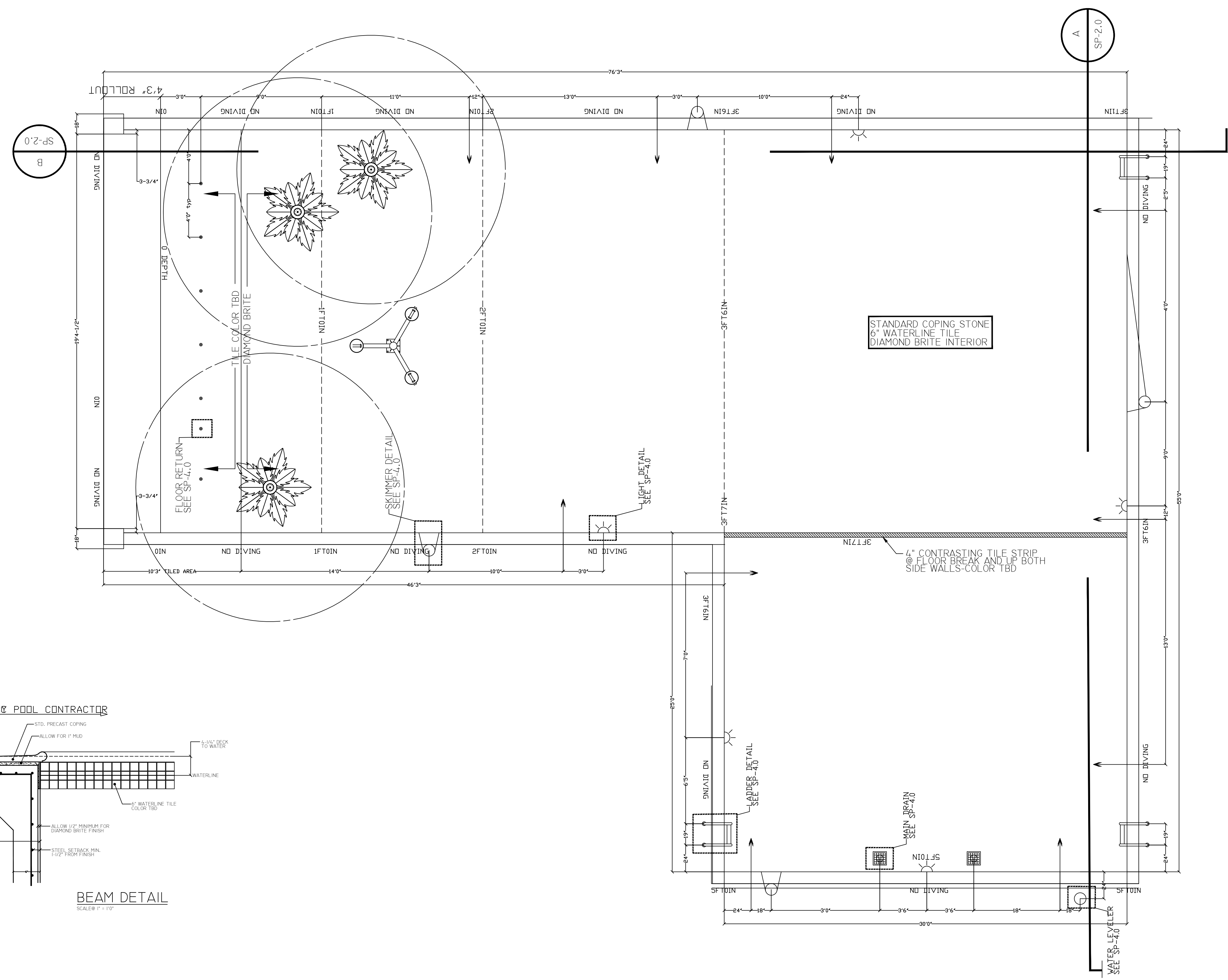
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**SWIMMING POOL SITE LAYOUT**  
 DO NOT SCALE DRAWINGS  
 USE FIGURED DIMENSIONS ONLY

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REVISED	03/22/2022

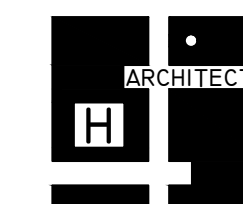
DATE : 02/18/2022  
 DRAWN : KHS  
 CHECKED :  
 SCALE : AS INDICATED  
 JOB NO : 2021-007

sheet  
**SP-2.0**

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**PROPOSED POOL PLAN**  
 SCALE: 1/4" = 1'-0"



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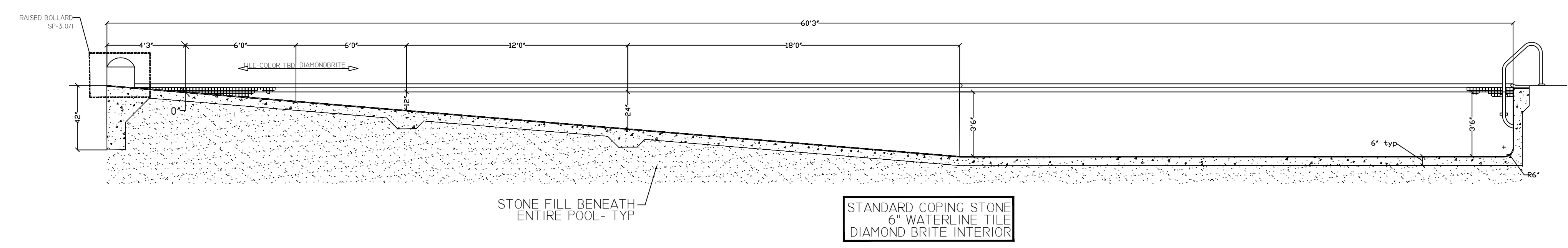
sheet title  
SWIMMING POOL SECTIONS  
DO NOT SCALE DRAWINGS  
USE FIGURED DIMENSIONS ONLY

