

GREEN OAK CHARTER TOWNSHIP

10001 Silver Lake Road, Brighton Michigan 48116
(810) 231-1333 FAX (810) 231-5080

Regular Electronic Board Meeting, June 2, 2021 at 7:00 p.m.

1. Call to Order
2. Pledge of Allegiance to Flag
3. Roll Call of the Board
4. Approval of the Agenda
5. Public Comment, **Agenda Related Items Only.**
6. Consent Agenda
 - a) Approval of May 19, 2021 Regular Board Meeting Minutes
 - b) Approval of the submitted bills list \$146,897.21
7. Department Head Reports & Request
8. Correspondence: As needed
9. Business Items:
 - a) Resolution 13-2021, First Resolution for Emerson Drive Road Improvements Special Assessment District 2021
 - b) Introduction, Text Amendment Section, 38-363, Tree and Woodlands Protection and Preservation
 - c) Introduction, Medical Marihuana Home Occupations and Recreational Use and Medical Marihuana Activities, Text Amendment, Section 38-194, Home Occupations, of the Code of Ordinances, to add New Provisions for Medical Marihuana Home Occupations and Recreational Use; to Repeal Section 38-201, Medical Marihuana Activities; and to Provide Penalties Therof
 - d) Winans Lake Road & Rickett Road Roundabout
 - e) The Parc at Green Oak Conditional Rezoning
10. Discussion: As needed
11. Committee Reports: As needed
12. Executive Session: None
13. Public Comment
14. Adjournment

The following is a link to attend and participate in the meeting:

<https://us02web.zoom.us/j/84711593361>

+1 301 715 8592 or +1 312 626 6799

Webinar ID: 847 1159 3361

**GREEN OAK CHARTER TOWNSHIP
BOARD POLICY**

Subject: Public Comment

Date adopted:
October 7, 1997

AMENDED:
December 2, 2020

Reason:

To set a procedure for public comment which is equitable to all citizens who wish to comment at Public meetings and to form a policy that promotes orderly conduct of business by the Township Board

Call to the Public:

1. Public Comment is limited to Call to the Public section on the agenda.
2. Call to the Public is limited to three (3) minutes per speaker, unless otherwise determined by the Township Board based on the number of persons wishing to speak.
3. Written material should be presented to the Township Board rather than read if it would exceed the 3-minute limit.
4. Comments and questions are to be addressed to the Chairperson, rather than to other individuals in the audience.

Citizen Participation during Electronic Meetings:

During Township Board meetings conducted electronically, members of the public attending the meeting, once recognized by the chair, shall identify themselves for the record and indicate whether they are a Township resident. Comments by the public will be limited in the same manner as provided for audience comment for non-electronic meetings to three minutes for each speaker unless the time is extended by the chair or by vote of the Board. Comments by the public during meetings held electronically will be limited to the Audience Comment portion of the meeting.

Public Hearing:

1. Comment is limited to three (3) minutes per speaker, unless otherwise determined by the Township Board based on the number of persons wishing to speak.
2. Written material should be presented to the Township Board rather than read if it would exceed the three (3) minute limit.
3. Comments and questions are to be addressed to the Chairperson, rather than to other individuals.

MEETING NOTICE

Green Oak Charter Township Board

Virtual Meeting

7:00 PM

June 2, 2021

NOTE: THIS MEETING WILL BE HELD ELECTRONICALLY. MEMBERS OF THE PUBLIC BODY AND MEMBERS OF THE PUBLIC MAY PARTICIPATE ELECTRONICALLY, AS DESCRIBED BELOW.

In accordance with the Open Meetings Act, Public Act 267 of 1976, as amended, MCL 15.261, the Township Board meeting on **June 2, 2021 at 7:00 pm** will take place electronically, as described below.

Reason for allowing participation by electronic means:

To mitigate the spread of COVID-19, protect the public health, and provide essential protections to vulnerable citizens, in-person contact should be limited. Critical mitigation measures include social distancing and limiting the number of people interacting at public gatherings. This includes public meetings.

Procedure for public participation by electronic means:

"A meeting of a public body held electronically must be conducted in a manner that permits two-way communication so that members of the public body can hear and be heard by other members of the public body and so that general public participants can hear members of the public body and can be heard by members of the public body and other participants during a public comment period. The public body may use technology to facilitate typed public comments that may be read to or shared with members of the public body and other participants to satisfy the requirement that members of the public can be heard by others during the meeting."

The Township will be utilizing the video/audio conferencing platform ZOOM. Members of the public body will be able to hear and speak to each other for the entire meeting. Except for any closed session portions of the meeting, members of the public will be able to hear (and possibly see) members of the public body during the entire meeting but will only be able to speak during a public comment period.

For details on how to connect to the Zoom meeting please go to the township website under the "LATEST NEWS" tab, follow the links for the Board meeting or click on the link below:

<https://us02web.zoom.us/j/84711593361>

+1 301 715 8592 or +1 312 626 6799

Webinar ID: 847 1159 3361

Members of the public participating in the public comment via ZOOM will wait in a virtual queue until called during the public comment period. Because of limitations on un-muting and re-muting members of the public, there will be only one public comment period, *which will be at the end of the meeting* (unless there is a public hearing item, in which case the following procedures will apply to that portion of the meeting as well).

When public comment is permitted, members of the public will be called one at a time, as would happen during an in-person meeting. The Supervisor will determine the order of public speakers. If you want to speak, you must use the "Raise Hand" feature in order for the Supervisor to know you need to be unmuted. When you are unmuted, and you will have three (3) minutes to share your comments to the public body. At the conclusion of your comments or your three (3) minutes, you will be re-muted and then removed from the queue.

Participants may also choose to submit comments that can be read into the record. Comments can be submitted electronically via email to the Township Clerk at: michael.sedlak@greenoaktwp.com. Comments shall be submitted prior to 5:00 p.m. on the day of the meeting.

Procedures for participation by persons with disabilities.

*The Township will be following its normal procedures for accommodation of persons with disabilities. **Those individuals needing accommodations for effective participation in this meeting should contact the Township Clerk 810-231-1333 ext. 122 at least two working days in advance of the meeting. An attempt will be made to make reasonable accommodations.***

1 Green Oak Charter Township
2 Board of Trustees
3 Regular Meeting Minutes
4 May 19, 2021
5
6
7

8 Per the Open Meetings Act, MCL 15.261. et seq., as amended by PA 228
9 of 2020, during roll call each Trustee attending the meeting remotely
10 identified their physical location as follows:
11

12 Roll Call: Susan Daugherty, Treasurer, Green Oak Township
13 Tracey Edry, Trustee, Green Oak Township
14 Richard Everett, Trustee, Green Oak Township
15 Daniel Rainko, Trustee, Green Oak Township
16 Michael Sedlak, Clerk, Green Oak Township
17 Mark St. Charles, Supervisor, Green Oak Township
18 James Tuthill, Trustee, Green Oak Township
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20

21 **APPROVAL OF AGENDA**

22 **Motion by Daugherty, second by Edry**
23 **To approve the agenda as presented.**
24

25 **Roll Call Vote: Ayes: Unanimous**
26 **Nays: None**
27

28 **MOTION APPROVED**
29
30

31 **PUBLIC COMMENT**
32

33 **Kerri Anderson, 7145 Rickett**, She thanked the Board for including her
34 correspondence in the meeting. She asked if she could clarify something about The
35 Parc at Green Oak. There are comments from Mr. Burkhalter and Mr. Lee from the
36 Planning Commission regarding having the trees upsized, she wondered if that is
37 something she can count on or is that something they are considering? She also asked
38 if the developer would consider putting in a privacy fence as well or is that not allowed in
39 the township.
40

41 **APPROVAL OF CONSENT AGENDA**
42

- 43
44 1) Approval of the May 5, 2021 Regular Board Meeting Minutes
45 2) Approval of the submitted bills list in the amount of \$189,251.60
46

47 **Motion by Edry, second by Rainko**
48 **To approve the Consent Agenda as presented.**
49

50 **Roll Call Vote: Ayes: Unanimous**
51 **Nays: None**
52

53 **MOTION APPROVED**
54

55
56 **DEPARTMENT HEAD REPORTS**
57

58 **Treasurer** – Treasurer Daugherty explained they are working to gather all the
59 information needed for the audit that is scheduled for the last week in July. They will be
60 working on the summer tax roll soon.
61

62 **Clerk** – Clerk Sedlak reported he filled in for Supervisor St. Charles at the last Huron
63 Valley Road Committee Meeting. There was extra money available, so he brought up
64 the portion of Whitmore Lake Road between Silver Lake Road and Lee Road and
65 explained how bad the condition of that stretch of road is. The money was then
66 allocated to the County to pave that portion in Green Oak Township. He thinks it will
67 probably happen next year.
68

69 **Supervisor** – Supervisor St. Charles explained they have a developer’s agreement with
70 many of the developers within the Winans Lake and Ricket Road area and with that
71 agreement they have approximately 1 million dollars pledged for road improvements.
72 He noted the Livingston County Road Commission reviewed the area and feel a single
73 lane roundabout at the intersection of Rickett and Winans Lake Road is needed. He will
74 be seeking township approval to begin moving forward with design, so it will be on the
75 next Board agenda. They will also look at adding a roundabout at Winans Lake and
76 Whitmore Lake Road.
77

78 He met with the residents on Huron River Drive, and they are all in agreement, for
79 snowplowing, grading and lime stoning their road, so he will be moving forward to
80 initiate that SAD for the next 10 years.
81

82
83 **CORRESPONDENCE**
84

85 **A. A letter from Kent and Kerri Anderson regarding The Parc at Green Oak**
86

87 Clerk Sedlak explained they received one letter from Kent and Kerri Anderson.
88 The letter was included with the Board packets and was posted in the Board packet
89 online. They can also forward it to the developers at The Parc at Green Oak. The
90 Board agreed.
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PUBLIC HEARING

A. Briggs Lake Aquatic Weed and Plant Eradication and Control 2021 Special Assessment District

Supervisor St. Charles explained this is a public hearing for the assessment roll. For riparian owners, the cost for year one is \$187.00/year, for years 2-5 \$105.00/year. For non-riparian owners, the cost for year one is \$40.00/year and for years 2-5 is \$40.00/year. There are 87 parcels of riparian landowners, and 24 parcels of non-riparian landowners. The purpose of the public hearing is to receive comments for or against the assessment roll. In order to protest the assessment to the tax tribunal residents must make the objection in voice or by writing, or object by letter no later than 5 p.m. at the Clerk’s Office tomorrow, May 20, 2021.

Mr. Colaianne explained a public hearing has been held, this is just a formality to move forward. Mr. Colaianne stated he is here for questions; this is the 3rd hearing that has been held. In terms of objection, any resident who objects needs to do so at this meeting.

Supervisor St. Charles opened the public hearing at 7:19 p.m. and closed it due to no one wishing to comment.

BUSINESS ITEMS

A. Resolution 10-2021, Third Resolution Confirming Special Assessment Roll, Briggs Lake Aquatic Weed and Plant Eradication and Control 2021 Special Assessment District

**Motion by Sedlak, second by Edry
To approve Resolution 10-2021 Third Resolution confirming Special Assessment roll Briggs Lake Aquatic Weed and Plant Eradication and Control 2021 Special Assessment District.**

**Roll Call Vote: Ayes: Unanimous
Nays: None**

MOTION APPROVED

B. Resolution 11-2021, Bond Resolution, Dejarol & Marcella Road Paving Special Assessment District 2021

Mr. Colaianne stated this is the public hearing and he is present for any questions.

140 The project consists of road improvements and serves properties located along and
141 within the designated Special Assessment District known as Dejarol and Marcella Road
142 Paving Special Assessment District 2021 assessments for which were confirmed by
143 the Township Board on May 5, 2021 with a total cost of \$210,039.00
144
145
146

147 **Motion by Tuthill, second by Edry**
148 **To approve Resolution 11-2021 Green oak Charter Township Bond**
149 **Resolution Dejarol & Marcella Road Paving Special Assessment District**
150 **Bond, Series 2021.**

151
152 **Roll Call Vote: Ayes: Unanimous**
153 **Nays: None**
154

155 **MOTION APPROVED**
156

157
158 **C. Resolution 12-2021, MERS Resolution to Purchase Years**
159

160 Clerk Sedlak explained this resolution is a new requirement by MERS. A Police Officer
161 is buying 5 years of seniority. This is no additional cost to the Township; the Police
162 Officer will fund this purchase entirely himself. He needs approval of the resolution.
163

164 **Motion by Everett, second by Edry**
165 **To approve Resolution 12-2021 MERS Resolution to Purchase Years**
166 **for the purpose of the Police Officer buying 5 years at no out of pocket cost**
167 **to the township.**
168

169 **Roll Call Vote: Ayes: Unanimous**
170 **Nays: None**
171

172 **MOTION APPROVED**
173
174

175 **D. The Parc at Green Oak Conditional Rezoning**
176

177 Representing The Parc at Green Oak: Howard Fingerroot, Vector Development
178 Nikki Jeffries
179

180 Mr. Fingerroot provided a power point presentation which gave an overview of The Parc
181 at Green Oak Luxury Apartment Complex.
182

183 They are proposing 23 10-unit buildings, with a maximum of 230 units. The following
184 amenities were presented:
185

- 186 • Clubhouse and amenities can be used as polling precinct.
- 187 • Connect to public water and sewer,

- 188 • Provide convenient parking spaces and sidewalk connection to cemetery,
- 189 • Property will be developed in accordance with the site plan,
- 190 • Meet all requirement for RM zoning,
- 191 • Buffer trees upsized to 14'
- 192 • Dog park

193
194 He noted the proposed rezoning provides a good transition from the existing zoning.

195
196 Mr. Fingerroot noted a community benefit is that The Parc is within walking distance to
197 Green Oak Retail Center, and an offsite pedestrian pathway connecting them to the
198 Shoppes at Green Oak will be provided. RM zoning also provides less traffic than
199 Research/Office plan. An RM zoning also preserves more natural features compared to
200 the research office plan

201
202 Supervisor St. Charles explained this is an introductory and will appear on the next
203 Board agenda.

204
205 Clerk Sedlak explained how the Planning Commission reviewed this plan. He noted the
206 County has approved this project as well. The developers have been working with them
207 regularly to meet the needs that they wanted for woodlands preservation. He felt that
208 the Planning Commission has done a good job. It still has to go through site plan
209 approval, but he feels it's a good addition to the community.

210
211 Trustee Everett asked how many square feet for each unit and how many different floor
212 plans there are. Mr. Fingerroot stated on average the units are about 1100 square feet,
213 with a mixture of 1 and 2 bedrooms and they are all single level and have an attached
214 garage. Clerk Sedlak explained the parking spots were increased and the end units
215 have two car garages.

216
217 Trustee Tuthill confirmed these are rental units.

218
219 Mr. Fingerroot explained the population they will see will be empty nesters, and young
220 aspiring couples new to the workforce, 35 and under saving up to live in a single-family
221 home.

222
223 Supervisor St. Charles explained a privacy fence height allowed in Green Oak
224 Township is 6' without a variance.

225
226 Trustee Everett asked if gas will be used or if it will be all electric. Mr. Fingerroot stated
227 he would anticipate gas furnaces. Ms. Jeffries stated she is not sure, but they can
228 check into that before the next meeting.

229
230 Mr. Fingerroot stated he did not think sprinkling was a requirement, but they do like the
231 common areas to be sprinkled. Clerk Sedlak stated it does meet the requirements for
232 fire access with the large vehicles.

233

234 Trustee Edry questioned since she saw the dog park, is there a limit of dogs and pets
235 and the size of these dogs and pets. Ms. Jeffries stated they will try to not put the dog
236 park by the single-family residents, but they haven't talked about restrictions yet.

237
238 Trustee Tuthill stated some of the comments from residents show concern about their
239 property values taking a hit and the research has shown that does not happen. Mr.
240 Fingerroot referred to Carlisle Wortmans review that basically shows areas with
241 apartments, areas with different types of housing have higher values. Supervisor St.
242 Charles agreed, property values hold up when a diverse housing market is provided.

243
244

245 **Motion by Sedlak, second by Edry**
246 **To table The Parc at Green Oak Conditional Rezoning.**

247
248

249 **Roll Call Vote: Ayes: Unanimous**
250 **Nays: None**

251
252

MOTION APPROVED

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255 **COMMITTEE REPORTS**

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257 Trustee Everett reported he met with the Superintendent of Brighton Area Schools on
258 Monday. He was notified that SELCRA is no longer invited to stay at their community,
259 and they want them to vacate where they have been so they can move community
260 education over there. He was told Brighton would not sign the Memo of Understanding
261 and they would need to vacate by the end of June. Trustee Everett asked that be put in
262 writing. There was brief discussion of possible places SELCRA could move for now.

263

264 Clerk Sedlak expressed his concern with using the old police station. Trustee Daugherty
265 explained the police station would not be a permanent solution just something that will
266 help them along until something permanent becomes available. Supervisor St. Charles
267 stated they were looking at the far north part of the building, just two offices, not the
268 entire building. Clerk Sedlak stated he is ok with that if they can make sure the building
269 is suitable. Supervisor St. Charles will speak with Mr. Jewell about the requirements
270 tomorrow.

271

272

273 **EXECUTIVE SESSION** – None

274

275

276 **PUBLIC COMMENT** - None

277

278 **Kerri Anderson, 7145 Rickett** – She stated as far as the dogs go, there really should
279 be a limit of about 30 lbs. for the dogs and only allow it in a few buildings away from
280 residential homes. She is not sure where the dumpster locations would be but hopefully
281 not along the residential back yards, they tend to attract rats, raccoons, and coyotes.
282 The privacy fence could only be 6' without a variance, so maybe they could put that

283 behind the residential area or Grasshopper Garden, along with the 14' tall trees they are
284 saying they will do. She commented that Maltby Road is a wreck, she is thrilled to hear
285 the road improvements in the Township. She asked if they have thought about
286 improving Maltby Road. She is hoping a privacy fence and trees will prevent headlights
287 and people from wandering onto her property.
288

289

290 **ADJOURNMENT**

291

292 The Board of Trustees meeting adjourned at 8:21 p.m. due to no further business.
293

294

295

296 Respectfully Submitted,

297

298 Kellie Angelosanto

299 Recording Secretary

300

301 Approved as submitted June 4, 2021
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306 _____
307 Michael H. Sedlak, CMC

308 Township Clerk

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341 _____
342 Mark St. Charles

343 Township Supervisor

Bills List

\$146,897.21

Check Date	Bank	Check #	Vendor Code	Vendor Name	Invoice Total	Credit Total	Total Amount	# Invoices
05/27/2021	OKB	00000068266	ACROSS	ACROSS THE STREET PRODUCTIONS	346.50	0.00	346.50	1
05/27/2021	OKB	00000068267	ALLSTAR	ALLSTAR ALARM LLC	25.00	0.00	25.00	1
05/27/2021	OKB	00000068268	AMERICAN A	AMERICAN AWARDS & ENGRAVING	24.50	0.00	24.50	2
05/27/2021	OKB	00000068269	APOLLO	APOLLO FIRE EQUIPMENT COMPANY	12.60	0.00	12.60	1
05/27/2021	OKB	00000068270	APPLIED IM	APPLIED IMAGING	4,702.55	0.00	4,702.55	4
05/27/2021	OKB	00000068271	ARBOR	ARBOR SPRINGS WATER	64.00	0.00	64.00	2
05/27/2021	OKB	00000068272	ARMSTRONG	ARMSTRONG MILLWORKS, INC.	406.53	0.00	406.53	1
05/27/2021	OKB	00000068273	BAFA	BRIGHTON AREA FIRE AUTHORITY	1,000.00	0.00	1,000.00	1
05/27/2021	OKB	00000068274	BC/BS	BLUE CROSS AND BLUE SHIELD OF MI	60,558.75	0.00	60,558.75	2
05/27/2021	OKB	00000068275	BIG	BUSINESS IMAGING GROUP, INC.	106.16	0.00	106.16	1
05/27/2021	OKB	00000068276	BLUFLINECU	BLUE LINE CUSTOMS	82.00	0.00	82.00	1
05/27/2021	OKB	00000068277	BOUND TREE	BOUND TREE MEDICAL, LLC	892.15	0.00	892.15	3
05/27/2021	OKB	00000068278	BS&A	BS&A SOFTWARE	1,500.00	0.00	1,500.00	1
05/27/2021	OKB	00000068279	C-LEC	C-LEC, INC.	359.00	0.00	359.00	1
05/27/2021	OKB	00000068280	CHAMP CHEV	CHAMPION CHEVROLET INC	111.76	0.00	111.76	1
05/27/2021	OKB	00000068281	CHARTER CO	CHARTER COMMUNICATTONS	964.98	0.00	964.98	2
05/27/2021	OKB	00000068282	CIVIL ENG	CIVIL ENGINEERING SOLUTIONS, INC.	282.50	0.00	282.50	1
05/27/2021	OKB	00000068283	CLS	CLS	130.16	0.00	130.16	1
05/27/2021	OKB	00000068284	COLLINS, J	JAMES W. COLLINS	870.00	0.00	870.00	1
05/27/2021	OKB	00000068285	COMMUN SER	COMMUNICATIONS SERVICES	809.25	0.00	809.25	1
05/27/2021	OKB	00000068286	CORRIGAN	CORRIGAN	2,032.62	0.00	2,032.62	2
05/27/2021	OKB	00000068287	CUMMINS BR	CUMMINS BRIDGEWAY LLC	390.67	0.00	390.67	1
05/27/2021	OKB	00000068288	DART TEAM	DART TEAM	39.00	0.00	39.00	2
05/27/2021	OKB	00000068289	DENTAL	DELTA DENTAL OF MI	4,911.83	0.00	4,911.83	2
05/27/2021	OKB	00000068290	DISCOUNT	THE REINALT-THOMAS CORPORATION	292.00	0.00	292.00	1
05/27/2021	OKB	00000068291	DUBOIS	DUBOIS CHEMICALS INC.	582.08	0.00	582.08	1
05/27/2021	OKB	00000068292	ELITE	ELITE CLEANERS	56.20	0.00	56.20	4
05/27/2021	OKB	00000068293	FALLERT	FALLERT CONTRACTING LLC	1,275.00	0.00	1,275.00	1
05/27/2021	OKB	00000068294	FEDEX	FEDEX	53.34	0.00	53.34	1
05/27/2021	OKB	00000068295	FIRE SERVI	FIRE SERVICE MANAGEMENT	173.05	0.00	173.05	1
05/27/2021	OKB	00000068296	GALLS	GALLS, LLC	983.52	0.00	983.52	4
05/27/2021	OKB	00000068297	HALT	HALT FIRE	601.65	0.00	601.65	2
05/27/2021	OKB	00000068298	HARTLAND F	HARTLAND DEERFIELD CAPITAL RESERVE	521.85	0.00	521.85	1
05/27/2021	OKB	00000068299	HIGHLAND T	HIGHLAND TREATMENT INC.	7,562.00	0.00	7,562.00	1
05/27/2021	OKB	00000068300	HINES PARK	HINES PARK FORD, INC.	608.15	0.00	608.15	1
05/27/2021	OKB	00000068301	HOGAN, AL	AL HOGAN	3,070.00	0.00	3,070.00	1
05/27/2021	OKB	00000068302	HVG	HURON VALLEY GUNS	42.99	0.00	42.99	1
05/27/2021	OKB	00000068303	JEWELL, W	WAYNE JEWELL	1,436.25	0.00	1,436.25	1
05/27/2021	OKB	00000068304	KANGAS, R	RICK KANGAS	2,141.62	0.00	2,141.62	1
05/27/2021	OKB	00000068305	LAWSON	LAWSON PRODUCTS, INC.	70.82	0.00	70.82	1
05/27/2021	OKB	00000068306	LCASSESSOR	LIVINGSTON CO. ASSESSOR'S ASSN.	60.00	0.00	60.00	1
05/27/2021	OKB	00000068307	LIVCOMCLK	LIVINGSTON CTY MUNICIPAL CLKS ASSOC	20.00	0.00	20.00	1

05/27/2021 08:38 AM
User: AMY
DB: Green Oak Townshi

CHECK PROOF FOR GREEN OAK CHARTER TOWNSHIP

BANK CODE: OKB CHECK DATE: 05/27/2021 INVOICE PAY DATE FROM 05/27/2021 TO 05/27/2021

Check Date	Bank	Check #	Vendor Code	Vendor Name	Invoice Total	Credit Total	Total Amount	# Invoices
05/27/2021	OKB	00000068308	LPRESS/ARG	LIVINGSTON DAILY PRESS & ARGUS	7,640.00	0.00	7,640.00	1
05/27/2021	OKB	00000068309	M/I HOMES	M/I HOMES OF MICHIGAN LLC	5,000.00	0.00	5,000.00	5
05/27/2021	OKB	00000068310	MARSHALL,	ANTHONY MARSHALL	57.00	0.00	57.00	1
05/27/2021	OKB	00000068311	MID AMERIC	MID AMERICAN AEL	235.20	0.00	235.20	1
05/27/2021	OKB	00000068312	MIMUNICLEA	MICHIGAN MUNICIPAL LEAGUE	327.36	0.00	327.36	1
05/27/2021	OKB	00000068313	MML WORKER	MML WORKERS' COMP FUND	16,477.00	0.00	16,477.00	1
05/27/2021	OKB	00000068314	MTA	MICHIGAN TOWNSHIPS ASSOCIATION	7,042.00	0.00	7,042.00	1
05/27/2021	OKB	00000068315	MUTUAL	MUTUAL OF OMAHA	2,931.74	0.00	2,931.74	1
05/27/2021	OKB	00000068316	NETEXPRESS	NETEXPRESS	220.11	0.00	220.11	1
05/27/2021	OKB	00000068317	O'REILLY A	O'REILLY AUTO PARTS	256.14	0.00	256.14	3
05/27/2021	OKB	00000068318	OFFICE DEP	OFFICE DEPOT	337.95	0.00	337.95	2
05/27/2021	OKB	00000068319	OVERHEAD D	OVERHEAD DOOR CO OF WHITMORE LAKE	715.00	0.00	715.00	1
05/27/2021	OKB	00000068320	PAETEC	WINDSTREAM	128.33	0.00	128.33	1
05/27/2021	OKB	00000068321	PETER'S	PETER'S TRUE VALUE HARDWARE	191.76	0.00	191.76	2
05/27/2021	OKB	00000068322	PIT BOWES	PITNEY BOWES GLOBAL FINANCIAL SER	667.41	0.00	667.41	1
05/27/2021	OKB	00000068323	ROBSON, D	DEANNA ROBSON	6.16	0.00	6.16	1
05/27/2021	OKB	00000068324	RSLI	RELIANCE STANDARD LIFE INS COMPANY	921.96	0.00	921.96	1
05/27/2021	OKB	00000068325	SAFEWARE	SAFEWARE, INC.	247.22	0.00	247.22	1
05/27/2021	OKB	00000068326	SHARE	SHARE CORP	350.44	0.00	350.44	1
05/27/2021	OKB	00000068327	SOHN	SOHN LINEN SERVICE, INC.	63.50	0.00	63.50	1
05/27/2021	OKB	00000068328	STAPLES	STAPLES	92.73	0.00	92.73	2
05/27/2021	OKB	00000068329	STAPLES CR	STAPLES CREDIT PLAN	177.72	0.00	177.72	1
05/27/2021	OKB	00000068330	STERICYCLE	STERICYCLE, INC.	197.67	0.00	197.67	1
05/27/2021	OKB	00000068331	THIN BLUE	THIN BLUE LINE OF MICHIGAN	20.00	0.00	20.00	1
05/27/2021	OKB	00000068332	TOTALENERG	TOTAL ENERGY SYSTEMS, LLC	700.00	0.00	700.00	1
05/27/2021	OKB	00000068333	TRI COUNTY	TRI COUNTY SUPPLY, INC.	182.70	0.00	182.70	1
05/27/2021	OKB	00000068334	TUTHILLCOM	TUTHILL FARMS & COMPOSTING	120.00	0.00	120.00	1
05/27/2021	OKB	00000068335	WASTE MGT	WM CORPORATE SERVICES, INC.	202.50	0.00	202.50	1
05/27/2021	OKB	00000068336	WITMER ASS	WITMER PUBLIC SAFETY GROUP, INC.	189.58	0.00	189.58	1
05/27/2021	OKB	00000068337	ZIRKLE,LAR	LARRY ZIRKLE	1,025.00	0.00	1,025.00	1

Num Checks: 72 Num Stubs: 0 Num Invoices: 100 Total Amount: 146,897.21

OK TO PAY
MHS 5/27/2021
John J. Hawkins 5/27/21



Green Oak Charter Township Police Department

9400 Whitmore Lake Road - Brighton, Michigan 48116-8318
Non-Emergency Business: (810) 231-9626 • FAX (810) 231-9627
Emergency: 911



TO: GREEN OAK CHARTER TOWNSHIP BOARD
FROM: CHIEF JASON C. PLESS *JCP*
SUBJECT: ACTIVITY REPORT FOR APRIL 2021
DATE: MAY 14, 2021

Listed below is the Green Oak Charter Township Police Department's Activity Report for March 2021.

- | | | |
|--------------------------------------|----------------------------------|-------------------------------------|
| 11 911 Hang Ups | Extortion | Natural Death |
| 5 Abandoned Vehicle | 52 False Alarm | 2 Neighbor Trouble |
| Accident - Boating | Family - Abuse/Neglect | 4 Noise Complaints |
| 4 Accident - Fail to Stop & Identify | Family - Other | 2 Obstruct Justice |
| Accident - Fatal | Fireworks Complaints | 1 Obstruct Police |
| 4 Accident - Non-Traffic | 5 Follow Up | Open Alcohol in Motor Vehicle |
| 5 Accident - Personal Injury | 3 Fraud - Credit Card/ATM | Organized Retail Crime |
| 24 Accident - Property Damage | 1 Fraud - False Pretense/Swindle | Other Agency Warrant Arrests |
| 17 Administrative Duties | Fraud - Forgery/Counterfeiting | Overdose/Fatal |
| Animal Bite | Fraud - Hacking/Comp. Invasion | 1 Overdose/Non-Fatal |
| 13 Animal Complaint | 3 Fraud - Identity Theft | 2 OWI-Alcohol/Drugs |
| 594 Area/Property/Sub/Vacation Check | Fraud - Impersonation | PPO Violation |
| Arson | 1 Fraud - Non-Sufficient Funds | Retail Fraud |
| 5 Assault & Battery | 1 Fraud - Wire | Road Run-off |
| Aggravated/Felonious Assaults | 7 General/Miscellaneous | Robbery |
| 29 Assist Citizen/Motorist | Health & Safety | Runaway |
| 86 Assist EMS | Immigration | 1 Sex Offense - Other |
| 22 Assist Fire Department | Intimidation/Stalking/Harassment | 2 Snowmobile/ORV Complaint |
| 12 Assist Other Agency | Invasion of Privacy | Solicitor Complaints |
| Boating Complaint | 1 Juvenile Complaint | SUAS Operation - Drone |
| Burglary - Forced Entry | Kidnapping | 4 Subpoena Service (incl attempts) |
| Burglary - Entry Without Force | 2 Larceny - From Building | Suicide Investigation |
| Child Abuse/Neglect | 3 Larceny - From Grounds | 4 Suspicious Person |
| 8 Civil Complaint | Larceny - From Motor Vehicle | 15 Suspicious Situation |
| 28 Community Policing | 1 Larceny - Motor Vehicle Parts | 7 Suspicious Vehicle |
| CSC I | Larceny - Other | Threats - General |
| CSC II | Liquor Inspection/Application | Tobacco Possession by Minor |
| CSC III | Liquor Violations - Other | 145 Traffic Detail |
| CSC IV | 12 Lock Out | 77 Traffic Stop |
| 2 Damage to Property (MDOP) | 3 Lost/Found Property | Traffic Violations - Other |
| 3 Death Investigation | Misc. Criminal Offense | Trespassing |
| 1 Disorderly Conduct | 41 Misc. Traffic Complaint | 9 Trouble with Subject |
| 4 Domestic - Verbal | Minor in Possession of Alcohol | 2 VIN Inspections |
| 3 Driving While License Suspended | Missing Person | 1 Violation of Controlled Substance |
| Embezzlement | Motor Vehicle Theft | Warrant Attempts |
| Escape/Flight | Motor Vehicle as Stolen Property | Weapons Offense |
| Executive Order Violation | Murder | 17 Welfare Check |

45 Total Citations were issued for the month of April 2021.

#60 - 53,017 #61 - 125,632 #62 - 121,148 #63 - 82,964 #64 - 27,749 MC1 - 3,680
#65 - 95,377 #66 - 23,378 #67 - 61,235 #68 - 65,863 #69 - 67,350 MC2 - 1,339

14,783 Total miles driven for April 2021.

AGENDA ITEM SHEET

MEETING DATE: June 2, 2021

PERSON PLACING ITEM ON AGENDA: Mark St. Charles, Supervisor

AGENDA TOPIC: Emerson Drive Road Improvement SAD

TOPIC EXPLANATION:

Attached is the Emerson Drive Road Improvement SAD 1st Resolution

SUPPORTING DOCUMENTATION

POSSIBLE COURSES OF ACTION:

SUGGESTED MOTION:

TYPE OF VOTE: ROLL CALL X VOICE VOTE

GREEN OAK CHARTER TOWNSHIP

At a regular meeting of the Township Board of Green Oak Charter Township, Livingston County, Michigan, in accordance with the Open Meetings Act, Public Act 267 of 1976, as amended, MCL 15.261, the Township Board meeting held electronically; in order to mitigate the spread of COVID-19, protect the public health, and provide essential protections to vulnerable citizens, limiting in-person contact and where critical mitigation measures included social distancing and limiting the number of people interacting at public gatherings, on the 2nd day of June 2021, at 7:00 p.m., Eastern Time, at Green Oak Township Hall in Brighton, Michigan there were:

PRESENT: _____

ABSENT: _____

The following resolution was moved for adoption by _____, and the motion was supported by _____.

**RESOLUTION NUMBER 13-2021
FIRST RESOLUTION REGARDING CERTAIN PROPOSED ROAD IMPROVEMENTS
FOR EMERSON DRIVE ROAD IMPROVEMENTS
SPECIAL ASSESSMENT DISTRICT 2021**

WHEREAS, the Township Clerk presented to the Board (a) petitions signed by record owners of land whose land constitutes 91.54% of the total frontage upon Emerson Drive in the proposed special assessment district described in the following resolution, (b) maps showing the location of the proposed improvements listed in the following resolution and the proposed special assessment district for the improvements, (c) plans describing the improvements and (d) an estimate of the cost of improvements.

NOW, THEREFORE, BE IT RESOLVED as follows by the Township Board of Green Oak Charter Township, Livingston County, Michigan, as follows:

1. The Board hereby declares its intention to acquire, construct and install the improvements in the Township described in Exhibit A attached hereto and to assess the cost of the improvements to the lands which will be especially benefited

thereby, as set forth in the special assessment district described in Exhibit B attached hereto.

2. The aforesaid maps, plans and cost estimate shall be filed in the office of the Township Clerk for public examination.

3. The aforesaid improvements shall be known as the Emerson Drive Road Improvements and the special assessment district therefor shall be known as the Emerson Drive Road Improvements Special Assessment District.

4. The estimated cost of the improvements and the part to be assessed against lands in the special assessment district are as follows:

Estimated Cost	\$781,538.00
Amount to be assessed against lands in the special assessment district	\$781,538.00
Amount to be a general obligation of the Green Oak Charter Township	-0-

5. The special assessments shall be payable in annual installments which shall become due at such time as the Board shall hereafter determine.

6. The Township's administrative fee relating to the improvements shall be 1%.

7. This Board shall meet electronically on Wednesday, the 16th day of June, 2021, via ZOOM meetings at <https://us02web.zoom.us/j/83801934492>, 1-312-626-6799 US (Chicago) or 1-888-788-0099 US Toll-free, Meeting ID: 838-0193-4492, at 7 p.m., prevailing Eastern Time, to hear and consider any objections submitted by any interested persons with respect to the petitions, the making of such improvements and the assessing of the cost thereof to the special assessment district. The Township Clerk shall give notice of such hearing by publication of the same twice in the *Livingston Daily Press & Argus*, or another newspaper having general circulation in the Township, and by sending by first class United States Mail,

postage thereon fully prepaid, a copy of said notice addressed to the record owner or party in interest in whose name any land in the special assessment district is assessed on the Township's last preceding tax assessment roll for ad valorem tax purposes which was reviewed by the Township board of review, as supplemented by any subsequent changes in the names or the addresses of the owners or parties listed on that roll. If a record owner's name does not appear on the Township tax assessment records, then such notice shall be given to the record owner at the address shown by the records of the county register of deeds. The first publication and the mailing shall be at least ten (10) days prior to the date of the hearing. The notice shall contain the information required by Act No. 188, Public Acts of Michigan, 1954, as amended.

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

YES:

NO:

ABSTAIN:

The Resolution was declared adopted.

BY ORDER OF THE TOWNSHIP BOARD,

Mark St. Charles, Supervisor

Michael H. Sedlak, CMC Clerk

CLERK'S CERTIFICATE

STATE OF MICHIGAN)
) ss
COUNTY OF LIVINGSTON)

I, the undersigned, the duly qualified and acting Clerk of Green Oak Charter Township, Livingston County, Michigan, do hereby certify that the foregoing is a true and complete copy of proceedings taken at a regular meeting of the Township Board, held on June 2, 2021, the original of which is on file in my

office. I further certify that notice of said meeting was given in accordance with the provisions of the open meetings act, MCL 15.261 et. seq., as amended.

IN WITNESS WHEREOF, I have hereunto affixed my official signature this ____ day of June, 2021.

Michael H. Sedlak, CMC
Green Oak Charter Township Clerk

EXHIBIT A TO RESOLUTION

Description of Emerson Drive Road Improvements

The improvements consist of the acquisition, construction and installation of road improvements to Emerson Drive, including, without limitation, pulverizing and reconstructing existing road, installing paving and related materials, installing curbs and gutters and related, ancillary and appurtenant facilities in Green Oak Charter Township, Livingston County, Michigan.

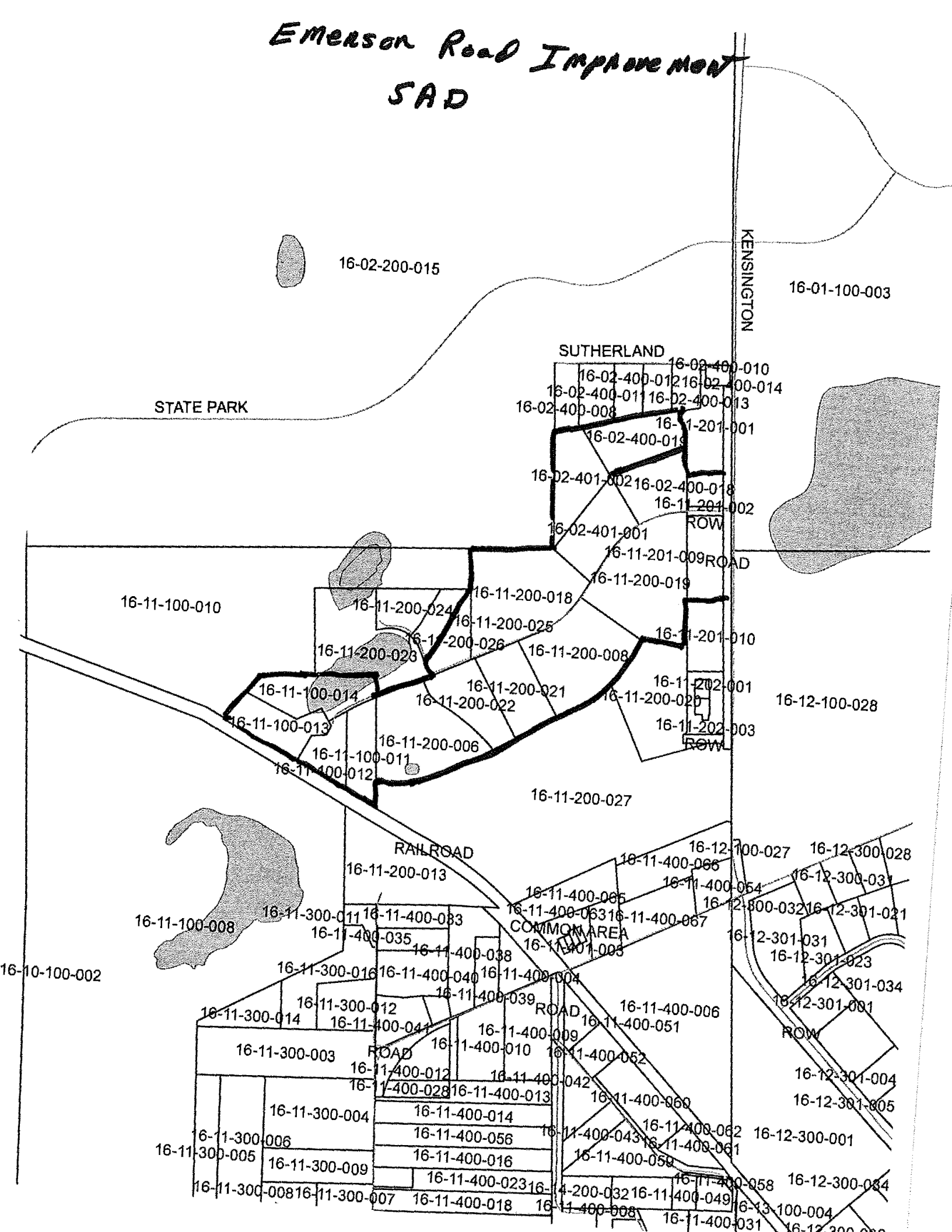
EXHIBIT B TO RESOLUTION

Emerson Drive Road Improvements Special Assessment District

The special assessment district shall consist of the following parcels, located along Emerson Drive in Green Oak Charter Township, Livingston County, Michigan, having the following tax identification numbers:

4716-11-100-014
4716-11-100-013
4716-11-100-012
4716-11-100-011
4716-11-200-006
4716-11-200-022
4716-11-200-021
4716-11-200-008
4716-11-200-026
4716-11-200-018
4716-02-401-001
4716-11-200-019
4716-02-400-018
4716-11-201-002
4716-11-201-009

EMERSON ROAD IMPROVEMENT SAD



Emerson Drive Paving Cost Worksheet

6523.84	Total Units					
		Construction		639,910.00		
		Contingency		35,000.00	0.05	
		Layout		5,000.00		
		Postage		80.00		
		Paper Cost		810.00		
		Lanscaping		30,000.00		
		Utility Locator		1,500.00		
		Construction/Paving Testing		30,000.00		
		Bond Cost		15,000.00		
		Signage & Notices		7,500.00		
		Publications & Notices		9,000.00		
		Sub-Total Project		773,800.00		
		Cost per Foot		118.61		
		1% Township Administrative Fee		1.19		
		Total Cost per Foot		119.80		
		Sub-Total		781,538.00		
		Unilock		(120,000.00)		
		Kem Krest		(60,000.00)		
		Sub-Total		601,538.00		
		Cost per Unit Ft.		92.21		

Emerson Drive Road Paving
SAD 2021

Units	Parcel #	Property Address	Owner's Name/Mailing Address	Legal Description	Front Footage	Property Counted	Assessment
1	4716-02-400-019	EMERSON DR	PILOT PARTNERS LLC 273 ASH COURT SOUTH LYON, MI 48178	SEC 2, T1N, R6E COMM SE COR OF SEC, TH N 02°56'41" W 286.38 FT, TH S 86°59'20" W, 330.33 FT, TH N 03°00'40" W, 498.93 FT TO POB, TH S 66°17'06" W, 624.91 FT, TH N 33°52'41" W, 400.26 FT, TH N 77°45'04" E, 800.28 FT, TH CHORD BEARING S 27°12'30" E, 40.99 FT, TH S 03°00'40" E, 90.29 FT TO POB CONT 5.01 ACRES 8/96 SPLIT FROM 16-02-400-016.	0		
1	4716-11-100-014	EMERSON DR	KX INVESTMENTS LLC 12238 EMERSON DR BRIGHTON, MI 48116	SEC 11 T1N, R6E, COM NE COR SAID SEC TH S 87°23'32" W 2633.76 FT TH S 02°50'16" E 949.09 FT FOR POB TH S 02°50'16" E 163.85 FT TH S 65°00'00" W 97.41 FT TH ALG CHD BRG S 61°51'10" W 54.90 FT TH S 58°42'20" W 245 FT TH N 31°17'40" W 108 FT TH S 63°20'32" W 202.44 FT TH N 65°05'29" W 420.04 FT TH N 37°39'47" E 167.64 FT TH N 87°03'00" E 399.13 FT TH N 86°41'00" E 455.65 FT TO POB CONT 5.314 AC 2/96 SPLIT FROM 16-11-100-001.	397.32	397.32	
1	4716-11-100-013	12238 EMERSON DR	K X INVESTMENTS 12238 EMERSON DR BRIGHTON, MI 48116	SEC 11, T1N, R6E, COM NE COR SAID SEC TH S 87°23'32" W 2633.76 FT TH S 02°50'16" E 1112.94 FT TH S 65°00'00" W 97.41 FT TH ALG CHD BRG S 61°52'10" W 54.90 FT TH S 58°42'20" W 245 FT TO POB TH S 31°17'40" E 42 FT TH S 26°28'28" W 75 FT TH S 83°04'01" W 110.25 FT TH S 27°45'38" W 217.97 FT TH N 62°14'22" W 245.26 FT TH ALG CHD BRG N 64°01'01" W 377.12 FT TH N 37°39'47" E 262.91 FT TH S 65°05'29" E 420.04 FT TH N 63°20'32" E 202.44 FT TH S 31°17'40" E 108 FT TO POB CONT 4.244 AC 2/96 SPLIT FROM 16-11-100-001.	108.00	108.00	
1	4716-11-100-012	12264 EMERSON DR	12664 EMERSON DR, LLC 12264 EMERSON DR BRIGHTON, MI 48116	SEC 11 T1N, R6E, COM NE COR SAID SEC TH S 87°23'32" W 2633.76 FT TH S 02°50'16" E 1112.94 FT TH S 65°00'00" W 97.41 FT TH ALG CHD BRG S 61°51'10" W 54.90 FT TH S 58°42'20" W 87.97 FT FOR POB TH S 02°12'33" E 591 FT TH N 62°14'22" W 428.92 FT TH N 27°45'38" E 217.97 FT TH N 83°04'01" E 110.25 FT TH N 26°28'28" E 75 FT TH N 31°17'40" W 42 FT TH N 58°42'20" E 157.03 TO POB 2.763 AC 2/96 SPLIT FROM 16-11-100-001.	157.03	157.03	
1	4716-11-100-011	12300 EMERSON DR	TJ EMERSON LLC 12300 EMERSON DR BRIGHTON, MI 48116	SEC 11 T1N, R6E COM NE COR SAID SEC TH S 87°23'32" W 2633.76 FT TH S 02°50'16" E 1112.94 FT FOR POB TH S 02°50'16" E 825.37 FT TH N 62°14'22" W 259.85 FT TH N 02°12'33" W 591 FT TH N 58°42'20" E 87.97 FT TH ALG CHD BRG N 61°51'10" E 54.90 FT TH N 65°00'00" E 97.41 FT TO POB CONT 3.60 AC 2/96 SPLIT FROM 16-11-100-001.	240.29	240.29	
1	4716-11-200-006	12336 EMERSON DR	4M WAREHOUSING LLC 4819 W WICKFORD BLOOMFIELD HILLS, MI 48302	SEC 11 T1N R6E COMM AT THE NE COR OF SEC, TH S 87°W 2633.76 FT, TH S 02°E 1112.94 FT TO POB, TH N 65°E 370.20 FT, TH S 25°E 75 FT, TH SELY ALONG AN ARC LEFT, CHORD BEARING, S 43°E 147.15 FT, TH SELY ALONG AN ARC RIGHT, CHORD BEARING, S 52°E 523.51 FT, TH S 60°W 390 FT, TH SWLY ALONG AN ARC RIGHT, CHORD BEARING, S 73°W 329.35 FT, TH S 86°W 200 FT, TH N 02°W 638.60 FT TO POB, 10.01AC, PARCEL 5, SPLIT FROM 001, 10-81	369.84	369.84	
1	4716-11-200-022	12424 EMERSON DR	PDM ACQUISITION COMPANY 12424 EMERSON DR BRIGHTON, MI 48116	SEC 11 T1N, R6E, COM NE COR SAID SEC TH S 87°22'20" W 2633.76 FT TH S 02°50'16" E 1112.94 FT TH N 65°00'00" E 370.20 FT FOR POB TH N 65°00'00" E 416.76 FT TH S 30°00'00" E 664.82 FT TH S 60°00'00" W 186.11 FT TH ALG CHD BRG N 52°33'41" W 523.51 FT TH ALG CHD BRG N 43°39'22" W 147.15 FT TH N 25°00'00" W 75 FT TO POB CONT 4.90 AC 4/96 SPLIT FROM 16-11-200-007	416.86	416.86	
1	4716-11-200-021	12482 EMERSON DR	MJD EMERSON GROUP, LLC 12482 EMERSON DR, STE 1 BRIGHTON, MI 48116	SEC 11 T1N, R6E, COM NE COR SAID SEC TH S 87°22'20" W 2633.76 FT TH S 02°50'16" E 1112.94 FT TH N 65°00'00" E 786.96 FT FOR POB TH N 65°00'00" E 346.60 FT TH S 30°00'00" E 634.61 FT TH S 60°00'00" W 345.28 FT TH N 30°00'00" W 664.82 FT TO POB CONT 5.15 AC 4/96 SPLIT FROM 16-11-200-007	346.6	346.60	
1	4716-11-200-008	12534 EMERSON DR	JAW OF MICHIGAN LLC PO BOX 1540 BRIGHTON, MI 48116	SEC 11 T1N R6E COMM AT THE NE COR OF SEC, TH N 02°W ALONG C.L. KENSINGTON RD 286.38 FT, TH S 86°W 330.33 FT, TH ALONG AN ARC LEFT, CHORD BEARING, S 58°W 667.90 FT, TH S 30°W 375 FT TO POB, TH S 57°E 537.18 FT, TH SWLY ALONG AN ARC RIGHT, CHORD BEARING, S 36°W 582.61 FT, TH S 60°W 278.61 FT, TH N 30°W 634.61 FT, TH N 65°E 150.74 FT, TH NELY ALONG AN ARC LEFT, CHORD BEARING, N 47°E 420.99 FT TO POB, 10.08AC, PARCEL 7, SPLIT FROM 001, 10-81	578.3	578.30	
1	4716-11-200-026	12565 EMERSON DR	UNILOCK MICHIGAN INC 12591 EMERSON DR BRIGHTON, MI 48116	SEC 11 T1N, R6E COM NE COR TH S 87°23'32" W 2633.76 FT TO N 1/4 COR TH S 02°50'16" E 301.85 FT TH N 87°22'20" E 700 FT TO POB TH S 02°50'16" E 523.40 FT TH S 65°00'00" W 323.90 FT TH N 24°59'43" W 106.33 FT TH N 29°01'48" E 643.99 FT TO POB CONT 2.44 AC. SPLIT 10/96 FROM 16-11-200-017.	323.59	323.59	
1	4716-11-200-018	12591 EMERSON DR	BRYANT, EDWARD J 12591 EMERSON DR	SEC 11 T1N R6E PART OF NE 1/4 COM AT NE COR, TH N2°W ALG E LINE OF SEC 2 & C/L KENSINGTON RD, 286.38 FT, TH S86°W 330.33 FT, TH ALG ARC L 696.25 FT CHD BRG S58°W 667.9 FT, TH S30°W 240.66 FT TO POB TH S30°W 134.34 FT, TH ALG ARC	1090.38	1,090.38	

Emerson Drive Road Paving
SAD 2021

Units	Parcel #	Property Address	Owner's Name/Mailing Address	Legal Description	Front Footage	Property Counted	Assessment
			BRIGHTON, MI 48116	R 427.61 FT, RAD 700 FT CHD BRG S47°W 420.99 FT, TH S65°W 528.46 FT, TH N2°W 825.25 FT TO N LINE OF SEC 11, TH N87°E 616.88 FT ALG SD N LINE, TH N87°E ALG SD N LINE, 616.88 FT, TH S50°E 362.23 FT TO POB 11.74 AC SPLIT 12/88 FROM 004 & 005			
1	4716-02-401-002	12781 EMERSON DR	PILOT PARTNERS LLC 273 ASH COURT SOUTH LYON, MI 48178	SEC 2 T1N R6E GREEN OAK GROUP CONDOMINIUM UNIT 2 LIBER 1385 PAGE 0183	0		
1	4716-02-401-001	12785 EMERSON DR	EXCELDA MANUFACTURING CO 12785 EMERSON BRIGHTON, MI 48116	SEC 2 T1N R6E GREEN OAK GROUP CONDOMINIUM UNIT 1 LIBER 1385 PAGE 0183	564.62	564.62	
1	4716-11-200-019	12800 EMERSON DR	COTTONWOOD RESORT, LLC 11818 L STREET OMAHA, NE 68137	SEC 11 & 2 T1N R6E COM SE COR SEC 2, TH N2°W 286.38 FT & S89°W 330.33 FT TO POB TH S3°E 983 FT, TH N86°W 355.1 FT, TH N57°W 537.18 FT, TH N30°E 375 FT, TH NE'LY ALG ARC R CHD BRG NSB°E 667.9 FT TO POB 12.24 AC #8A SPLIT 1/89 FROM 009	667.90	667.90	
1	4716-02-400-018	12839 EMERSON DR	LAMAR PROPERTIES LLC 12785 EMERSON DRIVE BRIGHTON, MI 48116	SEC 2 T1N, R6E COMM SE COR OF SEC, TH N 02°56'41" W 286.38 FT, TH S 86°59'20" W 330 FT TO POB, TH W ON AN ARC LEFT 377.11 FT, TH N 33°52'41" W 439.38 FT TH N 66°17'06" E 624.91 FT TH S 03°00'40" E. 493.93 FT TO POB. CONT 5.01 ACRES 8/96 SPLIT FROM 16-02-400-016.	372.36	372.36	
1	4716-11-201-002	12877 EMERSON DR	SPORT TECH CORPORATION 12264 BOULDER PASS MILFORD, MI 48380	SEC 11 T1N R6E TROUT LAKE RESEARCH & INDUSTRIAL PARK COMDOMINIUM UNIT 2 LIBER 1393 PAGE 0728	270.66		
1	4716-11-201-009	6964 KENSINGTON RD	PHILIP GLEBE P.O. BOX 530 HARTLAND, MI 48353	SEC 11 T1N, R6E, TROUT LAKE RESEARCH & INDUSTRIAL PARK CONDOMINIUM UNITS 3 & 4 COMBINED 3/96	250.26		
16					6,154.01	5,633.09	
	cost per front foot	77.91				Percentage in favor 91.54	

**Emerson Drive Road Paving
SAD 2018**

Units	Parcel #	Property Address	Owner's Name/Mailing Address	Legal Description	Front Footage	Assessment	1st Signature	2nd Signature	Property Counted
1	4716-02-400-019	EMERSON DR	PILOT PARTNERS LLC 273 ASH COURT SOUTH LYON, MI 48178	SEC 2, T1N, R6E COMM SE COR OF SEC, TH N 02°56'41" W 286.38 FT, TH S 86°59'20" W, 330.33 FT, TH N 03°00'40" W, 498.93 FT TO POB, TH S 66°17'06" W, 624.91 FT, TH N 33°52'41" W, 400.26 FT, TH N 77°45'04" E, 800.28 FT, TH CHORD BEARING S 27°12'30" E, 40.99 FT, TH S 03°00'40" E, 90.29 FT TO POB CONT 5.01 ACRES 8/96 SPLIT FROM 16-02-400-016.	0				
1	4716-11-100-014	EMERSON DR	KX INVESTMENTS LLC 12238 EMERSON DR BRIGHTON, MI 48116	SEC 11 T1N, R6E, COM NE COR SAID SEC TH S 87°23'32" W 2633.76 FT TH S 02°50'16" E 949.09 FT FOR POB TH S 02°50'16" E 163.85 FT TH S 65°00'00" W 97.41 FT TH ALG CHD BRG S 61°51'10" W 54.90 FT TH S 58°42'20" W 245 FT TH N 31°17'40" W 108 FT TH S 63°20'32" W 202.44 FT TH N 65°05'29" W 420.04 FT TH N 37°39'47" E 167.64 FT TH N 87°03'00" E 399.13 FT TH N 86°41'00" E 455.65 FT TO POB CONT 5.314 AC 2/96 SPLIT FROM 16-11-100-001.	397.32				
1	4716-11-100-013			SEC 11, T1N, R6E, COM NE COR SAID SEC TH S 87°23'32" W 2633.76 FT TH S 02°50'16" E 1112.94 FT TH S 65°00'00" W 97.41 FT TH ALG CHD BRG S 61°52'10" W 54.90 FT TH S 58°42'20" W 245 FT TO POB TH S 31°17'40" E 42 FT TH S 26°28'28" W 75 FT TH S 83°04'01" W 110.25 FT TH S 27°45'38" W 217.97 FT TH N 62°14'22" W 245.26 FT TH ALG CHD BRG N 64°01'01" W 377.12 FT TH N 37°39'47" E 262.91 FT TH S 65°05'29" E 420.04 FT TH N 63°20'32" E 202.44 FT TH S 31°17'40" E 108 FT TO POB CONT 4.244 AC 2/96 SPLIT FROM 16-11-100-001.	108.00				
1	4716-11-100-012		LC	SEC 11 T1N, R6E, COM NE COR SAID SEC TH S 87°23'32" W 2633.76 FT TH S 02°50'16" E 1112.94 FT TH S 65°00'00" W 97.41 FT TH ALG CHD BRG S 61°51'10" W 54.90 FT TH S 58°42'20" W 87.97 FT FOR POB TH S 02°12'33" E 591 FT TH N 62°14'22" W 428.92 FT TH N 27°45'38" E 217.97 FT TH N 83°04'01" E 110.25 FT TH N 26°28'28" E 75 FT TH N 31°17'40" W 42 FT TH N 58°42'20" E 157.03 TO POB 2.763 AC 2/96 SPLIT FROM 16-11-100-001.	157.03				
1	4716-11-100-011			SEC 11 T1N, R6E COM NE COR SAID SEC TH S 87°23'32" W 2633.76 FT TH S 02°50'16" E 1112.94 FT FOR POB TH S 02°50'16" E 825.37 FT TH N 62°14'22" W 259.85 FT TH N 02°12'33" W 591 FT TH N 58°42'20" E 87.97 FT TH ALG CHD BRG N 61°51'10" E 54.90 FT TH N 65°00'00" E 97.41 FT TO POB CONT 3.60 AC 2/96 SPLIT FROM 16-11-100-001.	240.29				
1	4716-11-200-006		48302	SEC 11 T1N R6E COMM AT THE NE COR OF SEC, TH S 87°W 2633.76 FT, TH S 02°E 1112.94 FT TO POB, TH N 65°E 370.20 FT, TH S 25°E 75 FT, TH SELY ALONG AN ARC LEFT, CHORD BEARING, S 43°E 147.15 FT, TH SELY ALONG AN ARC RIGHT, CHORD BEARING, S 52°E 523.51 FT, TH S 60°W 390 FT, TH SWLY ALONG AN ARC RIGHT, CHORD BEARING, S 73°W 329.35 FT, TH S 86°W 200 FT, TH N 02°W 638.60 FT TO POB, 10.01AC, PARCEL 5, SPLIT FROM 001, 10-81	369.84				
1	4716-11-200-022		MPANY 12424 EMERSON DR BRIGHTON, MI 48116	SEC 11 T1N, R6E, COM NE COR SAID SEC TH S 87°22'20" W 2633.76 FT TH S 02°50'16" E 1112.94 FT TH N 65°00'00" E 370.20 FT FOR POB TH N 65°00'00" E 416.76 FT TH S 30°00'00" E 664.82 FT TH S 60°00'00" W 186.11 FT TH ALG CHD BRG N 52°33'41" W 523.51 FT TH ALG CHD BRG N 43°39'22" W 147.15 FT TH N 25°00'00" W 75 FT TO POB CONT 4.90 AC 4/96 SPLIT FROM 16-11-200-007	416.86				
1	4716-11-200-021	12482 EMERSON DR	MJD EMERSON GROUP, LLC 12482 EMERSON DR, STE 1 BRIGHTON, MI 48116	SEC 11 T1N, R6E, COM NE COR SAID SEC TH S 87°22'20" W 2633.76 FT TH S 02°50'16" E 1112.94 FT TH N 65°00'00" E 786.96 FT FOR POB TH N 65°00'00" E 346.60 FT TH S 30°00'00" E 634.61 FT TH S 60°00'00" W 345.28 FT TH N 30°00'00" W 664.82 FT TO POB CONT 5.15 AC 4/96 SPLIT FROM 16-11-200-007	346.6				
1	4716-11-200-008	12534 EMERSON DR	JAW OF MICHIGAN LLC PO BOX 1540 BRIGHTON, MI 48116	SEC 11 T1N R6E COMM AT THE NE COR OF SEC, TH N 02°W ALONG C.L. KENSINGTON RD 286.38 FT, TH S 86°W 330.33 FT, TH ALONG AN ARC LEFT, CHORD BEARING, S 58°W 667.90 FT, TH S 30°W 375 FT TO POB, TH S 57°E 537.18 FT, TH SWLY ALONG AN ARC RIGHT, CHORD BEARING, S 36°W 582.61 FT, TH S 60°W 278.61 FT, TH N 30°W 634.61 FT, TH N 65°E 150.74 FT, TH NELY ALONG AN ARC LEFT, CHORD BEARING, N 47°E 420.99 FT TO POB, 10.08AC, PARCEL 7, SPLIT FROM 001, 10-81	578.3				
1	4716-11-200-026	12565 EMERSON DR	UNILOCK MICHIGAN INC 12591 EMERSON DR BRIGHTON, MI 48116	SEC 11 T1N, R6E COM NE COR TH S 87°23'32" W 2633.76 FT TO N 1/4 COR TH S 02°50'16" E 301.85 FT TH N 87°22'20" E 700 FT TO POB TH S 02°50'16" E 523.40 FT TH S 65°00'00" W 323.90 FT TH N 24°59'43" W 106.33 FT TH N 29°01'48" E 643.99 FT TO POB CONT 2.44 AC. SPLIT 10/96 FROM 16-11-200-017.	323.59				
1	4716-11-200-018	12591 EMERSON DR	BRYANT, EDWARD J 12591 EMERSON DR	SEC 11 T1N R6E PART OF NE 1/4 COM AT NE COR, TH N2°W ALG E LINE OF SEC 2 & C/L KENSINGTON RD, 286.38 FT, TH 586°W 330.33 FT, TH ALG ARC L 696.25 FT CHD BRG S58°W 667.9 FT, TH S30°W 240.66 FT TO POB TH S30°W 134.34 FT, TH ALG ARC	1090.38				

**HIGHLIGHTED
PROPERTIES
APPROVED SAD**

Emerson Drive Road Paving
SAD 2018

Units	Parcel #	Property Address	Owner's Name/Mailing Address	Legal Description	Front Footage	Assessment	1st Signature	2nd Signature	Property Counted
			BRIGHTON, MI 48116	R 427.61 FT, RAD 700 FT CHD BRG S47*W 420.99 FT, TH S65*W 528.46 FT, TH N2*W 825.25 FT TO N LINE OF SEC 11, TH N87*E 616.88 FT ALG SD N LINE, TH N87*E ALG SD N LINE, 616.88 FT, TH S50*E 362.23 FT TO POB 11.74 AC SPLIT 12/88 FROM 004 & 005					
1	4716-02-401-002	12781 EMERSON DR	PILOT PARTNERS LLC 273 ASH COURT SOUTH LYON, MI 48178	SEC 2 T1N R6E GREEN OAK GROUP CONDOMINIUM UNIT 2 LIBER 1385 PAGE 0183	0				
1	4716-02-401-001	12785 EMERSON DR	EXCELDA MANUFACTURING CO 12785 EMERSON BRIGHTON, MI 48116	SEC 2 T1N R6E GREEN OAK GROUP CONDOMINIUM UNIT 1 LIBER 1385 PAGE 0183	564.62				
1	4716-11-200-019	12800 EMERSON DR	COTTONWOOD RESORT, LLC 11818 L STREET OMAHA, NE 68137	SEC 11 & 2 T1N R6E COM SE COR SEC 2, TH N2*W 286.38 FT & S89*W 330.33 FT TO POB TH S3*E 983 FT, TH N86*W 355.1 FT, TH N57*W 537.18 FT, TH N30*E 375 FT, TH NE'LY ALG ARC R CHD BRG N58*E 667.9 FT TO POB 12.24 AC #8A SPLIT 1/89 FROM 009	667.90				
1	4716-02-400-018	12839 EMERSON DR	LAMAR PROPERTIES LLC 12785 EMERSON DRIVE BRIGHTON, MI 48116	SEC 2 T1N, R6E COMM SE COR OF SEC, TH N 02*56'41" W 286.38 FT, TH S 86*59'20" W 330 FT TO POB, TH W ON AN ARC LEFT 377.11 FT, TH N 33*52'41" W 439.38 FT TH N 66*17'06" E 624.91 FT TH S 03*00'40" E. 493.93 FT TO POB. CONT 5.01 ACRES 8/96 SPLIT FROM 16-02-400-016.	372.36				
1	4716-11-201-002	12877 EMERSON DR	SPORT TECH CORPORATION 12264 BOULDER PASS MILFORD, MI 48380	SEC 11 T1N R6E TROUT LAKE RESEARCH & INDUSTRIAL PARK COMDOMINIUM UNIT 2 LIBER 1393 PAGE 0728	270.66				
1	4716-11-201-009	6964 KENSINGTON RD	PHILIP GLEBE P.O. BOX 530 HARTLAND, MI 48353	SEC 11 T1N, R6E, TROUT LAKE RESEARCH & INDUSTRIAL PARK CONDOMINIUM UNITS 3 & 4 COMBINED 3/96	250.26				
16					6154.01				
	cost per front foot		77.91						



GREEN OAK CHARTER TOWNSHIP
10001 SILVER LAKE ROAD, BRIGHTON, MI 48116
PHONE: 810-231-1333 • FAX 810-231-5080

Supervisor's Department

PA 188 of 1954 Proceedings

CERTIFICATE

To the Clerk and Township Board
Green Oak Charter Township
Livingston County, Michigan

Re: Emerson Drive S.A.D. Repair & Improvements

Dear Officials,

This is to certify that I, Robert C. Brandmier, Assessor of Green Oak Charter Township, Livingston County, Michigan, have checked the attached petition's for Repairing and Improving Emerson Drive Road Improvement District to;

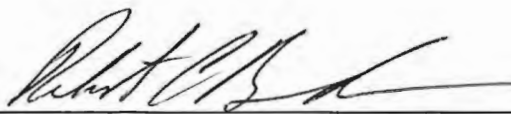
Pulverize/Reconstruct existing road. Install 3.5" 3C asphalt leveling coarse with 2" 13A wearing asphalt coarse. Isolated concrete curb & gutter and miscellaneous work. Estimated cost of the project is \$773,800.00 which includes increased assessment to parcel 4716-11-200-026 of \$120,000 and 4716-02-401-001 of \$30,000 and 4716-02-400-018 of \$30,000. Estimated per foot price is \$92.21 over a 15-year assessment.

And I do hereby certify that said petitions have been signed by the record owners of 91.54% (percent) of the front foot parcels within the boundaries as described upon the petition.

I further certify that the total front foot parcels within the district equals 6,154.01 front feet. The total front foot parcels signed for by the record owners within the proposed district equals 5,633.09 front feet.

I do hereby certify that the assessment roll and all assessment records have been verified with the records of the Assessor of Green Oak Charter Township as to the record owners of all property within Green Oak Charter Township and within the area set forth in said petition on the day of filing petition.

Respectfully submitted,


Robert C. Brandmier
Assessor, Green Oak Charter Township

Date 4-29-2021

LOCAL PROPOSAL PETITION – SPECIAL ASSESSMENT DISTRICT

We, the undersigned record owners of more than sixty percent (60%) of the total front footage area within the proposed district and frontage on the road listed below, in the Township of Green Oak, in the County of Livingston, State of Michigan, respectively petition for: Road improvements to Emerson Drive, GREEN OAK TOWNSHIP, LIVINGSTON COUNTY including the following: Pulverize/Reconstruct existing road. Install 3.5" 3C asphalt leveling coarse with 2" 13A wearing asphalt coarse. Isolated concrete curb & gutter and miscellaneous work. **Estimated cost of the project is \$773,800.00 which includes increased assessment to parcel 4716-11-200-026 of \$120,000 and 4716-02-401-001 of \$30,000 and 4716-02-400-018 of \$30,000. Estimated per foot price is \$92.21 over a 15-year assessment.**

WE UNDERSTAND THAT THE IMPROVEMENTS SHALL BE CONDUCTED IN ACCORDANCE WITH PLANS FOR THE SAME TO BE PREPARED, REVIEWED AND APPROVED BY THE TOWNSHIP BOARD, AND THAT THE COSTS THEREOF, INCLUDING EXPENSES CONNECTED WITH ENGINEERING AND LEGAL COSTS, WILL BE ASSESSED AGAINST EACH PARCEL OF LAND WITHIN SAID PROPOSED DISTRICT AND MAY BE DIVIDED INTO EQUAL ANNUAL INSTALLMENTS FOR A PERIOD OF TEN (10) YEARS, ALL IN ACCORDANCE WITH P.A. 188 OF 1954, MCL 41.721, ET. SEQ.

WARNING - A PERSON WHO KNOWINGLY SIGNS THIS PETITION MORE THAN ONCE, SIGNS A NAME OTHER THAN HIS OR HER OWN, SIGNS WHEN NOT QUALIFIED, OR SETS OPPOSITE HIS OR HER SIGNATURE ON A PETITION, A DATE OTHER THAN THE ACTUAL DATE THE SIGNATURE WAS AFFIXED, IS VIOLATING THE PROVISIONS OF MICHIGAN LAW.

SIGNATURE	PRINTED NAME	STREET ADDRESS OR RURAL ROUTE	POST OFFICE	DATE OF SIGNING		
				MONTH	DAY	YEAR
	Thomas M Bloom	12238 Emerson Dr	Brighton MI 48116	4	21	2021
	Thomas M Bloom	12238 Emerson Dr	Brighton MI 48116	4	21	2021
	ROBERT G. GAINES	7081 DAN McGUIRE DR.	BRIGHTON MI. 48116	4	21	2021
	THOMAS NIEBAUER	12591 EMERSON DR.	Brighton MI 48116	4	21	2021
	THOMAS NIEBAUER	12591 EMERSON DR	Brighton MI 48116	4	21	2021
	Michael LaMarra	12839 Emerson Dr.	Brighton MI 48116	4	26	2021
	Michael LaMarra	12785 Emerson Dr.	Brighton MI 48116	4	23	2021
	TROY TOUCHETTE	12800 Emerson DR	Brighton MI 48116	4	27	2021
	Kevin Brown	12264 Emerson DR	Brighton MI 48116	4	23	2021
	Anthony Allan	12534 Emerson Dr	Brighton MI 48116	4	23	2021
	Todd Bruhn	12300 Emerson Dr	Brighton MI 48116	4	26	2021
	Mehal Shah	12336 Emerson Dr	Brighton MI 48116	4	26	2021

CERTIFICATE OF CIRCULATOR

The undersigned circulator of the above petition asserts that he or she is qualified to circulate this petition and that each signature on the petition was signed in his or her presence; and that, to his or her best knowledge and belief, each signature is the genuine signature of the person purporting to sign the petition, the person signing the petition was at the time of signing a qualified real property owner/resident of Green Oak Township, and was qualified to sign the petition.

WARNING - A CIRCULATOR KNOWINGLY MAKING A FALSE STATEMENT IN THE ABOVE CERTIFICATE, A PERSON NOT A CIRCULATOR WHO SIGNS AS A CIRCULATOR, OR A PERSON WHO SIGNS A NAME OTHER THAN HIS OR HER OWN AS CIRCULATOR IS GUILTY OF A MISDEMEANOR.

CIRCULATOR - DO NOT SIGN OR DATE

CERTIFICATE UNTIL AFTER CIRCULATING PETITION

(Signature of Circulator) _____

Thomas M Bloom

(Printed Name of Circulator) _____

GREEN OAK TOWNSHIP

(City, Township or Village Where Registered) _____

12238 Emerson Dr.

Complete Address (Street and Number or Rural Route) _____

Brighton MI, 48116

(Post Office) _____

4, 27, 2021

(Date)

NOTICE



This form is following Michigan Election Law, MCL 168.488. Before using this form, it is strongly advised that you review the provisions of Michigan Law, which grant you the right to place your proposal on the ballot through a petitioning process to determine if any additional petition formatting requirements are specified. If additional requirements are specified under the governing statutes, this form cannot be used.

LOCAL PROPOSAL PETITION – SPECIAL ASSESSMENT DISTRICT

We, the undersigned record owners of more than sixty percent (60%) of the total front footage area within the proposed district and frontage on the road listed below, in the Township of Green Oak, in the County of Livingston, State of Michigan, respectively petition for: Road improvements to Emerson Drive, GREEN OAK TOWNSHIP, LIVINGSTON COUNTY including the following: Pulverize/Reconstruct existing road. Install 3.5" 3C asphalt leveling coarse with 2" 13A wearing asphalt coarse. Isolated concrete curb & gutter and miscellaneous work. **Estimated cost of the project is \$773,800.00 which includes increased assessment to parcel 4716-11-200-026 of \$120,000 and 4716-02-401-001 of \$30,000 and 4716-02-400-018 of \$30,000. Estimated per foot price is \$92.21 over a 15-year assessment.**

WE UNDERSTAND THAT THE IMPROVEMENTS SHALL BE CONDUCTED IN ACCORDANCE WITH PLANS FOR THE SAME TO BE PREPARED, REVIEWED AND APPROVED BY THE TOWNSHIP BOARD, AND THAT THE COSTS THEREOF, INCLUDING EXPENSES CONNECTED WITH ENGINEERING AND LEGAL COSTS, WILL BE ASSESSED AGAINST EACH PARCEL OF LAND WITHIN SAID PROPOSED DISTRICT AND MAY BE DIVIDED INTO EQUAL ANNUAL INSTALLMENTS FOR A PERIOD OF TEN (10) YEARS, ALL IN ACCORDANCE WITH P.A. 188 OF 1954, MCL 41.721, ET. SEQ.

WARNING - A PERSON WHO KNOWINGLY SIGNS THIS PETITION MORE THAN ONCE, SIGNS A NAME OTHER THAN HIS OR HER OWN, SIGNS WHEN NOT QUALIFIED, OR SETS OPPOSITE HIS OR HER SIGNATURE ON A PETITION, A DATE OTHER THAN THE ACTUAL DATE THE SIGNATURE WAS AFFIXED, IS VIOLATING THE PROVISIONS OF MICHIGAN LAW.

SIGNATURE	PRINTED NAME	STREET ADDRESS OR RURAL ROUTE	POST OFFICE	DATE OF SIGNING		
				MONTH	DAY	YEAR
1. 	Gilbert G. Aleman Jr	12424 Emerson Dr.	Brighton MI 48116	04	27	2021
2. 	MATTHEW SCHULTZ	12482 EMERSON DR	Brighton mi. 48116	4	27	2021
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						

CERTIFICATE OF CIRCULATOR

The undersigned circulator of the above petition asserts that he or she is qualified to circulate this petition and that each signature on the petition was signed in his or her presence; and that, to his or her best knowledge and belief, each signature is the genuine signature of the person purporting to sign the petition, the person signing the petition was at the time of signing a qualified real property owner/resident of Green Oak Township, and was qualified to sign the petition.

WARNING - A CIRCULATOR KNOWINGLY MAKING A FALSE STATEMENT IN THE ABOVE CERTIFICATE, A PERSON NOT A CIRCULATOR WHO SIGNS AS A CIRCULATOR, OR A PERSON WHO SIGNS A NAME OTHER THAN HIS OR HER OWN AS CIRCULATOR IS GUILTY OF A MISDEMEANOR.

