

**AGENDA
CASCADE CHARTER TOWNSHIP
REGULAR BOARD MEETING**

Wednesday, November 1, 2017

7:00 P.M.

Cascade Branch of the Kent District Library, Wisner Center
2870 Jacksmith, S.E.

Expected Meeting Procedures

1. During public comments you may speak on any item not noted on the agenda for a public hearing.
2. Please limit comments to 3 minutes per person and the Board may or may not choose to respond.
3. Please limit your comments to a specific issue.
4. Please turn OFF cellular phones.

- Article 1. Call to Order, Roll Call**
- Article 2. Pledge of Allegiance to the Flag**
- Article 3. Approval of Agenda**
- Article 4. Presentations**
- a. Daniel Waugh, Citizen Pathway Committee – Pathway Recommendation.**
- Article 5. Public Comments-Anything on the Agenda not scheduled for a public hearing. (limit comments to 3 minutes)**
- Article 6. Approval of Consent Agenda**
- a. Receive and File Various Meeting Minutes**
1. Regular Township Board Minutes for 10/25/17.
- b. Receive and File Communications**
1. Letter from Hidden Hills Neighborhood Association – re: Speed signs.
- Article 7. Financial Actions**
- Article 8. Unfinished Business**
- Article 9. New Business**
- 074-2017 a. Public Hearing – Rezone to P.U.D. to allow for 31 lot Subdivision – 1701 Spaulding.**
- b. Consider Ordinance to Amend the Cascade Charter Township Zoning Ordinance and Zoning Map to Establish the Cascade One Planned Unit Development. (roll call)**
- 075-2017 Consider Approval of Bid for 60th Street Water Main Connection and authorize the Township Manager to sign the contract documents on behalf of the Township.**

- Article 10. Public Comments – Any comments...whether it is on the Agenda or not.
(limit comments to 3 minutes)**
- Article 11. Closed Session
a. To Consider the lease of real property for the Building Inspections
Department.**
- Article 12. New Business
076-2017 Consider the Lease of Real Property for the Building
Inspections Department.**
- Article 13. Manager Comments**
- Article 14. Board Member Comments**
- Article 15. Adjournment**

MEMORANDUM

To: Cascade Charter Township Board
From: Daniel Waugh, Citizen Pathway Committee spokesperson
Subject: Pathway Recommendations
Meeting Date: November 1, 2017

The Citizen Pathway Committee was formed with township resident volunteers in April of this year. The committee was challenged with providing an informed recommendation to the Township Board regarding interest, if any, in expanding the Township pathway system.

The Committee has developed recommendations for your consideration. In order to provide these recommendations, the committee first developed a mission statement and a framework of guiding principles for that mission statement that would guide our thinking.

The Committee, rather quickly, developed a point of view that additional trails were desired by the Township populace. The focus then turned to gathering data and studying Township maps as well as surrounding community's pathway maps. Plans and timelines for surrounding community pathway projects were factored into Committee thinking when discussing possible pathway additions. A candidate list was developed and a local engineering firm FTC&H, was engaged for feasibility and conceptual cost estimates for each segment.

Other fiscal factors, DDA funding and Road Commission contribution were also considered. The list was finalized and included in an online survey (attached).

The survey, developed by the Committee and advertised on social media, experienced an exceptionally high level of participation from Township residents. Key takeaways from the survey were:

- A strong ratification (94% of respondents) that the Township community values the pathway system, and that it should be thoughtfully expanded (90% of respondents).
- Safety and intra-Township community connections are very important considerations (these attributes were key guiding principles for the Committee's mission statement).
- An affirmation of the Pathway Committee's recommendations of prioritized pathway additions.

Following the survey, an open house was held at the Wisner Center. It was well attended by the community. Committee members were there to answer questions. In general, the open house feedback provided further validation of the survey results.

The following table shows the proposed pathways as they appeared in the survey questions; followed by our recommendations on whether these new pathways should be considered by the Township board.

Potential Segments with Cost Estimate	Survey Rank	Committee Comments and Recommendation
<p>1. Cascade Road 36th Street to Whitneyville</p> <p>\$585,650 estimate</p>	High	<ul style="list-style-type: none"> • High desire score in survey • Provides connections to several neighborhoods • improves safety • appears to be feasible to construct • Recommend to construct
<p>2. Cascade Road Watermark Dr to Hall (South/West side of road)</p> <p>\$614,575 estimate</p>	High	<ul style="list-style-type: none"> • Provides connection to Watermark neighborhood as well as businesses between Hall and Watermark. • Improves safety • Appears to be feasible to construct • Duplicate path • Recommend to construct
<p>3. Patterson Ave 28th Street to Broadmoor</p> <p>\$2,124,525 estimate</p>	Low	<ul style="list-style-type: none"> • Lowest desire scores in survey • Low desire for connections to south • Low desire for connections to business area • Recommend that it NOT be constructed
<p>4. 28th Street Buttrick Ave to Snow Ave</p> <p>\$1,820,975 estimate</p>	Low	<ul style="list-style-type: none"> • Low desire scores in survey • No planned pathway connections in Lowell • Low density area • Recommend that it NOT be constructed
<p>5. Cascade Road Whitneyville Ave to Snow Ave</p> <p>\$2,101,450 estimate</p>	Low	<ul style="list-style-type: none"> • Low desire scores in survey • No planned pathway connections in Lowell • Low density area • Recommend that it NOT be constructed
<p>6. Cascade Road Burton to 28th st (South/West side of road)</p> <p>\$280,000 estimate less partnering with DDA</p>	High	<ul style="list-style-type: none"> • High desire score in survey • Partner with DDA • Improves connection to Caravelle village without crossing Cascade Rd • Improves safety in area • Recommend to construct

Potential Segments with Cost Estimate	Survey Rank	Committee Comments and Recommendation
<p>7. Thornapple River Dr From Cascade Rd to Thornhills</p> <p>\$2,836,113 estimate</p>	High	<ul style="list-style-type: none"> • Highest desire score in survey • Improves safety in the area • Provides indirect connection from village area to multiple subdivision south off Burger Dr. • Expensive • May require alternative design to fit in or may not be viable • Consideration will need to be given in design to maintain safety with any alternative design • Recommend to construct
<p>8. Burton Street Spaulding to Patterson</p> <p>\$2,132,000 estimate, less Road Commission funding (tbd)</p>	High	<ul style="list-style-type: none"> • Med-High desire score in survey • Kent County Road Commission has agreed to apply for significant grant funding to assist in funding. • Provides connection between pathway system in Cascade and sidewalk system in City of Kentwood. • Provide connection through I-96 • Recommend to Construct
<p>9. Thornapple River Dr Burger to Thornhills</p> <p>\$300,000 estimate</p>	High	<ul style="list-style-type: none"> • High desire score in survey • Provides limited connection to multiple subdivisions off Burger • No connection to village area • Recommend to construct if #7 is not viable.

To summarize, the Committee recommends moving forward with five of the nine segments listed; with number 9 as an alternative to number 7, in the event that number 7 is not viable due to constraints of the terrain.

The above recommendations best reflect the Committee's and by extension, the Township community's priority point of view. Based on feedback from the write-in portion of the survey the Committee also suggests that the Township Board may consider providing connections to Pine Ridge and Thornapple Elementary schools as well as an expanded sidewalk on Hall Street from Forest Hills High School to Ballybunion. While these two additions are secondary in priority to the Table of recommendations, the committee felt that these would assist in meeting the safety and connection goals of the mission

statement. However, the Committee has not pursued conceptual cost estimates on these write-in requests and is not suggesting that the Board must include these in the go-forward plan. Rather, we view this as at the discretion of the Board.

The Committee also recommends that any funding for new pathways be adequate to not only construct the new pathways, but to also provide adequate labor and equipment to maintain any additional pathways without sacrificing the quality and user experience of the existing pathway system.

Looking to the future and the potential for population swings, the Committee recommends a review in 3-5 years of the Northeast and South areas of the Township that are currently less densely populated, and are less served by the pathway system today.

In closing, the Citizen Pathway Committee feels that this Pathway Recommendation has strong support from the community to enhance safety and well-being; and to improve pedestrian connections within our township. We would like to thank Steve Peterson for his guidance and support; and for the Township Boards consideration and support of this opportunity for our Cascade community.

Attachments

Mission Statement

Public survey results

FTC&H Conceptual Costs

2017

Citizen pathway committee

Mission statement

The Citizen pathway committee will provide a recommendation to the Township Board regarding the interest, if any, in constructing more pathways in the Township.

The Committee has determined that the following issues will provide the framework for that recommendation.

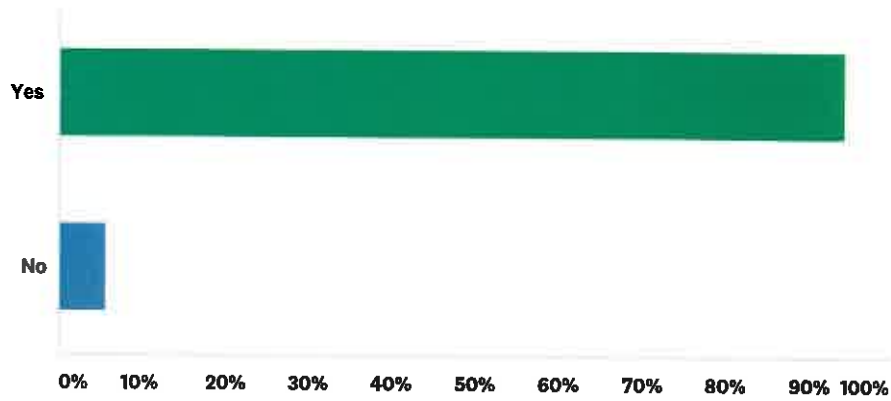
- Providing a healthy lifestyle in the Township.
- Increase the safety of non-motorized mode of transportation.
- Provide links to other trails uses such as parks, neighboring trail systems, schools, commercial areas, etc.
- Following the recommendations of other Township Planning Documents such as the Master plan, the Parks plan and the DDA plan.
- Providing pedestrian connections to connect cascade neighborhoods.
- Feasibility to construct any new pathways
- Ability to maintain any new/existing pathways

Citizen Pathway Committee members:

Cheryl Timyan Tom Grias, Joel Goldberg, Kris Taylor, Kathy Taylor, Denise Mazur, Tom Richardson, Daniel Waugh

Q1 Do you believe more pathways benefit the community?

Answered: 663 Skipped: 5



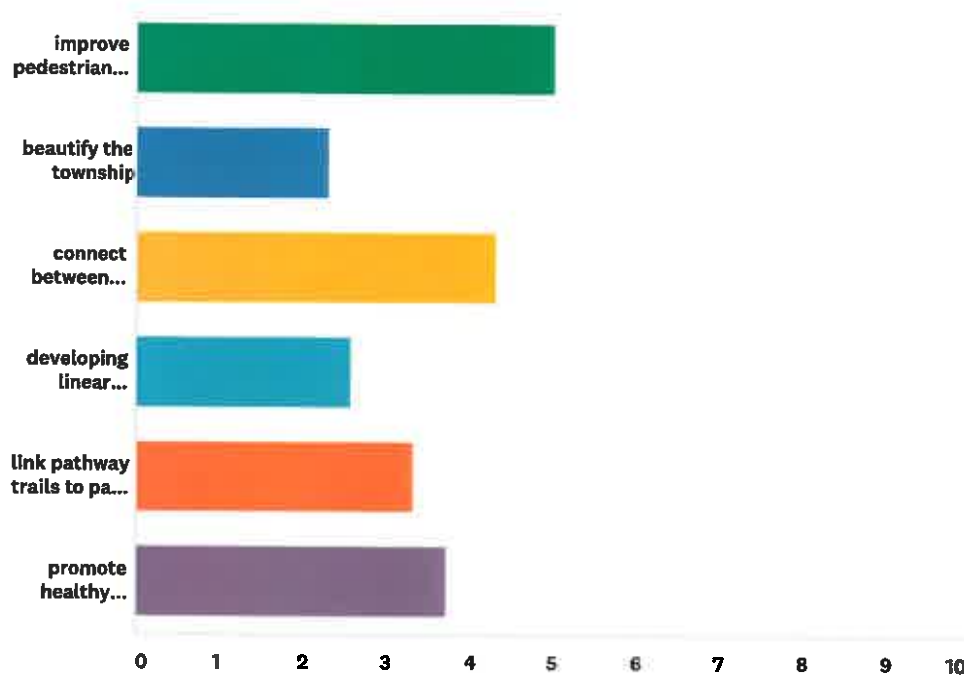
ANSWER CHOICES

RESPONSES

Yes	94.27%	625
No	5.73%	38
TOTAL		663

Q2 Which is the highest priority regarding the pathway trails? Please rank in order of your priority (with 1 being the highest priority and 6 the lowest).

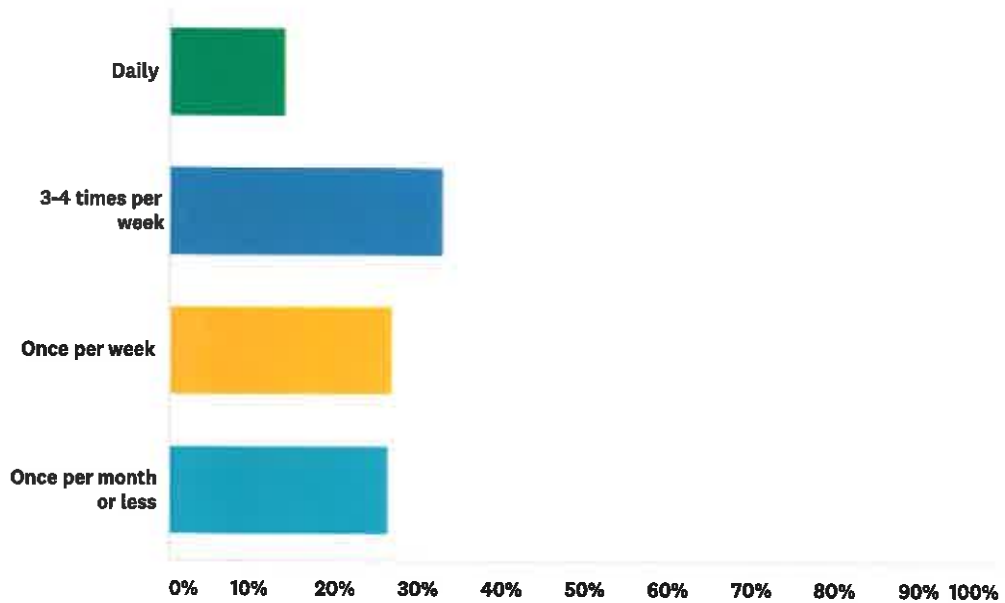
Answered: 659 Skipped: 9



	1	2	3	4	5	6	TOTAL	SCORE
improve pedestrian safety	58.40% 365	14.24% 89	11.52% 72	6.72% 42	6.08% 38	3.04% 19	625	5.03
beautify the township	1.52% 9	5.07% 30	12.16% 72	19.93% 118	26.18% 155	35.14% 208	592	2.30
connect between schools, trails and shops	18.09% 110	34.87% 212	21.88% 133	14.14% 86	8.06% 49	2.96% 18	608	4.32
developing linear recreational parks	3.78% 23	8.06% 49	13.82% 84	18.26% 111	27.63% 168	28.45% 173	608	2.57
link pathway trails to paths of other communities	8.90% 55	15.37% 95	22.33% 138	21.04% 130	17.48% 108	14.89% 92	618	3.33
promote healthy lifestyle	13.97% 89	23.39% 149	19.94% 127	18.52% 118	12.40% 79	11.77% 75	637	3.73

Q3 How often do you use the trail system?