issued for	date
PRELIMINARY	02/18/2022
REVISED	03/22/2022

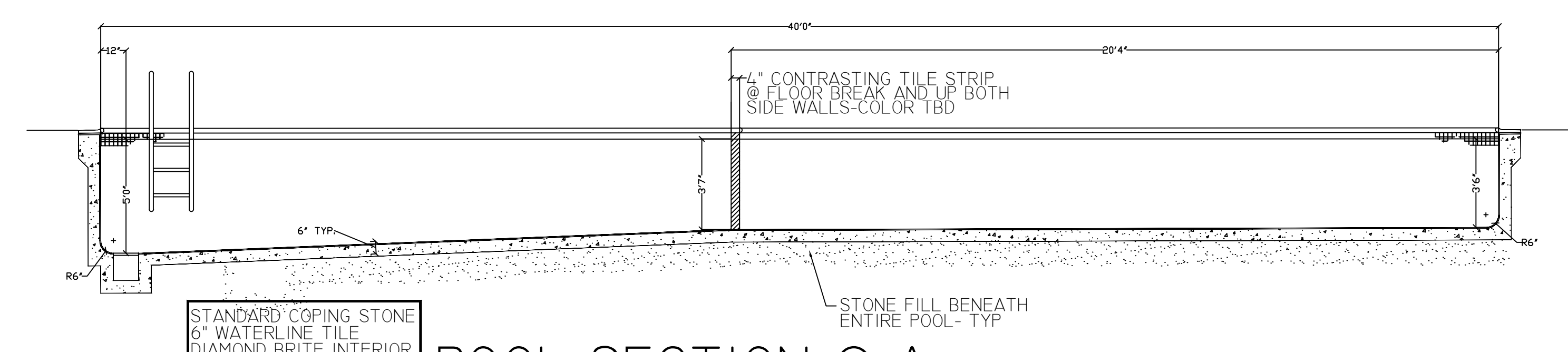
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JOB NO : 2021-007

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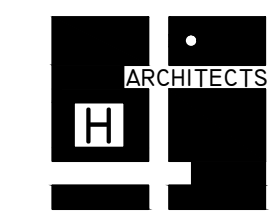
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**POOL SECTION @ B**  
SCALE @ 1/8" = 1'0"



**POOL SECTION @ A**  
SCALE @ 1/8" = 1'0"



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sheet title  
**SWIMMING POOL DETAILS**

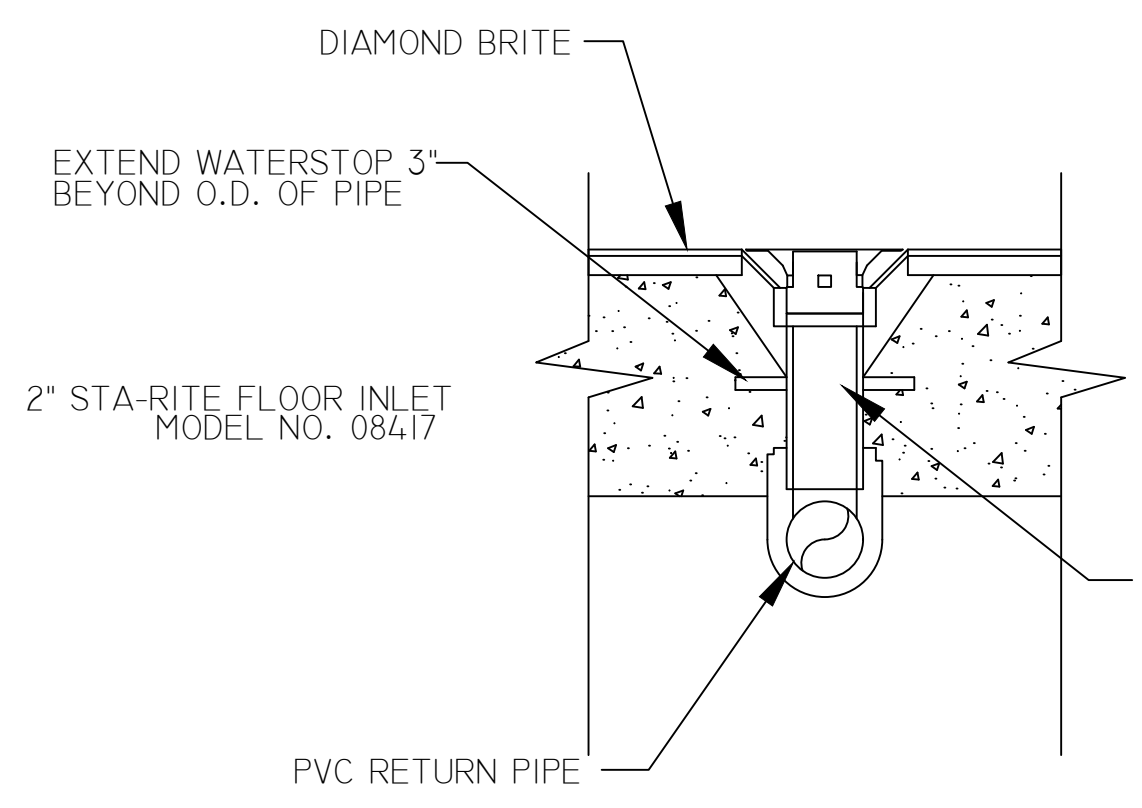
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 REVISED 03/22/2022