CIRCULATOR - DO NOT SIGN OR DATE CERTIFICATE UNTIL AFTER CIRCULATING PETITION

(Signature of Circulator)

THOMAS M. BLOOM

(Printed Name of Circulator)

GREEN OAK TOWNSHIP

(City, Township or Village Where Registered)

12238 EMERSON DR

Complete Address (Street and Number or Rural Route)

4, 27, 2021

(Date)

BRIGHTON MI 48116

(Post Office)

NOTICE

This form is following Michigan Election Law, MCL 168.488. Before using this form, it is strongly advised that you review the provisions of Michigan Law, which grant you the right to place your proposal on the ballot through a petitioning process to determine if any additional petition formatting requirements are specified. If additional requirements are specified under the governing statutes, this form cannot be used.

READ BEFORE CIRCULATING PETITION

The validity of signatures placed on this petition may be affected if the following is not observed.

Complete the heading of the petition before circulating it.

- Enter an appropriate description of your proposal.

Make sure that all signers properly complete the petition.

- Each signer must be the legal property owner of record of the properties listed in the heading.
- Each signer must sign and print his or her first and last name*.
- Each signer must enter his or her full address. A rural route number is acceptable. A post office box is not acceptable.
- Each signer must enter his or her post office. A signer's post office is the community's name that appears in the signer's mailing address.
- Each signer must date his or her signature with the month, day, and year.
- Each property of a parcel must sign the petition for the property to be counted in the affirmative.

Complete the circulator's certificate after circulating the petition.

- Sign and print your full name and enter the month, day, and year*. Signatures on the petition which are dated after the date on the circulator's certificate are invalid.
- Enter the name of the city, township, or village where you are registered.
- Enter your full address. A rural route number is acceptable. A post office box is not acceptable.
- Enter your post office. Your post office is the community's name that appears in your mailing address.

Circulate the petition properly.

- Do not fail to question signers on their jurisdiction of registration.
- Do not complete the heading of the petition after signatures have been affixed on the petition.
- Do not leave the petition unattended.

* **Failure of the circulator or an elector who signs the petition to print his or her name or to print his or her name in the proper location does not affect the validity of the circulator or signer's signature. However, a printed name located in the space designated for printed names does not constitute the signature of the circulator or elector.**

Notice

This form is following Michigan Election Law, MCL 168.488. Before using this form, it is strongly advised that you review the provisions of Michigan Law which

grant you the right to place your proposal on the ballot through a petitioning process to determine if any additional petition formatting requirements are specified. If additional requirements are specified under the governing statutes, this form cannot be used.

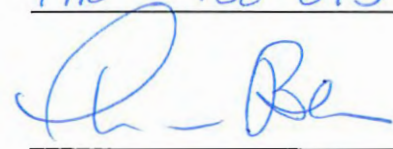
CORPORATE AUTHORIZATION

I, Thomas M Bloom, being the member of KX INVESTMENT LLC, pursuant to the resolution of its Board of Directors am authorized on behalf of the corporation to sign the attached Local Proposal Petition - Special Assessment District - for Road improvements to Emerson Drive located in Green Oak Township, Livingston County, Michigan.

Tax I.D.

4716-11-100-014

4716-11-100-013



Signature

4/21/2021

Date

CORPORATE AUTHORIZATION

I, ROBERT G. GAINES, being the MANAGER of LOMIC INVESTMENTS LLC, pursuant to the resolution of its Board of Directors am authorized on behalf of the corporation to sign the attached Local Proposal Petition - Special Assessment District - for Road improvements to Emerson Drive located in Green Oak Township, Livingston County, Michigan.

Tax I.D.

4716-11-200-023

Robert G. Gaines

Signature

4.21.21

Date


Linae 3
Pg 1

CORPORATE AUTHORIZATION

THOMAS NIBBANE
I, UNILOCK, being the General Mgr of UNILOCK MI, INC.,
pursuant to the resolution of its Board of Directors am authorized on behalf of the
corporation to sign the attached Local Proposal Petition - Special Assessment District -
for Road improvements to Emerson Drive located in Green Oak Township, Livingston
County, Michigan.

Tax I.D.

4716-11-200-026



Signature

4-21-21

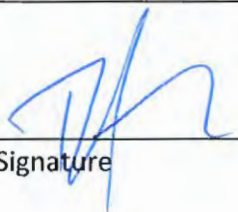
Date

CORPORATE AUTHORIZATION

I, THOMAS NIEZAWA, being the General Mgr of BD BRYANT, pursuant to the resolution of its Board of Directors am authorized on behalf of the corporation to sign the attached Local Proposal Petition - Special Assessment District - for Road improvements to Emerson Drive located in Green Oak Township, Livingston County, Michigan.

Tax I.D.

4716 - 11 - 200 - 018


Signature

4-21-21
Date

CORPORATE AUTHORIZATION

I, Michael LaMurra being the authorized member of Lamar Properties, LLC pursuant to the resolution of its Board of Directors am authorized on behalf of the corporation to sign the attached Local Proposal Petition - Special Assessment District - for Road improvements to Emerson Drive located in Green Oak Township, Livingston County, Michigan.

Tax I.D.

4716 - 02-400-018


Signature

4-26-21
Date

CORPORATE AUTHORIZATION

Excelda Manufacturing Co.

I, Michael Lakana, being the member of MNOW Investments, LLC pursuant to the resolution of its Board of Directors am authorized on behalf of the corporation to sign the attached Local Proposal Petition - Special Assessment District - for Road improvements to Emerson Drive located in Green Oak Township, Livingston County, Michigan.

Tax I.D.

4716-02-401-001


Signature

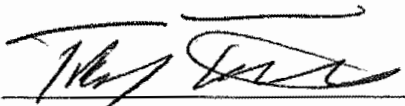
4-22-21
Date

CORPORATE AUTHORIZATION

I, Troy Touchette, being the Authorized Member of Cottonwood Resorts, pursuant to the resolution of its Board of Directors am authorized on behalf of the corporation to sign the attached Local Proposal Petition - Special Assessment District - for Road improvements to Emerson Drive located in Green Oak Township, Livingston County, Michigan.

Tax I.D.

4716-11-200-019


Signature

4-22-21
Date

CORPORATE AUTHORIZATION

I, Kevin Brown being the owner of Motorcity Truck collision pursuant to the resolution of its Board of Directors am authorized on behalf of the corporation to sign the attached Local Proposal Petition - Special Assessment District - for Road improvements to Emerson Drive located in Green Oak Township, Livingston County, Michigan.

Tax I.D.

4716-11-100-012

Kevin Brown

Signature

4/23/2021

Date

Page 1
4/23/21

CORPORATE AUTHORIZATION

I, Anthony Milov, being the OWNER of Jaw of Michigan, LLC
pursuant to the resolution of its Board of Directors am authorized on behalf of the
corporation to sign the attached Local Proposal Petition - Special Assessment District -
for Road improvements to Emerson Drive located in Green Oak Township, Livingston
County, Michigan.

Tax I.D.

4716 - 11-200-008



Signature

4/21/2021

Date

CORPORATE AUTHORIZATION

I, J. Todd Bruhn, being the member of TJ Emerson LLC, pursuant to the resolution of its Board of Directors am authorized on behalf of the corporation to sign the attached Local Proposal Petition - Special Assessment District - for Road improvements to Emerson Drive located in Green Oak Township, Livingston County, Michigan.

Tax I.D.

4716-11-100-011



Signature

4/26/2021

Date

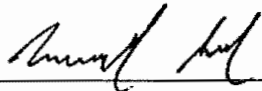
Handwritten initials and text:
AJ
11-100-011

CORPORATE AUTHORIZATION

I, Mehul Shah, being the Owner of 4 M Warehousing LLC pursuant to the resolution of its Board of Directors am authorized on behalf of the corporation to sign the attached Local Proposal Petition - Special Assessment District - for Road improvements to Emerson Drive located in Green Oak Township, Livingston County, Michigan.

Tax I.D.

4716-11-200-006


Signature

4-26-20
Date

CORPORATE AUTHORIZATION

I, GILBERT G. ALONSO being the Member of DDM,
pursuant to the resolution of its Board of Directors am authorized on behalf of the
corporation to sign the attached Local Proposal Petition - Special Assessment District -
for Road improvements to Emerson Drive located in Green Oak Township, Livingston
County, Michigan.

Tax I.D.

4716-11200-022

Gilbert G. Alonso
Signature


4/27/2021
Date

CORPORATE AUTHORIZATION

I, MATTHEW SCHULTZ, being the AUTHORIZED ^{member} of MJD EMERSON GROUP LLC, pursuant to the resolution of its Board of Directors am authorized on behalf of the corporation to sign the attached Local Proposal Petition - Special Assessment District - for Road improvements to Emerson Drive located in Green Oak Township, Livingston County, Michigan.

Tax I.D.

4716-11-200-021


Signature

4-27-21
Date

GREEN OAK CHARTER TOWNSHIP
LIVINGSTON COUNTY, MICHIGAN

NOTICE OF HEARING

Emerson Drive Road Improvements

NOTICE IS HEREBY GIVEN:

1. The Township Board has received petitions signed by the record owners of land whose land constitutes 91.54% of the total frontage upon Emerson Drive in the hereinafter described Emerson Drive Road Improvements Special Assessment District for the purposes of making the hereinafter described improvements and assessing the cost of the improvements to the Emerson Drive Road Improvements Special Assessment District.

2. The Township Board has tentatively declared its intention to make the following improvements in Green Oak Charter Township:

Emerson Drive Road Improvements

The improvements consist of the acquisition, construction and installation of road improvements to Emerson Drive, including, without limitation, pulverizing and reconstructing existing road, installing paving and related materials, installing curbs and gutters and related, ancillary and appurtenant facilities in Green Oak Charter Township, Livingston County, Michigan.

and to assess the cost of such improvements to the lands that will be especially benefitted thereby. The estimated cost of the improvements, the amount to be specially assessed, the amount to be a general obligation of the Green Oak Charter Township and the special assessment district are as follows:

ESTIMATED COST	\$781,538.00
AMOUNT TO BE ASSESSED AGAINST LANDS IN THE SPECIAL ASSESSMENT DISTRICT	\$781,538.00
AMOUNT TO BE A GENERAL OBLIGATION OF THE GREEN OAK CHARTER TOWNSHIP	-0-

DESCRIPTION OF SPECIAL ASSESSMENT DISTRICT

The special assessment district shall consist of the following parcels, located along Emerson Drive in Green Oak Charter Township, Livingston County, Michigan, having the following tax identification numbers:

4716-11-100-014
4716-11-100-013
4716-11-100-012
4716-11-100-011
4716-11-200-006
4716-11-200-022
4716-11-200-021
4716-11-200-008
4716-11-200-026
4716-11-200-018
4716-02-401-001
4716-11-200-019
4716-02-400-018
4716-11-201-002
4716-11-201-009

3. The petitions, maps showing the location of the improvements and the special assessment district, plans, specifications and a cost estimate for the improvements are on file with the Township Clerk for public examination.

4. The Township Board will meet electronically on Wednesday, the 16th day of June, 2021, via ZOOM meetings at **1-312 626-6799 US (Chicago) or 1-888-788-0099 US Toll-free, Meeting ID: 838-0193-4492**, at 7 p.m., prevailing Eastern Time, to hear and consider any objections that may be submitted by any interested person with respect to the petitions, the making of the improvements and the assessing of part of the cost thereof to the aforesaid special assessment district.

5. If the Township Board approves the petitions and the making of the improvements, a special assessment may be levied against properties that benefit from the improvements. Act 186 of the Public Acts of Michigan, 1973, as amended, provides that the special assessment must be protested at the hearing held for the purpose of confirming the special assessment roll before the Michigan Tax Tribunal may acquire jurisdiction of any dispute involving the special assessment. The hearing for the purpose of confirming the special

assessment roll will be held, if at all, at some time in the future pursuant to notice given as required by law. Appearance and protest at such hearing is required in order to appeal the amount of the special assessment to the Michigan Tax Tribunal. An owner of or party in interest in property to be assessed, or his or her agent, may appear in person to protest the special assessment, or may protest the special assessment by letter filed with the Township Clerk at or prior to the time of the hearing, in which case appearance in person is not required.

THIS NOTICE IS GIVEN by order of the Township Board.

Michael H. Sedlak, CMC
Green Oak Charter Township Clerk

**GREEN OAK CHARTER TOWNSHIP
ORDINANCE NUMBER 01-2021**

**AN ORDINANCE TO AMEND CHAPTER 38, ZONING, SECTION 38-363,
TREE AND WOODLANDS PROTECTION AND PRESERVATION, IN ITS
ENTIRETY, AND TO PROVIDE PENALITIES OR VIOLATIONS THEREOF.**

GREEN OAK CHARTER TOWNSHIP ORDAINS:

Section 1. Amendment of Chapter 38

Chapter 38, Zoning, Section 38-363, Tree and Woodlands Protection and Preservation, shall be amended in its entirety to now read as follows:

Sec. 38-363. Tree and Woodlands protection and preservation.

- (a) *Intent and Purpose.* It is the purpose of this section to protect trees and woodlands within the Township and preserve the economic, health, aesthetic and environmental values associated with trees. Regulation of the removal of tree resources will help protect and preserve an important natural feature of the Township for the benefit of present and future generations, and for the future well-being of the public health, Township character, and the natural environment. The provisions of this section are also intended to prohibit clear-cutting of woodland areas within the Township.

The Township finds that rapid growth, the spread of development, and increasing demands upon natural resources have had the effect of encroaching upon, despoiling, or eliminating many of the trees and natural resources and processes associated therewith which, if preserved and maintained in an undisturbed and natural condition, constitute important physical, aesthetic, recreation and economic assets to existing and future residents of the Township. Specifically, the Township finds that:

- (1) Woodland growth protects public health through the absorption of air pollutants and contamination, through buffering in the reduction of excessive noise, wind, storms and visual screening, and through its cooling effect in the summer months;
- (2) Woodlands provide for public safety through the prevention of erosion, siltation, and flooding;
- (3) Trees and woodland growth are an essential component of the general welfare of the Township by maintaining natural beauty, recreation, and heritage for existing and future Township residents;
- (4) Woodlands provide habitats for a wide array of species and ecological systems;
- (5) Woodlands retain rainfall and snow melt, helping to moderate hydrological systems;

- (6) Woodlands sequester carbon and provide high-quality aesthetic and quality of life benefits;
- (7) The protection of such natural resources is a matter of paramount public concern, as provided by Article IV, Section 52 of the Constitution of 1963, and the Natural Resources and Environmental Protection Act of 1994, Act No. 451 of the Public Acts of Michigan of 1994 (MCL 324.101 et seq.), as amended.

Therefore, this chapter is intended to:

- (1) Provide for the protection, preservation, replacement, proper maintenance and use of trees and woodlands located in the Township in order to minimize disturbance to them and to prevent damage from erosion and siltation, loss of wildlife and vegetation, and/or destruction of the natural habitat. In this regard, it is the intent of this chapter to protect the integrity of woodland areas as a whole, in recognition that woodlands serve as part of an ecosystem, and to place priority on the preservation of woodlands, trees, similar woody vegetation, and related natural resources over development when there are no location alternatives;
 - (2) Protect the woodlands of the Township for their economic support of local property values when allowed to remain uncleared and/or unharvested and for their natural beauty, wilderness character and geological, ecological, or historical significance; and
 - (3) Provide for the paramount public concern for these natural resources in the interest of health, safety and general welfare of the residents of the Township.
- (b) **Applicability.** This section shall apply to all land within the Township.
- (c) **Definitions.** The following words, terms and phrases, when used in this chapter, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:
- (1) **Agricultural activity** means the production of plants and animals useful to humans, including forages and sod crops, feed crops, field crops; dairy and dairy products; poultry and poultry products; livestock, including breeding and grazing of cattle, swine, captive cervidae, and similar animals; berries; herbs; flowers; seeds; grasses; nursery stock; fruits; vegetables; Christmas trees; and other similar uses and activities. Agricultural activity includes use in a federal acreage set-aside program or a federal conservation reserve program. Agricultural activity does not include the management and harvesting of a woodlot.
 - (2) **American National Standards Institute** means the most current version of A300, the industry consensus of performance standards for the care, pruning, and protection of trees.
 - (3) **Bona fide farming** means the undertaking of good faith agricultural activity on a farm located in the RF, residential farming district, or RE, rural residential estates

district, in the Township, or on a farm established in conformance with the Right to Farm Act.

- (4) **Commercial nursery, certified tree farm** means a licensed plant or tree nursery or farm in relation to those trees planted and growing on the premises of the licensee, which are planted and growing for sale or intended sale to the general public in the ordinary course of the licensee's business.
- (5) **Critical root zone (CRZ)** means a circular area around a tree with a radius measured to the tree's longest dripline radius plus one (1) foot.
- (6) **Damaged tree** means a tree that is injured so that it is not a viable tree or may cause harm. Any tree with greater than seventy-five (75) percent of its canopy intact shall be considered viable and healthy. This determination shall be made during the regular growing season.
- (7) **Dead tree** means a tree having no more than zero (0) to fifteen (15) percent of the canopy with leaves. This determination shall be made during the regular growing season.
- (8) **Diameter breast height (DBH)** means the diameter in inches of a tree measured at four and one-half (4½) feet above the existing grade.
- (9) **Diseased tree** means a tree that has been determined to have a terminal disease such as, but not limited to, Dutch Elm disease or Oak Wilt.
- (10) **Groundcover** means low-growing shrubs, woody vegetation, wildflowers and other small herbaceous plants within a woodland area.
- (11) **Invasive Plant Species** means any non-native (or alien) to the ecosystem under consideration; and whose introduction causes or is likely to cause economic or environmental harm or harm to human health as identified in the Table of Invasive Plant Species in Section 38-363.(I)
- (12) **Land clearing** means those operations where trees and vegetation are removed and which occur previous to construction of a building, e.g., road right-of-way excavation and paving, lake and drainage system excavation, utility excavation, grubbing, and any other clearing operations.
- (13) **Landmark Tree** means a tree that is distinctive because of its age, size, type or historical significance and includes: (a) any tree (except an invasive species) with a DBH of twenty-four (24) inches or larger; or (b) any tree that has attained the associated DBH on the Table for Landmark trees contained in Section 38-363.(f).
- (14) **Protected tree** means all trees 8" DBH or greater, including but not limited to those defined as landmark trees, and excluding species specifically identified as invasive in Section 38-363.(I)

- (15) **Remove, removal** includes the cutting of trees by whatever method, on any lands subject to this chapter.
- (16) **Transplant** means the digging up by a property owner of a tree from one place on a property and the planting of the same tree in another place on the same property.
- (17) **Tree** means a woody plant with an erect perennial trunk, which at maturity is thirteen (13) feet or more in height and which has a more or less definite crown of foliage.
- (d) **Exemptions.** The following exemptions shall apply to this section unless otherwise prohibited by statute or other ordinances:
- (1) **Residential parcels.** Notwithstanding the provisions of this chapter, removal or transplantation of trees necessary for the construction of a single-family home or accessory structures is permitted on residential parcels, provided the parcel supports only one (1) dwelling and permitted residential accessory uses, and provided that the parcel is not part of a site plan, plat, or site condominium being reviewed or anticipated for review under subsection (b) of this section. Invasive species as identified in the Table of Invasive Plant Species in Section 38-363.(I) or Problem Native Plant Species as listed in Table of Problem Native Plant Species in Section 38-363.(m) may be removed without mitigation. A tree that is a component of a landscape plan required through township approval which is removed for any reason shall be replaced in compliance with that plan using a tree selected from the approved planting list.
- (2) **Property Maintenance.** This section shall not prohibit tree removal or other activities where such actions were made necessary by a genuine emergency, such as a tornado, windstorm, flood, freeze, dangerous insect infestation or disease, or other natural or manmade disaster, in order to prevent injury or damage to persons or property, or to restore order. Property maintenance shall also include preventative actions necessary to protect against property damage due to conditions where the tree has grown in a manner that negatively impacts, for example, a structure, parking area, septic field, or utilities.
- (3) **Dead or damaged trees.** This section shall not prohibit the removal or trimming of dead, diseased, infested, or damaged trees, where the damage resulted from an accident or natural cause.
- (4) **Public utilities.** This section shall not prohibit the construction of, repair of, or maintenance work required for public utilities, which necessitate the trimming or

cutting of trees. This exemption shall not include work performed by a developer/landowner for a new development project.

- (5) ***Agricultural Activity, Bonafide Farming, Commercial Nursery, and Tree Farm uses.*** This section shall not prohibit the removal or transplanting of trees occurring during the use of the land for [agriculture](#) or bonafide farming purposes. The operation of a commercial nursery or certified tree farm is also exempt, but only if, the commercial nursery or certified tree farm has been licensed with the state and has received all other necessary licenses and permits.
 - (6) ***Woodlands management.*** Thinning, selective clearing, and trimming of trees shall be exempt from the requirements of this section, if conducted in accordance with the industry standards established by the American National Standards Institute. A permit for woodland management shall be required to engage in such activities. Through the application for a woodland management permit, the applicant must demonstrate that the proposed tree removal will promote the overall health of the woodland. Woodlands management activities shall not include clear cutting the site, which is specifically prohibited.
- (e) ***Tree inventory.*** A [tree](#) inventory shall be required for all lands, parcels, and projects to which this section applies. The tree inventory need not include any section of a site that will not be disturbed. The tree inventory shall include the following information:
- (1) An inventory indicating the location of all existing [trees](#) that are eight (8) inches in diameter at DBH or more, including all trees to be affected by the development. All such trees proposed to remain, be relocated, or be removed shall be so designated. Clearing limits shall be clearly shown on the inventory. The inventory shall be accompanied by a separate key, identifying the number of trees by size, common name, and condition.
 - (2) [Tree](#) location inventories are to be performed by actual field survey by a registered land surveyor, registered landscape architect, or certified arborist or forester. Professionals must verify the contents by seal or signature, whichever is applicable.
 - (3) If existing trees are to be relocated, the proposed location for such trees, together with a statement of how such trees are to be protected and/or stored during land clearance and construction, and how the trees are to be maintained after construction.
 - (4) A statement showing how trees to remain are to be protected during land clearance and construction, and on a permanent basis, including protection of the

CRZ and the proposed use of tree wells, protective barriers, tunneling, or retaining walls.

(f) **Landmark trees.**

Landmark trees. Specific landmark trees are identified in the following table:

<i>Common Name</i>	<i>Latin Name</i>	<i>Size** (inches)</i>
<i>Firs</i>	<i>Abies spp.</i>	18
<i>Maple</i>	<i>Acer spp. (excl. negundo, saccharinum)</i>	18
<i>Buckeye (horsechestnut)</i>	<i>Aesculus spp.</i>	18
<i>Serviceberry</i>	<i>Amelanchier spp.</i>	8
<i>Birch</i>	<i>Betula spp.</i>	18
<i>American hornbeam</i>	<i>Carpinus caroliniana</i>	8
<i>Hickory</i>	<i>Carya spp.</i>	18
<i>American chestnut</i>	<i>Castanea dentata</i>	8
<i>American beech</i>	<i>Fagus grandifolia</i>	18
<i>Ginkgo</i>	<i>Ginkgo biloba</i>	18
<i>Honey Locust</i>	<i>Gleditsia triacanthos</i>	24
<i>Kentucky coffee tree</i>	<i>Gymnocladus dioicus</i>	18
<i>Witch hazel</i>	<i>Hamamelis virginiana</i>	8
<i>Hawthorne (cultivars)</i>	<i>Crataegus spp.</i>	12
<i>Black and white walnut</i>	<i>Juglans nigra, J. cinerea</i>	20
<i>Cedar, red</i>	<i>Juniperus virginiana</i>	12
<i>Larch/tamarck</i>	<i>Larix laricina (eastern)</i>	12
<i>Sweet Gum</i>	<i>Liquidambar styraciflua</i>	18

<i>Tulip tree / Yellow poplar</i>	<i>Liriodendron tulipifera</i>	18
<i>Crabapple (cultivars)</i>	<i>Malus spp.</i>	12
<i>Black tupelo</i>	<i>Nyssa sylvatica</i>	12
<i>American hornbeam</i>	<i>Ostrya virginiana</i>	8
<i>Spruce</i>	<i>Picea spp.</i>	18
<i>London plane / Sycamore</i>	<i>Platanus spp.</i>	18
<i>Wild cherry</i>	<i>Prunus spp. (excl. avium, mahaleb, subhirtella)</i>	18
<i>Douglas fir</i>	<i>Pseudotsuga menziesii</i>	18
<i>Oak</i>	<i>Quercus spp.</i>	24
<i>Sassafras</i>	<i>Sassafras albidum</i>	15
<i>Arborvitae, White cedar</i>	<i>Thuja occidentalis</i>	18
<i>American basswood / Linden / Lime Tree</i>	<i>Tilia americana</i>	24
<i>Eastern hemlock</i>	<i>Tsuga canadensis</i>	12
<i>Hybrid elms (Dutch elm disease resistant cultivars)</i>	<i>Ulmus e.g. Accolade, Commendation, Frontier, etc.</i>	18

* *The landmark tree list includes the species that are prevalent in this area. Size designations take into consideration the potential longevity of the tree so that protected trees may still have years to grow.*

** *Size = dbh (diameter at breast height when measured 4 ½ feet above the existing grade).*

- (g) ***Trees to be removed/protected.*** Developments that are subject to the tree and woodlands preservation regulations of this section shall indicate all trees proposed to be removed and preserved on the provided tree inventory. The trees designated for protection shall be properly protected from damage due to construction operations and

development. Prior to commencement of development or construction operations, land clearing, filling, or any land alteration, a developer must erect and maintain suitable protective barriers around the CRZ to protect trees designated to remain under the submitted plan, including maintaining the CRZ free of any solvents, material, construction machinery, or added soil. The protective barriers around the CRZ shall be required for all trees designated to remain in place by the submitted plan.

(h) ***Development of land parcels.*** Except for the exemptions listed in subsection (d) of this section, no person shall remove, cause to be removed, transplant, or destroy, on any land in the Township to which this chapter applies, any tree having a eight (8) inch or greater dbh, without first obtaining approval subject to the provisions of this section. Protected trees shall be mitigated or replaced in accordance with the provisions of this section.

(i) ***Tree mitigation and replacement.***

(1) ***Requirement.*** For each protected tree required to be preserved under the terms and standards set forth in this section, and which is permitted to be removed under this section, the applicant shall replace or relocate trees according to the replacement tree requirements set forth in subsection (i)(2) of this section.

(2) ***Specifications.***

(i) Replacement trees shall have shade potential and/or other characteristics comparable to the removed trees; shall be state department of agriculture nursery grade no. 1 or better; and must be approved by the Township prior to planting. Replacement trees meeting those characteristics may be any species except those invasive species identified in the Table of Invasive Plant Species in Section 38-363.(I). Replacement trees must be fertilized, mulched, and watered, and shall be guaranteed by the applicant for a period of two (2) years.

(ii) For all protected trees removed, replacement shall be on a one-for-one (1:1) basis. For example, for each tree removed, a replacement tree shall be planted. All replacement trees shall have a dbh of at least two (2) inches. All evergreen replacement trees shall be at least six (6) feet in height.

(iii) Landmark trees shall be replaced on a one to one-half (1:1/2) dbh inch basis. For example, a forty-eight (48) inch landmark tree shall be replaced by twelve (12) two (2) inch trees.

a. The Planning Commission shall be authorized to waive portions of the tree replacement requirements if the applicant has adjusted site design

to save landmark trees. As an example, if a 24" Landmark tree is saved through site design adjustments, the number of other protected trees to be mitigated could be reduced by 12.

(j) **Location.**

- (1) **Township approval required.** The Township Supervisor, or Planning Commission, as applicable, shall approve tree relocation or replacement at off-site locations in order to provide optimum enhancement, preservation, and protection of wooded areas. To the extent feasible and desirable, trees shall be relocated or replaced on-site and within the same general area as trees removed, provided that survival shall not be jeopardized by improvements or activities.
- (2) **Relocation or replacement off-site.** Where it is not feasible and desirable to relocate or replace trees on-site, relocation or replacement may be made at another location in the Township that has been approved by the Supervisor or Planning Commission as applicable.

(k) **Environmental trust fund.** If lot coverage or site characteristics prohibit on-site or off-site mitigation, contribution to the Township’s environmental trust fund may be permitted. In lieu of replacing regulated trees, the Planning Commission may direct the applicant to exercise the option to contribute money to the Township’s environmental trust fund. Payment to the environmental trust fund, per tree removed, shall be in accordance with replacement fee schedules as established by the Township Board. The funds shall be used within the Township to fund tree planting activities or other projects that contribute the same or similar benefits as identified in Section 38-363(A). Examples of these projects include natural open space preservation, replanting of trees in Township parks or public areas, land purchase for park development, park development which preserves open space and existing trees and provides additional areas to plant trees or create innovative stormwater features, wetland restoration projects which preserve trees and other natural features that perform similar ecological functions, or non-motorized pathway development which promote alternate transportation modes to those that increase the carbon footprint to the detriment of trees and the environment. .

(l) **Invasive Plant Species**

Invasive plant Species. Specific invasive plant species are identified in the following table:

Common Name	Latin name	Type
Amur maple	Acer ginnala	Tree
Norway maple	Acer platanoides	Tree

Horse-chestnut	<i>Aesculus hippocastanum</i>	Tree
Tree-of-Heaven	<i>Ailanthus altissima</i>	Tree
Black Alder	<i>Alnus glutinosa</i>	Tree
False indigo	<i>Amorpha fruticosa</i>	Shrub
Turquoise berry	<i>Ampelopsis brevipedunculata</i>	Vine
Japanese barberry	<i>Berberis thunbergii</i>	Shrub
Common barberry	<i>Berberis vulgaris</i>	Shrub
Siberian peashrub	<i>Caragana arborescens</i>	Shrub
Oriental bittersweet	<i>Celastrus orbiculata</i>	Vine
Chinese yam	<i>Dioscorea oppositifolia</i>	Vine
Autumn-olive	<i>Elaeagnus angustifolia</i>	Tree
Autumn-olive	<i>Elaeagnus umbellata</i>	Shrub
Winged wahoo	<i>Euonymus alata</i> (including 'compacta')	Shrub
Spindle tree	<i>Euonymus europaea</i>	Shrub
Wintercreeper	<i>Euonymus fortunei</i>	Vine
Kalopanax	<i>Kalopanax septemlobus</i>	Tree
Border privet	<i>Ligustrum obtusifolium</i>	Shrub
Common privet	<i>Ligustrum vulgare</i>	Shrub
Japanese honeysuckle	<i>Lonicera japonica</i>	Vine
Amur honeysuckle	<i>Lonicera maackii</i>	Vine
Smooth Tartarian honeysuckle	<i>Lonicera tatarica</i>	Vine
Hybrid honeysuckle	<i>Lonicera x bella</i>	Vine
European fly honeysuckle	<i>Lonicera xylosteum</i>	Vine
White mulberry	<i>Morus alba</i>	Tree
Austrian pine	<i>Pinus nigra</i>	Tree
Scotch pine	<i>Pinus sylvestris</i>	Tree
White poplar	<i>Populus alba</i>	Tree
Sweet cherry	<i>Prunus avium</i>	Tree
Perfumed cherry	<i>Prunus mahaleb</i>	Tree
Kudzu	<i>Pueraria lobata</i>	Vine

Callery pear	Pyrus calleryana	Tree
Japanese knotweed	Reynoutria japonica (aka Fallopia japonica, Polygonum cuspidatum)	Shrub
Giant knotweed	Reynoutria sachalinensis (aka Fallopia sachalinensis, Polygonum sachalinensis)	Tree
Common buckthorn	Rhamnus cathartica	Tree
Glossy buckthorn	Rhamnus frangula	Shrub
Buckthorn	Rhamnus utilis	Shrub
Jetbead	Rhodotypos scandens	Shrub
Black locust	Robinia pseudoacacia	Tree
Multiflora rose	Rosa multiflora	Shrub
White willow	Salix alba	Tree
Crack willow	Salix fragilis	Tree
Basket willow	Salix purpurea	Tree
Siberian elm	Ulmus pumila	Tree
Wayfaring tree	Viburnum lantana	Shrub
European highbush cranberry	Viburnum opulus	Shrub

(m) **Problem Native Plant Species**

Problem Native Plant Species include trees or shrubs that are native to Michigan but which propagate in a manner that is undesirable and/or can overwhelm sensitive ecosystems, or which are susceptible to significant disease or insect infestation. These trees should not be planted in Green Oak Township and are exempt from protection. Specific **Problem Native Plant Species** are identified in the following table:

<i>Common Name</i>	<i>Latin name</i>	<i>Type</i>
Box elder	Acer negundo	Tree
Silver maple	Acer saccharinum	Tree
Northern catalpa	Catalpa speciosa	Tree

Ash	Fraxinus spp.	Tree
Cottonwood	Populus deltoides	Tree
Black locust	Robinia pseudoacacia	Tree

(n) **Recommended Tree Species**

Recommended Tree Species include trees that are native to Michigan or which do not exhibit negative propagation characteristics typical of invasive species. Specific [species](#) are identified in the following table:

<i>Common Name</i>	<i>Latin name</i>	<i>Type</i>
Freeman maple	Acer x freemanii	Tree
Trident maple	Acer buergerianum	Tree
State Street Maple	Acer miyabei	Tree
Red maple	Acer rubrum	Tree
Sugar maple	Acer saccharum	Tree
Amur maple	Acer tartaricum ssp ginnala	Tree
Red horsechestnut	Aesculus x carnea	Tree
Serviceberry	Amelanchier spp.	Tree/Shrub
River birch (Heritage and Dura-Heat)	Betula nigra	Tree
Ironwood, Musclewood, American Hornbeam	Carpinus caroliniana	Tree
Common hackberry	Celtis occidentalis	Tree
Eastern redbud	Cercis canadensis	Tree
American yellowwood	Cladastris lutea, C. kentukea	Tree
Corneliancherry Dogwood	Cornus mas	Tree
American smoketree	Cotinus obovatus	Tree/Shrub
Thornless Cockspur Hawthorn	Crataegus spp. crus-galli var. inermis	Tree
Hardy rubber tree	Eucommia ulmoides	Tree
Gingko, Maidenhair tree	Gingko biloba (male only)	Tree
Thornless honeylocust	Gleditsia triacanthos var. inermis	Tree

Coffeetree	<i>Gymnocladus dioicus</i>	Tree
Golden raintree	<i>Koelreuteria paniculata</i>	Tree
American sweetgum	<i>Liquidambar styraciflua</i>	Tree
Tuliptree	<i>Liriodendron tulipifera</i>	Tree
Amur Maackia	<i>Maackia amurensis</i>	Tree
Flowering Crabapple	<i>Malus</i> spp.	Tree
Dawn redwood	<i>Metasequoia glyptostroboides</i>	Tree
Black tupelo, Sour gum, Black gum	<i>Nyssa sylvatica</i>	Tree
American hophornbeam	<i>Ostrya virginiana</i>	Tree
Persian Parrotia	<i>Parrotia persica</i>	Tree
London planetree	<i>Platanus x acerifolia</i>	Tree
Accolade Flowering Cherry	<i>Prunus</i> 'Accolade'	Tree
Snow Goose Cherry	<i>Prunus</i> 'Snow Goose'	Tree
White oak	<i>Quercus alba</i>	Tree
Swamp white oak	<i>Quercus bicolor</i>	Tree
Scarlet oak	<i>Quercus coccinea</i>	Tree
Shingle oak	<i>Quercus imbricaria</i>	Tree
Bur oak	<i>Quercus macrocarpa</i>	Tree
Chinkapin oak	<i>Quercus muehlenbergii</i>	Tree
Pin oak	<i>Quercus palustris</i>	Tree
English oak	<i>Quercus robur</i>	Tree
Northern red oak	<i>Quercus rubra</i>	Tree
Shumard oak	<i>Quercus Shumard</i>	Tree
Japanese pagodatree	<i>Sophora japonica</i>	Tree
Japanese Tree Lilac	<i>Syringa reticulata</i>	Tree
Japanese pagodatree / Scholartree	<i>Styphnolobium japonicum</i> / <i>Sophora japonica</i>	Tree
Baldcypress	<i>Taxodium distichum</i>	Tree
Linden, Basswood	<i>Tilia americana</i>	Tree
Littleleaf linden	<i>Tilia cordata</i>	Tree
Silver linden	<i>Tilia tomentosa</i>	Tree

American Elm cultivars	Ulmus hybrids (Dutch Elm resistant cultivars only)	Tree
Japanese zelkova	Zelkova serrata	Tree

* Additional tree species not specifically listed in the invasive may be considered by the Planning Commission for inclusion on a landscape plan.

Section 2. Repealer.

This ordinance repeals any ordinances in conflict thereof.

Section 3. Severability.

If any section, subsection, sentence, clause or phrase of this ordinance is, for any reason, held to be unconstitutional, such decisions shall not affect the validity of the remaining portions of this ordinance. The Township Board of Trustees hereby declares that it would have passed this ordinance, and each section, subsection, clause or phrase thereof, irrespective of the fact that any one or more sections, subsections, sentences, clauses and phrases be declared unconstitutional.

Section 4. Savings Clause.

Nothing in this ordinance shall be construed to affect any suit or proceeding pending in any court, or any rights acquired, or liability incurred, or any cause or causes of action acquired or existing, under any act or ordinance hereby repealed as cited in Section 2 of this ordinance; nor shall any just or legal right or remedy of any character be lost, impaired or affected by this ordinance.

Section 5. Publication and Effective Date.

This ordinance shall be effective on the 8th day after publication, or a later date as provided in the Michigan Zoning Enabling Act for when a petition for voter referendum on this ordinance and/or a notice of intent to submit such a petition is timely filed with the Township Clerk.

Section 6. Adoption.

That this ordinance was duly adopted by the Green Oak Charter Township Board at its regular meeting called and held on _____, 2021 and was ordered given publication in the manner required by law.

GREEN OAK CHARTER TOWNSHIP

Michael H. Sedlak, Township Clerk

Adoption Date: _____, 2021
 Publication Date: _____, 2021
 Effective Date: _____, 2021

**GREEN OAK CHARTER TOWNSHIP
ORDINANCE NUMBER 02-2021**

AN ORDINANCE TO AMEND CHAPTER 38, ZONING, SECTION 38-194, HOME OCCUPATIONS, OF THE CODE OF ORDINANCES OF GREEN OAK CHARTER TOWNSHIP TO ADD NEW PROVISIONS FOR MEDICAL MARIHUANA HOME OCCUPATIONS AND RECREATIONAL USE; TO REPEAL SECTION 38-201, MEDICAL MARIHUANA ACTIVITIES; AND TO PROVIDE PENALTIES FOR VIOLATIONS THEREOF.

GREEN OAK CHARTER TOWNSHIP ORDAINS:

Section 1. Amendment to Section 38-194.

Chapter 38, Zoning, Section 38-194, Home Occupations, of the Code of Ordinances for Green Oak Charter Township, is hereby amended to read as follows:

Sec. 38-194. Home Occupations:

A. Medical Marihuana Home Occupations and Recreational Use.

1. Intent and Purpose. On November 4, 2008, Michigan voters approved a ballot initiative that legalized medical marihuana, and on December 4, 2008, Michigan's Medical Marihuana Act, MCL 333.26421, *et seq.* (MMMA) took effect allowing both patients and/or their caregivers to cultivate medical marihuana within an enclosed, locked facility in order for those individuals to be entitled to the MMMA protections.

The Stille-Derossett-Hale Single State Construction Code Act, MCL 125.1501, *et seq.* allows a local unit of government to legally adopt and enforce the State Building Code at the local level. The purpose of the Building Code is to enforce public health, safety, and welfare by protecting life and property from all hazards related to the design, erection, repair, removal, demolition, or use and occupancy of buildings, structures or premises. This is in relation to structural strength, adequate egress facilities, sanitary equipment, light and ventilation, and fire safety. Building permits are required when construction or alteration of a structure are made to support the cultivation of marihuana.

The Michigan Zoning Enabling Act, MCL 125.3101, *et seq.* (MZEA), provides the Township with statutory authority to regulate land use within the Township through its Zoning Ordinance. The Michigan Supreme Court has confirmed the Township's ability to geographically restrict caregiver marihuana cultivation to a particular zoning district and to require zoning permits and permit fees for the use of buildings and structures within its jurisdiction.

This article is intended:

- a. To permit those persons in need of marihuana for medicinal purposes allowed under the MMMA to be afforded a reasonable opportunity to be

treated, and for those persons who are permitted to furnish medical marihuana, to be afforded a reasonable opportunity to furnish it within the limitations of the MMMA and the MZEA, and the geographical restrictions imposed by the Zoning Ordinance.

- b. To protect and preserve the public health, safety, and welfare of the Township, the quality of life and stability of property values, including, but not limited to, the value of residential districts. The purpose is also to curtail problems associated with insufficient or improper electrical supplies, problems with ventilation leading to mold, offensive odors, other health hazards and/or other hazards that are associated with the cultivation of marihuana in structures, particularly in residential settings.
 - c. This article is also intended to recognize the rights of individuals 21 years of age or older to use, possess, store, consume, process or cultivate marihuana (referred to collectively as the "use of recreational marihuana") in their residence in accordance with the Michigan Regulation and Taxation of Marihuana Act (MRTMA), MCL 333.27952, *et seq.*, as amended.
 - d. To acknowledge the recreational use of marihuana as permitted in the Michigan Regulation and Taxation of Marihuana Act (MRTMA), MCL 333.27952, *et. seq.*, as amended.
 - e. To again confirm the Township's decision not to permit medical marihuana facilities as defined in the Medical Marihuana Facilities Licensing Act, MCL 333.27101 (MMFLA).
2. The acquisition, possession, cultivation, use, delivery, or distribution of marihuana to treat or alleviate a debilitating medical condition is permitted as a home occupation in the RF, RE, LA, R-1, R-2, R-2A, and R-3 Districts in compliance with the MMMA and the following:
- a. *Medical marihuana for registered qualifying patients or the use of recreational marihuana by an individual 21 years or older.* Registered qualifying patients may use, possess, cultivate and store medical marihuana as provided in the MMMA, as amended, and individuals 21 years or older may use, possess, cultivate, and store marihuana as provided in the MRTMA, and as further regulated herein.
 - (1) A registered qualifying patient (medical marihuana) and individuals 21 years or older (recreational marihuana):
 - i. May use, possess, cultivate and store marihuana in their principle residence within the Township, in which they reside on a full-time basis, for personal use only, and shall comply at all times and in all circumstances with the MMMA, the MRTMA, as applicable, and the general rules of the Michigan Community Health or the Michigan

Department of Licensing and Regulatory Affairs, as they may be amended from time to time.

- ii. May only cultivate marihuana for him/herself in compliance with the MMMA and the MRTMA, as applicable, on property zoned RF, RE, LA, R-1, R-2, R-2A, or R-3, in an enclosed locked facility, inaccessible on all sides and equipped with locks or other security devices that permit access only by the registered qualifying patient and the individual 21 years or older residing in the home.
- iii. All necessary building, electrical, plumbing, and mechanical permits shall be obtained for any alterations of any portion of the structure in support of or in association with the cultivation of marihuana.
- iv. The separation of plant resin from a marihuana plant by butane extraction or any other method that utilizes a substance with a flash point below 100 degrees Fahrenheit, in any public place, a motor vehicle, inside a residential structure, or the curtilage of a residential structure is prohibited.
- v. If a room with windows is utilized as a marihuana cultivation location, any lighting methods that exceed usual residential levels between the hours of 11:00 p.m. and 6:00 a.m. shall employ shielding methods, without alteration to the exterior of the residence, to prevent ambient light spillage that causes or creates a distraction or nuisance to adjacent residential properties.
- vi. If the registered qualifying patient, or individual 21 years or older, is not the owner of the premises but resides in the home on a full-time basis, then written and notarized consent must be obtained from the property owner to ensure the owner's knowledge of the use of the premises as permitted under this section, and the registered qualifying patient and individual 21 years or older shall maintain written proof that the use of the property under this section is approved by the property owner. The premises in this subparagraph shall be the principal residence of the registered qualifying patient or the individual 21 years or older.
- vii. No person other than the registered qualifying patient or individual 21 years or older residing in the home shall be engaged or involved in the growing process or handling of marihuana.

- viii. Use of the registered patient's residential structure for medical marijuana or an individual 21 years or older's residential structure for recreational marijuana shall be clearly incidental or subordinate to its use for residential purposes. Any modifications to the dwelling unit for the purpose of cultivating medical or recreational marijuana shall comply with all applicable building, electrical, mechanical and fire safety code requirements, including all requisite permit applications and related inspections.
 - ix. No equipment or process shall be used in growing, processing, or handling medical or recreational marijuana which creates noise, vibration, glare, light, fumes, odor, or electrical interference detectable to the normal senses at or beyond the property line of the registered patient's or individual over the age of 21 residential property. In case of electrical interference, no equipment or process shall be used that creates visual or audible interference with any radio, television, or similar receiver off the premises or causes fluctuation of line voltage off the premises.
 - x. The registered qualifying patient, individuals over the age of 21, and the owners of the property which marijuana for personal or medical use is present are responsible jointly and severally for compliance with this section.
- b. *Registered primary caregiver.* A registered primary caregiver, operating in compliance with the MMMA, may be permitted as a home occupation in the RF, RE, LA, R-1, R-2, R-2A, and R-3 Districts, only in accordance with the following standards and requirements:
- (1) Cultivation or other medical use of marijuana as a medical marijuana home occupation is limited to a single-family, detached dwellings that are the registered primary caregiver's residence. It is the specific intention of this article that a registered primary caregiver must reside in the dwelling unit on a full-time basis in order to qualify as a home occupation and to ensure compliance with these standards and requirements.
 - (2) A registered primary caregiver operating a medical marijuana home occupation must not be located within 1,000 feet of any school, childcare facility, community center, youth center, playground, public library, housing facility owned by a public housing authority, and place of worship as measured from the outer most boundaries of the lot or parcel on which the medical marijuana home occupation and restricted facility is located.
 - (3) The medical marijuana home occupation shall not be located within 500 feet of another registered caregiver operating a medical marijuana home occupation.

- (4) Not more than one primary caregiver within a single dwelling unit shall be permitted to serve registered qualifying patients.
- (5) The use of the dwelling unit for the medical marihuana home occupation shall be clearly incidental and subordinate to its use for residential purposes by its occupants, and not more than 25% of the square footage of the residence, including the basement and garage area shall be used for the purposes of the home occupation. The medical marihuana home occupation shall be carried out completely within the confines of such dwelling. No accessory building, detached garage, pole barn or similar structure shall be used in the medical marihuana home occupation.
- (6) Except for lighting, heating, watering, drying, or other equipment, or fertilizers, herbicides, or other chemicals directly related to the medical use of marihuana, no other materials or equipment not generally associated with normal ownership, use, and maintenance of the dwelling shall be permitted.
- (7) A qualifying patient shall not smoke or consume marihuana at the dwelling of the primary caregiver.
- (8) If marihuana is grown or located in a room with windows, all interior lighting shall be shielded to prevent ambient light from creating a distraction for adjacent properties.
- (9) If the primary caregiver is not the owner of record of the dwelling in which a registered primary caregiver of medical marihuana is functioning as a medical marihuana home occupation, the primary caregiver must gain written and notarized consent from the property owner to use the dwelling for the medical marihuana home occupation. At any time, the Township may request proof that the primary caregiver has consent from the property owner of record to use the dwelling for a medical marihuana home occupation, as well as proof that the primary caregiver resides in the dwelling unit on a full-time basis.
- (10) To ensure compliance with all applicable requirements and laws, the portion of the structure, such as a cultivation room, where energy use and heating requirements exceed typical residential limits and chemical storage occurs, is subject to inspection and approval by the building official, fire marshal, or other authorized Township officials.
- (11) The property, dwelling unit, and all enclosed lot facilities shall be available for inspection upon request by the building official, fire marshal, or other authorized officials.

- (12) The registered primary caregiver is responsible for utilizing an enclosed, locked facility compliant with the MMMA for cultivating, growing, manufacturing, processing and storing marihuana for medical use only. The enclosed, locked facility utilized by the primary registered caregiver shall provide separation by fully enclosed walls, or fences, or for plants that are grown on behalf of each registered qualifying patient, on whose behalf the registered primary caregiver is furnishing marihuana for medical use, so it is accessible only to the primary caregiver and registered patient. The processing and storing of medical marihuana is permitted only by registered primary caregivers and registered qualifying patients.
 - (13) The registered primary caregiver may grow up to the maximum of 72 plants, but no more than 12 plants for each individual registered qualifying patient as set forth in the MMMA.
 - (14) The registered primary caregiver is responsible for providing the security necessary to ensure the growing marihuana and usable product are accessible for use only by the registered primary caregiver for transfer to, only to registered qualifying patients, who are registered to the registered primary caregiver, and must fully comply with the provisions of the MMMA.
 - (15) A certificate of occupancy is required and must be obtained from the Township before the primary caregiver established the home occupation or provides services to a registered qualifying patient.
 - (16) The consumption, transfer, or use of marihuana in public, or place open to the public, is prohibited.
- 3. It is unlawful to establish or operate a for-profit or non-profit marihuana dispensary, collective, or cooperative within the Township, even if such use is intended for the medical use of marihuana.
 - 4. Medical marihuana provisioning centers, safety compliance facilities, dispensaries, cooperatives, marihuana establishments and any other operation or facility similar in nature are specifically prohibited within the Township.

B. Home Occupations Other Than Medical Marihuana Home Occupations and Recreational Use.

Home occupations other than Medical Marihuana Home Occupations and Recreational Use that are clearly incidental to the principal residential use are permitted in any residential district. The following conditions for home occupations shall be met:

- 1. The home occupation shall utilize no more than twenty-five percent (25%) of the residential structure used for such home occupation.

2. The home occupation shall involve no employees, other than members of the immediate family residing on the premises.
3. All home occupation activities shall be conducted indoors, except gardening.
4. No structural alterations or additions which will alter the residential nature of the structure shall be permitted to accommodate a home occupation.
5. Only customary domestic or household equipment, or equipment judged by the Zoning Administrator or designee not to be injurious or a nuisance to the surrounding neighborhood, shall be permitted.
6. There shall be no external evidence of such occupation, except a small announcement sign not exceeding two (2) square feet and conforming to provisions of Article IX of this chapter, pertaining to signs, may be permitted.
7. No unrelated commodity shall be sold on the premises in connection with a home occupation.
8. No home occupation shall be permitted which is injurious to the general character of the residential district and which creates a congested or otherwise hazardous traffic or parking condition.

Section 2. Repealer of Chapter 38, Zoning, Section 38-201, Medical Marihuana Activities.

Chapter 38, Zoning, Section 38-201, Medical Marihuana Activities, is hereby repealed in its entirety, and shall now read as follows:

Sec. 38-201. (Reserved).

Section 3. Repealer.

This Ordinance hereby repeals any ordinances in conflict herewith.

Section 4. Severability.

The various parts, sections and clauses of this Ordinance are declared to be severable. If any part, sentence, paragraph, section or clauses is adjudged unconstitutional or invalid by a court of competent jurisdiction, the remainder of the Ordinance shall not be affected.

Section 5. Savings Clause.

Nothing in this Ordinance shall be construed to affect any just or legal right or remedy of any character nor shall any just or legal right or remedy of any character be lost, impaired or affected by this Ordinance.

Section 6. Publication and Effective Date.

This ordinance shall be effective on the 8th day after publication, or a later date as provided in the Michigan Zoning Enabling Act for when a petition for voter referendum on this ordinance and/or a notice of intent to submit such a petition is timely filed with the Township Clerk.

Section 7. Adoption.

This Ordinance was duly adopted by the Green Oak Charter Township Board at its regular meeting called and held on the _____ day of _____, 2021, and was ordered given publication in the manner required by law.

GREEN OAK CHARTER TOWNSHIP

Michael H. Sedlak, CMC, Township Clerk

Adoption Date: _____, 2021

Publication Date: _____, 2021

Effective Date: _____, 2021

AGENDA ITEM SHEET

MEETING DATE: June 2, 2021

PERSON PLACING ITEM ON AGENDA: Mark St. Charles, Supervisor

AGENDA TOPIC: Winans & Rickett Roads Roundabout

TOPIC EXPLANATION:

As outlined at the last board meeting, Steve Wasyk, Managing Director has issued a proposal for addressing the congestion at Winans and Rickett Road intersection. Attached is the correspondence and Steve are waiting for our decision. As I also mentioned at the last meeting, I am circulating the attached letter to all of those who signed the participation agreement for funding.

SUPPORTING DOCUMENTATION

POSSIBLE COURSES OF ACTION:

SUGGESTED MOTION:

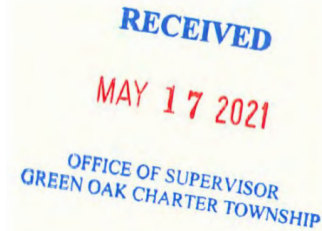
TYPE OF VOTE: ROLL CALL X VOICE VOTE

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

May 12, 2021

Mr. Mark St. Charles, Supervisor
Green Oak Charter Township
10001 Silver Lake Road
Brighton, MI 48116



Re: Winans Lake Road/Rickett Road Intersection

Dear Mr. St. Charles:

Per your request, we have reviewed the intersection of Winans Lake Road and Rickett Road in order to identify options for improving traffic flow in that area. Per our review, we feel that a single-lane roundabout is the most desirable improvement at this location. In order to begin development of this project, we are seeking Township approval of the following proposal:

1. The Livingston County Road Commission will be responsible for all design, inspection, and testing costs.
2. Green Oak Township will be responsible for all construction costs. We anticipate the construction costs to be approximately \$800,000 to \$1,000,000.
3. Due to MDOT's pending US-23 flex-lane project scheduled for late 2023/early 2024, we propose construction of the roundabout to be completed by the fall of 2023.

Please review the above proposal and confirm the Township's position. If you have any questions, please do not hesitate to contact me.

Sincerely,

A handwritten signature in blue ink that reads "Steve Wasylik".

Steve Wasylik, P.E.
Managing Director

Cc: Jodie Tedesco, LCRC Director of Engineering
Mike Goryl, LCRC Traffic and Safety Engineer
Bobby Daavettila, LCRC Construction Engineer
File

CONDITIONAL REZONING AGREEMENT

This Conditional Rezoning Agreement made and entered into this _____ day of June, 2021, by and between **GREEN OAK CHARTER TOWNSHIP** ("Township"), a Michigan municipal corporation, with its office located at 10001 Silver Lake Road, Brighton, MI 48116, and **VECTOR DEVELOPMENT, LLC.** ("Developer"), a Michigan limited liability company, with its office located at 2650 Island Court, Sylvan Lake, MI 48320.

RECITALS

- A. Developer has entered into an Agreement to purchase real property located at the southeast corner of Maltby Road and Rickett Road in Green Oak Charter Township, Michigan, Parcel No. 4716-08-100-014 (the "Property"), legally described in the attached **Exhibit A.**
- B. The Property consists of 22.36 acres of vacant land. The site is roughly rectangular in shape with approximately 680 feet of frontage on Maltby Road and an approximate depth of 1,300 feet. The Property is currently zoned RO-Residential Office and LI-Limited Industrial under the Township's Zoning Ordinance.
- C. In order to complete the purchase of the Property, Developer desires to develop the Property with a 230-unit multi-family residential development. In order to do so, Vector has proposed to rezone the Property to RM-Multiple-Family with conditions.
- D. The Green Oak Charter Township Code, Section 38-542, Conditional Rezoning, was adopted consistent with the provisions of Section 405 of the Michigan Zoning Enabling Act, MCL 125.3405.
- E. Section 38-542 of the Zoning Ordinance recognizes that there are certain instances where it would be in the best interest of the Township, as well as advantageous to the Developer, that certain conditions could be proposed as part of a request for rezoning.
- F. On April 1, 2021, Developer applied for a conditional rezoning for the Property.
- G. Developer's application was accompanied by a voluntary offer in writing setting forth conditions related to the use and/or development of the Property for which the conditional rezoning was requested. Developer also submitted a conceptual plan showing the specific proposed use of the Property.
- H. On April 1, 2021, the Planning Commission, after public hearing, recommended approval of the conditional rezoning with conditions. The Minutes of the Planning Commission Meeting are attached as **Exhibit B.**

- I. On April 21, 2021, the Livingston County Planning Commission recommended approval of the conditional rezoning with conditions.
- J. On _____, 2021, the Township Board approved the conditional rezoning, based upon the conceptual plan, and subject to execution of this Conditional Rezoning Agreement. The minutes of the Township Board Meeting are attached as **Exhibit C**.
- K. Under Section 38-542, a Conditional Rezoning Agreement is required to be signed by Developer. By executing this Agreement, the Township and Developer desire to set forth and confirm the conditions under which the Township granted the conditional rezoning.

NOW, THEREFORE, Developer agrees:

- 1. Conditions Running with the Property. This Conditional Rezoning Agreement covers the Property described on the attached **Exhibit A**. This Agreement shall be binding upon and inure to the benefit of the Developer and the Township, and their heirs, successors and assigns, and shall run with the Property, subject to Paragraph 3.j. below.
- 2. Conceptual Plan. The conditional rezoning was granted by the Township based upon the conceptual plan presented by Developer. The Property shall be developed substantially in conformance with the conceptual plan, subject to modifications which may be required during the reviews contained in Section 6 below.
- 3. List of Conditions. The conditional rezoning was granted to Developer based upon conditions which were voluntarily offered by Developer. The conditions which form the basis of the Township's grant of the conditional rezoning are as follows:
 - a. The proposed development will consist of no more than 23 two-story, multi-family buildings that will be in conformance with the renderings and colored elevations attached as **Exhibit D**.
 - b. The proposed development will contain no more than 230 units.
 - c. The proposed development will include a community clubhouse and amenities for its residents. Additionally, at the Township's request, the clubhouse can be used as a Township polling precinct.
 - d. The proposed development will connect to public water and sewer.
 - e. The proposed development will provide at least three parking spaces adjacent to the Township's cemetery for use by visitors of the cemetery. In addition, the proposed development will build a sidewalk connection in the northeast corner of the Property from the above-mentioned parking spaces to the property line at the cemetery. The parking spaces and sidewalk location will be shown on the final site plan and later approved by the Township.
 - f. The Property will be developed substantially in accordance with the site plan and landscape plan prepared by Atwell (attached as **Exhibit E**), as modified by the Township's consultants and subject to conditions for approval by the Township.

- g. The proposed development will meet all requirements for the RM Zoning District in the Township's Zoning Ordinance Schedule of Regulations, Section 38-136.
 - h. The trees to be planted within the required landscape buffer to the residential properties on the west and south sides of the Property will be upsized from 6 feet above ground level to 14 feet above ground level, subject to the Township amending its Woodland Ordinance in a manner that reduces the tree replacement obligations for the project.
 - i. If parking within the project continuously exceeds capacity, as determined solely by the Township, Developer will construct up to 40 additional parking spaces as determined by the Township to be necessary. These parking spaces will be constructed by Developer within eight (8) months of a request by the Township. The location of the additional parking spaces is shown on **Exhibit D**.
 - j. If Developer does not acquire title to the Property, the Township shall, at the request of the undersigned parcel owners, rezone the parcel back to RO-Residential Office and LI-Limited Industrial. If, at the request of the parcel owners, the Property is rezoned to RO-Residential Office and LI-Limited Industrial, this Agreement shall automatically terminate and shall no longer run with the Property.
4. Developer Acknowledgement. Developer acknowledges that it voluntarily offered and consented to the provisions contained in this Agreement. Developer agrees that the conditions contained herein are fair, reasonable and equitable requirements and conditions; agrees that the Agreement does not constitute a taking of property for any purpose or a violation of any constitutional rights; and agrees to be bound by each and every provision of this Agreement. Furthermore, it is agreed and acknowledged that any improvements and undertakings described herein are necessary and roughly proportional to the burden imposed by the conditional rezoning, and are necessary to insure that public services and facilities will be capable of accommodating the development and the increased service of facility loads caused by the development; to protect the natural environment and conserve natural resources; to insure capability with adjacent uses of land; to promote use of the Property in a socially and economically manner; and to achieve other legitimate objectives authorized by law.
5. Authority to Execute. This Agreement has been authorized by all necessary action of Developer, and Developer acknowledges that it has the authority to execute this Agreement and bind the Property to its terms and conditions.
6. Obligation to Obtain Other Approvals. Developer acknowledges that any use or development approved by the conditional rezoning that may require a special land use permit, a variance, or site plan approval under the terms of the Zoning Ordinance may only be commenced if such special land use permit, variance, and/or site plan approval is ultimately granted in accordance with the terms of the Zoning Ordinance. Developer also acknowledges that modifications to the conceptual plan may occur as a result of the site plan approval process, engineering review, and review by other governmental agencies, as required for the project to comply with all applicable Township, state or federal regulations and laws, and agrees to comply with any such modifications.

7. Amendment. This Agreement may only be amended in the same manner as prescribed for the original conditional rezoning and Agreement.
8. Compliance with Conditional Rezoning Agreement. Developer shall continuously operate and maintain the development and/or use of the Property in full compliance with all the conditions set forth in the Agreement. Any failure to comply fully with the conditions contained with the Agreement shall constitute a violation of the Zoning Ordinance and be punished accordingly. Any such violation shall be deemed a nuisance per se and subject to judicial abatement as provided by law.
9. Time Period for Developing Property. The first phase of the approved development and/or use of the Property pursuant to building and other required permits, must be commenced upon the Property within two (2) years after the effective date by publication of the conditional rezoning action, and must thereafter proceed diligently to completion. If the development and/or use of the rezoned land does not occur within this time frame, Developer acknowledges that the Property shall revert to its former zoning classification, and the Township may initiate a rezoning of the Property to complete this reversion process. However, upon good cause shown by the Developer, the Township may extend the foregoing period, in the Township's sole discretion.
10. Township Right to Rezone. Developer acknowledges that nothing in this Agreement shall be deemed to prohibit the Township from rezoning all or any portion of the Property subject to the Agreement to another zoning classification.
11. Governing Law. This Agreement shall be governed by, construed, and enforced in accordance with Michigan law.
12. Joint Drafting. No provision of this Agreement shall be construed against or interpreted to the disadvantage of one party against any other party by any court or other governmental authority by reason of any determination or assertion that one party was chiefly or primarily responsible for having drafted this Agreement.
13. Entire Agreement. This Agreement together with any agreements referenced herein, constitutes the entire agreement between the parties with respect to the subject of this Agreement.
14. Conflicts. In the event of conflict between the provisions of this Agreement and the provisions of another applicable ordinance, code, regulations, requirement, standard, or policy, the provisions of this Agreement shall prevail.
15. Severability. The invalidity of any provision of this Agreement shall not affect the validity of the remaining provisions, which shall remain valid and enforceable to the fullest extent permitted by law.
16. Recording. This Agreement shall be recorded with the Livingston County Register of Deeds.

17. Counterparts. This Agreement and any amendments to it may be executed in multiple counterparts, each of which shall be deemed an original and all of which shall constitute one Agreement. The signature of any party to any counterpart shall be deemed to be a signature to, and may be appended to, any other counterpart.

IN WITNESS WHEREOF, the parties have caused this Conditional Rezoning Agreement to be executed on the day and year recited above.

GREEN OAK CHARTER TOWNSHIP
a Michigan municipal corporation

By: Mark St. Charles
Its: Supervisor

By: Michael Sedlak
Its: Township Clerk

ACKNOWLEDGEMENT


STATE OF MICHIGAN)
) ss
COUNTY OF LIVINGSTON)

The foregoing document was acknowledged before me by Mark St. Charles, Supervisor, and Michael Sedlak, Clerk, on behalf of Green Oak Charter Township on the _____ day of _____, 2021.

Notary Public
_____ County, Michigan
Acting in _____ County, Michigan
My Commission Expires: _____

[Signatures continued on next page]

VECTOR DEVELOPMENT, LLC.
a Michigan limited liability company

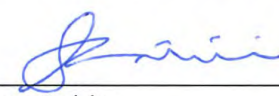


By:
Its:

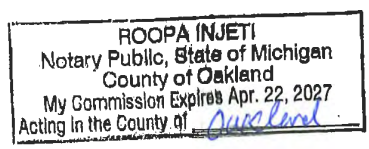
ACKNOWLEDGEMENT

STATE OF MICHIGAN)
) ss
COUNTY OF LIVINGSTON)

The foregoing document was acknowledged before me by Howard Avery Fingeroot
_____, on behalf of Vector Development, LLC, on the 25th day of May,
2021.



Notary Public
Oakland County, Michigan
Acting in Oakland County, Michigan
My Commission Expires: 04/22/2027



[Signatures continued on next page]

ACKNOWLEDGEMENT AND CONSENT

The undersigned owners of the Property, hereby acknowledge and consent to this Agreement.

LOWRY INVESTMENT COMPANY, L.L.C.

By: Michael R. Lowry
Michael Lowry, Managing Member

LOWRY DEVELOPMENT COMPANY

By: Michael A. Lowry
Michael Lowry, President

ACKNOWLEDGEMENT

STATE OF MICHIGAN)
) ss
COUNTY OF LIVINGSTON)

The foregoing document was acknowledged before me by Michael R. Lowry,
_____, on behalf of Lowry Investment Company, L.L.C. and Lowry Development
Company, on the 24th day of May, 2021.

DEBORAH ANN MELVIN
Notary Public, State of Michigan
County of Livingston
My Commission Expires Jan. 01, 2025
Acting in the County of Livingston

Deborah A. Melvin
Notary Public
LIVINGSTON County, Michigan
Acting in LIVINGSTON County, Michigan
My Commission Expires: 1-1-2025

EXHIBIT A

PART OF THE NORTHWEST 1/4 OF THE NORTHWEST 1/4 AND PART OF THE NORTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 8, T1N-R6E, GREEN OAK TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN, MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTHWEST CORNER OF SECTION 8; THENCE, ALONG THE NORTH LINE OF SECTION 8 AND IN MALTBY ROAD (66 FOOT WIDE RIGHT OF WAY), N 87°26'34" E (RECORDED AS S 89°07'57" E), 508.27 FEET TO THE POINT OF BEGINNING OF THE PARCEL TO BE DESCRIBED; THENCE CONTINUING ALONG THE NORTH LINE OF SECTION 8 AND IN MALTBY ROAD, N 87°26'34" E (RECORDED AS S 89°07'57" E), 679.92 FEET; THENCE S 02°12'18" E (RECORDED AS S 01°13'11" W), 147.58 FEET; THENCE N 87°26'34" E (RECORDED AS S 89°07'57" E), 33.08 FEET; THENCE S 02°12'18" E (RECORDED AS S 01°13'11" W), 114.44 FEET; THENCE N 87°43'16" E (RECORDED AS S 88°51'15" E), 314.50 FEET; THENCE S 02°12'18" E, 404.83 FEET, SAID POINT BEING THE FOLLOWING TWO (2) COURSES FROM THE NORTH 1/4 CORNER OF SECTION 8: 1) ALONG THE NORTH AND SOUTH 1/4 LINE OF SAID SECTION AND IN WHITMORE LAKE ROAD (60 FOOT WIDE 1/2 RIGHT OF WAY), S 02°07'04" E (RECORDED AS S 01°18'25" W), 667.32 FEET; 2) S 87°23'22" W (RECORDED AS N 89°11'09" W), 1134.76 FEET; THENCE S 87°23'22" W (RECORDED AS N 89°11'09" W), 200.00 FEET; THENCE ALONG THE EAST LINE OF THE NORTHWEST 1/4 OF THE NORTHWEST 1/4 OF SECTION 8, ALSO BEING THE WEST LINE OF THE NORTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 8, AS PREVIOUSLY SURVEYED AND MONUMENTED, S 02°12'18" E (RECORDED AS S 01°13'11" W), 653.84 FEET; THENCE ALONG THE SOUTH LINE OF THE NORTHWEST 1/4 OF THE NORTHWEST 1/4 OF SECTION 8, AS PREVIOUSLY SURVEYED AND MONUMENTED, S 87°23'19" W (RECORDED AS N 89°11'12" 1A1), 640.87 FEET; THENCE N 02°07'49" W (RECORDED AS N 01°17'40" E) 889.37 FEET; THENCE S 87°30'54" W (RECORDED AS N 89°03'37" W), 187.13 FEET; THENCE N 02°17'31" W (RECORDED AS N 01°07'58" E) 433.41 FEET, TO THE POINT OF BEGINNING, CONTAINING 22.36 ACRES, MORE OR LESS, AND SUBJECT TO THE RIGHTS OF THE PUBLIC OVER THE EXISTING MALTBY ROAD (66 FOOT WIDE RIGHT OF WAY). ALSO SUBJECT TO ANY EASEMENTS OR RESTRICTIONS OF RECORD.

**GREEN OAK CHARTER TOWNSHIP
AMENDMENT TO ZONING ORDINANCE
ZONING MAP AMENDMENT NO. _____.**

THE TOWNSHIP BOARD OF GREEN OAK CHARTER TOWNSHIP ORDAINS:

Section 1 of Ordinance. Title. This Ordinance shall be known as the "The Parc Conditional Rezoning Ordinance."

Section 2 of Ordinance. Purpose. The purpose of this Ordinance is to amend the Green Oak Charter Township Zoning Ordinance Map for the rezoning of approximately 21.42 acres of land located in Section 8 in the Township, located on the southeast corner of Maltby Road and Rickett Road, to change the use of the property from RO-Residential Office and LI-Limited Industrial to RM-Multiple-Family, and subject to the following:

List of Conditions. The conditional rezoning was granted to Developer based upon conditions which were voluntarily offered by Developer. The conditions which form the basis of the Township's grant of the conditional rezoning are as follows:

- a. The proposed development will consist of no more than 23 two-story, multi-family buildings that will be in conformance with the renderings and colored elevations attached as **Exhibit A**.
- b. The proposed development will contain no more than 230 units.
- c. The proposed development will include a community clubhouse and amenities for its residents. Additionally, at the Township's request, the clubhouse can be used as a Township polling precinct.
- d. The proposed development will connect to public water and sewer.
- e. The proposed development will provide at least three parking spaces adjacent to the Township's cemetery for use by visitors of the cemetery. In addition, the proposed development will build a sidewalk connection in the northeast corner of the Property from the above-mentioned parking spaces to the property line at the cemetery. The parking spaces and sidewalk location will be shown on the final site plan and later approved by the Township.
- f. The Property will be developed substantially in accordance with the site plan and landscape plan prepared by Atwell (attached as **Exhibit B**), as modified by the Township's consultants and subject to conditions for approval by the Township.
- g. The proposed development will meet all requirements for the RM Zoning District in the Township's Zoning Ordinance Schedule of Regulations, Section 38-136.
- h. The trees to be planted within the required landscape buffer to the residential properties on the west and south sides of the Property will be upsized from 6 feet above ground level to 14 feet above ground level, subject to the Township

amending its Woodland Ordinance in a manner that reduces the tree replacement obligations for the project.

- i. If parking within the project continuously exceeds capacity, as determined solely by the Township, Developer will construct up to 40 additional parking spaces as determined by the Township to be necessary. These parking spaces will be constructed by Developer within eight (8) months of a request by the Township. The location of the additional parking spaces is shown on **Exhibit C**.
- j. If Developer does not acquire title to the Property, the Township shall, at the request of the undersigned parcel owners, rezone the parcel back to RO-Residential Office and LI-Limited Industrial. If, at the request of the parcel owners, the Property is rezoned to RO-Residential Office and LI-Limited Industrial, this Agreement shall automatically terminate and shall no longer run with the Property.

Section 3 of Ordinance. Amendment. The Zoning Ordinance and the Zoning Map of Green Oak Charter Township is hereby amended as follows:

- A. The legal description of the subject property being rezoned to RM-Multiple-Family (with conditions) is as follows:

PART OF THE NORTHWEST 1/4 OF THE NORTHWEST 1/4 AND PART OF THE NORTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 8, T1N-R6E, GREEN OAK TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN, MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTHWEST CORNER OF SECTION 8; THENCE, ALONG THE NORTH LINE OF SECTION 8 AND IN MALTBY ROAD (66 FOOT WIDE RIGHT OF WAY), N 87°26'34" E (RECORDED AS S 89°07'57" E), 508.27 FEET TO THE POINT OF BEGINNING OF THE PARCEL TO BE DESCRIBED; THENCE CONTINUING ALONG THE NORTH LINE OF SECTION 8 AND IN MALTBY ROAD, N 87°26'34" E (RECORDED AS S 89°07'57" E), 679.92 FEET; THENCE S 02°12'18" E (RECORDED AS S 01°13'11" W), 147.58 FEET; THENCE N 87°26'34" E (RECORDED AS S 89°07'57" E), 33.08 FEET; THENCE S 02°12'18" E (RECORDED AS S 01°13'11" W), 114.44 FEET; THENCE N 87°43'16" E (RECORDED AS S 88°51'15" E), 314.50 FEET; THENCE S 02°12'18" E, 404.83 FEET, SAID POINT BEING THE FOLLOWING TWO (2) COURSES FROM THE NORTH 1/4 CORNER OF SECTION 8: 1) ALONG THE NORTH AND SOUTH 1/4 LINE OF SAID SECTION AND IN WHITMORE LAKE ROAD (60 FOOT WIDE 1/2 RIGHT OF WAY), S 02°07'04" E (RECORDED AS S 01°18'25" W), 667.32 FEET; 2) S 87°23'22" W (RECORDED AS N 89°11'09" W), 1134.76 FEET; THENCE S 87°23'22" W (RECORDED AS N 89°11'09" W), 200.00 FEET; THENCE ALONG THE EAST LINE OF THE NORTHWEST 1/4 OF THE NORTHWEST 1/4 OF SECTION 8, ALSO BEING THE WEST LINE OF THE NORTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 8, AS PREVIOUSLY SURVEYED AND MONUMENTED, S 02°12'18" E (RECORDED AS S 01°13'11" W), 653.84 FEET; THENCE ALONG THE SOUTH LINE OF THE NORTHWEST 1/4 OF THE NORTHWEST 1/4 OF SECTION 8, AS PREVIOUSLY SURVEYED AND MONUMENTED, S 87°23'19" W (RECORDED AS N 89°11'12" 1A1), 640.87 FEET; THENCE N 02°07'49" W (RECORDED AS N 01°17'40" E) 889.37 FEET; THENCE S 87°30'54" W (RECORDED AS N 89°03'37" W), 187.13 FEET;

THENCE N 02°17'31" W (RECORDED AS N 01°07'58" E) 433.41 FEET, TO THE POINT OF BEGINNING, CONTAINING 22.36 ACRES, MORE OR LESS, AND SUBJECT TO THE RIGHTS OF THE PUBLIC OVER THE EXISTING MALBY ROAD (66 FOOT WIDE RIGHT OF WAY). ALSO SUBJECT TO ANY EASEMENTS OR RESTRICTIONS OF RECORD.

Tax Parcel Number 4716-08-100-014

- B. The Green Oak Charter Township Zoning Ordinance Map is hereby amended as follows:

Section 4 of Ordinance. Repealer.

This ordinance repeals any ordinances in conflict thereof.

Section 5 of Ordinance. Severability.

If any section, subsection, sentence, clause or phrase of this ordinance is, for any reason, held to be unconstitutional, such decisions shall not affect the validity of the remaining portions of this ordinance. The Township Board of Trustees hereby declares that it would have passed this ordinance, and each section, subsection, clause or phrase thereof, irrespective of the fact that any one or more sections, subsections, sentences, clauses and phrases be declared unconstitutional.

Section 6 of Ordinance. Savings Clause.

Nothing in this ordinance shall be construed to affect any suit or proceeding pending in any court, or any rights acquired, or liability incurred, or any cause or causes of action acquired or existing, under any act or ordinance hereby repealed as cited in Section 4 of this ordinance; nor shall any just or legal right or remedy of any character be lost, impaired or affected by this ordinance.

Section 7 of Ordinance. Publication and Effective Date.

This ordinance shall be effective on the 8th day after publication, or a later date as provided in the Michigan Zoning Enabling Act for when a petition for voter referendum on this ordinance and/or a notice of intent to submit such a petition is timely filed with the Township Clerk.