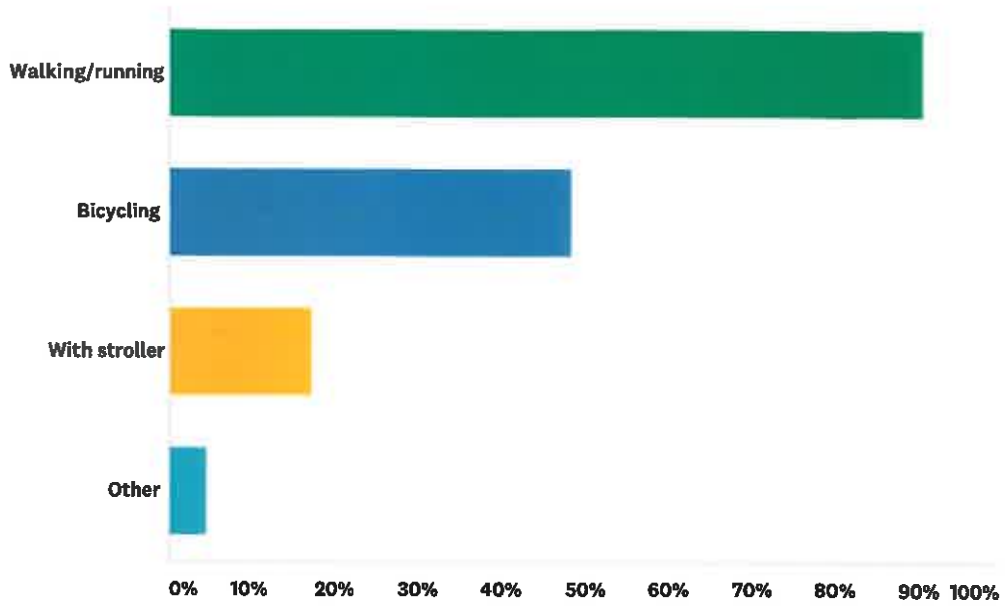
Answered: 661 Skipped: 7



ANSWER CHOICES	RESPONSES	
Daily	14.07%	93
3-4 times per week	32.83%	217
Once per week	26.78%	177
Once per month or less	26.32%	174
TOTAL		661

Q4 How do you use the trail system? (check all that apply)

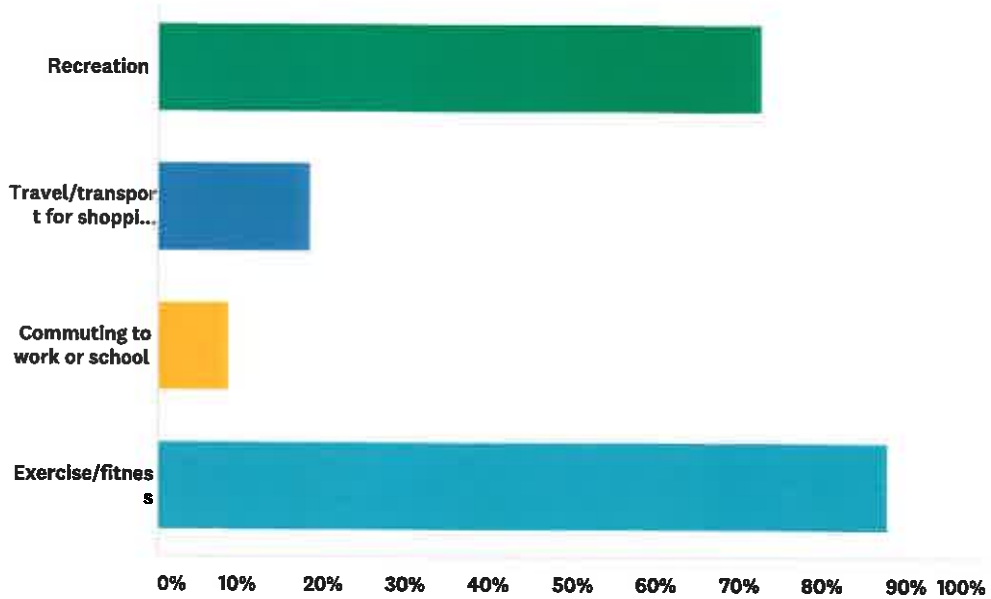
Answered: 660 Skipped: 8



ANSWER CHOICES	RESPONSES	
Walking/running	90.61%	598
Bicycling	48.33%	319
With stroller	17.12%	113
Other	4.70%	31
Total Respondents: 660		

Q5 For what do you use the trail system? (check all that apply)

Answered: 655 Skipped: 13



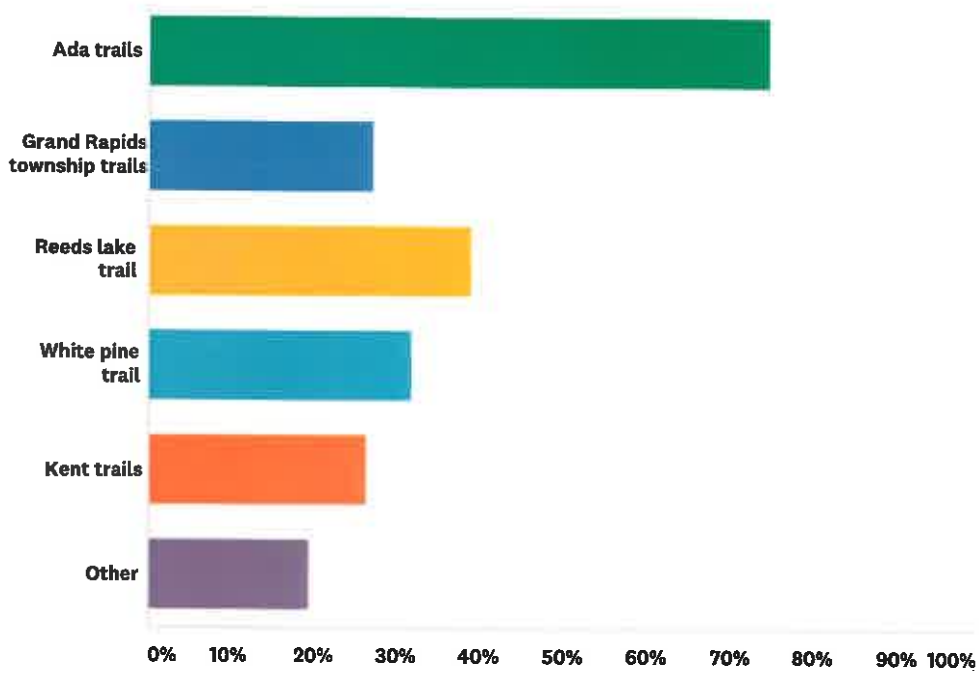
ANSWER CHOICES

RESPONSES

Recreation	72.67%	476
Travel/transport for shopping, errands	18.47%	121
Commuting to work or school	8.55%	56
Exercise/fitness	87.94%	576
Total Respondents: 655		

Q6 What other local trails do you use?

Answered: 620 Skipped: 48



ANSWER CHOICES

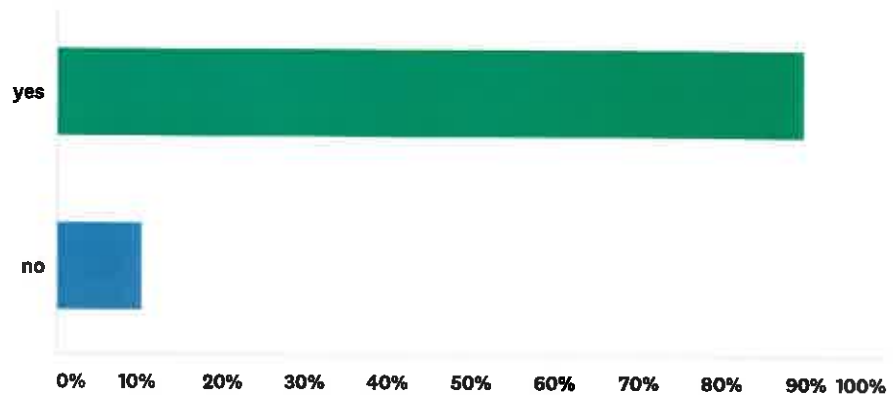
RESPONSES

Ada trails	74.68%	463
Grand Rapids township trails	27.10%	168
Reeds lake trail	38.87%	241
White pine trail	31.77%	197
Kent trails	26.45%	164
Other	19.35%	120

Total Respondents: 620

Q7 Should additional pathways be added to the current system?

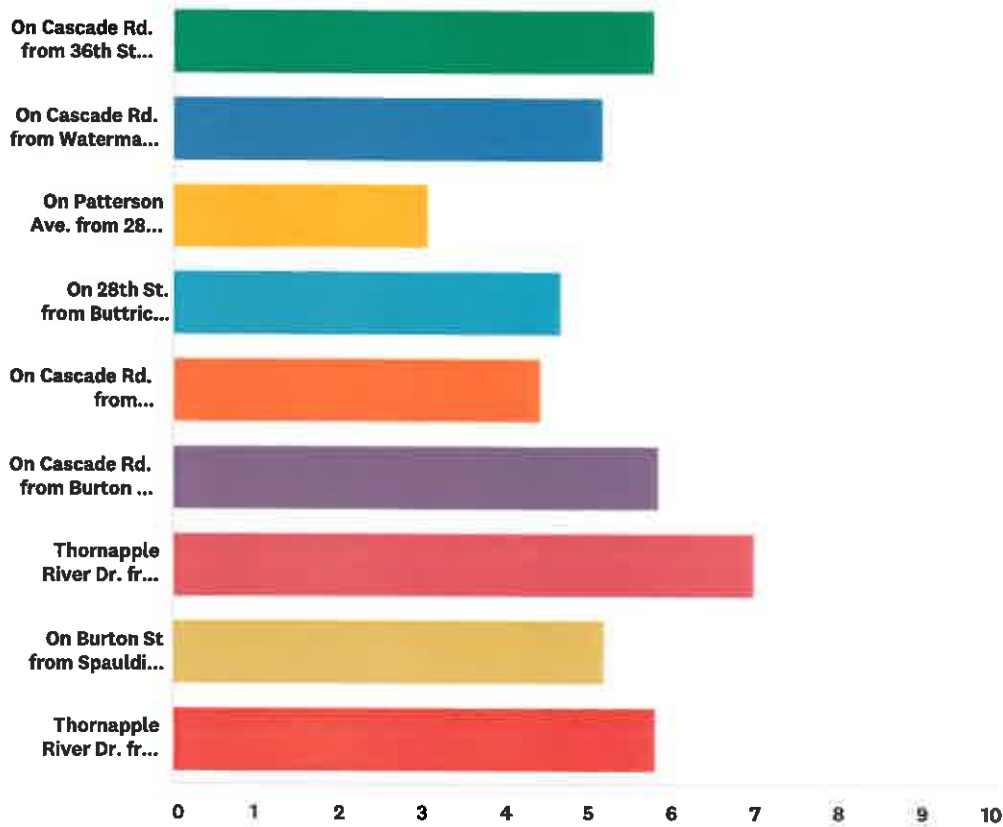
Answered: 657 Skipped: 11



ANSWER CHOICES	RESPONSES	
yes	89.65%	589
no	10.35%	68
TOTAL		657

Q8 The Pathways Committee identified the following potential new pathway trails. Please rank them in order of your priority (with 1 being the highest priority and 9 the lowest).

Answered: 636 Skipped: 32



	1	2	3	4	5	6	7	8	9	TOTAL	SCORE
On Cascade Rd. from 36th St to Whitneyville Rd.	28.16% 145	6.60% 34	10.68% 55	11.26% 58	7.77% 40	10.10% 52	9.32% 48	6.60% 34	9.51% 49	515	5.78
On Cascade Rd. from Watermark to Hall	11.59% 59	9.63% 49	12.38% 63	11.59% 59	15.13% 77	9.43% 48	12.38% 63	10.81% 55	7.07% 36	509	5.17
On Patterson Ave. from 28th St to Broadmoor	0.84% 4	3.14% 15	4.81% 23	5.65% 27	8.58% 41	12.76% 61	15.69% 75	16.11% 77	32.43% 155	478	3.06
On 28th St. from Buttrick Ave. to Snow Ave.	15.29% 78	4.90% 25	6.67% 34	8.63% 44	10.00% 51	14.31% 73	12.94% 66	18.04% 92	9.22% 47	510	4.67
On Cascade Rd. from Whitneyville Ave. To Snow Ave.	2.82% 14	11.90% 59	10.28% 51	8.87% 44	11.90% 59	12.90% 64	15.32% 76	12.30% 61	13.71% 68	496	4.41

Cascade Township citizen pathway committee

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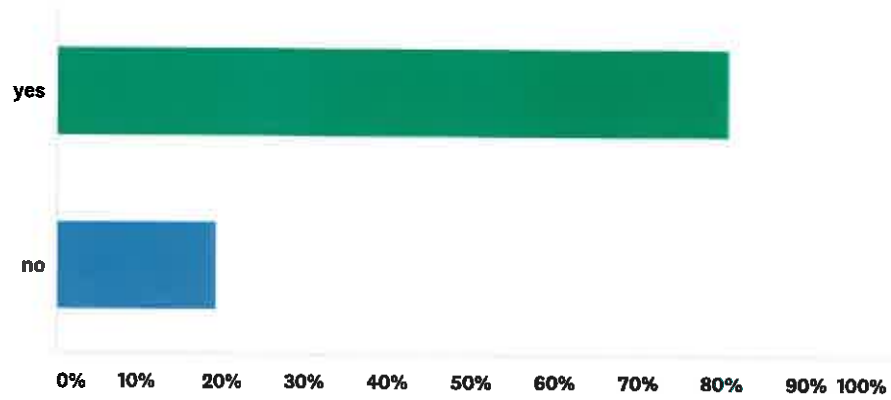
On Cascade Rd. from Burton to 28th St.	11.73% 61	15.77% 82	18.65% 97	13.65% 71	10.96% 57	10.19% 53	9.23% 48	6.35% 33	3.46% 18	520	5.84
Thornapple River Dr. from Cascade Rd. to Thornhills	30.28% 172	19.89% 113	16.02% 91	12.15% 69	8.27% 47	4.58% 26	4.93% 28	2.99% 17	0.88% 5	568	6.98
On Burton St from Spaulding to Patterson	11.56% 60	10.79% 56	12.72% 66	13.10% 68	11.75% 61	11.18% 58	7.71% 40	13.10% 68	8.09% 42	519	5.19
Thornapple River Dr. from Burger to Thornhills	5.79% 32	28.21% 156	12.84% 71	14.29% 79	11.03% 61	8.86% 49	5.42% 30	5.24% 29	8.32% 46	553	5.79

Q9 Is there an additional location where you would like to see a pathway built?

Answered: 372 Skipped: 296

Q10 As mentioned above the current pathway millage expires in 2018. Should the Township seek a new millage to pay for new pathway trails?

Answered: 648 Skipped: 20



ANSWER CHOICES	RESPONSES	
yes	80.71%	523
no	19.29%	125
TOTAL		648

Q9 Is there an additional location where you would like to see a pathway built?

Answered: 372 Skipped: 296

#	RESPONSES	DATE
1	No	10/17/2017 9:19 AM
2	No	10/17/2017 6:27 AM
3	No	10/16/2017 10:34 PM
4	No	10/16/2017 10:15 PM
5	No	10/16/2017 7:24 PM
6	Whitneyville Road (from Cascade to 52nd Street - natural beauty Road)	10/16/2017 5:45 PM
7	None	10/16/2017 1:05 PM
8	No	10/16/2017 12:19 PM
9	Pettis	10/16/2017 10:04 AM
10	No	10/16/2017 8:52 AM
11	No	10/16/2017 6:49 AM
12	No	10/16/2017 6:31 AM
13	Complete the path along the river behind Ada Moorings	10/15/2017 10:43 PM
14	No	10/15/2017 10:28 PM
15	Forest Hills rd at the overpass	10/15/2017 7:11 PM
16	On cascade Rd. West side.	10/15/2017 6:06 PM
17	No	10/15/2017 5:56 PM
18	No	10/15/2017 4:30 PM
19	No	10/15/2017 3:45 PM
20	On Whitneyville. From Cascade to 48th st	10/15/2017 9:16 AM
21	Along whitneyville to 48th st	10/14/2017 6:27 PM
22	Forest hill across 96	10/14/2017 2:30 PM
23	Snow between 28th and Grand River	10/14/2017 12:30 PM
24	No. Stop spending money that isn't yours. It's ridiculous how you feel the NEED to spend tax payers dollars. Here's a thought, reduce taxes and leave our community alone.	10/14/2017 12:12 PM
25	Ada Dr to thornapple river Dr	10/14/2017 9:31 AM
26	No	10/14/2017 9:27 AM
27	From thornapple to 36th street. Where thronhills and thornapple meet to the park	10/14/2017 8:51 AM
28	Pathway near covered bridge in Ada - unsafe to cross	10/14/2017 7:44 AM
29	On Cascade from Spaulding to Watermark on the SOUTH side of Cascade	10/14/2017 7:17 AM
30	Connect fully to pathways in Ada via Fulton	10/13/2017 9:40 PM
31	No	10/13/2017 7:45 PM
32	Thornapple/Thornhills to 36th	10/13/2017 7:02 PM
33	Buttrick from Whitneyville to 36th Street	10/13/2017 5:09 PM

Cascade Township citizen pathway committee

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34	No	10/13/2017 3:52 PM
35	Alta Dale from Ada Drive to Central Woodlands	10/13/2017 2:53 PM
36	On Thornapple River Drive between Nik Kik and Thornhills.	10/13/2017 2:04 PM
37	N/a	10/13/2017 1:24 PM
38	not at this time	10/13/2017 9:31 AM
39	Further north on honey creek, north of Knapp.	10/13/2017 7:38 AM
40	no	10/13/2017 2:40 AM
41	Kraft, 36th to Burton;	10/13/2017 12:39 AM
42	Anywhere south of 48 th street	10/12/2017 8:50 PM
43	Maintain existing trails in premium condition.	10/12/2017 8:43 PM
44	Thornapple /buttrick to covered bridge	10/12/2017 7:05 PM
45	36th street to Quiggle	10/12/2017 2:27 PM
46	Snow Ave from Grand River to Cascade	10/12/2017 11:05 AM
47	Grand river drive	10/12/2017 8:15 AM
48	no	10/12/2017 12:21 AM
49	Grand river to cascade on snow	10/11/2017 11:37 PM
50	Need pathway on Cascade Road from 36th Street to Whitneyville	10/11/2017 9:19 PM
51	A way to connect Buttrick to Grand River via 28th for s safe loop!	10/11/2017 7:06 PM
52	28th between Snow & Buttrick is a huge safety issue with a trail	10/11/2017 6:43 PM
53	no	10/11/2017 6:24 PM
54	No	10/11/2017 6:22 PM
55	Mandate bicycle usage where trails are present	10/11/2017 5:06 PM
56	No. Some listed above are not needed. I would rather see a smaller mileage, more likely to pass.	10/11/2017 1:40 PM
57	28th Street to Cascade Township Park	10/11/2017 12:07 PM
58	No	10/11/2017 11:18 AM
59	No	10/11/2017 10:23 AM
60	no	10/11/2017 10:06 AM
61	No	10/11/2017 9:15 AM
62	36th St from Patterson to Thornhills	10/11/2017 1:37 AM
63	Alta Dale Ave. between schools	10/10/2017 8:44 PM
64	Grand river dr.	10/10/2017 2:55 PM
65	Improve the safety for pedestrians & bikers at the Cascade-28th St. Intersection. Very dangerous as it is now!!	10/10/2017 1:10 PM
66	On Buttrick between 36th and Cascade Rd. The road is hilly and cars go flying down the road barely missing pedestrians almost daily.	10/10/2017 10:45 AM
67	along burger dr	10/10/2017 9:26 AM
68	no	10/10/2017 7:58 AM
69	No	10/10/2017 7:47 AM
70	Along Spaulding between cascade and Fulton and along Alta dale	10/10/2017 7:42 AM
71	No	10/10/2017 7:30 AM
72	Into Ada - could have signage pointing folks to the bridge - but then should have path into Ada.	10/9/2017 11:06 PM