DATE : 02/18/2022  
 DRAWN : KHS  
 CHECKED :  
 SCALE : AS INDICATED  
 JOB NO : 2021-007

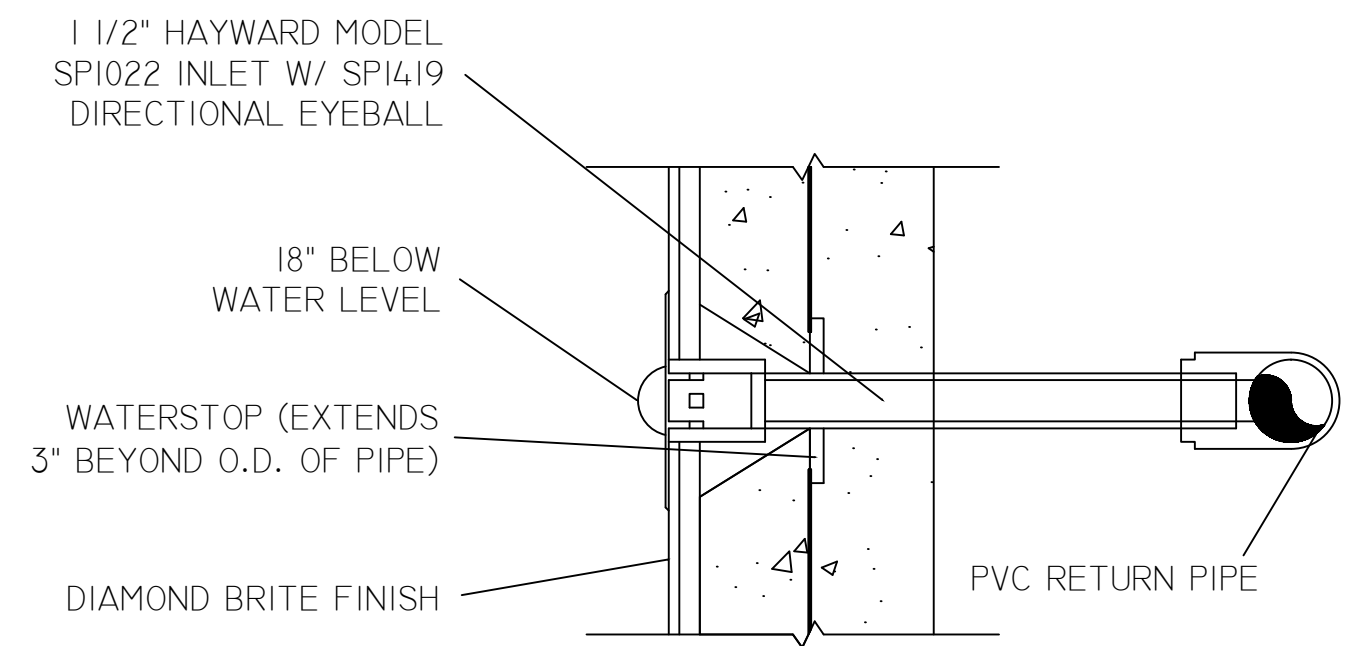
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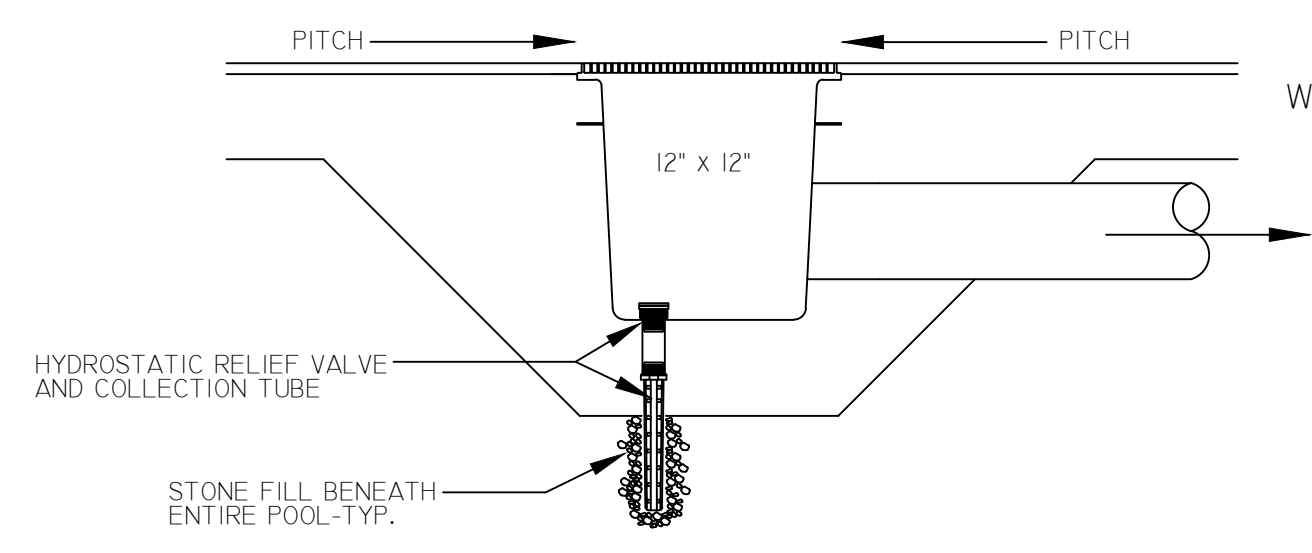
NOTE: CAP PIPE AND HYDROSTATICALLY TEST PER SPECIFICATIONS BEFORE CONCEALMENT