Section 8 of Ordinance. Adoption.

That this ordinance was duly adopted by the Green Oak Charter Township Board at its regular meeting called and held on _____, 2021 and was ordered given publication in the manner required by law.

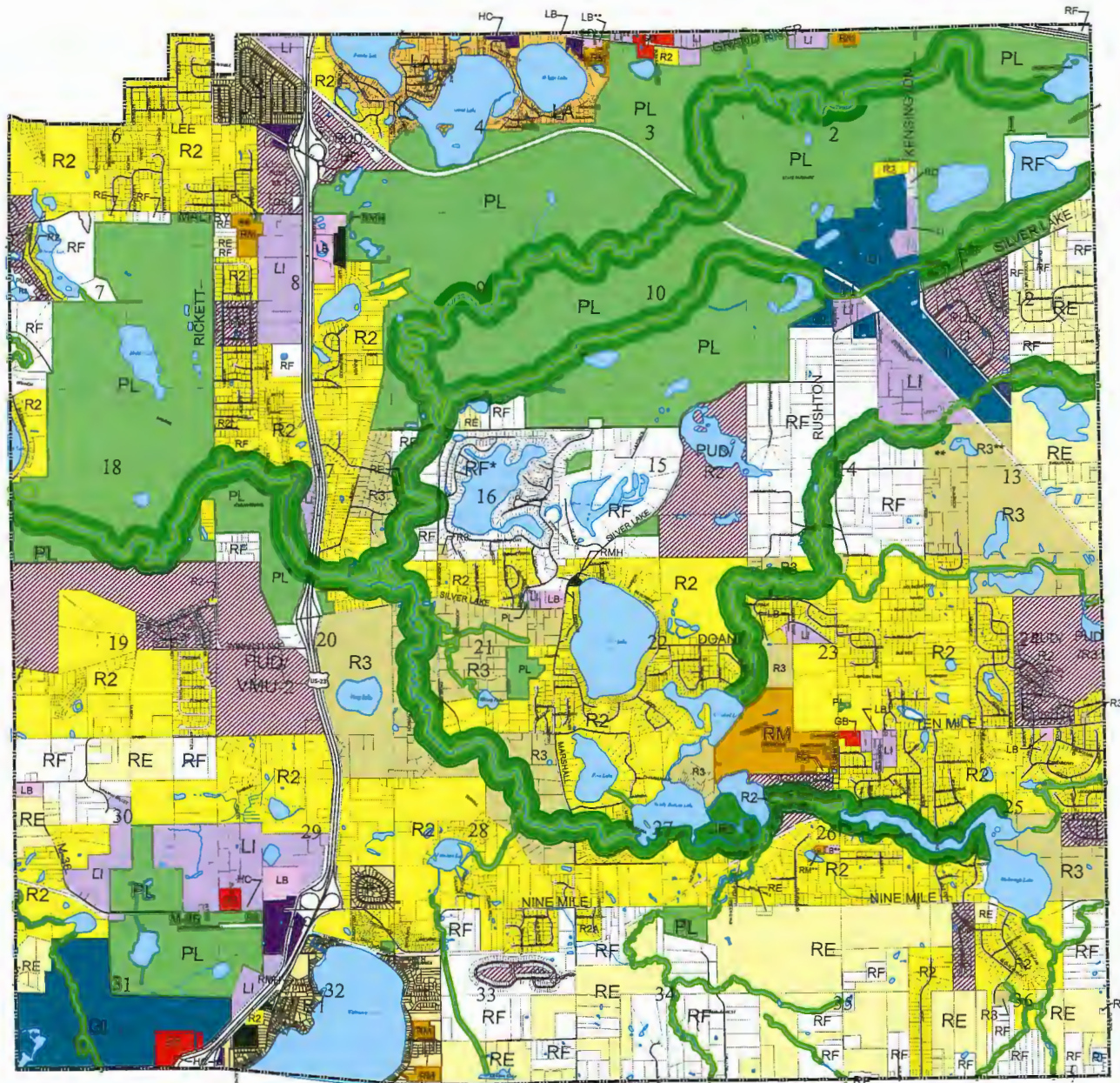
GREEN OAK CHARTER TOWNSHIP

Michael H. Sedlak, Township Clerk

Adoption Date: _____, 2021

Publication Date: _____, 2021

Effective Date: _____, 2021



LEGEND

- PL - Public Land
- RF - Residential Farming
- RE - Rural Estates
- R3 - Single Family
- R2 - Single Family
- R1 - Single Family
- LA - Lake Area Residential
- RM - Multiple Family
- RMH - Mobile Home Park
- LB - Local Business
- GB - General Business
- HC - Highway Commercial
- RO - Research Office
- LI - Limited Industrial
- GI - General Industrial
- PUD - Planned Unit Development
- GreenOak_Parcels
- * Court judgement
- ** Conditional Zoning

CERTIFICATION

This is to certify that this is the official Zoning Map referred to in the Zoning Ordinance of Green Oak Charter Township, Livingston, Michigan.

Mark G. Charbon
Township Supervisor *Mark G. Charbon* Date: *2/26/2021*

Michael H. Sedlak
Township Clerk *Michael H. Sedlak* Date: *2/26/2021*

ZONING DISTRICTS MAP

Green Oak Charter Township
Livingston County, Michigan



**GREEN OAK CHARTER TOWNSHIP
PLANNING COMMISSION
RESOLUTION OF FINDINGS
AND
RECOMMENDATION OF APPROVAL**

**REZONING #R 02-2020
PARC @ GREEN OAK CONDITIONAL REZONING
4/1/21**

Whereas, the Township received a petition from Vector Development LLC for a rezoning from RO, Research Office & LI, Limited Industrial to RM – Multiple Family Residential on a parcel with parcel ID number # 4716-08-100-014 & part of parcel # 4716-08-100-029 (1.86 acres) located on the south side of Maltby Road between Whitmore Lake Road and Ricket Road; and

Whereas, The subject land is 21.42 acres and is currently undeveloped; and

Whereas, the Planning Commission held a public hearing which was appropriately noticed on this matter on November 5, 2020, and received comments from the public; and

Whereas, the applicant has subsequently voluntarily offered conditions in a letter dated March 22, 2020, in accordance with Section 38-542 of the Zoning Ordinance; and

Whereas, the Planning Commission has reviewed the proposed conditional rezoning petition in terms of the standards stated within Section 38-539 of the Zoning Ordinance and finds the following:

- a) Objective 3 in the Master Plan presents the goal to foster the development of diverse housing types that meet the physical and financial needs of current and future Township residents. Strategy number 1 is to promote the development of multiple-family and attached single family residential housing in appropriate areas. This location appears to be appropriate based on its proximity to commercially developed areas and major roadways. Public utilities are available in the area to serve a multifamily development. Additionally, there are no new multifamily housing products available to township residents. This would provide for diversity in the housing stock available in the Township.
- b) With the proposed conditions the rezoning would be compatible with the neighboring zoning. It would serve as a transitional zone between the existing LI, Limited Industrial district to the east and the existing RE and RF zoning to the west. Multiple family would complement the R2, Single Family District along the north side of Maltby Road. Landscaping and buffering is required and shown on the plan between the proposed multifamily development and less intense neighboring residential uses.
- c) The Township engineer's review of the site plan offered with the conditions indicates that the site would be adequately served by public utilities available in the area.

- d) A multiple-family residential development would not be a permitted use in the existing RO, Research Office district. Uses in the RO district could include more intensive use of the land such as office buildings or research centers. Buildings in the RO district could be as tall as 50 feet and would not have a residential design. The proposed buildings in the application are only 30 feet tall and have a single-family residential look. The conditional rezoning to RM would allow for the proposed multiple-family development and will provide a transition between more intense uses in the LI district to the east and residential uses to the west.
- e) This site is too small to have the potential to significantly adversely impact the Township as a whole, or adjacent communities based upon the proposed zoning. Research does not indicate that multifamily developments decrease the value of neighboring single-family developments.
- f) This site is located in relative proximity to commercial areas that have developed over the years. Multiple family in close proximity to commercial uses and highway access is appropriate. The site has been zoned RO for almost 30 years with no development interest. Additionally, though there are no other vacant areas zoned RO in the township, the uses permitted in the RO district would also be permitted in other districts such as The General Industrial and Limited Industrial districts.
- g) The subject site is and undeveloped parcel which is uniquely located between light industrial and office uses and lower density residential uses, as well as within a district served by public utilities, in proximity to the commercially developed areas in the Township. Based on the unique location and the above findings this rezoning can be justified without setting any negative precedent.

Now therefore be it resolved, that the Planning Commission recommends approval of the Parc @ Green Oak Conditional Rezoning to the Township Board with the acceptance and incorporation of the conditions provided by the applicant in the signed attached letter.

1
2 Green Oak Charter Township
3 Planning Commission
4 Electronic Regular Meeting Minutes
5 April 1, 2021

6 Approved: _____
7
8

9 The meeting was called to order by Mr. Marshall at 7:00 p.m.

10
11 Per the Open Meetings Act, MCL 15.261. et seq., as amended by PA 228 of 2020, all
12 Commissioners attending the meeting remotely were located in Green Oak Township.
13

14
15 Roll Call: Cris Burkhalter
16 Keith Lee
17 Lary Marshall
18 Doug Nale
19 Sarah Pearsall
20

21 Absent: Michael Sedlak
22 Lamberto Smigliani
23

24 Also Present: Paul Montagno, Carlisle Wortman
25 Deborah McKenzie, Zoning Administrator
26 Rick Miner, CES
27

28
29 **APPROVAL OF AGENDA**
30

31 **Motion by Lee, second by Pearsall**
32 **To approve the agenda as submitted.**
33

34 **Voice Vote: Ayes: Unanimous**
35 **Nays: None**
36

37 **MOTION APPROVED**
38

39
40 **APPROVAL OF MINUTES**
41

42 **Motion by Burkhalter, second by Lee**
43 **To approve the March 18, 2021 minutes as submitted.**
44

45 **Voice Vote: Ayes: Unanimous**
46 **Nays: None**
47

48 **MOTION APPROVED**

49

50

51 **CALL TO THE PUBLIC** - None

52

53

54 **BUSINESS ITEMS**

55

56 **A. Proposed Residential Multiple Family Conditional Rezoning located on**
57 **parcel # 4716-08-100-014. Vector Development, The Parc at Green Oak, the**
58 **property is a vacant parcel of land located between 9198 and 9020 Maltby**
59 **Road, Brighton MI 48116. The property is currently zoned RO Research**
60 **office.**

61

62 **Representing The Parc: Howard Fingerroot**
63 **Nicki Jeffries**

64

65 Mr. Montagno explained the proposed resolution is similar to what is placed in the report
66 and based on the discussions they've had as a Planning Commission. The Planning
67 Commission did postpone action and requested staff to draft the resolution. He noted
68 the date in the 4th "Whereas" should be changed to April 1, 2021.

69

70 Mr. Marshall asked if any investigation was done regarding parking ordinances that may
71 have a similar development to see how they can work through that. Mr. Montagno stated
72 he did not find anything exactly similar but he did not do an exhaustive search, he does
73 not have a definitive answer but he did not see anything that was similar.

74

75 Mr. Burkhalter noted he visited some similar developments on the north side of Ann Arbor,
76 parking is so tight, he agreed with their earlier findings that this was probably designed
77 for an apartment complex in the 70's and 80's, where parking was 20-30' feet away. Now
78 people are parking right in front of the garages. He does not see a problem with it.

79

80 Mr. Lee stated the applicant has said they will comply with the RM zoning requirements,
81 and if that requires 10 feet of space how do they provide an option or alternative, some
82 sort of bypass or allowance for that. Mr. Montagno stated he thought as the Township
83 Planner, their interpretation has suggested that requirement is for a parking lot and not
84 for the driveway spaces. They would offer that as the solution.

85

86 Mr. Marshall stated he spent a lot of time sorting through the ordinance, and their only
87 option is to treat the approach to the garage as a driveway. He could not find any
88 prohibition in the Zoning Ordinance of parking in front of the garage door in your driveway.
89 He suggested looking at this ordinance to find a way to correct it because he is concerned
90 with parking spaces that are not in front of garages, there may have to be some
91 adjustment for one or two in each of the buildings that it is off to the side, not in front of a
92 garage. Either they need to do something with the ordinance or find some way around
93 those particular spots.

94

95 Ms. Pearsall agreed it's considered a driveway and not a parking lot. The ordinance might
96 need to be looked at and they will realize that more when they look at the site plan review.

97
98 Mr. Lee stated he is ok with that but he didn't want to set a precedence. Mr. Montagno
99 stated the requirement is each unit has 2 parking spaces, Carlisle Wortman is suggesting
100 that this is not considered a parking lot, and to meet the requirement for the 10'
101 separation, they have historically allowed a driveway space to count as a parking space
102 for a residential development.

103
104 Mr. Marshall noted the applicant has provided more parking spaces than are required, it
105 may be possible to not designate those spaces in front of the garage as parking spaces.
106 He felt it could be handled during the site plan review process. He explained he found
107 one ordinance in Northville where buildings must be set back 15' from a parking lot,
108 roadway or sidewalk, and that was the only reference he found.

109
110 Mr. Burkhalter noted on the applicant's letter listing their conditions, #8, dated April 1,
111 2021 as follows:

112
113 *"The tress to be planted in the required landscape buffer, on the west and south*
114 *sides of the project will be upsized from 6' above ground to 14' above ground*
115 *subject to the Township amending its Woodland Ordinance."*

116
117 Mr. Burkhalter noted they've discussed this and as a subcommittee it's been discussed
118 but they haven't gotten anywhere. He does not see that happening, so he doesn't see
119 where #8 will lead. Mr. Montagno stated as a condition that can be dealt with in the site
120 plan review.

121
122 Mr. Lee stated the upsizing is something they would want to do for the neighbors. He
123 would be amenable.

124
125 Mr. Fingerroot explained they cleaned up the changes to the site plan based on
126 discussions with the Planning Commission. Ms. Jeffries took into account the two
127 comments about dimensions between the building and the stormwater next door and
128 dumpster location, and confirmed the parking counts.

129
130 **Motion by Pearsall, second by Lee**
131 **To adopt the resolution recommending approval of the proposed Residential**
132 **Multiple Family Conditional Rezoning located on parcel # 4716-08-100-014.**
133 **Vector Development, The Parc at Green Oak, the property is a vacant parcel**
134 **of land located between 9198 and 9020 Maltby Road, Brighton MI 48116. The**
135 **property is currently zoned RO Research office. Adopting the Resolution that**
136 **was presented including the change of the applicant's conditions letter**
137 **dated April 1, 2021 for the Park at Green Oak and all of the items.**

138
139 **Roll Call Vote: Ayes: Unanimous**
140 **Nays: None**

142 **MOTION APPROVED**

143
144 **B. Site Plan Approval for SP03-2021 Allor Warehouse & Mini Storage parcel #**
145 **4716-29-400-011. The parcel is zoned Limited Industrial and 7.64 acres in**
146 **size. Vacant parcel is located off Whitmore lake Road.**

147
148 **Representing SP03-2021: Megan Farkas**
149 **Mike Peterson**
150 **Scott Bowers, Architect**
151

152 Mr. Montagno referenced the Carlisle Wortman review letter dated March 24, 2021. The
153 plans seem to demonstrate substantial compliance with the requirements of the Zoning
154 Ordinance. However, there are a number of comments in the review letter that should be
155 addressed, most importantly gaining a clear understanding of the proposed use of the
156 site. The comments are summarized below:

- 157
158 1. Provide an accurate total for required industrial/research building parking spaces.
159 2. The applicant must update their tree mitigation calculations.
160 3. Provide sign permit from the Zoning Administrator.

161
162 Mr. Lee questioned the setback from the road, he is wondering how far the storage
163 building and office building are from Whitmore Lake Road. Mr. Scott Bowers stated from
164 the right of way it's about 85' to the southeast corner of the building and 99' from the north
165 property line. Mr. Lee stated his concern with these developments is that he doesn't
166 want to drive by and see a bunch of garage doors. Mr. Bowers stated building A does
167 not have the garage doors on it, it's internal, and B and C are ends without garage doors
168 facing out to the road. Mr. Lee stated the vegetation around the perimeter of the site
169 appears that it will camouflage the fronts of the buildings. Mr. Bowers agreed, the
170 landscape plan is quite extensive and should be a nice looking site. Mr. Lee he felt this
171 will look really nice.

172
173 Mr. Miner referenced the CES review letter dated March 26, 2021. He stated public water
174 and sewer are not available to the site and they are proposing an on site system. The
175 intended stormwater outlet appears to be the Whitmore Lake ditch which will require
176 approval from the Road Commission. The applicant has provided a detention basin with
177 sediment forebay, CES noted the applicant is proposing a pumped outlet to the Whitmore
178 Lake ditch which is not allowed under the Engineering Standards, they must have a
179 gravity outlet. Also, the non-motorized pathway plan appears to show a 10' wide pathway
180 required along Whitmore Lake Road.

181
182 Mr. Lee questioned the 10' non-motorized pathway, will that come into play with the
183 redoing of US-23? Mr. Miner stated that is correct, although he thinks that is in the
184 conceptual stage but the two paths should be coordinated. Mr. Peterson noted they will
185 work with Ms. Zawada's office regarding the pathway.

186
187 Mr. Bowers stated they want to have a good looking project and it's pretty straight forward,
188 he felt it would be good for his corner and they are not opposed to the bike path. Right

189 now they have Allor Building Company in the building, but they are looking at Comcast
190 as a possible tenant too.

191
192 Mr. Bowers confirmed they are showing detention ponds on the site plan and those plans
193 will be cleaned up.

194
195 Mr. Marshall stated there are trees shown as being saved, have those been included in
196 the tree mitigation calculations. Mr. Bowers stated yes.

197
198 **Motion by Lee, second by Pearsall**

199 **To recommend Site Plan approval for SP03-2021 Allor Warehouse & Mini**
200 **Storage parcel # 4716-29-400-011. The parcel is zoned Limited Industrial and**
201 **7.64 acres in size. Vacant parcel is located off Whitmore lake Road. This**
202 **approval is conditional based on review with staff of the design requirements**
203 **for the stormwater outlets and access for the 10' wide non-motorized**
204 **pathway and final recalculation of the tree replacement.**

205
206 **Roll Call Vote: Ayes: Unanimous**
207 **Nays: None**

208
209 **MOTION APPROVED**

210
211
212 **REPORTS**

213
214 **Chairman – None**

215 **Township Board Representative – None**

216 **Zoning Board of Appeals Representative – None**

217 **Planning Consultant – Mr. Montagno commented he hoped to talk with everyone**
218 **about the Woodlands Ordinance this week.**

219 **Correspondence – None**

220
221 **CALL TO THE PUBLIC - None**

222
223
224 **ADJOURNMENT**

225
226 Mr. Marshall adjourned the Planning Commission meeting at 8:01 p.m.

227
228
229
230 Respectfully Submitted,

231
232 *Kellie Angelosanto*

233
234 Kellie Angelosanto
235 **Recording Secretary**

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Green Oak Charter Township
Planning Commission
Electronic Regular Meeting Minutes
March 18, 2021

Approved: _____

The meeting was called to order by Mr. Smigliani at 7:00 p.m.

Per the Open Meetings Act, MCL 15.261. et seq., as amended by PA 228 of 2020, all Commissioners attending the meeting remotely were located in Green Oak Township.

Roll Call: Cris Burkhalter
 Keith Lee
 Lary Marshall
 Doug Nale
 Sarah Pearsall
 Michael Sedlak
 Lamberto Smigliani

Also Present: Paul Montagno, Carlisle Wortman
 Deborah McKenzie, Zoning Administrator
 Rick Miner, CES

APPROVAL OF AGENDA

**Motion by Burkhalter, second by Pearsall
To approve the agenda as submitted.**

**Voice Vote: Ayes: Unanimous
 Nays: None**

MOTION APPROVED

APPROVAL OF MINUTES

Mr. Burkhalter made a change to the minutes.

**Motion by Nale, second by Pearsall
To approve the March 4, 2021 minutes as amended.**

**Voice Vote: Ayes: Unanimous
 Nays: None**

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MOTION APPROVED

CALL TO THE PUBLIC - None

BUSINESS ITEMS

A. Proposed Residential Multiple Family Conditional Rezoning located on parcel # 4716-08-100-014. Vector Development, The Parc at Green Oak, the property is a vacant parcel of land located between 9198 and 9020 Maltby Road, Brighton MI 48116. The property is currently zoned RO Research Office

**Representing The Parc: Howard Fingerroot
Nicki Jeffries**

Mr. Montagno referenced the Carlisle Wortman review letter dated March 11, 2021. He explained although the proposed rezoning is not consistent with the future land use map in the Master Plan, there is justification, based on findings, that a recommendation of approval could be justified.

The Planning Commission cannot place conditions on a rezoning. According to the Section 38-542 conditions must be offered by the applicant. However, the Planning Commission can discuss the merits of the conditions that are offered and whether they are sufficient to satisfy the necessary findings needed to make a positive recommendation. If the Planning Commission takes issues with any of the conditions or the detail of the condition that would lead them towards a negative recommendation, they should let the applicant know and give the applicant the opportunity to amend their proposed conditions if they see fit.

Mr. Miner referenced the CES review letter dated March 12, 2021. CES had concerns over the retention basins ability to infiltrate water. The applicant has provided field measured data indicating that they have more than adequate infiltration rates. CES has no outstanding engineering items.

Mr. Fingerroot reviewed the plan changes that includes 5 trash enclosures, 40 deferred parking spaces and 87 deep parking spaces. Those were the issues brought up at the last meeting and how it was resolved through the sub-committee.

Mr. Fingerroot asked if the township was willing to amend the Woodlands Protection Ordinance.

Mr. Fingerroot explained he didn't have a problem doubling up a few of the recyclable dumpsters.

95 Mr. Marshall noted he ran across a problem today. In Section 38-311e, the last line for
96 the location of parking for multiple family dwellings, states "in no event shall any
97 uncovered parking space be located closer than 10' to any main building." Which is
98 problematic with the way the parking lots are currently laid out. He also has some minor
99 technical discrepancies on the drawings but this is not a site plan review and felt those
100 could be handled at a later date.

101
102 Mr. Montagno explained that section Mr. Marshall is referring to is really more focused on
103 parking lots, when this ordinance was written this style or product was not something they
104 saw, there was not the garage set up with a driveway. The conclusion he came to was
105 the intent was that they didn't have open surface parking right up to the building. In the
106 case of these buildings they will have to have a driveway to get to the garage door, so
107 they aren't going to remove the asphalt or concrete from this area. People will park in the
108 driveways just like they would in a single family home.

109
110 Mr. Fingerroot agreed with Mr. Montagno's interpretation. Mr. Marshall stated he can't
111 interpret the intent of the ordinance based on what's written and he doesn't have the
112 history of when it was revised. Clerk Sedlak stated he believed the history of this would
113 be related to fire protection.

114
115 Clerk Sedlak stated he would like to take the time to investigate. The City of Brighton and
116 Howell have many apartments like this and he would like to see how they address it. Mr.
117 Smigliani explained the City of South Lyon has a product similar as well. Mr. Fingerroot
118 explained in terms of fire, the cars in the garage would also be in issue. Clerk Sedlak
119 stated they are obligated to see if there is a method to move by this in a way that will
120 satisfy a future ordinance change. Mr. Marshall agreed.

121
122 Mr. Fingerroot asked if this is the only issue is it possible to approve it since they would be
123 in front of the Planning Commission for the site plan.

124
125 Mr. Marshall briefly shared the technical details that need correcting with Ms. Jeffries.

126
127 Mr. Nale stated he didn't know how they would stop someone from parking there, it would
128 be convenient and people do it at their own homes.

129
130 Ms. Pearsall stated she would like to see what other communities are doing to handle this
131 and she would like to see about updating the ordinance in order to be clear.

132
133 Clerk Sedlak stated he looked at #9, if parking within the project when fully developed,
134 continually exceeds capacity as recently determined by the Township, the applicant will
135 construct up to 40 additional parking spaces as determined by the Township to be
136 necessary. Who defines when the project is fully developed? He would like a definition of
137 "fully developed". And he would like the words "continuously exceeds capacity" defined.
138 Also, what would the time frame be to have the additional parking spaces constructed,
139 they need a deadline to avoid any confusion later. The size of the dumpster needs to be
140 defined and if they are having recyclables that also needs definition. He also noted the
141 dumpster orientation needs to be analyzed as far as the flow pattern.

142 Mr. Burkhalter explained the Green Oak Natural Features Map does not show the site as
143 a woodlands site area. He walked the land and he agreed it is a woodland forest, and for
144 some reason it was not put on that natural features map. It hasn't been touched in 30
145 years, it has never been built on. If more than 50% of the parcel of land is designated in
146 the Woodlands map then the applicant is not required to replace more than 30% of the
147 trees. They do have a subcommittee and he didn't know how quickly they could get that
148 done, but he wondered how they can put this aside for this project. Clerk Sedlak stated
149 it's a pretty new forest, the fact that the owner didn't maintain it is why the forest appeared
150 and was probably not at that point when the ordinance went into place, nature does take
151 over if it's not maintained.

152
153 Mr. Fingerroot felt that many of the concerns Clerk Sedlak noted could be handled at site
154 plan like the location of the dumpsters. Those are site plan issues that they will
155 incorporate.

156
157 Mr. Burkhalter stated he felt this type of project is needed in the Township. Mr. Lee agreed
158 and felt it was a good use for the site and it should go forward. Ms. Pearsall agreed, the
159 community needs this, it's good for young people getting started in the community.

160
161 Mr. Marshall stated during the preparation of the resolution he would like to make sure
162 they have an adequate solution to the parking issue raised and make sure the parking is
163 addressed.

164
165 Mr. Smigliani stated he thought there were precedent projects in the area that would show
166 the solution that is appropriate for this type of zoning. This is a newer model, and when
167 they look at apartment style living in the past it did not have garages attached and those
168 kinds of amenities that are offered today. Looking at precedence will be a good study
169 and will answer some questions to see how it's typically done.

170
171 Mr. Montagno stated they can draft a resolution in the meantime. They can reach out to
172 other communities to see how the parking is handled when there are garages. It will
173 come down to an interpretation to the wording in the ordinance.

174
175 Mr. Smigliani stated regarding #9, he would say if parking within the project exceeds
176 capacity as determined by the Township, the applicant would construct up to 40 additional
177 parking spaces. The "fully developed" and "continuously" is the problem. He felt there
178 would be more reasonable discussion than using a certificate of occupancy of the last
179 building. It would be easier to accept if there is a harder time line to it. Clerk Sedlak
180 agreed the wording "fully developed" and "continuously" should be struck completely.
181 They need a set time to get it done, it has to be reasonable, but it has to have an end.
182 Mr. Fingerroot stated he is comfortable with everything that was said.

183
184 **Motion by Sedlak, second by Lee**
185 **To postpone proposed Residential Multiple Family Conditional Rezoning**
186 **located on parcel # 4716-08-100-014, Vector Development, The Parc at Green**
187 **Oak until such time the applicant brings additional details forward and direct**
188 **staff to draft a resolution.**

189
190 **Roll Call Vote: Ayes: Unanimous**
191 **Nays: None**

192
193 **MOTION APPROVED**

194
195 **REPORTS**

196
197 **Chairman** – None

198 **Township Board Representative** – Clerk Sedlak brought the Planning Commission up
199 to date regarding the last Board meeting.

200 **Zoning Board of Appeals Representative** – None

201 **Planning Consultant** – Mr. Montagno reported in addition to the tree ordinance they
202 are working on an update to the sign ordinance.

203 **Correspondence** – None

204
205 **CALL TO THE PUBLIC** - None

206
207
208 **ADJOURNMENT**

209
210 Mr. Smigliani adjourned the Planning Commission meeting at 8:08 p.m.

211
212
213
214 Respectfully Submitted,

215
216 *Kellie Angelosanto*

217
218 Kellie Angelosanto
219 Recording Secretary

220

Green Oak Charter Township
Planning Commission
Regular Meeting Minutes
November 5, 2020

Approved: _____

The meeting was called to order by Mr. Smigliani at 7:01 p.m.

Roll Call: Keith Lee
Lary Marshall
Sarah Pearsall
Michael Sedlak
Deborah Sellis
Lamberto Smigliani

Also Present: Paul Montagno, Carlisle Wortman
Deborah McKenzie, Zoning Administrator

APPROVAL OF AGENDA

**Motion by Sedlak, second by Marshall
To approve the agenda as submitted.**

**Voice Vote: Ayes: Unanimous
Nays: None**

MOTION APPROVED

APPROVAL OF MINUTES

Mr. Marshall made changes and clarifications to the minutes.

**Motion by Marshall, second by Sedlak
To approve the October 15, 2020 minutes as amended.**

**Voice Vote: Ayes: Unanimous
Nays: None**

MOTION APPROVED

48 **CALL TO THE PUBLIC**

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Jean and Chris Pascoe, 9156 Larkspur Way – Mr. Pascoe explained a 230-unit apartment complex is proposed to the north side of their subdivision. Mrs. Pascoe stated she is very concerned regarding their property value, they have been there 25 years and she would hate to get less than what they paid for it, and she is really worried about that. If she was looking for a home and there was an apartment building behind the home, she would be out there so fast. The infrastructure is an issue, they finally got the power grid updated and adding this many people would hurt that. The roads are awful between the schools and business in that area, there would be close to 500 cars out of that one little driveway. She is also concerned about the impact on the fire department. There is also the concern for impact to the environment.

Cameron and Elizabeth Sokolowski, 7305 Goldenrod Court- Mr. Sokolowski stated a lot of their concerns are the same as Jean’s. They moved in on June 4 of this year. Huge concern is the property value, he works for a property management development and apartments tend to have a negative effect. What will this do the value of their homes? A one lane road with two stop signs, and it will be about 500 people using a stop sign road. In his eyes, despite the traffic studies he cannot see how this won’t have a huge impact. He doesn’t know how this will be post Covid-19 since people are working from home right now. Huge reason they bought here was due to the schools, he has 3 children, and this will only add more population to the school system, he does not see a good side to that with everything that is happening in education right now. These buildings take a long time to construct and a complex of this size could take years, they would have to be living with huge machinery ripping down trees and construction for the next foreseeable future. Once this goes in, what does it do to the environment? Along with the amount of noise and light that will back up to nice quiet homes.

Mike and Carolyn Toomey, 9183 Periwinkle way, Brighton - He stated he wanted to voice the exact same concern as the last two people. The property is zoned office research and it should stay that way. Property values, additional traffic on a road that is built for that type of traffic, the infrastructure is a concern and in no way is this a good idea.

Cameron and Elizabeth Sokolowski, 7305 Goldenrod Court- Mr. Sokolowski stated with the future public hearing to take place, are they here today to focus on the rezoning? Mr. Smigliani stated they are holding a public hearing, they openly introduce the topic, an overview will be provided and the township engineer will speak and then they will open the public hearing to collect feedback, nothing more will be done at this time. Mr. Sokolowski asked if any decision will be made tonight. Mr. Smigliani stated it will come back a second time for review and discussion. Ms. Pearsall clarified there is not another public hearing its just further down in the agenda.

95 **BUSINESS ITEMS**

96
97 **A. Public Hearing on November 5, 2020 at 7:00 p.m. via Zoom video**
98 **conferencing. The purpose of the public hearing is to receive comments on**
99 **a proposed Residential Multiple Family Rezoning located on parcel #4716-**
100 **08-100-014. Vector Development, The Parc at Green Oak, the property is a**
101 **vacant parcel of land located between 9198 and 9020 Maltby Road, Brighton,**
102 **MI 48116. The property is currently zoned RO Research Office.**
103

104 Mr. Montagno reviewed the Carlisle Wortman memo dated October 29, 2020. He
105 explained although the proposed rezoning is not consistent with the future land use map
106 in the Master Plan, there is justification, based on the findings, that a recommendation of
107 approval could be justified. The Planning Commission should review each of the findings
108 to determine if the proposed rezoning is appropriate before making a recommendation to
109 the Township Board.
110

111 Ms. Zawada explained the water proposed to service this parcel is by LCWA, there is
112 sanitary sewer available on Whitmore Lake Road but this parcel did not contribute to the
113 special assessment district, however, there is capacity for sanitary sewer to support a
114 rezoning. The plans that accompanied the application, show that service would be
115 provided through the parcel to the east. Any plan would have to be resubmitted to the
116 Sewer Committee for their review. The traffic impact study would not be submitted until
117 a site plan is submitted. This will come only if a rezoning was granted by the township.
118

119 Ms. Sellis asked when they are doing this analysis, it's discretionary to change the zoning
120 based on these factors. There is no obligation to go one way or another. Mr. Montagno
121 explained the findings should be the basis to make the decision, when making a
122 recommendation to the Township, it should be based on the findings of fact and provide
123 justification.
124

125 Ms. Sellis stated she always has trouble with regard to the condition or value of the
126 property in the township, that seems to be something that is measurable with facts, there
127 would be comparisons, that properties situated similarly may have an impact on the value
128 of another property, one of the suggestions would be they don't believe there would be
129 an adverse impact to surrounding neighbors, is that something they would base on
130 observations, or what is that based on. Mr. Montagno stated he can bring some data
131 back for them like comparisons. He also mentioned the applicants are in attendance if
132 they want to give a presentation.
133

134 Representing Vector Development: Nikki Jeffries
135 Bill Anderson
136 Howard Fingerroot
137

138 Mr. Fingerroot provided a power point presentation giving an overview of the proposed
139 project. They are asking to rezone the property to multi-family residential which means
140 there will be no variances needed. The buildings have been reduced in width by 4 feet
141 each, some tandem parking spaces were removed behind the garages, and an

142 unobstructed sidewalk along the east side of the main internal road was added.

143

144 Mr. Fingerroot explained he is requesting that the site be designated woodlands on the
145 Township Natural Resource Map, since the requirement is to be over 50% wooded, and
146 they exceed that, they are at 62% wooded. The tree replacement is treated differently if
147 it would be placed on the map.

148

149 Clerk Sedlak asked if they have submitted the plan for The Parc to the Township yet?
150 Ms. Jeffries stated they did submit the site plan with the rezoning application. Clerk Sedlak
151 asked if the Planning Commission does the rezoning is the applicant locked into the plan
152 that was submitted? Ms. Jeffries stated no, they have not reviewed the site plan yet.
153 Clerk Sedlak stated there is nothing to prevent the applicant from resubmitting at the
154 allowable higher number of units. Mr. Montagno stated they would need to review any
155 site plan, but there is nothing to prevent the higher density.

156

157 Clerk Sedlak stated he is very uncomfortable doing the rezoning until they have a
158 committed plan that won't change, he is very uncomfortable with this. Clerk Sedlak stated
159 he would like to see the plan committed to and submitted before they do a rezoning, he
160 is not in favor of the woodlands request, since the applicant is including the areas in
161 between the units as woodlands and that's not woodlands, so they need to go back to the
162 drawing board and show them a plan they can commit to.

163

164 Mr. Fingerroot stated they are committed to this plan and this is what they want to do, he
165 just needs to know what procedure to do.

166

167 Mr. Lee stated he shares the same concerns as Clerk Sedlak, if they zone to RM then
168 they are locked out if they meet those requirements. He wants a site plan approved
169 before they make any movement to rezone.

170

171 Ms. Pearsall asked if a conditional rezoning would lock them in? Mr. Montagno stated
172 the applicant can make conditions, and make the site plan a condition of the rezoning and
173 work through the site plan process. Ms. Pearsall stated that's what everyone is looking
174 at, she assumed Mr. Fingerroot would be willing to do those things as well, Mr. Fingerroot
175 stated absolutely.

176

177 Mr. Smigliani asked if the applicant changes the request to a conditional rezoning do they
178 have to do another public hearing? Mr. Montagno stated he did not think so, but he would
179 make sure if that's the direction the applicant wants to go.

180

181 **Motion by Smigliani, second by Sedlak**
182 **To open the public hearing at 8:02 p.m.**

183

184 **Voice Vote: Ayes: Unanimous**
185 **Nays: None**

186

187 **MOTION APPROVED**

188

189 **Kerri and Kent Anderson, 7145 Rickett Road, Brighton** – Mrs. Anderson explained
190 their property butts up to the proposed development. They have 130' on the east side
191 and 187' on the north side and are right next door to Grasshopper. They are zoned rural
192 farming and they are not happy with an apartment complex proposal here. They talked
193 when they tried to put condos in there and now here she is with the same 20-acre parcel.
194 Buildings 3, 4 and 5 will look over their property. There is a proposed dog park, and she
195 is not happy with that idea. They have not said how much rent they will be asking, will
196 there be section 8 housing? She is a retired mail carrier; many are good people who live
197 in apartments, but many are transient people that come and go. There is nothing like an
198 actual property owner. Right now, she sees nature, wildlife, and beautiful landscaping.
199 The applicant is talking about putting two or 3 pine trees, that's not landscaping, she
200 wants to keep the 50' buffer that they have built between them and that property. She
201 can't imagine 23 buildings on 20 acres. She is concerned about lighting, the traffic on
202 Maltby Road, concerned about people wandering off the property. Just a few weeks ago
203 there were hunters wandering around on the property. There would need to be an 8'
204 privacy fence and a buffer all the way around. She is really concerned with Section 8
205 housing. In all honesty, this will affect their property values. She suggested making it a
206 senior housing complex or condo's, but everything should only be one story. She is totally
207 against the apartment complex and anything over one story.
208

209 **Cameron Sokolowski – 7305 Golden Rod Court, Brighton** - He explained that many
210 of his issues after seeing the site plans mirror the prior caller. He is in development and
211 he guarantees this project will affect their home value. The area for woodlands is
212 deceptive. This is a massive building, and it doesn't bring in the greatest group of people,
213 there will be a lot of additional noise and traffic and there is not a good impact on the
214 people that reside in the community. The only benefit is to the applicant.
215

216 **Mike and Caroline Toomey, 9183 Periwinkle Way** – They have 3 main concerns,
217 property values, he is a residential realtor and can assure them that people will look at
218 those apartments when looking for a home. The roads and schools will be filled to
219 maximum capacity if they aren't already. The road would have to go under some sort of
220 review. They just redid Rickett Road, so they must endure more road construction, and
221 a dog park, they don't need anymore dogs barking. Nothing about this is a good idea.
222

223 **Don Hokenson and his girlfriend Kristi – He owns the property at 9137 Maltby Road,**
224 **9121 Maltby Road and a vacant lot adjacent to 9137 Maltby Road** - He has lived here
225 all his life, and thought this is a terrible idea, the buildings don't look anything like the
226 houses on Maltby Road. The entrance to the apartment building is directly across from
227 his home, it's completely way off base of what needs to be put in. A senior housing
228 development would be appropriate, but no two-story houses. There are a lot of mature
229 trees on Maltby Road, they could put the entrance down by KSI. He disagrees with what
230 is planned. The property has been vacant for over 30 years, there is wildlife there and
231 mature trees. He has seen this development and hopefully it's not a Section 8
232 development. This is way too small of an area for this. Terrible idea.
233

234 **Jean and Chris Pascoe, 9156 Larskpur Way** – Mr. Pascoe stated the Zoning
235 Commission has incredible power, if they change zoning, they can do anything they want

236 to the community, if on the Zoning Committee they need to ask what's in the best interest
237 to the Township. He does not think the apartment complex is a good idea. Condos or
238 homes would be better, people with ownership. He asked if they were living next door
239 what would they want. Think about if it was you would you want an apartment complex
240 built next to your property. Is there something better that could go in there other than an
241 apartment complex.

242
243 **Jean Pascoe** – She commented that the applicant doesn't care about this township and
244 the people that live here, the developer is out the pacific northwest and don't care what
245 goes on here. She has been here 25 years and a lot of their neighbors are first time
246 owners, she doesn't want to see their community lost. If this passes there will be a for
247 sale sign so fast, they will be running out of here. She is concerned with the type of
248 people that will live there, it just makes no sense. She can't believe it's being considered.

249
250 **Eli Swetland, 7288 Goldenrod Court** – He lives across the street from the back of the
251 proposed complex. He is against the project. Since it's a rezoning application does the
252 Commission look into the fact that there is only one other research office zone in the area,
253 so rezoning this would eliminate the second to last research area. Has the impact with
254 23 buildings on the sewage plan been taken into account and he didn't think the school
255 could handle 230 more students. He agreed with everyone who has spoken. An
256 apartment complex in this area does not fit the local area. There are no other multifamily
257 homes in the area, and it would be something quite new and different to be added.

258
259 **David and Lisa Meissner, 9256 Azalea Court, Brighton** – Mr. Meissner stated this
260 property seems out of place. Maltby Road has smaller homes, light industrial to
261 landscaping, to a park, a cemetery and then 23 two story buildings, it seems completely
262 out of place. For Green Oak and Brighton, the nature, the values of the property, the
263 aesthetics do not look well and having tree lines. Is it possible they could go down to one
264 story, it's too big for the area, he would love to see the traffic study. It will hurt the property
265 values. He asked that they reserve deciding until they see a better site plan and do a
266 conditional rezoning. Mrs. Meissner stated the sound and traffic are an issue and she
267 can't imagine the barrier being broken losing more trees what it would do with sound. Mr.
268 Meissner is concerned with lighting as well; the skies are getting brighter and brighter.
269 He would hope there is some regulation on lighting on and noise. Mrs. Meissner stated
270 they are losing the quaintness of Brighton, losing the small-town feel.

271
272 **William Adam, 9178 Amaranth Way** – He is completely against this idea. They have all
273 driven through Canton, they don't need to become another Canton. They are already
274 seeing it southwest of the Legacy Center, with community building going on and it's not
275 a great fit for that area. He feels bad for the people across the street and those that would
276 butt up to this property. They don't need an apartment complex in this area. It does not
277 attract the type of people they want in this area. He asked how Westland likes the
278 apartment complexes around the mall, or Wixom. There must be a better use for the
279 property.

280
281 **Mary Ellen Provenzola, 7906 Pamalane Court** – She lives on the opposite end of the
282 subdivision, she feels her neighbors' pain. They just went through a development on their

283 end of the sub where they had pine trees that were 70 years old removed in order to have
284 4 houses put up, they lost their cul de sac, they had wildlife and now they are gone. It's
285 unfair to the animals, to the environment and to the people around the area. The light,
286 you would not believe the difference in the night sky when the trees are taken down. They
287 deserve to keep their privacy. Consider if it were your home how you would feel. They
288 were ignored with that when this development went through next to their house. They
289 are beautiful homes but that's not the point.

290

291 **Kerri Anderson – 7145 Rickett** - She spoke with several of her neighbors, and not
292 everyone is comfortable or know how to do a Zoom call, so they didn't comment. She
293 was told that they are not happy with the apartment complex either, anything over one
294 story tall will be an eyesore for all of them. 23 buildings on 20 acres is ridiculous. Kent
295 and Kerri Anderson are totally against the apartment complex and so are several of their
296 neighbors.

297

298 **Elizabeth Sokolowski, 7305 Goldenrod** - She mirrored the comments Kerri made, they
299 had similar conversations with their neighbors regarding similar concerns being on the
300 Zoom meeting and making their comments known.

301

302 **Bob, 7446 Quince Court** – He hoped they are taking serious consideration on this. There
303 is Legacy on one side, and this large apartment on the other side. 23 backs up and then
304 they can't move on Rickett Road, and now the same effect on the other side, making it
305 very difficult to get through when things happen. His key point is to picture a bar bell with
306 heavy weights on either side and then people trying to exist in between. He appreciated
307 being able to comment.

308

309 **Motion by Smigliani, second by Marshall**

310 **To close the public hearing at 8:38 p.m. due to no one wishing to comment.**

311

312 **Voice Vote: Ayes: Unanimous**
313 **Nays: None**

314

315 **MOTION APPROVED**

316

317 Mr. Marshall commented there are only two areas currently zoned for RO, the other one
318 being on Kensington Road, rezoning this would eliminate RO zoning anywhere in the
319 township. They need to think about that carefully. There does not appear to be any open
320 land zoned for multiple residential other than the Legacy on Winans Lake Road, that is
321 identified as a Village Mixed Use which does allow for multiple residential, there appears
322 to be other areas in the township that is available for multifamily development.

323

324 When looking at the current zoning which is research office and multifamily, the maximum
325 building height in residential office is 50' whereas in multifamily it's 35', lot coverage for
326 research office is 35% and 30% for multifamily. the maximum amount of impervious
327 surface in Research Office is 90% and there is no value identified for multifamily. In
328 setbacks Research Office is 50' for front yard setback, and 30' for multifamily. Side yard
329 setback in Research Office is 15' and 20' for multifamily. The rear yard setback is 40' for

330 Research Office and 50' for multifamily. In addition to that there is a requirement for
331 multifamily to have an additional distance of 100' from residential property lines. From
332 that standpoint there may be an advantage for multifamily development.
333

334 The plan shows a retention pond is to be incorporated into the development, but it does
335 not appear the retention pond is on the property. He asked if that other property has to
336 be rezoned to multifamily as well. He asked if the Woodland Map is a County map. This
337 is a pure rezoning request and it's not tied to a plan. How many times have people come
338 in looking for multifamily developments that were not satisfied with their availability of land
339 within the township vs how many people came in looking for Research Office projects?
340 He would like to do some research on that.
341

342 Mr. Montagno stated he will bring that information back.
343

344 Clerk Sedlak stated that enough concerns have been brought forward for them to look at
345 and discuss.
346

347 Mr. Fingerroot explained he did include the detention parcel. He noted that Vector
348 Development is based in southeast Michigan, not in the northwest. His intention is to
349 propose the condition they use the site plan as part of this rezoning application and take
350 anyone's worry away that they would propose something else.
351

352 Mr. Lee stated his concern would be traffic on Maltby, that would be a big change from
353 where they are now.
354

355 **Motion by Sedlak, second by Pearsall**

356 **To postpone all activity for the Residential Multiple Family Rezoning located**
357 **on parcel #4716-08-100-014. Vector Development, The Parc at Green Oak,**
358 **located between 9198 and 9020 Maltby Road, Brighton.**
359

360 **Voice Vote: Ayes: Unanimous**

361 **Nays: None**
362

363 **MOTION APPROVED**
364

365
366 **B. Site Plan approval for SP 05-2020 for Oxford Recovery Center, address is**
367 **7030 Whitmore Lake Road; Property owner is Tami Peterson Tax ID #4716-**
368 **08-100-025 and part of 4716-08-100-030 the property is zoned LI (Limited**
369 **Industrial).
370**

371 Mr. Montagno reviewed the Carlisle Wortman memo dated October 20, 2020. The
372 applicant has provided a thorough set of plans, however there are some outstanding
373 issues that must be addressed. Addressing the Special Use status of the proposal and
374 working with the neighboring site on possible transportation interconnectivity are most
375 important. The following is a summary of Carlisle and Wortman's comments:
376

- 377 1. Apply for a Special Land Use Approval.
- 378 2. Provide lot coverage on site plan.
- 379 3. Tree replacement calculations must be updated using 2-inch caliper deciduous or
- 380 foot high evergreen replacement trees.
- 381 4. The regulatory status of the wetland must be provided and verified by EGLE.
- 382 5. The applicant must provide parking calculations to demonstrate compliance with
- 383 Section 38-312.
- 384 6. Relocate parking spaces lined along the proposed access road so that vehicles
- 385 won't back into the roadway.
- 386 7. Work with the developer to the west to provide vehicle and pedestrian connectivity.
- 387 8. Provide pedestrian crosswalks at entrances along the access road through the
- 388 parking lots.
- 389 9. Sidewalks should be provided along both sides of the proposed access road.
- 390 10. The planting plan and schedule will need to be updated to reflect any changes to
- 391 the tree replacement calculations.
- 392 11. Provide a photometric grid per Section 38-364 (d).
- 393 12. If any changes are proposed to the signs on site, provide sign plan in compliance
- 394 with Sign Design Standards in Section 38-405.
- 395

396 Ms. Zawada reviewed the CES memo dated October 21, 2020. She noted they have
397 seen the revised site plan. Items are still outstanding, but she has no objection if the
398 Planning Commission takes action.

- 399
- 400 1. The project is proposed to be served by public water and public sewer.
- 401 2. The intended stormwater outlet appears to be the Whitmore Lake Road ditch, use
- 402 of which will require the approval of the Livingston County Road Commission.
- 403 3. CES understands that the Applicant has retained Bergmann to perform a Traffic
- 404 Impact Study and CES awaits recommendations regarding road improvements to
- 405 be made, if any.
- 406 4. CES recommends the applicant contact the Township Supervisor regarding
- 407 additional water and sewer tap fees. The applicant should coordinate and show
- 408 the proposed sanitary and storm easements to accommodate the property to the
- 409 west with a note on who would be constructing that. The other project is not
- 410 approved but there should be some sort of indication on the plan.
- 411

412 Mr. Marshall asked if they made changes to the traffic study? Ms. Zawada stated it's very
413 common to reference previous studies, they haven't had time to look at this yet, that's
414 why she would like to be able to send this to the Road Commission and if they agree with
415 it, if the Road Commission required additional improvements, that could occur through
416 permitting.

417
418 Mr. Lee questioned the easement for the other project, if the other project would not go
419 through, shouldn't they still show an easement, should it be shown on the plan regardless.
420 Ms. Zawada stated the owner of this parcel also owns the parcel to the west and is selling
421 both of these, it's not a township requirement that they show that line, but she will make
422 the assumption the property owner would want to offer storm service to that parcel. It
423 needs to be a coordinated effort.

424 Mr. Lee stated they are removing a lot of parking that's around the Lowery building, will
425 they still have enough parking spaces to meet the parking requirements at the Lowery
426 building. Mr. Montagno stated they would need to look at those calculations.

427

428 Mr. Sedlak stated he sees this as a wonderful improvement and sees nothing but good
429 from this project.

430

431 **Representing Oxford Recovery Center: Allan Pruss**

432

Tom Beauchamp, Brivar Construction

433

Gary Markin

434

Tim Melvin

435

Craig Stockard

436

Tami Peterson, Owner

437

438 Mr. Beauchamp explained they replied with their response to the review comments and
439 issued drawings. They would like to start with Al Pruss to identify some items and how
440 they were addressed.

441

442 Mr. Pruss commented the revised landscape plan does meet the ordinance now. Initially
443 they had proposed a future road on the west side, and it's been removed. Oxford is
444 unsure of their future development plans. Regrading easement coordination, they are
445 open to comments with Atwell Hicks for The Parc at Green Oak, they are open to that, it
446 does make sense to coordinate utilities. It would set up that property to the west
447 regardless of how it's developed. He has no problem to showing the easements. They
448 started their discussions with LCRC. On a preliminary basis they are fine with the plans,
449 but they need to do a formal review. The walking paths have been increased to 10'
450 asphalt pathways. There are sidewalks throughout the site, Oxford is making it pedestrian
451 friendly for their clientele. The other comment was addressed with Lowery parking, the
452 parking is enough for that building.

453

454 Mr. Beauchamp asked if there are any specific questions, they are willing to speak directly
455 to that, this project is a basic expansion of a good community member who is providing
456 service to this area.

457

458 Clerk Sedlak stated he is happy to see it expand.

459

460 Mr. Marshall stated he would like a copy of the original special use approval, prior to going
461 through the special use approval expansion so they know what was approved originally.
462 He is not an expert on emergency vehicles, and he didn't know if they could make the
463 turn, it looks tight. Mr. Pruss stated that they do have a circulation plan which shows
464 emergency vehicles and refuse vehicles and they can maneuver throughout the parking
465 lot.

466

467 Mr. Marshall stated on one of the drawings, the architect used the 2016 Zoning
468 Ordinance, he recommended they get an updated copy and reference the right one. He
469 is concerned about the garbage truck backing up to get to the pick-up site, that seemed
470 like it might be a safety concern for pedestrians. They also show a pedestrian sidewalk,

471 through the southwest parking lot, but not on the northwest parking lot, and that is the
472 one that causes the pedestrians to cross over from the garbage truck, he wants to make
473 sure it's put together safely. He wondered if there should be a north/south sidewalk to
474 connect from the parking lot sidewalk to the sidewalk along the side of the building. It
475 didn't seem like there were any access points to connect. The southeast parking lot
476 extends into the side yard setback and he didn't get a chance to verify if that was legal or
477 not.

478
479 Mr. Pruss stated he can look for a different location for the dumpster. Mr. Pruss confirmed
480 the properties would be joined.

481
482 Mr. Marshall as a result of the plans and the separation of the Lowery building to the west,
483 a new retention basin is shown on the Lowery land, is that something that is handled
484 administratively? Ms. Zawada explained an administrative review will be done
485 separately.

486
487 Mr. Marshall asked if the future driveway out to Maltby Road is being approved with this
488 plan or since it's identified as a "future" should that be looked at when they get to it. Mr.
489 Pruss stated that's been removed.

490
491 There were no further comments and Mr. Smigliani closed this business item.

492 **REPORTS**

493
494
495 **Chairman** – None

496 **Township Board Representative** – Clerk Sedlak brought the Board up to date regarding
497 the last Board meeting and the election.

498 **Zoning Board of Appeals Representative** - None

499 **Planning Consultant** - None

500 **Correspondence** – Ms. McKenzie explained there will be a public hearing at the next
501 Planning Commission meeting for Oxford Recovery.

502 **CALL TO THE PUBLIC**

503
504
505 **Kerry Anderson 7145 Rickett Road** – She spoke earlier regarding the multifamily unit
506 and ended up staying on to listen. She has no problem with the Oxford Center moving
507 forward. She found out that the Oxford Center and multifamily unit are using the same
508 road study. If the traffic study was done this year, it's not accurate because it was either
509 done during Covid lockdown or Covid slow down. The school buses are not running like
510 they were, and at home learning is taking place. If they reference some of the previous
511 road studies, there has been a lot of development going on especially with the Legacy
512 Center. They almost need to wait until we get back up and running as a country. On
513 Rickett Road and Maltby from 2:30 p.m. on gets extremely business. Maltby Road is
514 bumper to bumper. The road study has her concerned. Maltby Road is crumbling now,
515 getting more traffic on that road especially a multifamily unit would be detrimental.

516
517 **Eli Swetland, 7288 Goldenrod Court** – Some of his neighbors were talking about the

518 inability of some of his other neighbors getting on the Zoom call to voice their concerns.
519 He wondered if Green Oak Township has more clear instructions on how to set up
520 Zoom to try and help people get educated to make their public comments and
521 voice their concerns. Mr. Smigliani explained there are training sessions people can
522 take on Zoom. The Township could provide limited assistance. Also, if people cannot
523 attend the Zoom meetings and call in, additional information can be provided by writing
524 letters to the Township. Those letters are placed in the Commissioners packet of
525 information. They can also email their concerns to the Township.

526

527 **ADJOURNMENT**

528

529 Mr. Smigliani adjourned the Planning Commission meeting at 9:30 p.m.

530

531

532

533 Respectfully Submitted,

534

535 *Kellie Angelosanto*

536

537 Kellie Angelosanto

538 Recording Secretary

539

McKenzie, Debra

From: Josh Holowicki <josh.holowicki@gmail.com>
Sent: Monday, November 23, 2020 9:36 AM
To: McKenzie, Debra
Cc: Joe Otis; William Drabing; ozanich3@gmail.com
Subject: Property Re-Zoning- Maltby Road

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Debra,

I hope you are doing well and looking forward to a great Thanksgiving with family! I live at 7402 Wisteria Way in the Southeby Square Neighborhood at Rickett and Maltby. I am also the HOA President representing 180+ single family homes in the Southeby Square, Hodges Green, Abby Knoll and Fisher's Glen neighborhoods. We understand there is a proposal on the table for the re-zoning of property on Maltby Road between the cemetery and Grasshopper Gardens that would allow for a multi-building, multi-unit apartment complex to be constructed. Many of our residents attended the November 5th virtual meeting to listen and share concerns for this development but I wanted to follow up myself. I expect you will likely receive many additional emails and or calls regarding this matter in the coming days.

Ultimately, I don't believe any of us want to stop appropriate development in our area but we want to be responsible in that development. One of the many things I'm sure we all love about our community is the incredible amount of natural land that surrounds us and we don't want to pour concrete on every square inch of our township. However, we do understand the many positive impacts proper development brings. Frankly, I spent a significant part of my early career in the building and development industry and continue to be involved in large development projects across the country.

The consensus among our HOA at this point is complete opposition to a multi-unit apartment complex. We do not believe this type of development is at all appropriate for our area and we see a long list of negatives against a very short list of positives. From the increased traffic and noise it brings to the type of residents these developments tend to attract, it is just not something we are willing to support. However, in the spirit of seeing appropriate development in our area I'm sure our HOA could get behind something more in alignment with our area and after some conversations with residents, I would like to offer a few suggestions of developments and zoning that would get a significantly higher level of support from our HOA residents.

The current zoning of the property as "research office" would certainly be appropriate and attract a higher end office community which seems very attractive. If re-zoning is what the property needs in order to see development, single family homes with a price point starting around \$375,000 would also be something we could support. I would even go so far as to say a high-end condominium/town home development would be something we could get support for, so long as the development is a "for sale" and not a "for rent" community. If the focus of the property is to be on re-zoning for residential, one that is not focused on a concentration of residential rentals would be appropriate.

Thank you for your consideration on these concerns and if you would like to talk further with me and/or our HOA board to discuss how we can get support from our community for a development, please let us know. We're happy to work together!

My email is of course attached and my cell is 734-660-2197. Thanks again!

Josh Holowicki

--

Josh Holowicki
C: 734.660.2197

McKenzie, Debra

From: Connie M <conniem023@gmail.com>
Sent: Friday, November 27, 2020 8:48 PM
To: McKenzie, Debra
Subject: Rezoning of Green Oak Property on Maltby Road near Rickett Road

Ms. McKenzie,

I am writing to you to express my feelings in regards to the proposed rezoning of the property on Maltby Road near Rickett Road. I am strongly opposed to the rezoning proposal for a multi-family and multi-building complex. I do not believe a development of this nature is a positive for our community. The amount of traffic that the proposed development would create would be very detrimental to our community. Although I prefer to keep the wooded area as is, I realize that development might be inevitable. I urge you to keep the area zoned as is. After living in this community for over 25 years I have seen a tremendous amount of development and many changes in this area. None have such a negative impact that I believe this type of development would create.

Thank you for your time and attention.

Connie Mond
7700 Goldenrod Court
Fisher's Glen Subdivision

McKenzie, Debra

Place in Packet Parc of green oak

From: Josh Holowicki <josh.holowicki@gmail.com>
Sent: Monday, November 23, 2020 9:36 AM
To: McKenzie, Debra
Cc: Joe Otis; William Drabing; ozanich3@gmail.com
Subject: Property Re-Zoning- Maltby Road

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Debra,

I hope you are doing well and looking forward to a great Thanksgiving with family! I live at 7402 Wisteria Way in the Southeby Square Neighborhood at Rickett and Maltby. I am also the HOA President representing 180+ single family homes in the Southeby Square, Hodges Green, Abby Knoll and Fisher's Glen neighborhoods. We understand there is a proposal on the table for the re-zoning of property on Maltby Road between the cemetery and Grasshopper Gardens that would allow for a multi-building, multi-unit apartment complex to be constructed. Many of our residents attended the November 5th virtual meeting to listen and share concerns for this development but I wanted to follow up myself. I expect you will likely receive many additional emails and or calls regarding this matter in the coming days.

Ultimately, I don't believe any of us want to stop appropriate development in our area but we want to be responsible in that development. One of the many things I'm sure we all love about our community is the incredible amount of natural land that surrounds us and we don't want to pour concrete on every square inch of our township. However, we do understand the many positive impacts proper development brings. Frankly, I spent a significant part of my early career in the building and development industry and continue to be involved in large development projects across the country.

The consensus among our HOA at this point is complete opposition to a multi-unit apartment complex. We do not believe this type of development is at all appropriate for our area and we see a long list of negatives against a very short list of positives. From the increased traffic and noise it brings to the type of residents these developments tend to attract, it is just not something we are willing to support. However, in the spirit of seeing appropriate development in our area I'm sure our HOA could get behind something more in alignment with our area and after some conversations with residents, I would like to offer a few suggestions of developments and zoning that would get a significantly higher level of support from our HOA residents.

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Thank you for your consideration on these concerns and if you would like to talk further with me and/or our HOA board to discuss how we can get support from our community for a development, please let us know. We're happy to work together!

My email is of course attached and my cell is 734-660-2197. Thanks again!

Josh Holowicki

--

Josh Holowicki
C: 734.660.2197

McKenzie, Debra

From: broesler@dsgsteel.com
Sent: Thursday, December 3, 2020 2:50 PM
To: McKenzie, Debra
Subject: Proposed complex off of Maltby

Hello Debra Mckenzie,

I am writing you this email to express my concern/opinion on the proposed apartment complex to be built off of Maltby. I am a resident of the area and my address is 7355 Goldenrod Ct and I just want to have my vote/say in this matter and it is that I completely disagree to having an apartment complex be built on this land. I see no good reason for this to happen. I feel this will bring down the property values in the surrounding areas. There are a tremendous amount of homes in this area that will be financially affected by there properties losing value. I also have a big concern with traffic, as of now the traffic backs up past our subdivision opening and many times this is from Legacy down the road. The amount of traffic this would cause at the 4 way stop of Maltby and Rickett would be staggering along with Maltby and Whitmore lake. We also have a very nice wildlife area with these woods and putting such a big development would have a big impact on that also. I do appreciate you taking the time to listen to my concerns and hope you will take this in consideration when you make your decision and hopefully you will decide against the apartment complex. You are in a position that can make decisions that can have a big impact on many and I hope you will listen to the residents when it comes time for a decision.

Thank you very much,
Brian Roesler
7355 Goldenrod CT
Brighton, MI 48116
313-806-2557

December 2, 2020

Ms. Debra McKenzie, MAAO, MCPPE
Green Oak Charter Township
10001 Silver Lake Rd.
Brighton, MI 48116

Dear Ms. McKenzie and the Green Oaks Township Board,

I am writing to further express my strong opposition to the rezoning of Parcel #4716-08-100-014 and the potential development of the multi-family community "The Parc at Green Oak." While we the neighboring parcels, acknowledge that the owner fully has the right to sell and/or develop this property, we strongly believe rezoning from Research Office to Residential Multiple Family and developing an apartment complex on the property would be detrimental to the community. This redevelopment would cause traffic and safety concerns, create even more strain on the local elementary school, destroy the woodlands, and potentially lower the property values of the houses adjacent to the parcel, as well as the entire subdivision located to the south of the property.

Traffic along Maltby Road and especially Rickett Road has increased over the last year, with the development of the Legacy Sports Complex Center. The traffic load will only continue to increase in the next year as many current residents return to work and the Complex completes its ongoing expansion. Installing a 230-unit development along Maltby will create havoc at the intersection of Maltby and Rickett, as well as the corner of Maltby and Whitmore Lake Rd. By increasing the traffic loads at these junctures, the current two-lane roads will not be sustainable. The Developers are marketing this development to "active adults" as "walkable" to the current shopping area. There is no current infrastructure to support this, and additionally, logistically it does not make sense (how many people do you know can walk home with their merchandise from Costco?)

Hawkins Elementary School is already busy during pick up and drop off each day. Mind you, this is during COVID, while MANY Brighton Community School students are attending the Brighton Virtual Academy. Additionally, teachers currently have full classrooms. Imagine how installing 230-units into the neighborhood would affect class-sizes, school resources, as well as again, the traffic in the area. The community has already approved a millage to improve the School District, I cannot image another passing in the coming years to support the financial burden of potentially a couple hundred new students.

As an adjacent resident, we have enjoyed the wildlife and woodlands that this vacant parcel has provided. Again, we acknowledge that the owner has the right to develop this land, and that it would impact the environment surrounding us. However, the proposed planned unit development leaves little to no coverage and woodlands to support the wildlife habitat and maintain any greenspace. In reviewing the PUD, the developer states they hope to obtain "Woodlands" designation. However, the "woodlands" that remain are greenspace within curbs and directly surrounding the buildings, with minimal tree and shrub coverage around the perimeter. In speaking with the project team to the east, for the Oxford Recovery Center, the owners of this site are doing everything in their power to save trees.

Additionally, the surrounding area would see a drastic increase in noise and light during all hours of the day.

Consequently, property values are likely to decrease in the area if a multi-family apartment complex is built. This type of structure is not consistent with the current community that surrounds it. Our neighborhood is full of residents who take great care in their homes. Multi-family structures bring tenants who have no long-term commitment to the community, no investment in where they reside, and it does not develop a local stronghold.

As my husband and I stated in the November 5 Planning Commission meeting, we do not feel rezoning this Parcel has a potential benefit to the community. Keeping this parcel zone Research Office leaves a potential space for a tech company or automotive research company that would benefit the community. It would bring younger, research driven employees, only affect traffic during business hours, would eliminate around the clock noise and light and could potentially conserve some of the surrounding woodlands.

I ask that you please take all of this into consideration as you make your decision on rezoning Parcel #4716-08-100-014. If you have any questions, or would like to seek further insight, please reach out to me at (517) 414-0544 or via email at Elizabeth.m.sokolowski@gmail.com.

Thank you for your time and consideration.

Elizabeth Sokolowski
7305 Goldenrod Ct.
Brighton, MI 48025

McKenzie, Debra

From: Alyssa Merna <amerna74@gmail.com>
Sent: Tuesday, December 1, 2020 7:32 PM
To: McKenzie, Debra
Subject: Opposition to the Re-Zoning Behind Goldenrod

Dear Debra McKenzie,

My name is Alyssa Merna and I am a resident of Green Oak Township writing to you about the re-zoning of the property behind goldenrod. My family lives on Wisteria Way and we are concerned about this re-zoning for several reasons: Loss of property value- an apartment development this close to our neighborhood will significantly lower the home values in our neighborhood.

Additionally, traffic in the area is already an issue. This area will not be able to handle the additional traffic. Especially at the intersections of Winnans and Rickett, Whitmore Lake and Maltby, and Rickett and Maltby.

It should be noted that the additional traffic from the neighborhoods being added on Winnans have already drastically increased traffic in the area- making Green Oak less desirable as a place to live, which I hate to see.

I hope you will consider the families of Green Oak who live in our neighborhood who would suffer should this re-zoning go through.

Thank you,
Alyssa Merna

McKenzie, Debra

From: Caleb Merna <cdmerna@gmail.com>
Sent: Tuesday, December 1, 2020 3:20 PM
To: McKenzie, Debra
Subject: Maltby Rd Rezoning Proposal

Hello Debra,

I understand you are the contact for any concerns reference the multi-family complex proposed for Maltby Rd. If I should be contacting someone else then please let me know.

I live on Wisteria Way close to this land parcel. I travel this section of Maltby Rd daily. My concern is the traffic impact this complex will have. What considerations are in place for the traffic?

As a current resident of Green Oak Township I would like to state I am against the rezoning proposal.

Thank you,

Caleb Merna

McKenzie, Debra

From: Colin Thomas <cthomas@thegreenpanel.com>
Sent: Tuesday, December 1, 2020 2:41 PM
To: McKenzie, Debra
Subject: Rezoned Property

Debra,

Writing to voice opposition to the proposed rezoning of wooded, vacant property between Lee Rd and Goldenrod Ct. (next to cemetery) as RM Residential Multiple.

We purchased our home in the Southey Square, Hodges Green, Fishers Glen, Abbey Knoll subdivision based on the state land across Rickett Rd. and zoned commercial property along Lee Rd and wanting to live among trees and undeveloped land having moved from Berkley, MI.

Preference would be to keep this zoned as commercial.

Thank you,
Colin

7384 Wisteria Way
Brighton, MI 48116

Our names are Kent and Kerri Anderson
7145 Rickett Road, Brighton, MI 48116
Property # 4716-08-100-027

Our property butts up to the proposed development on 2 sides. 130' on the east, 187' on the north side. We are right next door to Grasshopper Garden Center.

Back in 2014 Mr. Lowry attempted to have this same property rezoned. We attended that meeting and gave you and Mr. Lowry a copy of my letter of concern. I have attached it again for you to reference. Our opinion is still the same! As stated then, I have nothing against a portion of that property being developed. But we do have a few concerns.

We would like to reiterate that if a development is allowed to be built, then only single story units are allowed, preferably for a senior living complex.

We would like to see a 6' tall privacy fence around the property and also a large wide green belt be kept. There are many tall trees adjacent to my property. If the development can keep a portion of these tall trees, then it is our hope that we still have the 'tree view' and not 'building view' from our property. Plus the current greenbelt area is where deer and turkeys live.

Another main concern would be lighting. We do not want to see parking lot or spot lights at all. One of the beauties of living in Green Oak is being able to look outside at night and see darkness and the stars in the sky. Parking lot and building lights will take that beauty away.

Since 2014 the high traffic and poor road conditions on Maltby Rd have gotten much worse. Right now that road is way overdue for paving, not just repairs, but actual repaving. And with more residents expected in a new development something needs to be done about it. It is only a two lane road with no center turn lane. The four way stop at Maltby and Rickett is backed up daily in all directions. The stop sign on Maltby at Whitmore Lake Rd may need to be changed to a traffic light with all the added traffic.

We feel Mr. Lowry is a respected local businessman and appreciate him listening to our views as one of his neighbors. We hope if a development moves forward it will be something that all of us can agree on. Thank You for reading these letters and taking our input into consideration.

My name is Kerri Anderson and I live at 7145 Rickett Rd. Property # 4716-08-100-027
My property butts up to the proposed development on 2 sides. 130' on the east, 187' on the north side.

I moved to the Green Oak Township area because of the rural, wooded, natural landscape. Not as busy and congested as downtown Brighton, yet close to city amenities. I like to look out my back windows or sit on my deck and enjoy the many trees, flowers, abundant wildlife, privacy and peacefulness of it all.

I can certainly appreciate an owner of a vacant 20 acre parcel wanting to sell or develop it, and I know that progress is inevitable. However, after reading Mr. Lowry's "Petition For Zoning District Change" I do have some concerns pertaining to this matter and items C1,2, 3 and 4 of appendix B, Public Welfare, seem to be more just his opinion, not necessarily fact. For example, in item C4 Property value, Mr. Lowry is asked "Will change adversely affect property values in adjacent area?" His answer is 'No'. How does he know that his development will not lower my property value? I hope my property will not decrease in value, but honestly, I do not see how anyone can just state "No".

Privacy - I currently have privacy and natural woods on the 317' that adjoins the property. I am concerned about the proximity of the buildings and roadways or parking lots to my property line. I would like to know that he would put up at least a 6' tall berm and plant a minimum of 3 rows deep of adjoining pine or arborvitae trees, that are at least 8' - 10' tall, OR a 6' privacy fence and a single solid 8-10' tall privacy hedge so that I can not see the buildings or roadways. This would also give his residents a serene setting.

Wildlife - there are currently several families of turkeys and deer that live in that 20 acres. They visit my backyard almost daily. Will he be making any provisions to keep some of the wooded areas?

Final Development - I do not want to see an 'apartment' complex on this site. Apartments bring many young families. I have nothing against young families. But this would increase noise, school buses and traffic. And with Costco on the north side of Maltby, I do not feel we need the added congestion of school buses so close to the commercial area. Plus there are already plenty of apartment complexes in the area with vacant apartments.

Suggestion - I am more comfortable with a senior living complex on the 20 acres that is in line with the township master plan. There is a beautiful senior development in Novi called Meadowbrook Commons. I don't know if you are familiar with it, but it is an excellent example of senior housing. I have attached their brochure to give you some information on possible ideas for Mr. Lowry. There are roughly 10 ranch buildings with about 6-8 private entries per building. (They also have a 3 story building, but I do not wish to see any building over one story.) Ranch units have about 800 sq. ft. The complex offers very affordable senior living with many amenities. They have pull cords in the bedrooms and bathrooms that go directly to 911. Every unit has a washer and dryer, cathedral ceilings and even their own carport. It is healthy and quiet living, a smoke free and pet free community. There is an activity room for bingo, cards, etc. The complex has sidewalks and is nicely landscaped. The buildings are brick, single story. Residents must be 55 or older. The housing is a set affordable rent for middle income people. We *do* have a need for affordable middle class senior housing in our area. By affordable I mean rent around the \$900 to \$1,200 a month range. Meadowbrook Commons is not an assisted living facility but total independent senior apartment living. They are always full with a long waiting list! Good solid income for the owner!

I am a retired letter carrier. I delivered mail for over 33 years to both apartment complexes and senior living complexes. After experiencing and observing both types of housing, I feel that the senior complex would be more suitable for this development, in line with the township master plan and less disruptions to the adjoining properties.

I respectfully ask the Green Oak Township Planning Commission to have an exact use and plan for this property before approval of a rezoning. I plan on staying in Green Oak Township for many years to come. I hope whatever zoning you approve you take in to consideration my input. Thank You.



Carlisle | Wortman
ASSOCIATES, INC.

117 NORTH FIRST STREET SUITE 70 ANN ARBOR, MI 48104 734.662.2200 734.662.1935 FAX

Date: October 29, 2020
December 10, 2020
March 11, 2021

**Land Use and Zoning Analysis
For
Green Oak Township, Michigan**

Applicant: Vector Development, LLC.

Project Name: PARC at Green Oak Rezoning

Location: Southeast corner of Maltby Road and Rickett Road.

Current Zoning: RO, Research Office & LI, Limited Industrial

Action Requested: Rezone to RM, Multiple Family.

Required Information: As noted in the following review.

PETITION

The applicant is requesting a conditional rezoning on a parcel with parcel ID number 16-08-100-014. The application also includes a portion of the adjacent LI-Limited industrial property to the east, which is to be used as the stormwater pond. The property is situated on Maltby Road between 9198 Maltby Road (Cemetery) and 9020 Maltby. The petitioner requests that the subject land, which is currently zoned RO, as well as the small portion of land to the east, which is zoned LI, be rezoned to RM to RM – Multiple Family Residential. Conditions were offered in writing by the applicant in a letter dated February 17, 2021.

SITE DESCRIPTION/CURRENT USE

The subject parcel is 21.42 acres in size. The site is roughly rectangular in shape with approximately 680 feet of frontage on Maltby Road and an approximate depth of 1,300 feet. There is no development on the site. The site consists of open space and wooded areas. The

surrounding area to the east is currently open space with several residential lots to the north, west, and south. A landscape supply company is located at the northwest corner.

Figure 1. Aerial Image of Site and Surroundings

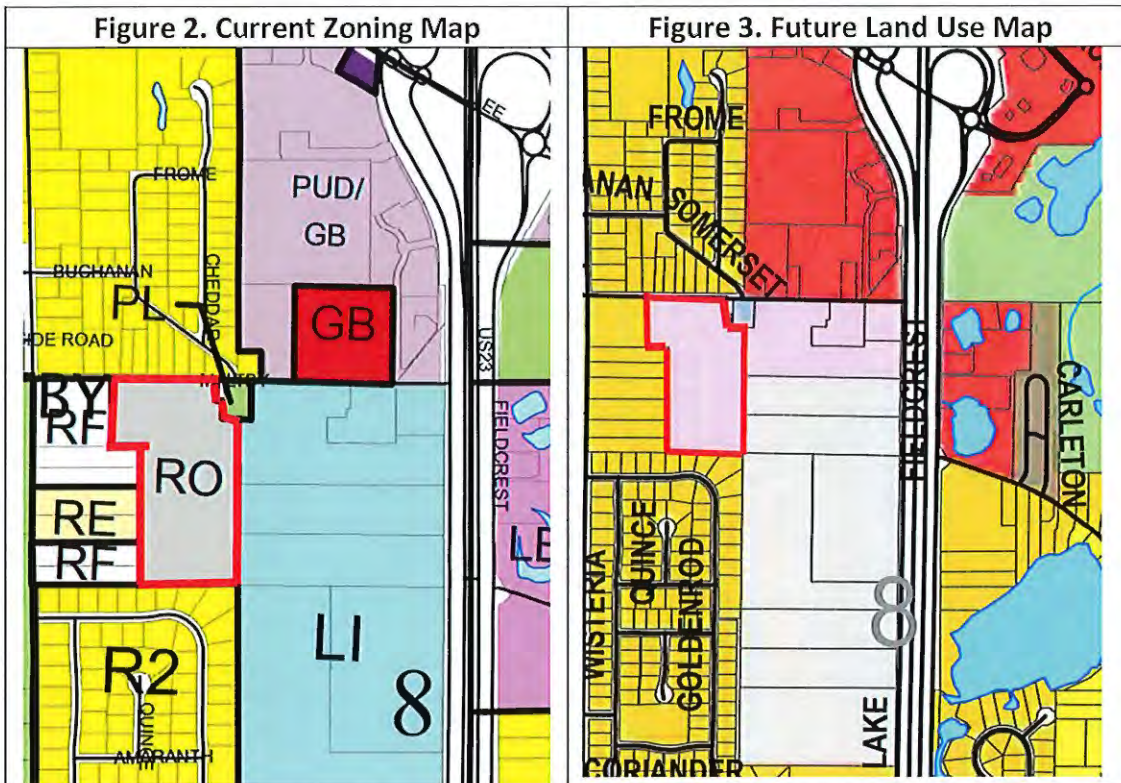


SURROUNDING ZONING AND LAND USE

The following chart compares zoning, future land use designation, and existing land use surrounding the subject parcel.