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73	Alta Dale from Central Woodlands to Ada Dr.	10/9/2017 6:41 PM
74	No	10/9/2017 6:14 PM
75	Buttrick from 36th to Cascade Rd.	10/9/2017 3:38 PM
76	No	10/9/2017 3:05 PM
77	Just want parks and schools connected	10/9/2017 2:49 PM
78	none	10/9/2017 1:35 PM
79	No	10/9/2017 1:25 PM
80	?	10/9/2017 1:15 PM
81	From Buttrick, down 28th street, north on Snow to Grand River. Connects to Peace park	10/9/2017 12:58 PM
82	On Buttrick from 36th to Whitneyville Road	10/9/2017 12:03 PM
83	yes, on Buttrick between 36th and Whitneyville; also on Whitneyville from Cascade Rd to 48th St.; it does not make sense for many of the suggested new paths that already have sidewalks (3) or bikepaths on the other side of the street (6 & 2). Last month I was almost killed when my mountain bike wiped out on the dangerously soft shoulder on Burton on the SE side of the I-96 overpass. I'm an experienced mountain biker.	10/9/2017 11:45 AM
84	No	10/9/2017 9:52 AM
85	Buttrick and 48th to a trail	10/9/2017 9:51 AM
86	No	10/9/2017 8:06 AM
87	Nothing specific	10/9/2017 7:51 AM
88	Any places without sidewalks next to major roads	10/9/2017 7:00 AM
89	The more the better. But these recommendations are good.	10/8/2017 11:25 PM
90	No	10/8/2017 9:41 PM
91	No	10/8/2017 9:13 PM
92	No	10/8/2017 9:01 PM
93	Better connectivity to Kent wood and reeds lake	10/8/2017 8:36 PM
94	No	10/8/2017 11:20 AM
95	No	10/8/2017 8:19 AM
96	nope	10/8/2017 12:59 AM
97	No	10/7/2017 11:58 PM
98	from Cascade to 36th on Buttrick	10/7/2017 9:39 PM
99	No	10/7/2017 8:14 PM
100	No	10/7/2017 6:43 PM
101	No	10/7/2017 1:35 PM
102	no	10/7/2017 1:17 PM
103	No	10/7/2017 12:11 PM
104	No	10/7/2017 12:09 PM
105	From 52 and Whitneyville to cascade road	10/7/2017 11:55 AM
106	48th St SE, between Whitneyville and 36th	10/7/2017 11:37 AM
107	Just to stress the importance of a path along Thornapple River Drive between Thornhills and Cascade. People use this regularly and it is dangerous not to have one!	10/7/2017 8:10 AM
108	Better access to downtown Ada from the trail system (dangerous crossing at the ball fields to covered bridge and that neighborhood	10/7/2017 7:03 AM
109	Cascade rood from old 28th street to whittneyville	10/6/2017 11:24 PM

Cascade Township citizen pathway committee

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110	No	10/6/2017 11:02 PM
111	On cascade road over the bridge needs to be made safer for the pedestrians. There is not enough room between cars and pedestrians on that bridge	10/6/2017 10:44 PM
112	?	10/6/2017 10:29 PM
113	Thornapple River Drive from Cascade to Peace	10/6/2017 9:01 PM
114	No	10/6/2017 8:51 PM
115	No	10/6/2017 7:56 PM
116	I would love to see improved, safer pathways crossing over the highway on Burton and on Forest Hills	10/6/2017 6:22 PM
117	no	10/6/2017 4:53 PM
118	A better path on a section of Buttrick from Ada Park to Thornapple River Dr.	10/6/2017 3:03 PM
119	Carry the path on Laraway Lake all the way to Cascade Rd.	10/6/2017 1:50 PM
120	I would like to see NO MORE pathways.	10/6/2017 12:56 PM
121	none	10/6/2017 12:21 PM
122	Hall and Fox Hollow out to Ada Dr	10/6/2017 11:52 AM
123	No	10/6/2017 11:23 AM
124	Spaulding from Fulton to cascade	10/6/2017 11:12 AM
125	Grand River from Peace Park to Ada Park	10/6/2017 11:06 AM
126	No Im tired of paying taxes on something that isnt even by me !!!!!!!!!!!!!	10/6/2017 10:36 AM
127	Please 28th between Buttrick and Snow	10/6/2017 10:32 AM
128	Grand River Avenue east of Buttrick	10/6/2017 9:28 AM
129	Cascade to buccaneer	10/6/2017 8:48 AM
130	Cascade by the thornapple river	10/6/2017 8:47 AM
131	Grand River Rd., Ada Park to Peace Park. Bicycles, jogging & walking are abundant	10/6/2017 8:07 AM
132	Whitneyville from 52nd St. to Cascade Rd.	10/6/2017 7:51 AM
133	No	10/6/2017 7:10 AM
134	Yes, kraft between chatham woods and Burton. My girls will not allow me to cross Kraft by Meijer as traffic is awful even for cars. If you refuse a stop light, with traffic to MVP..all the hotels including a new one and an auto shop...at least give us a sidewalk on our side of Kraft. Also to 28th street on our side of Kraft from Chatam woods.	10/6/2017 12:24 AM
135	Along the Grand River.	10/5/2017 10:02 PM
136	Cascade springs!	10/5/2017 9:58 PM
137	No	10/5/2017 9:48 PM
138	Burton over the highway	10/5/2017 9:48 PM
139	36th beyond Buttrick	10/5/2017 9:26 PM
140	N/A	10/5/2017 9:10 PM
141	Nope	10/5/2017 9:07 PM
142	No	10/5/2017 8:46 PM
143	n/a	10/5/2017 8:29 PM
144	from Peace Park to new road off 28th Street before Snow.	10/5/2017 8:23 PM
145	No	10/5/2017 6:30 PM
146	No	10/5/2017 5:52 PM

Cascade Township citizen pathway committee

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147	No	10/5/2017 4:55 PM
148	Ridgemont to Thornapple	10/5/2017 3:16 PM
149	Not off hand	10/5/2017 2:37 PM
150	Grand River Dr from Ada Park toward Lowell	10/5/2017 2:34 PM
151	You didnt ask the right questions....#2 none important..we use for dog walking only and occasional biking,and no space for comments were left!	10/5/2017 2:15 PM
152	No	10/5/2017 1:52 PM
153	No	10/5/2017 1:43 PM
154	no	10/5/2017 1:19 PM
155	Grand River between Buttrick and Bolt	10/5/2017 1:14 PM
156	Fix the mess on Spaulding from cascade road to burton. It's awful.	10/5/2017 12:45 PM
157	No	10/5/2017 12:36 PM
158	10 miles (even out and back) of relatively flat trail would be perfect.	10/5/2017 12:32 PM
159	Thornapple River Dr. from Brookhills to Cascade Park	10/5/2017 11:42 AM
160	No	10/5/2017 11:10 AM
161	Thornapple River Dr. from Cascade township park to burger	10/5/2017 9:29 AM
162	No	10/5/2017 8:29 AM
163	No	10/5/2017 7:56 AM
164	Connecting to Grand River Nature Area and Seidman Park.	10/5/2017 7:48 AM
165	No	10/5/2017 7:34 AM
166	Forest Hills Ave.	10/5/2017 7:21 AM
167	No	10/5/2017 7:18 AM
168	No	10/5/2017 7:16 AM
169	No	10/5/2017 7:04 AM
170	No	10/5/2017 6:20 AM
171	Na	10/5/2017 6:06 AM
172	no	10/5/2017 4:58 AM
173	Grand River Dr from Buttrick to Snow	10/5/2017 12:02 AM
174	No	10/4/2017 10:24 PM
175	No just 28th, Buttrick to Snow. Cars are rude and about run me and my neighbor over on our morning walks	10/4/2017 10:24 PM
176	No	10/4/2017 10:18 PM
177	Burger from Thornapple to cascade	10/4/2017 10:10 PM
178	No	10/4/2017 10:06 PM
179	no	10/4/2017 9:45 PM
180	No	10/4/2017 9:22 PM
181	Kraft , Burton-28th	10/4/2017 9:18 PM
182	No	10/4/2017 9:10 PM
183	No	10/4/2017 8:36 PM
184	No	10/4/2017 8:31 PM
185	Grand River	10/4/2017 8:00 PM

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186	Need a way to cross 96 that isn't 28th. To many businesses that people pull in and out to be safe to ride on	10/4/2017 7:40 PM
187	until a use by RESIDENTS is known, think we should wait	10/4/2017 7:40 PM
188	Cascade road from thimapple river to thorncrest	10/4/2017 7:39 PM
189	48th street to thornapple river drive to the CascAde Park	10/4/2017 7:35 PM
190	Butttrick between cascade and 36th	10/4/2017 6:00 PM
191	none	10/4/2017 5:48 PM
192	No	10/4/2017 5:43 PM
193	no	10/4/2017 5:40 PM
194	No	10/4/2017 5:37 PM
195	Hall St To Ada Drive Along Fox Hollow	10/4/2017 4:59 PM
196	Not at this time	10/4/2017 4:41 PM
197	bolt drive	10/4/2017 4:15 PM
198	Forest hill from cascade to burton	10/4/2017 3:58 PM
199	No	10/4/2017 3:44 PM
200	From Crahen, on Bradford to Frederick Meijer Gardens	10/4/2017 2:41 PM
201	On Burger from Thornapple River Driver to Goodwood	10/4/2017 2:23 PM
202	No	10/4/2017 2:14 PM
203	NA	10/4/2017 1:44 PM
204	Thornapple River Road from Thornhills to Cascade Park	10/4/2017 1:29 PM
205	No	10/4/2017 1:14 PM
206	From Burger at Thornapple River drive to Tuscany.	10/4/2017 1:06 PM
207	Kraft	10/4/2017 1:00 PM
208	From Cascade Rd to Thornhills to Cascade Park	10/4/2017 12:43 PM
209	Thornapple River Drive/Thornhills is the most important one for my family.	10/4/2017 12:42 PM
210	Thornapple River near the entrance to the park	10/4/2017 12:05 PM
211	No	10/4/2017 11:40 AM
212	Forest Hill Ave. Fill in between Burton and Cascade Rd.	10/4/2017 11:37 AM
213	No. Lets improve roads first.	10/4/2017 11:28 AM
214	No	10/4/2017 11:25 AM
215	No	10/4/2017 11:17 AM
216	Only Thomapple because danger to people walking and riding	10/4/2017 11:15 AM
217	no, Cascade road (36th to Whitneyville) is very dangerous and needs a pathway. Our small children have almost been hit multiple times. These are heavy populated family neighborhoods that need access to the safe pathways at 36th and Cascade.	10/4/2017 11:03 AM
218	Kraft and 28th to Patterson and 28th	10/4/2017 10:52 AM
219	thornapple river drive between cascade and thornhills	10/4/2017 9:35 AM
220	I'm satisfied with the proposed additions	10/4/2017 9:30 AM
221	No	10/4/2017 9:29 AM
222	no	10/4/2017 8:47 AM
223	Only Thomapple River Drive is needed, no other area is dangerous. If a mileage is required it should only be a portion, 10% to 15%, of the last mileage.	10/4/2017 8:45 AM

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224	No	10/4/2017 8:43 AM
225	Connect 48th between Whitneyville & Thornhills to the Cascade Trail System!	10/4/2017 8:28 AM
226	Would like to see bike lanes marked on the roads	10/4/2017 8:20 AM
227	Please consider crushed stone vs all asphalt	10/4/2017 8:02 AM
228	Buttrick to 36th street	10/4/2017 7:57 AM
229	No	10/4/2017 7:54 AM
230	Cascade to Thornhills on Thornapple River Dr.	10/4/2017 7:51 AM
231	I know the path on Laraway Lake to Cascade is complete. However, the end near Cascade: Can we do something to move it UP or further in so that you are not really just walking on the shoulder of the road. NOT as safe as I would expect. This type of pathway anywhere in the system should be avoided. The money should be spent to secure the easements and right-of-way to complete.	10/4/2017 7:42 AM
232	no	10/4/2017 7:42 AM
233	Thornappe River to Cascade to 30th	10/4/2017 7:41 AM
234	N/A	10/4/2017 7:31 AM
235	no	10/4/2017 7:31 AM
236	On 36th St from Thornapple River Drive to Kraft and down Kraft to 28th St	10/4/2017 7:30 AM
237	No	10/4/2017 7:17 AM
238	no	10/4/2017 7:15 AM
239	No	10/4/2017 6:49 AM
240	On the south side of Laraway Lake Road coming up the hill from Cascade Road.	10/4/2017 6:38 AM
241	Buttrick Grand River to Thornapple River Drive	10/4/2017 6:31 AM
242	I would love to see sidewalks built in my neighborhood Hidden Hills	10/4/2017 5:27 AM
243	No	10/4/2017 4:34 AM
244	No	10/4/2017 2:20 AM
245	Hall Street to Fox Hollow to Ada Drive	10/4/2017 12:23 AM
246	Patterson to east along south side of airport	10/3/2017 11:58 PM
247	Whitneyville to 52	10/3/2017 11:19 PM
248	36th st to cherry lane	10/3/2017 10:41 PM
249	No	10/3/2017 10:37 PM
250	Burton from Spaulding to Patterson	10/3/2017 10:26 PM
251	Along Thornapple from Buttrick to Ada Drive	10/3/2017 10:16 PM
252	No	10/3/2017 10:08 PM
253	Better path along Laraway	10/3/2017 10:03 PM
254	no	10/3/2017 10:00 PM
255	no	10/3/2017 9:34 PM
256	Yes, the overpass on Forest Hills Ave., over I-96.	10/3/2017 9:22 PM
257	no	10/3/2017 8:51 PM
258	Ada. Along thornapple river drive or around fase street,	10/3/2017 8:45 PM
259	Forest Hills Ave	10/3/2017 8:41 PM
260	36th from Buttrick to Snow and along Grand River from Buttrick to Snow	10/3/2017 8:18 PM
261	Anywhere to improve safety	10/3/2017 8:09 PM
262	Leyton between cascade and Redford dr (pine ridge)	10/3/2017 7:59 PM

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263	Thornhills out Thornapple River Drive past the Airport or 44th to Whitneyville Road	10/3/2017 7:37 PM
264	Really a path from Spaulding to Patterson on Burton would be huge!	10/3/2017 7:35 PM
265	No	10/3/2017 7:31 PM
266	Burton/I-96 to access the YMCA, forest hills/I-96 for school children	10/3/2017 6:23 PM
267	On Burton over I96 and Forest Hill Ave over I96	10/3/2017 6:12 PM
268	My first choice would be connecting the constructed path on Thirnapple driver drive with cascade township park.	10/3/2017 5:40 PM
269	No	10/3/2017 5:30 PM
270	Buttrick to Fase St. to Thornapple.	10/3/2017 5:30 PM
271	No	10/3/2017 5:28 PM
272	No	10/3/2017 5:07 PM
273	Snow from 28th to Cascade	10/3/2017 5:06 PM
274	No	10/3/2017 4:52 PM
275	No	10/3/2017 4:45 PM
276	no	10/3/2017 4:20 PM
277	36th street extending past Buttrick	10/3/2017 4:16 PM
278	From Forest Hill Ave across to Crahen section w/ no path before railroad bridge	10/3/2017 4:08 PM
279	Ada drive, hall and spaulding	10/3/2017 3:53 PM
280	no	10/3/2017 3:37 PM
281	No	10/3/2017 3:31 PM
282	No	10/3/2017 3:25 PM
283	Additional cross walks and safe landings at 36th and Cascade Road	10/3/2017 3:23 PM
284	no	10/3/2017 3:16 PM
285	Bolt drive to. Buttrick	10/3/2017 3:13 PM
286	Anywhere near downtown Cascade	10/3/2017 3:01 PM
287	NO	10/3/2017 2:57 PM
288	no	10/3/2017 2:54 PM
289	Thornhills to Rec Park, snow from Grand River to 36th to Buttrick	10/3/2017 2:53 PM
290	No	10/3/2017 2:45 PM
291	Path from airport area to Cascade / Whitneyville (possibly on 36th St.). Paths on 28th street itself. Connect business to residential.	10/3/2017 2:44 PM
292	Grand River: Buttrick Rd. to Peace Park	10/3/2017 2:38 PM
293	no	10/3/2017 2:37 PM
294	Along Thomapple river drive from cascade to peace	10/3/2017 2:34 PM
295	Bicycles should be banned on roadways that have pathways such as Buttrick.	10/3/2017 2:26 PM
296	Connect the path on cascade from Wycliffe to the river. Widen path on bridge over river.	10/3/2017 2:19 PM
297	no	10/3/2017 2:16 PM
298	Cascade road - all the way from 28th to Whitneyville	10/3/2017 2:14 PM
299	Cascade Springs DR. to 30th	10/3/2017 2:09 PM
300	No	10/3/2017 2:02 PM
301	No.	10/3/2017 1:35 PM