**FLOOR RETURN**  
 SCALE@ NONE

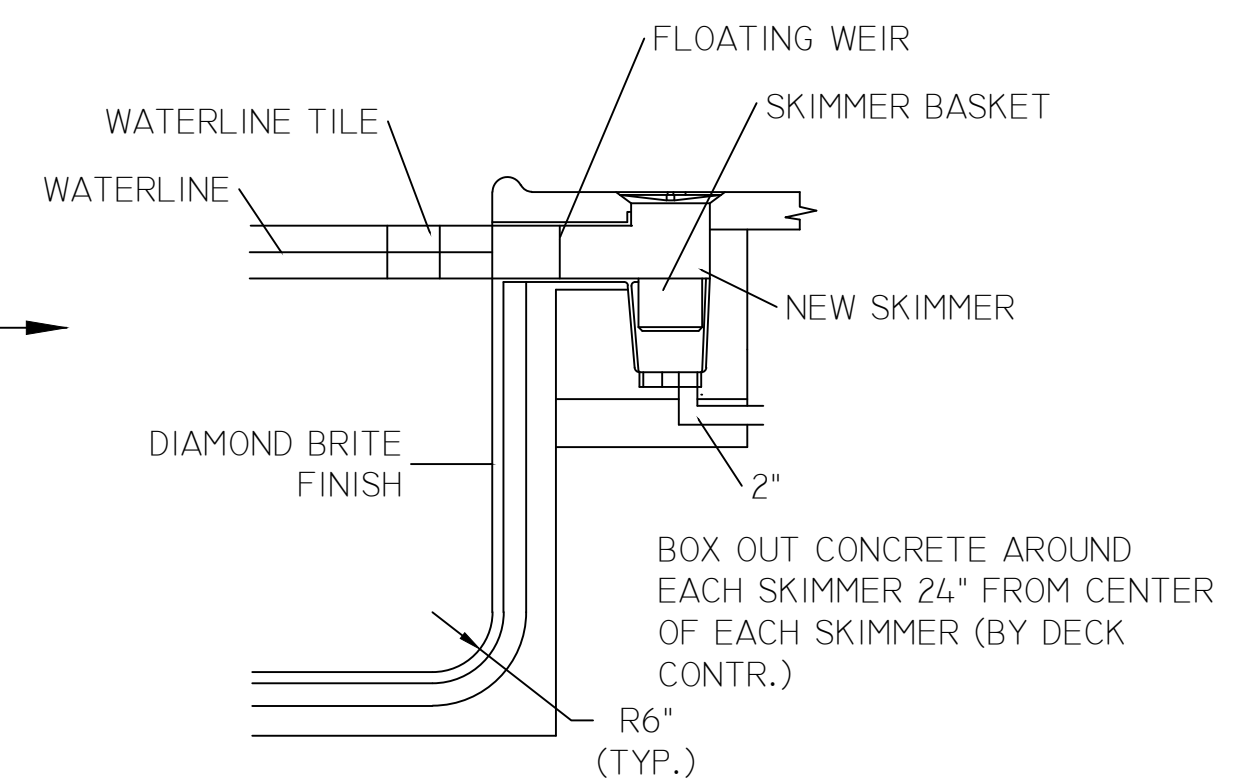


NOTE: CAP PIPE AND HYDROSTATICALLY TEST PER SPECIFICATIONS BEFORE CONCEALMENT

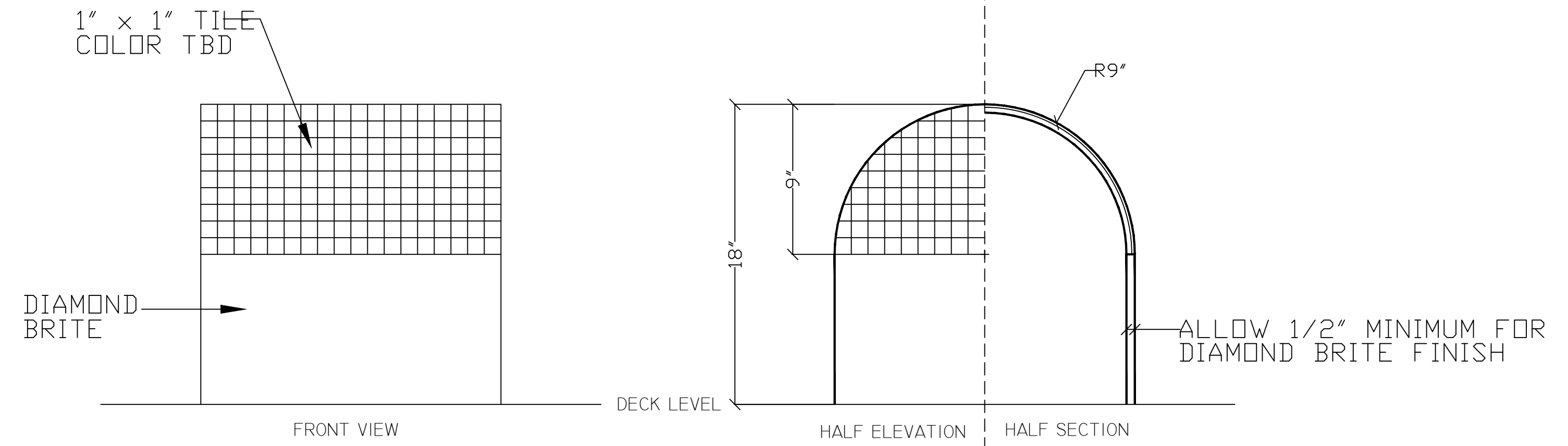
**SIDEWALL RETURN**  