	Current Zoning	Future Land Use Designation	Existing Land Use
Subject parcel	RO – Research Office / LI Limited Industrial	RO – Research Office	Vacant Land / Open Space
North	R2 – Single Family	Suburban Density Residential	Residential
South	R2 – Single Family	Suburban Density Residential	Residential
East	PL – Public Land LI – Limited Industrial	Research Office Public – Institutional	Vacant Land / Open Space
West	RF – Residential Farming RE – Rural Estates	Suburban Density Residential	Residential

MASTER PLAN



As noted in the table above and depicted in the current zoning map, Figure 2, the subject site is in the RO, Research Office zoning classification. Figure 3 depicts the future land use map from the adopted 2014 Green Oak Township Master Plan. The Future Land Use Plan designates the parcel as Research Office.

DEVELOPMENT POTENTIAL

Current Zoning

The intent of the RO zoning classification is to provide for research and office uses in a planned development. When located in the RO district, such uses are to be developed in a manner which will complement neighboring land uses and the community, while at the same time provide for the necessary nonmanufacturing uses such as corporate office and research facilities. Dimensional regulations of note for this district include maximum building height of 3 story or 50 feet, 35% lot coverage, 90% impervious surface, and 1- foot side yard and 40-foot rear yard setbacks.

Proposed Zoning

The intent of the RM district is to primarily accommodate sites for two-family and multiple-family dwelling structures and related uses, which will generally serve as zones of transition between nonresidential districts and lower density single-family districts. The RM district is further provided to serve the limited needs for the apartment type of unit in an otherwise low-density single-family community. Due to its buffering characteristic between residential and nonresidential uses, the RM district is intended to provide a residential area which is low rise in character, yet provides greater density by allowing increased building coverage in the most intense single-family residential district.

In accordance with Section 38-542 of the Zoning Ordinance, the applicant has provided proposed conditions to the rezoning in writing in a letter dated February 17, 2021. There are eleven (11) conditions proposed. The conditions limit the development potential by indicating that there will be no more than 23 buildings, and no more than 230 units. The 6th condition states, *"The parcels will be developed substantially in accordance with the site plan and landscape plan prepared by Atwell as the same be modified based on the recommendations of the Township's consultants and the conditions for approval requested by the Green Oak Township Planning Commission."* The plan includes twenty-three (23) two-story multiple family residential buildings containing 230 units. Proposed buildings are 2 stories and have suburban residential style design to the proposed façades. There will be a clubhouse/leasing office with a pool and parking. There is a proposed park area near the front of the development, which is roughly 1/10 of an acre in size. This area provides parking and access to the Plains Cemetery owned by the Township. Providing access to and parking for the cemetery is also explicitly listed as a condition in the letter. The development has one (1) proposed access point on Maltby Road.

Since the last time this project appeared in front of the Planning Commission the applicants have met with the appointed subcommittee to discuss particular concerns about the plan. Two of the major concerns brought up at those meetings were parking and trash collection. The applicant is now showing 6 dumpster locations spread throughout the site. They have also shown 80 new parking spaces throughout the site, including 24 near the club house, another 16 surrounding the little park near the cemetery, and 67 spaces spread throughout the development. Additionally, another condition has been added to the list of conditions indicating that "if parking within the project as fully developed continuously exceeds capacity, as reasonably determined by the Township, the applicant will construct up to 40 additional parking spaces as determined by the Township to be necessary. The locations of the additional parking spaces are shown on the site plan." These 40 additional spaces are shown as deferred on the west side of the site. It appears that even without the 40 additional spaces there are sufficient guest spaces with the 80 new spaces. This condition gives the township a mechanism if there are ever persistent parking issues.

If there are still particular concerns about the plan that relate to the ability of the proposed plan as a condition to support the findings for rezoning, the Planning Commission should bring them to the attention of the applicant before proceeding with a decision. If such concerns may lead to a negative recommendation the applicant may wish to have the opportunity to revise their conditions.

ZONING AMENDMENT PROCEDURE

Section 38-537. of the Zoning Ordinance outlines the requirements and procedures to review a rezoning petition.

For the rezoning, the Planning Commission must hold a public hearing, deliberate on findings that are identified in the Zoning Ordinance in Section 38-539., and make recommendations to the Township Board to approve, approve with conditions, or deny the application.

FINDINGS FOR REZONING

In reviewing an application for the rezoning of land, whether the application be made with or without an offer of conditions, factors that should be considered by the Planning Commission and the Township Board include, but are not limited to, the following:

- a) Whether the rezoning is consistent with the policies and uses proposed for that area in the Township's Master Land Use Plan;

CWA Objective 3 in the Master Plan presents the goal to foster the development of diverse housing types that meet the physical and financial needs of current and future Township residents. Strategy number 1 is to promote the development of multiple-family and attached single family residential housing in appropriate areas. This location appears to be appropriate based on its proximity to commercially developed areas and major roadways. Public utilities are available in the area to serve a multifamily development. Additionally, there are no new multifamily housing products available to township residents. This would provide for diversity in the housing stock available in the Township. The proposed zoning is not consistent with the future land use plan. The Future Land Use Map in the Master Plan designates this area as Research Office (RO) which allows primarily offices for research and development.

- b) Whether all of the uses allowed under the proposed rezoning would be compatible with other zones and uses in the surrounding area;

CWA The proposed rezoning would be compatible with the neighboring zoning. It would serve as a transitional zone between the existing LI, Limited Industrial district to the east and the existing RE and RF zoning to the west. Multiple family would complement the R2, Single Family District along the north side of Maltby Road. Landscaping and buffering would be required between any multifamily development and less intense residential use.

- c) Whether any public services and facilities would be significantly adversely impacted by a development or use allowed under the requested rezoning;

CWA A review of the development potential indicates that the site would be adequately served by public utilities available in the area. It is expected that the site will be adequately served by other public services and facilities.

- d) Whether the uses allowed under the proposed rezoning would be equally or better suited to the area than uses allowed under the current zoning of the land.

CWA A multiple-family residential development would not be a permitted use in the existing RO, Research Office district. Uses in the RO district could include more intensive use of the land such as office buildings or research centers. Building in the RO district could be as tall as 50 feet and would not have a residential design. The conditional rezoning to RM would allow for the proposed multiple-family development and will provide a transition between more intense uses in the LI district to the east and residential uses to the west.

- e) Whether the condition and/or value of property in the Township or in adjacent communities would be significantly adversely impacted by a development or use allowed under the requested rezoning;

CWA This site is too small to have the potential to significantly adversely impact the Township as a whole, or adjacent communities based upon the proposed zoning. Research indicates that multifamily developments do not decrease the value of neighboring single-family developments.

- f) Whether or not the requested zoning change is justified by a change in conditions since the original ordinance was adopted or by an error in the original ordinance; and

CWA This site is located in relative proximity to commercial areas that have developed over the years. Multiple family in close proximity to commercial uses and highway access is appropriate. The site has been zoned RO for almost 30 years with no development interest. Additionally, though there are no other vacant areas zoned RO in the township, the uses permitted in the RO district would also be permitted in other districts such as The General Industrial and Limited Industrial districts.

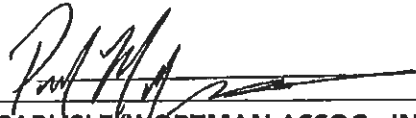
- g) Whether precedents might result from approval or denial of the petition, and the possible effects of such precedents.

CWA The subject site is an undeveloped parcel which is uniquely located between light industrial and office uses and lower density residential uses, as well as within a district served by public utilities, in proximity to the commercially developed areas in the Township. Based on the unique location and the above findings the Planning Commission could justify this rezoning without setting any negative precedent.

RECOMMENDATIONS

Although the proposed rezoning is not consistent with the future land use map in the Master Plan, there is justification, based on the above suggested findings, that a recommendation of approval could be justified. The Planning Commission should review each of the findings to, the voluntarily imposed conditions, and the development potential based on the proposed conditions to determine if the proposed rezoning is appropriate before making a recommendation to the Township Board.

The Planning Commission cannot place conditions on a rezoning. According to the Section 38-542 conditions must be offered by the applicant. However, the Planning Commission can discuss the merits of the conditions that are offered and whether they are sufficient to satisfy the necessary findings needed to make a positive recommendation. If the Planning Commission takes issues with any of the conditions or the detail of the condition that would lead them towards a negative recommendation, they should let the applicant know and give the applicant the opportunity to amend their proposed conditions if they see fit.



CARLISLE/WORTMAN ASSOC., INC.
Paul Montagno, AICP
Associate



CARLISLE/WORTMAN ASSOC., INC.
Kristoffer Canty
Planner

#175-2002

- cc. Mark St. Charles, Township Supervisor
- Debra McKenzie, Planning & Zoning Administrator
- Leslie Zawada, Township Engineer
- Tim Kedzierski, Township Fire Marshal
- Wayne Jewell, Township Building Official
- Carol Rosati, Township Attorney
- John Enos, Principal, CWA
- Applicant njeffries@sunlanddev.com
- Applicant's Engineer wanderson@atwell-group.com



March 12, 2021

Green Oak Charter Township
10001 Silver Lake Road
Brighton, MI 48116

ATTN: Ms. Debra McKenzie, Planning & Zoning Administrator and the Township Planning Commission

RE: The Parc at Green Oak – 2nd Rezoning Review – Conditional Rezoning
Parcel Nos. 4716-08-100-014; 4716-08-100-029
CES #2020-0008

Dear Ms. McKenzie and Planning Commission Members,

Civil Engineering Solutions, Inc. has completed the 2nd Rezoning Review for the above-referenced project. Plans accompanying the application are dated revised February 22, 2021. Please note the following:

1. The property is served with public water by the existing 12-inch watermain in Maltby Road, that is under the jurisdiction of the Livingston Community Water Authority.
2. Sanitary sewer is available to the property from the existing 10-inch diameter sewer located on the west side of Whitmore Lake Road. Although this parcel was not in the Special Assessment District established for this sewer, the Township's Sewer Committee and our office have confirmed available REUs and have no objection to serving this property.
3. A stormwater outlet is not available to the property and a retention basin is proposed, which will retain all water on-site and rely on infiltration as the means of dewatering. Soils information and infiltration testing submitted separately to our office and performed in two (2) locations within the basin footprint indicate infiltration rates exceeding the minimum rate required by the Township's Engineering Standards.
4. Access to the property is by way of Maltby Road, a paved road under the jurisdiction of the Livingston County Road Commission.

Please contact us with any questions or concerns. We may be reached at (248) 264-6906.

Sincerely,
CIVIL ENGINEERING SOLUTIONS, INC.

Rick Miner, P.E.
Project Manager

encl: plans

cc: Mark St. Charles, Township Supervisor, via email
Tim Kedzierski, Fire Department, via email
Carol Rosati, Township Attorney, via email
Paul Montagno, Carlisle-Wortman, via email
Craig Kantola, P.E., Atwell Group, via email
Howard Fingerroot, Vector Development, LLC, via email



October 30, 2020

Green Oak Charter Township
10001 Silver Lake Road
Brighton, MI 48116

ATTN: Ms. Debra McKenzie, Planning & Zoning Administrator and the Township Planning Commission

RE: The Parc at Green Oak – 1st Rezoning Review
Parcel Nos. 4716-08-100-014; 4716-08-100-029
CES #2020-0008

Dear Ms. McKenzie and Planning Commission Members,

Civil Engineering Solutions, Inc. has completed the 1st Rezoning Review for the above-referenced project. Plans accompanying the application are dated revised October 5, 2020. Please note the following:

1. The property is served with public water by the existing 12-inch watermain in Maltby Road, that is under the jurisdiction of the Livingston Community Water Authority.
2. Sanitary sewer is available to the property from the existing 10-inch diameter sewer located on the west side of Whitmore Lake Road. Although this parcel was not in the Special Assessment District established for the Whitmore Lake sewer, the Township's Sewer Committee and our office have confirmed available REUs and have no objection to serving this property.
3. A stormwater outlet is not available to the property and a retention basin is proposed, which will retain all water on-site and rely on infiltration as the means of dewatering. Soils information provided in two (2) areas of the site on the accompanying plans seem to indicate favorable conditions to support infiltration, but a boring log within the footprint of the proposed basin will be required with supporting infiltration data meeting Township standards before a final determination can be made. This information has not been provided at this time.
4. Access to the property is by way of Maltby Road, a paved road under the jurisdiction of the Livingston County Road Commission.

Please contact us with any questions or concerns. We may be reached at (248) 264-6906.

Sincerely,
CIVIL ENGINEERING SOLUTIONS, INC.

Rick Miner, P.E.
Project Manager

encl: plans

cc: Mark St. Charles, Township Supervisor, via email
Tim Kedzierski, Fire Department, via email
Paul Montagno, Carlisle-Wortman, via email
Craig Kantola, P.E., Atwell Group, via email
Michael J. Lowry, Applicant, via email
Howard Fingerroot, Vector Development, LLC, via email



**GREEN OAK CHARTER TOWNSHIP
PLANNING AND ZONING DEPARTMENT**

10001 Silver Lake Road, Brighton, MI 48116
Phone: 810-231-1333 ext.104 Fax: 810-231-5080

APPENDIX A

Property Identification
No. 16-08-100-014

Date 10/05/2020
Case # _____

PETITION FOR CHANGE OF ZONE

**TO THE TOWNSHIP PLANNING COMMISSION AND TOWNSHIP BOARD OF
GREEN OAK**

I. Property Information

A. The undersigned applicant does hereby petition to change the zoning of the following legally described property (Use an attached sheet if necessary); -

See legal description on plan Cover Sheet

B. Situated at the following address: Maltby Rd between 9198 Maltby (cemetery)
and 9020 Maltby (Grasshopper Gardens)

C. The applicant requests that the Zoning Ordinance be amended to reclassify this property from zone RO-Research Office
to zone RM - Multi-Family Residential

to permit the erection of (State proposed use, if known) _____
Twenty three (23) two story multiple family residential buildings containing
230 units.

D. A plot plan of this property, showing both existing zone boundaries and those proposed, is hereto attached and made a part of this petition.

E. Said property has the following deed restrictions affecting the use thereof:
N/A

Said deed restrictions will expire on _____

II. The Answers To The Following Must Be Made Complete and Full

A. Such change is necessary for the preservation and enjoyment of a substantial property right because; (State in detail wherein the conditions applicable to this property establish the above statement).

The establish of a new multiple family residential development is needed within the Township to provide another housing option. This development will attract new families into the township, serve as transitional zoning between office and single family residential, and connect the development to the Shoppes at Green Oak near the Lee Rd interchange.

B. Such change will not be materially detrimental to the public welfare nor the property of other persons located in the vicinity thereof because; (State in detail wherein the conditions applicable to this property establish the above statement).

The development and subsequent zoning change would not result in any material detriment to the public welfare or property of others. The proposed development aims to incorporate the residents into Green Oak Township and establish a beautifully landscaped and aesthetically appealing architectural community. It will be screened appropriately where required and conform with applicable local and county regulations.

C. Such change will be advantageous to the governmental unit where rezoning is requested because; (State in detail, with factual support reasons for the above statement of why refusing the change would be to the Township's disadvantage)

The site has been zone RO for over 29 years with no development ever occurring. Refusing to re-zone would be a disadvantage because this project would increase the tax base, extend utilities westerly down Maltby Rd, provide a housing product the Township currently lacks, serve as a Township polling precinct, provide parking for the adjacent cemetery, and include an off-site pathway.

D. Such change is needed because zoned land is not presently available elsewhere in the community or adjacent communities to permit proper location of proposed use: (State in detail this determination).

See response on page 3 of this application

III. Affidavit

A. The undersigned Michael J. Lowry says that he/she is the owner involved in this petition and that the foregoing answers and statements herein contained and the information herewith submitted are in all respects true and correct to the best of his/her knowledge and belief.

B. This application also provides authority for Township Representatives to physically view and inspect the property.

Subscribed and sworn to before me
this 5th day of October 2020
Deborah A. McLean
Notary Public

Signed Michael J. Lowry
Address: 9420 Oak Hill
Brighton MI 48116

Livingston County, Michigan
My commission expires 1-1-2025

Phone number 810-534-1608

DEBORAH ANN MELVIN
Notary Public, State of Michigan
County of Livingston
My Commission Expires Jan. 01, 2025
Acting in the County of Livingston

Response to II.D. (above)

A review of parcel zoning in Green Oak Township and the adjacent communities (City of Brighton and Hamburg Township) found very few parcels zoned for Multiple Family Residential, and of those parcels, the majority are occupied by multiple types of uses (multi-family residential, single-family residential, churches, business/retail, cemetery, etc.) with only a few vacant parcels found. There were no vacant RM parcels found in Green Oak Township. Existing RM parcels in the Township are older developments that would be considered out of date. The proposed product for this project will compliment the existing surrounding residential with a design that meets todays style trends and lifestyle habits. One RB parcel in Hamburg Township is available but has no public utilities and is located approximately 6 miles from the proposed site. The vacant R4 in the City of Brighton are either very small in size, occupied by existing uses, or are encumbered by natural features (wetlands, etc.). Based on these findings there are no appropriately zoned and sized parcels in the area that would be amenable to the proposed project use.

APPENDIX B

There must be compelling reasons for any zoning amendment, which is substantially related to the public welfare and necessity. It is not sufficient that an applicant for an amendment to the Zoning Ordinance merely show that there is no neighborhood objection to a requested amendment; nor is it sufficient that an applicant show that the amendment would enable him to gain a greater profit or income from his/her property.

A. COMPREHENSIVENESS:

1. Is change contrary to the established land use pattern? _____
No, this would serve as a transitional zoning.

2. Would change create an isolated district unrelated to similar districts; i.e., is this "spot zoning"? It will be adjacent to similar uses such as single family residential, will serve as transitional zoning.

3. Would change alter the population density pattern and thereby increase the load of public facilities (school, sewers, streets)? Yes, there would be an increase however, it is anticipated to be small. Being single ownership, items such as road maintenance would be the responsibility of the owner.

4. Are present district boundaries illogically drawn in relation to existing conditions? No, however the RO land use designation is in very low demand, this property has existed under current conditions without ever being developed.

5. Is the change in conformance with the comprehensive development plan? No, however, we have submitted a petition asking for consideration of amending the Township Master Plan to be in conformance.

B. CHANGED CONDITIONS:

1. Have the basic land use conditions been changed? _____
No, the demand is low.

2. Has development of area been contrary to existing regulations? _____
No, and this development would contribute to the surrounding uses and be transitional in nature.

C. PUBLIC WELFARE:

1. Will change adversely influence living conditions in the neighborhood? _____
No

2. Will change create or excessively increase traffic congestion? _____
A Traffic Impact Study has been provided.

3. Will change seriously reduce the light and air to adjacent area? No

4. Will change adversely affect property values in adjacent area? No

5. Will change be a deterrent to the improvement or development of adjacent property in accord with existing regulations? No

6. Will change constitute a grant of special privilege to an individual as contrasted to the general welfare? No

D. REASONABLENESS:

1. Are there substantial reasons why the property cannot be used in accord with existing zoning? The property has sat vacant for many years with very little interest with current zoning.

2. Is the change requested out of scale with the needs of the neighborhood or community? No, the proposed re-zoning will provide the transitional use and will be a positive for the community.

3. Is it impossible to find adequate sites for the proposed use in existing districts permitting such use? This is the best and most feasible site.

DO NOT WRITE BELOW THIS LINE

A. ACTION TAKEN BY TOWNSHIP PLANNING COMMISSION:

1. Date preliminary hearing held _____

2. Date public hearing published _____

3. Date public hearing held _____

4. Recommendation of Planning Commission _____

5. Date sent to County Planning Commission _____

B. ACTION TAKEN BY TOWNSHIP BOARD

1. Date acted on by Township Board _____

2. Action of Township Board _____

3. Date Zoning Map and/or Ordinance Changed _____

5. Ordinance Number _____

ADMINISTRATIVE REGULATION

The following administrative regulations shall be followed whenever an application for rezoning of land is made to the Planning Commission and/or to the Township Board, and said regulations shall be a prerequisite to the right of public hearing thereupon:

1. A 4 ft. by 4 ft. sign shall be erected in full public view along road frontage 21 days prior to a public hearing on the property which is the site of the rezoning provided, however, that if the property to be rezoned is situated on two streets or roads abutting the subject property, then two (2) signs, one for each road, shall be required. The sign shall be located no more than five (5) foot off the property line, with one (1) sign for every 600 foot of frontage or fraction thereof. The boundaries of the property shall be marked with orange flags on stakes not less than one (1) foot high above grade. The applicant shall submit a drawing of proposed sign location at the time application is made for rezoning.
2. Such signs shall be removed after the decision of the Township Board. If the Public Hearing is adjourned, the date of the public hearing shall be changed upon the face of the sign.
3. Said sign shall be exempt from the zoning ordinance governing the sign ordinance of the Township of Green Oak as mandated sign provided, however, that a temporary sign permit shall be obtained.
4. The sign shall read as follows:
 - a) At the top of the sign the words shall appear, "This property proposed to be rezoned".
 - b) The sign shall contain the name of the real property of interest asking for the zoning change.
 - c) The sign shall contain what the present zoning is at the time of petition.
 - d) The sign shall contain the proposed or requested zoning sought and amount of acreage involved.
 - e) The sign shall contain the proposed use of the land if the zoning is successful.
 - f) The date, time and place of the public hearing on the rezoning.
5. The Township shall supply the sign to the petitioner for a fee. It shall be the duty of the petitioner to erect, maintain and remove said sign; removal shall be within three (3) days after the final decision of the rezoning request.
6. This application also provides authority for Township Representatives to physically view and inspect the property.

THIS PROPERTY
PROPOSED
TO BE REZONED

Name of the Applicant: _____

Present Zoning: _____

Requested Zoning Classification: _____

Proposed Use of Land: _____

Property Area: _____

Public Hearing Date:
Green Oak Township Hall
10001 Silver Lake Road, Brighton, Michigan 48116

For more information: 810. 231-1333



THE PARC AT GREEN OAK
Planning Commission Meeting
Conditional Rezoning
March 18, 2021



PROJECT TEAM

VECTOR DEVELOPMENT

Howard Fingerroot, President
Nikki Jeffries, Project Manager

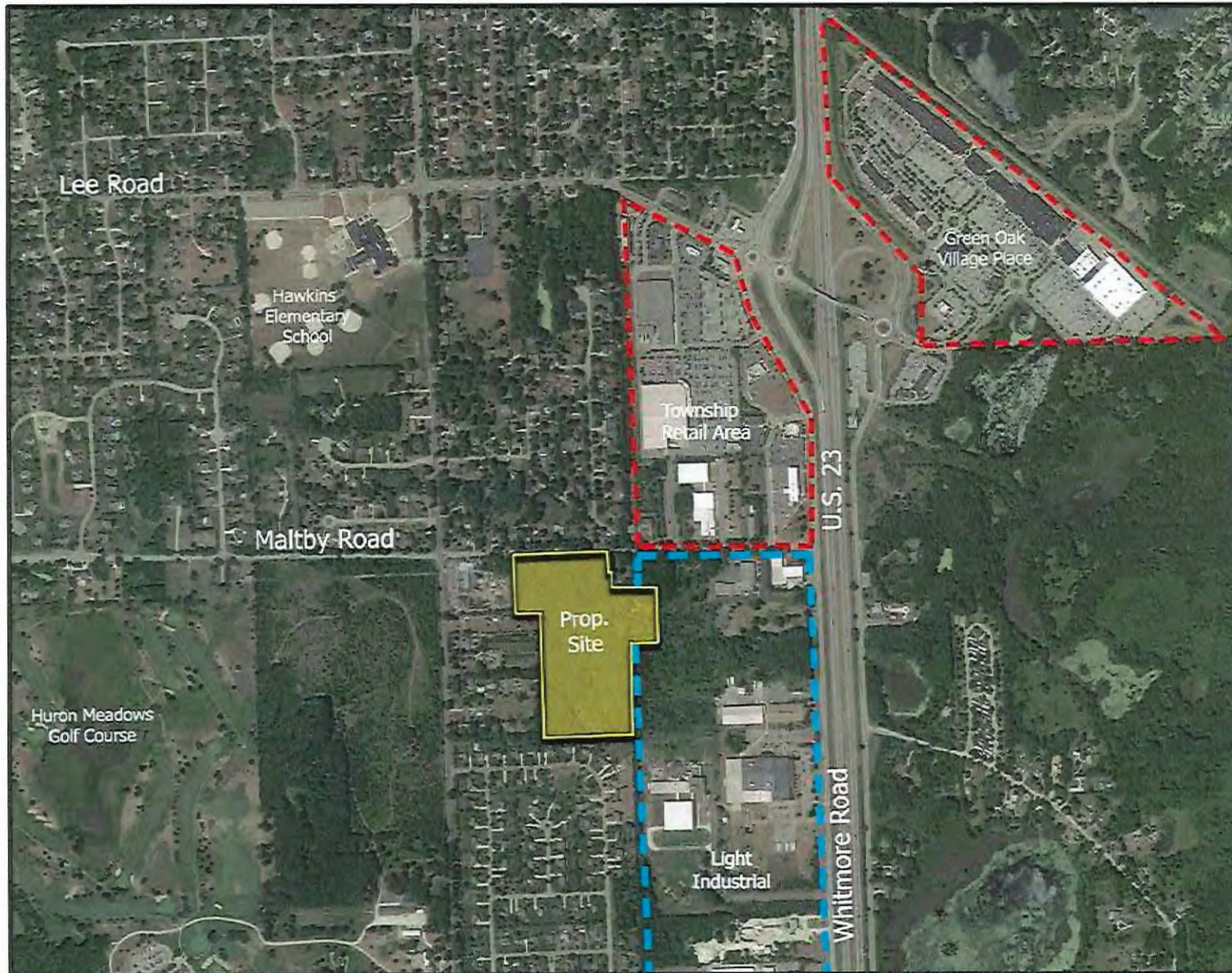
HUMPHREYS & PARTNERS ARCHITECTS

Architect
Austin, TX



Bill Anderson & Matt Bush
Planning/Engineering/Surveying
Ann Arbor, MI

SITE LOCATION



POSED PLAN – MULTI-FAMILY (RM)



Site Data

of Units: 230 units (10 units/
Total Buildings: 23 buildings
Proposed Density: 10.7 du/ac
Open Space: 9.21 acres (43%)

USING PRODUCT



Front Elevation



Left Elevation



Right Elevation



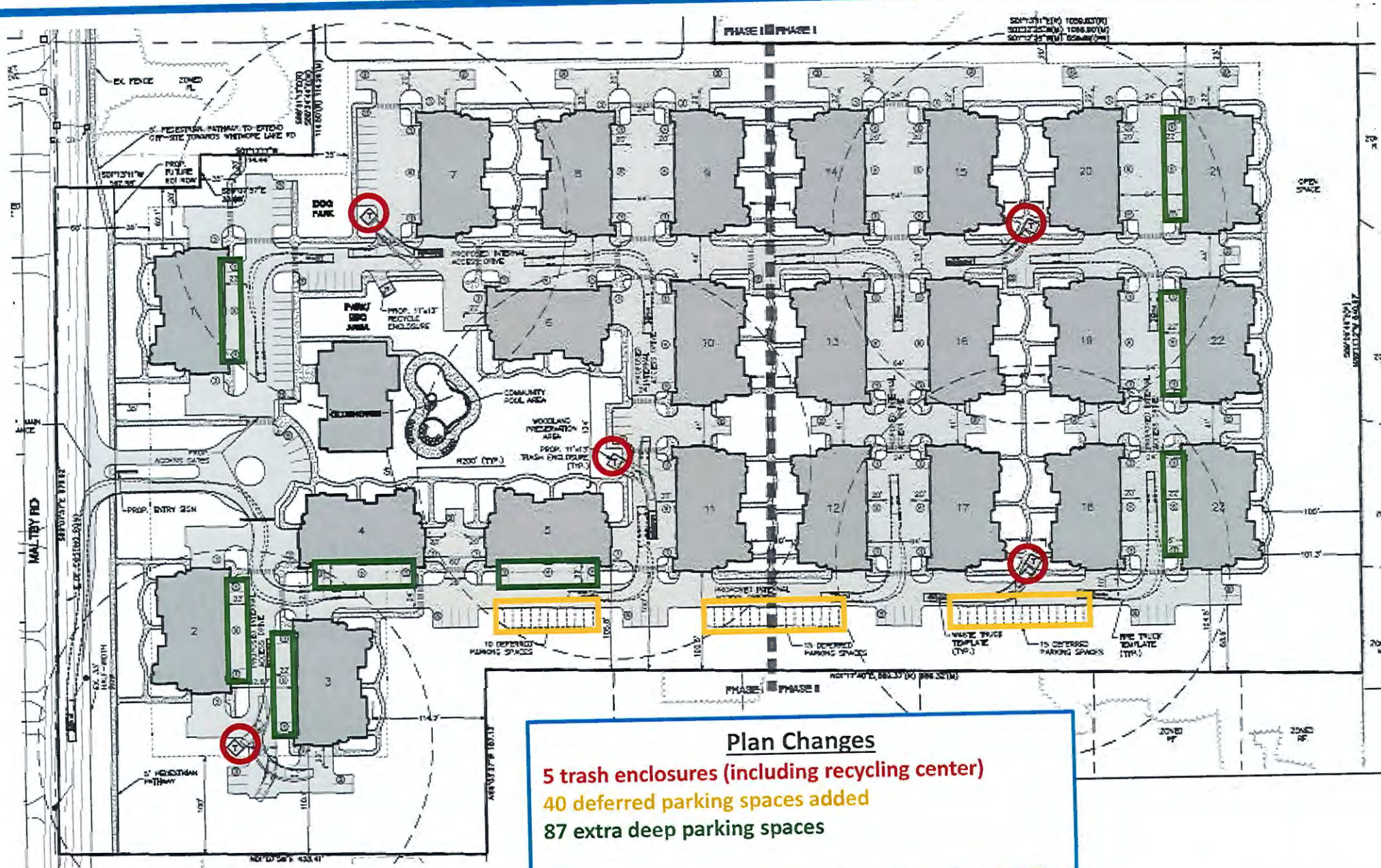
Rear Elevation

3-COMMITTEE UPDATE

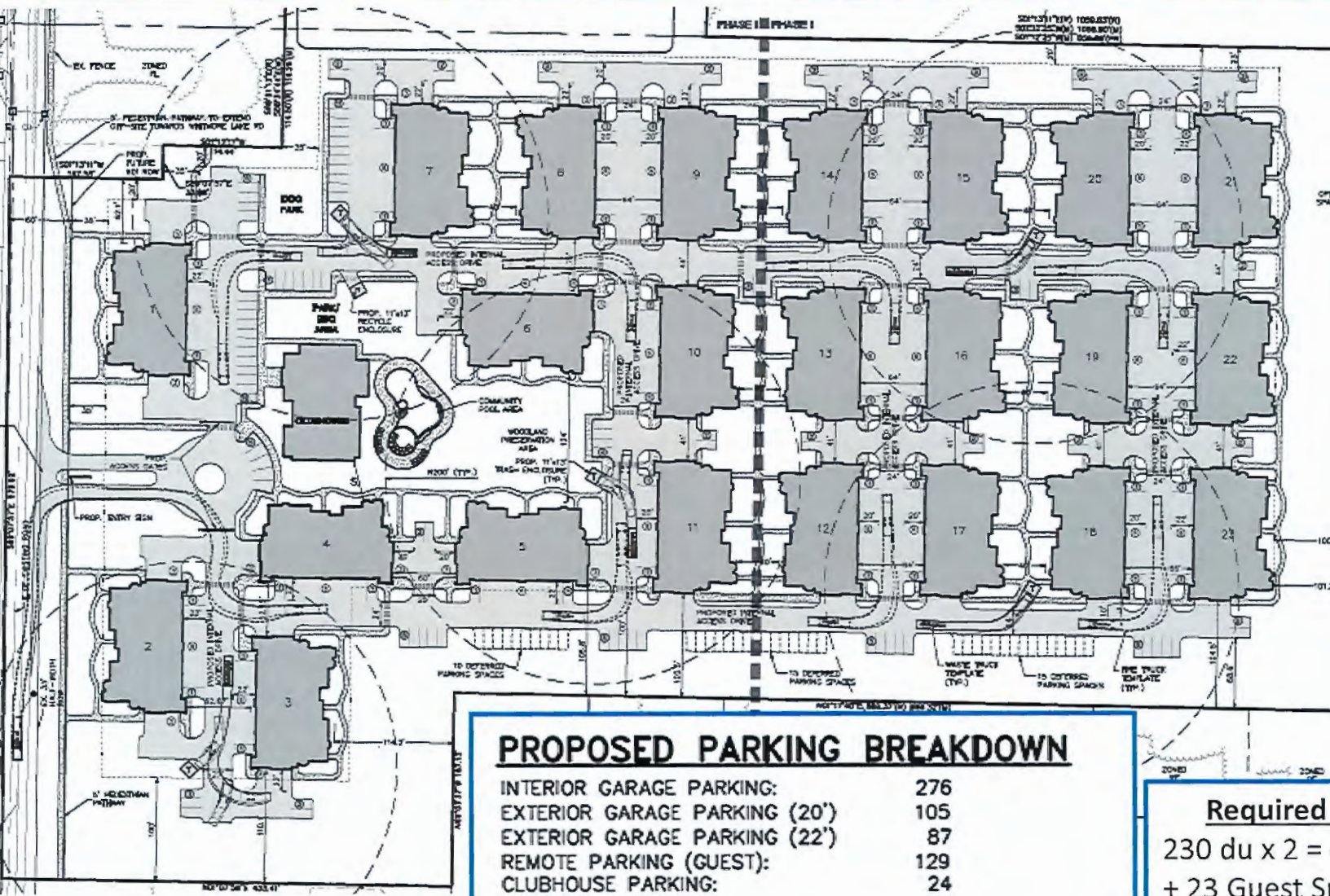
1. Number of parking spaces
2. Depth of parking spaces
3. Trash handling



PLAN CHANGES



PARKING BREAKDOWN



PROPOSED PARKING BREAKDOWN	
INTERIOR GARAGE PARKING:	276
EXTERIOR GARAGE PARKING (20')	105
EXTERIOR GARAGE PARKING (22')	87
REMOTE PARKING (GUEST):	129
CLUBHOUSE PARKING:	24
DEFERRED PARKING:	40
TOTAL PARKING PROPOSED:	661
ORDINANCE REQ'D PARKING:	502
 (REFER TO COVER SHEET FOR OVERALL PARKING SUMMARY)	

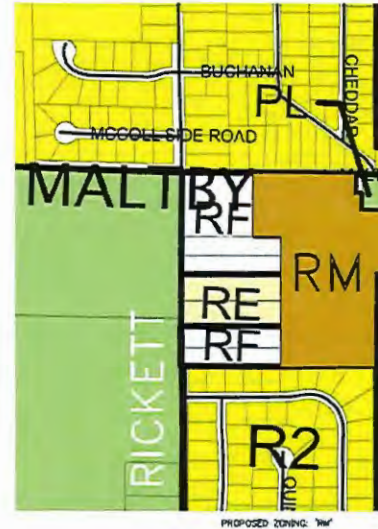
Required
 230 du x 2 =
 + 23 Guest Sp
 + 19 Clubhou
 = 502 spaces

ADDITIONAL REZONING

Additional Rezoning to Multi-Family Residential (RM)

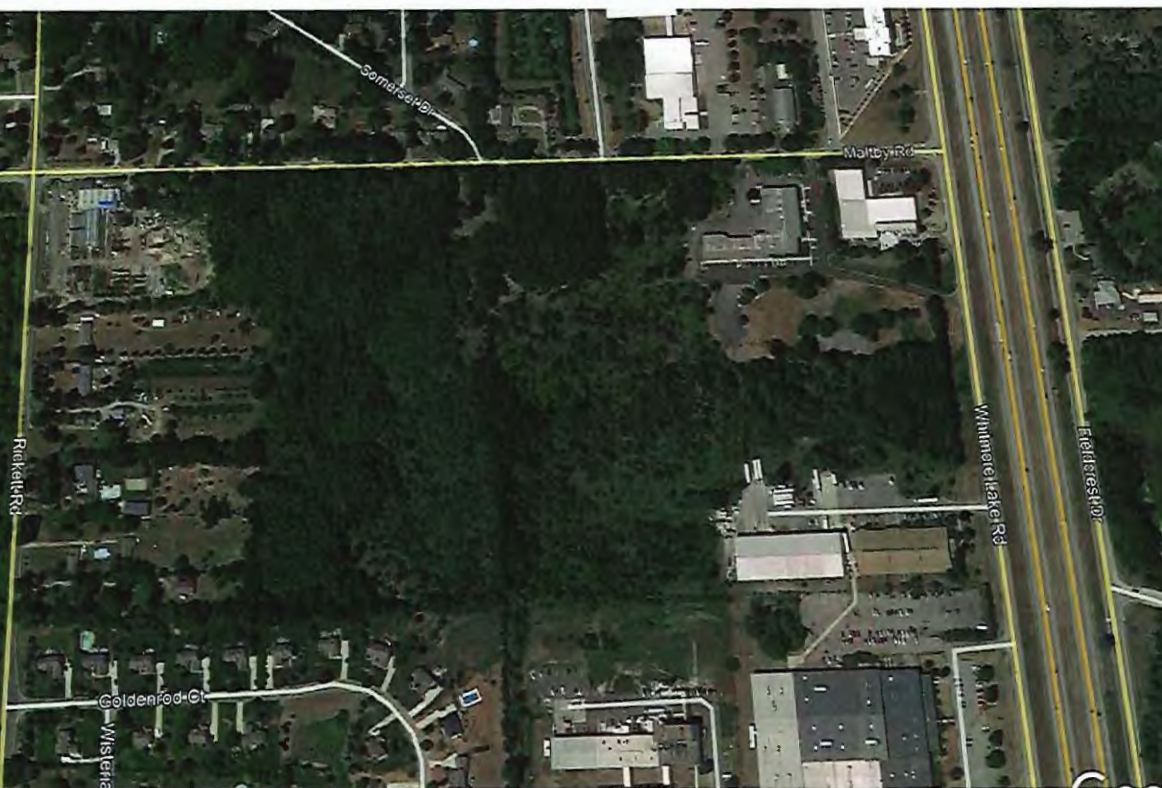
Conditions Proposed:

1. Max. of 23 two-story multi-family buildings
2. Max. of 230 units
3. Include clubhouse & amenities
4. Connect to public water & sewer
5. Provide parking & sidewalk connection to cemetery
6. To be developed in accordance with Site Plan
7. Meet all requirements for RM Zoning District
8. Buffer trees will be upsized from 6' to 14', if woodland ordinance is amended
9. Deferred parking will be added, if necessary
10. If applicant doesn't acquire land, rezoned back to RO & LI
11. Conditions may be amended at request of applicant, subject to approval of Board of Trustees



WOODLANDS

Amending Woodlands protection Zoning Ordinance Amendment



Site Aerial



March 18, 2021

Green Oak Township Planning Commission

QUESTIONS?



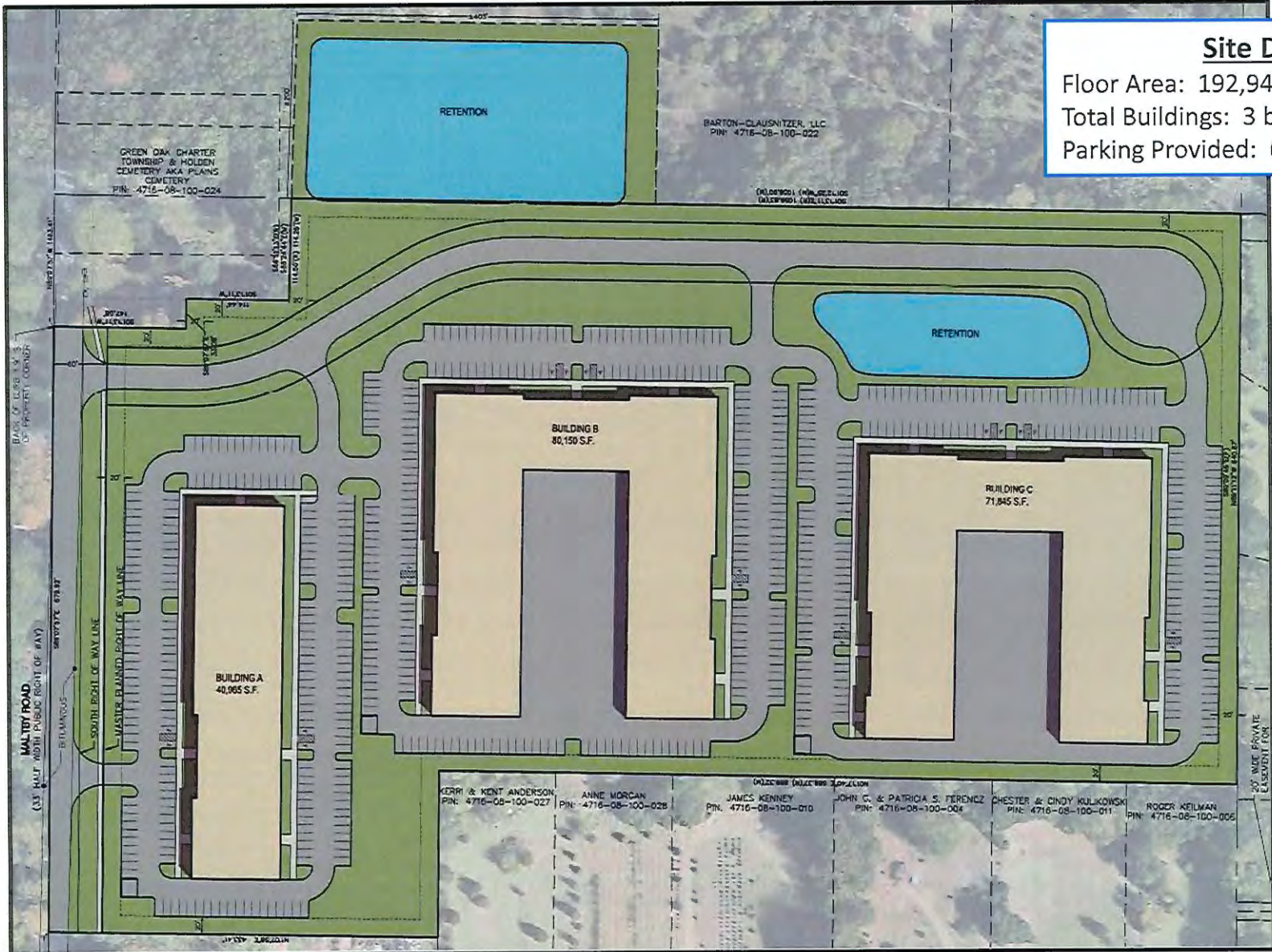
THE PARC AT GREEN OAK
Planning Commission Meeting
March 18, 2021



ING COMPARISON

	Research Office (RO)	Multi-Family (RM)
Minimum Lot Size	1 acre	3 acres
# Stories	3 stories	2 stories
Building Height	50 feet	30 feet
Setbacks		
Front Yard	50 feet	35 feet
Side Yard	15 feet	20 feet
Rear Yard	40 feet	50 feet
Adj. to SF	Same as above	100 feet
Lot Coverage	35%	30%
Maximum Impervious	90%	N/A

PARALLEL PLAN – RESEARCH OFFICE (P)



March 18, 2021

Green Oak Township Planning Commission

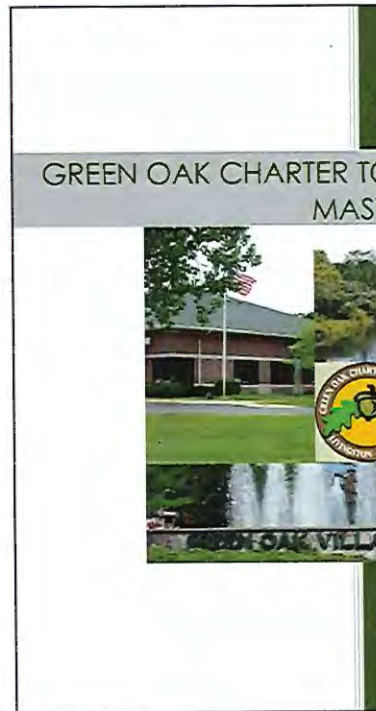
COMPARISON

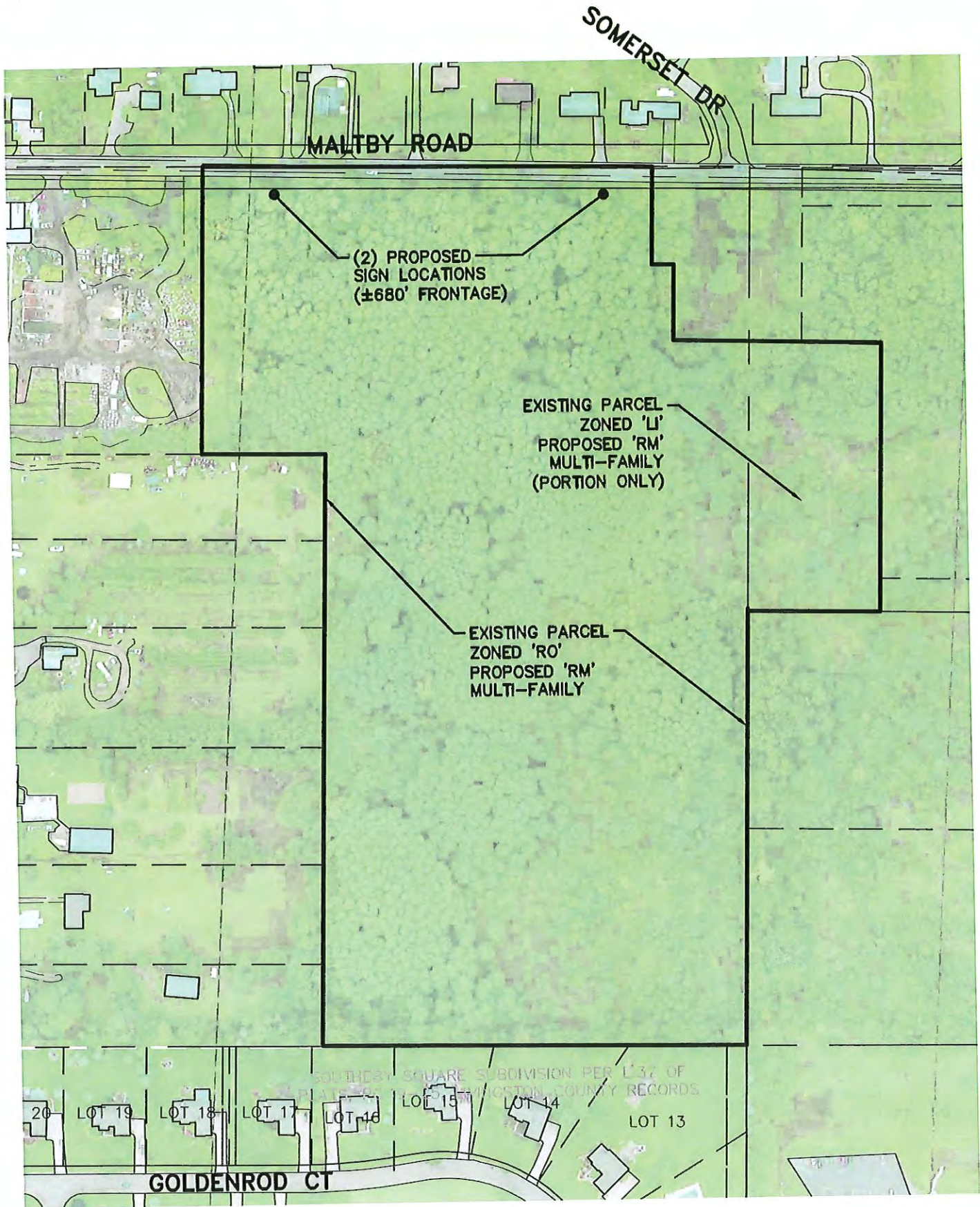
	Existing Zoning Plan (RO)	Proposed Zoning Plan (RM)
# of Units	193,000 SF	230 units
Density	N/A	10.7 du/ac
Open Space	7.7 ac (36%)	9.2 ac (43%)
Tree Preservation	0.3 ac (1%)	2.4 ac (11%)
Impervious Area	13.8 ac (64%)	11.3 ac (52%)
Average Daily Traffic	2,179 trips	1,698 trips
AM Peak Hour	208 trips	105 trips
PM Peak Hour	213 trips	124 trips

ZONING CRITERIA

Section 38-539 of the Township's Zoning Ordinance, factors considered for a rezoning include:

- consistent with the policies and uses in the Master Plan
- uses compatible with the surrounding areas
- public services and facilities NOT significantly adversely impacted
- new use equally or better suited to the area
- value of adjacent property will NOT be significantly adversely impacted
- justified by a change in conditions or by an error in the original ordinance
- no precedents result from approval or denial





REZONING SIGN LOCATION MAP

SCALE: 1" = 200'



NOTE: REFER TO GREEN OAK CHARTER TOWNSHIP P.U.D. APPLICATION PGS 5-6, "ADMINISTRATIVE REGULATION" FOR SIGNAGE REQUIREMENTS.

VECTOR DEVELOPMENT LLC
2650 Island Court
Sylvan Lake, MI 48320

April 1, 2021

Debra McKenzie
Planning & Zoning Administrator
Green Oak Township
10001 Silver Lake Road
Brighton, MI 48116

RE: Parc at Green Oak
REVISED Conditional Rezoning Request
Parcel No. 4716-08-100-014 & part of 4716-08-100-029

Dear Mrs. McKenzie,

Vector Development LLC has applied to rezone the above parcels from Research Office (RO) and Light Industrial (LI) to Residential Multiple-Family (RM). In connection with the rezoning application, and in accordance with Section 38-542 of the Township's Zoning Ordinance, the applicant desires to voluntarily offer certain conditions regarding the use and development of the property if the rezoning is approved. Previously, certain conditions were offered, and this letter is intended to supersede any previous versions.

The applicant hereby voluntarily offers and agrees to the following conditions regarding the use and development of the subject parcels if the applicant's rezoning request for the above-mentioned parcels is approved by the Township:

1. The proposed development will consist of no more than twenty-three (23) two-story multi-family buildings that will generally look like the renderings and colored elevations depicted in Attachment 1 of this letter.
2. The proposed development will contain no more than 230 units.
3. The proposed development will include a community clubhouse and amenities for its residents. Additionally, at the Township's request, the clubhouse can be used as a Township polling precinct.
4. The proposed development will connect to public water and sewer.
5. The proposed development will provide at least three (3) parking spaces adjacent to the Township cemetery for use by visitors to the cemetery. In addition, the proposed development will build a sidewalk connection in the northeast corner of the site from the above-mentioned parking spaces to the to the property line at the cemetery. The

parking spaces and sidewalk location will be shown on the Final Site Plan and the location will be approved by the Township.

6. The parcels will be developed substantially in accordance with the site plan and landscape plan prepared by Atwell attached hereto, as the same be modified based on the recommendations of the Township's consultants and the conditions for approval requested by the Green Oak Township Planning Commission.
7. The proposed development will meet all requirements for the RM Zoning District in the Township's Zoning Ordinance Schedule of Regulations (Section 38-136).
8. The trees to be planted within the required landscape buffer to the residential properties on the west and south sides of the project will be upsized from six (6) feet above ground level to fourteen (14) feet above ground level, subject to the Township amending its Woodland Ordinance in a manner that reduces the tree replacement obligations for the project.
9. If parking within the project continuously exceeds capacity, as determined by the Township, the applicant will construct up to 40 additional parking spaces as determined by the Township to be necessary. These parking spaces will be constructed by the Applicant in eight months or less after the Township requests the additional spaces. The locations of the additional parking spaces are shown on the attached site plan.
10. If the applicant does not acquire title to the parcels, the Township shall, at the request of the undersigned parcel owner, rezone the parcels back to Research Office (RO) and Light Industrial (LI).
11. The foregoing conditions may be amended at the request of the applicant, subject to the approval by the Township Board of Trustees.

We feel this project meets the criteria for a rezoning and respectfully request that this Conditional Rezoning request be placed on the next available Planning Commission agenda for their consideration. Please contact Nikki Jeffries at 248-892-0889 if you need any additional information regarding this request. I look forward to discussing this project further with your staff, the Planning Commission and the Township Board.

Sincerely,

VECTOR DEVELOPMENT, LLC

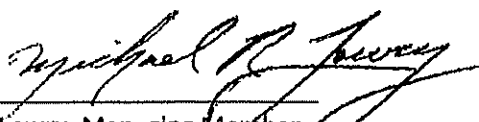
Howard Fingerroot
By: [Howard Fingerroot \(Apr 1, 2021 12:59 EDT\)](#)

Howard Fingerroot
Its: Manager

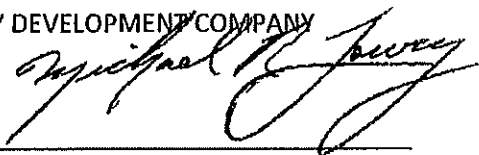
ACKNOWLEDGEMENT AND CONSENT

The undersigned owners of the parcels that are subject to the applicant's rezoning request acknowledge and consent to the foregoing conditions to rezoning offered by the applicant.

LOWRY INVESTMENT COMPANY, L.L.C.

By: 
Michael Lowry, Managing Member

LOWRY DEVELOPMENT COMPANY

By: 
Michael Lowry, President

Attachments: Proposed Building Rendering & Elevatlons and Site Plan

cc: Mark Cohn, Seyburn Kahn
Paul Montagno, Township Planner
Bill Anderson & Matt Bush, Atwell

ATTACHMENT 1
Proposed Building Rendering & Elevations



FRONT ELEVATION



LEFT ELEVATION



RIGHT ELEVATION



REAR ELEVATION



PRELIMINARY SITE PLAN

THE PARC AT GREEN OAK

SECTION 8, GREEN OAK CHARTER TOWNSHIP, LIVINGSTON COUNTY



PROJECT NARRATIVE

THE PARC AT GREEN OAK IS A PROPOSED 230 UNIT MULTI-FAMILY RESIDENTIAL DEVELOPMENT LOCATED ON THE SOUTH SIDE OF MALTBY RD WEST OF WHITEHOUSE LAKE RD IN GREEN OAK TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN. THE PROPERTY IS A VACANT WOODS (D) CURRENTLY ZONED AND MAINTAINED AS A "D" (DISCREET OFFICE). A PORTION OF THE ADJACENT "U" (LIGHT INDUSTRIAL) ZONED PARCEL IS PROPOSED TO BE INCLUDED FOR DEVELOPMENT MANAGEMENT. AS A PART OF THIS DEVELOPMENT A REVISION APPLICATION HAS BEEN SUBMITTED REQUESTING "RM" (MULTI-FAMILY RESIDENTIAL) ZONING. A PETITION HAS BEEN SUBMITTED REQUESTING A WOODLAND MAP REVISION IN TANDUM WITH THE REVISION APPLICATION.

THE SITE IS BOUNDED ON THE EAST BY A CEMETERY AND LIGHT INDUSTRIAL ZONING / LAND USES ON THE NORTH BY "R2" AND TO THE SOUTH BY SINGLE FAMILY "RE" RESIDENTIAL. THE PROPOSED MULTI-FAMILY USE IS CONSISTENT WITH LAND USE TRANSITIONS FOUND BETWEEN INDUSTRIAL AND SINGLE FAMILY RESIDENTIAL IN MANY COMMUNITIES. NO FEASIBLE VACANT TRACTS OR PROPERTIES WERE FOUND IN THE AREA THAT WOULD PROVIDE A TRADITIONALLY ZONED DEVELOPMENT LOCATION FOR A PROJECT OF THIS TYPE.

THE DEVELOPMENT OFFERS APPEAL TO A WIDER USE OF DEMOGRAPHICS INCLUDING YOUNG FAMILIES THROUGH ACTIVE ADULT HOUSING WITH SHARED SERVICES. ONE ENTRANCE IS PROVIDED FROM MALTBY ROAD WHICH IS THE ONLY EXISTING ROAD PROVIDING ACCESS TO THE SITE. THE MAIN ENTRANCE IS PROPOSED AS A DRIVEWAY ENTRY WITH A PROMINENT SIGN AND LANDSCAPED TRAVEL PAST THE COMMUNITY CLUBHOUSE.

UTILITY SERVICE TO THE SITE WILL BE VIA PUBLIC SEWER AND WATER. SEWER SERVICE TO THE SITE WILL BE VIA A SANITARY SEWER CONNECTION THROUGH THE ADJACENT PARCELS TO THE EAST. THE EXISTING SEWER ON THE WEST SIDE OF WHITEHOUSE LAKE ROAD. WATER SERVICE IS PROPOSED VIA AN EXTENSION OF THE EXISTING WATER MAIN ON THE NORTH SIDE OF MALTBY ROAD, WHICH WILL BE EXTENDED TO THE WEST BOUNDARY OF THE SITE.

STORMWATER MANAGEMENT WILL BE PROVIDED BY AN UNDERGROUND STORM SPINER SYSTEM THAT WILL BE ROUTED TO A PROPOSED RETENTION BASIN ALONG THE EAST SITE BOUNDARY. A RETENTION SYSTEM IS PROVIDED FOR THIS AREA DUE TO THE LACK OF A CLEARLY DEFINED DRAINAGE CHANNEL IN THE AREA, AND IS SUPPORTED BY THE PRESENCE OF SANDY SOILS IN THE AREA. THE RESIDENTIAL DEVELOPMENT TO THE SOUTH ALSO HAS A RETENTION SYSTEM WITH NO DEFINED OUTLET AVAILABLE, AND THERE ARE NO KNOWN ISSUES WITH THE OPERATION OF THE STORM WATER MANAGEMENT SYSTEM.

THIS PROJECT WILL BE CONSTRUCTED IN TWO (2) PHASES. THE FIRST PHASE ENCOMPASSES ROUGHLY THE NORTHERN HALF OF THE PROPERTY AND WILL INCLUDE 110 UNITS AS WELL AS THE RETENTION BASIN. THE SECOND PHASE WILL FINISH THE PROJECT AND CONSIST OF 120 UNITS.

A PEDESTRIAN SYSTEM COMPRISED OF CONCRETE SIDEWALKS LOCATED THROUGHOUT THE PROPOSED DEVELOPMENT AND ALONG THE INTERNAL ACCESS DRIVE HAS BEEN CREATED. THE PRIMARY STORMWATER MANAGEMENT RUN FOR THE SITE IS A PROPOSED RETENTION BASIN THAT WILL CAPTURE RUNOFF AND PROMOTE INFILTRATION INTO THE NATIVE SANDY SOILS RATHER THAN DIRECTING RUNOFF TO DOWNSHIP ADJACENT PROPERTIES. THUSLY REDUCING THE POTENTIAL FOR FLOODING. SIDEWALKS FROM ADJACENT SINGLE FAMILY RESIDENTIAL PROPERTIES HAS BEEN INSTALLED TO PROVIDE PRIVACY, AND THE BUILDING PRODUCT ACHIEVES A HIGH-QUALITY VISUAL AESTHETIC FROM ALL VIEW POINTS.

PROPERTY DESCRIPTION

SCHEDULE C DESCRIPTION FOR ALTA COMMITMENT FOR TITLE INSURANCE ISSUED BY FIRST AMERICAN TITLE INSURANCE COMPANY, ISSUING AGENT, LIBERTY TITLE AGENCY, COMMITMENT NUMBER: LB1816966, COMMITMENT DATE: 5/21/2016.

LAND IN THE TOWNSHIP OF GREEN OAK, LIVINGSTON COUNTY, MICHIGAN, BEING A PART OF THE NORTHWEST 1/4 OF THE NORTHWEST 1/4 OF SECTION 8, TOWNSHIP 3 NORTH, RANGE 18 EAST, GREEN OAK TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN, DESCRIBED AS FOLLOWS, COMMENCING AT THE NORTHWEST CORNER OF SAID SECTION, THENCE SOUTH 89 DEGREES 07 MINUTES 52 SECONDS EAST ALONG THE NORTH LINE OF SAID SECTION 89 DEGREES 07 MINUTES 52 SECONDS EAST 150.27 FEET TO THE POINT OF BEGINNING OF THE PARCEL TO BE DESCRIBED; THENCE CONTINUING SOUTH 89 DEGREES 07 MINUTES 52 SECONDS EAST ALONG SAID LINE 150.27 FEET; THENCE SOUTH BY BEARING 13 DEGREES 11 MINUTES 11 SECONDS WEST 149.58 FEET; THENCE SOUTH 89 DEGREES 07 MINUTES 52 SECONDS EAST 33.08 FEET; THENCE SOUTH 01 DEGREES 13 MINUTES 11 SECONDS WEST 114.44 FEET; THENCE NORTH 89 DEGREES 07 MINUTES 52 SECONDS EAST 114.50 FEET; THENCE SOUTH BY BEARING 13 DEGREES 11 MINUTES 11 SECONDS WEST ALONG THE NORTHWEST 1/4 OF THE NORTHWEST 1/4 OF SAID SECTION, 100.00 FEET; THENCE NORTH BY BEARING 13 DEGREES 11 MINUTES 11 SECONDS WEST ALONG THE SOUTH LINE OF THE NORTHWEST 1/4 OF SAID SECTION, 164.07 FEET; THENCE NORTH BY BEARING 13 DEGREES 11 MINUTES 11 SECONDS WEST 114.50 FEET; THENCE NORTH 01 DEGREES 13 MINUTES 58 SECONDS EAST, 433.41 FEET TO THE POINT OF BEGINNING.

ADDITIONAL AREA, GENERALLY DESCRIBED AS THE SOUTHWEST 200 FEET (E-W) OF 465 FEET (N-S) OF PARCEL 4716-09-100-020 (LUMBER RESIDUAL USE LOT).

NOTE: A REVEALED LEGAL FOR THE ENTIRE BOUNDARY WILL BE PROVIDED WHEN AGREEMENT AND SURVEY ARE COMPLETED FOR ADJACENT ADDITIONAL STORMWATER BASIN AREA.



SHEET INDEX

- 1 COVER SHEET
- 2 EXISTING CONDITIONS - OVERALL
- 3 EXISTING CONDITIONS
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- 5 UTILITY PLAN
- 6 OFFSITE UTILITY & SIDEWALK PLAN
- 7 GRADING PLAN
- 8 STORM WATER MANAGEMENT PLAN
- 9 REDONAL & NATURAL FEATURES IMPACT PLAN
- 10 DETAIL SHEET
- 11 BUILDING ELEVATIONS
- P-1 PARALLEL & DENSITY PLAN
- L-1 LANDSCAPE PLAN
- L-2 ORSIDENTAL PLAN
- L-3 LANDSCAPE DETAILS

DEVELOPMENT TEAM

PROPERTY OWNER
4716-09-100-014
LONEY DEVELOPMENT COMPANY
9400 MALTBY DRIVE
BRIGHTON, MI 48116
CONTACT: MICHAEL H. LONEY
EMAIL: MHL@LONEYDEVELOPMENT.COM

APPLICANT/DEVELOPER
VECTOR DEVELOPMENT, LLC
ONE TRINITE SQUARE, SUITE 100
TOWNSHIP OF GREEN OAK
CONTACT: HOWARD FINEGOOD
EMAIL: HFIN@VECTORDEVELOPMENT.COM

PLANNER/CIVIL ENGINEER
311 N. MAIN STREET
GREEN OAK, MI 48116
CONTACT: HOWARD FINEGOOD
PHONE: (734) 494-4000
CONTACT: MATHIAS RIEDEL, P.E.
EMAIL: MATHIAS@ATWELL-GRP.COM

SITE DATA:

SITE AREA (GROSS)	20.58 AC
ADDITIONAL RET. AREA	+3.95 AC
MALTBY ROW	+58.6 AC ZONED/LANDSCAPE BUFFER/ROW
TOTAL SITE AREA (NET)	21.42 AC
EXISTING ZONING	R0 - RESEARCH OFFICE, U - LIGHT INDUSTRIAL
PROPOSED RE-ZONING	RM - MULTI-FAMILY RESIDENTIAL
DENSITY	
TOTAL SITE AREA	933,050 S.F. (21.42 AC X 43,560 S.F./AC)
TOTAL BUILDINGS	23
UNITS PER BUILDING	4 ONE BEDROOM / & TWO BEDROOM = 10 UNITS
DENSITY	230 UNITS / 21.42 AC = 10.74 UNITS/AC
ONE BEDROOM UNITS	REQUIRED: 2,500 S.F./UNIT PROPOSED: 47 (232,000 S.F. REQ'D)
TWO BEDROOM UNITS	REQUIRED: 5,000 S.F./UNIT PROPOSED: 155 (800,000 S.F. REQ'D)
TOTAL UNITS	300 (1,000,000 S.F. REQ'D X 933,050 S.F.)
ON ZONING INFORMATION	REQUIRED: 35' FRONT 35' SIDE (EAST) 100' SIDE (WEST) 100' REAR
BUILDING SEPARATION	40' MIN.
BUILDING HEIGHT	37' (2.5 STYS) 50' MAX (54' TOP)
BUILDING LENGTH	200 FT 133 FT
LOT COVERAGE (BUILDING)	43% 28%
OPEN SPACE	8.57 AC (40%) 9.21 AC (43%)

REVISIONS

REVISIONS	DATE
1/1/20 THE PUD REVIEW	
10/17/20 PUD REVISION	
3/22/21 PUD REVISION REV	
7/14/21 PUD REVISION REV	

REVISIONS	DATE
SCALE: 1" = 100 FEET	
DL, CH, DL, CK	
P.L., AM	
DATE	
JOB: 190002954	
DATE/SET: SHEET NO. PUD-PSR-1	

811
Know what's below.
Call before you dig.
The location of buried
utilities must be known
before excavation. Call
811 to request a utility
locate. The utility locate
service is provided by
the utility companies.
Excavation work and drilling
to any depth must be done
in the presence of a utility
locate operator. All excavation
work must be done in
accordance with the
Michigan Uniform
Excavation Act, MCL
207.101-207.105.

ATWELL
666.650.4000 www.atwell-greenoak.com
311 N. MAIN STREET
GREEN OAK, MI 48116
734.494.4000

SECTION 8
TOWNSHIP OF GREEN OAK EAST
GREEN OAK TOWNSHIP
LIVINGSTON COUNTY, MICHIGAN

VECTOR DEVELOPMENT, LLC
THE PARC AT GREEN OAK
PRELIMINARY SITE PLAN
COVER SHEET

DATE: JANUARY 30, 2020

1/1/20 THE PUD REVIEW

10/17/20 PUD REVISION

3/22/21 PUD REVISION REV

7/14/21 PUD REVISION REV

REVISIONS

SCALE: 1" = 100 FEET

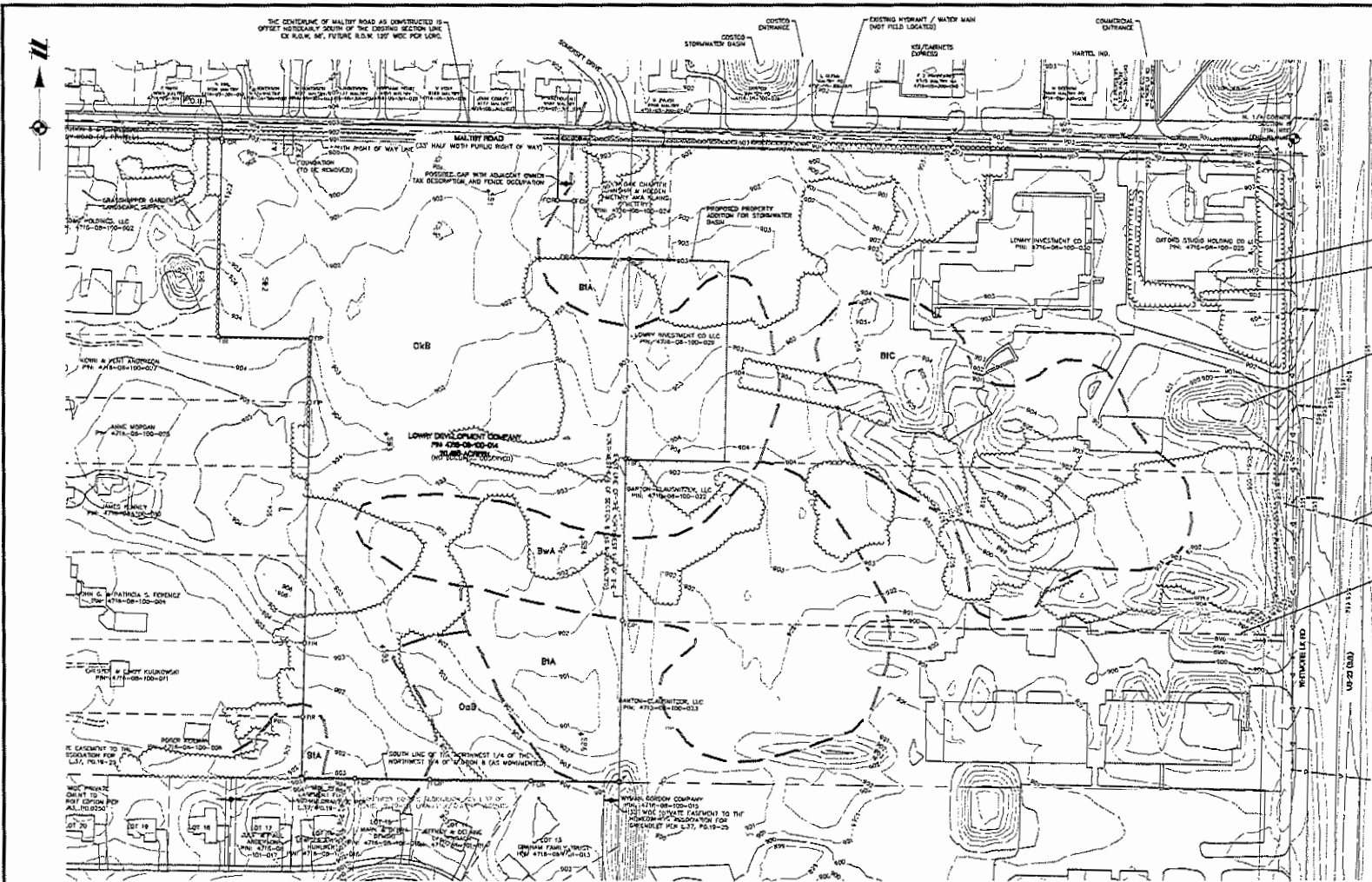
DL, CH, DL, CK

P.L., AM

DATE

JOB: 190002954

DATE/SET: SHEET NO. PUD-PSR-1



NOTE: CURRENT ROADWAYS TO BE PROVIDED DURING DETAILED ENGINEERING.

HISTORICAL BOUNDARIES:

- FOR WALTON ROAD PLANS (LOGS)
- FOR 'SOUTHWEST CORNER' CONCRETE TOWER
- FOR WALTON RD. E.L. 902.23
- FOR 'MUNICIPAL' NE CORNER WALTON & SOMERSET (E.L. 902.03)
- FOR WEST PROPERTY IRON ALPHIC HEATING (E.L. 904.05)
- FOR WATSON LAKE ROAD PLANS (LOGS)
- FOR N/2 NE/4 POLE AT NW CORNER OF WALTON ROAD AND WATSON LAKE ROAD - E.L. 902.76

EXISTING WATER MAIN (NOT FIELD LOCATED)

EXISTING 12" SANITARY SEWER (NOT FIELD LOCATED)

LOWRY STORMWATER BASIN PROPOSED LOWRY PLAN (OVERLAY)

EXISTING CULVERT (UNDER ROAD)

WATER QUALITY SERVICES STORMWATER BASIN

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

NOTE:
CONSTRUCTION AND WATER TO BE PROVIDED DURING DETAILED ENGINEERING.



SECTION 8
TOWN OF MARSH ROCK CO. EAST
GREEN OAK TOWNSHIP
LIVINGSTON COUNTY, MICHIGAN

VEICOR DEVELOPMENT, LLC
THE PARK AT GREEN OAK
PRELIMINARY SITE PLAN
EXISTING CONDITIONS - OVERALL

DATE: JANUARY 30, 2020

1/1/20: THE P&S REVIEW
1/13/20: THE P&S REVIEW
1/20/20: THE P&S REVIEW
1/24/20: THE P&S REVIEW

REVISIONS:

SCALE 0 50 100
1" = 100 FEET

DR, CH, DL, CK
P.L. AM
BOOK
JOB 16000954
PLAN SHEET NO. 1613-02 - 2

SOIL BORING LOG SUMMARY
SOURCE: MEDWELL SOIL INVESTIGATION (JOB 18-235, 8/29/19)

Soil Profile	1	2	3	4	5	6
Depth (ft)						
Moisture	95.8	98.3	98.9	95.9	92.3	98.0
Soil Moisture	25	21	20	8	26	19
Soil Temperature	44	51	51	38	44	48
Soil pH					7.1	
Soil Conductivity					1.1	
Soil Resistivity	244	241	301	264	303	244
Soil Compression						
Control	18.9	15.3	10.9	15.8	12.3	15.8
Moist	18.9	15.3	10.9	15.8	12.3	15.8
Dry	18.9	15.3	10.9	15.8	12.3	15.8
Soil	18.9	15.3	10.9	15.8	12.3	15.8
Moist	18.9	15.3	10.9	15.8	12.3	15.8
Dry	18.9	15.3	10.9	15.8	12.3	15.8
Soil	18.9	15.3	10.9	15.8	12.3	15.8
Moist	18.9	15.3	10.9	15.8	12.3	15.8
Dry	18.9	15.3	10.9	15.8	12.3	15.8
Soil	18.9	15.3	10.9	15.8	12.3	15.8
Moist	18.9	15.3	10.9	15.8	12.3	15.8
Dry	18.9	15.3	10.9	15.8	12.3	15.8
Soil	18.9	15.3	10.9	15.8	12.3	15.8
Moist	18.9	15.3	10.9	15.8	12.3	15.8
Dry	18.9	15.3	10.9	15.8	12.3	15.8
Soil	18.9	15.3	10.9	15.8	12.3	15.8
Moist	18.9	15.3	10.9	15.8	12.3	15.8
Dry	18.9	15.3	10.9	15.8	12.3	15.8
Soil	18.9	15.3	10.9	15.8	12.3	15.8
Moist	18.9	15.3	10.9	15.8	12.3	15.8
Dry	18.9	15.3	10.9	15.8	12.3	15.8

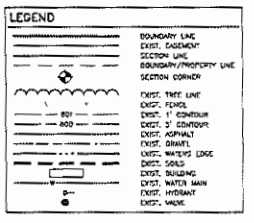
NOTE: ELEVATIONS LISTED ON THIS TABLE ARE BASED ON THE U.S. TOPOGRAHIC SURVEY ELEVATION OF THE PROPOSED BENCHMARK LOCATION STAKE. ACTUAL ELEVATION OF FIELD-SELECTED BORING LOCATION MAY DIFFER SLIGHTLY.