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302	No	10/3/2017 1:27 PM
303	no	10/3/2017 1:24 PM
304	Build in pedestrian walk way with railing with more safety crossing thornapple river on cascade rd near thornapple river drive.	10/3/2017 1:14 PM
305	No	10/3/2017 12:44 PM
306	Grand River Ave to Snow	10/3/2017 12:44 PM
307	No at this time	10/3/2017 12:41 PM
308	no	10/3/2017 12:13 PM
309	Anywhere along a road that's 45 mph+ that doesn't have at least a sidewalk and where there's lots of pedestrian/cycling traffic	10/3/2017 11:20 AM
310	no	10/3/2017 10:55 AM
311	On Bridgewater from Thornapple River Dr. to Thornapple Elementary	10/3/2017 10:53 AM
312	no	10/3/2017 10:39 AM
313	NA	10/3/2017 10:29 AM
314	connection to the elementary schools	10/3/2017 9:57 AM
315	no	10/3/2017 9:48 AM
316	Not at this time	10/3/2017 8:56 AM
317	Along Cascade from Whitneyville to Snow	10/3/2017 8:22 AM
318	thornhills connecting 28th street to cascade twp park near 96	10/3/2017 7:52 AM
319	No, this is a great start	10/3/2017 7:04 AM
320	No	10/3/2017 6:38 AM
321	No	10/3/2017 6:16 AM
322	No. But cascade road from 36th to Whitneyville should be priority. Safety is a major concern.	10/3/2017 5:44 AM
323	No	10/3/2017 5:08 AM
324	No	10/2/2017 10:38 PM
325	No	10/2/2017 10:29 PM
326	Any extension off cascade	10/2/2017 10:26 PM
327	no	10/2/2017 10:22 PM
328	no.	10/2/2017 10:13 PM
329	No. Just Cascade from 36th to Whitneyville. And Thornapple from Cascade to thornhills. These are very dangerous roads that children travel daily!!!	10/2/2017 10:04 PM
330	Alta Dale	10/2/2017 9:42 PM
331	No	10/2/2017 9:30 PM
332	No	10/2/2017 9:20 PM
333	No	10/2/2017 9:16 PM
334	As far along cascade as you can go and back	10/2/2017 8:58 PM
335	Hall to Spaulding or Cascade at Spaulding to Ada Dr/Spaulding	10/2/2017 8:43 PM
336	Burton from Patterson to Spaulding	10/2/2017 7:37 PM
337	No	10/2/2017 6:56 PM
338	No	10/2/2017 6:53 PM
339	No	10/2/2017 6:53 PM

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340	Connect from the dam up cascade to the south so people who live south of the damn can get to the shops without walking in the street on cascade.	10/2/2017 6:41 PM
341	?	10/2/2017 6:14 PM
342	Nope	10/2/2017 5:57 PM
343	36th street between Thornapple and Kraft/Patterson	10/2/2017 4:59 PM
344	The Thornapple River Drive from Cascade to Thornhills would be a huge benefit to my family.	10/2/2017 4:53 PM
345	Snow to 28th to 36th, Snow to 36th to Buttrick	10/2/2017 4:28 PM
346	Whitneyville to Cascade. Many bikers pass through	10/2/2017 4:19 PM
347	No	10/2/2017 4:12 PM
348	Not that I know of. I currently live just past where the path ends by Cascade and 36th. With two little kids I would use it a lot more if I could safely access it.	10/2/2017 4:08 PM
349	no, re-eval as needed	10/2/2017 4:06 PM
350	no	10/2/2017 4:01 PM
351	No	10/2/2017 3:53 PM
352	No	10/2/2017 3:49 PM
353	no	10/2/2017 3:34 PM
354	The Forgotten Zone, aka, the portion of the township south of 96. This section IOS consistently forgotten/ignored by the township. My suggestions would be south on Thornapple and Whitneyville to 60th, and across 48th St, all very high traffic routes. Even though we pay for all of the paths, you didn't even consider putting one in our neighborhood.	10/2/2017 2:18 PM
355	No	10/2/2017 2:17 PM
356	No, the one from 36th to Ehitneyville is the most important to me as my children would regularly use it.	10/2/2017 1:51 PM
357	Desperately would love to have a connection for my son and I to safely cross the street (Cascade past 36th)	10/2/2017 1:46 PM
358	Laraway lake between cascade rd & tamaron	10/2/2017 1:39 PM
359	No	10/2/2017 1:26 PM
360	I would rather pay for sidewalks along Hall Rd all the way up to Ada Dr. We live across from FHC High School and yet have to walk on the very fast Hall Rd with no sidewalks to get to the schools.	10/2/2017 1:19 PM
361	No	10/2/2017 1:13 PM
362	No	10/2/2017 12:59 PM
363	Yes connect the trail on Thornapple River Drive to Cascade Township Park.	10/2/2017 12:05 PM
364	Kraft (28th - 36th); 36th (Kraft - Patterson); Burton (36th - Cascade); Whitneyville (Cascade - 60th)	10/2/2017 12:05 PM
365	No	10/2/2017 11:59 AM
366	No	10/2/2017 11:54 AM
367	48th St. from Whitneyville to the airport	10/2/2017 11:30 AM
368	no	10/2/2017 11:19 AM
369	no	10/2/2017 11:03 AM
370	From the dead end of Beard Rd to Thornapple elementary	10/2/2017 10:34 AM
371	Leyton from Cascade Rd to Pine Ridge Elementary	10/2/2017 10:33 AM
372	No	10/2/2017 10:27 AM

Summary of written surveys from public open house. 16 surveys turned in. Not all questions answered.

1. Do you believe more pathways benefit the community?

Yes – 14	93.3%
No – 1	6.6%

2. Which is the highest priority regarding the pathway trails? Please rank in order of your priority (with 1 being the highest priority and 6 the lowest).

(a) 1.68	improve pedestrian safety
(b) 4	beautify the township
(c) 2.93	connect between schools, trails and shops
(d) 4.87	developing linear recreational parks
(e) 3.75	link pathway trails to paths of other communities
(f) 4	promote healthy lifestyle

3. How often do you use the trail system?

(a) Daily	6
(b) 3-4 times per week	3
(c) Once per week	4
(d) Once per month or less	3

4. How do you use the trail system? (check all that apply)

(a) Walking/running	13
(b) Bicycling	9
(c) With stroller	7
(d) Other	2

5. For what do you use the trail system? (check all that apply)

(a) Recreation	10
(b) Travel/transport for shopping, errands	2
(c) Commuting to work or school	4
(d) Exercise/fitness	14

6. What other local trails do you use?

(a) Ada trails	9
(b) Grand Rapids township trails	5
(c) Reeds lake trail	7
(d) White pine trail	4
(e) Kent trails	3
(f) Other	3

7. Should additional pathways be added to the current system?

Yes - 14

No - 1

8. The Pathways Committee identified the following potential new pathway trails. Please rank them in order of your priority (with 1 being the highest priority and 9 the lowest). (Not scored the same as survey monkey. The lower the score the higher the priority)

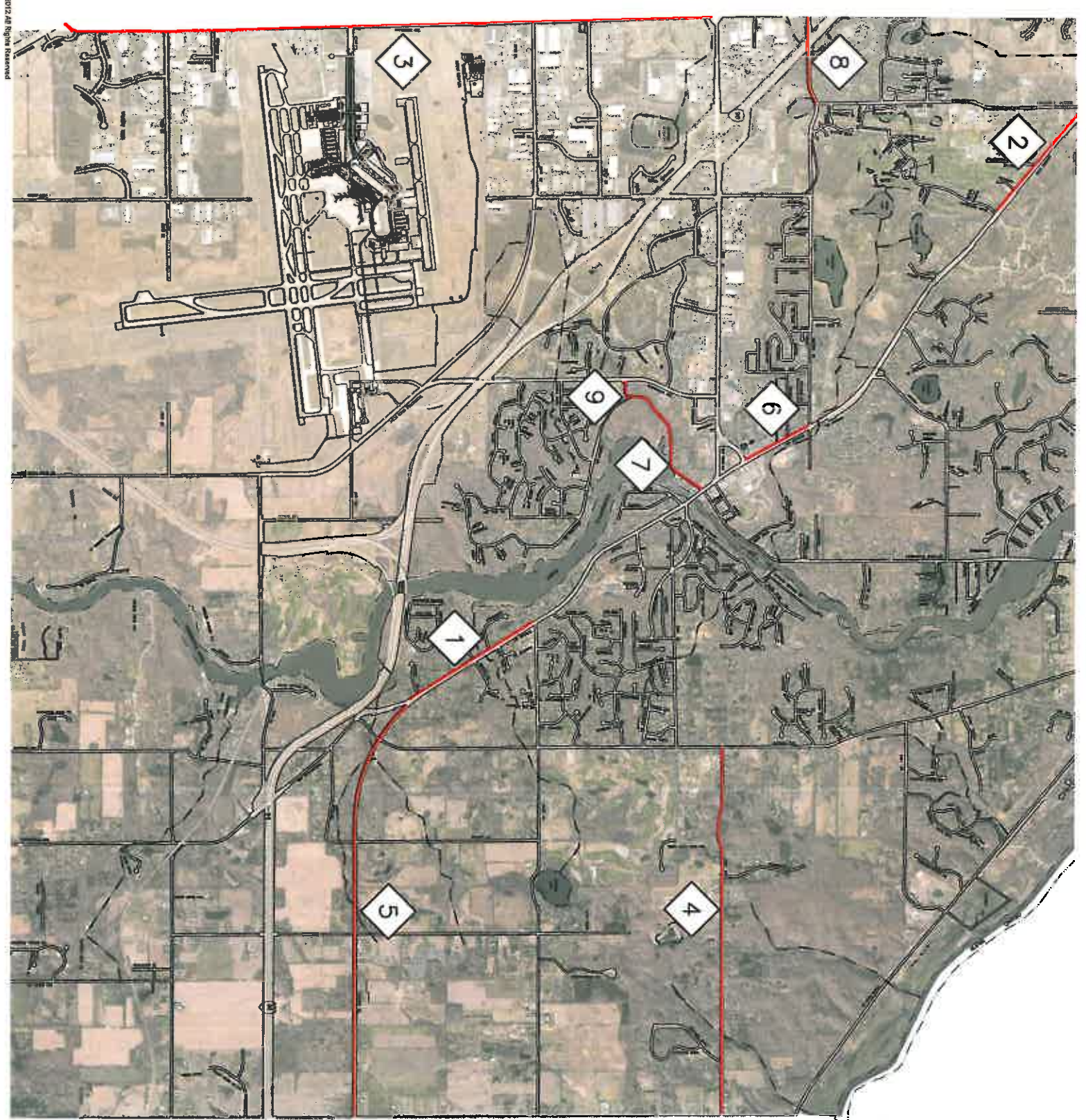
- (a) 4.35 ___ On Cascade Rd. from 36th St to Whitneyville Rd.
- (b) 5.46 ___ On Cascade Rd. from Watermark to Hall
- (c) 6.26 ___ On Patterson Ave. from 28th St to Broadmoor
- (d) 4.86 ___ On 28th St. from Butterick Ave. to Snow Ave.
- (e) 5.86 ___ On Cascade Rd. from Whitneyville Ave. To Snow Ave.
- (f) 4.06 ___ On Cascade Rd. from Burton to 28th St.
- (g) 3.35 ___ Thornapple River Dr. extension from Cascade Rd. to Thornhills
- (h) 5.66 ___ On Burton St from Spaulding to Patterson
- (i) 5.07 ___ Thornapple River Dr. from Burger to Thornhills

9. Is there an additional location where you would like to see a pathway built?

10. As mentioned above the current pathway millage expires in 2018. Should the Township seek a new millage to pay for new pathway trails?

Yes – 11 78.5%

No- 3 21.4%



Opinion of Probable Project Cost

Fishbeck, Thompson, Carr & Huber, Inc.

1515 Arboretum Drive S.E., Grand Rapids, MI 49546

Telephone: (616) 575-3824 FAX: (616) 464-3993

CASCADE TOWNSHIP - PATHWAY CONCEPTUAL ESTIMATES (08/01/17)

Location #1 - Cascade Road (36th St to Whineyville Ave)

Total Length 4500 ft

- West side of road assumed to be best location

Item	Length	Price	Unit	Item Cost
Base Pathway	4500	\$75	LF	\$337,500
Large Tree Clearing	1500	\$10	LF	\$15,000
Storm Sewer (replace ditch)	400	\$50	LF	\$20,000
Retaining Wall (< 6 ft)	200	\$390	LF	\$78,000
Construction Cost				\$450,500
Engineering and Contingency (30%)				\$135,150
Conceptual Project Cost Estimate				\$585,650

Location #2 - Cascade Road (Watermark Dr to Hall St)

Total Length 3550 ft

- Southwest side of road assumed

Item	Length	Price	Unit	Item Cost
Base Pathway	3550	\$75	LF	\$266,250
Heavy Grading (cut/fill)	500	\$20	LF	\$10,000
Large Tree Clearing	500	\$10	LF	\$5,000
Storm Sewer (replace ditch)	50	\$50	LF	\$2,500
Retaining Wall (< 6 ft)	300	\$390	LF	\$117,000
Retaining Wall (> 6 ft)	100	\$720	LF	\$72,000
Construction Cost				\$472,750
Engineering and Contingency (30%)				\$141,825
Conceptual Project Cost Estimate				\$614,575

Location #3 - Patterson Avenue (28th St to Broadmoor Ave)

Total Length 19430 ft

- East side pathway since west side is Kentwood

Item	Length	Price	Unit	Item Cost
Base Pathway	19430	\$75	LF	\$1,457,250
Large Tree Clearing	1000	\$10	LF	\$10,000
Storm Sewer (replace ditch)	1000	\$50	LF	\$50,000
Retaining Wall (< 6 ft)	300	\$390	LF	\$117,000
Construction Cost				\$1,634,250
Engineering and Contingency (30%)				\$490,275
Conceptual Project Cost Estimate				\$2,124,525

Location #4 - Whitneyville Avenue (Cascade Road to Township Limits)

Total Length 13700 ft

- West side of road

Item	Length	Price	Unit	Item Cost
Base Pathway	13700	\$75	LF	\$1,027,500
Storm Sewer (replace ditch)	3000	\$50	LF	\$150,000
Retaining Wall (< 6 ft)	900	\$390	LF	\$351,000
Retaining Wall (> 6 ft)	300	\$720	LF	\$216,000
Pedestrian Bridge over I-96	1	\$1,500,000	EA	\$1,500,000
Short Boardwalk (< 6 ft)	500	\$350	LF	\$175,000
Construction Cost				\$3,419,500
Engineering and Contingency (30%)				\$1,025,850
Conceptual Project Cost Estimate				\$4,445,350

Location #5 - 28th Street (Buttrick Avenue to Township Limits)

Total Length 10650 ft

- assumed South side of road

Item	Length	Price	Unit	Item Cost
Base Pathway	10650	\$75	LF	\$798,750
Heavy Grading (cut/fill)	2000	\$20	LF	\$40,000
Large Tree Clearing	2000	\$10	LF	\$20,000
Retaining Wall (< 6 ft)	300	\$390	LF	\$117,000
Short Boardwalk (< 6 ft)	500	\$350	LF	\$175,000
Tall Boardwalk (> 6 ft)	500	\$500	LF	\$250,000
Construction Cost				\$1,400,750
Engineering and Contingency (30%)				\$420,225
Conceptual Project Cost Estimate				\$1,820,975

Location #6 - Cascade Road (Whitneyville Avenue to Township Limits)

Total Length 12400 ft

- assumed South side of road

Item	Length	Price	Unit	Item Cost
Base Pathway	12400	\$75	LF	\$930,000
Large Tree Clearing	8000	\$10	LF	\$80,000
Storm Sewer (replace ditch)	650	\$50	LF	\$32,500
Retaining Wall (> 6 ft)	700	\$720	LF	\$504,000
Short Boardwalk (< 6 ft)	200	\$350	LF	\$70,000
Construction Cost				\$1,616,500
Engineering and Contingency (30%)				\$484,950
Conceptual Project Cost Estimate				\$2,101,450

Location #7 - Cascade Road (Burton Street to 28th Street)

Total Length 2200 ft

- assumed South West side of road

Item	Length	Price	Unit	Item Cost
Base Pathway	2200	\$75	LF	\$165,000
Large Tree Clearing	200	\$10	LF	\$2,000
Storm Sewer (replace ditch)	200	\$50	LF	\$10,000
Retaining Wall (< 6 ft)	100	\$390	LF	\$39,000
Construction Cost				\$216,000
Engineering and Contingency (30%)				\$64,800
Conceptual Project Cost Estimate				\$280,800

Location #8 - Thornapple River Drive (Cascade Road to Thornhills Avenue)

Total Length 4355 ft

- NW side of road probably best, less utility poles

Item	Length	Price	Unit	Item Cost
Base Pathway	4355	\$75	LF	\$326,625
Heavy Grading (cut/fill)	3000	\$20	LF	\$60,000
Large Tree Clearing	3000	\$10	LF	\$30,000
Storm Sewer (replace ditch)	2000	\$50	LF	\$100,000
Retaining Wall (< 6 ft)	1500	\$390	LF	\$585,000
Retaining Wall (> 6 ft)	1500	\$720	LF	\$1,080,000
Construction Cost				\$2,181,625
Engineering and Contingency (30%)				\$654,488
Conceptual Project Cost Estimate				\$2,836,113

Location #9 - Burton Street (Patterson Avenue to Spaulding Avenue)

Total Length 1800 ft

Item	Length	Price	Unit	Item Cost
Base Pathway	1800	\$75	LF	\$135,000
Large Tree Clearing	500	\$10	LF	\$5,000
Pedestrian Bridge over I-96	1	\$1,500,000	EA	\$1,500,000
Construction Cost				\$1,640,000
Engineering and Contingency (30%)				\$492,000
Conceptual Project Cost Estimate				\$2,132,000

Location #10 - Thornapple River Drive (Thornhills Avenue to Burger Drive)

Total Length

500 ft

- South side

Item	Length	Price	Unit	Item Cost
Base Pathway	500	\$75	LF	\$37,500
Heavy Grading (cut/fill)	150	\$20	LF	\$3,000
Large Tree Clearing	180	\$10	LF	\$1,800
Utility Pole Relocation	2	\$5,000	EA	\$10,000
Retaining Wall (< 6 ft)	200	\$390	LF	\$78,000
Construction Cost				\$130,300
Engineering and Contingency (30%)				\$39,090
Conceptual Project Cost Estimate				\$169,390

**MINUTES OF THE
CASCADE CHARTER TOWNSHIP
REGULAR BOARD MEETING**

Wednesday, October 25, 2017

7:00 P.M.