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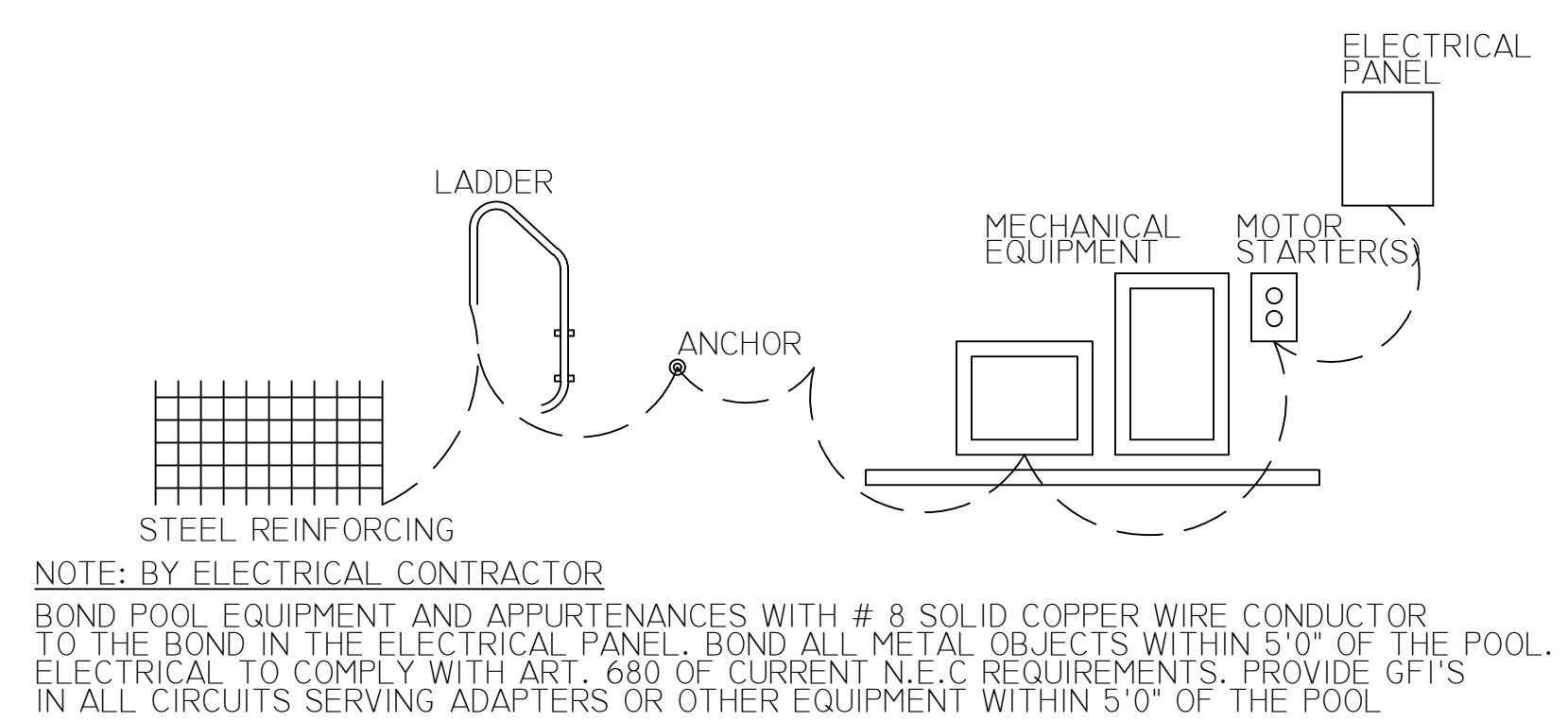
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**SKIMMER DETAIL**  
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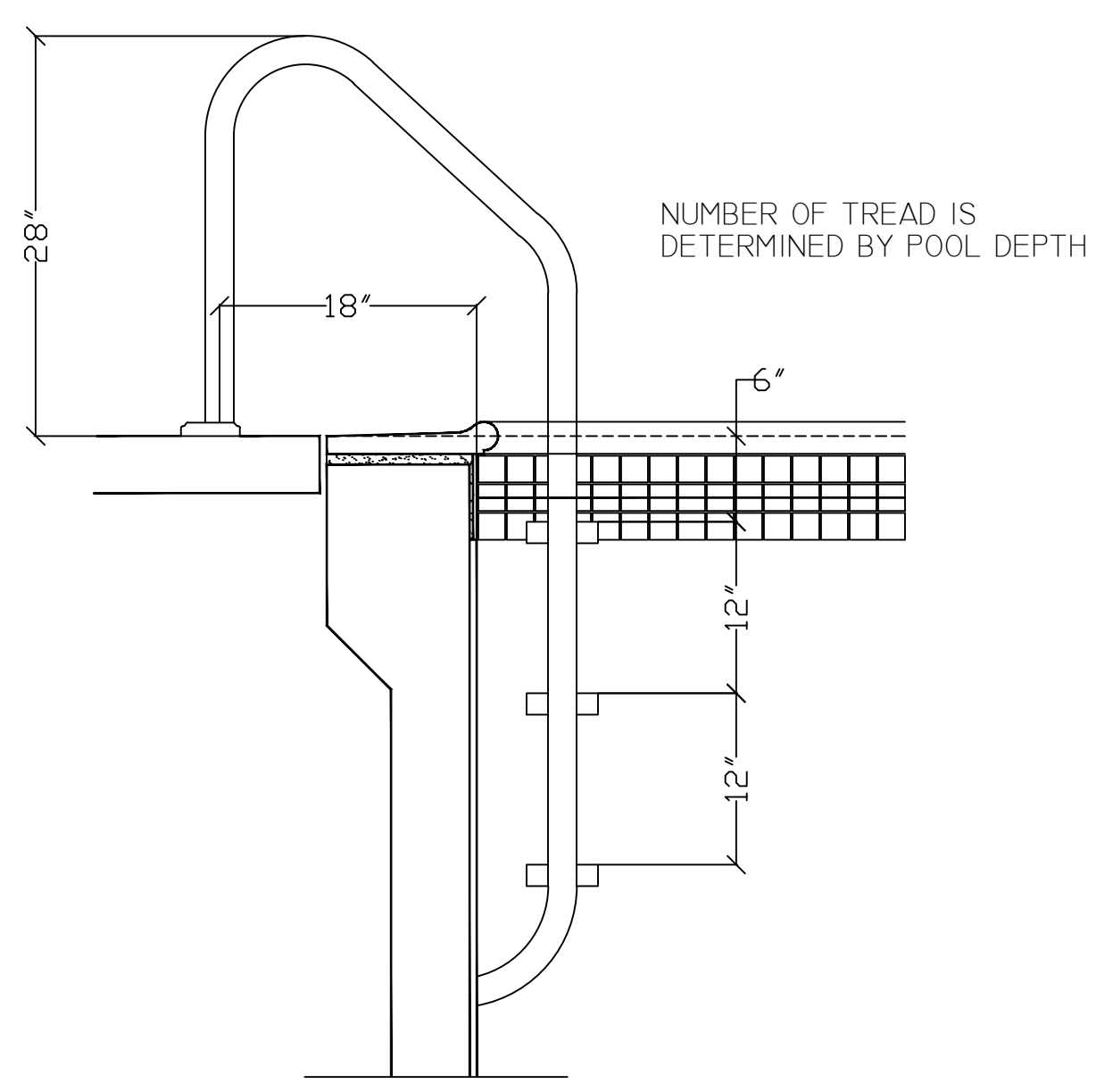