SOILS INFORMATION

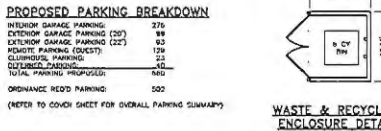
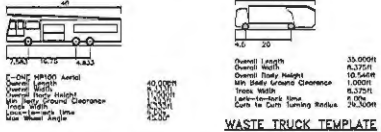
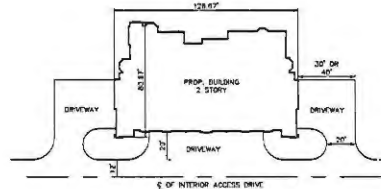
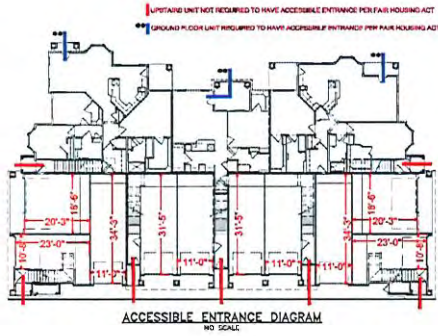
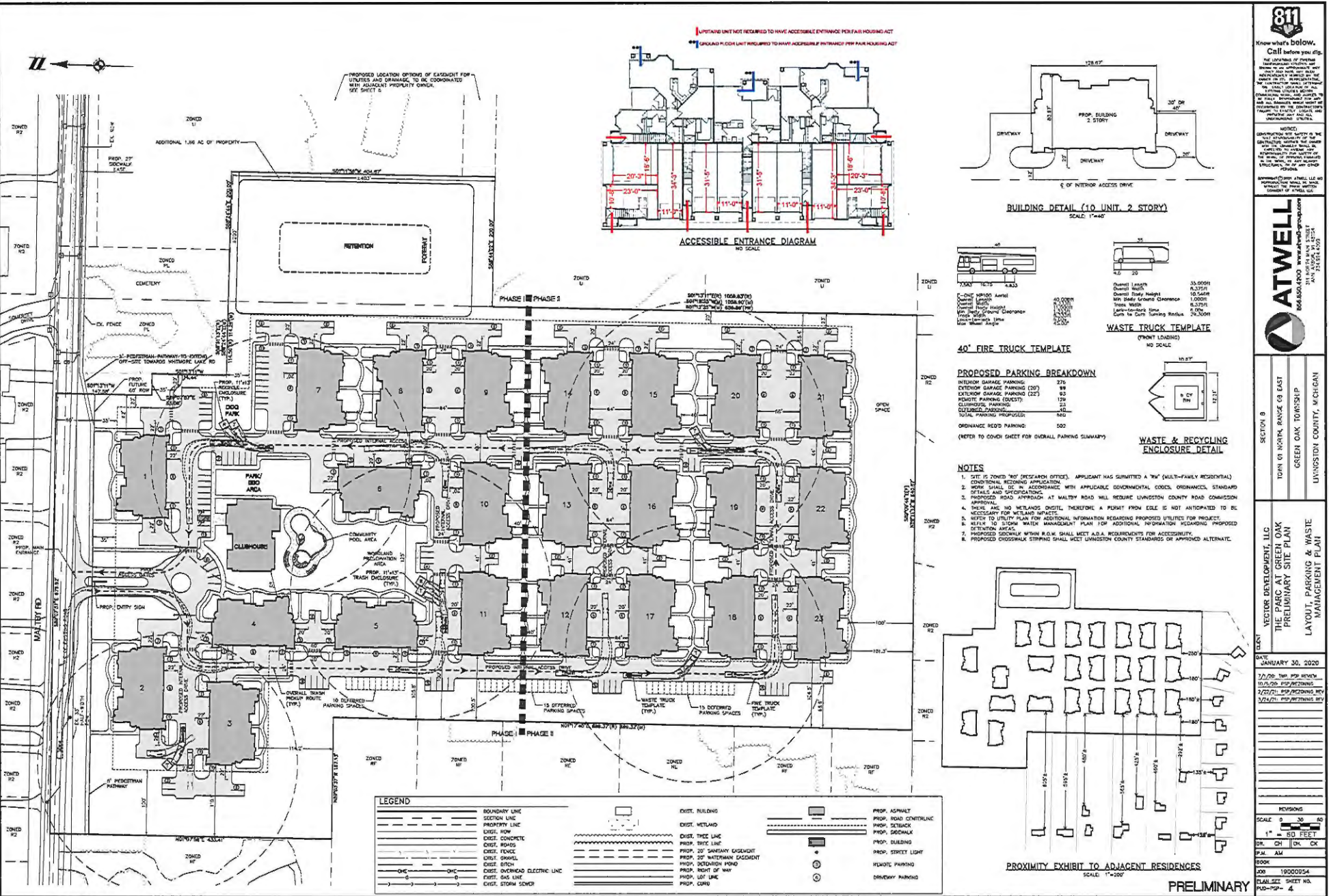
Soil Profile	HSIC
B/A BOWLY-CONTAINING LOAMY SANDS, 0-2% SLOPES	D
B/C BOWLY-CONTAINING LOAMY SANDS, 4-12% SLOPES	D
B/W BROWNIER LOAMY SAND, 0-2% SLOPES	H
D/B DOWNEY-FINE SAND, 0-4% SLOPES	A
O/D DARK-LEAFY FINE SAND, 0-4% SLOPES	A

NOTES:

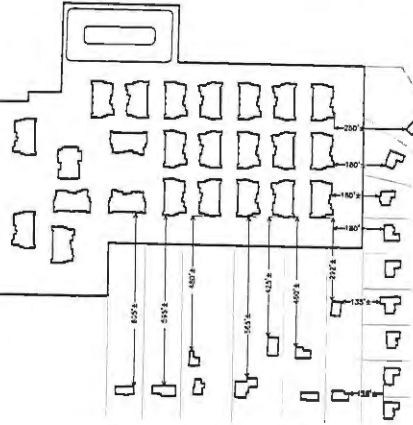
- BOUNDARY FOR ALTA SURVEY BY ATWELL COMPLETED OCTOBER 2016.
- FOR BORINGS AND LOGS OF MEDWELL & ASSOCIATES COMPLETED AUGUST 2019.
- THAT ARE AND NOT PLANNED ON-SITE.
- THAT ARE NO REGULATED 100-YEAR FLOODPLAIN ON-SITE; THE SITE IS LOCATED WITHIN ZONE X (AREAS DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN) ACCORDING TO MAP NUMBER 2685856M-01-D OF THE FLOOD INSURANCE RATE MAP, EFFECTIVE DATE SEPTEMBER 17, 2020.
- FINDINGS CONCERNING POTENTIAL GROUND-WATER HAZARD ARE NOT APPROPRIATE FOR CENTER DATA. A TOPOGRAHIC FIELD SURVEY WILL BE PERFORMED PRIOR TO DETAILED ENGINEERING.
- FIELD TAGGING AND INVENTORY HAS NOT BEEN PERFORMED AT THIS TIME.
- SEE SHEET 10 FOR INFILTRATION TEST DATA.
- ADJACENT PARCELS ARE BASED ON OS-LEVEL ACCURACY AND HAVE NOT BEEN FIELD SURVEYED AT THIS TIME.



PRELIMINARY



- NOTES**
1. SITE IS ZONED "R2" (RESIDUAL OFFICE). APPLICANT HAS SUBMITTED A "M" (MULTI-FAMILY RESIDENTIAL) CONDITIONAL RECORDING APPLICATION.
 2. WORK SHALL BE IN ACCORDANCE WITH APPLICABLE GOVERNMENTAL CODES, ORDINANCE STANDARD DETAILS AND SPECIFICATIONS.
 3. PROPOSED ROAD APPROACH AT MALTBY ROAD WILL REQUIRE LIVINGSTON COUNTY ROAD COMMISSION APPROVAL.
 4. THERE ARE NO WETLANDS IDENTIFIED THEREFORE A PERMIT FROM EOLE IS NOT ANTICIPATED TO BE NECESSARY FOR WETLAND IMPACTS.
 5. REFER TO UTILITY PLAN FOR ADDITIONAL INFORMATION REGARDING PROPOSED UTILITIES FOR PROJECT.
 6. REFER TO 3-DIM WATER MANAGEMENT PLAN FOR ADDITIONAL INFORMATION REGARDING PROPOSED DETENTION AREAS.
 7. PROPOSED SIDEWALK WITHIN R.O.W. SHALL MEET A.D.A. REQUIREMENTS FOR ACCESSIBILITY.
 8. PROPOSED CROSSWALK STRIPING SHALL MEET LIVINGSTON COUNTY STANDARDS OR APPROVED ALTERNATE.



LEGEND

	BOUNDARY LINE		PROP. ASPHALT
	SECTION LINE		PROP. ROAD CENTERLINE
	PROPERTY LINE		PROP. SETBACK
	DIST. HWY		PROP. SIDEWALK
	DIST. CONCRETE		PROP. BUILDING
	DIST. ROADS		PROP. STREET LIGHT
	DIST. FENCE		REMOTE PARKING
	DIST. GRAVEL		DRIVEWAY PARKING
	DIST. DITCH		
	DIST. OVERHEAD ELECTRIC LINE		
	DIST. GAS LINE		
	DIST. STORM SEWER		
	DIST. BUILDING		
	DIST. WETLAND		
	DIST. TREE LINE		
	PROP. TREE LINE		
	PROP. 20' SANITARY EASEMENT		
	PROP. 20' WATERMAN EASEMENT		
	PROP. DITCH POND		
	PROP. RIGHT OF WAY		
	PROP. LOT LINE		
	PROP. CURB		

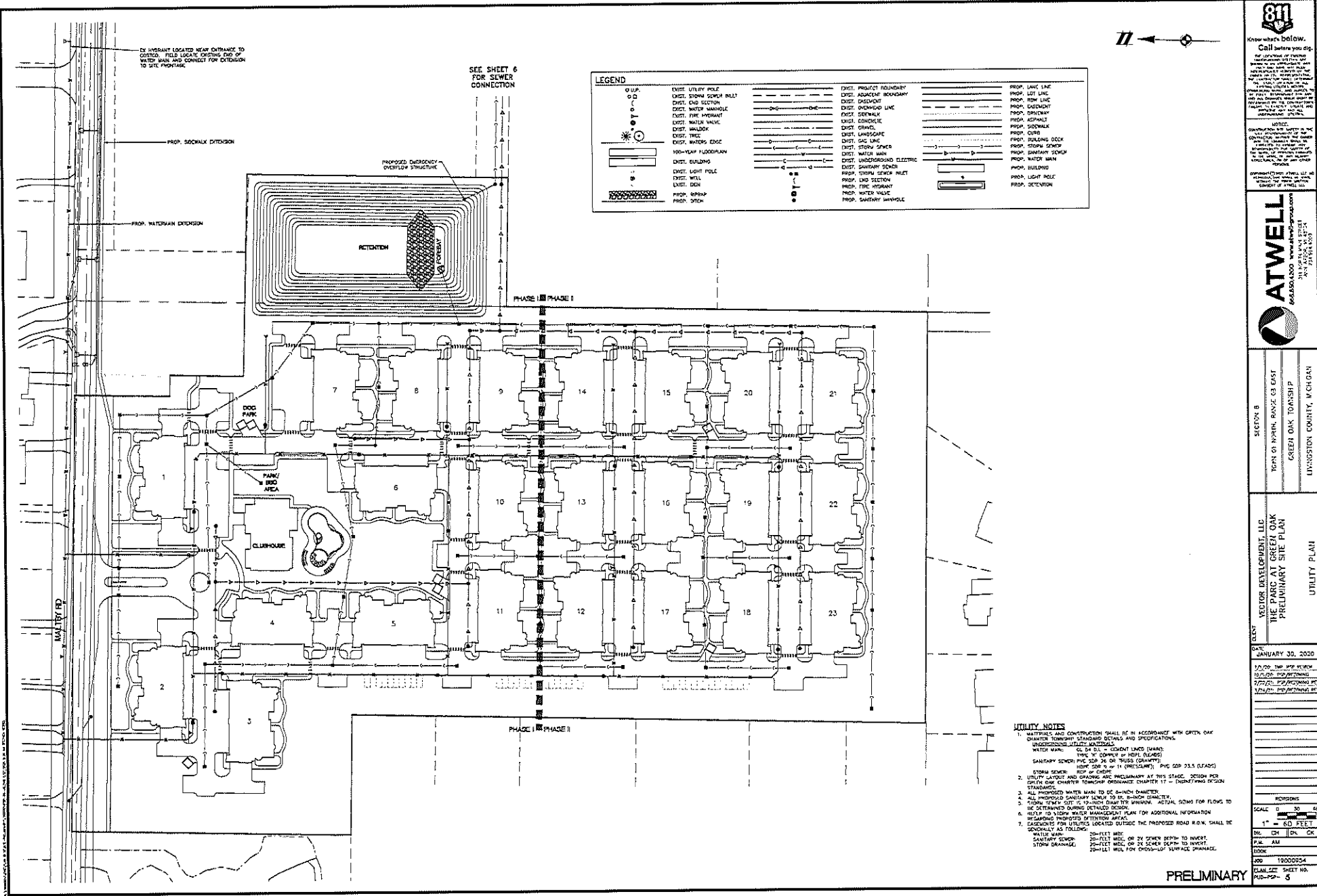
811
Know what's below.
Call before you dig.
The location of the water, gas, electric, sewer, and other underground utilities and lines are shown on the utility maps and records on file with the City of Aurora. It is the responsibility of the contractor to locate all utilities and lines before excavation. The City of Aurora does not warrant the accuracy of the utility maps and records. The contractor is responsible for obtaining all necessary permits and approvals from the appropriate agencies. The contractor is responsible for protecting all existing utilities and lines. The contractor is responsible for restoring all excavated areas to original condition or better. The contractor is responsible for all costs associated with the excavation and restoration process.

ATWELL
3110 W. 14th Street
Aurora, CO 80014
772-881-1000
www.atwellgroup.com

SECTION 9
TOWN OF WORM RANGE 08 EAST
GREER OAK TOWNSHIP
LIVINGSTON COUNTY, MICHIGAN

CLIENT
VECTOR DEVELOPMENT, LLC
THE PARC AT GREER OAK
PRELIMINARY SITE PLAN
LAYOUT, PARKING & WASTE
MANAGEMENT PLAN

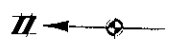
DATE: JANUARY 30, 2020
 2/2/20 TWP. PER REVIEW
 10/15/20 PER RECORDING
 2/25/21 SUPPLEMENTARY
 10/20/21 PER RECORDING
 SCALE: 0" = 30' AND 1" = 60 FEET
 DIV. CH. IN. CK. AM.
 BOOK
 JOB 19000054
 PLAN SET SHEET NO. P02-PS-4
PRELIMINARY



BY HYDRANT LOCATED NEAR ENTRANCE TO COURSE. FIELD LOCATE EXISTING END OF WATER MAIN, AND CONNECT FOR EXTENSION TO SITE FRONTAGE.

SEE SHEET 6 FOR SEWER CONNECTION

LEGEND		
○ U.P.	EXIST. UTILITY POLE	EXIST. PROJECT BOUNDARY
○ C	EXIST. STORM SEWER WELLS	EXIST. ADJACENT BOUNDARY
○	EXIST. END SECTION	EXIST. GAS/VENT
○	EXIST. WATER MANHOLE	EXIST. OVERHEAD LINE
○	EXIST. FIRE HYDRANT	EXIST. CEMENT/CL
○	EXIST. WATER VALVE	EXIST. CRANK
○	EXIST. MANHOLE	EXIST. LANDSCAPE
○	EXIST. TREE	EXIST. GAS LINE
○	EXIST. WATER'S EDGE	EXIST. STORM SEWER
○	100-YEAR FLOODPLAIN	EXIST. UNDERGROUND ELECTRIC
○	EXIST. BUILDING	EXIST. SANITARY SENDER
○	EXIST. LIGHT POLE	PROP. STORM SEWER INLET
○	EXIST. WELL	PROP. LINE SECTION
○	EXIST. SIGN	PROP. FIRE HYDRANT
○	PROP. DRIVEWAY	PROP. WATER VALVE
○	PROP. DRIVE	PROP. SANITARY MANHOLE
○		PROP. LINE LINE
○		PROP. LEG LINE
○		PROP. ROW LINE
○		PROP. EASEMENT
○		PROP. DRIVEWAY
○		PROP. ASPHALT
○		PROP. SIDEWALK
○		PROP. CURB
○		PROP. BUILDING DECK
○		PROP. STORM SEWER
○		PROP. SANITARY SENDER
○		PROP. WATER MAIN
○		PROP. BUILDING
○		PROP. LIGHT POLE
○		PROP. DETENTION



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

The user shall be responsible for obtaining all necessary permits and approvals from the appropriate authorities before any excavation or construction work is undertaken. The user shall also be responsible for ensuring that all utility lines are properly marked and identified before any excavation or construction work is undertaken.

NOTICE:
The user shall be responsible for obtaining all necessary permits and approvals from the appropriate authorities before any excavation or construction work is undertaken. The user shall also be responsible for ensuring that all utility lines are properly marked and identified before any excavation or construction work is undertaken.

ATWELL
ENGINEERS AND ARCHITECTS
10000 DALLAS STREET
DALLAS, TEXAS 75243
TEL: 972.382.1234
WWW.ATWELL.COM

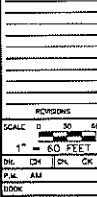


SECTION 8
TOWN OF GREEN OAK
GREEN OAK TOWNSHIP
LYNCHBURG COUNTY, VIRGINIA

VECTOR DEVELOPMENT, LLC
THE PARK AT GREEN OAK
PRELIMINARY SITE PLAN
UTILITY PLAN

DATE: JANUARY 30, 2020
SCALE: 1" = 30' 0"

- UTILITY NOTES**
1. MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH GREEN OAK CHARTER TOWNSHIP STANDARD DETAILS AND SPECIFICATIONS.
 2. ALL PROPOSED WATER MAIN TO BE 8-INCH DIAMETER.
 3. ALL PROPOSED SANITARY MAIN TO BE 8-INCH DIAMETER.
 4. STORM SEWER SHALL BE 18-INCH DIAMETER UNLESS OTHERWISE NOTED.
 5. ALL UTILITY LINES SHALL BE 18-INCH DEPTH UNLESS OTHERWISE NOTED.
 6. ALL UTILITY LINES SHALL BE 18-INCH DEPTH UNLESS OTHERWISE NOTED.
 7. ALL UTILITY LINES SHALL BE 18-INCH DEPTH UNLESS OTHERWISE NOTED.



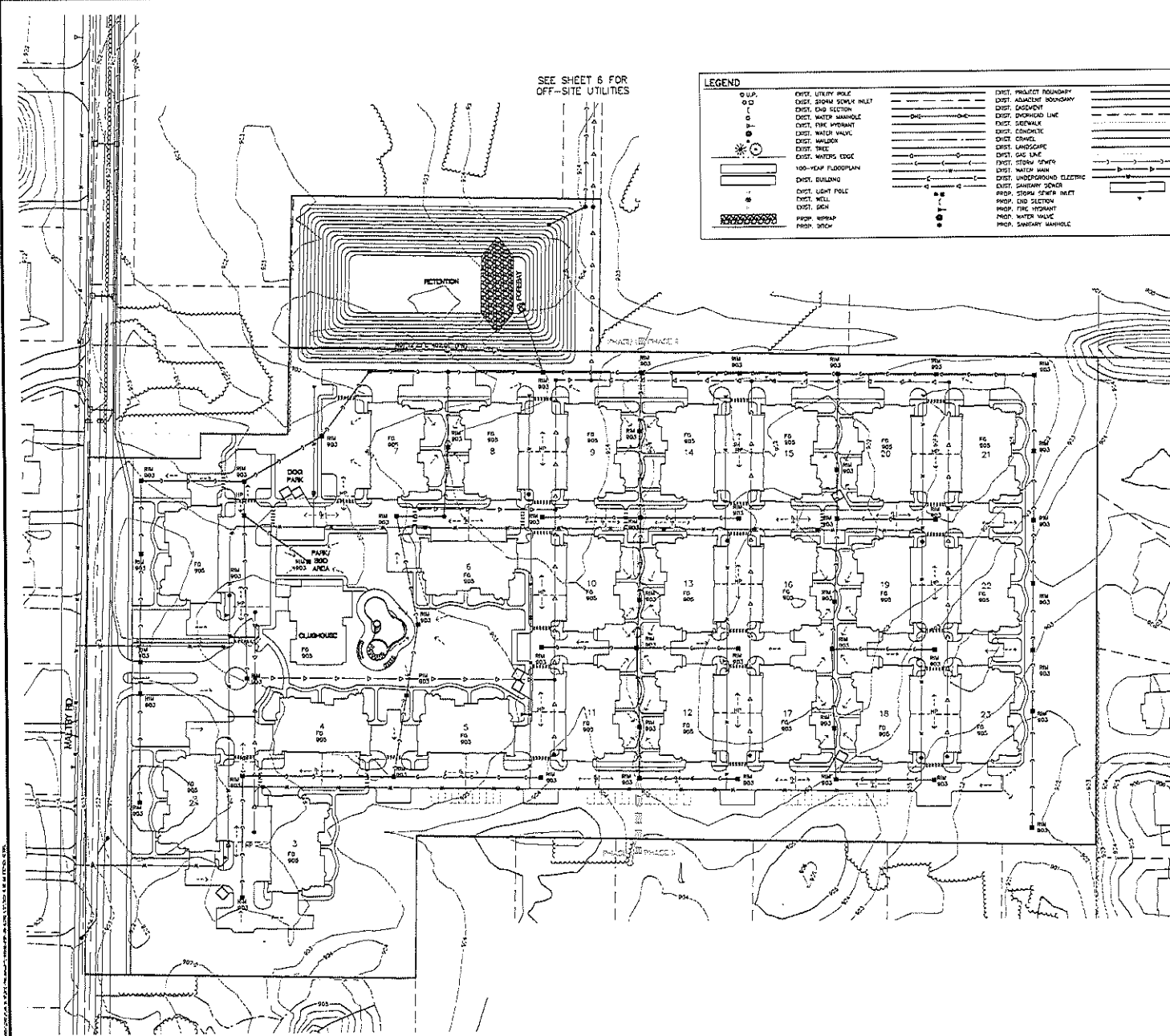
PRELIMINARY

PLAN SHEET NO. PUB-PP-5



SEE SHEET 6 FOR
OFF-SITE UTILITIES

LEGEND	
○ U.P.	EXIST. UTILITY POLE
○	EXIST. STORM SEWER INLET
○	EXIST. GAS SECTION
○	EXIST. WATER MANHOLE
○	EXIST. FIVE AMPERANT
○	EXIST. WATER VALVE
○	EXIST. WALKER
○	EXIST. TREE
○	EXIST. WATERS EDGE
○	100-YEAR FLOODPLAIN
○	EXIST. BUILDING
○	EXIST. LIGHT POLE
○	EXIST. WELL
○	EXIST. SIGN
○	PROG. ASPHALT
○	PROG. DRIVE
○	EXIST. PROJECT BOUNDARY
○	EXIST. ADJACENT BOUNDARY
○	EXIST. CASSEMENT
○	EXIST. DISCHARGE LINE
○	EXIST. SIDEWALK
○	EXIST. CONDUIT
○	EXIST. CABLE
○	EXIST. LANDSCAPE
○	EXIST. GAS LINE
○	EXIST. STORM SEWER
○	EXIST. UNDERGROUND ELECTRIC
○	EXIST. SANITARY SEWER
○	PROG. STORM SEWER INLET
○	PROG. GAS ELECTRON
○	PROG. FIRE HYDRANT
○	PROG. WATER TAP
○	PROG. SANITARY MANHOLE
○	PROG. LIGHT POLE
○	PROG. LAKE LINE
○	PROG. ROW LINE
○	PROG. CASSEMENT
○	PROG. DRIVEWAY
○	PROG. ASPHALT
○	PROG. SIDEWALK
○	PROG. CURB
○	PROG. BOARDING DECK
○	PROG. STORM SEWER
○	PROG. SANITARY SEWER
○	PROG. WALKER MARK
○	PROG. BUILDING
○	PROG. LIGHT POLE



GRADING NOTES

1. THE DEVELOPER IS RESPONSIBLE FOR RESOLVING ANY DRAINAGE PROBLEMS ON ADJACENT PROPERTIES WHICH ARE A RESULT OF THE DEVELOPER'S ACTIVITIES.
2. PROPOSED GRADING SHOWN ON THIS PLAN IS CONSIDERED AS NATURE, TO BE DETERMINED BY SURVEY AND ADJUSTED TO FIT THE FINAL SITE PLAN AND ENGINEERING STAGES OF THE PROJECT.
3. GENERAL COEFFICIENT FOR PRELIMINARY GRADING:

GRAVEL	0.8	GRAVEL	0.8
ASPHALT	1.5	ROADS AND PARKING AREAS	2-4% PREPARED
CONCRETE	0.5	ROADWAY LONGITUDINAL SLOPE	
4. NO RETAINING WALLS ARE PROPOSED ON THIS GRADING PLAN. IF A WALL OF GREATER THAN FOUR FEET (4') IS PROPOSED, SOIL RETAINING SYSTEM SHALL BE DESIGNED BY A QUALIFIED STRUCTURAL OR GEOTECHNICAL ENGINEER.
5. ALL GRADING IS INTENDED TO MEET ADJACENT PROPERTY GRADES AND GRADING STATEMENTS ARE PROPOSED:
6. A SOIL EROSION MONITOR SHALL BE REQUIRED FOR EARTH DISRUPTION GREATER THAN ONE ACRE.

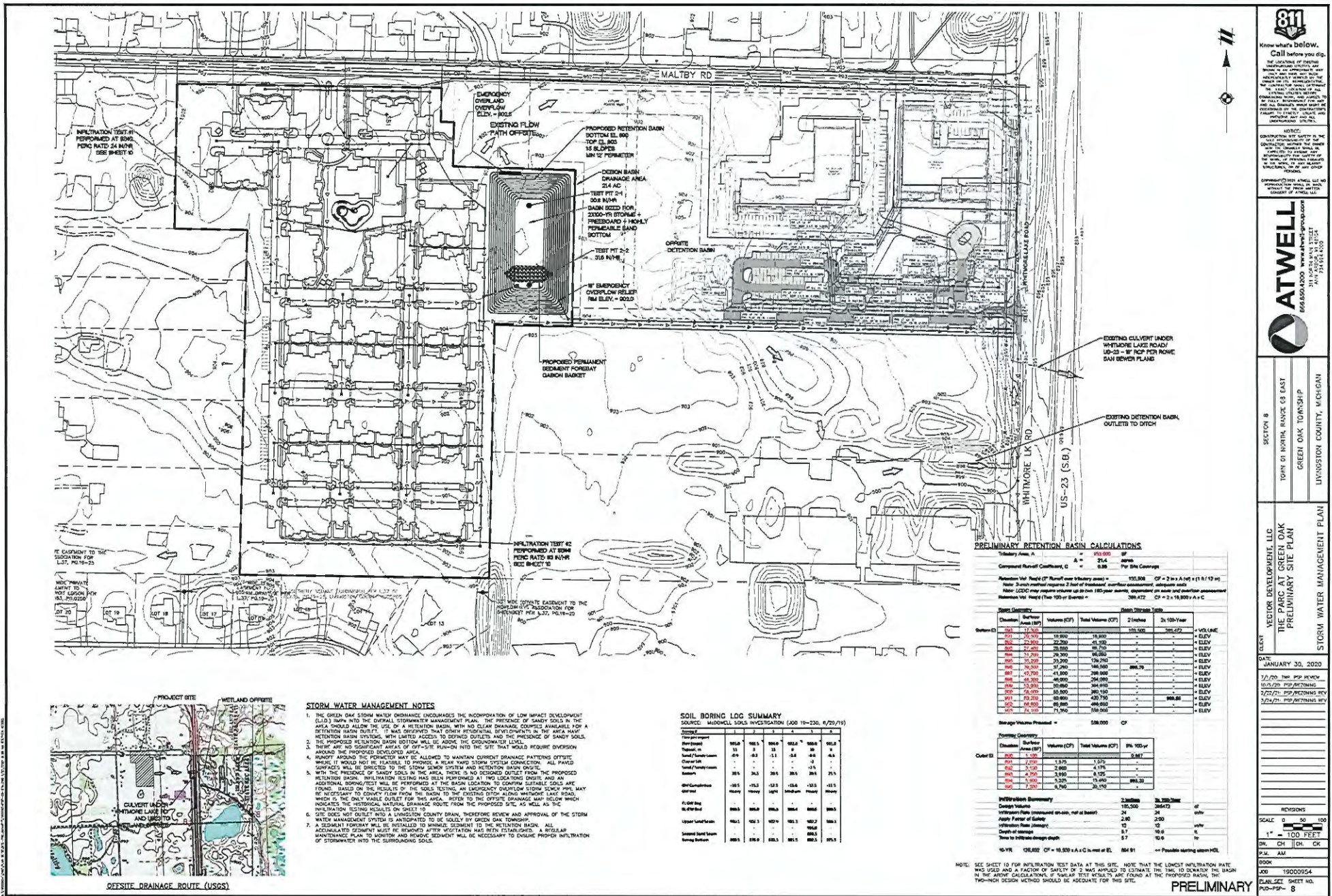
Know where you dig.
Call before you dig.

FOR LISTINGS OF PARTICIPATING UTILITIES, VISIT www.811.com.
FOR MORE INFORMATION, VISIT www.811.com.
FOR A LIST OF PARTICIPATING UTILITIES, VISIT www.811.com.
FOR A LIST OF PARTICIPATING UTILITIES, VISIT www.811.com.

ATWELL
2000 W. 10TH ST. SUITE 100
LIVINGSTON, MI 48150
TEL: 734.283.1100
WWW.ATWELLINC.COM

SECTION 8	TOWN OF LIVINGSTON, RANGE C3 EAST GREEN OAK TOWNSHIP	LIVINGSTON COUNTY, MICHIGAN
CLIENT	RESUR DEVELOPMENT, LLC THE BACKLIT GREEN OAK PRELIMINARY SITE PLAN	GRADING PLAN
DATE	JANUARY 30, 2020	
SCALE	1/2" = 10' HORIZONTAL 1/8" = 5' VERTICAL	
DRAWN BY	J.M. AM	
CHECKED BY	J.M. AM	
BOOK	19000004	
PLAN SET SHEET NO.	P02-P02-7	

PRELIMINARY



811
Know what's below.
Call before you dig.
The location of buried underground utilities and structures must be determined before any excavation or drilling is undertaken. This is especially important in areas where there are known or suspected underground utilities and structures. Failure to locate these utilities and structures can result in injury, property damage, and environmental damage. For more information, visit www.811.com.



SECTION 8
TOWN OF NORTH RAINCO, GREEN OAK TOWNSHIP
LIVINGSTON COUNTY, MICHIGAN

RESIDUAL DEVELOPMENT, LLC
THE HOLLOW GREEN OAK
PRELIMINARY SITE PLAN
STORM WATER MANAGEMENT PLAN

DATE: JANUARY 30, 2020
1/1/20: THE PSP REVIEW
10/10/20: PSP REVISIONS
1/22/21: PSP REVISIONS INV
1/22/21: PSP REVISIONS INV

PRELIMINARY RETENTION BASIN CALCULATIONS

Detention Area, A = 193,000 SF
Compound Runoff Coefficient, C = 0.36
Retention Vol. (Peak 2-Hr Rainfall over 24-Hour Storm) = 193,000 CF = 2 in x A (ft) x (1.811/12) in
Peak 2-Hour Rainfall (from 2-Hour of Retention) = 0.204 in
Note: USGS may require volume of 100-year storm, dependent on use and applicable government
Retention Vol. (100-Year Storm) = 389,472 CF = 2 x 19,900 A x C

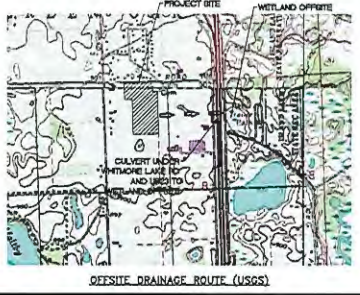
Storm Category	Duration (hr)	Retention Volume (CF)		
		1-inches	2-inches	24-Hour
Storm C1	0.1	17,300	34,600	173,000
	0.2	34,600	69,200	346,000
	0.5	86,500	173,000	865,000
	1.0	173,000	346,000	1,730,000
	2.0	346,000	692,000	3,460,000
	5.0	865,000	1,730,000	8,650,000
	10.0	1,730,000	3,460,000	17,300,000
	24.0	3,460,000	6,920,000	34,600,000
	48.0	6,920,000	13,840,000	69,200,000
72.0	10,380,000	20,760,000	103,800,000	

- ### STORM WATER MANAGEMENT NOTES
- THE GREEN OAK STORM WATER DRAINAGE ENCOURAGES THE INCORPORATION OF LOW IMPACT DEVELOPMENT (LID) INTO THE OVERALL STORMWATER MANAGEMENT PLAN. THE PRESENCE OF SANDY SOILS IN THE AREA SHOULD ALLOW THE USE OF A RETENTION BASIN WITH NO CLEAR DRAINAGE COURSES AVAILABLE FOR A RETENTION BASIN OUTLET. IT WAS OBSERVED THAT OTHER RESIDENTIAL DEVELOPMENTS IN THE AREA HAVE RETENTION BASIN SYSTEMS WITH LIMITED ACCESS TO DEFINED OUTLETS AND THE PRESENCE OF SANDY SOILS AROUND THE PROPOSED DEVELOPED AREA.
 - THE PROPOSED RETENTION BASIN SYSTEM WILL BE ABOVE THE GROUNDWATER LEVEL.
 - THE PROPOSED RETENTION BASIN SYSTEM WILL BE ABOVE THE GROUNDWATER LEVEL.
 - THE PROPOSED RETENTION BASIN SYSTEM WILL BE ABOVE THE GROUNDWATER LEVEL.
 - IF NECESSARY, A PERMANENT BEDROCK FOREBAY DRAIN BARRETT WILL BE INSTALLED TO MINIMIZE SEDIMENT TO THE RETENTION BASIN. ALL ACCUMULATED SEDIMENT MUST BE REMOVED AFTER VEGETATION HAS BEEN ESTABLISHED. A REGULAR MAINTENANCE PLAN TO MONITOR AND REMOVE SEDIMENT WILL BE NECESSARY TO ENSURE PROPER INFILTRATION OF STORMWATER INTO THE SURROUNDING SOILS.

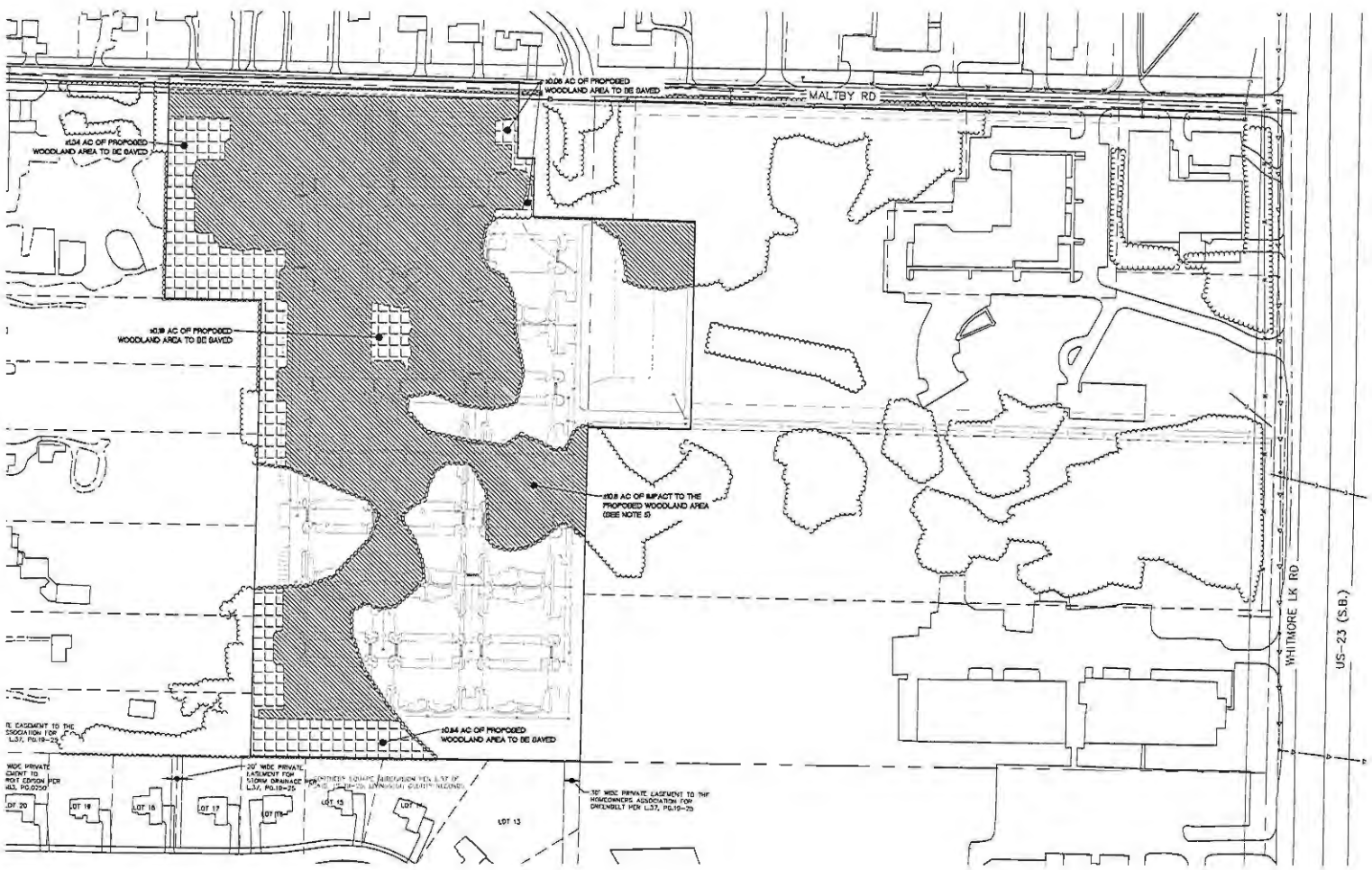
SOIL BORING LOG SUMMARY

SOURCE: MODELING LOGS INVESTIGATION (JOB 19-230, 4/29/19)

Soil Type	1	2	3	4	5	6
Topsoil	0.0	0.0	0.0	0.0	0.0	0.0
Subsoil	0.0	0.0	0.0	0.0	0.0	0.0
Bedrock	0.0	0.0	0.0	0.0	0.0	0.0



NOTE: SEE SHEET 10 FOR INFILTRATION TEST DATA AT THIS SITE. NOTE THAT THE LOWEST INFILTRATION RATE WAS USED AND A FACTOR OF SAFETY OF 2 WAS APPLIED TO ESTIMATE THE TIME TO EXHAUST THE BASIN IN THE ABOVE CALCULATIONS. IF FASTER TEST RESULTS ARE FOUND AT THE PROPOSED BASIN, THE TWO-INCH DESIGN METHOD SHOULD BE ADEQUATE FOR THIS SITE.



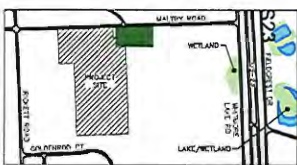
E. EASEMENT TO THE SEPARATE FOR L.S.A. PG.19-24

WIDE PRIVATE EASEMENT TO NOT COMMON PER ALL. PG.20-21

20' WIDE PRIVATE EASEMENT FOR STORM DRAINAGE PER L.S.A. PG.22-23

ANOTHER 10' WIDE EASEMENT PER L.S.A. PG.22-23 UNLESS OTHERWISE NOTED.

10' WIDE PRIVATE EASEMENT TO THE HOMEOWNERS ASSOCIATION FOR DRENCHWELL PER L.S.A. PG.19-20



GREEN OAK TOWNSHIP NATURAL FEATURES MAP
NO SCALE

- NOTES**
1. LIMITS OF REMOVAL AND IMPACTS ON THIS PLAN ARE BASED ON PRELIMINARY DESIGN AND ARE SUBJECT TO REVISION DURING THE APPROVAL PROCESS.
 2. REFER TO LANDSCAPE PLANS FOR INFORMATION REGARDING EXISTING TREES AND WOODLAND AREAS.
 3. REMOVAL AND RELOCATION OF FACILITIES WITHIN MALTBY ROAD RIGHT-OF-WAY WILL BE SUBJECT TO REVIEW AND APPROVAL OF LAMINGTON COUNTY ROAD COMMISSION.
 4. THERE ARE NO REGULATED WETLANDS ON-SITE THAT WOULD REQUIRE A PERMIT FROM EOL.
 5. REFER TO THE ATWELL WOODLAND SITE ASSIGNMENT LETTER DATED JANUARY 8, 2009 FOR DETAILS REGARDING THE Delineation OF THE PROPOSED WOODLAND AREA ON-SITE.

WOODLAND SUMMARY

TOTAL WOODLAND ON PROPERTY	13.11 ACRES
TOTAL PROPOSED WOODLAND	32.45 ACRES

LEGEND

---	BOUNDARY LINE
---	SECTION LINE
---	PROPERTY LINE
---	EXIST. ROAD
---	EXIST. CONCRETE
---	EXIST. PAVES
---	EXIST. FENCE
---	EXIST. DRAIN
---	EXIST. DITCH
---	EXIST. OVERHEAD ELECTRIC LINE
---	EXIST. GAS LINE
---	EXIST. STEEP SLOPE
---	EXIST. BUILDING
---	EXIST. WETLAND
---	EXIST. TREE LINE
---	PROSP. DEVELOPMENT



THE LOCATION OF UTILITIES AND THE QUALITY OF THE SOILS ARE NOT GUARANTEED BY THE STATE OF MISSISSIPPI. THE USER OF THIS INFORMATION SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF UTILITIES AND THE QUALITY OF THE SOILS. THE STATE OF MISSISSIPPI DOES NOT WARRANT THE ACCURACY OF THIS INFORMATION.

ATWELL
666.600.4200 www.atwellgroup.com
AN ATWELL COMPANY
218 S. GULF BLVD.
SUITE 200
DALLAS, TX 75244-2000

SECTION 6
TOWN OF INDIAN RIVER CO EAST
GREEN OAK TOWNSHIP
UNION COUNTY, MICHIGAN

VECTOR DEVELOPMENT, LLC
THE PARK AT GREEN OAK
PRELIMINARY SITE PLAN
REMOVAL & NATURAL FEATURES
IMPACT PLAN

DATE: JANUARY 30, 2020
1/2/20, TRP, PDP REVIEW
10/1/20, PDP REVIEW
3/23/21, PDP REVIEW REV
3/23/21, PDP REVIEW REV

REVISIONS

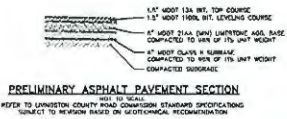
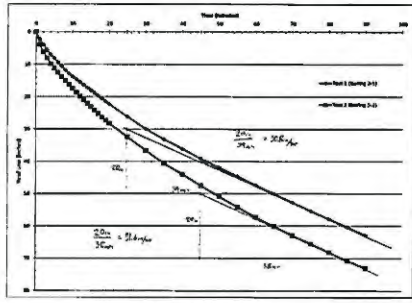
NO.	DATE	BY	CHK

SCALE: 0 50 100
1" = 100 FEET
DR. CH. DR. CK.
P.L. AM
BOOK

JPO 19000954
PLAN SET SHEET NO.
PUD-02-9

PRELIMINARY

INFILTRATION TEST DATA			
Test No.	Flow Rate (gpm)	Flow Rate (in/hr)	Flow Rate (in/day)
1	2.05	0.8	1.92
2	2.76	1.1	2.64
3	2.76	1.1	2.64
4	3.07	1.2	2.88
5	3.26	1.3	3.12
6	3.26	1.3	3.12
7	3.26	1.3	3.12
8	3.26	1.3	3.12
9	3.26	1.3	3.12
10	3.26	1.3	3.12
11	3.26	1.3	3.12
12	3.26	1.3	3.12
13	3.26	1.3	3.12
14	3.26	1.3	3.12
15	3.26	1.3	3.12
16	3.26	1.3	3.12
17	3.26	1.3	3.12
18	3.26	1.3	3.12
19	3.26	1.3	3.12
20	3.26	1.3	3.12
21	3.26	1.3	3.12
22	3.26	1.3	3.12
23	3.26	1.3	3.12
24	3.26	1.3	3.12
25	3.26	1.3	3.12
26	3.26	1.3	3.12
27	3.26	1.3	3.12
28	3.26	1.3	3.12
29	3.26	1.3	3.12
30	3.26	1.3	3.12



NOTICE: CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO ANY EXCAVATION WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL ADJACENT PROPERTIES AND SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL ADJACENT UTILITIES.



SECTION B
TOWN OF NORTH RAINGE 68 EAST
GREEN OAK TOWNSHIP
LIVINGSTON COUNTY, MICHIGAN

VECTOR DEVELOPMENT, LLC
THE PARK AT GREEN OAK
PRELIMINARY SITE PLAN

CLIENT: VECTOR DEVELOPMENT, LLC

DATE: JANUARY 30, 2020

1/2/20: IMV PDP REVIEW
10/1/20: PDP ACTIONING
2/25/21: PDP ACTIONING REV
3/23/21: PDP ACTIONING REV

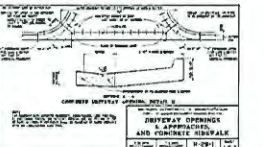
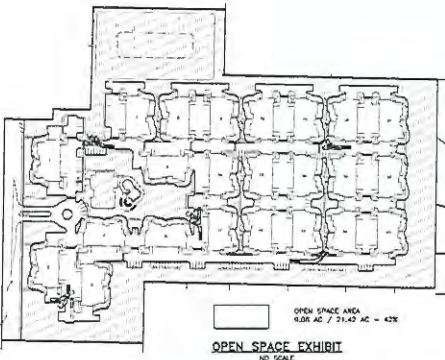
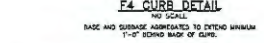
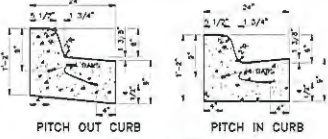
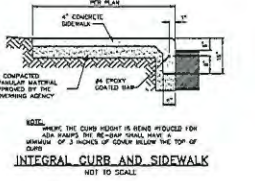
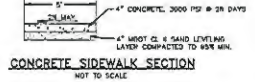
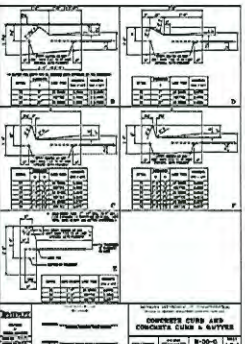
REVISIONS

SCALE: 0 30 60
1" = 60 FEET

DR: CH | DK: CK
P/L: AM

BOOK: _____

JOB: 19000954
BLANKET SHEET NO. PUG-PSP-10



WOOD CURB AND GUTTER DETAILS
NO SCALE

WOOD TYPE 'M' APPROACH
NO SCALE

REPRESENTATIVE BUILDING ELEVATIONS
NO SCALE

PRELIMINARY

REAR ELEVATION



LEFT ELEVATION



RIGHT ELEVATION

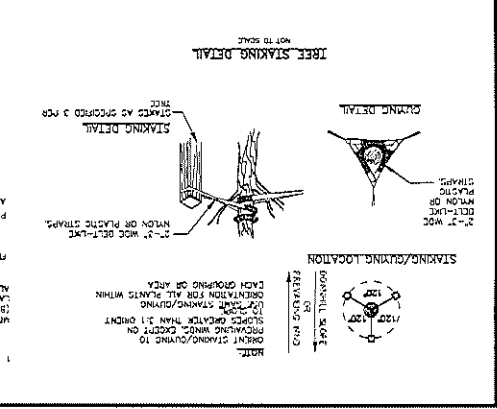
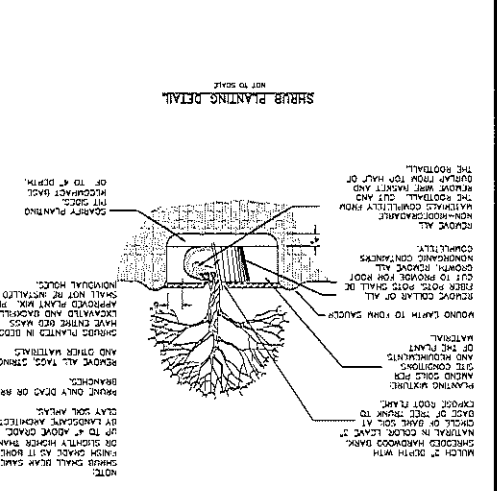


FRONT ELEVATION



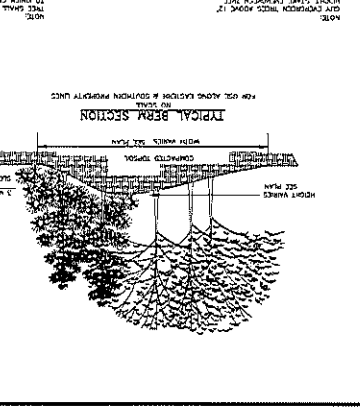
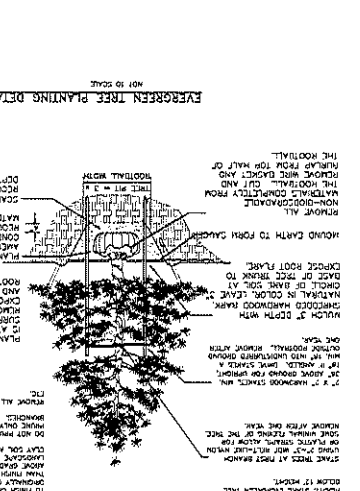
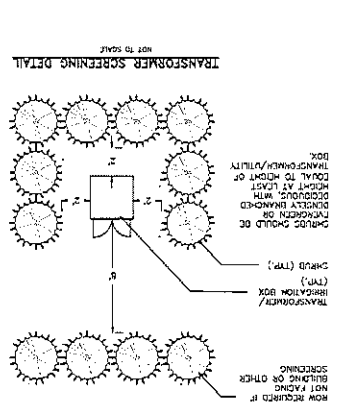
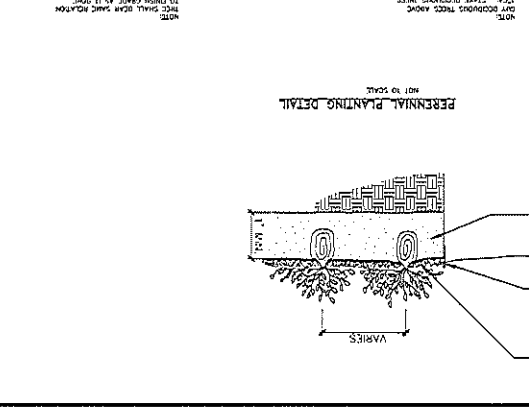
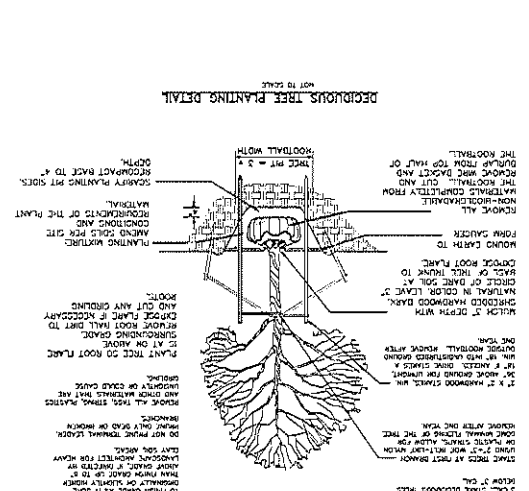
LANDSCAPE NOTES

1. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING LOCATION OF ALL EXISTING AND PROPOSED UTILITIES.
2. EXISTING UTILITIES SHALL BE MAINTAINED AND PROTECTED. ANY UTILITIES THAT ARE DAMAGED OR DISRUPTED SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
3. ALL NEW UTILITIES SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE CODES AND REGULATIONS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.
5. ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE APPROVED BY THE ARCHITECT PRIOR TO INSTALLATION.
6. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL EXISTING UTILITIES AND SERVICES AT ALL TIMES.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING TREES AND PLANTS TO REMAIN.
8. ALL PLANTING SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE CODES AND REGULATIONS.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.
10. ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE APPROVED BY THE ARCHITECT PRIOR TO INSTALLATION.
11. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL EXISTING UTILITIES AND SERVICES AT ALL TIMES.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING TREES AND PLANTS TO REMAIN.
13. ALL PLANTING SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE CODES AND REGULATIONS.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.
15. ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE APPROVED BY THE ARCHITECT PRIOR TO INSTALLATION.



LANDSCAPE REQUIREMENTS

1. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING LOCATION OF ALL EXISTING AND PROPOSED UTILITIES.
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5. ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE APPROVED BY THE ARCHITECT PRIOR TO INSTALLATION.
6. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL EXISTING UTILITIES AND SERVICES AT ALL TIMES.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING TREES AND PLANTS TO REMAIN.
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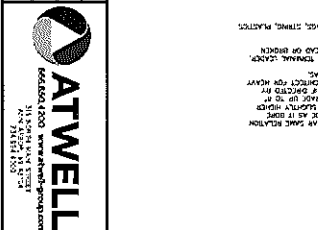
PRELIMINARY

DATE: 11/17/2023

PROJECT: VICTOR DEVELOPMENT, LLC
THE PARK AT GREEN OAK
PRELIMINARY SITE PLAN

SECTION B

TEAM OF NORTH HAVEN CO EAST
GREEN OAK TOWNSHIP
UNION COUNTY, INDIANA



11111 11111

11111 11111



GREEN OAK CHARTER TOWNSHIP
10001 SILVER LAKE ROAD, BRIGHTON, MI 48116
PHONE: 810-231-1333 • FAX 810-231-5080

**PLANNING COMMISSION
NOTICE OF PUBLIC HEARING**

Please be notified that the Green Oak Charter Township Planning Commission will hold a Public Hearing on November 5, 2020 at 7:00 p.m. via video conferencing. The purpose of the public hearing is to receive comments for a Proposed Residential Multiple Family Rezoning located on parcel # 4716-08-100-014, Vector Development: The Parc at Green Oak, The property is a vacant parcel of land located between 9198 and 9020 Maltby Road, Brighton MI 48116. The property is currently zoned RO Research office.

All interested persons are invited to be participate at the aforesaid time via video conferencing and to submit comments concerning any of the foregoing. To request access to the video conference please email request to Planning-Zoning@greenoaktwp.com prior to 5:00 p.m. Eastern time November 5, 2020.

Information is posted at the following locations and on greenoaktwp.com
9384 Whitmore Lake Road, Brighton, MI, 11411 Grand River, Brighton, MI, 9863
Rushton Road, South Lyon, MI, 8965 Fieldcrest, Brighton, MI, 10001 Silver Lake Road,
Brighton, MI

A copy of the application will also be available from the Green Oak Charter Township Clerk's Office, and will be available for inspection Monday through Friday from 8:00 a.m. to 5:00 p.m. or on the township website 15 days prior to the meeting.

https://www.greenoaktwp.com/departments/minutes_and_meetings/planning_commission_on_meetings/2020_planning_commission.php

Public comments and participation are both encouraged and welcome, please contact Debra McKenzie, Zoning Administrator, and 10001 Silver Lake Road, Brighton, MI 48116 by FAX at 810. 231-5080 or E-Mailed to Planning-Zoning@greenoaktwp.com prior to 5:00 p.m. November 5, 2020

Persons with disabilities needing accommodations for effective participation in this meeting should contact the Green Oak Charter Township Clerk's Office at least 5 business days prior to the meeting to request mobility, visual, hearing or other assistance.



THIS PROPERTY PROPOSED TO BE REZONED

- Name of the applicant: Vector Developments
The Parc at Green Oak
- Present Zoning: Research Office
- Requested Zoning: RM Residential Medium Density
- Property Area: 20.450 and 1.86 acres
- Public Hearing Date: November 5th,
at Green Oak Township Hall
10001 Silver Lk. Road
For more information: (810) 231-1333



GREEN OAK CHARTER TOWNSHIP

10001 SILVER LAKE ROAD, BRIGHTON, MI 48116

PHONE: 810-231-1333 • FAX 810-231-5080

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GREEN OAK CHARTER TOWNSHIP
10001 SILVER LAKE ROAD, BRIGHTON, MI 48116
PHONE: 810-231-1333 • FAX 810-231-5080

**PLANNING COMMISSION
NOTICE OF PUBLIC HEARING**

Please be notified that the Green Oak Charter Township Planning Commission will hold a Public Hearing on September 17, 2020 at 7:00 p.m. via video conferencing. The purpose of the public hearing is to receive comments for a Planned Unit Development located on parcel # 4716-08-100-014 The Parc at Green Oak, the property is a vacant parcel of land located between 9198 and 9020 Maltby Road, Brighton MI 48116. The property is currently zoned RO Research office., Brighton MI 48116. The property is zoned Limited Industrial.

All interested persons are invited to be participate at the aforesaid time via video conferencing and to submit comments concerning any of the foregoing. To request access to the video conference please email request to Planning-Zoning@greenoaktwp.com prior to 5:00 p.m. Eastern time September 17, 2020

A copy of the application is also available from the Green Oak Charter Township Clerk's Office, and is available for inspection Monday through Friday from 8:00 a.m. to 5:00 p.m. or on the township website https://cms2.revize.com/revize/greenoakct/departments/minutes_and_meetings/planning_commission_meetings/2020_planning_commission.php

Public comments and participation are both encouraged and welcome, please contact Debra McKenzie, Zoning Administrator, and 10001 Silver Lake Road, Brighton, MI 48116 by FAX at 810. 231-5080 or E-Mailed to Planning-Zoning@greenoaktwp.com prior to 5:00 p.m. September 17, 2020

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DET-LIV-Livingston Daily Press a	DETW-Legals	Legal Notices	7	10/15/2020	10/21/2020

* ALL TRANSACTIONS CONSIDERED PAID IN FULL UPON CLEARANCE OF FINANCIAL INSTITUTION

Text of Ad: 10/02/2020

NOTICE OF POSTING

Please be notified that the Green Oak Charter Township Planning Commission will hold a Public Hearing on November 5, 2020 at 7:00 p.m. via video conferencing. The purpose of the public hearing is to receive comments for a Proposed Residential Multiple Rezoning located on parcel # 4716-08-100-014, Vector Development: The Parc of Green Oak. The property is a vacant parcel of land located between 9198 and 9020 Malby Road, Brighton MI 48116. The property is currently zoned RO Research office.

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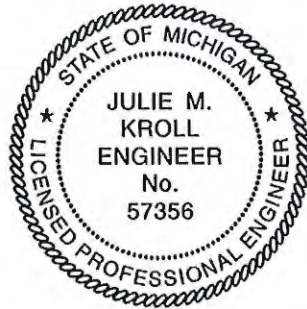


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GREEN OAK PARC TRAFFIC IMPACT STUDY

GREEN OAK TOWNSHIP, MICHIGAN

JANUARY 29, 2020



Julie M. Kroll

Digitally signed by Julie M. Kroll
Date: 2020.01.29 08:27:15 -05'00'

PREPARED FOR:



VECTOR DEVELOPMENT, LLC
TWO TOWNE SQUARE
SUITE 120
SOUTHFIELD, MI 48076

PREPARED BY:



27725 STANSBURY BLVD., SUITE 195
FARMINGTON HILLS, MI 48834

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The opinions, findings, and conclusions expressed herein are those of Fleis & VandenBrink Engineering, Inc. and do not necessarily reflect the official views or policy of the Livingston County Road Commission or Green Oaks Township, which makes no warranty, either implied or expressed, for the information contained in this document; neither does it assume legal liability or responsibility for the accuracy, completeness or usefulness of this information. Any products, manufacturers or trademarks referenced in this document are used solely for reference purposes.

Agency Review	Date	Comments
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- B. EXISTING TRAFFIC CONDITIONS
- C. FUTURE TRAFFIC CONDITIONS
- D. AUXILIARY LANE WARRANTS

REFERENCES

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO). (2018). *A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS*. WASHINGTON DC.

FEDERAL HIGHWAY ADMINISTRATION, MICHIGAN DEPARTMENT OF TRANSPORTATION, MICHIGAN STATE POLICE. (2011). *MICHIGAN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES*.

INSTITUTE OF TRANSPORTATION ENGINEERS. (2017). *TRIP GENERATION MANUAL, 10TH EDITION*. WASHINGTON DC.

NATIONAL RESEARCH COUNCIL (U.S.) TRANSPORTATION RESEARCH BOARD. (2016). *HIGHWAY CAPACITY MANUAL (HCM)*. WASHINGTON, D.C.: TRANSPORTATION RESEARCH BOARD.

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STOVER, V. G., & KOEPKE, F. J. (2006). *TRANSPORTATION AND LAND DEVELOPMENT (VOL. 2ND EDITION)*. WASHINGTON DC: INSTITUTE OF TRANSPORTATION ENGINEERS (ITE).

1 INTRODUCTION

This report presents the results of a Traffic Impact Study (TIS) for the Green Oak Parc that is located adjacent to the south side of Maltby Road, approximately 500 feet east of the Maltby Road & Rickett Road intersection. The property is currently undeveloped, is zoned Research Office (RO), and is master planned for Multi-Family (RM). This project includes the construction of 250 multi-family units and the property is to be rezoned with a PUD as part of this project. Site access is proposed via two driveways to Maltby Road as shown on **Figure 1**.

The scope of this study was developed based on Fleis & VandenBrink's (F&V) knowledge of the study area, accepted traffic engineering practice, and information published by the Institute of Transportation Engineers (ITE). The study analyses were completed using Synchro and SimTraffic, Version 10 traffic analysis software. The purpose of this study is to evaluate the impact of the proposed development on the adjacent roadway network and provide recommendations (if any) to mitigate the impact of the proposed development. Specific tasks undertaken for this study include the following:

1. Study Area

- a. Provide a description of the study area including surrounding land uses, intersection and roadway geometries, speed limits, functional classifications and traffic volume data (where available). In addition, a study area site map showing the site location and the study intersections will also be provided.

2. Proposed Land Use

- a. Obtain and review the proposed site plan which includes the proposed land uses, densities, and desired site access locations. A description of the current and proposed land use, including characteristics such as the number and type of dwelling units will be accompanied with a complete project site plan (with buildings identified as to proposed use). A schedule for construction of the development and proposed development stages will also be provided.

3. Existing Conditions

- a. Provide an analysis of the traffic-related impacts of the proposed development at the following study intersections:
 - Maltby Road & Rickett Road
 - Maltby Road & Whitmore Lake Road
 - The proposed site access points
- b. Collect AM (7:00 AM to 9:00 AM) and PM (4:00 PM to 6:00 PM) peak period turning movement counts at the study intersections. Traffic counts will be taken when school is in session, unless otherwise approved by the LCRC and Green Oak Township.
- c. Identify the Existing AM and PM peak hour traffic volumes at the study intersections based on turning movement count data.
- d. Calculate the Existing vehicle delays, LOS, and vehicle queues at the study intersections during the AM and PM. The analysis will be performed at each of the study intersections. Intersection analysis shall include LOS determination for all approaches and movements. The LOS will be based on the procedures outlined in the HCM 6th Edition, the latest edition of Transportation Research Board's Highway Capacity Manual.
- e. Identify improvements (if any) for the study road network that would be required to accommodate the existing traffic volumes.

4. Future Background Growth

- a. If the planned completion date for the project or the last phase of the project is beyond one year of the study, an estimate of background traffic growth for the adjacent street network will be made and included in the analysis.



MALTBY ROAD

WHITMORE LAKE ROAD

E. SITE DRIVE

W. SITE DRIVE

RICKETT ROAD

SITE



FIGURE 1
SITE LOCATION MAP
GREEN OAK PARC - GREEN OAK TOWNSHIP, MI

LEGEND



SITE LOCATION



NORTH
SCALE: NOT TO SCALE

- b. Calculate the future background traffic volumes based on an appropriate traffic growth determined from local or statewide data to the project build-out year and/or any applicable background developments in the vicinity of this project, as identified by LCRC and Green Oak Township. The proposed background growth rate for use in this study will be reviewed and approved by LCRC.

5. Background Conditions (No Build)

- a. Calculate the **Background (*without the proposed development*)** vehicle delays, LOS, and vehicle queues at the study intersections during the AM and PM peak periods. Intersection analysis shall include LOS determination for all approaches and movements. The LOS will be based on the procedures outlined in the HCM 6th Edition, the latest edition of Transportation Research Board's Highway Capacity Manual.
- b. Any state, local, or private transportation improvement projects in the project study area that will be underway in the build-out year, and traffic that is generated by other proposed developments in the study area will be included as background conditions.
- c. Identify improvements (if any) for the study road network that would be required to accommodate the background traffic volumes.

6. Trip Generation

- a. Forecast the number of AM and PM peak hour trips that would be generated by the proposed development based on data published by the Institute of Transportation Engineers (ITE) in Trip Generation, 10th Edition and/or local development data, as approved for use in the study by the LCRC and Green Oak Township. The trip generation will be provided to the LCRC for review and approval prior to the completion of the Future Conditions analysis.
- b. A table will be provided in the report outlining the categories and quantities of land uses, with the corresponding trip generation rates or equations, and the resulting number of trips.

7. Trip Distribution and Traffic Assignment

- a. Assign the trips that would be generated by the proposed development to the adjacent road network based on existing traffic patterns. The distribution of the estimated trip generation to the adjacent street network and nearby intersections shall be included in the report and the basis will be explained. The distribution percentages with the corresponding volumes will be provided in a graphical format. The trip distribution will be provided to the LCRC for review and approval prior to the completion of the Future Conditions analysis.
- b. Combine the site-generated traffic assignments with the background traffic forecasts to establish the Future AM and PM peak hour traffic volumes.

8. Future Conditions

- a. Calculate the **Future (*with the proposed development*)** vehicle delays, LOS, and vehicle queues at the study intersections. Intersection analysis shall include LOS determination for all approaches and movements. The LOS will be based on the procedures outlined in the HCM 6th Edition, the latest edition of Transportation Research Board's Highway Capacity Manual.
- b. Identify improvements (if any) for the study road network that would be required to accommodate the site-generated traffic volumes.

9. Access Management

- a. Evaluate the proposed site driveways to determine the need for auxiliary lanes (left-turn, right-turn, passing flare)

10. Signalization

- a. If a traffic signal is recommended at any of the study intersections, a signal warrant analysis will be included in the study.

2 BACKGROUND DATA

2.1 EXISTING ROAD NETWORK

Vehicle transportation for the study area is provided by Maltby Road, Whitmore Lake Road and Rickett Road. Regional transportation is provided via US-23 east of the proposed site. The lane use and traffic control at the study intersections are shown on **Figure 2** and the study roadways are further described below. For the purposes of this study, all minor streets and driveways are assumed to have an operating speed of 25 miles per hour (mph).

Maltby Road is classified as a Major Collector, runs in the east and west directions, and is under the jurisdiction of LCRC. Maltby Road has a posted speed limit of 45 mph and a typical two-lane cross section with one lane in each direction. Between Rickett Road and Whitmore Lake Road, Maltby Road has an Annual Average Daily Traffic (AADT) volume of 6,800 vehicles per day (SEMCOG 2016). Maltby Road between Hamburg Road and Rickett Road has an AADT of 3,800 vehicles per day (SEMCOG 2016).

Whitmore Lake Road is classified as a Minor Arterial, runs in the north and south directions, and is under the jurisdiction of LCRC. South of Maltby Road, Whitmore Lake Road has a posted speed limit of 55 mph, an AADT of 6,200 vehicles per day (SEMCOG 2016), and a two-lane cross section. Whitmore Lake Road north of Maltby Road has an AADT of 21,300 vehicles per day (SEMCOG 2016) and widens to provide two travel lanes in each direction and a center left turn lane.

Rickett Road is classified as a Major Collector, runs generally in the north and south directions, and is under the jurisdiction of LCRC. Rickett Road south of Maltby Road has a typical two-lane cross section, a posted speed limit of 55 mph, and an AADT of 5,100 vehicles per day (SEMCOG 2016). The segment of Rickett Road north of Maltby Road has a posted speed limit of 40 mph and an AADT of 9,100 vehicles per day (SEMCOG 2016).

2.2 EXISTING TRAFFIC VOLUMES

Existing traffic volume data at the study intersections were collected by F&V subconsultant, Traffic Data Collection, LLC (TDC), on January 8, 2020 between the hours of 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM. This data was used as a baseline to establish the current peak hour traffic volumes for the analysis of existing traffic conditions. During collection of the manual intersection turning movement counts, pedestrian data and commercial truck percentages were recorded and used in the traffic analysis. Peak Hour Factors (PHFs) were also calculated for each study intersection approach.

The network wide peak hour was identified for the study area and traffic volumes for each intersection during the peak hour were utilized for this study, and the volumes were balanced upward through the study network. At locations where access is provided between study intersections, "dummy" intersections were used to account for sink and source volumes, and through volumes were carried along the main study roadways. The AM and PM peak hours of existing network traffic was identified to occur between 7:15 AM to 8:00 AM and 4:45 PM to 5:30 PM for a typical weekday. The traffic volume data are included in Appendix A and the existing peak hour traffic volumes are summarized on **Figure 3**.

3 ANALYSIS

3.1 EXISTING CONDITIONS

The existing AM and PM peak hour vehicle delays and Levels of Service (LOS) were calculated at the study intersections using Synchro (Version 10) traffic analysis software. The results of the analysis of existing conditions were based on the existing lane use and traffic control shown on **Figure 2**, the existing traffic volumes shown on **Figure 3**, and the methodologies presented in the Highway Capacity Manual (HCM) 2000 and HCM 6th Edition (HCM6).

Descriptions of LOS "A" through "F", as defined in the HCM, are provided in Appendix A for unsignalized intersections. Typically, LOS D is considered acceptable, with LOS A representing minimal delay and LOS F indicating failing conditions. The results of the analysis of existing conditions are presented in Appendix B and are summarized in **Table 1**.

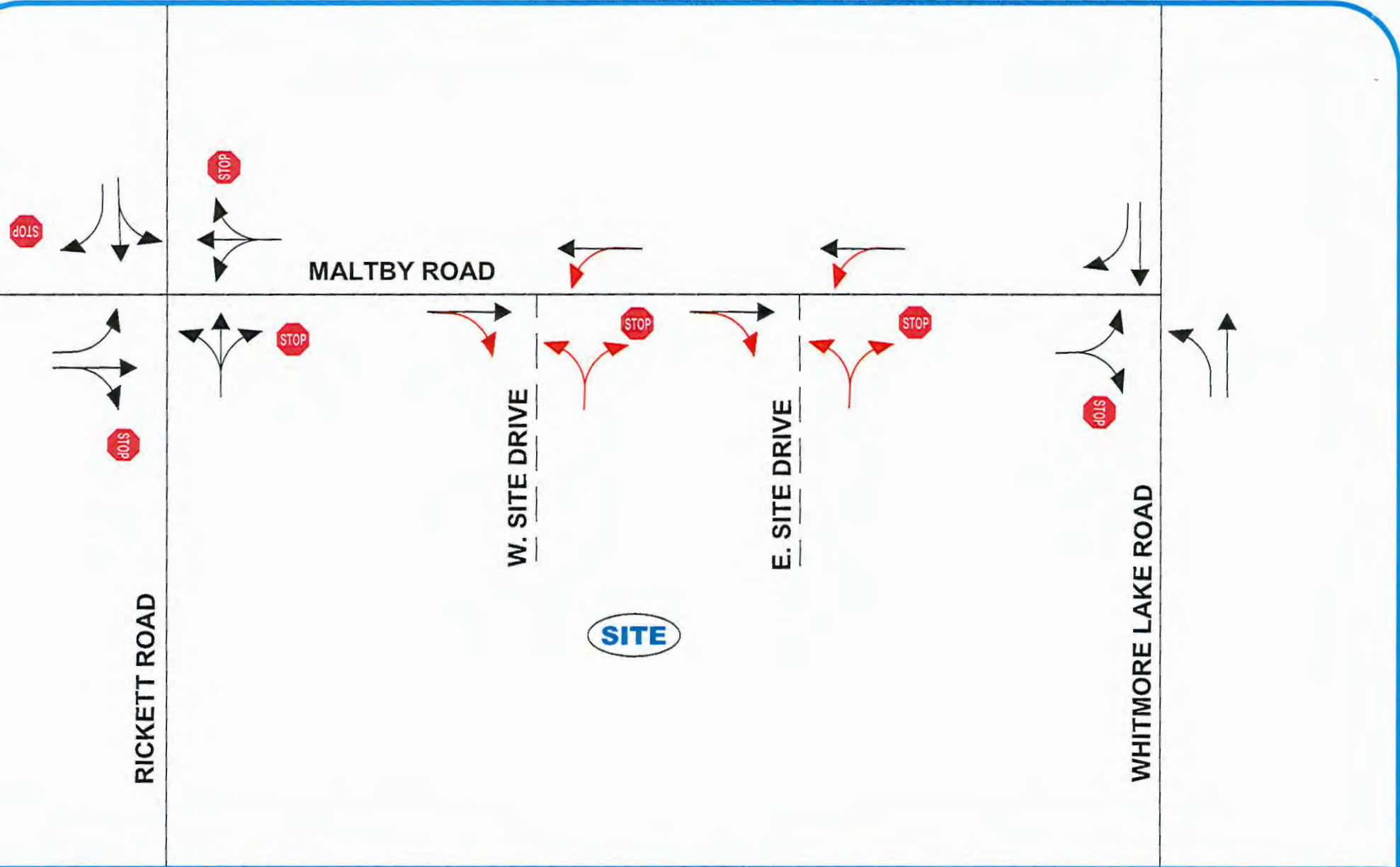






FIGURE 2
LANE USE AND TRAFFIC CONTROL
 GREEN OAK PARC - GREEN OAK TOWNSHIP, MI

LEGEND

-  UNSIGNALIZED INTERSECTION
-  ROADS
-  PROPOSED LANE USE
-  LANE USE



36/29
150/207
140/131

30/73
115/181
20/111

475/188
110/176

165/365

221/75
205/74
36/15

47/53
166/207
30/21

288/156

MALTBY ROAD

153/123
77/73

409/302
67/107

RICKETT ROAD

SITE

WHITMORE LAKE ROAD

LEGEND

- TRAFFIC VOLUMES (AM/PM)
- ROADS



NORTH
SCALE: NOT TO SCALE



FIGURE 3
EXISTING TRAFFIC VOLUMES
GREEN OAK PARC - GREEN OAK TOWNSHIP, MI

Table 1: Existing Intersection Operations

Intersection	Control	Approach	Existing Conditions								
			AM Peak				PM Peak				
			Delay (s/veh)	LOS	Avg. Queue (ft)	95th% Queue (ft)	Delay (s/veh)	LOS	Avg. Queue (ft)	95th% Queue (ft)	
1	Maltby Road & Rickett Road	STOP (ALL WAY)	NB	25.7	D	60	104	24.5	C	59	97
			SBLT	21.6	C	49	80	20.8	C	59	109
			SBR	14.9	B	38	62	12.5	B	40	73
			EBL	31.6	D	48	89	13.9	B	26	46
			EBTR	30.1	D	51	91	13.4	B	27	51
			WB	20.1	C	42	74	34.4	D	74	138
			Overall	25.2	D			23.6	C		
2	Maltby Road & Whitmore Lake Road	STOP (Minor Street)	NBL	9.3	A	20	45	8.4	A	21	47
			SB	Free		Free		-	-	-	-
			EB	150.3	F	89	217	26.4	D	44	82

The results of the existing conditions analysis indicate that all study intersection approaches and movements currently operate acceptably at a LOS D or better with the following exception:

- The EB approach at the STOP controlled intersection of Maltby Road and Whitmore Lake Road currently operates at a LOS F during the AM peak hour.