Article 1. Supervisor Beahan called the meeting to order.
Present: Supervisor Beahan, Clerk Slater, Treasurer Peirce, Trustee Koessel,
McDonald, Lewis and Shipley.
Absent: None
Also Present: DDA/Economic Development Director Korhorn and those listed in
Supplement #1.

Article 2. Supervisor Beahan led the Pledge of Allegiance to the Flag.

Article 3. Motion was made by Trustee Lewis and supported by Trustee McDonald to
approve the Agenda as presented. Motion carried unanimously.

Article 4. Presentations

**Article 5. Public Comments-Anything on the Agenda not scheduled for a public
hearing. (limit comments to 3 minutes)**

Article 6. Approval of Consent Agenda

a. Receive and File Various Meeting Minutes

1. Regular Township Board Minutes for 10/11/17.
2. Zoning Board of Appeals Minutes for 09/12/2017.
3. Planning Commission Minutes for 09/18/2017.
4. Downtown Development Minutes for 08/15/2017.

b. Receive and File Communications

1. Letter from Kent County Community Action – re: FY 17-18
CDBG Grant Funding.
2. Letter from Grand Valley Metro Council – re: Clean Air Action
Display.
3. E-mail from Gatehouse Homeowners Association – re: Kent
County Sheriff Department.
4. Newsletter from Michigan Public Service Commission.

c. Education Requests

1. Stephanie Fast – Zoning Administrator Certificate – Grayling,
MI.

Motion was made by Trustee Koessel and supported by Trustee Shipley to
approve the Consent Agenda as presented. Motion carried unanimously.

Article 7. Financial Actions

a. Consider Approval of General/Special Funds for September, 2017.

Motion was made by Clerk Slater and supported by Trustee Koessel to
approve the General/Special Funds for September, 2017. Motion
carried unanimously.

**b. Consider Approval of Payables, Payroll and Transfers for
September, 2017.**

Motion was made by Trustee Lewis and supported by Trustee McDonald
to approve the Payables, Payroll and Transfers for September, 2017.
Motion carried unanimously.

Article 8. Unfinished Business

Article 9. New Business

072-2017 Consider Approval of Resolutions for Tris4Health to close public streets for Triathlon on June 10, 2018.
DDA/Economic Development Director Korhorn presented the request to the Board. Motion was made by Trustee Shipley and supported by Trustee Koessel to approve the Resolution for Tris4Health to close public streets for Triathlon on June 10, 2018. Motion carried unanimously by roll call vote.

073-2017 Consider Approval of the Universal Data Sharing Agreement with Michigan State Police and Authorize the Township Manager to execute it on behalf of the Township.
Supervisor Beahan reviewed the Agreement with the Board. Motion was made by Trustee McDonald and supported by Trustee Lewis to approve the Universal Data Sharing Agreement with Michigan State Police and Authorize the Township Manager to execute it on behalf of the Township. Discussion followed. Motion carried unanimously.

Article 10. Public Comments – Any comments...whether it is on the Agenda or not. (limit comments to 3 minutes)

Mark Bauer, 5870 Saddlehorn Dr., Belmont, MI and Jose Coriano, 418 Deleware St., were present regarding the licensing ability the State has recently announced considering for medical marijuana provision centers.

Kenneth Carey, 2929 Thornapple River Dr., inquired about the participation in the Pathway Open House. He relayed concerns regarding safety and whether it will be going to a vote.

Ryan Roe, Kent County Sheriff Community Policing Officer was present to update the Board on happenings in Cascade Township.

Article 11. Manager Comments

Article 12. Board Member Comments

Trustee Shipley offered the following comments:

- Thanked the residents for coming to the meeting.
- Thanked Deputy Roe for doing a great job.

Trustee Koessel offered the following comments:

- Will need to be excused for the November 1st meeting as he will be out of town.

Trustee McDonald offered the following comments:

- I think it behooves us to look holistically at our Township needs long term regarding a Facilities Evaluation and how we can involve the public.

Supervisor Beahan offered the following comments:

- Would like to thank the Board members who participated and attended the interviews for the Fire Chief position.

Article 13. Adjournment

Motion was made by Treasurer Peirce and supported by Trustee Koessel to adjourn. Motion carried unanimously.

Meeting adjourned at 7:30 p.m.

HIDDEN HILLS NEIGHBORHOOD ASSOCIATION

October 6, 2017

Mr. Ben Swayze, Manager
Cascade Township
2865 Thornhills Ave. SE
Grand Rapids, MI 49546

Dear Ben:

I recently spoke with Deputy Roe about the speed signs that are displayed on Cascade Road and Thornapple River Drive. Their design and placement makes them easily noticeable. He mentioned that these were purchased through a grant and that the township was considering purchasing additional signs. The Hidden Hills Neighborhood Association board would like to encourage the purchase of similar signs for use in specific situations in the township.

Over the years Deputy Roe has had the speed sign trailer deployed on Hidden Hills Avenue. Our street has a significant downhill slope for cars proceeding west to Cascade. These cars easily pick up speed as they go downhill. A similar situation occurs on Candlewood Drive for cars going to the Hidden Hills intersection. On both of these streets there are many young families with children that play in the street. Unfortunately many drivers aren't aware of how they increase speed on these slopes and they can easily reach 35-45 mph which poses a threat to walkers and children playing on the side of the streets.

Please let us know what we can do to encourage the purchase of more signs by the township. Thanks for all your work on behalf of the Cascade residents.

Sincerely,



William J. Weitzel
Board Member

cc: Deputy Roe

STAFF REPORT

TO: Cascade Charter Township Board
FROM: Steve Peterson, Community Development Director
REPORT DATE: October 18, 2017
MEETING DATE: November 1, 2017
CASE: #17-3367 -Cascade One

GENERAL INFORMATION

- A. Applicant: Cascade One LLC
Dave Barker
2721 Arbor Chase NE
Grand Rapids MI 49525
- B. Status of Applicant: Owner
- C. General Location: The property is located on the west side of Spaulding north of Abbeydale – 1701 Spaulding.
- D. Requested Action: Rezone to P.U.D. to allow for 31 lot subdivision.
- E. Existing Zoning on Subject Parcels: ARC, Agricultural Rural Conservation
- F. Zoning on Adjoining Parcels: North – ARC
South – R2 and PUD Abbeydale and Tall Pines
East – R1 frontage along Spaulding Ave
West – City of Kentwood
- G. Parcel Size: Approximately 36 acres
- H. Existing Land Use on Subject Parcel: Vacant
- I. Adjacent Area Land Uses:
North – Koetsier’s Greenhouse/Wetland Mitigation for M-6
South – Residential
East – Residential
West – Residential

STAFF ANALYSIS

- A. The applicant is requesting Final approval in order to rezone approximately 36 acres for a new Planned Unit Development called Cascade One. This rezoning request is for 31 single-family lots.
- B. This project is similar to the project they applied for in 2014. At that time the project was proposed for 27 single family lots. Due to the increase in the number of lots and the numerous layout changes I have determined that this should move forward as a new project rather than just an update of the old one. The developer has provided all new information for this new project.
- C. The property is currently zoned ARC, and the master plan recommends this area for Low Density single family residential.
- D. The applicant is requesting to cluster the homes in an open space concept with the development on the upland areas of the property.
- E. The developer is choosing to develop the project under our subdivision ordinance using the 25% open space method. This allows lot sizes as small as 25,000 sq ft. with public sewer and water. Since they are seeking approval with lots sizes less than that, they are requesting PUD rezoning. Lots range in size from 15,000 sq ft to 28,000 sq ft.
- F. They have submitted a test plan showing how they could meet the 50% open space method with 14,500 sq ft lots and have 33 lots without needing PUD rezoning approval.
- G. The applicant is attempting to use the 25% open space development technique for this project. The open space or common areas need to be clearly identified on the plan, along with a plan showing how they calculated the density to make sure it fits with our subdivision ordinance.
- H. These lots sizes would compare to those in the Jennydale, Abbeydale and Tall Pines subdivisions. However these subdivisions do not provide any open space or common areas.
- I. The subdivision includes the use of new public roads. This is a change from how the project was originally presented. The main issue was regarding the slope of the road connecting to Spaulding Ave. The developer has now received approval from the KCRC for the new road design and will proceed as a public road. The road names will need to be approved by KCRC.
- J. The developer has agreed to install the access to Spaulding Ave in the first phase in order to avoid construction traffic using Abbeydale.
- K. The development is proposed to be served by both public sewer and public water. The utility plans have been approved by the Township Engineer.
- L. The Township Engineer has also approved the Storm water plan for this project.

- M. The applicant is also proposing to connect to the Abbeydale subdivision to the south. This was contemplated when Abbeydale was constructed in the late 80's and early 90's. Due to the topography issue the development does not plan to connect the north for future development of that area.
- N. The plan does include a pedestrian connection from our path on Spaulding through the development to Cavalcade Dr in Kentwood. This will be a private walk that will be open to the public. This is similar to how we handled Manchester/Stoneshire and Watermark.
- O. The path crosses the Martin Beek Drain. The KCDC will have to permit the work in the drainage easement. This crossing is planned to be wooden boardwalk and would be part of the general common element to be maintained by the association.
- P. The site is impacted by some small wetland areas which should be evaluated for need of any MDEQ permits.
- Q. As we have done with other open space developments we have tried to include the most sensitive areas within the open space areas. This helps to protect these areas from being used or disturbed by future owners. The developer has done this on the site as well which requires the PUD rezoning to allow for some smaller lots than allowed, but this is only because they are keeping some the drainage system in the common areas.
- R. The plan includes an area about 3.8 acres in size that they are leaving out of the project. This area has direct connection to Cavalcade Dr in Kentwood. This area would be able to accommodate two parcels.
- S. The applicant has indicated the subdivision will have light poles and street trees in the development.
- T. The developer is also proposing smaller setbacks than normal to accommodate the smaller lot sizes. This is something that has been done with other projects, i.e. Watermark, Manchester, Burton Pointe.
- U. The Planning Commission held a public hearing on this matter at the September 11, 2017 meeting. At that meeting the planning commission approved the plan and has now forwarded a positive recommendation for the project, under the following conditions:
1. Phase one of construction shall include the construction of the road to Spaulding Ave and will allow for all construction traffic to use that access rather than Abbeydale Dr.
 2. The sidewalk to Cavalcade Dr will be separated from the proposed driveway.
 3. The sidewalk connection to Kentwood (Cavalcade Dr) from Spaulding Ave must be constructed before the 25th building permit is issued or 5 years after the project is started whichever comes first.
- V. The above conditions have been incorporated in the PUD Ordinance.

Standards

Section 16.03 of the Zoning Ordinance requires that a Planned Unit Development must demonstrate that:

Standard	Staff Comment
Granting of the Planned Unit Development rezoning will result in a recognizable and substantial benefit to the ultimate users of the project and to the community, where such benefit would otherwise be unfeasible or unlikely to be achieved.	The planned development is very similar to other residential PUD's. They have shown how they could develop the property with 33 lots by right and have chosen to use the PUD to develop it with 31 lots with some lot size exceptions.
In relation to underlying zoning, the proposed type and density of use shall not result in a material increase in the need for public services, facilities and utilities, and shall not place a material burden upon the subject or surrounding land or property owners and occupants or the natural environment	The density of the use is consistent with zoning and the master plan.
The proposed development shall be compatible with the General Development Plan of the Township, and shall be consistent with the intent and spirit of this Chapter	The overall use is compatible.
In relation to underlying zoning, the proposed development shall not result in an unreasonable negative economic impact upon surrounding properties	Being that the plan is consistent with the master plan I would not find any negative economic impacts associated to the surrounding properties.
The proposed development shall contain at least as much green area and usable open space as would otherwise be required by this Ordinance with respect to the most dominant use in the development	met
The proposed development shall be under single ownership or control such that there is a single person or entity having responsibility for completing the project in conformity with this Ordinance. This provision shall not prohibit a transfer of ownership or control, upon due notice to the Planning Director of the Township	met

Staff Recommendation

Staff recommends approval of the plan and associated P.U.D. ordinance.

Attachments: Site Plan
 Application
 PUD Ordinance



CASCADÉ CHARTER TOWNSHIP

2865 Thornhills SE Grand Rapids, Michigan 49546-7140

PLANNING & ZONING APPLICATION

APPLICANT: Name: CASCADÉ ONE LLC (DAVE BARKER)
 Address: 2721 ARBOR CHASE N.E.
 City & Zip Code: GRAND RAPIDS MI 49525
 Telephone: ED PYNNONEY 616-437-4288
DAVE BARKER 605-400-7875
 Email Address: ED.PYNNONEY@COMCAST.NET
DAVE.BARKER@COMCAST.NET

OWNER: * (If different from Applicant)

Name: SAME
 Address: _____
 City & Zip Code: _____
 Telephone: _____
 Email Address: _____

NATURE OF THE REQUEST: (Please check the appropriate box or boxes)

<input type="checkbox"/> Administrative Appeal	<input checked="" type="checkbox"/> Administrative Site Plan Review
<input type="checkbox"/> Deferred Parking	<input checked="" type="checkbox"/> P.U.D. - Rezoning *
<input type="checkbox"/> P.U.D. - Site Condominium *	<input type="checkbox"/> Rezoning
<input type="checkbox"/> Site Plan Review *	<input type="checkbox"/> Sign Variance
<input type="checkbox"/> Special Use Permit	<input type="checkbox"/> Subdivision Plat Review *
<input type="checkbox"/> Zoning Variance	<input type="checkbox"/> Other: _____ *

* Requires an initial submission of 5 copies of the completed site plan

BRIEFLY DESCRIBE YOUR REQUEST:**

APPROVAL OF REZONING FOR 3: LOT PRELIMINARY PLAT
AND 2 PARCELS

(**Use Attachments if Necessary)
-SEE OTHER SIDE-

LEGAL DESCRIPTION OF PROPERTY**:

PART OF N 1/2 OF THE SW 1/4 SECTION 6 T6N - R10W
CASCADE TOWNSHIP, KENT COUNTY, MICHIGAN

(**Use Attachments if Necessary)

PERMANENT PARCEL (TAX) NUMBER: 41-19 -06-302-001

ADDRESS OF PROPERTY: VACANT LAND - SPAULDING 1701 SPAULDING

PRESENT USE OF THE PROPERTY: VACANT LAND

NAME(S) & ADDRESS(ES) OF ALL OTHER PERSONS, CORPORATIONS, OR FIRMS HAVING A LEGAL OR
EQUITABLE INTEREST IN THE PROPERTY:

Name(s)

Address(es)

JAMES WILKSTON

2925 HILLCREST DR
NEW ERA, MI 49446

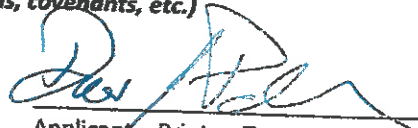
SIGNATURES

I (we) the undersigned certify that the information contained on this application form and the required documents attached hereto are to the best of my (our) knowledge true and accurate. I (we) also agree to reimburse the Cascade Charter Township for all costs, including consultant costs, to review this request in a timely manner. I (we) understand that these costs may also include administrative reviews which may occur after the Township has taken action on my (our) request.

I (we) the undersigned also acknowledge that the proposed project does not violate any known property restrictions (i.e. plat restrictions, deed restrictions, covenants, etc.)

CASCADE ONE LLC

Owner - Print or Type Name
(*If different from Applicant)



Applicant - Print or Type Name

DAVE J KRAWLER 2/2/17

Owner's Signature & Date
(*If different from Applicant)

Applicant's Signature & Date

PLEASE ATTACH ALL REQUIRED DOCUMENTS NOTED IN THE PROCESS REVIEW SHEET - THANK YOU

Rev. 7/24/14

Assessing
949-3765

Building
949-3765

Building & Grounds
682-4636

Clerk
949-1608

Fee
949-1320

Manager
949-1500

Planning
949-1500

Treasurer
949-1500



August 17, 2017
Project No. 080322

Mr. Steve Peterson
Cascade Charter Township
2865 Thornhills Avenue, SE
Grand Rapids, MI 49546-7192

Re: Meadows at Abbeydale
Site Plan Review

Dear Steve:

We have reviewed the site plan for Meadows at Abbeydale, located at 1701 Spaulding Avenue, prepared by Medema, Van Kooten & Associates. The current site plan and basis of this review is dated June 29, 2017. The proposed project is a 31-lot residential development with associated road and utility improvements. The 37-acre site is located in the Plaster Creek watershed, sub-drainage district Cascade West.