**BOLLARD DETAIL**  
 SCALE@ NONE

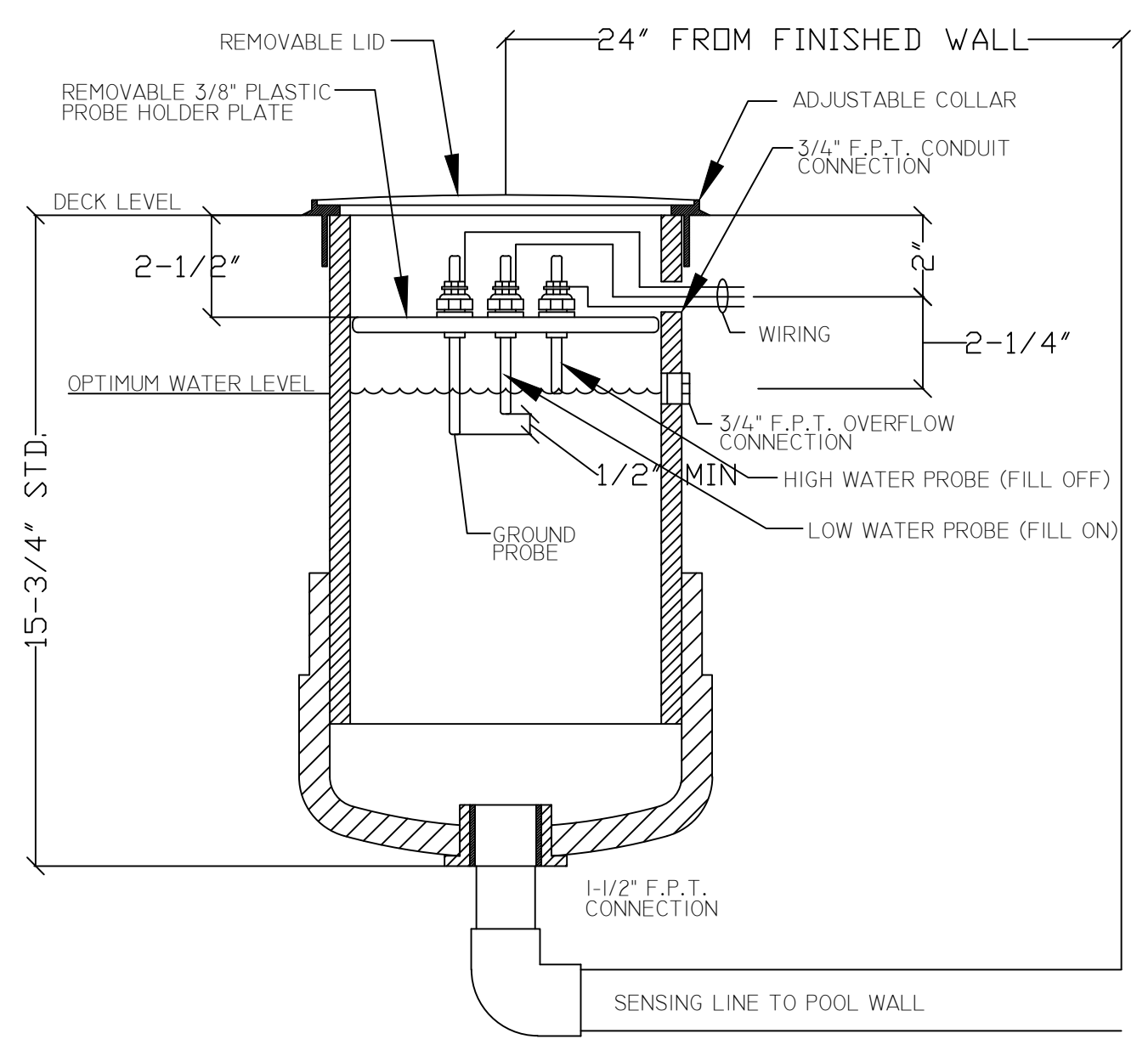


**BONDING SCHEMATIC**  
 SCALE@ NONE

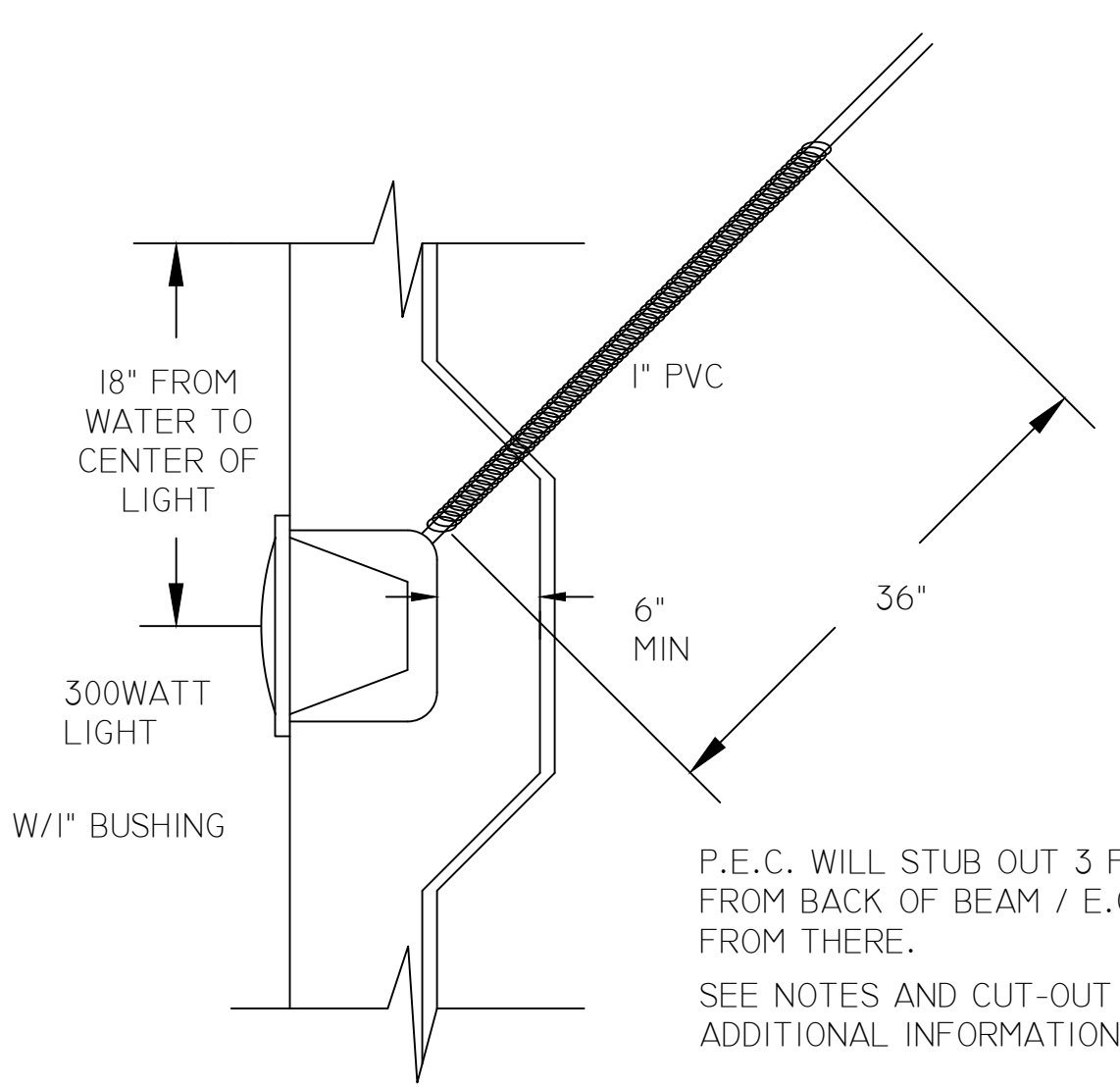
NOTE: BY ELECTRICAL CONTRACTOR  
 BOND POOL EQUIPMENT AND APPURTENANCES WITH # 8 SOLID COPPER WIRE CONDUCTOR TO THE BOND IN THE ELECTRICAL PANEL. BOND ALL METAL OBJECTS WITHIN 5'0" OF THE POOL. ELECTRICAL TO COMPLY WITH ART. 680 OF CURRENT N.E.C REQUIREMENTS. PROVIDE GFI'S IN ALL CIRCUITS SERVING ADAPTERS OR OTHER EQUIPMENT WITHIN 5'0" OF THE POOL