3.2 EXISTING IMPROVEMENTS

In order to improve traffic operations for all intersection approaches and movements in the existing condition, F&V investigated the mitigation measure of adding an exclusive right-turn lane on Maltby Road at Whitmore Lake Road. This approach is a single-lane approach and there is currently a high volume of left-turning movements during the AM peak hour. Additional capacity at this intersection is recommended to accommodate the existing traffic volumes. The addition of a right-turn lane would reduce the delays and vehicle queue lengths on the single lane approach. The LCRC should consider adding this additional capacity to improve existing operations.

The projected operations at this intersection with this addition of a right-turn lane is summarized in Table 2 and shows the addition of a right-turn lane on this approach reduces the existing vehicle delay. This mitigation measure significantly improved the operations on this approach for right-turns. The LCRC should consider adding this additional capacity at this intersection to improve existing operations.

Table 2: Existing Intersection Improvements Summary

Intersection	Control	Approach	Existing Conditions				Existing with Improvements				Difference				
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak		
			Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	
2	Maltby Road & Whitmore Lake Road	STOP (Minor Street)	NBL	9.3	A	8.4	A	9.3	A	8.4	A	0	n/c	0	n/c
			SB	Free		Free		Free		Free		-	-	-	-
			EBL	150.3	F	26.4	D	117.4	F	28.1	D	-32.9	n/c	1.7	n/c
			EBR	150.3	F	26.4	D	13.0	B	9.8	A	-137.3	F to B	-16.6	D to A



Table 3: Existing Intersection Queuing Improvements Summary

Intersection	Control	Approach	Existing Conditions				Existing with Improvements				Difference				
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak		
			Avg. Queue (ft)	95th% Queue (ft)	Avg. Queue (ft)	95th% Queue (ft)	Avg. Queue (ft)	95th% Queue (ft)	Avg. Queue (ft)	95th% Queue (ft)	Avg. Queue (ft)	95th% Queue (ft)	Avg. Queue (ft)	95th% Queue (ft)	
2	Maltby Road & Whitmore Lake Road	STOP (Minor Street)	NBL	20	45	21	47	21	46	20	47	1	1	-1	0
			SB	Free		Free		Free		Free		-	-	-	-
			EBL	89	217	44	82	59	115	40	75	-30	-102	-4	-7
			EBR					19	36	18	34	-70	-181	-26	-48

3.3 BACKGROUND CONDITIONS

In order to determine the applicable traffic growth rate for the existing traffic volumes to the 2023 buildout year, SEMCOG traffic projections for this area were reviewed. SEMCOG shows a decrease in traffic from 2020-2025. Through discussions with the LCRC a 0% background growth rate was assumed for this study; therefore, the existing traffic volumes are equal to background traffic volumes for the purpose of this study.

3.4 SITE TRIP GENERATION ANALYSIS

The number of daily vehicle trips and AM and PM peak hour vehicle trips that would be generated by the proposed development was forecast based on data published in the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 10th Edition*. The trip generation forecast for the proposed development was reviewed and approved for use in this study by LCRC and is summarized in **Table 4**.

Table 4: Site Trip Generation Summary

Land Use	ITE Code	Amount	Units	Average Daily Traffic (vpd)	AM Peak Hour (vph)			PM Peak Hour (vph)		
					In	Out	Total	In	Out	Total
Multi-Family Housing (Low-Rise)	220	250	DU	1,849	26	88	114	84	49	133

3.5 SITE TRIP DISTRIBUTION

The vehicle trips that would be generated by the proposed development were assigned to the study road network based on existing peak hour traffic patterns and the methodologies published by ITE. This methodology indicates that new trips will return to their direction of origin. The site trip distributions used in the analysis were reviewed and approved by LCRC for use in this study and are summarized in **Table 5**.

Table 5: Site Trip Distribution Summary

To/From	Via	AM	PM
North	Whitmore Lake Road	33%	23%
South	Whitmore Lake Road	32%	26%
North	Rickett Road	20%	23%
South	Rickett Road	10%	18%
West	Maltby Road	5%	10%
Total		100%	100%

The site-generated traffic volumes in **Table 4** were distributed to the adjacent roadway network based on the distribution shown in **Table 5**. The site generated traffic volumes are shown in **Figure 4** and were added to the existing traffic volumes to calculate the future traffic volumes with the proposed development. Future traffic volumes are provided in **Figure 5**.



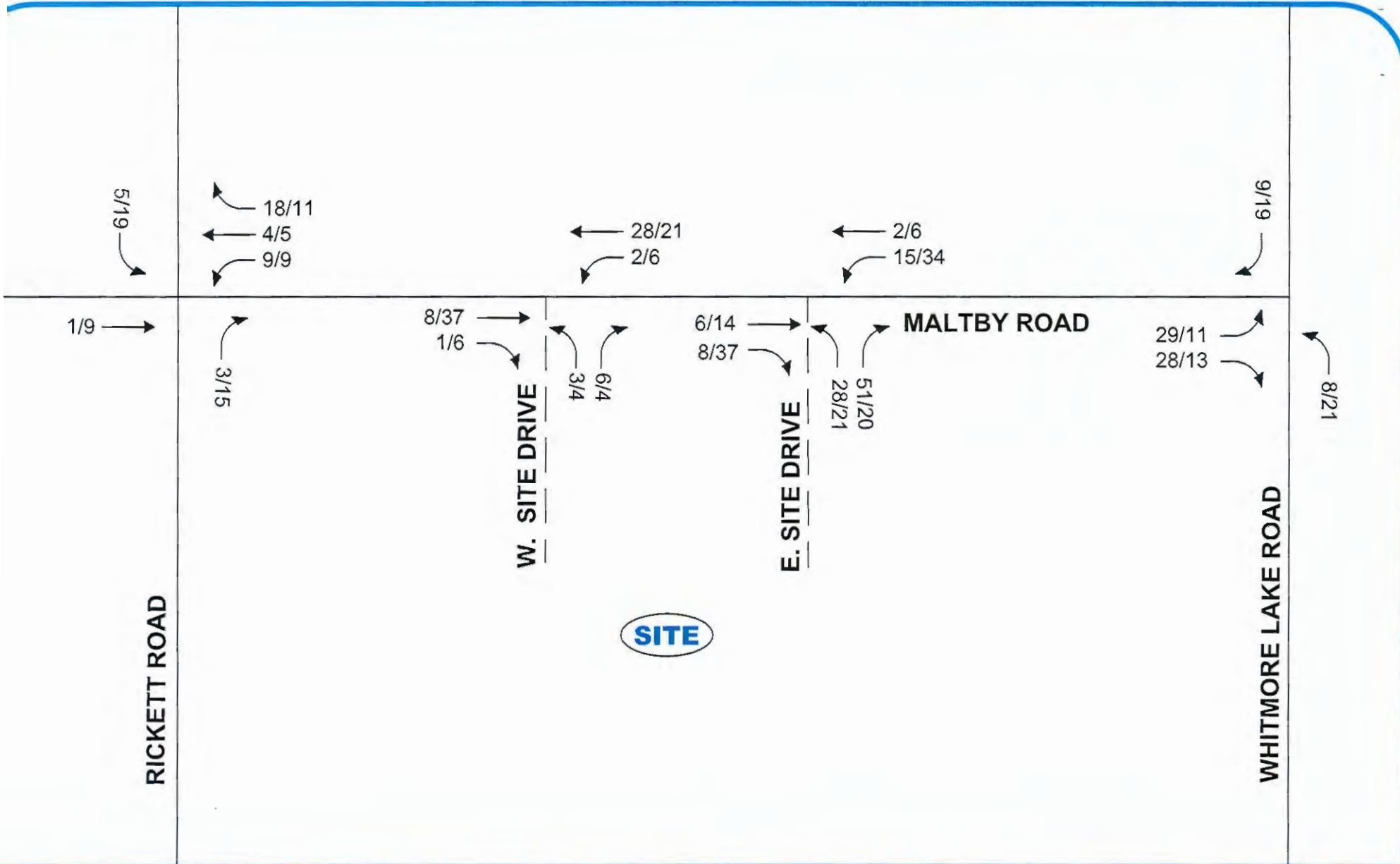




FIGURE 4
SITE-GENERATED TRAFFIC VOLUMES
 GREEN OAK PARC - GREEN OAK TOWNSHIP, MI

LEGEND

-  TRAFFIC VOLUMES (AM/PM)
-  ROADS



41/48
150/207
140/131

48/84
119/186
29/120

193/386
2/6

167/371
15/34

475/188
119/195

221/75
206/83
36/15

50/68
166/207
30/21

296/193
1/6

W. SITE DRIVE

3/4
6/4

SITE

294/160
8/37

E. SITE DRIVE

28/21
51/20

MALTBY ROAD

182/134
105/86

409/302
75/128

rickett road

Whitmore Lake Road



FIGURE 5
FUTURE TRAFFIC VOLUMES
GREEN OAK PARC - GREEN OAK TOWNSHIP, MI

LEGEND

- TRAFFIC VOLUMES (AM/PM)
- ROADS



3.6 FUTURE CONDITIONS

Future operations (*with the proposed development*) peak hour vehicle delays and LOS were calculated based on the existing lane use and traffic control shown on **Figure 2**, and the methodologies presented in the HCM. The results of the analysis of future conditions are presented in Appendix C and are summarized in **Table 6**.

The results of the future conditions analysis indicate that study intersection approaches and movements will operate in a manner similar to existing conditions. Key findings from this analysis include:

- During the AM peak hour, the EB left-turn movement on Maltby Road at Rickett Road is expected to operate at LOS E with the addition of the site generated traffic. However, a review of network simulations shows queue lengths of 2-4 vehicles, which is not significant.
- During the PM peak hour, the WB Maltby Road approach at Rickett Road is expected to operate at LOS E. A review of network simulations shows that the queue lengths on this approach will be similar to existing conditions with the addition of the proposed development.
- During the AM Peak hour, the EB approach on Maltby Road at Whitmore Lake Road is expected to continue operating at LOS F.

Table 6: Future Intersection Operations

Intersection	Control	Approach	Existing Conditions				Future Conditions				Difference			
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
			Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS
1 Maltby Road & Rickett Road	STOP (ALL WAY)	NB	25.7	D	24.5	C	29.1	D	29.8	D	3.4	n/c	5.3	C to D
		SBLT	21.6	C	20.8	C	24.2	C	25.6	D	2.6	n/c	4.8	C to D
		SBR	14.9	B	12.5	B	15.8	C	13.2	B	0.9	B to C	0.7	n/c
		EBL	31.6	D	13.9	B	35.6	E	14.6	B	4.0	D to E	0.7	n/c
		EBTR	30.1	D	13.4	B	34.7	D	14.5	B	4.6	n/c	1.1	n/c
		WB	20.1	C	34.4	D	24.9	C	48.8	E	4.8	n/c	14.4	D to E
		Overall	25.2	D	23.6	C	28.7	D	30.4	D	3.5	n/c	6.8	C to D
2 Maltby Road & Whitmore Lake Road	STOP (Minor Street)	NBL	9.3	A	8.4	A	9.4	A	8.6	A	0.1	n/c	0.2	n/c
		SB	Free		Free		Free		Free		-	-	-	-
		EB	150.3	F	26.4	D	264.1	F	34.8	D	113.8	n/c	8.4	n/c
3 E. Site Drive & Maltby Road	STOP (Minor Street)	NB	N/A				13.3	B	12.3	B	13.3	B	12.3	B
		EB	N/A				Free		Free		Free		Free	
		WBL	N/A				8.3	A	7.8	A	8.3	A	7.8	A
4 W. Site Drive & Maltby Road	STOP (Minor Street)	NB	N/A				11.9	B	11.6	B	11.9	B	11.6	B
		EB	N/A				Free		Free		Free		Free	
		WBTL	N/A				8.2	A	7.7	A	8.2	A	7.7	A



Table 7: Future Intersection Operations Queuing Summary

Intersection	Control	Approach	Existing Conditions				Future Conditions				Difference				
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak		
			Avg. Queue (ft)	95th% Queue (ft)	Avg. Queue (ft)	95th% Queue (ft)	Avg. Queue (ft)	95th% Queue (ft)	Avg. Queue (ft)	95th% Queue (ft)	Avg. Queue (ft)	95th% Queue (ft)	Avg. Queue (ft)	95th% Queue (ft)	
1	Maltby Road & Rickett Road	STOP (ALL WAY)	NB	60	99	59	97	60	103	63	101	0	4	4	4
			SBLT	52	92	59	109	54	97	63	109	2	5	4	0
			SBR	42	74	40	73	42	75	42	77	0	1	2	4
			EBL	53	111	26	46	51	95	27	50	-2	-16	1	4
			EBTR	55	128	27	51	57	105	28	54	2	-23	1	3
			WB	47	86	74	138	50	88	78	134	3	2	4	-4
2	Maltby Road & Whitmore Lake Road	STOP (Minor Street)	NBL	21	51	21	47	19	46	25	33	-2	-5	4	-14
			SB	Free		Free		Free		Free		-	-	-	-
			EB	78	175	44	82	159	362	51	100	81	187	7	18
3	E. Site Drive & Maltby Road	STOP (Minor Street)	NB	N/A				33	56	21	47	33	56	21	47
			EB	N/A				Free		Free		Free		Free	
			WBL	N/A				4	20	7	29	4	20	7	29
4	W. Site Drive & Maltby Road	STOP (Minor Street)	NB	N/A				10	33	5	23	10	33	5	23
			EB	N/A				Free		Free		Free		Free	
			WBTL	N/A				0	4	1	11	0	4	1	11

3.7 FUTURE IMPROVEMENTS

Mitigation measures were investigated at the study intersections in order to improve the study intersections to LOS D or better with the addition of the site generated traffic.

Maltby Road & Whitmore Lake Road

This intersection is anticipated to operate in a manner similar to existing conditions with the addition of the site generated traffic volumes. Therefore, the addition of a right-turn lane on the Maltby Road approach at Whitmore Lake Road was considered. The projected operations at this intersection with this addition of a right-turn lane is summarized in **Tables 8 and 9** and shows the addition of a right-turn lane on this approach reduced the projected vehicle delay. This mitigation measure significantly improved the operations on this approach for right-turns.

Maltby Road & Rickett Road

The STOP controlled eastbound left-turn movement during the AM peak hour operates at a LOS E in the future condition. The operations at this intersection during the AM peak hour are impacted by the peak 30 minutes of drop-off at Scranton Middle School. This impact is also shown in the SimTraffic simulation which shows a brief period of vehicle queueing that is not present throughout the peak hour.

The STOP controlled westbound approach at this intersection operates at a LOS E during the PM peak hour. As drivers return from work in the PM peak hour, again there are brief periods of vehicle queues (maximum of 6 vehicles); however, these dissipate and are not present throughout the peak hour.

In order to improve the intersection LOS to D or better, the addition of turn lanes were considered on the northbound and westbound approaches to increase capacity; however, the impact of these improvements was limited and there was not enough ROW to add these improvements. Therefore, based on the operational review it is recommended that this intersection is monitored by LCRC to determine if/when mitigation measures are necessary.



Table 8: Future Intersection Operations with Improvements

Intersection	Control	Approach	Future Conditions				Future Conditions with Improvements				Difference				
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak		
			Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	
2	Maltby Road & Whitmore Lake Rd	STOP (Minor Street)	NBL	9.4	A	8.6	A	9.4	A	8.6	A	0.0	n/c	0	n/c
			SB	Free		Free		Free		Free		-	-	-	-
			EBL	264.1	F	34.8	D	195.1	F	35.6	E	-69.0	n/c	0.8	D to E
			EBR					13.6	B	9.9	A	-250.5	F to B	-24.9	D to A

Table 9: Future Intersection Operations with Improvements Queuing Summary

Intersection	Control	Approach	Future Conditions				Future Conditions with Improvements				Difference				
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak		
			Avg. (ft)	95th% (ft)	Avg. (ft)	95th% (ft)	Avg. (ft)	95th% (ft)	Avg. (ft)	95th% (ft)	Avg. (ft)	95th% (ft)	Avg. (ft)	95th% (ft)	
2	Maltby Road & Whitmore Lake Rd	STOP (Minor Street)	NBL	19	46	25	33	22	47	27	52	3	1	2	19
			SB	Free		Free		Free		Free		Free		Free	
			EBL	159	362	51	100	76	159	39	73	-83	-203	-12	-27
			EBR					24	48	21	38	-135	-314	-30	-62

4 AUXILIARY LANE WARRANTS

The proposed site driveways were evaluated using the MDOT left- and right-turn lane criteria to determine if auxiliary lanes are necessary at the proposed intersections on Maltby Road. The results of the analysis are summarized in Table 10 below and provided in Appendix D.

Table 10: Auxiliary Lane Warrant Analysis Summary

Auxiliary Lane	West Site Drive	East Site Drive
Right-turn Lane	No	No
Left-turn Lane	No	No
Left-turn Passing Flare	No	Yes

5 CONCLUSIONS

The conclusions of this TIS are as follows:

1. The proposed development includes the construction of 250 multi-family units and the property is to be rezoned with a PUD as part of this project.
2. The proposed development includes the addition of two site driveways on Maltby Road between Rickett Road and Whitmore Lake Road.
3. The AM and PM peak hours of existing network traffic were identified to occur between 7:15 AM to 8:00 AM and 4:45 PM to 5:30 PM for a typical weekday. Traffic volumes during the AM peak hour are influenced by the operations at Scranton Middle School.
4. Mitigation measures were investigated at the Maltby Road and Whitmore Lake Road intersection to improve existing operations. The eastbound approach is a single-lane approach and there is currently a high volume of left-turning movements during the AM peak hour. Additional capacity at this intersection is recommended to accommodate the existing traffic volumes. The addition of a right-turn

lane would reduce the delays and vehicle queue lengths on the single lane approach. The LCRC should consider adding this additional capacity at this intersection to improve existing operations.

5. In order to determine the applicable traffic growth rate for the existing traffic volumes to the 2023 buildout year, SEMCOG traffic projections for this area were reviewed. SEMCOG shows a decrease in traffic from 2020-2025. Through discussions with the LCRC a 0% background growth rate was assumed for this study; therefore, the existing traffic volumes are equal to background traffic volumes for the purpose of this study.
6. The Maltby Road and Rickett Road intersection operates as an all-way STOP controlled intersection. The addition of the site generated traffic volumes is expected to increase the delays at this intersection for select movements. In order to improve the operations with the addition of the development, the addition of turn lanes were considered on the northbound and westbound approaches to increase capacity; however, the impact of these improvements was limited and there was not enough ROW to add these improvements. Therefore, based on the operational review it is recommended that this intersection is monitored by LCRC to determine if/when mitigation measures are necessary.
7. The proposed site driveway intersections are expected to operate well with the addition of the proposed development. Based on the MDOT turn lane analysis, a left-turn passing flare is recommended at the East Site Drive. No additional auxiliary lanes are required at the proposed site driveways.

6 RECOMMENDATIONS

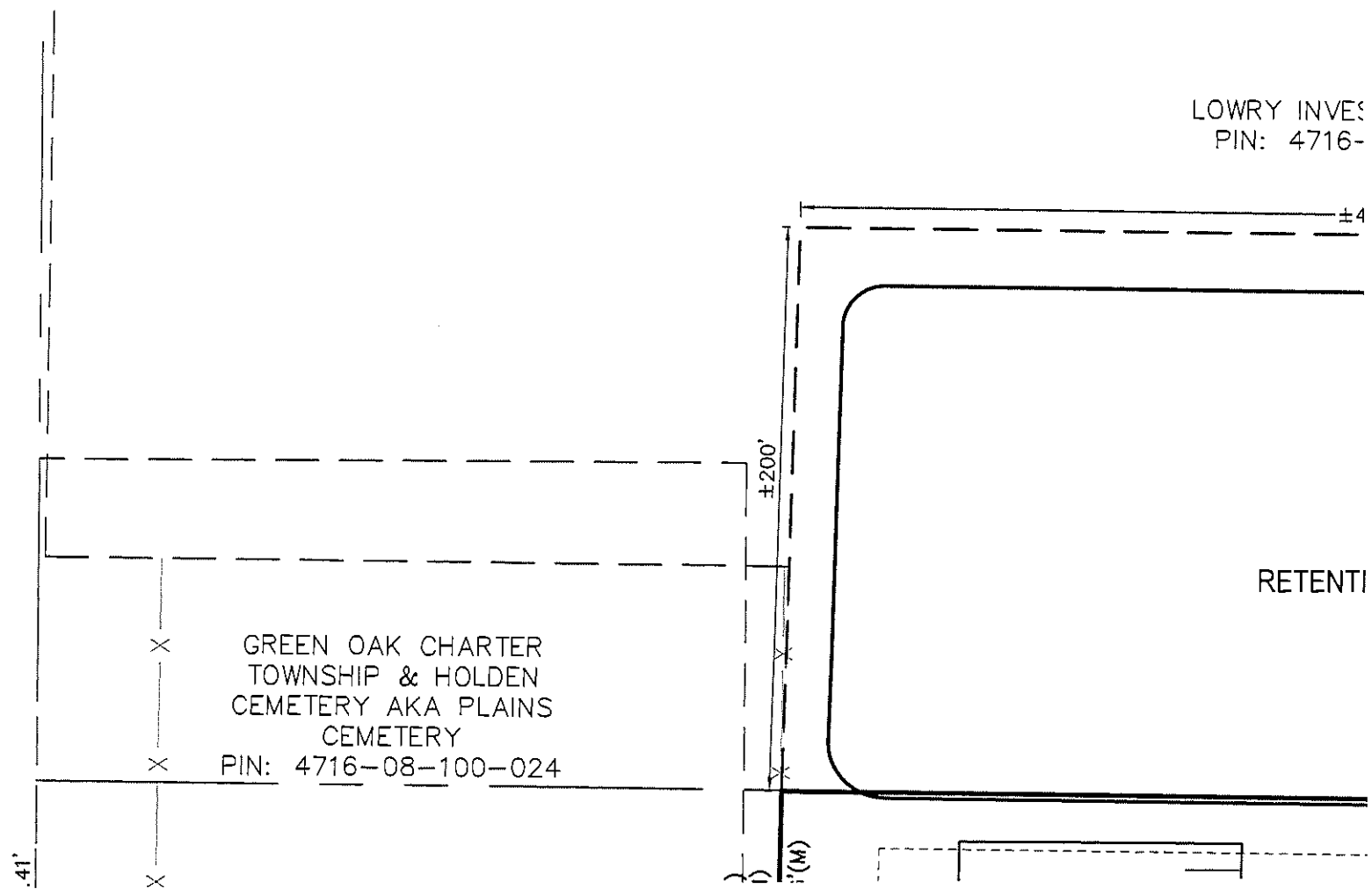
The recommendations of this TIS are as follows:

- The LCRC should consider the addition of an EB right-turn lane on Maltby Road at Whitmore Lake Road to improve existing operations. Additional capacity on Maltby Road at the Whitmore Lake Road intersection is recommended to accommodate the existing traffic volumes. The addition of a right-turn lane would reduce the delays and vehicle queue lengths on the single lane approach.
- Provide a left-turn passing flare at the proposed East Site Drive on Maltby Road.

Appendix A

BACKGROUND INFORMATION

LOWRY INVE
PIN: 4716-



RETENTI

GREEN OAK CHARTER
TOWNSHIP & HOLDEN
CEMETERY AKA PLAINS
CEMETERY
PIN: 4716-08-100-024

.41'

±200'

±4

(M)

Crash and Road Data

Road Segment Report

Maltby Rd, (PR Number 940204)

From:	Rickett Rd 1.662 BMP
To:	Whitmore Lake Rd 2.172 EMP
FALINK ID:	5567
Community:	Green Oak Township
County:	Livingston
Functional Class:	5 - Major Collector
Direction:	1 Way
Length:	0.510 miles
Number of Lanes:	2
Posted Speed:	45 (source: TCO)
Route Classification:	M-59
Annual Crash Average 2014-2018:	2
Traffic Volume (2016)*:	6,800 (Observed AADT)
Pavement Type (2016):	Asphalt
Pavement Rating (2016):	Poor
Short Range (TIP) Projects:	No TIP projects for this segment.
Long Range (RTP) Projects:	No long-range projects for this segment.

* AADT values are derived from Traffic Counts

Street View



Crash and Road Data

Road Segment Report

Maltby Rd, (PR Number 940204)

From:	Hamburg Rd 0.000 BMP
To:	Rickett Rd 1.662 EMP
FALINK ID:	5566
Community:	Green Oak Township , Hamburg Township
County:	Livingston
Functional Class:	5 - Major Collector
Direction:	1 Way
Length:	1.662 miles
Number of Lanes:	2
Posted Speed:	45 (source: TCO)
Route Classification:	M-59
Annual Crash Average 2014-2018:	<u>4</u>
Traffic Volume (2016)*:	3,900 (Observed AADT)
Pavement Type (2016):	Asphalt
Pavement Rating (2016):	Poor
Short Range (TIP) Projects:	No TIP projects for this segment.
Long Range (RTP) Projects:	No long-range projects for this segment.

* AADT values are derived from **Traffic Counts**

Street View



Crash and Road Data

Road Segment Report

Rickett Rd, (PR Number 940304)

From:	Maltby Rd 2.503 BMP
To:	Lee Rd 3.008 EMP
FALINK ID:	5587
Community:	Green Oak Township
County:	Livingston
Functional Class:	5 - Major Collector
Direction:	1 Way
Length:	0.505 miles
Number of Lanes:	2
Posted Speed:	40 (source: TCO)
Route Classification:	Not a route
Annual Crash Average 2014-2018:	2
Traffic Volume (2016)*:	9,100 (Observed AADT)
Pavement Type (2016):	Asphalt
Pavement Rating (2016):	Fair
Short Range (TIP) Projects:	No TIP projects for this segment.
Long Range (RTP) Projects:	No long-range projects for this segment.

* AADT values are derived from Traffic Counts

Street View

Crash and Road Data

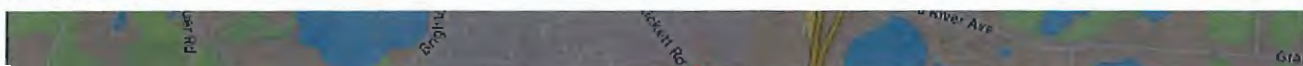
Road Segment Report

Rickett Rd, (PR Number 940304)

From:	Winans Lake Rd 0.000 BMP
To:	Maltby Rd 2.503 EMP
FALINK ID:	5586
Community:	Green Oak Township
County:	Livingston
Functional Class:	5 - Major Collector
Direction:	1 Way
Length:	2.503 miles
Number of Lanes:	3
Posted Speed:	55 (source: TCO)
Route Classification:	Not a route
Annual Crash Average 2014-2018:	<u>11</u>
Traffic Volume (2016)*:	5,100 (Observed AADT)
Pavement Type (2016):	Asphalt
Pavement Rating (2016):	Fair
Short Range (TIP) Projects:	No TIP projects for this segment.
Long Range (RTP) Projects:	No long-range projects for this segment.

* AADT values are derived from Traffic Counts

Street View



Crash and Road Data

Road Segment Report

Whitmore Lake Rd, (PR Number 932204)

From:	Maltby Rd 5.337 BMP
To:	Whitmore Lake Rd 5.706 EMP
FALINK ID:	5115
Community:	Green Oak Township
County:	Livingston
Functional Class:	4 - Minor Arterial
Direction:	1 Way
Length:	0.369 miles
Number of Lanes:	2
Posted Speed:	55 (source: TCO)
Route Classification:	Not a route
Annual Crash Average 2014-2018:	<u>5</u>
Traffic Volume (2016)*:	21,300 (Observed AADT)
Pavement Type (2016):	Asphalt
Pavement Rating (2016):	Poor
Short Range (TIP) Projects:	No TIP projects for this segment.
Long Range (RTP) Projects:	No long-range projects for this segment.

* AADT values are derived from Traffic Counts

Street View



Crash and Road Data

Road Segment Report

Whitmore Lake Rd, (PR Number 932204)

From:	Silver Lake Rd 2.989 BMP
To:	Maltby Rd 5.337 EMP
FALINK ID:	5114
Community:	Green Oak Township
County:	Livingston
Functional Class:	4 - Minor Arterial
Direction:	1 Way
Length:	2.348 miles
Number of Lanes:	2
Posted Speed:	55 (source: TCO)
Route Classification:	Not a route
Annual Crash Average 2014-2018:	<u>10</u>
Traffic Volume (2016)*:	6,200 (Observed AADT)
Pavement Type (2016):	Asphalt
Pavement Rating (2016):	Poor
Short Range (TIP) Projects:	No TIP projects for this segment.
Long Range (RTP) Projects:	No long-range projects for this segment.

* AADT values are derived from Traffic Counts

Street View





Road Name:	Maltby
Weekday VMT:	2,633
Weekday VHT:	115
Segment Length (miles):	0.51

2025	East	West	Total
Weekday Flow	2,790	2,770	5,560
AM Peak Hr Flow	330	120	450
PM Peak Hr Flow	210	370	580
Lane(s)	1	1	2

[Click here to comment on this road segment](#)

Weekday Flow

- 1 - 5,000
- 5,001 - 10,000
- 10,001 - 20,000
- 20,001 - 40,000
- >= 40,001



Caulerton Loop

Bick App Rd

Level of Service Criteria for Stop Sign Controlled Intersections

The level of service criteria are given in Table 17-2. As used here, control delay is defined as the total elapsed time from the time a vehicle stops at the end of the queue until the vehicle departs from the stop line; this time includes the time required for the vehicle to travel from the last-in-queue position to the first-in-queue position, including deceleration of vehicles from free-flow speed to the speed of vehicles in queue.

The average total delay for any particular minor movement is a function of the service rate or capacity of the approach and the degree of saturation. . . .

Exhibit 17-2. Level of Service Criteria for TWSC Intersections

LEVEL OF SERVICE	AVERAGE CONTROL DELAY (sec/veh)
A	≤ 10
B	> 10 and ≤ 15
C	> 15 and ≤ 25
D	> 25 and ≤ 35
E	> 35 and ≤ 50
F	> 50

Average total delay less than 10 sec/veh is defined as Level of Service (LOS) A. Follow-up times of less than 5 sec have been measured when there is no conflicting traffic for a minor street movement, so control delays of less than 10 sec/veh are appropriate for low flow conditions. To remain consistent with the AWSC intersection analysis procedure described later in this chapter, a total delay of 50 sec/veh is assumed as the break point between LOS E and F.

The proposed level of service criteria for TWSC intersections are somewhat different from the criteria used in Chapter 16 for signalized intersections. The primary reason for this difference is that drivers expect different levels of performance from different kinds of transportation facilities. The expectation is that a signalized intersection is designed to carry higher traffic volumes than an unsignalized intersection. Additionally, several driver behavior considerations combine to make delays at signalized intersections less onerous than at unsignalized intersections. For example, drivers at signalized intersections are able to relax during the red interval, where drivers on the minor approaches to unsignalized intersections must remain attentive to the task of identifying acceptable gaps and vehicle conflicts. Also, there is often much more variability in the amount of delay experienced by individual drivers at unsignalized than signalized intersections. For these reasons, it is considered that the total delay threshold for any given level of service is less for an unsignalized intersection than for a signalized intersection. . . .

LOS F exists when there are insufficient gaps of suitable size to allow a side street demand to cross safely through a major street traffic stream. This level of service is generally evident from extremely long total delays experienced by side street traffic and by queueing on the minor approaches. The method, however, is based on a constant critical gap size - that is, the critical gap remains constant, no matter how long the side street motorist waits. LOS F may also appear in the form of side street vehicles' selecting smaller-than-usual gaps. In such cases, safety may be a problem and some disruption to the major traffic stream may result. It is important to note that LOS F may not always result in long queues but may result in adjustments to normal gap acceptance behavior. The latter is more difficult to observe on the field than queueing, which is more obvious.

Source: Highway Capacity Manual, 2010. Transportation Research Board, National Research Council

Traffic Data Collection, LLC

www.tdccounts.com

Phone: 586.786-5407

Traffic Study Performed For:

Fleis & VandenBrink



Project: Bloomfield Traffic Impact Study
Study: 4 Hr. Video Turning Movement Count
Weather: Flurries AM, Cldy PM Deg 30s
Count By Miovision Video VCU 4PU SW

File Name : TMC_1 Maltby & Rickett_1-8-20
Site Code : TMC_1
Start Date : 1/8/2020
Page No : 1

4 Hour traffic study was conducted during typical weekday (Wednesday) from 7:00 AM - 9:00 AM morning & 4:00 PM - 6:00 PM afternoon peak hours, while school was in session.

Groups Printed- Pass Cars - Single Units - Heavy Trucks - Peds

Start Time	Rickett Road Southbound					Maltby Road Westbound					Rickett Road Northbound					Maltby Road Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	13	27	6	0	46	3	17	1	0	21	8	43	4	0	55	1	33	27	0	61	183
07:15 AM	44	28	5	0	77	3	31	2	0	36	16	30	16	0	62	4	55	52	0	111	286
07:30 AM	60	37	12	0	109	6	46	1	0	53	4	34	9	0	47	15	55	60	0	130	339
07:45 AM	24	45	13	0	82	6	27	12	0	45	13	47	3	0	63	15	69	86	0	170	360
Total	141	137	36	0	314	18	121	16	0	155	41	154	32	0	227	35	212	225	0	472	1168
08:00 AM	12	40	6	0	58	15	11	5	0	31	14	55	2	0	71	2	26	23	0	51	211
08:15 AM	7	35	9	0	51	7	10	4	0	21	14	54	2	0	70	3	19	21	0	43	185
08:30 AM	8	34	18	0	60	18	12	3	0	33	15	63	2	0	80	4	23	22	0	49	222
08:45 AM	17	41	27	0	85	10	7	1	0	18	9	36	0	0	45	1	17	19	0	37	185
Total	44	150	60	0	254	50	40	13	0	103	52	208	6	0	266	10	85	85	0	180	803
*** BREAK ***																					
04:00 PM	29	51	7	0	87	16	28	21	0	65	7	31	4	0	42	4	15	17	0	36	230
04:15 PM	28	45	12	0	85	12	33	27	0	72	8	55	6	0	69	6	19	7	0	32	258
04:30 PM	33	39	12	0	84	13	40	23	0	76	15	44	4	0	63	2	16	18	0	36	259
04:45 PM	40	45	6	0	91	17	51	25	0	93	21	52	3	0	76	4	24	22	0	50	310
Total	130	180	37	0	347	58	152	96	0	306	51	182	17	0	250	16	74	64	0	154	1057
05:00 PM	35	49	6	0	90	19	36	30	0	85	10	60	5	0	75	2	15	22	0	39	289
05:15 PM	19	51	9	0	79	18	49	26	0	93	11	57	6	0	74	4	19	15	0	38	284
05:30 PM	37	62	8	0	107	19	45	30	0	94	11	38	7	0	56	5	16	16	0	37	294
05:45 PM	25	56	13	0	94	13	49	25	0	87	19	63	6	0	88	3	12	21	0	36	305
Total	116	218	36	0	370	69	179	111	0	359	51	218	24	0	293	14	62	74	0	150	1172
Grand Total	431	685	169	0	1285	195	492	236	0	923	195	762	79	0	1036	75	433	448	0	956	4200
Apprch %	33.5	53.3	13.2	0		21.1	53.3	25.6	0		18.8	73.6	7.6	0		7.8	45.3	46.9	0		
Total %	10.3	16.3	4	0	30.6	4.6	11.7	5.6	0	22	4.6	18.1	1.9	0	24.7	1.8	10.3	10.7	0	22.8	
Pass Cars	428	673	163	0	1264	194	485	235	0	914	193	751	76	0	1020	71	427	440	0	938	4136
% Pass Cars	99.3	98.2	96.4	0	98.4	99.5	98.6	99.6	0	99	99	98.6	96.2	0	98.5	94.7	98.6	98.2	0	98.1	98.5
Single Units	3	9	4	0	16	1	7	1	0	9	1	11	3	0	15	4	6	8	0	18	58
% Single Units	0.7	1.3	2.4	0	1.2	0.5	1.4	0.4	0	1	0.5	1.4	3.8	0	1.4	5.3	1.4	1.8	0	1.9	1.4
Heavy Trucks	0	3	2	0	5	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	6
% Heavy Trucks	0	0.4	1.2	0	0.4	0	0	0	0	0	0.5	0	0	0	0.1	0	0	0	0	0	0.1
Peds	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Peds	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TDC Traffic Comments: Non-signalized intersection, all-way stop controlled. Video VCU camera was located within SW intersection quadrant. Note: Peds. are excluded from peak hour reports. Traffic study was performed for Vector Development, Green Oaks Charter Twp. Traffic Impact Study for Fleis & Vandenbrink.

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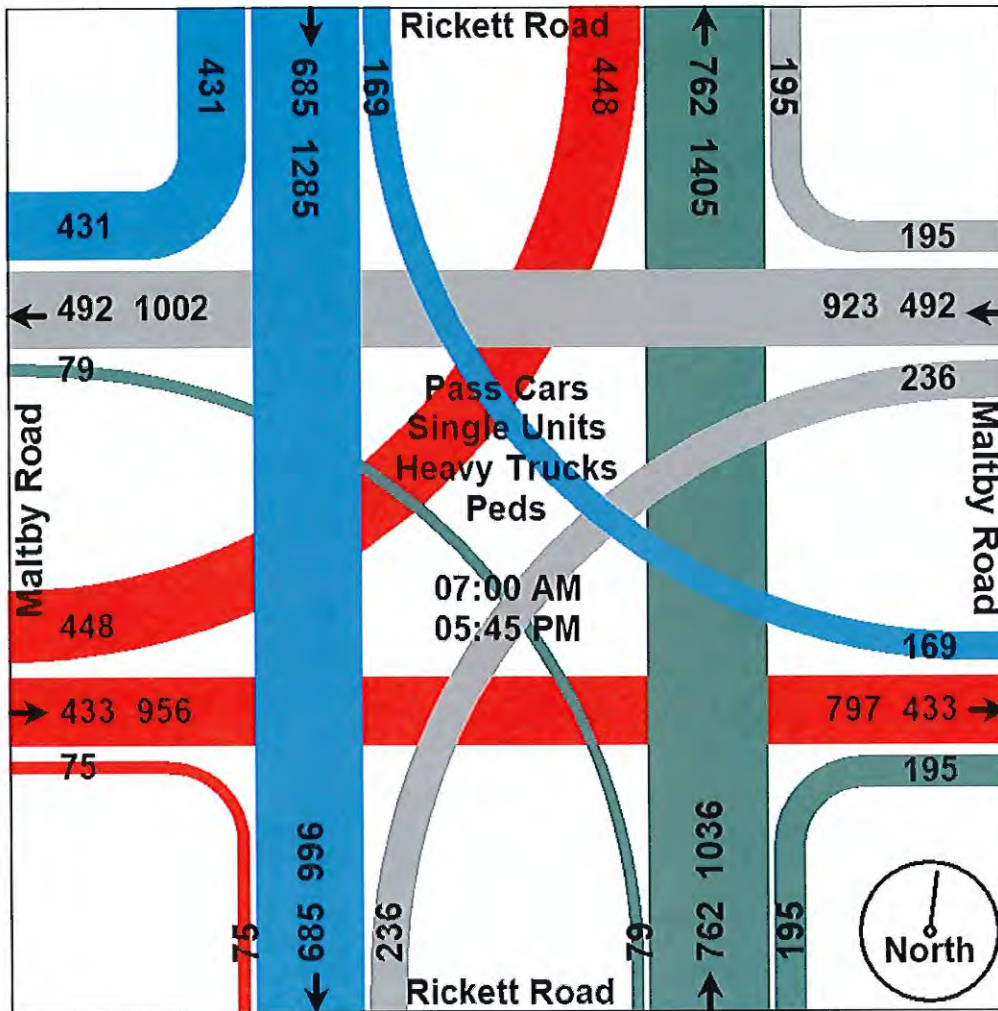
Traffic Study Performed For:

Fleis & VandenBrink



Project: Bloomfield Traffic Impact Study
Study: 4 Hr. Video Turning Movement Count
Weather: Flurries AM, Cldy PM Deg 30s
Count By Miovision Video VCU 4PU SW

File Name : TMC_1 Maltby & Rickett_1-8-20
Site Code : TMC_1
Start Date : 1/8/2020
Page No : 2



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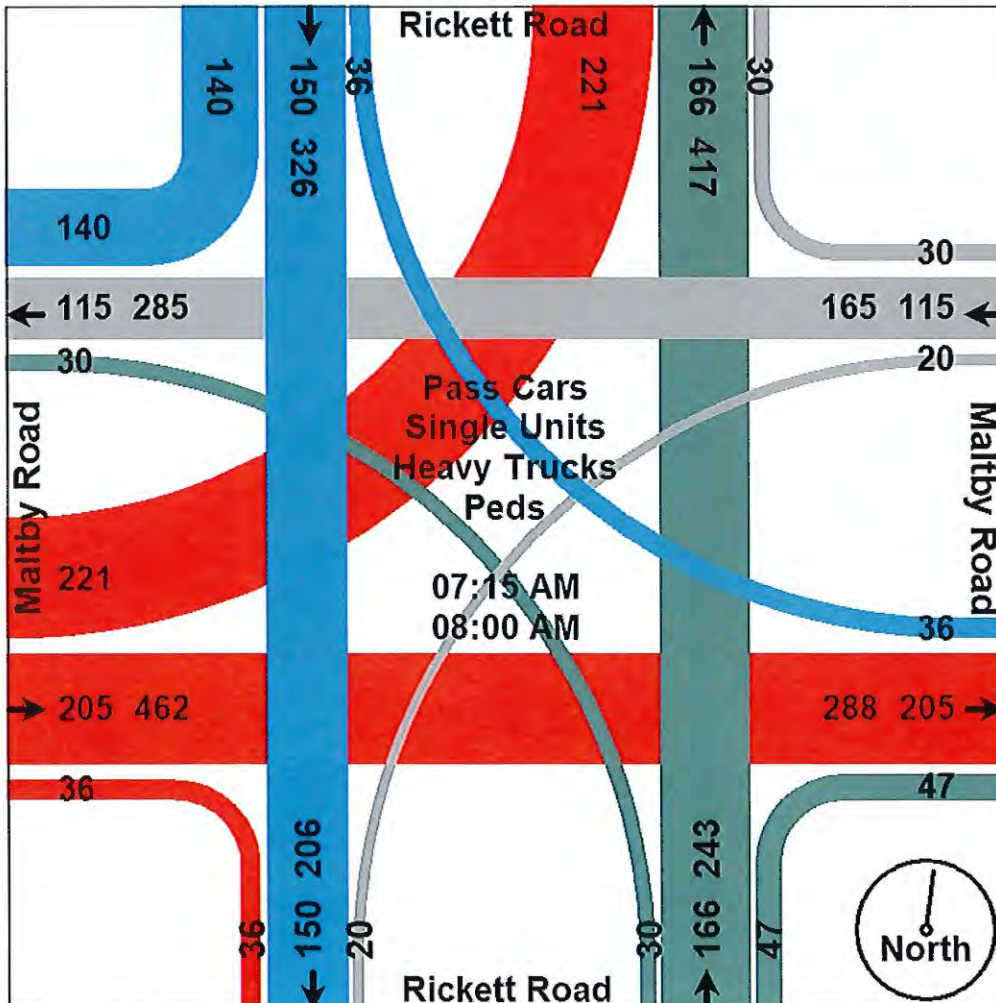
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Count By Miovision Video VCU 4PU SW

File Name : TMC_1 Maltby & Rickett_1-8-20
Site Code : TMC_1
Start Date : 1/8/2020
Page No : 3

Start Time	Rickett Road Southbound				Maltby Road Westbound				Rickett Road Northbound				Maltby Road Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 12:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	44	28	5	77	3	31	2	36	16	30	16	62	4	55	52	111	286
07:30 AM	60	37	12	109	6	46	1	53	4	34	9	47	15	55	60	130	339
07:45 AM	24	45	13	82	6	27	12	45	13	47	3	63	15	69	86	170	360
08:00 AM	12	40	6	58	15	11	5	31	14	55	2	71	2	26	23	51	211
Total Volume	140	150	36	326	30	115	20	165	47	166	30	243	36	205	221	462	1196
% App. Total	42.9	46	11		18.2	69.7	12.1		19.3	68.3	12.3		7.8	44.4	47.8		
PHF	.583	.833	.692	.748	.500	.625	.417	.778	.734	.755	.469	.856	.600	.743	.642	.679	.831
Pass Cars	138	146	34	318	30	112	20	162	47	164	28	239	35	203	217	455	1174
% Pass Cars	98.6	97.3	94.4	97.5	100	97.4	100	98.2	100	98.8	93.3	98.4	97.2	99.0	98.2	98.5	98.2
Single Units	2	3	2	7	0	3	0	3	0	2	2	4	1	2	4	7	21
% Single Units	1.4	2.0	5.6	2.1	0	2.6	0	1.8	0	1.2	6.7	1.6	2.8	1.0	1.8	1.5	1.8
Heavy Trucks	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
% Heavy Trucks	0	0.7	0	0.3	0	0	0	0	0	0	0	0	0	0	0	0	0.1
Peds	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Peds	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



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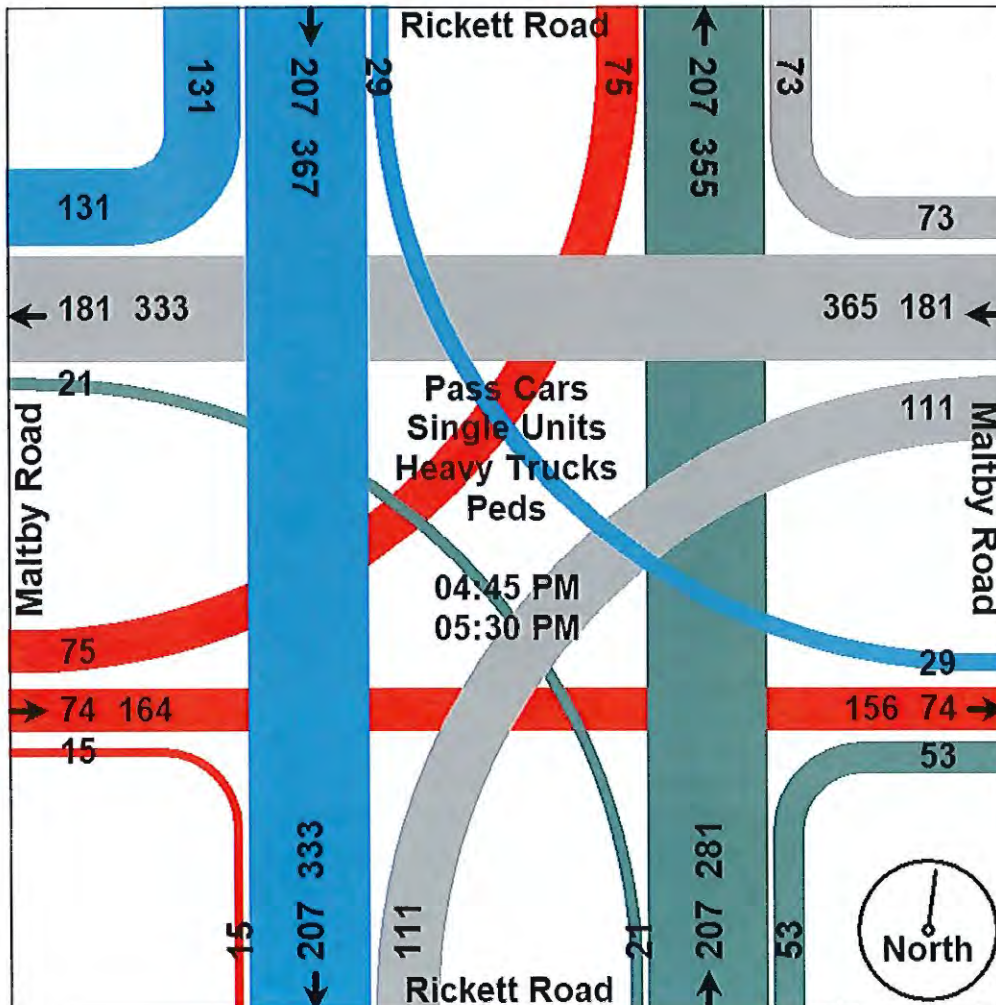
Fleis & VandenBrink



Project: Bloomfield Traffic Impact Study
 Study: 4 Hr. Video Turning Movement Count
 Weather: Flurries AM, Cldy PM Deg 30s
 Count By Miovision Video VCU 4PU SW

File Name : TMC_1 Maltby & Rickett_1-8-20
 Site Code : TMC_1
 Start Date : 1/8/2020
 Page No : 4

Start Time	Rickett Road Southbound				Maltby Road Westbound				Rickett Road Northbound				Maltby Road Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 12:45 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	40	45	6	91	17	51	25	93	21	52	3	76	4	24	22	50	310
05:00 PM	35	49	6	90	19	36	30	85	10	60	5	75	2	15	22	39	289
05:15 PM	19	51	9	79	18	49	26	93	11	57	6	74	4	19	15	38	284
05:30 PM	37	62	8	107	19	45	30	94	11	38	7	56	5	16	16	37	294
Total Volume	131	207	29	367	73	181	111	365	53	207	21	281	15	74	75	164	1177
% App. Total	35.7	56.4	7.9		20	49.6	30.4		18.9	73.7	7.5		9.1	45.1	45.7		
PHF	.819	.835	.806	.857	.961	.887	.925	.971	.631	.863	.750	.924	.750	.771	.852	.820	.949
Pass Cars	131	207	28	366	73	180	111	364	53	206	21	280	15	73	74	162	1172
% Pass Cars	100	100	96.6	99.7	100	99.4	100	99.7	100	99.5	100	99.6	100	98.6	98.7	98.8	99.6
Single Units	0	0	0	0	0	1	0	1	0	1	0	1	0	1	1	2	4
% Single Units	0	0	0	0	0	0.6	0	0.3	0	0.5	0	0.4	0	1.4	1.3	1.2	0.3
Heavy Trucks	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
% Heavy Trucks	0	0	3.4	0.3	0	0	0	0	0	0	0	0	0	0	0	0	0.1
Peds	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Peds	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



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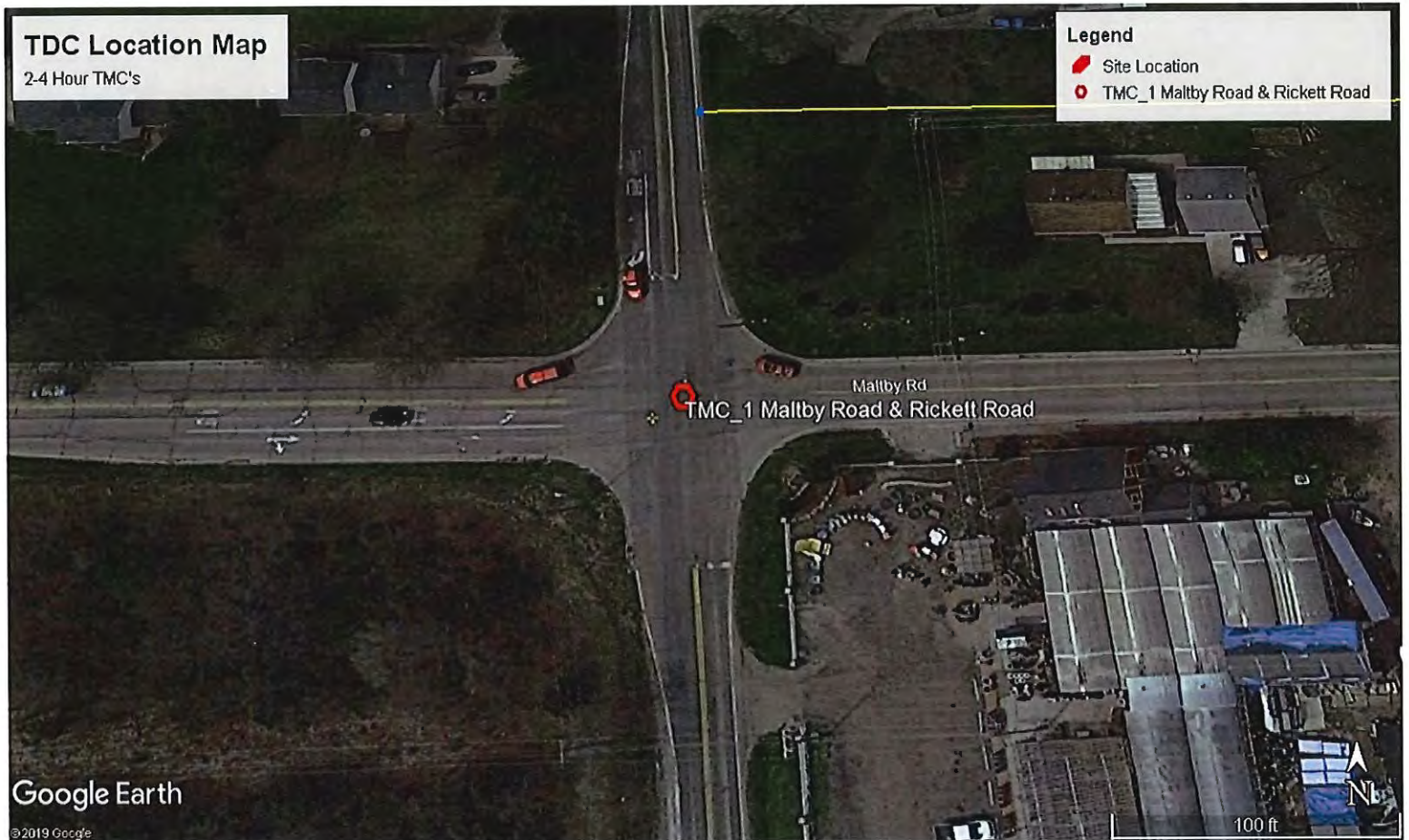
Fleis & VandenBrink



Project: Bloomfield Traffic Impact Study
Study: 4 Hr. Video Turning Movement Count
Weather: Flurries AM, Cldy PM Deg 30s
Count By Miovision Video VCU 4PU SW

File Name : TMC_1 Maltby & Rickett_1-8-20
Site Code : TMC_1
Start Date : 1/8/2020
Page No : 5

Aerial Photo



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Project: Bloomfield Traffic Impact Study
Study: 4 Hr. Video Turning Movement Count
Weather: Flurries AM, Cldy PM Deg 30s
Count By Miovision Video VCU 4G2 NW

File Name : TMC_2 Maltby & Whitmore Lk_1-8-20
Site Code : TMC_2
Start Date : 1/8/2020
Page No : 1

4 Hour traffic study was conducted during typical weekday (Wednesday) from 7:00 AM - 9:00 AM morning & 4:00 PM - 6:00 PM afternoon peak hours, while school was in session.

Groups Printed- Pass Cars - Single Units - Heavy Trucks - Peds

Start Time	Whitmore Lake Southbound				Whitmore Lake Northbound				Maltby Road Eastbound				Int. Total
	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	
07:00 AM	15	93	0	108	23	10	0	33	20	21	0	41	182
07:15 AM	27	136	0	163	18	12	0	30	20	48	0	68	261
07:30 AM	39	130	0	169	65	21	0	86	27	37	0	64	319
07:45 AM	35	112	0	147	114	12	0	126	23	43	0	66	339
Total	116	471	0	587	220	55	0	275	90	149	0	239	1101
08:00 AM	20	105	0	125	128	22	0	150	13	37	0	50	325
08:15 AM	16	128	0	144	102	12	0	114	14	36	0	50	308
08:30 AM	22	142	0	164	47	25	0	72	21	27	0	48	284
08:45 AM	13	141	0	154	57	11	0	68	28	32	0	60	282
Total	71	516	0	587	334	70	0	404	76	132	0	208	1199
*** BREAK ***													
04:00 PM	33	46	0	79	58	20	0	78	17	25	0	42	199
04:15 PM	43	38	0	81	61	22	0	83	13	26	0	39	203
04:30 PM	46	50	0	96	74	21	0	95	22	27	0	49	240
04:45 PM	51	37	0	88	69	27	0	96	16	40	0	56	240
Total	173	171	0	344	262	90	0	352	68	118	0	186	882
05:00 PM	31	55	0	86	94	33	0	127	14	26	0	40	253
05:15 PM	48	46	0	94	65	26	0	91	21	30	0	51	236
05:30 PM	47	48	0	95	69	20	0	89	16	17	0	33	217
05:45 PM	42	54	0	96	77	26	0	103	22	22	0	44	243
Total	168	203	0	371	305	105	0	410	73	95	0	168	949
Grand Total	528	1361	0	1889	1121	320	0	1441	307	494	0	801	4131
Apprch %	28	72	0		77.8	22.2	0		38.3	61.7	0		
Total %	12.8	32.9	0	45.7	27.1	7.7	0	34.9	7.4	12	0	19.4	
Pass Cars	522	1336	0	1858	1096	317	0	1413	299	485	0	784	4055
% Pass Cars	98.9	98.2	0	98.4	97.8	99.1	0	98.1	97.4	98.2	0	97.9	98.2
Single Units	6	18	0	24	19	2	0	21	5	6	0	11	56
% Single Units	1.1	1.3	0	1.3	1.7	0.6	0	1.5	1.6	1.2	0	1.4	1.4
Heavy Trucks	0	7	0	7	6	1	0	7	3	3	0	6	20
% Heavy Trucks	0	0.5	0	0.4	0.5	0.3	0	0.5	1	0.6	0	0.7	0.5
Peds	0	0	0	0	0	0	0	0	0	0	0	0	0
% Peds	0	0	0	0	0	0	0	0	0	0	0	0	0

TDC Traffic Comments: Non-signalized "T" intersection. Malby is stop controlled for Whitmore Lake. Video VCU camera was located within NW intersection quadrant. Note: Peds. are excluded from peak hour reports. Traffic study was performed for Vector Development, Green Oaks Charter Twp. Traffic Impact Study for Fleis & Vandenbrink.

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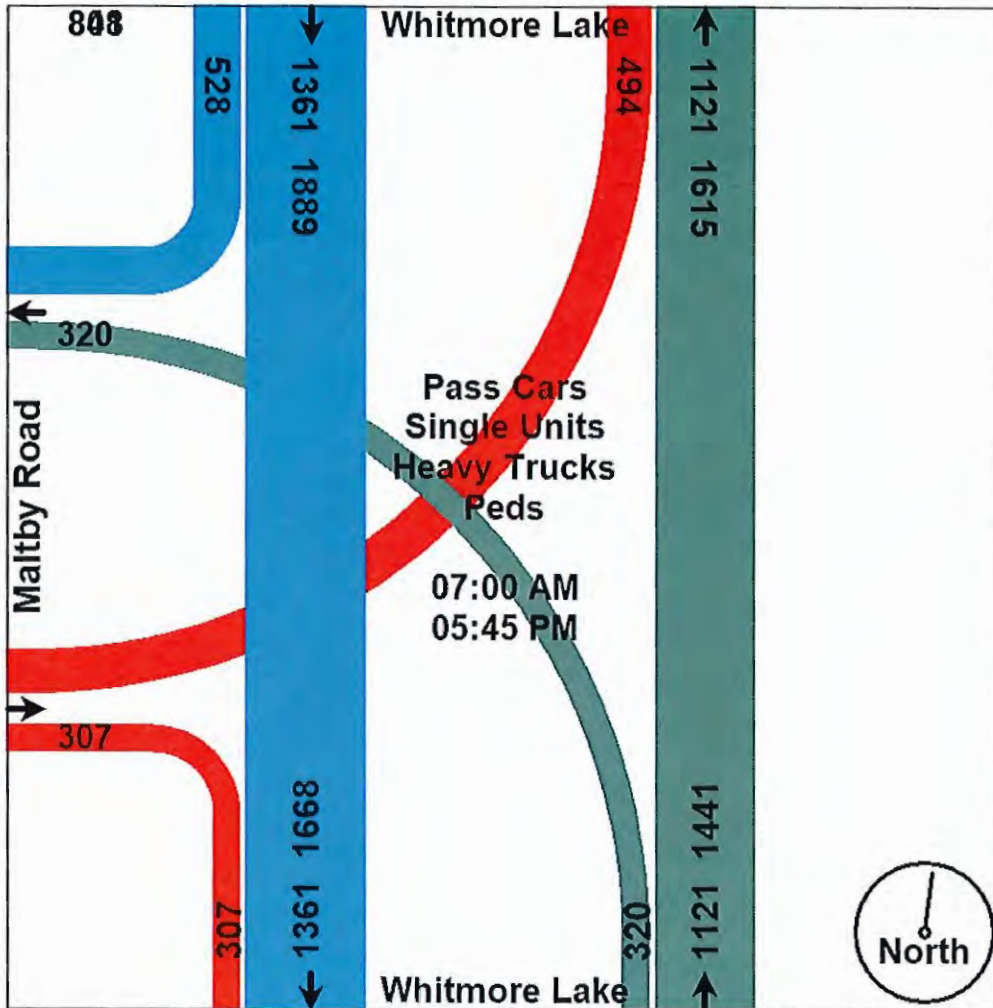
Traffic Study Performed For:

Fleis & VandenBrink



Project: Bloomfield Traffic Impact Study
Study: 4 Hr. Video Turning Movement Count
Weather: Flurries AM, Cldy PM Deg 30s
Count By Miovision Video VCU 4G2 NW

File Name : TMC_2 Maltby & Whitmore Lk_1-8-20
Site Code : TMC_2
Start Date : 1/8/2020
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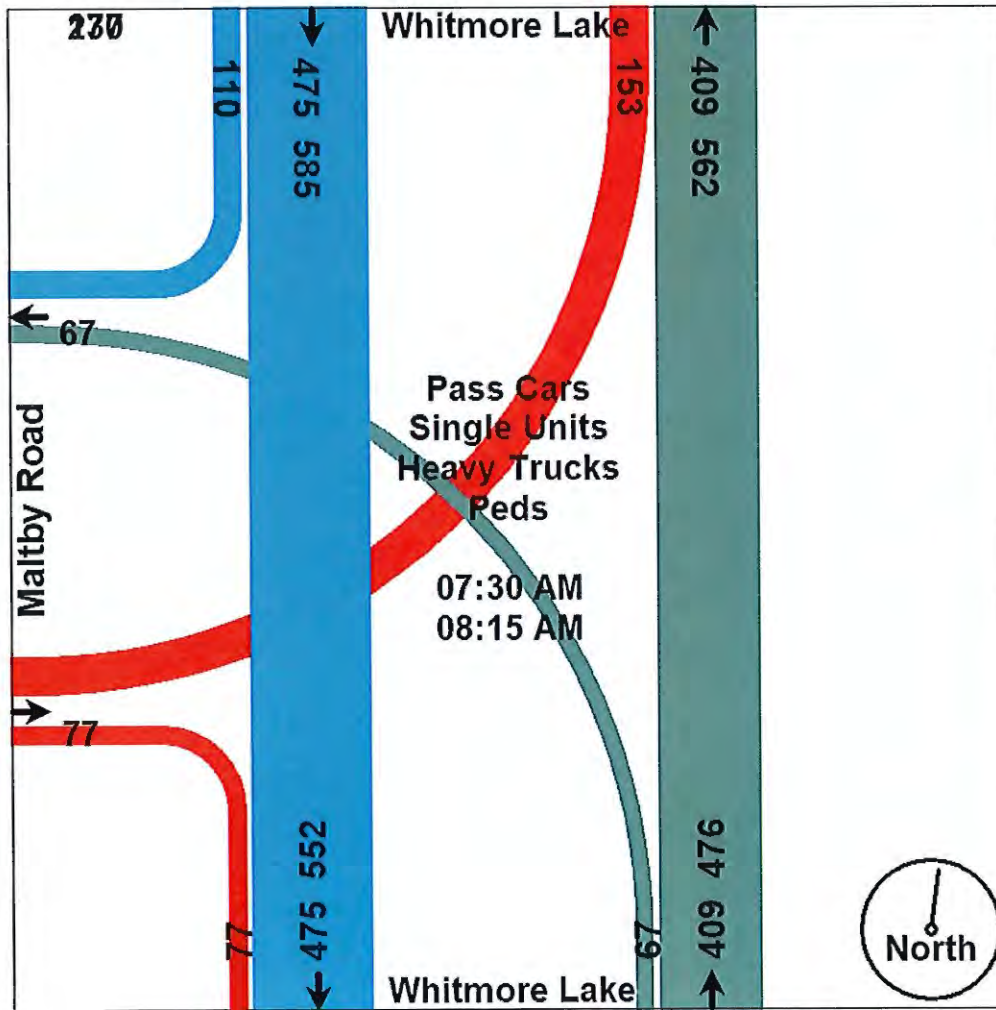
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Weather: Flurries AM, Cldy PM Deg 30s
Count By Miovision Video VCU 4G2 NW

File Name : TMC_2 Maltby & Whitmore Lk_1-8-20
Site Code : TMC_2
Start Date : 1/8/2020
Page No : 3

Start Time	Whitmore Lake Southbound			Whitmore Lake Northbound			Maltby Road Eastbound			Int. Total
	Right	Thru	App. Total	Thru	Left	App. Total	Right	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 12:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	39	130	169	65	21	86	27	37	64	319
07:45 AM	35	112	147	114	12	126	23	43	66	339
08:00 AM	20	105	125	128	22	150	13	37	50	325
08:15 AM	16	128	144	102	12	114	14	36	50	308
Total Volume	110	475	585	409	67	476	77	153	230	1291
% App. Total	18.8	81.2		85.9	14.1		33.5	66.5		
PHF	.705	.913	.865	.799	.761	.793	.713	.890	.871	.952
Pass Cars	108	464	572	394	65	459	76	151	227	1258
% Pass Cars	98.2	97.7	97.8	96.3	97.0	96.4	98.7	98.7	98.7	97.4
Single Units	2	10	12	12	2	14	1	2	3	29
% Single Units	1.8	2.1	2.1	2.9	3.0	2.9	1.3	1.3	1.3	2.2
Heavy Trucks	0	1	1	3	0	3	0	0	0	4
% Heavy Trucks	0	0.2	0.2	0.7	0	0.6	0	0	0	0.3
Peds	0	0	0	0	0	0	0	0	0	0
% Peds	0	0	0	0	0	0	0	0	0	0



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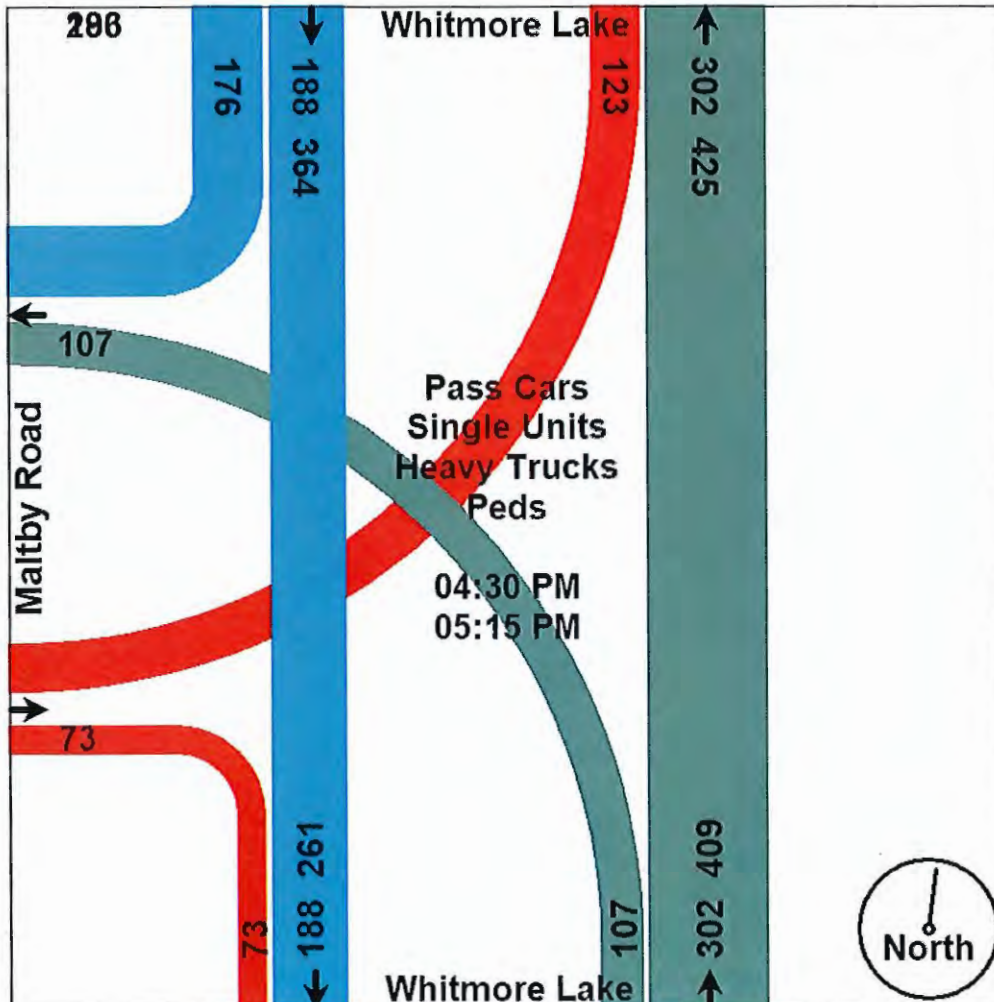
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Project: Bloomfield Traffic Impact Study
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 Weather: Flurries AM, Cldy PM Deg 30s
 Count By Miovision Video VCU 4G2 NW

File Name : TMC_2 Maltby & Whitmore Lk_1-8-20
 Site Code : TMC_2
 Start Date : 1/8/2020
 Page No : 4

Start Time	Whitmore Lake Southbound			Whitmore Lake Northbound			Maltby Road Eastbound			Int. Total
	Right	Thru	App. Total	Thru	Left	App. Total	Right	Left	App. Total	
Peak Hour Analysis From 12:45 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	46	50	96	74	21	95	22	27	49	240
04:45 PM	51	37	88	69	27	96	16	40	56	240
05:00 PM	31	55	86	94	33	127	14	26	40	253
05:15 PM	48	46	94	65	26	91	21	30	51	236
Total Volume	176	188	364	302	107	409	73	123	196	969
% App. Total	48.4	51.6		73.8	26.2		37.2	62.8		
PHF	.863	.855	.948	.803	.811	.805	.830	.769	.875	.958
Pass Cars	175	186	361	299	107	406	70	120	190	957
% Pass Cars	99.4	98.9	99.2	99.0	100	99.3	95.9	97.6	96.9	98.8
Single Units	1	1	2	2	0	2	2	2	4	8
% Single Units	0.6	0.5	0.5	0.7	0	0.5	2.7	1.6	2.0	0.8
Heavy Trucks	0	1	1	1	0	1	1	1	2	4
% Heavy Trucks	0	0.5	0.3	0.3	0	0.2	1.4	0.8	1.0	0.4
Peds	0	0	0	0	0	0	0	0	0	0
% Peds	0	0	0	0	0	0	0	0	0	0



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Traffic Study Performed For:

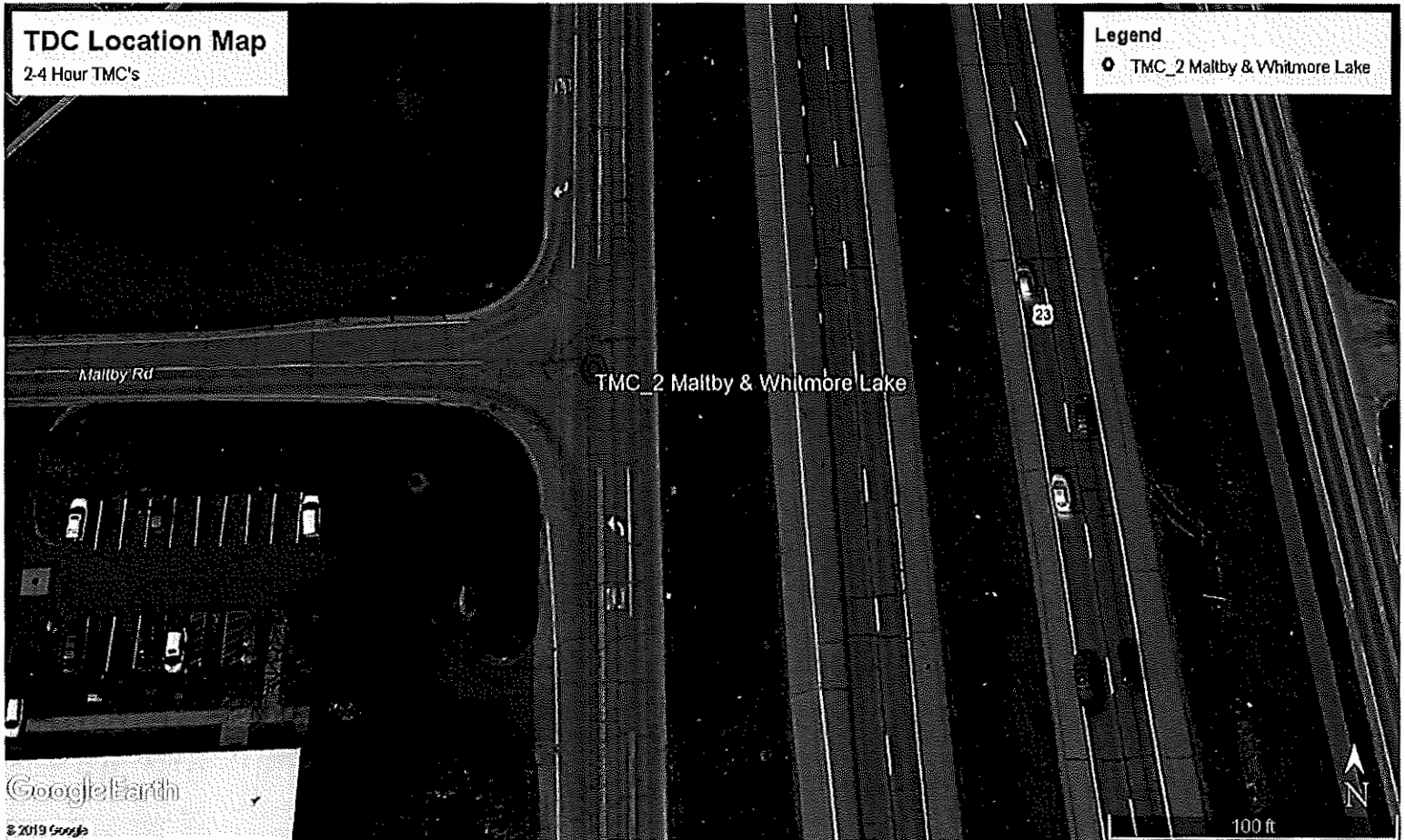
Fleis & VandenBrink



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File Name : TMC_2 Maltby & Whitmore Lk_1-8-20
Site Code : TMC_2
Start Date : 1/8/2020
Page No : 5

Aerial Photo



Appendix B

EXISTING TRAFFIC CONDITIONS

HCM 6th AWSC
1: Rickett Road & Maltby Road

Existing Conditions
AM Peak

Intersection

Intersection Delay, s/veh	25.2
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱			↕			↕			↱	↰
Traffic Vol, veh/h	221	205	36	20	115	30	30	166	47	36	150	140
Future Vol, veh/h	221	205	36	20	115	30	30	166	47	36	150	140
Peak Hour Factor	0.68	0.68	0.68	0.78	0.78	0.78	0.86	0.86	0.86	0.75	0.75	0.75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	325	301	53	26	147	38	35	193	55	48	200	187
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	30.8	20.1	25.7	18.7
HCM LOS	D	C	D	C

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	12%	100%	0%	12%	19%	0%
Vol Thru, %	68%	0%	85%	70%	81%	0%
Vol Right, %	19%	0%	15%	18%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	243	221	241	165	186	140
LT Vol	30	221	0	20	36	0
Through Vol	166	0	205	115	150	0
RT Vol	47	0	36	30	0	140
Lane Flow Rate	283	325	354	212	248	187
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	0.651	0.744	0.75	0.503	0.571	0.387
Departure Headway (Hd)	8.294	8.241	7.619	8.555	8.286	7.463
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	435	439	471	419	434	480
Service Time	6.381	6.026	5.403	6.655	6.066	5.243
HCM Lane V/C Ratio	0.651	0.74	0.752	0.506	0.571	0.39
HCM Control Delay	25.7	31.6	30.1	20.1	21.6	14.9
HCM Lane LOS	D	D	D	C	C	B
HCM 95th-tile Q	4.5	6.1	6.3	2.7	3.5	1.8