Stormwater and Drainage

Flood Control

The proposed project is a new development, so all improvements shall comply with the requirements of the Cascade Charter Township (Township) Stormwater Ordinance (SWO). The site is located in Stormwater Management Zone B, which requires detention of the 25-year storm event and a direct connection (overland or underground) of the 100-year storm event, or detention of the 100-year storm event. The SWO also requires the first 0.5-inch of stormwater runoff be detained and released over a 24-hour period.

The proposed stormwater management design includes a detention basin located at the southwest corner of the development. 14.3 acres of the site drains to the detention basin, 4.3 acres drains to an existing pond located at the east end of the development, and the remaining 18.3 acres is either landscaped open space, floodplain, or undeveloped. The detention basin was sized for the 25-year storm event for the entire 37-acre parcel and is therefore oversized for the actual drainage area of 14.3 acres. The design was intended to be conservative. The detention basin discharges through an outlet control structure to the Martin and Beak county drain, a Kent County Drain Commissioner (KCDC) drain.

The entrance drive to the development increases in grade from Spaulding Avenue into the site. It was not possible to capture stormwater runoff from the entrance drive and convey it to the detention basin located at the southwest corner of the site. The applicant attempted to discharge the entrance drive runoff to the Martin and Beak drain, located along the west side of Spaulding Avenue; however, the KCDC stated this drain was at full capacity and would not accept stormwater from the development.

The current stormwater design is to discharge runoff from the entrance drive to an existing pond located at the east end of the site. Stormwater runoff from the entrance drive will spill into a roadside ditch and a series of culverts will convey it to the pond. No stormwater runoff will enter Spaulding Avenue or the Martin and Beak drain. The facilities were sized for the 100-year storm event. FTCH requested the applicant provide calculations showing the proposed development would not increase the volume of runoff to the existing pond as it may impact existing property owners along Spaulding Avenue. The applicant provided a drainage analysis showing the existing drainage area to the pond is 6.0 acres and the proposed development would reduce this to 4.3



acres. The 100-year runoff volume to the pond will be reduced from 1.9 acre-feet to 1.4 acre-feet as a result of the proposed development.

Water Quality Control

The SWO requires the first 0.5-inch of stormwater runoff be detained and released over a 24-hour period. The stormwater detention basin outlet structure is designed to meet this requirement. Calculations and design details were provided by the applicant. The proposed design is in accordance with the SWO.

Stormwater Runoff

The applicant provided stormwater calculations to size the onsite detention basin. Calculations were also provided to determine the amount of stormwater runoff entering the existing pond. All stormwater runoff from the impervious areas of the site will discharge to the detention basin or pond. Therefore, the site will not see an increase in rate of stormwater leaving the site.

Drainage Plan

The applicant has submitted drawings, calculations, and additional documentation as required in the SWO Section 2.03, Drainage Plan. Please refer to the included checklist for items and comments on each item. Please note a maintenance agreement is required before construction begins. The agreement should be submitted to the Township for review. The maintenance agreement and plan should include at a minimum, cleaning of catch basin sumps, sediment and debris removal from the detention basin, and landscape maintenance of the detention basins to maintain the design volume and ensure the system is operating as it was designed.

Utilities

New public water and sanitary sewer is proposed for the development. The applicant coordinated the design with the City of Grand Rapids (City). New 8-inch water main and 8-inch sanitary sewer will connect to existing utilities in Abbeydale Drive at the south side of the site. Several of the lots will be served with force main laterals with private individual pumps. City permits will be required for the water and sanitary sewer connections prior to construction taking place.

Soil Erosion and Sedimentation Control

Soil Erosion and Sedimentation Control (SESC) measures are provided on the plan drawings. The applicant has included silt fence along the limits of clearing and grading, silt sacks in catch basins, and seeding with mulch at all disturbed areas of the site. SESC falls under the review and approval of the Kent County Road Commission and a permit is required before construction can begin. The SESC measures indicated on the drawings appear appropriate given the expected work.

Summary

The proposed stormwater design meets the Township SWO requirements for new developments. The applicant will need to apply for and obtain a number of permits (SESC, water and sewer from the City, Kent County Road Commission for the new driveway, and KCDC for the detention basin discharge to the County drain) prior to beginning construction. We recommend approval of the site plan from an engineering standpoint.

Mr. Steve Peterson
Page 3
August 17, 2017



If you have any questions or require additional information, please contact me at 616.464.3786 or nrtorrey@ftch.com.

Sincerely,

FISHBECK, THOMPSON, CARR & HUBER, INC.

A handwritten signature in black ink, appearing to read "N. Torrey", is positioned above the name of the sender.

Nathan R. Torrey, PE

pmb

Attachment

By email

cc/att: Mr. Michael L. Berrevoets, PE – FTCH



Cascade Charter Township

Storm Water Ordinance, Ordinance 7 of 2002, as amended by Ordinance No. 2 of 2008, 5/14/2008

Reviewing Engineer Comments are Italicized

OK – Received and Acceptable

NA – Not Applicable

NR – Not Received, Needs Follow-up, See Comments

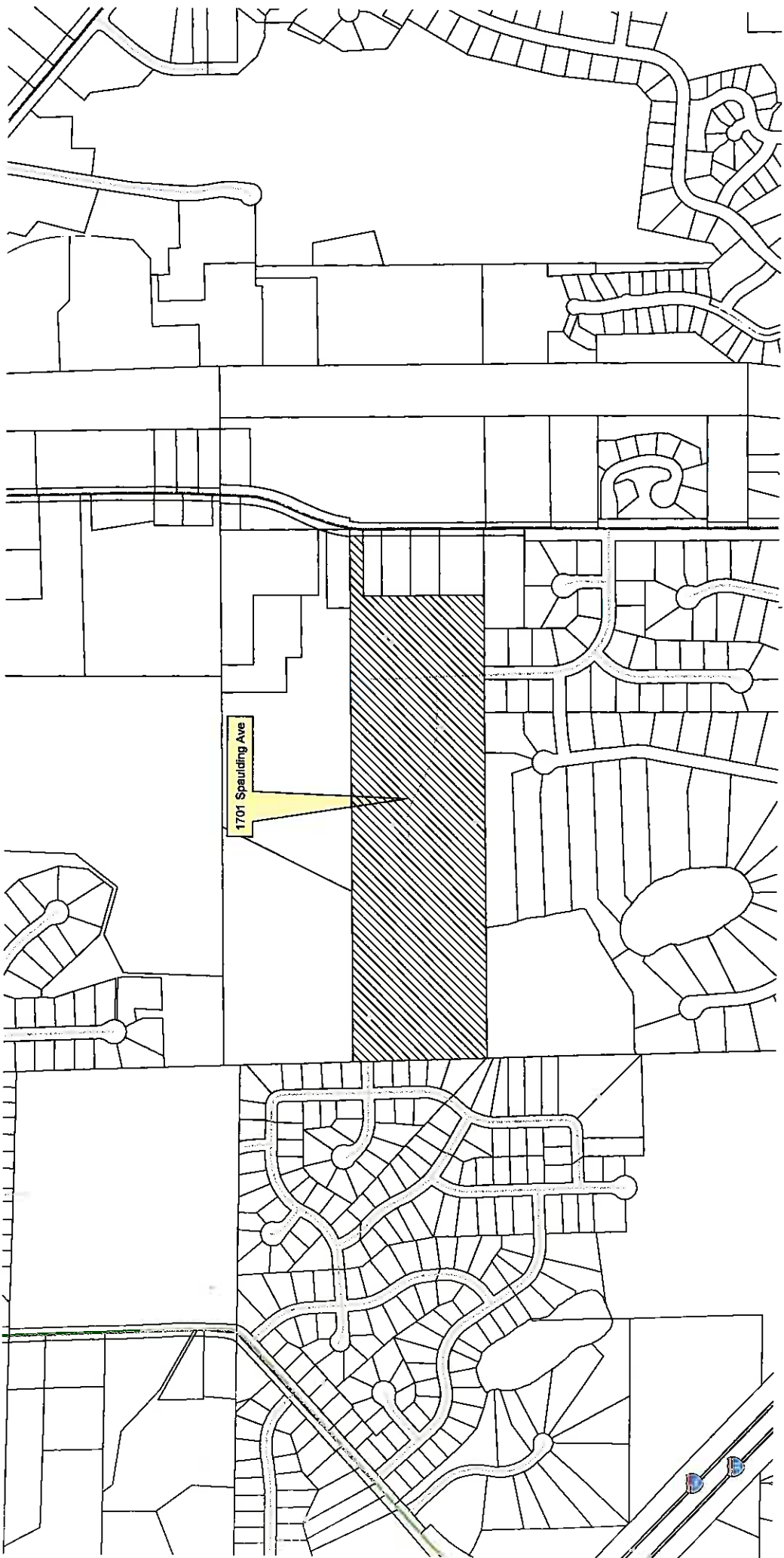
Meadows at Abbeydale

Drainage Plan Checklist

- OK (1) Location of the development site and water bodies that will receive storm water runoff
All stormwater runoff from the site is discharged to a detention basin or existing pond located onsite. The detention basin discharges through an outlet structure to the Martin and Beak County drain.
- OK (2) Existing and proposed topography of the development site, including the alignment and boundary of the natural drainage courses, with contours having a maximum interval of one foot (using USGS datum). The information shall be superimposed on the pertinent Kent County soil map
Existing and proposed contours have been provided.
- OK (3) Development tributary area to each point of discharge from the development
Stormwater calculations and tributary areas were provided by the applicant.
- OK (4) Calculations for the final peak discharge rates
Applicant provided calculations in design of the onsite storm sewer system and detention basin.
- OK (5) Calculations for any facility or structure size and configuration
Stormwater runoff calculations were provided by the applicant.
- OK (6) Drawing showing all proposed storm water runoff facilities with existing and final grades
The applicant provided a utility plan showing all proposed stormwater runoff facilities.
- OK (7) The sizes and locations of upstream and downstream culverts serving the major drainage routes flowing into and out of the development site. Any significant off-site and on-site drainage outlet restrictions other than culverts should be noted on the drainage map
The drainage map did not indicate any major offsite drainage routes flowing into the site.
- OK (8) An implementation plan for construction and inspection of all storm water runoff facilities necessary to the overall drainage plan, including a schedule of the estimated dates of completing construction of the storm water runoff facilities shown on the plan and an identification of the proposed inspection procedures to ensure that the storm water runoff facilities are constructed in accordance with the approved drainage plan
A construction schedule was included on the plans.
- OK (9) Plan to ensure the effective control of construction site storm water runoff and sediment track-out onto roadways
The SESC measures shown on the plan appear appropriate given the expected work. SESC falls under the review and approval of the KCRC and a permit is needed before construction can begin.



- OK (10) Drawings, profiles, and specifications for the construction of the storm water runoff facilities reasonably necessary to ensure that storm water runoff will be drained, stored, or otherwise controlled in accordance with this ordinance
The applicant provided calculations and design details for construction of the onsite storm sewer system.
- NR (11) Maintenance agreement, in form and substance acceptable to the Township, for ensuring maintenance of any privately owned storm water runoff facilities. The maintenance agreement shall include the developer's written commitment to provide routine, emergency, and long-term maintenance of the facilities and, in the event that the facilities are not maintained in accordance with the approved drainage plan, the agreement shall authorize the Township to maintain any on-site storm water runoff facility as reasonably necessary, at the developer's expense
Maintenance agreement was not provided and is required.
- OK (12) Name of the engineering firm and the registered professional engineer that designed the drainage plan and that will inspect final construction of the storm water runoff facilities
- NA (13) All design information must be compatible for conversion to Grand Valley Regional Geographic Information System (REGIS)
This is a privately owned system and will not be uploaded to REGIS.
- OK (14) Other information necessary for the Township to verify that the drainage plan complies with the Township's design and performance standards for drains and storm water management systems



**PROPOSED DRIVEWAY
1701 SPAULDING AVE SE**

10/18/2017



Scale 1" = 20'

RIVA
RIDGE
DRIVE

CAVALCADE
DRIVE

REMOVE EXISTING CONCRETE CURB AND BITUMINOUS PAVEMENT AS NECESSARY - SAW CUT EDGES. REPLACE EX. VALLEY GUTTER AS NECESSARY.

PROPOSED 24" CONCRETE CURB & GUTTER

PROPOSED ASPHALT DRIVEWAY

TRANSITION BITUMINOUS VALLEY GUTTER TO CURB

CONNECT TO EX WALK

PROPOSED CONCRETE SIDEWALK

PROPOSED CONCRETE SIDEWALK WITH INTEGRAL CURB

From: [Steven Van Kooten](#)
To: [Ed Pynnonen](#)
Subject: FW: DEQ Permit Requirements
Date: Monday, February 22, 2016 2:13:05 PM
Attachments: [Preliminary Plat 2015-09-10 for discussion.pdf](#)

Steven P. Van Kooten, P.S., P.E.
Medema, Van Kooten & Associates Inc.
252 State Street SE Suite 100
Grand Rapids, MI 49503
Ph 616 451-0639 Cell 616 893-8935

-----Original Message-----

From: Saldivia, Luis (DEQ) [mailto:SALDIVIAL@michigan.gov]
Sent: Monday, October 12, 2015 3:39 PM
To: Steven Van Kooten
Cc: Whitscell, Amanda (DEQ); Occhipinti, Matthew (DEQ); Crane, Joshua (DEQ)
Subject: RE: DEQ Permit Requirements

Steven:

Thank you for contacting us regarding the preliminary plat of Meadows at Abbeydale in Cascade Township, Kent County.

Your inquiry regarding the installation of a walking path with some type of crossing over the Martin Beak Drain would necessitate a permit from the Department Of Environmental Quality's (DEQ's) Water Resources Division (WRD) under Part 301, Inland Lakes and Stream, of the Natural Resources and Environmental Protection Act, 1994, PA 451, as amended

The permit application and information about our programs is available at www.michigan.gov/jointpermit or at <https://miwaters.deq.state.mi.us>.

I am copying Amanda Whitscell with this email since she handles this portion of Kent County. Please do not hesitate to contact Amanda Whitscell at whitscella@michigan.gov or at 616-356-0619 or you may contact me if you have additional questions.

Luis A. Saldivia
Grand Rapids District Supervisor
Water Resources Division
Department of Environmental Quality
616-710-2136

From: Steven Van Kooten [mailto:steve@mvkengineering.com]
Sent: Monday, October 05, 2015 4:58 PM
To: Saldivia, Luis (DEQ)
Subject: DEQ Permit Requirements

Mr. Saldivial,

The Cascade Township Planner, Steve Peterson, has asked me to send you a copy of our proposed

project to determine what permits from the DEQ are required.

There are some wetlands, ponds and flood plains on this site. We are planning on staying out of the wetlands and staying above the ordinary high water of the pond with our construction. The Township is requiring that we constructed a walking path from our proposed road, Brookdale Court, to the existing road, Cavalcade Drive. The walking path with be asphalt with some type of crossing over the Martin Beak Drain. We are going to do the minimum amount of grading to construct the path. There will be no other construction in the flood plain other than the path.

I have attached our preliminary plat drawing.

Steven P. Van Kooten, P.S., P.E.
Medema, Van Kooten & Associates Inc.
252 State Street SE Suite 100
Grand Rapids, MI 49503
Ph 616 451-0639 Cell 616 893-8935

From: [Steven Van Kooten](#)
To: [Ed Pynnonen](#); [Ed Pynnonen](#)
Subject: FW: Meadows of Abbydale
Date: Monday, February 22, 2016 12:49:40 PM
Attachments: [Meadows of Abbydale SITE PLAN.pdf](#)
[Permit Application.doc](#)

Steven P. Van Kooten, P.S., P.E.
Medema, Van Kooten & Associates Inc.
252 State Street SE Suite 100
Grand Rapids, MI 49503
Ph 616 451-0639 Cell 616 893-8935

-----Original Message-----

From: Latvaitis,Angie [mailto:angie.latvaitis@kentcountymi.gov]
Sent: Wednesday, February 17, 2016 10:09 AM
To: Steven Van Kooten
Cc: Boomstra,Brad
Subject: RE: Meadows of Abbydale

Morning Steve,

Being a Site Condo, we will not review unless Cascade Township wants our recommendation, which is not typical.

There would however be a permit to discharge into the Martin & Beak Drain for both connections; by Spaulding Ave & to the west by the channel.

Being two different locations, we would require a \$100 fee. Please submit the fee, permit application and computations showing that the historic flow is met.

Sincerely,

Angie Latvaitis

Staff Engineer
Office of the Kent County Drain Commissioner

Main Office: (616) 632-7910

Direct: (616) 632-7912

Fax: (616) 632-7915

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From: Steven Van Kooten [mailto:steve@mvkengineering.com]

Sent: Monday, February 15, 2016 4:20 PM

To: Latvaitis,Angie

Subject: Meadows of Abbydale

Angie,

Attached is our site plan for this project. We talked about this project awhile back. At that time you indicated that the drainage along Spaulding Ave was having some problems and we could not just allow the runoff from our new street to enter the storm sewer in Spaulding. I think I came up with a solution to that problem. What we have done is changed the development to a Site Condo with private streets. In our private street we will have underground detention with the capacity to hold a 25 year storm with a release rate of 0.13 cfs per acre. The detention pond would release and overflow into Spaulding Ave.

I am not sure if you are required to approve our plans now that it is a site condo. If you are required to approve our plans, I would like your preliminary approval on the attached site plan. If you are not required to approve them I would at least like your thoughts and comments on the preliminary design.