**LADDER DETAIL**  
 SCALE@ NONE



**WATER LEVEL DETAIL**  
 SCALE@ NONE



**LIGHT DETAIL**  
 SCALE@ NONE

P.E.C. WILL STUB OUT 3 FEET OF CONDUIT FROM BACK OF BEAM / E.C. WILL PICK UP FROM THERE.  
 SEE NOTES AND CUT-OUT SHEETS FOR ADDITIONAL INFORMATION.

# Board Correspondence





STATE OF MICHIGAN

GRETCHEN WHITMER  
GOVERNOR

DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS  
LANSING

ORLENE HAWKS  
DIRECTOR

June 7, 2022

WD Log Cabin, LLC  
Attorney Marc Salach  
([msalach@dawdamann.com](mailto:msalach@dawdamann.com))

**RID # 2203-02021**      **Reference/Transaction:** CONDITIONAL LICENSE, Transfer Ownership escrowed 2021 Class C & SDM license with Sunday Sales Permit (PM), Dance-Entertainment Permit, Specific Purpose Permit (food) and Outdoor Service Area from Nick's Log Cabin Inn, Inc.

Please let this letter serve as notice the Michigan Liquor Control Commission has referred your application to our Enforcement Division for investigation of your request.

**Applicant/Licensee: WD Log Cabin, LLC**

**Business address and phone number: 5393 E Grand River Ave, Howell 48843**

**Home address and phone number of partner(s)/subordinates:**

**1. Winfried Dahm: 3255 Lakewood Shores Dr, Howell 48843 C: (248) 670-1074**

As part of the licensing process, an investigation is required by the Michigan Liquor Control Commission Enforcement Division. The Enforcement investigation will be conducted from the following designated District Office: **Southfield District Office (313) 456-1170**

You may contact your designated District Office regarding any appointments or questions on documentation requested by the Investigator. **Failure to provide requested information or to keep scheduled appointments will cause the application to be returned to the Lansing office for cancellation.**

Since this request is a transfer under MCL 436.1529(1), approval of the local unit of government is not required. However, a copy of this notice is also being provided to **Local Governmental Unit** should they wish to submit an opinion on the application or advise of any local non-compliance issues.

Under administrative rule R 436.1105, the Commission shall consider the opinions of the local residents, local legislative body, or local law enforcement agency with regard to the proposed business when determining whether an applicant may be issued a license or permit.

Under administrative rule R 436.1003, the licensee shall comply with all state and local building, plumbing, zoning, sanitation, and health laws, rules, and ordinances as determined by the state and local law enforcements officials who have jurisdiction over the licensee. The licensee must obtain all other required state and local licenses, permits, and approvals before using this license for the sale of alcoholic liquor. Approval of this license by the Michigan Liquor Control Commission does not waive any of these requirements.

MICHIGAN LIQUOR CONTROL COMMISSION  
Retail Licensing Division  
(866) 813-0011

cc: City of Howell ([aquillen@cityofhowell.org](mailto:aquillen@cityofhowell.org))

To Board 6/20/22



June 1, 2022

Ms. Polly Skolarus, Clerk  
Township of Genoa  
2911 Dorr Rd.  
Brighton, MI 48116

RE: Regional Sports Networks

Dear Ms. Skolarus:

We are committed to keeping you and our customers informed about changes to Xfinity TV services. As you may know, many sporting events and broadcasts were put on hold during the pandemic. We have been working hard to recover the fees regional sports networks charged us for those sporting events and broadcasts during the hiatus to pass back to our customers.

We are currently notifying customers in your community of a courtesy adjustment related to these fees. This adjustment reflects what has been committed to us by the regional sports networks in your area to date. We will continue to work to recover additional funds where possible. We are committed to giving our customers 100% of what we receive.

Please feel free to contact me at 734-359-2308 if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Kyle W. Mazurek".

Kyle W. Mazurek  
Manager of External Affairs  
Comcast, Heartland Region  
41112 Concept Drive  
Plymouth, MI 48170