HCM 6th TWSC
2: Whitmore Lake Road & Maltby Road

Existing Conditions
AM Peak

Intersection

Int Delay, s/veh	26.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔		↔	↑	↑	↔
Traffic Vol, veh/h	153	77	67	409	475	110
Future Vol, veh/h	153	77	67	409	475	110
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	150	-	-	220
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	79	79	87	87
Heavy Vehicles, %	1	1	3	3	2	2
Mvmt Flow	176	89	85	518	546	126

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1234	546	672	0	-	0
Stage 1	546	-	-	-	-	-
Stage 2	688	-	-	-	-	-
Critical Hdwy	6.41	6.21	4.13	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	2.227	-	-	-
Pot Cap-1 Maneuver	196	540	914	-	-	-
Stage 1	582	-	-	-	-	-
Stage 2	501	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	178	540	914	-	-	-
Mov Cap-2 Maneuver	178	-	-	-	-	-
Stage 1	528	-	-	-	-	-
Stage 2	501	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	150.3	1.3	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	914	-	230	-	-
HCM Lane V/C Ratio	0.093	-	1.149	-	-
HCM Control Delay (s)	9.3	-	150.3	-	-
HCM Lane LOS	A	-	F	-	-
HCM 95th %tile Q(veh)	0.3	-	12.3	-	-

HCM 6th TWSC
3: E. Site Drive & Maltby Road

Existing Conditions
AM Peak

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗		↖	↘	
Traffic Vol, veh/h	288	0	0	165	0	0
Future Vol, veh/h	288	0	0	165	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	50	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	313	0	0	179	0	0

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	313	0	492
Stage 1	-	-	-	-	313
Stage 2	-	-	-	-	179
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1247	-	536
Stage 1	-	-	-	-	741
Stage 2	-	-	-	-	852
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1247	-	536
Mov Cap-2 Maneuver	-	-	-	-	536
Stage 1	-	-	-	-	741
Stage 2	-	-	-	-	852

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1247	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

HCM 6th TWSC
4: W. Site Drive & Maltby Road

Existing Conditions
AM Peak

Intersection

Int Delay, s/veh 0

Movement EBT EBR WBL WBT NBL NBR

Lane Configurations	↕			↕	↕	
Traffic Vol, veh/h	288	0	0	165	0	0
Future Vol, veh/h	288	0	0	165	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	313	0	0	179	0	0

Major/Minor Major1 Major2 Minor1

Conflicting Flow All	0	0	313	0	492	313
Stage 1	-	-	-	-	313	-
Stage 2	-	-	-	-	179	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1247	-	536	727
Stage 1	-	-	-	-	741	-
Stage 2	-	-	-	-	852	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1247	-	536	727
Mov Cap-2 Maneuver	-	-	-	-	536	-
Stage 1	-	-	-	-	741	-
Stage 2	-	-	-	-	852	-

Approach EB WB NB

HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt NBLn1 EBT EBR WBL WBT

Capacity (veh/h)	-	-	-	1247	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

HCM 6th TWSC
12: Maltby Road & Dummy Node

Existing Conditions
AM Peak

Intersection

Int Delay, s/veh 1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	58	230	165	12	0	0
Future Vol, veh/h	58	230	165	12	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	63	250	179	13	0	0

Major/Minor

	Major1	Major2	Minor2
Conflicting Flow All	192	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.12	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	-
Pot Cap-1 Maneuver	1381	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1381	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach

	EB	WB	SB
HCM Control Delay, s	1.6	0	0
HCM LOS			A

Minor Lane/Major Mvmt

	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1381	-	-	-	-
HCM Lane V/C Ratio	0.046	-	-	-	-
HCM Control Delay (s)	7.7	0	-	-	0
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	-

HCM 6th AWSC
1: Rickett Road & Maltby Road

Existing Conditions
PM Peak

Intersection	
Intersection Delay, s/veh	23.6
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷			↶↷			↶↷			↶	↷
Traffic Vol, veh/h	75	74	15	111	181	73	21	207	53	29	207	131
Future Vol, veh/h	75	74	15	111	181	73	21	207	53	29	207	131
Peak Hour Factor	0.82	0.82	0.82	0.95	0.95	0.95	0.92	0.92	0.92	0.86	0.86	0.86
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	91	90	18	117	191	77	23	225	58	34	241	152
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	13.6	34.4	24.5	17.8
HCM LOS	B	D	C	C

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	7%	100%	0%	30%	12%	0%
Vol Thru, %	74%	0%	83%	50%	88%	0%
Vol Right, %	19%	0%	17%	20%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	281	75	89	365	236	131
LT Vol	21	75	0	111	29	0
Through Vol	207	0	74	181	207	0
RT Vol	53	0	15	73	0	131
Lane Flow Rate	305	91	109	384	274	152
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	0.658	0.221	0.243	0.798	0.587	0.293
Departure Headway (Hd)	7.757	8.685	8.046	7.605	7.701	6.917
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	467	414	447	480	472	522
Service Time	5.77	6.422	5.783	5.605	5.414	4.63
HCM Lane V/C Ratio	0.653	0.22	0.244	0.8	0.581	0.291
HCM Control Delay	24.5	13.9	13.4	34.4	20.8	12.5
HCM Lane LOS	C	B	B	D	C	B
HCM 95th-ile Q	4.7	0.8	0.9	7.3	3.7	1.2

HCM 6th TWSC
2: Whitmore Lake Road & Maltby Road

Existing Conditions
PM Peak

Intersection						
Int Delay, s/veh	6.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y		Y	↑	↑	↑
Traffic Vol, veh/h	123	73	107	302	188	176
Future Vol, veh/h	123	73	107	302	188	176
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	150	-	-	220
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	80	80	95	95
Heavy Vehicles, %	3	3	1	1	1	1
Mvmt Flow	141	84	134	378	198	185

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	844	198	383	0	-	0
Stage 1	198	-	-	-	-	-
Stage 2	646	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.11	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.209	-	-	-
Pot Cap-1 Maneuver	332	841	1181	-	-	-
Stage 1	833	-	-	-	-	-
Stage 2	520	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	294	841	1181	-	-	-
Mov Cap-2 Maneuver	294	-	-	-	-	-
Stage 1	739	-	-	-	-	-
Stage 2	520	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	26.4	2.2	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1181	-	388	-	-
HCM Lane V/C Ratio	0.113	-	0.581	-	-
HCM Control Delay (s)	8.4	-	26.4	-	-
HCM Lane LOS	A	-	D	-	-
HCM 95th %tile Q(veh)	0.4	-	3.5	-	-

HCM 6th AWSC
1: Rickett Road & Maltby Road

Existing Conditions with Improvements

AM Peak

Intersection

Intersection Delay, s/veh	25.2
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	221	205	36	20	115	30	30	166	47	36	150	140
Future Vol, veh/h	221	205	36	20	115	30	30	166	47	36	150	140
Peak Hour Factor	0.68	0.68	0.68	0.78	0.78	0.78	0.86	0.86	0.86	0.75	0.75	0.75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	325	301	53	26	147	38	35	193	55	48	200	187
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	30.8	20.1	25.7	18.7
HCM LOS	D	C	D	C

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	12%	100%	0%	12%	19%	0%
Vol Thru, %	68%	0%	85%	70%	81%	0%
Vol Right, %	19%	0%	15%	18%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	243	221	241	165	186	140
LT Vol	30	221	0	20	36	0
Through Vol	166	0	205	115	150	0
RT Vol	47	0	36	30	0	140
Lane Flow Rate	283	325	354	212	248	187
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	0.651	0.744	0.75	0.503	0.571	0.387
Departure Headway (Hd)	8.294	8.241	7.619	8.555	8.286	7.463
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	435	439	471	419	434	480
Service Time	6.381	6.026	5.403	6.655	6.066	5.243
HCM Lane V/C Ratio	0.651	0.74	0.752	0.506	0.571	0.39
HCM Control Delay	25.7	31.6	30.1	20.1	21.6	14.9
HCM Lane LOS	D	D	D	C	C	B
HCM 95th-tile Q	4.5	6.1	6.3	2.7	3.5	1.8

HCM 6th TWSC
2: Whitmore Lake Road & Maltby Road

Existing Conditions with Improvements
AM Peak

Intersection

Int Delay, s/veh	14.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖	↖	↖	↗	↗	↖
Traffic Vol, veh/h	153	77	67	409	475	110
Future Vol, veh/h	153	77	67	409	475	110
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	250	0	150	-	-	220
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	79	79	87	87
Heavy Vehicles, %	1	1	3	3	2	2
Mvmt Flow	176	89	85	518	546	126

Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	1234	546	672	0	0
Stage 1	546	-	-	-	-
Stage 2	688	-	-	-	-
Critical Hdwy	6.41	6.21	4.13	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-
Follow-up Hdwy	3.509	3.309	2.227	-	-
Pot Cap-1 Maneuver	196	540	914	-	-
Stage 1	582	-	-	-	-
Stage 2	501	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	178	540	914	-	-
Mov Cap-2 Maneuver	178	-	-	-	-
Stage 1	528	-	-	-	-
Stage 2	501	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	82.4	1.3	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	914	-	178	540	-	-
HCM Lane V/C Ratio	0.093	-	0.988	0.164	-	-
HCM Control Delay (s)	9.3	-	117.4	13	-	-
HCM Lane LOS	A	-	F	B	-	-
HCM 95th %tile Q(veh)	0.3	-	8	0.6	-	-

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑		↑	↑	
Traffic Vol, veh/h	288	0	0	165	0	0
Future Vol, veh/h	288	0	0	165	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	50	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	313	0	0	179	0	0

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	313	0	492
Stage 1	-	-	-	-	313
Stage 2	-	-	-	-	179
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1247	-	536
Stage 1	-	-	-	-	741
Stage 2	-	-	-	-	852
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1247	-	536
Mov Cap-2 Maneuver	-	-	-	-	536
Stage 1	-	-	-	-	741
Stage 2	-	-	-	-	852

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1247	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

HCM 6th TWSC
4: W. Site Drive & Maltby Road

Existing Conditions with Improvements
AM Peak

Intersection

Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↑	
Traffic Vol, veh/h	288	0	0	165	0	0
Future Vol, veh/h	288	0	0	165	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	313	0	0	179	0	0

Major/Minor	Major1	Major2	Minor1
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Conflicting Flow All	0	0	313	0	492	313
Stage 1	-	-	-	-	313	-
Stage 2	-	-	-	-	179	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1247	-	536	727
Stage 1	-	-	-	-	741	-
Stage 2	-	-	-	-	852	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1247	-	536	727
Mov Cap-2 Maneuver	-	-	-	-	536	-
Stage 1	-	-	-	-	741	-
Stage 2	-	-	-	-	852	-

Approach	EB	WB	NB
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HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
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Capacity (veh/h)	-	-	-	1247	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

HCM 6th TWSC
12: Maltby Road & Dummy Node

Existing Conditions with Improvements
AM Peak

Intersection

Int Delay, s/veh	1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↖	↗		↘	
Traffic Vol, veh/h	58	230	165	12	0	0
Future Vol, veh/h	58	230	165	12	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	63	250	179	13	0	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	192	0	-	0	562 186
Stage 1	-	-	-	-	186 -
Stage 2	-	-	-	-	376 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1381	-	-	-	488 856
Stage 1	-	-	-	-	846 -
Stage 2	-	-	-	-	694 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1381	-	-	-	462 856
Mov Cap-2 Maneuver	-	-	-	-	462 -
Stage 1	-	-	-	-	801 -
Stage 2	-	-	-	-	694 -

Approach	EB	WB	SB
HCM Control Delay, s	1.6	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1381	-	-	-	-
HCM Lane V/C Ratio	0.046	-	-	-	-
HCM Control Delay (s)	7.7	0	-	-	0
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	-

HCM 6th AWSC
1: Rickett Road & Maltby Road

Existing Conditions with Improvements
PM Peak

Intersection	
Intersection Delay, s/veh	23.6
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔			↔			↔			↔	↔
Traffic Vol, veh/h	75	74	15	111	181	73	21	207	53	29	207	131
Future Vol, veh/h	75	74	15	111	181	73	21	207	53	29	207	131
Peak Hour Factor	0.82	0.82	0.82	0.95	0.95	0.95	0.92	0.92	0.92	0.86	0.86	0.86
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	91	90	18	117	191	77	23	225	58	34	241	152
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	13.6	34.4	24.5	17.8
HCM LOS	B	D	C	C

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	7%	100%	0%	30%	12%	0%
Vol Thru, %	74%	0%	83%	50%	88%	0%
Vol Right, %	19%	0%	17%	20%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	281	75	89	365	236	131
LT Vol	21	75	0	111	29	0
Through Vol	207	0	74	181	207	0
RT Vol	53	0	15	73	0	131
Lane Flow Rate	305	91	109	384	274	152
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	0.658	0.221	0.243	0.798	0.587	0.293
Departure Headway (Hd)	7.757	8.685	8.046	7.605	7.701	6.917
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	467	414	447	480	472	522
Service Time	5.77	6.422	5.783	5.605	5.414	4.63
HCM Lane V/C Ratio	0.653	0.22	0.244	0.8	0.581	0.291
HCM Control Delay	24.5	13.9	13.4	34.4	20.8	12.5
HCM Lane LOS	C	B	B	D	C	B
HCM 95th-tile Q	4.7	0.8	0.9	7.3	3.7	1.2

HCM 6th TWSC
2: Whitmore Lake Road & Maltby Road

Existing Conditions with Improvements
PM Peak

Intersection

Int Delay, s/veh 5.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↘	↗	↘	↗	↗	↗
Traffic Vol, veh/h	123	73	107	302	188	176
Future Vol, veh/h	123	73	107	302	188	176
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	250	0	150	-	-	220
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	80	80	95	95
Heavy Vehicles, %	3	3	1	1	1	1
Mvmt Flow	141	84	134	378	198	185

Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	844	198	383	0	0
Stage 1	198	-	-	-	-
Stage 2	646	-	-	-	-
Critical Hdwy	6.43	6.23	4.11	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.209	-	-
Pot Cap-1 Maneuver	332	841	1181	-	-
Stage 1	833	-	-	-	-
Stage 2	520	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	294	841	1181	-	-
Mov Cap-2 Maneuver	294	-	-	-	-
Stage 1	739	-	-	-	-
Stage 2	520	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	21.3	2.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1181	-	294	841	-	-
HCM Lane V/C Ratio	0.113	-	0.481	0.1	-	-
HCM Control Delay (s)	8.4	-	28.1	9.8	-	-
HCM Lane LOS	A	-	D	A	-	-
HCM 95th %tile Q(veh)	0.4	-	2.5	0.3	-	-

Intersection

Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗		↖	↓	
Traffic Vol, veh/h	156	0	0	365	0	0
Future Vol, veh/h	156	0	0	365	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	50	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	170	0	0	397	0	0

Major/Minor

	Major1	Major2	Minor1		
Conflicting Flow All	0	0	170	0	567
Stage 1	-	-	-	-	170
Stage 2	-	-	-	-	397
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1407	-	485
Stage 1	-	-	-	-	860
Stage 2	-	-	-	-	679
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1407	-	485
Mov Cap-2 Maneuver	-	-	-	-	485
Stage 1	-	-	-	-	860
Stage 2	-	-	-	-	679

Approach

	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt

	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1407	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

HCM 6th TWSC
4: W. Site Drive & Maltby Road

Existing Conditions with Improvements
PM Peak

Intersection

Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↑	
Traffic Vol, veh/h	156	0	0	365	0	0
Future Vol, veh/h	156	0	0	365	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	170	0	0	397	0	0

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	170	0	567
Stage 1	-	-	-	-	170
Stage 2	-	-	-	-	397
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1407	-	485
Stage 1	-	-	-	-	860
Stage 2	-	-	-	-	679
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1407	-	485
Mov Cap-2 Maneuver	-	-	-	-	485
Stage 1	-	-	-	-	860
Stage 2	-	-	-	-	679

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1407	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

HCM 6th TWSC
12: Maltby Road & Dummy Node

Existing Conditions with Improvements
PM Peak

Intersection						
Int Delay, s/veh	2.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↑	↑
Traffic Vol, veh/h	0	156	283	0	40	82
Future Vol, veh/h	0	156	283	0	40	82
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	170	308	0	43	89

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	308	0	-	0	478 308
Stage 1	-	-	-	-	308 -
Stage 2	-	-	-	-	170 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1253	-	-	-	546 732
Stage 1	-	-	-	-	745 -
Stage 2	-	-	-	-	860 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1253	-	-	-	546 732
Mov Cap-2 Maneuver	-	-	-	-	546 -
Stage 1	-	-	-	-	745 -
Stage 2	-	-	-	-	860 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	11.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1253	-	-	-	658
HCM Lane V/C Ratio	-	-	-	-	0.202
HCM Control Delay (s)	0	-	-	-	11.8
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.7

Appendix C

FUTURE TRAFFIC CONDITIONS

HCM 6th AWSC
1: Rickett Road & Maltby Road

Future Conditions
AM Peak

Intersection

Intersection Delay, s/veh 28.7
Intersection LOS D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↕			↕			↖	↗
Traffic Vol, veh/h	221	206	36	29	119	48	30	166	50	41	150	140
Future Vol, veh/h	221	206	36	29	119	48	30	166	50	41	150	140
Peak Hour Factor	0.68	0.68	0.68	0.78	0.78	0.78	0.86	0.86	0.86	0.75	0.75	0.75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	325	303	53	37	153	62	35	193	58	55	200	187
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	35.1	24.9	29.1	20.6
HCM LOS	E	C	D	C

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	12%	100%	0%	15%	21%	0%
Vol Thru, %	67%	0%	85%	61%	79%	0%
Vol Right, %	20%	0%	15%	24%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	246	221	242	196	191	140
LT Vol	30	221	0	29	41	0
Through Vol	166	0	206	119	150	0
RT Vol	50	0	36	48	0	140
Lane Flow Rate	286	325	356	251	255	187
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	0.691	0.777	0.789	0.614	0.614	0.407
Departure Headway (Hd)	8.697	8.607	7.983	8.792	8.68	7.843
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	415	419	452	410	418	461
Service Time	6.745	6.355	5.73	6.844	6.38	5.543
HCM Lane V/C Ratio	0.689	0.776	0.788	0.612	0.61	0.406
HCM Control Delay	29.1	35.6	34.7	24.9	24.2	15.8
HCM Lane LOS	D	E	D	C	C	C
HCM 95th-tile Q	5.1	6.6	7	4	4	1.9

HCM 6th TWSC
2: Whitmore Lake Road & Maltby Road

Future Conditions
AM Peak

Intersection

Int Delay, s/veh	54.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W		W	↑	↑	↑
Traffic Vol, veh/h	182	105	75	409	475	119
Future Vol, veh/h	182	105	75	409	475	119
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	-	220
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	79	79	87	87
Heavy Vehicles, %	1	1	3	3	2	2
Mvmt Flow	209	121	95	518	546	137

Major/Minor

	Minor2	Major1	Major2			
Conflicting Flow All	1254	546	683	0	-	0
Stage 1	546	-	-	-	-	-
Stage 2	708	-	-	-	-	-
Critical Hdwy	6.41	6.21	4.13	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	2.227	-	-	-
Pot Cap-1 Maneuver	~ 191	540	905	-	-	-
Stage 1	582	-	-	-	-	-
Stage 2	490	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 171	540	905	-	-	-
Mov Cap-2 Maneuver	~ 171	-	-	-	-	-
Stage 1	521	-	-	-	-	-
Stage 2	490	-	-	-	-	-

Approach

	EB	NB	SB
HCM Control Delay, s	264.1	1.5	0
HCM LOS	F		

Minor Lane/Major Mvmt

	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	905	-	228	-	-
HCM Lane V/C Ratio	0.105	-	1.447	-	-
HCM Control Delay (s)	9.4	-	264.1	-	-
HCM Lane LOS	A	-	F	-	-
HCM 95th %tile Q(veh)	0.3	-	19.2	-	-

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 6th TWSC
3: E. Site Drive & Maltby Road

Future Conditions
AM Peak

Intersection

Int Delay, s/veh 1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↗			↖	↘	↙
Traffic Vol, veh/h	294	8	15	167	28	51
Future Vol, veh/h	294	8	15	167	28	51
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	68	68	78	78	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	432	12	19	214	30	55

Major/Minor

	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	444	0	690
Stage 1	-	-	-	-	438
Stage 2	-	-	-	-	252
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1116	-	411
Stage 1	-	-	-	-	651
Stage 2	-	-	-	-	790
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1116	-	403
Mov Cap-2 Maneuver	-	-	-	-	403
Stage 1	-	-	-	-	651
Stage 2	-	-	-	-	775

Approach

	EB	WB	NB
HCM Control Delay, s	0	0.7	13.3
HCM LOS			B

Minor Lane/Major Mvmt

	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	520	-	-	1116	-
HCM Lane V/C Ratio	0.165	-	-	0.017	-
HCM Control Delay (s)	13.3	-	-	8.3	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.6	-	-	0.1	-

HCM 6th TWSC
4: W. Site Drive & Maltby Road

Future Conditions
AM Peak

Intersection

Int Delay, s/veh 0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↻			↻	↻	
Traffic Vol, veh/h	296	1	2	193	3	6
Future Vol, veh/h	296	1	2	193	3	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	68	68	78	78	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	435	1	3	247	3	7

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3	
Conflicting Flow All	0	0	436	0	689	436
Stage 1	-	-	-	-	436	-
Stage 2	-	-	-	-	253	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1124	-	412	620
Stage 1	-	-	-	-	652	-
Stage 2	-	-	-	-	789	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1124	-	411	620
Mov Cap-2 Maneuver	-	-	-	-	411	-
Stage 1	-	-	-	-	652	-
Stage 2	-	-	-	-	787	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	11.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	530	-	-	1124	-
HCM Lane V/C Ratio	0.018	-	-	0.002	-
HCM Control Delay (s)	11.9	-	-	8.2	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

HCM 6th AWSC
1: Rickett Road & Maltby Road

Future Conditions
PM Peak

Intersection

Intersection Delay, s/veh 30.4
Intersection LOS D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	75	83	15	120	186	84	21	207	68	48	207	131
Future Vol, veh/h	75	83	15	120	186	84	21	207	68	48	207	131
Peak Hour Factor	0.82	0.82	0.82	0.95	0.95	0.95	0.92	0.92	0.92	0.86	0.86	0.86
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	91	101	18	126	196	88	23	225	74	56	241	152
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	14.5	48.8	29.8	21.4
HCM LOS	B	E	D	C

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %		7%	100%	0%	31%	19%
Vol Thru, %		70%	0%	85%	48%	81%
Vol Right, %		23%	0%	15%	22%	0%
Sign Control		Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane		296	75	98	390	255
LT Vol		21	75	0	120	48
Through Vol		207	0	83	186	207
RT Vol		68	0	15	84	0
Lane Flow Rate		322	91	120	411	297
Geometry Grp		6	7	7	6	7
Degree of Util (X)		0.724	0.231	0.281	0.897	0.666
Departure Headway (Hd)		8.103	9.098	8.468	7.865	8.084
Convergence, Y/N		Yes	Yes	Yes	Yes	Yes
Cap		447	394	423	460	448
Service Time		6.166	6.866	6.235	5.919	5.844
HCM Lane V/C Ratio		0.72	0.231	0.284	0.893	0.663
HCM Control Delay		29.8	14.6	14.5	48.8	25.6
HCM Lane LOS		D	B	B	E	D
HCM 95th-tile Q		5.7	0.9	1.1	9.8	4.8

HCM 6th TWSC
2: Whitmore Lake Road & Maltby Road

Future Conditions
PM Peak

Intersection						
Int Delay, s/veh	8.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↘		↘	↑	↑	↗
Traffic Vol, veh/h	134	86	128	302	188	195
Future Vol, veh/h	134	86	128	302	188	195
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	150	-	-	220
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	80	80	95	95
Heavy Vehicles, %	3	3	1	1	1	1
Mvmt Flow	154	99	160	378	198	205

Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	896	198	403	0	0
Stage 1	198	-	-	-	-
Stage 2	698	-	-	-	-
Critical Hdwy	6.43	6.23	4.11	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.209	-	-
Pot Cap-1 Maneuver	309	841	1161	-	-
Stage 1	833	-	-	-	-
Stage 2	492	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	266	841	1161	-	-
Mov Cap-2 Maneuver	266	-	-	-	-
Stage 1	718	-	-	-	-
Stage 2	492	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	34.8	2.6	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1161	-	363	-	-
HCM Lane V/C Ratio	0.138	-	0.697	-	-
HCM Control Delay (s)	8.6	-	34.8	-	-
HCM Lane LOS	A	-	D	-	-
HCM 95th %tile Q(veh)	0.5	-	5	-	-

HCM 6th TWSC
3: E. Site Drive & Maltby Road

Future Conditions
PM Peak

Intersection

Int Delay, s/veh	1.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	160	37	34	371	21	20
Future Vol, veh/h	160	37	34	371	21	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	95	95	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	195	45	36	391	23	22

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	240	0	681 218
Stage 1	-	-	-	-	218 -
Stage 2	-	-	-	-	463 -
Critical Hdwy	-	-	4.12	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	-	-	2.218	-	3.518 3.318
Pot Cap-1 Maneuver	-	-	1327	-	416 822
Stage 1	-	-	-	-	818 -
Stage 2	-	-	-	-	634 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1327	-	401 822
Mov Cap-2 Maneuver	-	-	-	-	401 -
Stage 1	-	-	-	-	818 -
Stage 2	-	-	-	-	612 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	12.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	535	-	-	1327	-
HCM Lane V/C Ratio	0.083	-	-	0.027	-
HCM Control Delay (s)	12.3	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

HCM 6th TWSC
4: W. Site Drive & Maltby Road

Future Conditions
PM Peak

Intersection						
Int Delay, s/veh	0.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↑	
Traffic Vol, veh/h	193	6	6	386	4	4
Future Vol, veh/h	193	6	6	386	4	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	95	95	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	235	7	6	406	4	4

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	242	0	657
Stage 1	-	-	-	-	239
Stage 2	-	-	-	-	418
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1324	-	430
Stage 1	-	-	-	-	801
Stage 2	-	-	-	-	664
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1324	-	427
Mov Cap-2 Maneuver	-	-	-	-	427
Stage 1	-	-	-	-	801
Stage 2	-	-	-	-	660

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	11.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	557	-	-	1324	-
HCM Lane V/C Ratio	0.016	-	-	0.005	-
HCM Control Delay (s)	11.6	-	-	7.7	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Intersection Delay, s/veh	28.7
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↖			↕			↕			↖	↗
Traffic Vol, veh/h	221	206	36	29	119	48	30	166	50	41	150	140
Future Vol, veh/h	221	206	36	29	119	48	30	166	50	41	150	140
Peak Hour Factor	0.68	0.68	0.68	0.78	0.78	0.78	0.86	0.86	0.86	0.75	0.75	0.75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	325	303	53	37	153	62	35	193	58	55	200	187
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	35.1	24.9	29.1	20.6
HCM LOS	E	C	D	C

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	12%	100%	0%	15%	21%	0%
Vol Thru, %	67%	0%	85%	61%	79%	0%
Vol Right, %	20%	0%	15%	24%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	246	221	242	196	191	140
LT Vol	30	221	0	29	41	0
Through Vol	166	0	206	119	150	0
RT Vol	50	0	36	48	0	140
Lane Flow Rate	286	325	356	251	255	187
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	0.691	0.777	0.789	0.614	0.614	0.407
Departure Headway (Hd)	8.697	8.607	7.983	8.792	8.68	7.843
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	415	419	452	410	418	461
Service Time	6.745	6.355	5.73	6.844	6.38	5.543
HCM Lane V/C Ratio	0.689	0.776	0.788	0.612	0.61	0.406
HCM Control Delay	29.1	35.6	34.7	24.9	24.2	15.8
HCM Lane LOS	D	E	D	C	C	C
HCM 95th-tile Q	5.1	6.6	7	4	4	1.9

HCM 6th TWSC
2: Whitmore Lake Road & Maltby Road

Future Conditions with Improvements
AM Peak

Intersection						
Int Delay, s/veh	26.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔	↔	↔	↑	↑	↔
Traffic Vol, veh/h	182	105	75	409	475	119
Future Vol, veh/h	182	105	75	409	475	119
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	250	0	150	-	-	220
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	79	79	87	87
Heavy Vehicles, %	1	1	3	3	2	2
Mvmt Flow	209	121	95	518	546	137

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1254	546	683	0	-	0
Stage 1	546	-	-	-	-	-
Stage 2	708	-	-	-	-	-
Critical Hdwy	6.41	6.21	4.13	-	-	-
Critical Hdwy Stg 1	5.41	-	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-	-
Follow-up Hdwy	3.509	3.309	2.227	-	-	-
Pot Cap-1 Maneuver	~ 191	540	905	-	-	-
Stage 1	582	-	-	-	-	-
Stage 2	490	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 171	540	905	-	-	-
Mov Cap-2 Maneuver	~ 171	-	-	-	-	-
Stage 1	521	-	-	-	-	-
Stage 2	490	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	128.7	1.5	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	905	-	171	540	-	-
HCM Lane V/C Ratio	0.105	-	1.223	0.223	-	-
HCM Control Delay (s)	9.4	-	195.1	13.6	-	-
HCM Lane LOS	A	-	F	B	-	-
HCM 95th %tile Q(veh)	0.3	-	11.6	0.8	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 6th TWSC
3: E. Site Drive & Maltby Road

Future Conditions with Improvements
AM Peak

Intersection

Int Delay, s/veh 1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑		↑	↑	↑	
Traffic Vol, veh/h	294	8	15	167	28	51
Future Vol, veh/h	294	8	15	167	28	51
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	68	68	78	78	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	432	12	19	214	30	55

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	444	0	690
Stage 1	-	-	-	-	438
Stage 2	-	-	-	-	252
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1116	-	411
Stage 1	-	-	-	-	651
Stage 2	-	-	-	-	790
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1116	-	404
Mov Cap-2 Maneuver	-	-	-	-	404
Stage 1	-	-	-	-	651
Stage 2	-	-	-	-	777

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	13.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	521	-	-	1116	-
HCM Lane V/C Ratio	0.165	-	-	0.017	-
HCM Control Delay (s)	13.3	-	-	8.3	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.6	-	-	0.1	-

Intersection						
Int Delay, s/veh	0.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↖			↗	↘	
Traffic Vol, veh/h	296	1	2	193	3	6
Future Vol, veh/h	296	1	2	193	3	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	68	68	78	78	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	435	1	3	247	3	7

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	0	0	436	689
Stage 1	-	-	-	436
Stage 2	-	-	-	253
Critical Hdwy	-	-	4.12	6.42
Critical Hdwy Stg 1	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	3.518
Pot Cap-1 Maneuver	-	-	1124	412
Stage 1	-	-	-	652
Stage 2	-	-	-	789
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	-	1124	411
Mov Cap-2 Maneuver	-	-	-	411
Stage 1	-	-	-	652
Stage 2	-	-	-	787

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	11.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	530	-	-	1124	-
HCM Lane V/C Ratio	0.018	-	-	0.002	-
HCM Control Delay (s)	11.9	-	-	8.2	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection

Intersection Delay, s/veh 30.4
Intersection LOS D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷			↶			↷			↶	↷
Traffic Vol, veh/h	75	83	15	120	186	84	21	207	68	48	207	131
Future Vol, veh/h	75	83	15	120	186	84	21	207	68	48	207	131
Peak Hour Factor	0.82	0.82	0.82	0.95	0.95	0.95	0.92	0.92	0.92	0.86	0.86	0.86
Heavy Vehicles, %	1	1	1	1	1	1	1	1	1	1	1	1
Mvmt Flow	91	101	18	126	196	88	23	225	74	56	241	152
Number of Lanes	1	1	0	0	1	0	0	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	1	2
HCM Control Delay	14.5	48.8	29.8	21.4
HCM LOS	B	E	D	C

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1	SBLn2
Vol Left, %	7%	100%	0%	31%	19%	0%
Vol Thru, %	70%	0%	85%	48%	81%	0%
Vol Right, %	23%	0%	15%	22%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	296	75	98	390	255	131
LT Vol	21	75	0	120	48	0
Through Vol	207	0	83	186	207	0
RT Vol	68	0	15	84	0	131
Lane Flow Rate	322	91	120	411	297	152
Geometry Grp	6	7	7	6	7	7
Degree of Util (X)	0.724	0.231	0.281	0.897	0.666	0.307
Departure Headway (Hd)	8.103	9.098	8.468	7.865	8.084	7.264
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	447	394	423	460	448	494
Service Time	6.166	6.866	6.235	5.919	5.844	5.024
HCM Lane V/C Ratio	0.72	0.231	0.284	0.893	0.663	0.308
HCM Control Delay	29.8	14.6	14.5	48.8	25.6	13.2
HCM Lane LOS	D	B	B	E	D	B
HCM 95th-tile Q	5.7	0.9	1.1	9.8	4.8	1.3

HCM 6th TWSC
2: Whitmore Lake Road & Maltby Road

Future Conditions with Improvements
PM Peak

Intersection

Int Delay, s/veh 6.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖	↖	↖	↗	↗	↖
Traffic Vol, veh/h	134	86	128	302	188	195
Future Vol, veh/h	134	86	128	302	188	195
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	250	0	150	-	-	220
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	80	80	95	95
Heavy Vehicles, %	3	3	1	1	1	1
Mvmt Flow	154	99	160	378	198	205

Major/Minor

	Minor2	Major1	Major2		
Conflicting Flow All	896	198	403	0	0
Stage 1	198	-	-	-	-
Stage 2	698	-	-	-	-
Critical Hdwy	6.43	6.23	4.11	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.209	-	-
Pot Cap-1 Maneuver	309	841	1161	-	-
Stage 1	833	-	-	-	-
Stage 2	492	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	266	841	1161	-	-
Mov Cap-2 Maneuver	266	-	-	-	-
Stage 1	718	-	-	-	-
Stage 2	492	-	-	-	-

Approach

	EB	NB	SB
HCM Control Delay, s	25.6	2.6	0
HCM LOS	D		

Minor Lane/Major Mvmt

	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1161	-	266	841	-	-
HCM Lane V/C Ratio	0.138	-	0.579	0.118	-	-
HCM Control Delay (s)	8.6	-	35.6	9.9	-	-
HCM Lane LOS	A	-	E	A	-	-
HCM 95th %tile Q(veh)	0.5	-	3.3	0.4	-	-

HCM 6th TWSC
3: E. Site Drive & Maltby Road

Future Conditions with Improvements
PM Peak

Intersection

Int Delay, s/veh	1.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑		↑	↑	↑	↑
Traffic Vol, veh/h	160	37	34	371	21	20
Future Vol, veh/h	160	37	34	371	21	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	95	95	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	195	45	36	391	23	22

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	240	0	681
Stage 1	-	-	-	-	218
Stage 2	-	-	-	-	463
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1327	-	416
Stage 1	-	-	-	-	818
Stage 2	-	-	-	-	634
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1327	-	405
Mov Cap-2 Maneuver	-	-	-	-	405
Stage 1	-	-	-	-	818
Stage 2	-	-	-	-	617

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	12.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	538	-	-	1327	-
HCM Lane V/C Ratio	0.083	-	-	0.027	-
HCM Control Delay (s)	12.3	-	-	7.8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

HCM 6th TWSC
4: W. Site Drive & Maltby Road

Future Conditions with Improvements
PM Peak

Intersection						
Int Delay, s/veh	0.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↖			↗	↘	
Traffic Vol, veh/h	193	6	6	386	4	4
Future Vol, veh/h	193	6	6	386	4	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	95	95	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	235	7	6	406	4	4

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	242	0	657
Stage 1	-	-	-	-	239
Stage 2	-	-	-	-	418
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1324	-	430
Stage 1	-	-	-	-	801
Stage 2	-	-	-	-	664
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1324	-	427
Mov Cap-2 Maneuver	-	-	-	-	427
Stage 1	-	-	-	-	801
Stage 2	-	-	-	-	660

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	11.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	557	-	-	1324	-
HCM Lane V/C Ratio	0.016	-	-	0.005	-
HCM Control Delay (s)	11.6	-	-	7.7	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

HCM 6th TWSC
12: Maltby Road & Dummy Node

Future Conditions with Improvements
PM Peak

Intersection

Int Delay, s/veh	2.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↖	↗		↘	
Traffic Vol, veh/h	0	180	323	0	40	82
Future Vol, veh/h	0	180	323	0	40	82
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	82	82	95	95	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	220	340	0	43	89

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	340	0	0	560	340
Stage 1	-	-	-	340	-
Stage 2	-	-	-	220	-
Critical Hdwy	4.12	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	3.518	3.318
Pot Cap-1 Maneuver	1219	-	-	489	702
Stage 1	-	-	-	721	-
Stage 2	-	-	-	817	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1219	-	-	489	702
Mov Cap-2 Maneuver	-	-	-	489	-
Stage 1	-	-	-	721	-
Stage 2	-	-	-	817	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	12.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1219	-	-	-	614
HCM Lane V/C Ratio	-	-	-	-	0.216
HCM Control Delay (s)	0	-	-	-	12.5
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.8

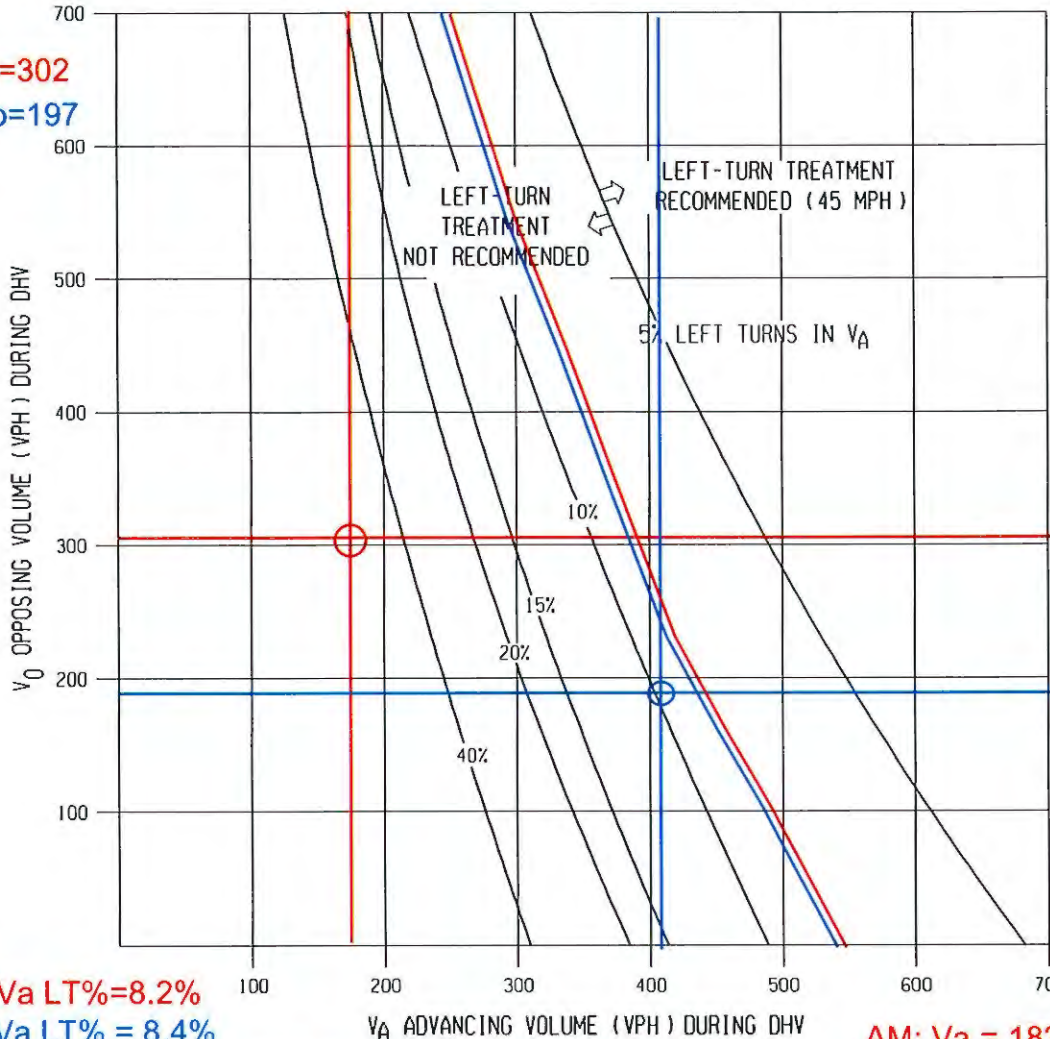
Appendix D

AUXILIARY LANE WARRANTS

MALIBY ROAD & E. SITE DRIVE LEFT-TURN LANE WARRANT

TWO-LANE HIGHWAYS WITH A POSTED SPEED OF 45 MPH

AM: $V_0=302$
 PM: $V_0=197$



AM: V_a LT%=8.2%
 PM: V_a LT% = 8.4%

AM: $V_a = 182$
 PM: $V_a = 405$

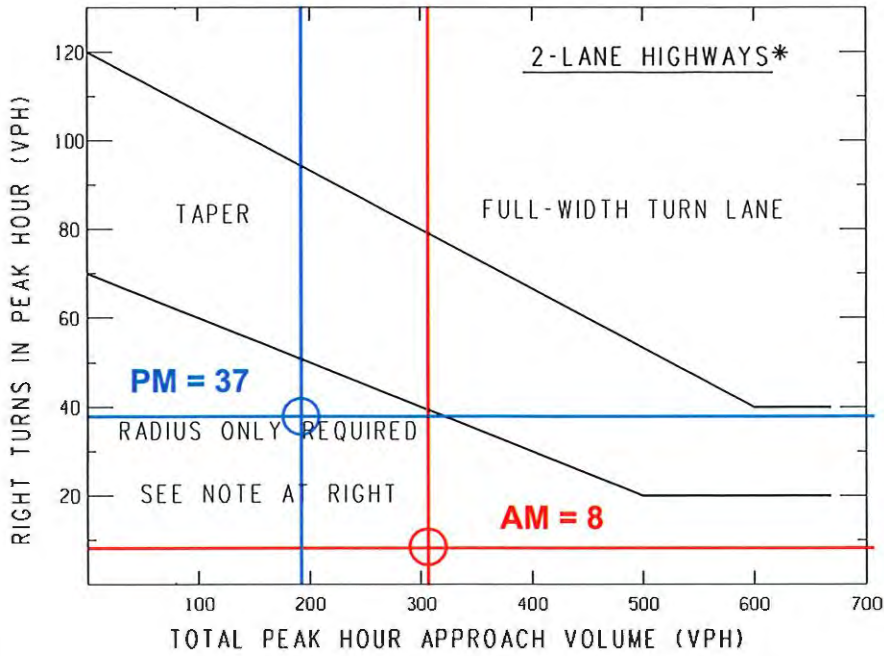
LEFT TURN LANE TREATMENT IS NOT RECOMMENDED

Instructions:

- The family of curves represent the percentage of left turns in the advancing volume (V_A). The designer should locate the curve for the actual percentage of left turns. When this is not an even increment of 5, the designer should estimate where the curve lies.
- Read V_A and V_0 into the chart and locate the intersection of the two volumes.
- Note the location of the point in #2 relative to the line in #1. If the point is to the right of the line, then a left-turn lane is recommended. If the point is to the left of the line, then a left-turn is not recommended based on traffic volumes.

<p>TRAFFIC AND SAFETY NOTE</p>	<p>TRAFFIC VOLUME GUIDELINES FOR LEFT-TURN LANES AT UNSIGNALIZED INTERSECTIONS</p>	
	<p>DRAWN BY: MTS CHECKED BY: JAT</p>	<p>08/05/2004 PLAN DATE:</p>
<p>FILE: K:/DGN/ts notes/Note605A tsn.dgn</p>		<p>REV. 08/05/2004</p>

MALIBY ROAD & E. SITE DRIVE RIGHT-TURN LANE WARRANT

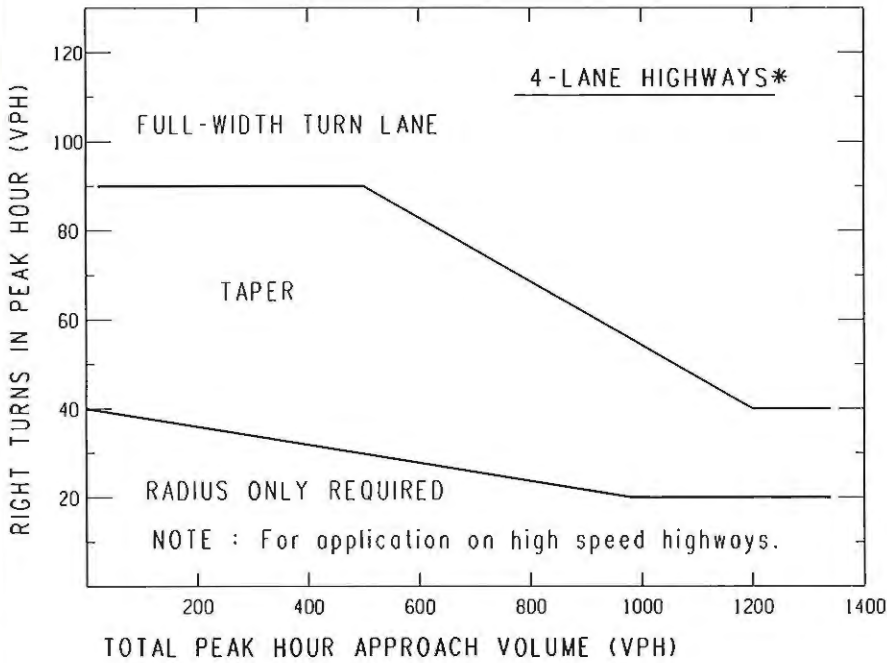


NOTE:
For posted speeds at or under 45 mph, peak hour right turns greater than 40 vph, and total peak hour approach less than 300 vph, adjust right turn volumes.

Adjust peak hour right turns = Peak hour right turns - 20

APPROACH:
AM = 302
PM = 197

RADIUS ONLY RECOMMENDED



*If a center left-turn lane exists (i.e. 3 or 5 lane highway), subtract the number of left turns in approach volume from the total approach volume to get an adjusted total approach volume.

Sample Problem:

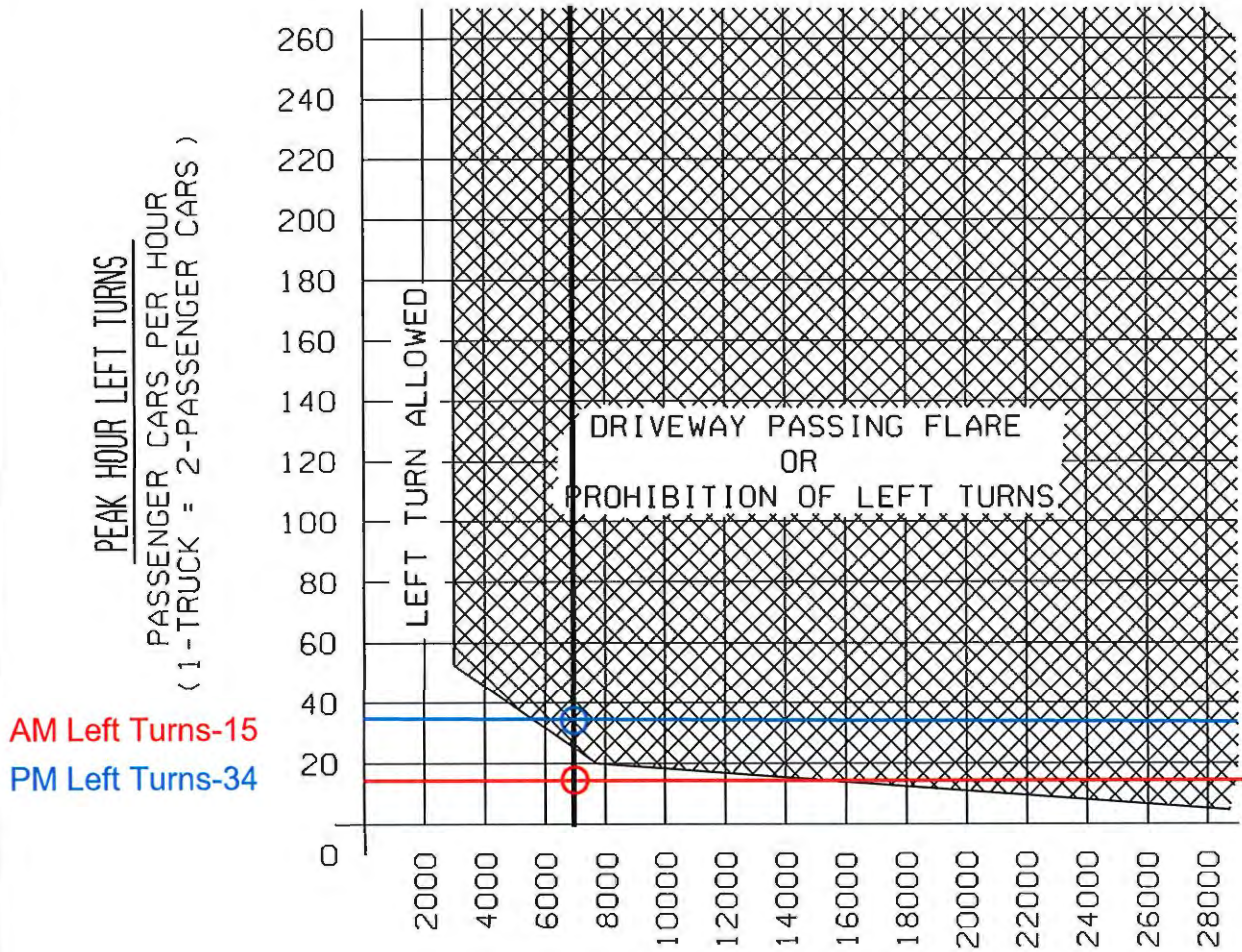
The Design Speed is 55 mph. The Peak Hour Approach Volume is 300 vph. The Number of Right Turns in the Peak Hour is 100 vph. Determine if a right turn lane is recommended.

Solution:

Figure indicates that the intersection of 300 vph and 100 vph is located above the upper trend line; thus, a right-turn lane may be recommended.

<p>MDOT Michigan Department of Transportation</p> <p>TRAFFIC AND SAFETY NOTE</p>	TRAFFIC VOLUME GUIDELINES FOR RIGHT-TURN LANES AND TAPERS	
	DRAWN BY: MTS CHECKED BY: JAT	08/05/2004 PLAN DATE:
FILE: K:/DGN/ts notes/Note604A tsn.dgn		REV. 08/05/2004

MALTBY ROAD & E. SITE DRIVE DRIVEWAY PASSING FLARE WARRANT



2016 SEMCOG AADT = 6800
2023 (0% GROWTH) = 6800

TWO-WAY 24 HOUR VOLUME

**DRIVEWAY PASSING FLARE
IS RECOMMENDED**

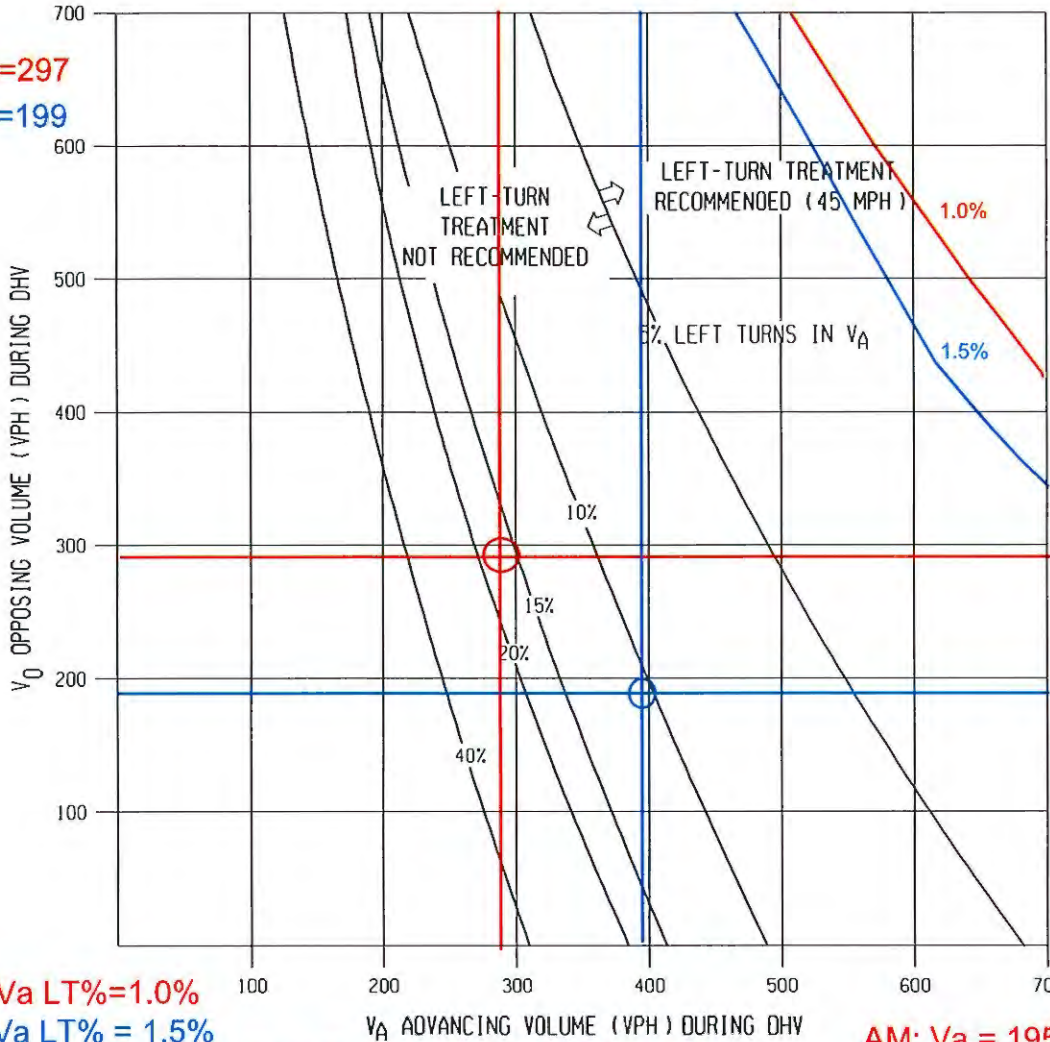
Note: This Chart is Based on Total Development and
is for Two Way Roadways.

<p>TRAFFIC AND SAFETY NOTE</p>	<p>TRAFFIC VOLUME GUIDELINES FOR DRIVEWAY PASSING FLARES</p>	
	<p>DRAWN BY: MTS CHECKED BY: JAT</p>	<p>08/05/2004 PLAN DATE:</p>
<p>FILE: K:\DGN\ts notes\Note603A tsn.dgn</p>		<p>REV. 08/05/2004</p>

WALIBY ROAD & W. SITE DRIVE LEFT-TURN LANE WARRANT

TWO-LANE HIGHWAYS WITH A POSTED SPEED OF 45 MPH

AM: $V_0=297$
 PM: $V_0=199$



AM: V_a LT% = 1.0%
 PM: V_a LT% = 1.5%

LEFT TURN LANE TREATMENT IS NOT RECOMMENDED

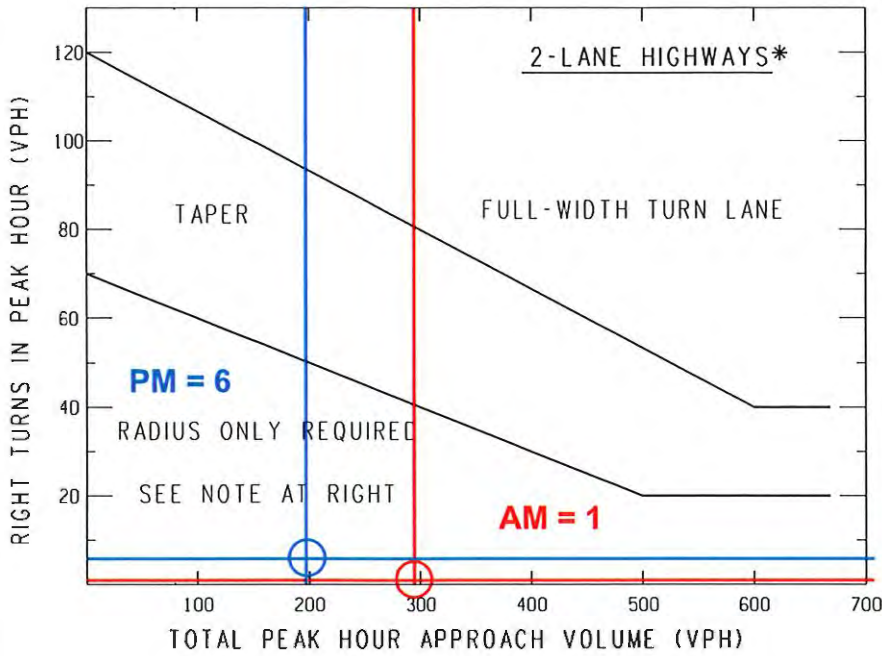
AM: $V_a = 195$
 PM: $V_a = 392$

Instructions:

1. The family of curves represent the percentage of left turns in the advancing volume (V_A). The designer should locate the curve for the actual percentage of left turns. When this is not an even increment of 5, the designer should estimate where the curve lies.
2. Read V_A and V_0 into the chart and locate the intersection of the two volumes.
3. Note the location of the point in #2 relative to the line in #1. If the point is to the right of the line, then a left-turn lane is recommended. If the point is to the left of the line, then a left-turn is not recommended based on traffic volumes.

<p>TRAFFIC AND SAFETY NOTE</p>	<p>TRAFFIC VOLUME GUIDELINES FOR LEFT-TURN LANES AT UNSIGNALIZED INTERSECTIONS</p>		
	<p>DRAWN BY: MTS CHECKED BY: JAT FILE: K:/DGN/ts notes/Note605A tsn.dgn</p>	<p>08/05/2004 PLAN DATE:</p>	<p>605A</p>
			<p>REV. 08/05/2004</p>

MALIBY ROAD & W. STE DRIVE RIGHT-TURN LANE WARRANT

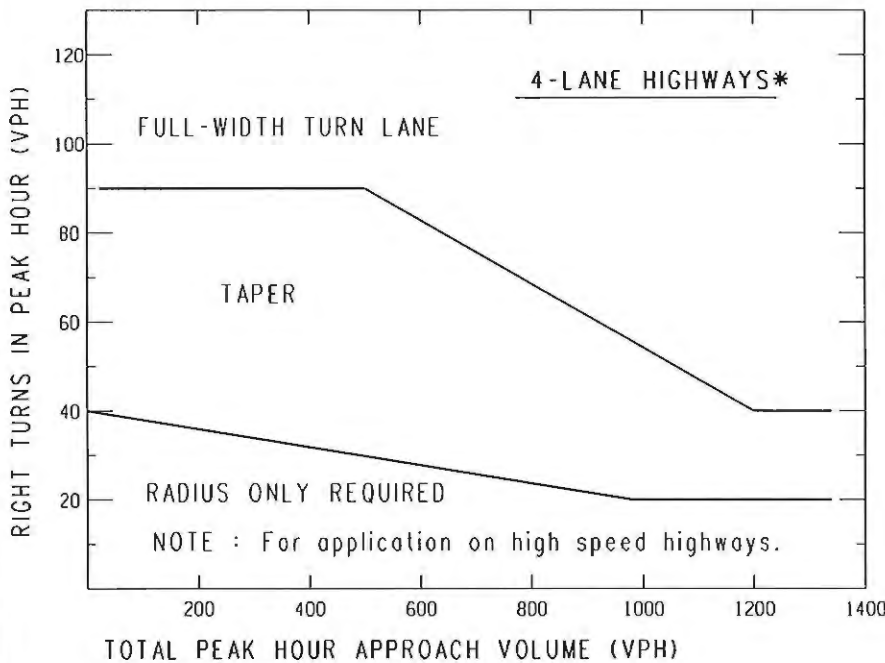


NOTE:
For posted speeds at or under 45 mph, peak hour right turns greater than 40 vph, and total peak hour approach less than 300 vph, adjust right turn volumes.

Adjust peak hour right turns = Peak hour right turns - 20

APPROACH:
AM = 297
PM = 199

RADIUS ONLY RECOMMENDED



*If a center left-turn lane exists (i.e. 3 or 5 lane highway), subtract the number of left turns in approach volume from the total approach volume to get an adjusted total approach volume.

Sample Problem:

The Design Speed is 55 mph. The Peak Hour Approach Volume is 300 vph. The Number of Right Turns in the Peak Hour is 100 vph. Determine if a right turn lane is recommended.

Solution:

Figure indicates that the intersection of 300 vph and 100 vph is located above the upper trend line; thus, a right-turn lane may be recommended.



TRAFFIC AND SAFETY NOTE

TRAFFIC VOLUME GUIDELINES FOR RIGHT-TURN LANES AND TAPERS

DRAWN BY: MTS
CHECKED BY: JAT

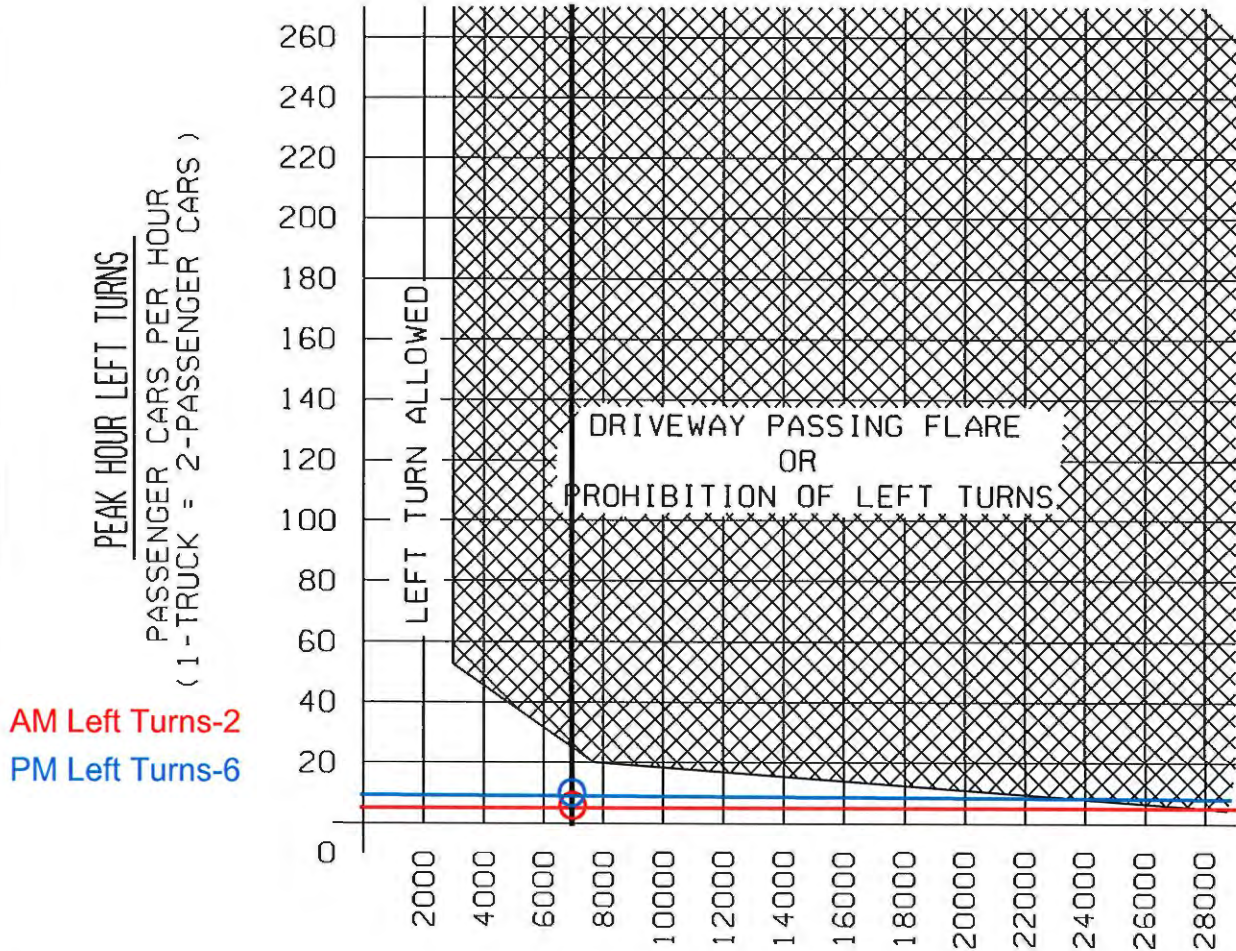
08/05/2004
PLAN DATE:

604A

SHEET 2 OF 2

FILE: K:\DGN\ts notes\Note604A tsn.dgn

REV. 08/05/2004



2016 SEMCOG AADT = 6800
2023 (0% GROWTH) = 6800

**DRIVEWAY PASSING FLARE
IS NOT RECOMMENDED**

Note: This Chart is Based on Total Development and is for Two Way Roadways.

<p>TRAFFIC AND SAFETY NOTE</p>	<p>TRAFFIC VOLUME GUIDELINES FOR DRIVEWAY PASSING FLARES</p>		
	<p>DRAWN BY: MTS CHECKED BY: JAT</p>	<p>08/05/2004 PLAN DATE:</p>	<p>603A</p>
<p>FILE: K:/DGN/ts notes/Note603A tsn.dgn</p>			<p>REV. 08/05/2004</p>

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DD&G HOLDINGS, LLC
9020 MALTBY RD
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4716-08-100-010
KENNEY, JAMES
7197 RICKETT RD
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4716-08-100-024
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HOLDEN CEMETERY AKA PLAINS CEMETERY
AKA GREEN OAK CEMETERY
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FERENCZ, JOHN G & PATRICIA S
7215 RICKETT RD
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4716-08-100-011
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7247 RICKETT RD
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MASTER, MITCHELL
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GRAHAM FAMILY TRUST
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7319 GOLDENROD CT
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MICHAEL LOCKHART
7250 WHITMORE LAKE RD
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BARTON-CLAUSNITZER, LLC
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BRIGHTON MI 48116

4716-08-100-006
KEILMAN, ROGER
7269 RICKETT RD
BRIGHTON MI 48116

4716-08-100-010
KENNEY, JAMES
7197 RICKETT RD
BRIGHTON MI 48116

4716-08-100-011
KULIKOWSKI, CHESTER & CINDY
7247 RICKETT RD
BRIGHTON MI 48116

4716-08-100-014
LOWRY DEVELOPMENT COMPANY
ATTN JIM HOWATH
9420 MALTBY RD
BRIGHTON MI 48116

4716-08-100-015
WYMAN GORDON COMPANY
MICHAEL LOCKHART
105 MADISON ST
WORCESTER MA 01610

4716-08-100-022
BARTON-CLAUSNITZER, LLC
7300 WHITMORE LAKE RD
BRIGHTON MI 48116

4716-08-100-023
7202 WHITMORE LLC
10226 CARMER ROAD
FENTON MI 48430

4716-08-100-024
GREEN OAK CHARTER TOWNSHIP
HOLDEN CEMETERY AKA PLAINS CEMETERY
AKA GREEN OAK CEMETERY
10001 SILVER LAKE RD
BRIGHTON MI 48116

4716-08-100-027
ANDERSON, KERRI & KENT
7145 RICKETT RD
BRIGHTON MI 48116

4716-08-100-028
WILLIAMS, WAYNE E & JULIE ANN
7171 RICKETT RD
BRIGHTON MI 48116

4716-08-100-029
LOWRY INVESTMENT CO LLC
ATTN JIM HOWATH
9420 MALTBY RD
BRIGHTON MI 48116

4716-08-101-012
ROESLER, BRIAN
7355 GOLDENROD CT
BRIGHTON MI 48116

4716-08-101-013
GRAHAM FAMILY TRUST
7337 GOLDENROD CT
BRIGHTON MI 48116

4716-08-101-014
LAUTENBACH, JEFFREY & DELAINE
7319 GOLDENROD CT
BRIGHTON MI 48116

4716-08-101-015
SOKOLOWSKI, CAMERON & ELIZABETH
7305 GOLDENROD CT
BRIGHTON MI 48116

4716-08-101-016
HURLBERT, LEWIS & KRISTINE
7291 GOLDENROD CT
BRIGHTON MI 48116

4716-08-101-017
ANDERSON, JULIE & PAUL
7277 GOLDENROD CT
BRIGHTON MI 48116

4716-08-101-018
KLONOWSKI, JASON S REVOC & SUZANNE
7263 GOLDENROD CT
BRIGHTON MI 48116

4716-08-101-019
FORESMAN, STEPHEN & LAUREN
7249 GOLDENROD CT
BRIGHTON MI 48116

4716-08-101-035
CHOI, SIK YOUN & SUNJU
7364 GOLDENROD CT
BRIGHTON MI 48116

4716-08-101-036
SWETLAND, ELI & LOTERO- GIRALDO MAR
7288 GOLDENROD CT
BRIGHTON MI 48116

4716-08-101-037
PHILLIPS, AARON & HEATHER
7268 GOLDENROD CT
BRIGHTON MI 48116

4716-08-101-054
HODGES GREEN #2, FISHER'S GLEN,
ABBAY KNOLL & SOUTHEY SQUARE SUB
PO BOX 1276
BRIGHTON MI 48116



January 30, 2020

Mr. Mark St. Charles
Township Supervisor
Green Oak Township
10001 Silver Lake Rd
Brighton, Michigan 48116

**Re: Vector Development- The Parc at Green Oak
Project Narrative**

Dear Mr. St. Charles,

We are pleased to present to you a Preliminary Site Plan for parcel 16-08-100-014 on Maltby Road. Please accept this letter and accompanying plans as a formal submittal for your consideration on behalf of our client's proposed development.

PROJECT OVERVIEW

The Parc at Green Oak is a proposed 250-unit multifamily residential Open Space Planned Unit Development located on the south side of Maltby Road, west of Whitmore Lake Road in Green Oak Township, Livingston County, Michigan. The property is a vacant wooded site consisting of 20.50 gross acres (with additional 1.86 acres being purchased for retention) currently zoned and master planned as 'RO' (Research Office). The site is bounded on the east by a cemetery and light industrial zoning / land use; on the north by 'R2' single family residential (2 du/ac); to the west by commercial (landscape supply) and 'RE'/'RF' residential; and to the south by R2 single family residential. The proposed multi-family use is consistent with land use transitions traditionally found between industrial and single family residential in many communities.

20,450

The development will offer a mixed target demographic for both active adult "empty nesters" through young professionals in brand new, modern, for-rent apartment buildings which are unlike anything currently available in the area today. In addition, there will be a community clubhouse and pool for residents at The Parc at Green Oak to enjoy. Two entrances are proposed from Maltby Road, which is the only existing road providing access to the site. The main entrance is proposed as a boulevard entry with a monument sign and encourages travel past the community clubhouse. The secondary entrance to the east will provide access to the residential units and is oriented as a north-south corridor through the site. The western and southern property lines will be screened providing a noise and visual buffer from the adjacent single-family residential property owners. The proposed building has a very attractive "residential" look with varied roof lines and building materials, and a low two-story building profile with attached garages for all units.

Utility service to the site will be via public sewer and water. Sewer service to the site will be provided via a sanitary sewer connection through the adjacent parcel to the east, into the existing sewer on the west side of Whitmore Lake Road. Water service is proposed via an extension of the existing water main on the north side of Maltby Road, which will be extended to the west boundary of the site.

Stormwater management will be provided by an underground storm sewer system that will be routed to a proposed retention basin along the east site boundary. A retention system is preferred for this property due to the lack of a clearly defined drainage channel nearby, and is supported by the presence of sandy soils in the area. The residential development to the south also has a retention system with no defined outlet, and there are no known issues with flooding.

The proposed multi-family unit count of 250 units represents a reduction in density from what would be allowed in a similar multi-family layout without a clubhouse / pool amenity. The alternative / parallel layout would result in:

- higher density (276 units versus 250 units proposed)
- less open space (no tree preservation to the south)
- no community clubhouse & pool
- no Best Management Storm Water Practices utilized
- no community benefits

The proposed Open Space PUD allows for design flexibility in order to accomplish a feasible density within a smaller area. Some of the natural features (woodlands) are preserved while approximately 50% open space has been achieved on the site. A pedestrian system comprised of concrete sidewalks located throughout the proposed development and along the internal access drives has been created along with a sidewalk connection along Maltby Road to the Shoppes at Green Oak and to the Township cemetery. The primary stormwater management Best Management Practice for the site is a proposed retention basin that will capture runoff and promote infiltration into the native sandy soils rather than directing runoff to downstream properties, thereby reducing the potential for flooding. The building product and community overall achieves a high-quality visual aesthetic through the architectural style and landscaped features. The community benefits proposed as a result of The Parc at Green Oak Open Space PUD are as follows;

- Use of community clubhouse as Township precinct polling location
- Reduced density from an alternative RM development
- New, attractive housing option to draw new residents into Green Oak Township unlike anything currently available today
- New housing opportunity within walking distance to Green Oak retail center
- Off-site pedestrian pathway connection along Maltby Road to The Shoppes at Green Oak
- Parking spaces provided for adjacent cemetery
- Extension of utilities down Maltby Road
- Extension of sanitary sewer to Whitmore Lake Road, which will provide service for property to the southeast

- 10.8 acres of permanent open space (50% overall)
- Dedicated land for future Maltby Road right of way
- Increased tax base
- Donation to Township Tree Fund and/or planting trees at an agreed on offsite location

In addition to the community benefits listed above, the proposed project will contribute to the community in the following ways:

- Multiple Family Residential as a Transitional Zoning: Multiple Family Residential developments are traditionally considered good transitional zonings because while it is a more intense use than single family, the primary use is still as a residence. Since the subject parcel falls in between a higher (industrial) and lower (single family residential) use, the more appropriate zoning would be RM in-lieu of RO.
- Addresses a Housing Need within the Green Oak Community: In a cursory search of the Township options for apartment developments, three (3) appeared. This project would allow for another multiple family development that is new, creatively designed, located close to US-23/Lee Road hub, and included in Brighton Area School district.
- Aligns with Master Plan Goals & Objectives: This project parallels the Township Master Plan goals and objectives which include providing diverse housing options, exploring residential growth management, and protecting natural features.
- RO-Research Office has Minimal Demand: The subject parcel has been zoned RO since at least 1990. The property remains vacant despite being available for development for nearly 29 years.

PROJECT PROCESS

The avenue for which to develop this project is through the Open Space Planned Unit Development (PUD) process as described in Article V of the Zoning Ordinance. Developing the site as a PUD allows both the Township and project flexibility in layout, community features, and benefits offered. While following the PUD process, we are also requesting two amendments from the Township, both are described below.

In order to successfully develop and garner an approval for this PUD, it needs to meet the future vision the Township has for this site. Currently, the site is zoned RO (Research Office) and is master planned for the same. The proposed multi-family use is not a principal or special land use supported by the RO zoning. Because this property is better suited to multi-family, and due to the substantial community benefits listed above, we would respectfully formally request that Green Oak Township and it's consultants amend the Master Plan to reflect the subject parcel as RM (Multiple Family Residential) on the new Township Master Plan currently being drafted.

Additionally, we are seeking an amendment to the Township Woodlands Map. After completing a thorough on-site evaluation and comparing this site to others in the area that are designated woodlands we believe this site should be officially classified as a "Woodland." We have prepared a Woodland Assessment of the site which has been included with this package. Please refer to this document for further information and evidence of woodlands on site.

Requests for these amendments will better serve the Green Oak community and multi-family is a more appropriate land use designation. The proposed project will be a highly sought-after marquee development that will allow Green Oak Township to provide a new housing option applicable to the changing times.

Thank you for your assistance and cooperation with respect to this petition. If you should have any questions or need any additional information, please contact us.