Thanks,

Steven P. Van Kooten, P.S., P.E.
Medema, Van Kooten & Associates Inc.
252 State Street SE Suite 100
Grand Rapids, MI 49503
Ph 616 451-0639 Cell 616 893-8935

CASCADE CHARTER TOWNSHIP
Ordinance #__ of 2017
AN ORDINANCE TO AMEND THE CASCADE CHARTER TOWNSHIP
ZONING ORDINANCE AND ZONING MAP TO ESTABLISH THE
CASCADE ONE
PLANNED UNIT DEVELOPMENT PROJECT.

Cascade Charter Township (the "Township") Ordains:

Section I. An Amendment to the Cascade Charter Township Zoning Ordinance.

The application received from Dave Barker of Cascade One LLC (hereinafter referred to as the "Developer") for Planned Unit Development designation for the proposed Cascade One Planned Unit Development Project (hereinafter referred to as the "Project") was recommended by the Cascade Charter Township Planning Commission for approval at the September 11, 2017 Planning Commission meeting. The Project is recommended for rezoning from ARC, Agricultural Rural Conservation to PUD, Planned Unit Development, thus permitting a site condominium development. This action requires an amendment to the Cascade Charter Township Zoning Ordinance and Zoning Map to incorporate the Planning Commission's recommendations and the Cascade Charter Township Board of Trustees' action on the November 1, 2017.

Section II. Legal Description.

The legal description of the Project is made up of the following:

That part of the SW 1 /4 of Section 6, T5N, R1 OW, Cascade Township, Kent County, Michigan, described as: Commencing at the NW corner of said SW; thence S02°51'20" E 646.86 feet along the west line of said SW 1/4; thence N88°38'54"E 604.85 feet along the north line of the south 12.00 feet of the N 1 /2 of the N 1 /2 of said SW 1/4 to the point of beginning; thence N88°38'54"E 2,059.96 feet; thence S01 °27'49"E 66.00 feet along the N-S 1 /4 of said section 6; thence S88°38'54"W 300.00 feet along the south line of the north 54.0 feet of the S 1/2 of the N 1/2 of said SW 1/4; thence S01 °27'49"E 607.22 feet along the west line of the of the east 300.00 feet of said SW 1/4; thence S88°38'32"W 2,348.43 feet along the south line of the N 1/2 of said SW 1/4; thence N02°51'18"W 342.92 feet along the west line of said SW 1/4; thence N87°08'40"E 604.64 feet; thence N02°51'21"W 314.90 feet to CENTER OF SECTION

Section III. General Provisions.

The following provisions shall hereby apply to the Project, in addition to those provisions outlined in Chapter 16 of the Cascade Charter Township Zoning Ordinance (Ordinance No. 11 of 1988, as amended).

Section IV. Purpose.

The Project occupies approximately 36 acres of land in the Township. The Project will be a site condominium development containing 31 single-family site condominium units. Approximately 41% of the property is to be preserved as open space. This technique has been chosen by the

Developer to give it and the eventual owners of each unit more control over the Project's aesthetics and appearance. This development technique provides the Developer with the ability to develop the Project in a manner to meet market expectations where more traditional mechanisms such as creating subdivision plats do not.

The regulations contained herein are established to define the procedures necessary to ensure high quality development in the Project. Additionally, they are designed to achieve integration of this development with adjacent land uses.

Section V. Approval Limitations.

- A. The provisions of this Ordinance/Ordinance amendment ("this Ordinance") are not intended as a substitute for the Cascade Charter Township Zoning Ordinance and the General Development Plan, nor do they in any way relieve the Developer from obtaining all approvals and permits required by the Township, except as otherwise expressly provided herein. In the event that a development issue or site plan element is not expressly addressed by this Ordinance, the specifications and requirements of the Cascade Charter Township Zoning Ordinance shall apply. Furthermore, all other applicable Cascade Charter Township ordinances shall still govern the Project where applicable.
- B. Except as expressly otherwise provided herein, the Developer and his assigns must meet all applicable provisions, ordinance requirements, and regulations of Cascade Charter Township, as well as federal and state law, and must obtain all necessary approvals from state and county governmental agencies that are required for construction, operation, or use.
- C. This PUD approval is expressly contingent upon all conditions of approval herein remaining fully effective and valid. If any condition imposed herein is determined to be illegal or contrary to law as a result of a successful legal challenge by the Developer or its assigns, or any other party, the Township reserves the right to review the entire Project under the PUD provisions of the Cascade Charter Township Zoning Ordinance, and further, to withdraw its approval of this PUD if the Township finds that, absent the effect of any condition imposed herein, the PUD no longer meets the standards for PUD approval contained in the Zoning Ordinance.
- D. All conditions contained herein and in the final approved site plan shall be binding upon the Developer, as well as its successors, tenants and assigns. The conditions may be modified or amended only pursuant to a formal amendment of the PUD approval, approved site plan, and ordinance amendment. The Project must be constructed and operated, and all properties therein used, in strict compliance with the PUD approval (including this Ordinance and the final approved site plan), and no deviations can occur without prior formal written approval by the Township. So-called minor deviations shall not occur unilaterally by the Developer or its successors, tenants, or assigns. Any deviation without

prior formal written approval by the Township will constitute a violation of this Ordinance and the Cascade Charter Township Zoning Ordinance.

- E. **This approval document shall be recorded with the Kent County Register of Deeds by the Developer prior to construction occurring on site and shall run with and bind the lands involved. Copies of this recorded document shall be supplied by the Developer to the Cascade Charter Township Clerk.**
- F. Failure to comply with the site plan or any condition of approval herein shall be deemed to be both a nuisance per se and a violation of the Cascade Charter Township Zoning Ordinance.
- G. **Prior to recording a copy of this document as specified in Section V(E) hereof, the Developer shall type the following statement onto the end of this document (or add an additional page to the document) as follows, and shall sign and date the same:**

“I, _____, have fully read the above PUD ordinance amendment, understand its provisions and fully agree with all requirements and conditions contained in the same, on behalf of myself and my assigns, successors and transferees in and to the property involved.”

Section VI. Site Condominium Documents and Plans.

- A. Specific controls relating to architectural elements, common elements of the site condominium project, construction materials, size and space requirements, improvements and out buildings, specific prohibitions and rules of conduct shall be governed by site condominium bylaws and master deed. These restrictions shall become part of this Ordinance by reference.
- B. The Project shall be developed exactly in accordance with the site plan approved and signed by the Township. The site plan shall indicate where each building envelope will be located and shall provide appropriate measurements demonstrating compliance with Section 16.11(2) of the Zoning Ordinance. Engineering plans and documents relating to utilities, topography, drainage, and the survey of the Project shall be reviewed and approved by the Township Engineer. Approval of these documents shall be based upon their meeting the requirements of Section 16.11(4) of the Zoning Ordinance and also meeting recognized, acceptable engineering standards and practices. Once it has been determined that the plans have met Township requirements, the Township Engineer shall sign and mark these plan documents as “Approved,” and forward them to the Developer. Only approved plan documents shall be recorded with the appropriate county and state agencies.
- C. The number of building sites may be reduced or consolidated within the Project only after the review by and written approval of the Township Planning Department. The proposed changes to the site/survey plan to reduce or

consolidate building sites shall be reviewed by the Planning Department to ensure compliance with the Cascade Charter Township Zoning Ordinance, this PUD Ordinance, and any other requirements. Once approved by the Planning Department, the amended site/survey shall then be recorded with the Kent County Register of Deeds Office and the appropriate state agencies by the Developer at his cost. A copy of the recorded site/survey plan shall be forwarded to the Planning Department, so that accurate files regarding the development can be maintained.

Section VII. Permitted Uses.

The permitted uses for the Cascade One PUD are as follows:

- A. Single Family Residences.
- B. Accessory buildings customarily incidental to a single family residence, subject to the provisions of Section 4.08 and 4.09 of the Cascade Charter Township Zoning Ordinance, as it may be amended.
- C. Signs. All signs for the Project shall conform with Section 6.02 of the Cascade Charter Township Sign Ordinance (Ordinance 14 of 1997, as amended).

Section VIII. Design Guidelines, Requirements and Limitations.

The Project shall be developed in exact accordance with the site plan approved by the Township. No alterations, expansions or additions may occur as to the Project without a formal amendment to this Ordinance, unless expressly otherwise authorized herein.

- A. Maximum Number of Residential Units - The maximum number of single-family detached site condominium units within the Project shall be limited to thirty-one (31) units.
- B. Maximum Building or Structure Height - 35 feet or 2½ stories whichever is the less.
- C. Setback Requirements

All site condominium buildings and structures shall meet the following minimum setback requirements:

- 1. Front Yard Setback: 25 feet
- 2. Side Yard Setback: minimum of 10 feet with both sides totaling at least 20 feet
- 3. Rear Yard Setback: 25 feet.

- D. Minimum Floor Area

Each dwelling on a site condominium unit shall contain a minimum of:

1. One Story & Bi-Level – 1,800 square feet on the main floor, top floor of a bi-level, finished livable area above grade level, exclusive of garages, decks, porches and breezeways.
 2. Two Story – 2,000 square feet, with a minimum of 800 square feet on the first floor, finished livable area above grade level, exclusive of garages, decks, porches and breezeways.
- E. Street Trees. All street trees shall be planted after each home is constructed in compliance with Township regulations
- F. Sidewalks. All sidewalk on the site shall be built along with the homes construction for each lot. All sidewalk must be construed to connect Spaulding Ave to Cavalcade Dr (Kentwood) before the 25th building permit is issued or with five years of the start of the project whichever is first. The sidewalk connecting to Cavalcade must be separated from the proposed drive off from Cavalcade Dr.

Section IX. Public Street Development.

- A. The Developer has chosen to construct public roads to serve this development. these plans must be done in accordance with the Kent County Road Commission.
- B. The developer has agreed to construct the access to Spaulding Ave first to allow all construction traffic to use this entrance rather than the connection to Abbeydale Dr.
- C. No combustible building materials may be erected on the Project until a temporary access road is constructed to within 100 feet of the furthest point of a structure. Such road shall be a minimum 18 feet wide and be able to support 20 tons on a single axle with dual wheels and standard road tires.

Section X. Temporary Buildings.

No structure of a temporary nature; trailer, tent or construction shack shall be constructed, placed or maintained within the Project except accessory to and during construction of any building or infrastructure improvement.

Section XI. Utilities.

- A. Water and Sewer – The individual units in the Project will be served by public sewer and public water. Such systems shall be designed, installed, and maintained pursuant to all applicable requirements of the City of Grand Rapids.
- B. Stormwater Drainage - All proposed stormwater drainage facilities shall be reviewed and approved by the Township Engineer, and the Kent County Drain Commissioner's office, and the Michigan Department of Environmental Quality

(if it has jurisdiction) prior to the development of the Project. The Developer shall provide the Township Planning Department with copies of all correspondence and permits received from the Kent County Drain Commissioner and the Michigan Department of Environmental Quality regarding stormwater disposal.

- C. The Developer shall provide all necessary easements within the Project for telephone, electricity, gas and cable television to the appropriate utility provider without cost. Said easements shall be recorded with the Kent County Register of Deeds and be provided to each utility provider for their records.
- D. Exterior Lighting. All street lighting shall either be installed prior to the issuance of any certificate of occupancy for the first building in the Project or paid for prior to the issuance of any certificate of occupancy for the project.

Section XII. Soil Erosion Control Requirements.

The Developer shall submit a soil erosion control plan showing all temporary and permanent soil erosion control measures to be taken before, during, and after construction on the Project. This plan shall be reviewed and approved by the Township Engineer prior to commencing any excavation on the site.

Section XIII. Performance Guarantee.

To ensure compliance with this Ordinance and any conditions herein, the Township may require reasonable performance guarantees to ensure completion of improvements such as, but not limited to, landscaping, drainage, lighting, roads, and utilities. The Township Board, Engineer, or Planning Department may require such guarantees at any time they deem reasonably necessary to ensure completion of the improvements. The form (including the bank or surety involved), duration, and amount of the performance guarantee as shall be approved by the Township.

Section XIV. Permanent Common Open Space.

The permanent common open space area is to remain in its present undeveloped state in perpetuity. To ensure this occurs, the following regulations shall apply to the permanent common open space area:

- A. No buildings, structures, fences, or driveways shall be erected, constructed or placed within the common open space area. All improvements shown on the approved site plan dated 9/25/17, may encroach into this area provided they are consistent with the development plan for this Project.

Section XV. The Gerald R. Ford International Airport.

Within the recorded Master Deed, the Developer shall expressly disclose in writing that the Project is located in the vicinity of the Gerald R. Ford International Airport and that there may be noise, vibration, and property valuation impacts associated with such location.

Section XVI. Consistency of the Master Deed and/or Deed Restrictions/Covenants with the PUD Approval.

If the Project will be a condominium project (in whole or in part), the master deed (and attachments) shall be reviewed and approved by the Township Attorney prior to final recording to ensure consistency with this Ordinance. If some or all of the Project will be governed by deed restrictions/restrictive covenants apart from a condominium master deed, such deed restrictions/restrictive covenants shall be reviewed and approved by the Township Attorney before recording to ensure consistency with this Ordinance.

Section XVII. Consistency With Planned Unit Development (PUD) Standards.

The rezoning to Planned Unit Development will result in a recognizable benefit to the ultimate users of the Project and to the community. Current and future residents will recognize the benefits of a residential development that offers a low-density land use.

In relation to the underlying zoning (ARC) the Township finds the Project will not result in a material increase in the need for public services, facilities and utilities and will not place a material burden upon the subject property and the surrounding properties. The Project is not anticipated to cause undo impact to the stormwater drainage of the surrounding area. All stormwater and soil erosion control plans have been approved by the Township Engineer and the appropriate County and State agencies.

The Project has been determined by the Township to be compatible with the 1999 Comprehensive Plan of the Township and with the spirit and intent of the Planned Unit Development Chapter of the Zoning Ordinance. The Project has been determined to be a "Residential" use, which is consistent with the Cascade Township Comprehensive Plan.

The Township finds the Project will not result in an unreasonable negative economic impact upon surrounding properties.

The Township finds the Project to have at least the same amount of green areas and usable open space than would typically be required by the Township Zoning Ordinance.

Finally, the Township recognizes the Project will be under single ownership or control. The Township recognizes that the Developer or its assigns will retain ownership and control of the Premises until a majority of the site condominium units are purchased for single family residential purposes.

Section XVIII. Effective Date.

This Ordinance shall become effective seven (7) days after publication of the ordinance, or a summary thereof, in *The Grand Rapids Press*, a newspaper of general circulation within Cascade Charter Township.

The foregoing Ordinance was offered for adoption by Board Member _____, supported by Board Member _____. The roll call vote being as follows:

YEAS:

NAYS:

ABSENT:

Sue Slater
Cascade Charter Township Clerk

CERTIFICATION

I hereby certify the foregoing to be a true copy of an Ordinance adopted at a Regular Meeting of the Cascade Charter Township Board on the ____ day of _____ 2017.

Sue Slater
Cascade Charter Township Clerk

Cascade Township Planning

Cascade MI

Case No 17-3367, 1701 Spaulding Ave

I am unable to attend a public hearing September 11, 2017 to discuss development of a parcel located at 1701 Spaulding Ave. I reside at 5101 Abbeydale Dr and welcome new neighbors and understand a desire to develop property. I would like the township to consider the following which may or may not currently be part of the new development:

If Abbeydale Drive is extended to a neighborhood of homes it should be extended as a public road which the existing road is. Continuation of the road should be similar in width as this would be the main road through both a new development and Abbeydale Meadows.

If the road transitions to a private or narrower street consideration could be given to a gate similar to what exists between Abbeydale Meadows and Tall Pines which easily allows emergency vehicle access.

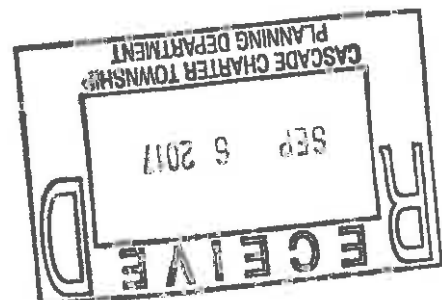
Road access at Spaulding to a new development should be adequate to allow simultaneous entrance and exit of vehicles comparable in width to Abbeydale Meadows entrance.

The existing developments west of Spaulding between Burton and Cascade Rd have multiple homesites with one primary entrance per neighborhood (Tall Pines, Jennydale, Abbeydale Meadows). The new development could in similar fashion have one entrance off Spaulding Ave. If a second entrance via Abbeydale Drive is desired please strongly consider the concerns and impact on the adjoining neighborhood and if the majority would like to see fewer new homesites please factor this into a decision. The number proposed will greatly impact an existing subdivision. During the initial 1990s development of Abbeydale Meadows there was a potential for more homesites, a dozen or so homes, nothing close to 31.

Thank you for any consideration to the above items which may already be addressed by the property owner, township and road commission. Increased traffic is not something most people look forward to but extension of a road is not a bad thing. Safety and enjoyment of all residents in the area I am certain are being considered as decisions are made.

Barbara Lovinger 616-450-4040

BLovings@aol.com



Steve

From: tback1@aol.com
Sent: Wednesday, September 06, 2017 4:55 PM
To: Steve
Subject: Cascade 1 - Sept 11,2017 public hearing

Steve,

I am unable to attend the public hearing next Monday, but would like to share a concern of mine.

With respect to Cascade 1, the meeting is to rezone the property to a Planned Unit Development with 31 home sites. If the primary access to this development is Abbeydale Drive, I am opposed to this. My understanding is that a primary entrance is being considered at Spaulding Avenue. I urge the Township not to make any decisions on this development until the primary entrance off of Spaulding Avenue is formally approved by the Kent County Road Commission.