Sincerely,
ATWELL, LLC



Albert Mickalich, PE
Senior Project Manager



ONE COMPANY.
INFINITE SOLUTIONS.

January 30, 2020

Howard Fingeroot

Vector Development

Two Towne Center, Suite 120

Southfield, MI 48076

Atwell, LLC Project No. 19000954

Re: Woodland Site Assessment

The Parc at Green Oak Parcel 22.36 acres

Green Oak Charter Township, Livingston County, Michigan

Mr. Fingeroot:

Vector Development, LLC (Client) contracted Atwell, LLC (Agent) to conduct a woodland assessment for an approximately 22.36 acre parcel in Section 8 of Green Oak Charter Township (Township 01 South, Range 08 East), Livingston County, Michigan (hereinafter referred to as "Site") to support a proposed residential development project. The Site is located approximately 950 feet east of the intersection of Maltby Road and Rickett Road.

The purpose of the woodland assessment was to determine the general vegetation communities present within the various areas on the Site and to provide data supporting the proposal to reclassify portions of the Site as meeting the Green Oak Charter Township woodland ordinance definition. The Township ordinance does not detail the process for determining if a parcel meets the Township definition of woodlands for inclusion on the Township woodlands map. Therefore, Atwell has used the generally accepted definition of woodland as being a vegetation community where the individual tree canopies generally overlap forming a more or less continuous canopy shading the ground layer to varying degrees.

A desktop review of historical aerial photos and other publicly available records was undertaken followed by a site inspection on December 20, 2019. During the site inspection, Atwell conducted a meander search of the Site to confirm the presence of vegetation community types identified during the desktop review.

Review of current aerial photos combined with field truthing revealed that the Site exhibits three general zones comprised of two woodland types (Zone A and B) and a more open old field area (Zone C). These individual areas are identified on the attached woodland map with and descriptions of each area detailed below. Refer to the enclosed *Woodland Map*.

Mr. Howard Fingerroot

January 30, 2020

Page 2 of 3

Zone A

Zone A is located at the northern end of the Site fronting on Maltby Road where a historical homestead was located and comprises approximately 3.63 acres. This zone exhibits a dense closed canopy comprised of an equal mix of black locust (*Robinia pseudoacacia*) and sugar maple (*Acer saccharum*) dominants with typical spacing of 10'-12'. Average DBH (diameter breast height) of black locust specimens range from 8"-18" and sugar maple from 4"-10". A number of larger black locust specimens in the range of 24"-30" and sugar maple in the range of 12"-18" also present. A few large specimens of black oak (18"-24") and black cherry (18"-20") are scattered throughout this area. Trees in the canopy layer are generally in good health with limited dead snags present. Due to the dense canopy, the understory exhibits a sparse layer comprised of scattered smaller saplings of black locust and sugar maple. Average DBH of midstory species range from 2"-4" with an average height of 10'-15'. The herbaceous layer is also sparse due to lack of sunlight penetration to the ground layer.

Zone B

Zone B is comprised of two areas. The main area runs from the southern edge of Zone A through the central portion of the Site with fingers extending to the eastern and southern Site boundary. A second smaller area is located in the northeast corner of the Site. These two areas comprise a total of 9.68 acres. Zone B is similar to Zone A in that it also exhibits a dense closed canopy but is comprised almost exclusively of black locust in the canopy layer (90%). Typical spacing of canopy layer trees is denser in this zone and ranges from 4'-6'. Average DBH of canopy specimens range from 6"-8" with a number of larger 12"-18" specimens scattered throughout the area. Subdominants in the canopy layer include sweet cherry (*Prunus avium*), sugar maple and box elder (*Acer negundo*) in the range of 4"-8" DBH.

Trees in the canopy layer are generally in good health with limited dead snags present. Due to the dense canopy, the understory exhibits a sparse layer comprised of scattered smaller saplings of black locust, sugar maple, sweet cherry, and white oak (*Quercus alba*). Average DBH of midstory species range from 2"-4" with an average height of 12'-15'. The herbaceous layer is generally sparse due to lack of sunlight penetration to the ground layer except in limited more open edges where typical old field grass species, raspberry (*Rubus spp.*), honeysuckles (*Lonicera spp.*), and autumn olive (*Elaeagnus umbellata*) are present.

Zone C

Zone C is comprised of three areas extending into the Site from the eastern, western, and southeastern edges. These three areas comprise a total of 8.53 acres. Zone C exhibits a mosaic of dense groupings of conifers dominated by juniper (*J. communis* var. *communis*) of various ages with smaller groupings of mature white pine (*Pinus strobus*) and limited scots pine (*Pinus sylvestris*) interspersed with more open old field areas. Typical spacing of canopy layer trees in this zone range from 10'-12'. Average DBH of canopy specimens range from 4"-6" for junipers with heights ranging typically from 10'-20'. White and scots pine range from 12'-18" DBH and heights typically 15'-30'. Trees in the canopy layer are generally in good health and exhibit some typical die back of lower branches common with conifer species.

The understory and herbaceous layers within the dense conifer groupings is generally lacking due to canopy shading. However, in the more open areas between these groupings typical old field species dominate the ground layer. Common herbaceous vegetation within these areas includes Queen Anne's-

Mr. Howard Fingerroot
January 30, 2020
Page 3 of 3

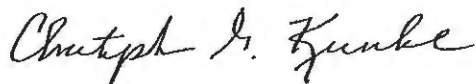
Lace (*Daucus carota*), teasel (*Dipsacus fullonum*), Canada goldenrod (*Solidago canadensis*), common milkweed (*Asclepias syriaca*), smooth brome (*Bromus inermis*), spotted knapweed (*Centaurea maculosa*), fleabane (*Erigeron annuus*), and chicory (*Cichorium intybus*).

Based on the desktop review and field truthing of the vegetation communities present on the Site, it is Atwell's professional opinion that the portions of the Site falling within Zones A and B (13.31 acres) should be considered as meeting the definition of woodland and should be included on the Green Oak Charter Township Woodlands Map. These areas exhibit a closed canopy of mature tree species similar to areas mapped as woodland on the Township Woodlands Map.

We appreciate the opportunity to be of service to you on this project. Should you have any questions, please contact us at (248) 447-2000.

Sincerely,

ATWELL, LLC

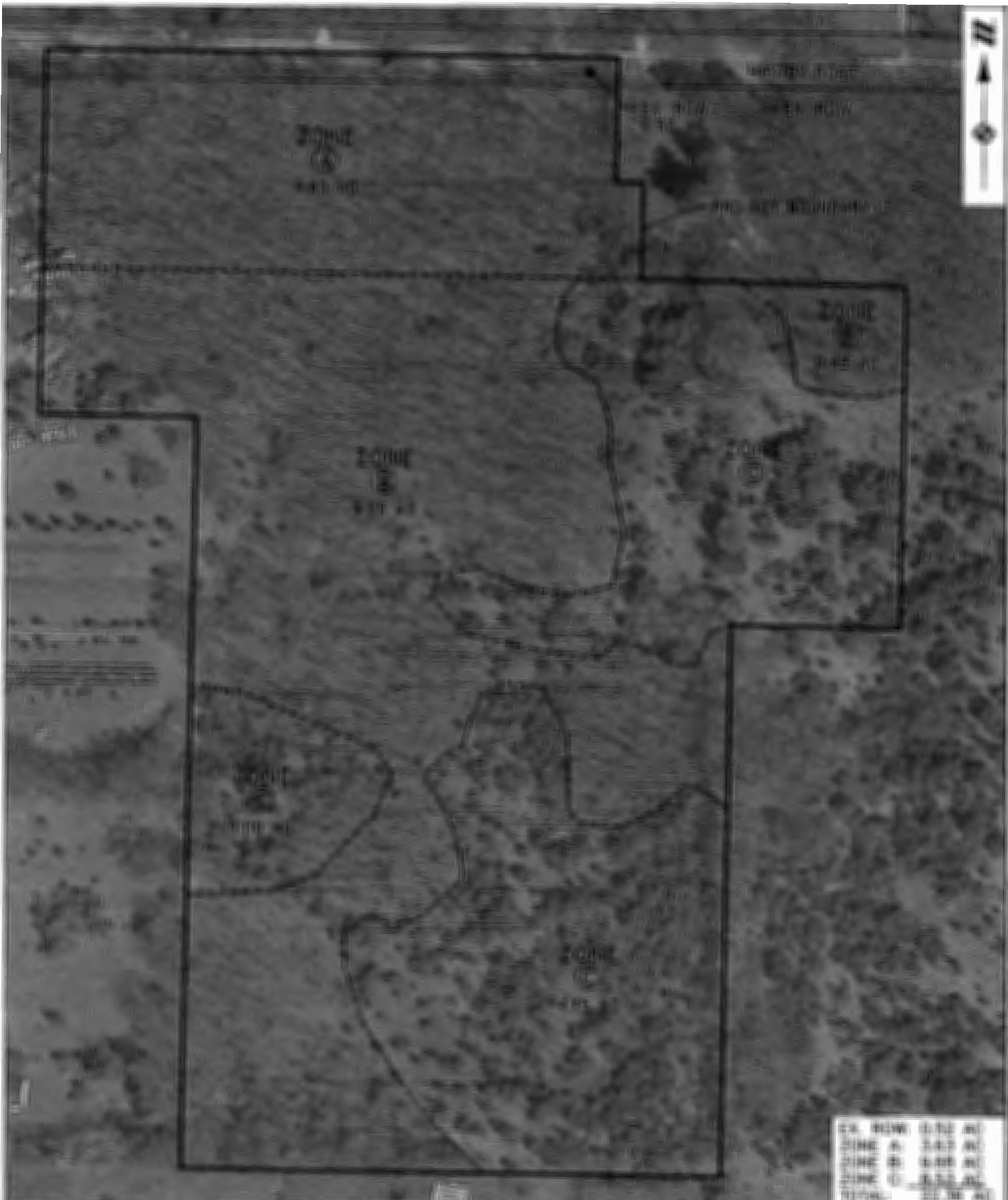


Chris Kunkle
Senior Environmental Consultant
Environmental Services Group



Don Berninger
Team Leader
Environmental Services Group

Enclosures: Woodland Location Map




ZONE A	1.52 AC
ZONE B	2.43 AC
ZONE C	5.48 AC
ZONE D	5.72 AC
ZONE E	22.38 AC

19000954 - VECTOR DEVELOPMENT
 THE PARC AT GREEN OAK PARCEL
 WOODLAND ASSESSMENT MAP

DRAWN BY: AG
 DATE: 01-20-2021

 SCALE: 1" = 100'



ATWELL
 www.atwell.com www.atwellgroup.com
 11100 WILSON STREET
 SAN JOSE, CA 95128
 (415) 436-1000



October 5, 2020

Mr. Rick Miner, P.E.
1150 Corporate Office Drive, Ste. 210
Milford, MI 48381

RE: *The Parc at Green Oak PUD*
CES # 2020-0008
1st Preliminary Site Plan Review

Dear Mr. Miner,

Thank you for providing your review and feedback for the above referenced project. We have revised the plans in accordance with your last review letter dated February 19, 2020. For your use, below are our responses on how we have addressed or plan to address each of the comments in your letter.

1. The project will be served by public water by extending the existing 12-inch watermain in Maltby Road and a network of on-site watermain; these new mains will require the review and approval of the Livingston Community Water Authority.
Response: *Comment noted.*
2. Sanitary sewer will be extended to the property from the existing 10-inch diameter sewer located on the west side of Whitmore Lake Road. This parcel was not in the Special Assessment District and this proposal includes the addition of 250 REUs. CES will confirm available number of REUs with the Township's Sewer Committee once the Planning Commission provides feedback on number of units. CES will also verify capacity of the Whitmore Lake sanitary sewer once the number of units has been determined.
Response: *Comment noted.*
3. A stormwater outlet is not available to the property and a retention basin is proposed, which will retain all water on-site and rely on infiltration as the means of dewatering. Soils information provided in two (2) areas of the site seem to indicate favorable conditions to support infiltration, but a boring log within the footprint of the proposed basin will be required with supporting infiltration data meeting Township standards before a final determination can be made. This information has not been provided at this time.
Response: *Comment noted. Additional soil borings will be performed to confirm infiltration capabilities within the proposed basin prior to Final Site plan approval.*
4. Sediment forebay(s) will be required as part of the retention basin design and the plans shall be revised to reflect this. By township standards, forebays separate from the basin proper are required but a compartment within the basin walled-off with stone is proposed. Further, a note on sheet 8 says that the forebay will be temporary. The sediment forebays are required to be permanent.
Response: *The proposed forebay is intended to be a separate cell within the basin created by a stone gabion basket which will capture and isolate sediment from the rest of the retention basin, as per township standards. The note on Sheet 08 has been revised to identify this forebay as a permanent forebay for sediment isolation.*

5. Offsite easements for the storm sewer emergency overflow and sanitary sewer will be required.
Response: *Comment noted. A preliminary offsite shared utility easement is shown on the Offsite Utility & Sidewalk Plan (sheet 6) as requested. Note that coordination with the adjacent property owners is underway and a final location for these proposed easements will be determined in future submittals during the Final Site Plan submittals.*
6. There may be additional impacts to existing woodland areas due to offsite sewer construction that should be addressed by the Applicant.
Response: *Offsite woodland impacts will be considered when an easement option is confirmed, and a tree inventory is performed. This will be resolved prior to Final Site plan approval.*
7. Access to the site is by way of Maltby Road, a paved road under the jurisdiction of the Livingston County Road Commission. Initial feedback from the Road Commission has been provided to the Applicant, who is to address all concerns as well as the recommendations contained in the Traffic Impact Study prepared for this project by Fleis and Vandenbrink.
Response: *Comment noted.*
8. Project phasing has been generally shown on the preliminary plan. On the final site plan, phasing must include utility layout such that each phase will be self-supporting.
Response: *The phase line is shown on the Layout and Utility plans (Sheets 4 and 5). Phase 1 will be self-supporting and utility stubs will be provided for Phase 2 upon construction of phase 1. Phase 1 will be constructed prior to phase 2.*
9. An AutoTurn analysis has been provided and demonstrates that the proposed layout can accommodate a ladder truck.
Response: *Comment noted.*
10. The applicant is required to obtain all permits prior to the commencement of construction, including all local, State, and Federal permits, where applicable.
Response: *Comment noted. Required permits will be obtained prior to commencement of construction.*
11. It is noted that the plan has been revised to show only one entrance off of Maltby Road.
Response: *Comment noted.*

Should you have any remaining questions or need anything else from us to help facilitate your review and approvals, please do not hesitate to contact me direct at (810) 923-6878.

Sincerely,
ATWELL, LLC



Matthew W. Bush, P.E.
Team Leader – Land Development



ONE COMPANY.
INFINITE SOLUTIONS.

January 8, 2020

Howard Fingerroot
Vector Development
Two Towne Center, Suite 120
Southfield, MI 48076

Atwell, LLC Project No. 19000954

Re: Woodland Site Assessment
Maltby Road Parcel 22.36 acres
Green Oak Charter Township, Livingston County, Michigan

Mr. Fingerroot:

Vector Development, LLC (Client) contracted Atwell, LLC (Agent) to conduct a woodland assessment for an approximately 22.36 acre parcel in Section 8 of Green Oak Charter Township (Township 01 South, Range 08 East), Livingston County, Michigan (hereinafter referred to as "Site") to support a proposed residential development project. The Site is located approximately 950 feet east of the intersection of Maltby Road and Rickett Road.

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Mr. Howard Fingerroot
January 8, 2020
Page 3 of 3

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Based on the desktop review and field truthing of the vegetation communities present on the Site, it is Atwell's professional opinion that the portions of the Site falling within Zones A and B (13.31 acres) should be considered as meeting the definition of woodland and should be included on the Green Oak Charter Township Woodlands Map. These areas exhibit a closed canopy of mature tree species similar to areas mapped as woodland on the Township Woodlands Map.

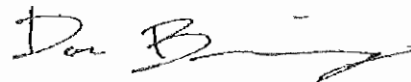
We appreciate the opportunity to be of service to you on this project. Should you have any questions, please contact us at (248) 447-2000.

Sincerely,

ATWELL, LLC



Chris Kunkle
Senior Environmental Consultant
Environmental Services Group



Don Berninger
Team Leader
Environmental Services Group

Enclosures: Woodland Location Map

ATWELL
 066450300 WOODLAND AT GREEN OAK
 211 NORTH MAIN STREET
 ANN ARBOR MI 48106
 734.761.1200

SECTION 8
 TOWNSHIP OF GREEN OAK
 COUNTY OF WOODLAND, MICHIGAN

SECTION 8
 TOWNSHIP OF GREEN OAK
 COUNTY OF WOODLAND, MICHIGAN

SECTION 8
 TOWNSHIP OF GREEN OAK
 COUNTY OF WOODLAND, MICHIGAN

SECTION 8
 TOWNSHIP OF GREEN OAK
 COUNTY OF WOODLAND, MICHIGAN

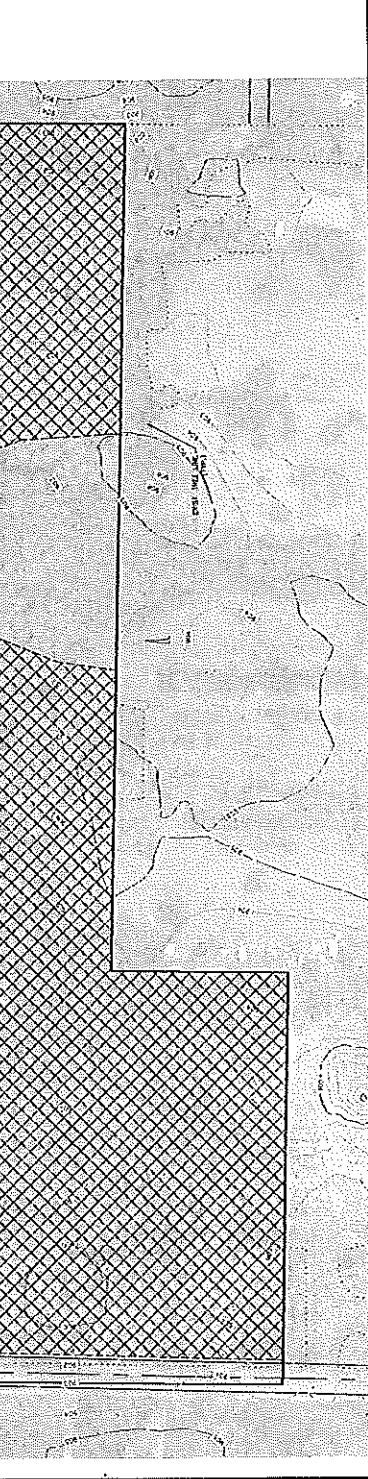
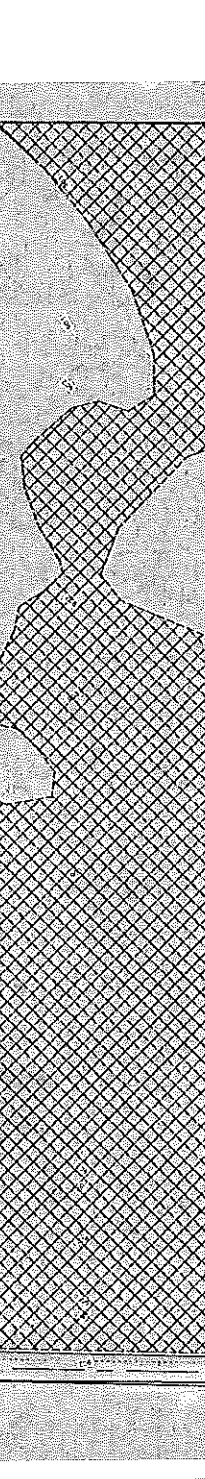
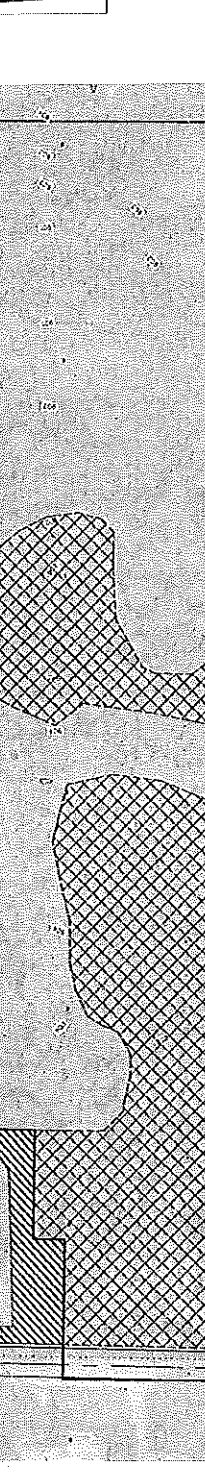
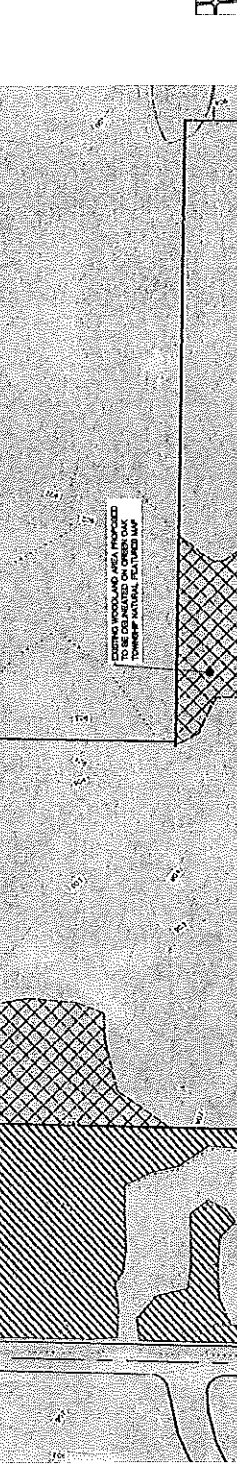
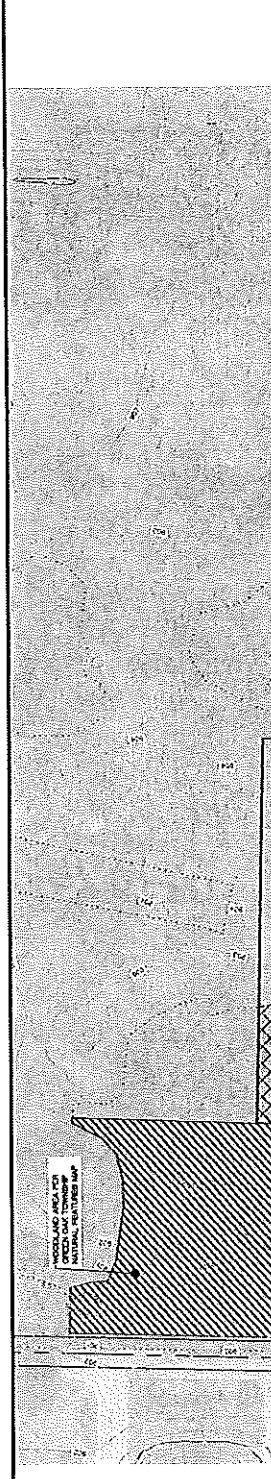
WOODLAND AREA SITE DATA
 13.31 AC / 7,710 SQ. FT. ±
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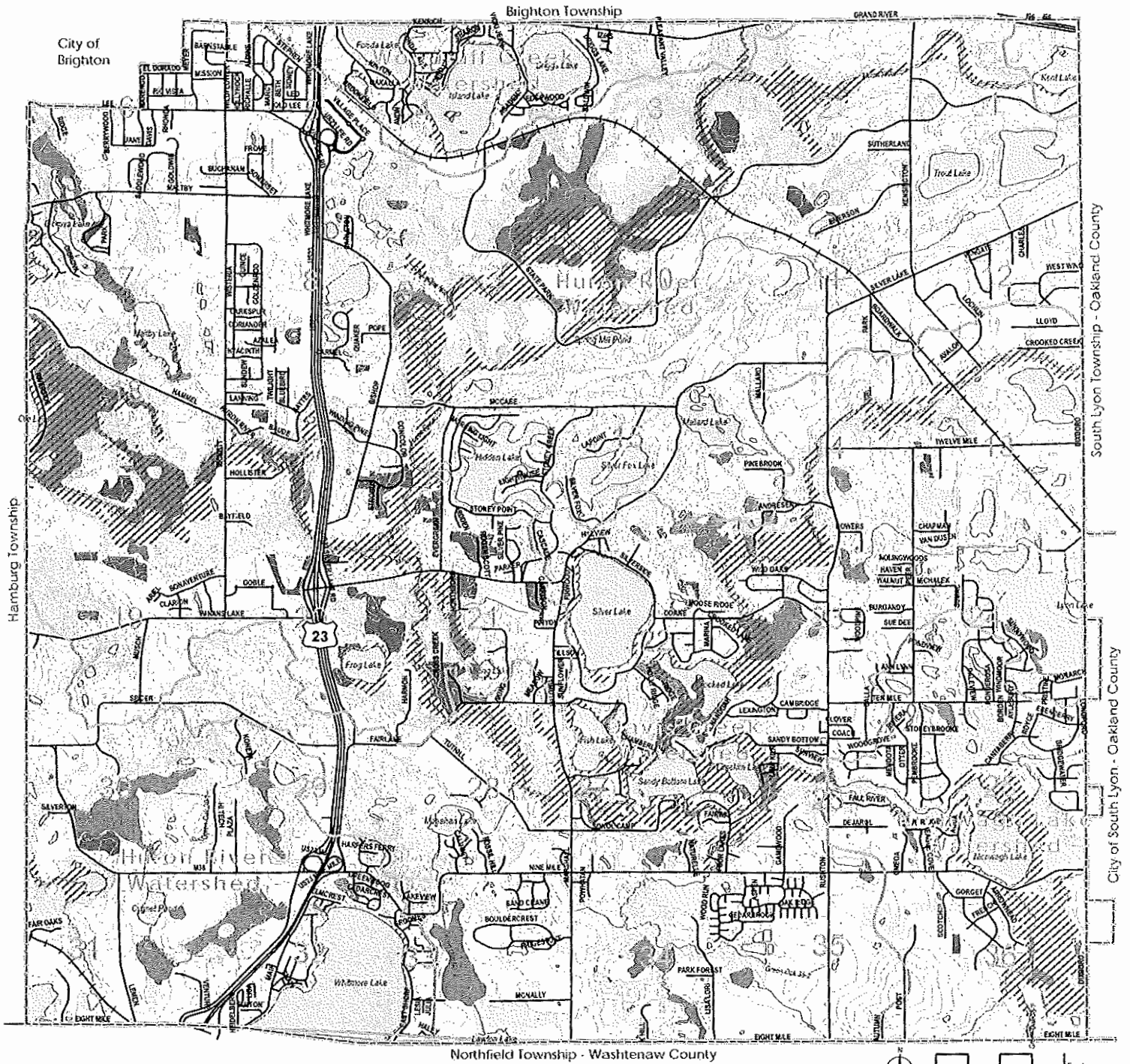
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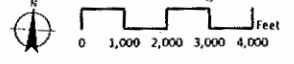
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PRELIMINARY
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Figure 11. - Natural Features



- Central Hardwood Forest
- Pine Forest
- Forested Wetland
- Scrub-Shrub Wetland
- Emergent Wetland
- Contour Elevation
- Watershed Boundary
- Floodplain



1-23-14
 Carlisle/Wortman Associates, Inc.
 Ann Arbor, Michigan



Livingston County Department of Planning

April 22, 2021

Green Oak Township Board of Trustees
c/o Michael Sedlak, Clerk
Green Oak Township Hall
10001 Silver Lake Road
Brighton, MI 48116

Kathleen J. Kline-Hudson
AICP, PEM
Director

Robert A. Stanford
AICP, PEM
Principal Planner

Scott Barb
AICP, PEM
Principal Planner

Re: Planning Commission Review of Zoning Amendments Z-10-21 and Z-11-21

Dear Board Members:

The Livingston County Planning Commission met on Wednesday, April 21, 2021 and reviewed the zoning amendments referenced above. The Livingston County Planning Commissioners made the following recommendations:

Z-10-21 Approval. The proposed PUD/RE rezoning is compatible with surrounding RE Rural Estate zoning and Low Density Residential master planning. It is also compatible with the majority of surrounding residential land uses, although not entirely compatible with the industrial park land uses to the northwest. The proposed PUD Planned Unit Development will be far more protective of the natural environment surrounding Dove Lake than a conventional rezoning to RE Rural Estates would be. This is extremely important since the Davis Creek tributary of the Huron River is adjacent to the northern boundary of the site.

Z-11-21 Approval. The proposed RM Residential Multiple Family conditional rezoning is compatible with surrounding residential zoning and land use, and public utilities are available to the site. The proposed RM development will provide a transition between the more intense industrial land uses and zoning located along Whitmore Lake Road and the less-intensive surrounding single-family land uses and zoning. The conditions offered by the applicant will include the preservation and enhancement of woodlands on-site that will act as both a visual and noise buffer between the development and surrounding residential development to the west and south.

Copies of the staff review and draft Livingston County Planning Commission meeting minutes are enclosed. Do not hesitate to contact our office should you have any questions regarding this county action.

Sincerely,

Kathleen J. Kline-Hudson

Kathleen J. Kline-Hudson
Director

Enclosures

c: Lamberto Smigliani, Chair Green Oak Township Planning Commission
Debra McKenzie, Planning and Zoning Administrator

Meeting minutes and agendas are available at:
<http://www.livgov.com/plan/Pages/agendas.asp>

Department Information

Administration Building
304 E. Grand River Avenue
Suite 206
Howell, MI 48843-2323

(517) 546-7555
Fax (517) 552-2347

Web Site
co.livingston.mi.us

ZONING/MASTER PLAN AMENDMENT FORM

Livingston County Planning Commission, 304 East Grand River, Suite 206, Howell, MI 48843-2323

LOCAL CASE NUMBER _____ COUNTY CASE NUMBER 2-11-21

The Green Oak Charter Township Planning Commission is submitting the following amendment for review and comment.

REZONING (MAP AMENDMENT) Property description and location (attach a map of the proposed amendment as required by law).
Size: 22.36 acres Property tax Identifier: 4716-08-100-014 and 4716-08-100-029
Location: 9198 and 9120 Maltby Road
Existing Zoning District is: RO Research Office LI Proposed Zoning District: Conditional Rezoning RM
Name of Petitioner: Vector Development Name of Property Owner: LOWRY DEVELOPMENT COMPANY
Purpose of Change: To have 23 Two Story multi -family apartment complex
Existing Land Use: vacant land

ZONING ORDINANCE TEXT AMENDMENT The following Article(s) and Section(s) to be amended:
Article Number(s): _____ Article Name(s): _____
Section Number(s): _____ Section Name(s): _____
Please attach a copy of the proposed zoning ordinance changes.

PUBLIC NOTICE AND PUBLICATION SCHEDULE
Legal notice of the public hearing was published on October 15, 2020 in the Brighton Daily Press & Argus
(not less than 15 days before the public hearing per Michigan Zoning Enabling Act, Act 110 of 2006, MCL 126.3103)

Newspaper, which has general circulation in the jurisdiction. The Green Oak Charter Township Planning
Commission held a public hearing on November 5, 2020 to hear the views of the public on the proposed amendment.

MINUTES OF PUBLIC HEARING (Please check "a" or "b" below)
a. The meeting minutes are attached.
b. The minutes of the meeting will be sent later. The case information has been sent so that the Livingston County Planning Department staff can be working on the case while the minutes are being prepared. The facts brought out at the hearing are: (use additional sheets as necessary)

MASTER PLAN
 Adoption of new or revised plan Amendment (Section/Chapter) _____
Note: For all master plan cases, the municipality must submit a statement signed by the Planning Commission Secretary stating that all of the necessary legislative bodies have been sent notice of the public hearing and copies of the proposed language/map, along with the name and address of each, and date of submittal.

PUBLIC NOTICE AND PUBLICATION SCHEDULE
Legal notice of the public hearing was published on _____
(not less than 15 days before the public hearing per Michigan Planning Enabling Act, Act 33 of 2006, MCL 125.3843)
In the _____ Newspaper, which has general circulation in the jurisdiction.
The Green Oak Charter Township Planning Commission held a public hearing on _____ to hear the
views of the public on the proposed amendment. (date)

MINUTES OF PUBLIC HEARING (Please check "a" or "b" below)
a. The meeting minutes are attached.
b. The minutes of the meeting will be sent later. The case information has been sent so that the Livingston County Planning Department staff can be working on the case while the minutes are being prepared. The facts brought out at the hearing are: (use additional sheets as necessary)

LOCAL JURISDICTION PLANNING COMMISSION ACTION
The recommendation of the Green Oak Charter Township Planning Commission, at its meeting of April 1, 2021, was:
 Approval Disapproval Approval under the following conditions: (use additional sheets as necessary)
(date)

(Chair Signature)

LIVINGSTON COUNTY PLANNING COMMISSION ACTION
Date Received April 8, 2021 Date of CPC Meeting April 21, 2021
The Commission on the above meeting date took the following action:
 Approval Approval with conditions stated in attachment Disapproval No action-encourage further review

(Chair Signature) _____
(Director Signature)

LOCAL JURISDICTION BOARD ACTION
Date of Meeting _____ The Green Oak Charter Township Board at a legally constituted
meeting held on the above date PASSED PASSED WITH AMENDED LANGUAGE DID NOT PASS NO ACTION-ENCOURAGE FURTHER REVIEW the
recommended change contained herein.

(Clerk)



Livingston County Department of Planning

LIVINGSTON COUNTY PLANNING COMMISSION MEETING

Wednesday, April 21, 2021 – 6:30 p.m.

Administration Building, Board of Commissioners Chambers
304 East Grand River, Howell, MI 48843

Kathleen J. Kline-Hudson
AICP, PEM
Director

Robert A. Stanford
AICP, PEM
Principal Planner

Scott Barb
AICP, PEM
Principal Planner

Via Zoom (on-line meetings):

<https://zoom.us/j/3997000062?pwd=SUdLYVFFcmozWnFxbm0vcHRjWkVIZz09>

Via the Zoom app

Join a meeting, with meeting number: **399 700 0062**

Enter the password: **LCBOC** (ensure there are no spaces before or after the password)

One tap mobile

+13017158592,,3997000062#,,1#,886752# US (Germantown)

+13126266799,,3997000062#,,1#,886752# US (Chicago)

Dial by your location

+1 301 715 8592 US (Germantown)

+1 929 205 6099 US (New York)

Meeting ID: **399 700 0062**

Password: **886752**

Meeting recordings may be made using a personal computer or laptop, after requesting ability from the meeting host.

Agenda

1. Call to Order
2. Pledge of Allegiance to the Flag
3. Roll and Introduction of Guests
4. Approval of Agenda – April 21, 2021
5. Approval of Meeting Minutes – March 17, 2021
6. Call to the Public
7. Zoning Reviews
 - A. Z-10-21 Green Oak Township, Rezoning, RE Rural Estates to PUD RE Planned Unit Development Rural Estates in Section 13
 - B. Z-11-21 Green Oak Township, Rezoning, RO Research Office & LI Limited Industrial to RM Multiple Family in Section 8
8. Old Business
 - A. Planning Commission Vacancy
 - B. Livingston County Planning Department 2021 Work Program

Department Information

Administration Building
304 E. Grand River Avenue
Suite 206
Howell, MI 48843-2323

(517) 546-7555
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Web Site
co.livingston.mi.us

9. New Business
 - A. Planning Commission Meetings
 - B. Planning Commission Per Diems
10. Reports
11. Commissioners Heard and Call to the Public
12. Adjournment



**LIVINGSTON COUNTY PLANNING DEPARTMENT
REZONING REQUEST - | -
STAFF REPORT**

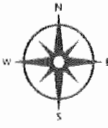
**CASE NUMBER:
Z-11-21**

COUNTY CASE NUMBER:	Z-11-21	TOWNSHIP:	Green Oak Township
REPORT DATE:	April 14, 2021	SECTION NUMBER:	8
STAFF ANALYSIS BY:	Kathleen Kline-Hudson	TOTAL ACREAGE:	22.36

APPLICANT / OWNER:	Vector Development/Lowry Development Company
LOCATION:	Near southeast corner of Maltby and Rickett Roads
LAND USE:	Vacant

CURRENT ZONING:	REQUESTED ZONING:
RO Research Office/LI Limited Industrial	RM Residential Multiple Family
PERMITTED/SPECIAL USES (Not all inclusive):	PERMITTED/SPECIAL USES (Not all inclusive):
<p>Permitted:</p> <p>RO: Any use charged with the principle function of technical training; Office buildings for executive, administrative, clerical, accounting, engineering, architecture, drafting, and sales functions; Data processing and computer centers, including sales, service, and maintenance of electronic data processing equipment; Warehousing accessory to the above uses.</p> <p>LI: Wholesale establishments; Manufacture; Bakery goods; Cosmetics; Hardware and cutlery; Pottery; Musical instruments; Metal or rubber stamps; Electrical appliances; Electric or neon signs; Light sheet metal products; Textile goods; Apparel and leather goods; Furniture and fixtures; Printing and publishing.</p>	<p>Permitted:</p> <p>Single-family detached dwellings; Two-family dwellings; Multiple-family dwellings; Public educational institutions; Accessory uses; Senior housing complexes; Family Day Care Homes; Adult Foster Care Small Group Home.</p>
<p>Special:</p> <p>RO: any use charged with the principal function of basic research, design, and pilot or experimental product development.</p> <p>LI: Municipal waste or water treatment facilities; Automobile body repair stations; Lumber and planing mills; Building materials and lumber supply sales and/or storage; Sales, leasing, and storage of contractors' equipment and supplies.</p>	<p>Special:</p> <p>All special uses permitted in the LA, R-1, R-2, R-2A, R-3, and RE districts; Convalescent homes; Adult Day Care Centers; Child Care Centers; Adult Foster Care Large Group Homes; Adult Foster Care Congregate Facilities.</p>
<p>Minimum Lot Area: 1 Acre (both RO and LI)</p>	<p>Minimum Lot Area: 3 Acres</p>

TOWNSHIP PLANNING COMMISSION RECOMMENDATION AND PUBLIC COMMENTS:	ESSENTIAL FACILITIES AND ACCESS:
Approval; at the November 5, 2020 public hearing there were numerous comments from the public regarding property values; multiple family land use; buffers; lighting; traffic; trees; wildlife; and building height. Numerous letters of concern were also sent to the Township office and were included in County Planning Commission materials.	<p>Water: Municipal Water</p> <p>Sewer: Municipal Sewer</p> <p>Access: Access to the property is via Maltby Road, a paved primary roadway.</p>

EXISTING LAND USE, ZONING AND MASTER PLAN DESIGNATION:				
	Land Use:	Zoning:	Master Plan:	
Subject Site:	Vacant	RO Research Office and LI Limited Industrial	RO Research Office	
	To the North:	Commercial and Residential	General Commercial and Suburban Residential	
	To the East:	Public Land Industrial	RO Research Office and LI Limited Industrial	
	To the South:	Residential	R2 Single Family	Suburban Residential
	To the West:	Commercial, Residential and Recreation	RF Residential Farming, RE Rural Estates, and PL Public Land	Suburban Residential and Recreation-Conservation

ENVIRONMENTAL CONDITIONS:	
Soils / Topography:	The Livingston County Soil Survey indicates that the site consists primarily of OkB Oakville fine sand on slopes of 0-6 percent. Where slopes are 12 percent or less, these soils have only slight limitations for most nonfarm uses.
Wetlands:	The National Wetland Inventory (NWI) maps indicate that there are no wetland areas on-site.
Vegetation:	The site contains areas of open space and woodlands.
County Priority Natural Areas:	According to the map "Livingston County's High Quality Natural Areas", there are no Priority 1,2 or 3 Natural Areas on-site.

TOWNSHIP MASTER PLAN DESIGNATION:

The Green Oak Charter Township Master Plan adopted in 2014, designates the site as Research Office. The master plan defines this future land use category as follows:

Research-Office is a category that provides areas for research and office uses which are clean, attractive, and developed in a campus-type setting. The area planned for research/office activities is focused at the southwest corner of Whitmore Lake and Maltby Roads, to provide maximum visibility from and accessibility to the expressway and may be appropriate in mixed use developments.

This future land use designation is associated with the RO Research Office zoning district.

COUNTY COMPREHENSIVE PLAN:

The 2018 Livingston County Master Plan does not direct future land use patterns, or development within the Township or surrounding area.

A county-wide land use perspective is considered when reviewing potential rezoning amendments. The County Master Plan notes land use opportunities and constraints for each quadrant of the county. The opportunities and constraints pertinent to this rezoning amendment include:

- Trail System Recreation Opportunity - There is an opportunity for a trail system that would connect the Lakelands Trail State Park to downtown City of Brighton. This trail opportunity was mapped by participants as extending from the commercial node at Chilson and M-36 (Kroger Plaza) to traverse along Chilson, Winans Lake, Hamburg, Maltby and Rickett Roads through Hamburg and Green Oak Townships to the City of Brighton.

Additionally, for multi-family housing the Livingston County Master Plan recommends:

Missing Middle Housing (pages 119-121) - Missing middle housing is a range of multi-unit or clustered housing types that are blended within or next to blocks of single-family housing. It is reminiscent of pre-1940's housing construction where blocks of housing had varied types of structures. The suggested types of housing structures include: duplex; triplex; four plex; courtyard apartment; bungalow court; townhouse; multiplex; and live/work. The multiple units typically have small to medium footprints, with a structure width, depth and height that is compatible in scale with single-family homes. This creates a block of housing that is visually harmonious, making Missing Middle Housing a good tool for compatible infill.

COUNTY PLANNING STAFF COMMENTS:

The County Planning Department and Planning Commission are reviewing this conditional rezoning amendment on the merits of the proposed rezoning, not on the merits of the conceptual site plan. A short summary of the proposed development is provided for information purposes.

The applicant is seeking this conditional rezoning to RM Residential Multiple Family to develop twenty-three (23) two story multiple family residential buildings containing 230 units. The development called The Parc at Green Oak is proposed for an approximate 22 acre site on the south side of Maltby Road, approximately 1/2 mile west of U.S. 23. The proposed site plan for the development includes a boulevard ingress/egress off of Maltby Road, a clubhouse and pool, garages for each dwelling unit, 10.7 dwelling units per acre and 9.21 acres of open space (43% of total land area). If parking within the project continuously exceeds capacity, as determined by the Township, the applicant will construct up to 40 additional parking spaces within eight (8) months or less.

The Future Land Use Map of the 2014 Green Oak Township Master Plan designates this site and 2 parcels to the east of the site as RO Research Office consistent with the current RO zoning of the site. The adjacent Lowry Industries parcels are utilized as a research office park, although the properties are zoned LI Limited Industrial. The proposed rezoning of the site to RM is inconsistent with the RO master plan designation.

Zoning is not as compartmentalized as it used to be, as is evidenced by the character of this area of Green Oak Township which contains a mix of commercial, industrial, residential, residential farming (landscape/nursery business) and public recreational land use and zoning.

Multi-family zoning and land use has traditionally provided a transition between intensive commercial and industrial land uses/zoning districts and single-family residential zoning and land uses. Along the north side of the Maltby Road corridor there is no such transition between the commercial uses at Shoppes of Green Oak and KSI and the single-family residential use in Mapleview Subdivision. Likewise, on the south side of Maltby Road there is also no transition in use land and zoning between the industry located along Whitmore Lake Road and the single-family residential in the Southeby residential development.

The proposed site is an ideal location for providing some transition between the more intense industrial land uses located along Whitmore Lake Road and the less-intensive surrounding single-family land uses; this transition could be accomplished through either the existing Research Office zoning or the proposed RM Residential Multiple Family zoning, although residential multiple family zoning is more compatible with other residential uses and zoning districts.

Additionally, the dimensional requirements of the RM Residential Multiple Family zone are less intensive than the dimensional requirements of the RO Research Office zone. For instance, in the RO district, buildings can be a maximum of 3 stories or 50 feet in height, whereas in the RM district buildings can be a maximum of 2 stories or 30 feet in height. Additionally, the maximum lot coverage in the RO district is 35% whereas it is 30% in the RM district.

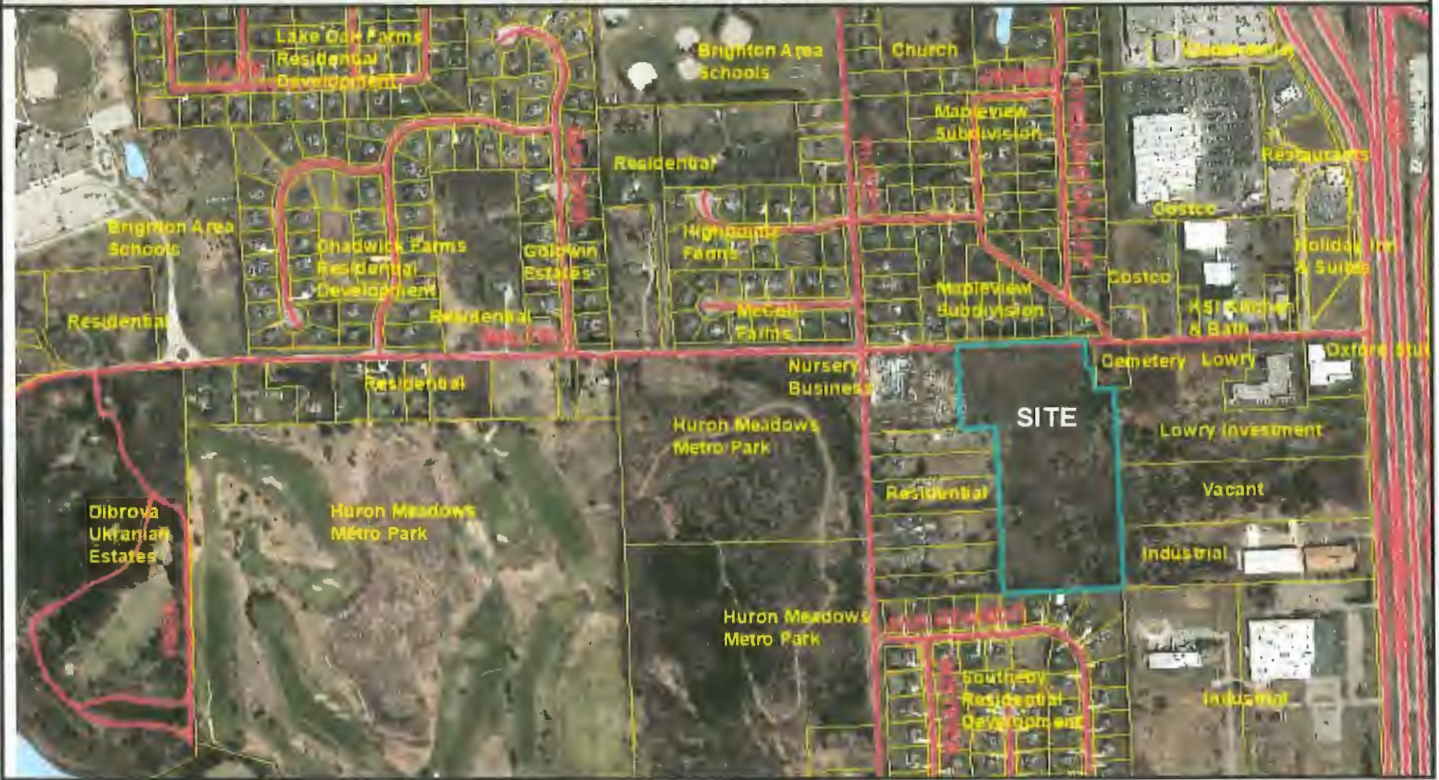
Section 38-542 Conditional Rezoning of the 2017 Green Oak Township Zoning Ordinance recognizes that there are certain instances where it would be in the best interests of the Township, as well as advantageous to property owners seeking a change in zoning classification, that certain conditions could be proposed by property owners as part of a request for rezoning. The petitioner of The Parc at Green Oak offers ten (10) conditions for this conditional rezoning. The conditions regard many development considerations such as: the number of buildings, number of units, amenities, utilities, and parking (see attachment at end of review for full list of conditions). A couple of the more unique rezoning conditions are as follows:

- The trees to be planted within the required landscape buffer to the residential properties on the west and south sides of the project will be upsized from six (6) feet above the ground level to fourteen (14) feet above ground level, subject to the Township amending its Woodland Ordinance in a manner that reduces the tree replacement obligations for the project.
- If parking within the project continuously exceeds capacity, as determined by the Township, the applicant will construct up to 40 additional parking spaces as determined by the Township to be necessary. These parking spaces will be constructed by the Applicant in eight months or less after the Township requests the additional spaces. The locations of the additional parking spaces are shown on the attached site plan.

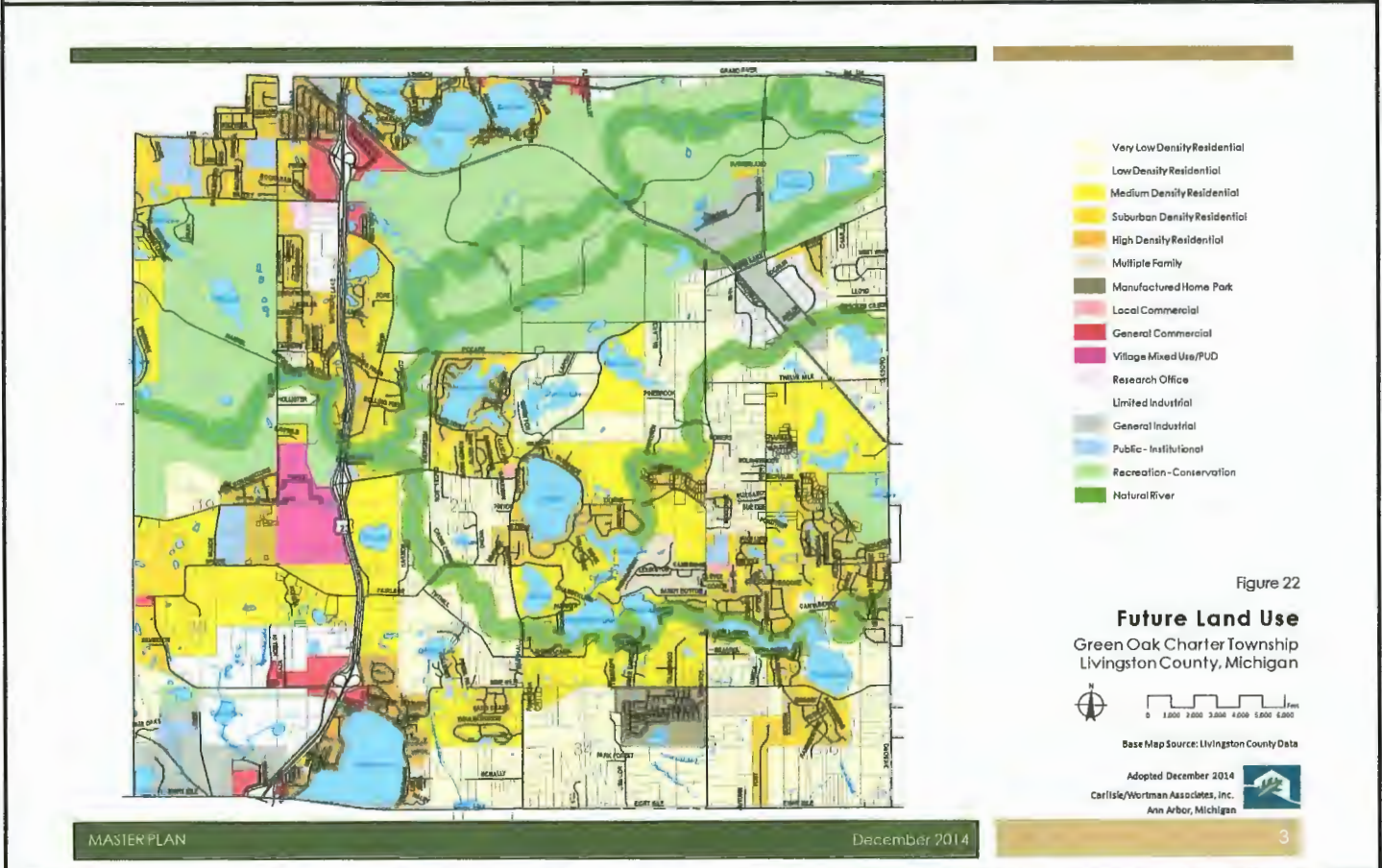
COUNTY PLANNING STAFF RECOMMENDATION:

Approval; the proposed RM Residential Multiple Family conditional rezoning is compatible with surrounding residential zoning and land use, and public utilities are available to the site. The proposed RM development will provide a transition between the more intense industrial land uses and zoning located along Whitmore Lake Road and the less-intensive surrounding single-family land uses and zoning. The conditions offered by the applicant will include the preservation and enhancement of woodlands on-site that will act as both a visual and noise buffer between the development and surrounding residential development to the west and south.

EXISTING LAND USE MAP:

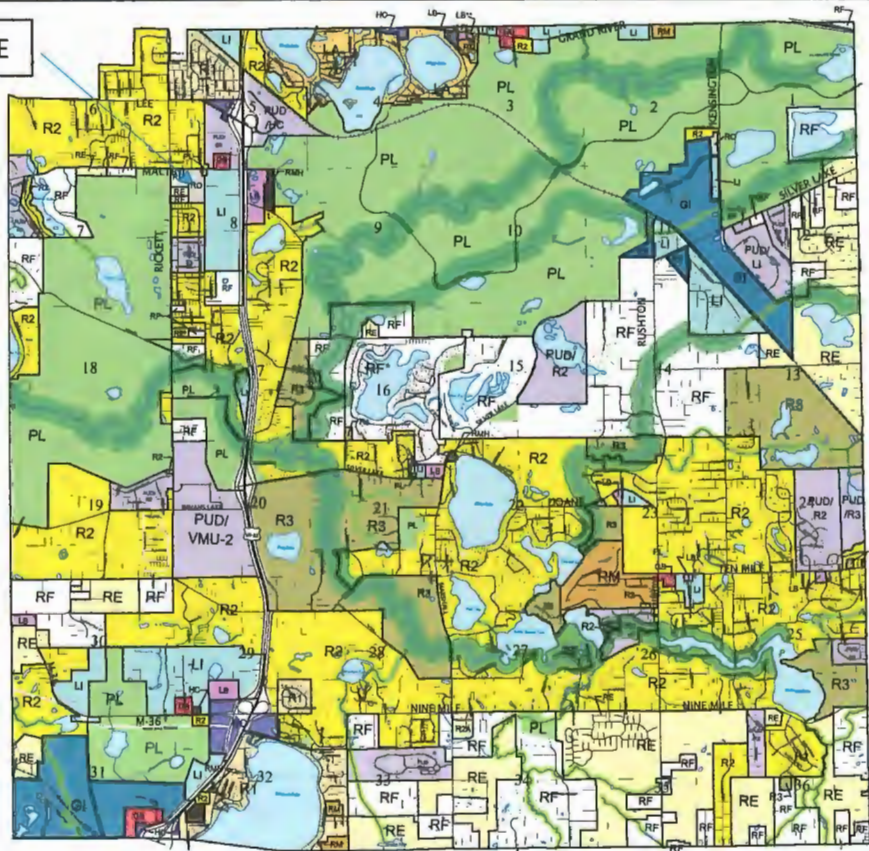


FUTURE LAND USE MAP:



GREEN OAK TOWNSHIP ZONING MAP:

SITE



- LEGEND**
- Natural River Overlay
 - Tributary Overlay
 - PL - Public Land
 - RF - Residential Farming
 - RE - Rural Estates
 - R3 - Single Family
 - R2 - Single Family
 - R2A - Single Family
 - R1 - Single Family
 - LA - Lake Area Residential
 - RM - Multiple Family
 - RMH - Mobile Home Park
 - LB - Local Business
 - GB - General Business
 - HC - Highway Commercial
 - RO - Research Office
 - LI - Limited Industrial
 - GI - General Industrial
 - PUD - Planned Unit Development
 - VMU-1 - Village Mixed Use 1
 - VMU-2 - Village Mixed Use 2
 - Court Judgement
 - ⌘ Conditional Zoning

CERTIFICATION

I am in no way and this is my Official Zoning Map referred to in the Zoning Ordinance of Green Oak Charter Township, Livingston County, Michigan.

Mayor of Charter Township Supervisor: *[Signature]* Date: *4/14/21*

Mayor of Charter Township Supervisor: *[Signature]* Date: *4/14/21*

ZONING DISTRICTS MAP

Green Oak Charter Township
Livingston County, Michigan

01-001

SITE PHOTOS:



Subject Site



Adjacent to East



East



West



North



South

VECTOR DEVELOPMENT LLC

2650 Island Court
Sylvan Lake, MI 48320

April 1, 2021

Debra McKenzie
Planning & Zoning Administrator
Green Oak Township
10001 Silver Lake Road
Brighton, MI 48116

RE: Parc at Green Oak
REVISED Conditional Rezoning Request
Parcel No. 4716-08-100-014 & part of 4716-08-100-029

Dear Mrs. McKenzie,

Vector Development LLC has applied to rezone the above parcels from Research Office (RO) and Light Industrial (LI) to Residential Multiple-Family (RM). In connection with the rezoning application, and in accordance with Section 38-542 of the Township's Zoning Ordinance, the applicant desires to voluntarily offer certain conditions regarding the use and development of the property if the rezoning is approved. Previously, certain conditions were offered, and this letter is intended to supersede any previous versions.

The applicant hereby voluntarily offers and agrees to the following conditions regarding the use and development of the subject parcels if the applicant's rezoning request for the above-mentioned parcels is approved by the Township:

1. The proposed development will consist of no more than twenty-three (23) two-story multi-family buildings that will generally look like the renderings and colored elevations depicted in Attachment 1 of this letter.
2. The proposed development will contain no more than 230 units.
3. The proposed development will include a community clubhouse and amenities for its residents. Additionally, at the Township's request, the clubhouse can be used as a Township polling precinct.
4. The proposed development will connect to public water and sewer.
5. The proposed development will provide at least three (3) parking spaces adjacent to the Township cemetery for use by visitors to the cemetery. In addition, the proposed development will build a sidewalk connection in the northeast corner of the site from the above-mentioned parking spaces to the to the property line at the cemetery. The

parking spaces and sidewalk location will be shown on the Final Site Plan and the location will be approved by the Township.

6. The parcels will be developed substantially in accordance with the site plan and landscape plan prepared by Atwell attached hereto, as the same be modified based on the recommendations of the Township's consultants and the conditions for approval requested by the Green Oak Township Planning Commission.
7. The proposed development will meet all requirements for the RM Zoning District in the Township's Zoning Ordinance Schedule of Regulations (Section 38-136).
8. The trees to be planted within the required landscape buffer to the residential properties on the west and south sides of the project will be upsized from six (6) feet above ground level to fourteen (14) feet above ground level, subject to the Township amending its Woodland Ordinance in a manner that reduces the tree replacement obligations for the project.
9. If parking within the project continuously exceeds capacity, as determined by the Township, the applicant will construct up to 40 additional parking spaces as determined by the Township to be necessary. These parking spaces will be constructed by the Applicant in eight months or less after the Township requests the additional spaces. The locations of the additional parking spaces are shown on the attached site plan.
10. If the applicant does not acquire title to the parcels, the Township shall, at the request of the undersigned parcel owner, rezone the parcels back to Research Office (RO) and Light Industrial (LI).
11. The foregoing conditions may be amended at the request of the applicant, subject to the approval by the Township Board of Trustees.

We feel this project meets the criteria for a rezoning and respectfully request that this Conditional Rezoning request be placed on the next available Planning Commission agenda for their consideration. Please contact Nikki Jeffries at 248-892-0889 if you need any additional information regarding this request. I look forward to discussing this project further with your staff, the Planning Commission and the Township Board.

Sincerely,

VECTOR DEVELOPMENT, LLC

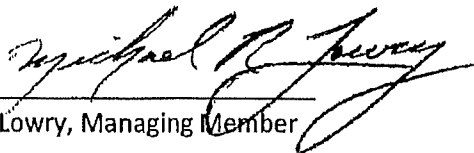
By: *Howard Fingerroot*
Howard Fingerroot (Apr 1, 2021 12:59 EDT)

Howard Fingerroot
Its: Manager

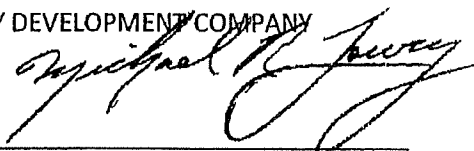
ACKNOWLEDGEMENT AND CONSENT

The undersigned owners of the parcels that are subject to the applicant's rezoning request acknowledge and consent to the foregoing conditions to rezoning offered by the applicant.

LOWRY INVESTMENT COMPANY, L.L.C.

By: 
Michael Lowry, Managing Member

LOWRY DEVELOPMENT COMPANY

By: 
Michael Lowry, President

Attachments: Proposed Building Rendering & Elevations and Site Plan

cc: Mark Cohn, Seyburn Kahn
Paul Montagno, Township Planner
Bill Anderson & Matt Bush, Atwell

PROPOSED PLAN – MULTI-FAMILY (RM)

Maltby Road



Site Data

of Units: 230 units (10 units/b

Total Buildings: 23 buildings

Proposed Density: 10.7 du/ac

Open Space: 9.21 acres (43%)

SING PRODUCT



Front Elevation



Left Elevation



Right Elevation



Rear Elevation

**LIVINGSTON COUNTY PLANNING
COMMISSION MEETING MINUTES**

April 21, 2021

6:30 p.m.

- Virtual Meeting Held in Accordance with Public Act 228 of 2020 -

**Zoom Virtual Meeting Room Meeting ID: 399-700-0062 / Password: LCBOC
<https://zoom.us/j/3997000062?pwd=SUdLYVFFcmozWnFxbm0vcHRjWkVIZz09>**

PLANNING COMMISSION							
COMMISSIONERS PRESENT:	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">BRIAN PROKUDA</td> <td style="width: 50%;">BILL ANDERSON</td> </tr> <tr> <td>MATT IKLE</td> <td>DENNIS BOWDOIN</td> </tr> <tr> <td></td> <td>BILL CALL</td> </tr> </table>	BRIAN PROKUDA	BILL ANDERSON	MATT IKLE	DENNIS BOWDOIN		BILL CALL
BRIAN PROKUDA	BILL ANDERSON						
MATT IKLE	DENNIS BOWDOIN						
	BILL CALL						
COMMISSIONERS ABSENT:	JEANNE CLUM						
STAFF PRESENT:	KATHLEEN KLINE-HUDSON ROB STANFORD SCOTT BARB						
OTHERS PRESENT:	PAUL FUNK, HOWARD FINGEROOT, NICKKI JEFFRIES, GAYLA RUETER-ALM, MIKE L, MARK SZERLAG						

1. **CALL TO ORDER:** Meeting was called to order by Planning Commission Chair Prokuda at 6:35 PM.

2. **PLEDGE OF ALLEGIANCE TO THE FLAG**

3. **ROLL AND INTRODUCTION OF GUESTS:** Roll call by Principal Planner Stanford indicated the presence of a quorum. Members of the public were acknowledged in the audience.

Present:

Prokuda	[X]	Location: Deerfield Township
Ikle	[X]	Location: Genoa Township
Anderson	[X]	Location: Howell Township
Bowdoin	[X]	Location: Conway Township
Call	[X]	Location: Handy Township

Absent: Jeanne Clum

4. APPROVAL OF AGENDA

Commissioner Action: IT WAS MOVED BY COMMISSIONER CALL TO APPROVE THE AGENDA, AS PRESENTED, DATED APRIL 21, 2021, SECONDED BY COMMISSIONER IKLE.

All in favor, motion passed.

Yea: Prokuda [X] Ikle [X] Anderson [X] Bowdoin [X] Call [X]

Nay: None.

5. APPROVAL OF PLANNING COMMISSION MEETING MINUTES – Commissioner Anderson noted one correction to the March 17, 2021 minutes; Abramson was noted as being present at adjournment.

Commissioner Action: IT WAS MOVED BY COMMISSIONER IKLE TO APPROVE THE MINUTES AS AMENDED, DATED MARCH 17, 2021, SECONDED BY COMMISSIONER ANDERSON.

All in favor, motion passed.

Yea: Prokuda [X] Ikle [X] Anderson [X] Bowdoin [X] Call [X]

Nay: None.

6. CALL TO THE PUBLIC: No members of the public wished to speak.

7. ZONING REVIEWS:

A. Z-10-21: GREEN OAK CHARTER TOWNSHIP – REZONING

Current Zoning: RE- Rural Estates

Proposed Zoning: PUD Rural Estates

Section 13

Township Master Plan:

The Green Oak Charter Township Master Plan adopted in 2014, designates the site and the parcels immediately to the north, south, east and west, as Low Density Single-Family Residential. The master plan defines this future land use category as follows:

Low Density Single-Family Residential is planned for areas with existing and adjacent low density development. Unlike Very Low Density Residential, Low Density Residential areas warrant road improvements in areas of poor road conditions because existing population densities are sufficient. However, Low Density Residential is similar to Very Low Density Single-Family Residential in providing for the following:

- Preservation of Rural Character- Low density and very low density designations are also preferred for the location of large acreage horse or livestock operations. These rural residential uses, in conjunction with optional livestock use, help preserve the preferred rural residential character of the Township.*
- Consideration of Sensitive Natural Features- The areas designated for low density uses include large portions of land where soils and groundwater conditions warrant larger lots. Soils are often heavy in these areas and are often not suitable for smaller size lots. The proximity to natural river areas and tributaries make these areas sensitive to watershed resources and groundwater quality and are therefore only moderately capable of supporting additional development due to these natural resource conditions.*

Low density residential development occurs primarily within the southeast quadrant of the Township, the Dixboro Road corridor, and select additional areas of established large lot development. The Zoning Plan of the Master Plan notes that RE Rural Estates is the zoning district that corresponds to the Low Density Single-Family Residential master plan designation.

The Green Oak Charter Township Master Plan adopted in 2014, also designates the site and the parcels immediately to the north and west, as Natural River Overlay. The master plan defines this future land use category as follows:

Green Oak Charter Township includes rivers and creeks which are designated for protection under the Natural River Act (PA 59 of 1995 and PA 451 of 1994) by the Michigan Department of Natural Resources and under the Township Natural Rivers Overlay District. Generally, the area four hundred (400) feet from the ordinary high water mark on each side of and parallel to the Huron River and its tributaries, Davis Creek and Spring Mill Creek, is designated as Natural Rivers Overlay District. Regulations includes a building setback of one hundred twenty-five (125) feet from the river or fifty (50) feet from the tributaries.

County Comprehensive Plan:

The 2018 Livingston County Master Plan does not direct future land use patterns, or development within the Township or surrounding area. A county-wide land use perspective is considered when reviewing potential rezoning amendments. The County Master Plan notes land use opportunities and constraints for each quadrant of the county. The opportunities and constraints pertinent to this rezoning amendment include:

- *The Huron River, its tributaries and the lakes that they connect, are noted as opportunities for a connected waterway trail.*
- *Possible Land Use Conflicts along much of the township boundary between Green Oak and Brighton Townships is noted as a potential land use constraint between commercial land uses and parks and recreational land use.*
- *The Fonda, Island & Briggs Lake Joint Water Authority has an established wellhead protection area at the border of Green Oak and Brighton Townships that is noted as an opportunity for water quality.*

Township Planning Commission Recommendation: Approval. At the November 19, 2020 public hearing there was one public comment regarding the proposed number of homes, the rural character of the area and the potential impact on traffic.

Staff Recommendation: Approval. The proposed PUD/RE rezoning is compatible with surrounding RE Rural Estate zoning and Low Density Residential master planning. It is also compatible with the majority of surrounding residential land uses, although not entirely compatible with the industrial park land uses to the northwest. The proposed PUD Planned Unit Development will be far more protective of the natural environment surrounding Dove Lake than a conventional rezoning to RE Rural Estates would be. This is extremely important since the Davis Creek tributary of the Huron River is adjacent to the northern boundary of the site.

Commission Discussion: Commissioner Ikle inquired if the applicant has requested water and sewer hook-up. Director Kline-Hudson said that to her knowledge, this has not been requested. Commissioner Prokuda asked about the parallel plan process and the natural area around Davis Creek. Director Kline-Hudson explained the parallel plan process that resulted in 37 lots between approximately ¼ - ½ acre in size, and that the required 125 foot buffer around Davis Creek will remain undisturbed.

Public Comment: None.

Commission Action:

Commissioner Action: IT WAS MOVED BY COMMISSIONER CALL TO RECOMMEND APPROVAL. SECONDED BY COMMISSIONER ANDERSON.

Motion passed: 5-0

Yea: Prokuda [X] Ikle [X] Anderson [X] Bowdoin [X] Call [X]

Nay: None.

B. Z-11-21: GREEN OAK CHARTER TOWNSHIP – REZONING

Current Zoning: RO Research Office/LI Limited Industrial

Proposed Zoning: RM Residential Multiple Family

Section 8

Township Master Plan:

The Green Oak Charter Township Master Plan adopted in 2014, designates the site as Research Office. The master plan defines this future land use category as follows:

Research-Office is a category that provides areas for research and office uses which are clean, attractive, and developed in a campus-type setting. The area planned for research/office activities is focused at the southwest corner of Whitmore Lake and Maltby Roads, to provide maximum visibility from and accessibility to the expressway and may be appropriate in mixed use developments.

This future land use designation is associated with the RO Research Office zoning district.

County Comprehensive Plan:

The 2018 Livingston County Master Plan does not direct future land use patterns, or development within the Township or surrounding area. A county-wide land use perspective is considered when reviewing potential rezoning amendments. The County Master Plan notes land use opportunities and constraints for each quadrant of the county. The opportunities and constraints pertinent to this rezoning amendment include:

Trail System Recreation Opportunity - There is an opportunity for a trail system that would connect the Lakelands Trail State Park to downtown City of Brighton. This trail opportunity was mapped by participants as extending from the commercial node at Chilson and M-36 (Kroger Plaza) to traverse along Chilson, Winans Lake, Hamburg, Maltby and Rickett Roads through Hamburg and Green Oak Townships to the City of Brighton.

Additionally, for multi-family housing the Livingston County Master Plan recommends:

Missing Middle Housing (pages 119-121) - Missing middle housing is a range of multi-unit or clustered housing types that are blended within or next to blocks of single-family housing. It is reminiscent of pre-1940's housing construction where blocks of housing had varied types of structures. The suggested types of housing structures include: duplex; triplex; four-plex; courtyard apartment; bungalow court; townhouse; multiplex; and live/work. The multiple units typically have small to medium footprints, with a structure width, depth and height that is compatible in scale with single-family homes. This creates a block of housing that is visually harmonious, making Missing Middle Housing a good tool for compatible infill.

Township Planning Commission Recommendation: Approval. At the November 5, 2020 public hearing there were numerous comments from the public regarding property values; multiple family land use; buffers; lighting; traffic; trees; wildlife; and building height. Numerous letters of concern were also sent to the Township office and were included in County Planning Commission materials.

Staff Recommendation: Approval. The proposed RM Residential Multiple Family conditional rezoning is compatible with surrounding residential zoning and land use, and public utilities are available to the site. The proposed RM development will provide a transition between the more intense industrial land uses and zoning located along Whitmore Lake Road and the less-intensive surrounding single-family land uses and zoning. The conditions offered by the applicant will include the preservation and enhancement of woodlands on-site that will act as both a visual and noise buffer between the development and surrounding residential development to the west and south.

Commission Discussion: The applicant Howard Fingerroot briefly explained the Township support for the project and answered questions from commissioners. Commissioner Anderson asked the applicants about the locations of the retention pond and reserve parking. Applicant Nikki Jeffries identified these areas on the site plan. Commissioner Ikle asked if a berm would be present between the development and the residential development to the south. He also asked about a traffic count on Maltby Road. Nikki Jeffries commented on the buffers between the development and surrounding residences, and discussed traffic on Maltby Road and remedies such as a passing lane that will be added.

Public Comment: None.

Commission Action:

Commissioner Action: IT WAS MOVED BY COMMISSIONER ANDERSON TO RECOMMEND APPROVAL. SECONDED BY COMMISSIONER IKLE.

Motion passed: 5-0

**Yea: Prokuda [X] Ikle [X] Anderson [X] Bowdoin [X] Call [X]
Nay: None.**

8. OLD BUSINESS:

A. Planning Commission Vacancy: Director Kline-Hudson explained the process and the current status of the candidate selection process.

B. Livingston County Planning Department 2021 Work Program: The Professional Planning Services contract for the Village of Pinckney has been removed from the work program because the Village planning consultant has decided to fill the planning and zoning void until the Village is able to hire a new zoning administrator. Staff hours in the work program have been adjusted.

9. NEW BUSINESS:

A. Planning Commission Meetings: It was decided by Planning Commission Chair Prokuda that the May 19, 2021 meeting will be virtual. Future meeting arrangements will be discussed at the May 19 meeting.

B. Planning Commission Per Diems: Principal Planner Stanford explained how he had consulted with various Administration personnel on per diems, and that signed forms will no longer be needed as accounting backup, as we are allowed to use the meeting minutes from the meeting for this purpose, according to Fiscal Services Director Cindy Catanach and Account Assistant - Accounts Payable Amy Cook.

10. REPORTS:

- April 28, 2021 Brown Bag Lunch on Rural Broadband Access
- Acceptance and Oath of Office with County Clerk representative will be scheduled for May 19, 2021 meeting if possible.

11. **COMMISSIONERS HEARD AND CALL TO THE PUBLIC:** Mr. Paul Funk briefly introduced himself and commented on the Planning Commission appointment process.

12. **ADJOURNMENT:**

**Commissioner Action: IT WAS MOVED BY COMMISSIONER ANDERSON TO
ADJOURN THE MEETING AT 7:45 P.M., SECONDED BY COMMISSIONER CALL.**

Motion passed: 5-0

Yea: Prokuda [X] Anderson [X] Bowdoin [X] Call [X] Ikle [X]

Nay: None.

May 13, 2021

Our Names are Kent and Kerri Anderson
7145 Rickett Rd, Brighton, MI 48116
Property # 4716-08-100-027

RE: The Parc at Green Oak proposed Apartment complex by Vector Development
located between 9198 and 9020 Maltby Rd.

With technology difficulties and electronic glitches, we would like this letter to be part of the packet for the proposed apartment complex in case we are unable to log on for the upcoming meeting and participate at that time.

Our property butts up to the proposed development on 2 sides. 130' on our east side and 187' on our north side. We are right next door to Grasshopper Garden Center. According to the current plans, buildings 3, 4 and 5 would all be overlooking our property. And the pool noise would be filtering right between buildings 4 and 5 towards our property. We all know that sounds and voices do carry a long distance. Plus you have access roads and parking spaces where if the vehicles pull in at night the headlights would be shining towards our home.

We would like to reiterate that if the development is allowed to be built we are concerned about protecting our property, unwanted wandering residents, lighting, noise and parking.

We are asking the developer to consider putting up a solid 12' fence or wall along the two sides that butt up to our property. In fact, I am sure ALL the current residents who butt up to the development would appreciate a privacy fence installed. In the past we have had numerous wandering people from that property walking /wandering in our yard. One even had a loaded gun for supposed hunting! The fence/wall would not only help to keep unwanted people off our property but would also help with keeping headlights from shining into our yard and home.

Secondly, we would like the developer to consider leaving more trees between our properties. I know the developer has said he would put up a berm with trees spaced out. However, these are small trees and would take decades to grow and provide privacy. Perhaps if they were to spend more money on a fence and larger trees that would help.

Also, there was some mention of a dog park. I would not want to hear or see that anywhere near my property lines. No matter what you tell dog owners to do, many do not pick up after their pets and the smell would be horrific.

We moved to beautiful Green Oak Township and chose our current home and property based on the fact that we were surrounded by a quiet rural treed setting. We realize change and development are part of progress. We are hoping that Vector Development will take our request into consideration in order to keep a 'neighborly' relationship with us current Green Oak residents.

Thank You for reading this letter and including it in the packet.

Kent and Kerri Anderson

MALIBU ROAD

7145
Rickett Rd.