Tom Back

Steve

From: Bueche, Brian <bbueche@kentcountyroads.net>
Sent: Tuesday, September 05, 2017 5:07 PM
To: abbeydalehoa@gmail.com
Subject: Meadows at Abbeydale -- proposed development

Ms. Ingrid Anastasiu (*HOA Abbeydale Estates*),

As follow-up to our telephone conversation this morning, I am sending you this email to expand on some of the items we discussed.

The **general process** of developing a new public road for take-over by the Kent County Road Commission is as follows:

- (1) Formal project plan submittal to municipality (usually township)
- (2) Municipality (usually township) tentative preliminary planning and board approval of the development plan for conformance with ordinance provisions and processes.
- (3) Formal project plan submittal to Road Commission (and other agencies as required)
- (4) Road Commission Board preliminary approval (and other agencies as required)
- (5) Municipality preliminary approval of project plan
- (6) Developer's engineer prepares improvements final construction plans to meet Municipal, Road Commission, and other agencies requirements
- (7) Municipal, Road Commission, and other agencies review and approve construction plans
- (8) Developer hires contractor to build proposed public (and private) improvement to meet requirements
- (9) Municipal, Road Commission, and other agencies accept the satisfactorily built improvements
- (10) Municipal, Road Commission, and other agencies take-over the satisfactorily built improvements for use by the public
- (11) Road Commission maintains public streets

The developer has the financial and physical responsibility to build the proposed public street(s) to meet Road Commission requirements.

A project's schedule is that of the developer's providence, meaning that the developer determines when their project will be submitted for Municipal, Road Commission, along with other agencies for required reviews and approvals, including responses to questions and comments. The developer's scheduling providence includes build-out phasing along with the contract award and completion of improvements construction.

KCRC staff has been working with the developer and their professional designs to find workable design solutions to the unique topography issues of this site related to providing acceptable public street access and extension.

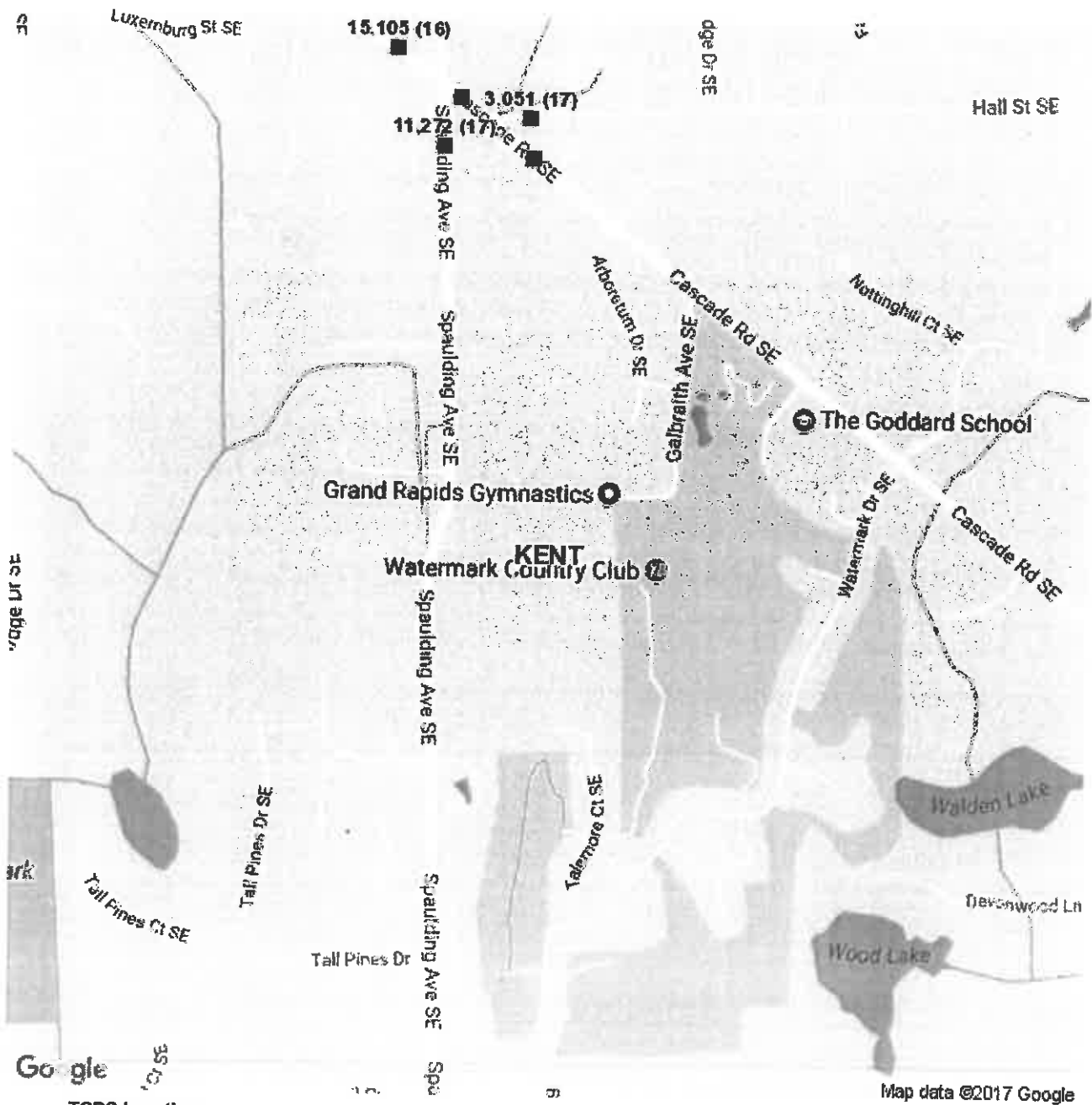
The developer has shared with KCRC conceptual layout and grading plans to work out major design issues; however, has not made a formal submittal for Board consideration of preliminary approval.



Brian Bueche, P.E.

Engineer for Plats & Public Streets
p. (616) 242.6901 ext. 6911 | f. (616) 242-6974
bbueche@kentcountyroads.net

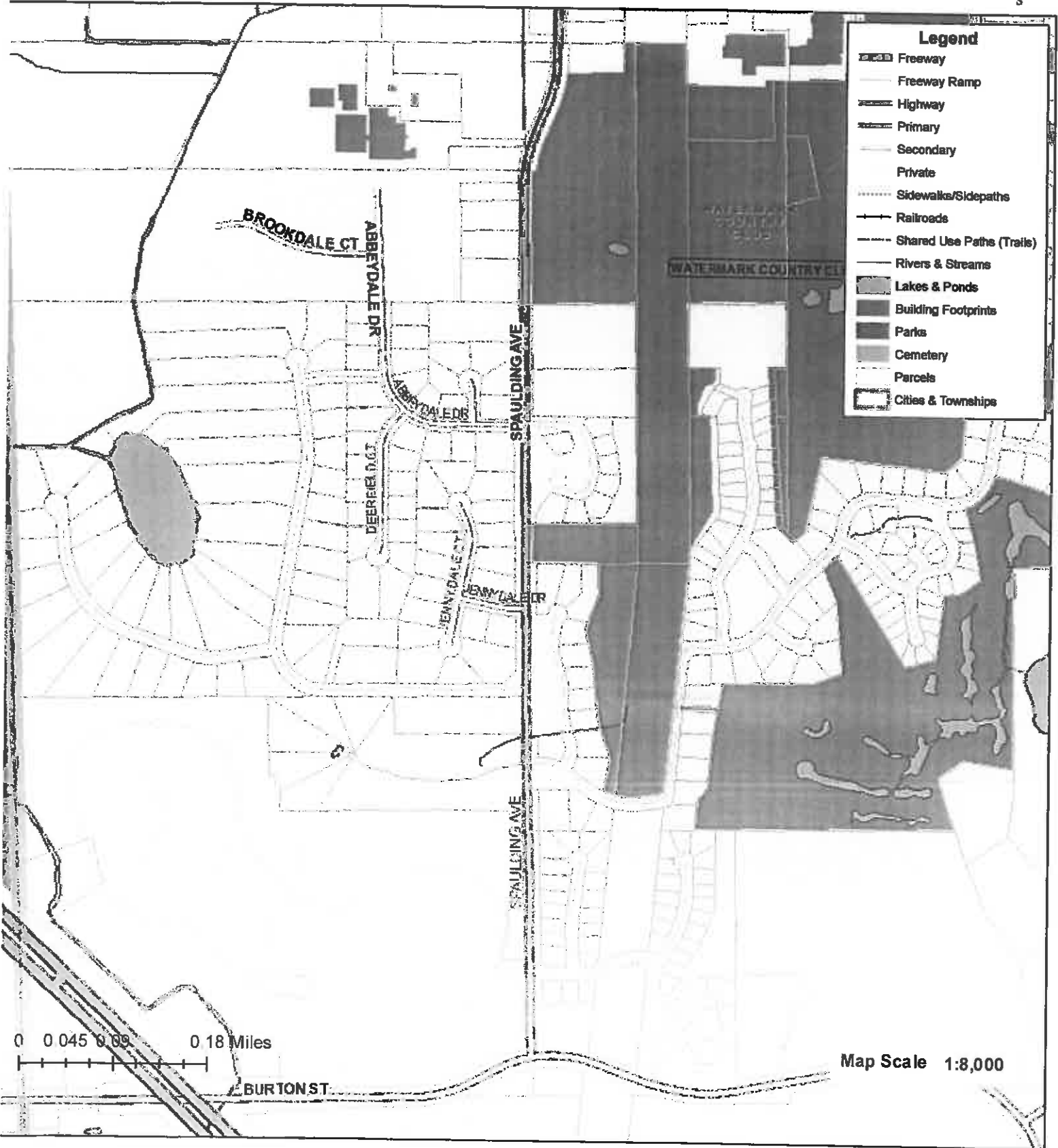
Kent County Road Commission
1500 Scribner Avenue NW, Grand Rapids, MI 49504
kentcountyroads.net



- Google
- TCDS Locations**
- Short
 - Continuous
 - WIM
 - Located Short
 - Located Continuous
 - Located WIM

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TITLE

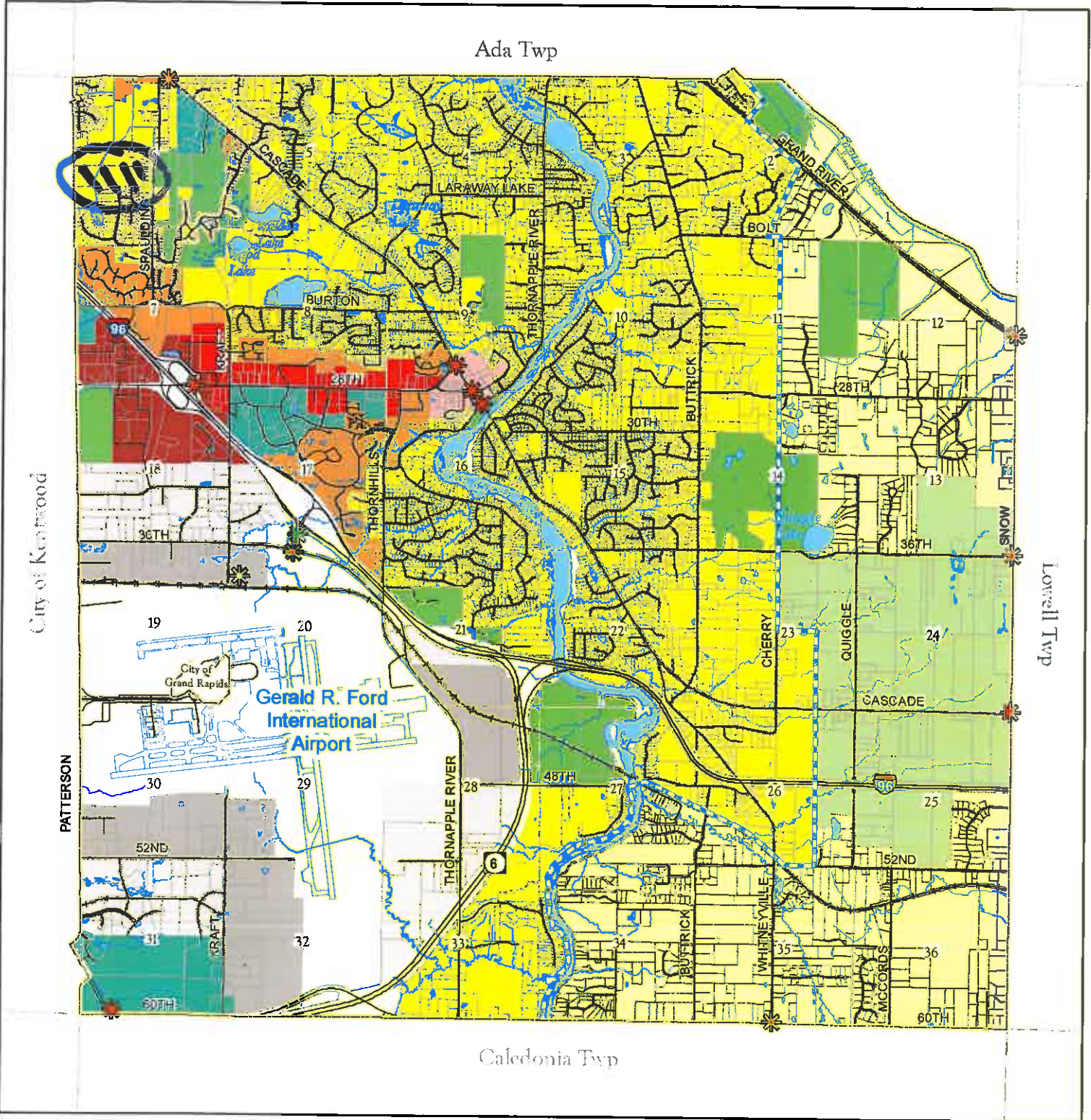


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Ada Twp



Caledonia Twp

Cascade Charter Township

Kent County, Michigan

Map 15 Future Land Use

Legend

- Gateway Feature
- Park 'n' Ride
- Rail Station
- Utility Service Area
- Farmland Preservation
- Rural Residential
- Suburban Residential
- Community Residential
- Village Commercial
- General Commercial
- Highway Commercial
- Mixed Use
- Heavy Industrial
- Light Industrial
- Community Facility / Golf Course



W&W
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Williams & Works
A Division of Jacobs
616.294.1300 phone • 616.294.1381 fax
300 Glenview Road, Grand Rapids, MI 49503

April 22, 2009

have been identified in the Natural Features Inventory. Subdivisions and site condominiums should be allowed as a special land use, with standards in place to ensure adequate buffering, preservation of open space, deep setbacks from roadways, and preservation of natural features as identified in the Natural Features Inventory.



SUBURBAN RESIDENTIAL

Description: A significant portion of the Township has been developed as suburban style single family residential neighborhoods as a result of historic planning efforts by the Township. These communities are relatively homogeneous in form and land uses, scaled primarily for passenger car travel and developed primarily for families with small and school-age children. New suburban residential areas should incorporate pedestrian access connecting cul-de-sac subdivisions to the Township's non-motorized trail system, when available or planned. New development within the suburban residential areas should also provide an internal trail or sidewalk system to encourage walking, biking, and healthy neighborhoods.

Location: The suburban residential land use category is located in the central portion of the Township and within the utility service boundary.

Desired Uses and Densities: The primary land use within this area will be single family homes developed in subdivisions or site condominiums on lots ranging from 1/3 acre to 1 acre (i.e. 1 to 3 dwelling units per acre) or in conservation clusters that result in the preservation of significant open lands and overall densities of 3 or more dwelling units per acre. The Township should explore different tools that will provide for the extension of utilities as the result of new development. Such tools may include requiring utility extensions when existing utilities are close by, allowing options for developers to choose from in those areas that are further out but still inside the utility boundary, and other tools with the goal of increasing the number of homes connected to municipal water and sewer helping to maintain quality ground water supplies and encourage sequential development within the utility boundary. Traffic patterns will be established to safely move vehicles through local streets to connectors and to arterials while minimizing vehicle/pedestrian conflicts. A network of pedestrian and bike trails, sidewalks, clear pedestrian crossings and traffic calming techniques will be utilized to promote safe non-motorized and motorized transportation. The neighborhood character will also be enhanced with sidewalks, street trees and street lights. In addition to single family homes, suburban residential neighborhoods may include schools, neighborhood parks, churches and similar uses that support quality residential neighborhoods. Police and fire service to these



CASCADE CHARTER TOWNSHIP
2865 Thornhills SE Grand Rapids, Michigan 49546-7140

Date: November 1st, 2017
To: Supervisor Beahan and Township Board Members
From: Ben Swayze, Township Manager
Subject: 60th Street Watermain Connection Project

FACTS:

In June of this year, the Cascade Township Board authorized the purchase of a section of watermain located in the north right-of-way of 60th Street from Caledonia Township. You'll recall that in 2002 Caledonia Township completed their watermain expansion project on 60th Street during which water utilities were installed in the north right-of-way without the permission of Cascade Township. At the time, Cascade and Caledonia Township reached an agreement to allow Caledonia to keep their watermain in the north right-of-way of 60th Street. In that agreement, Caledonia Township agreed to accommodate the needs Cascade Township should we need to exercise our rights to utilize the right-of-way for infrastructure expansion.

With the pending consideration of the Garden Apartments project located at Broadmoor and 60th Street, Cascade reached out to Caledonia to negotiate how the Cascade infrastructure needs would be accommodated. After discussing several options, the two Townships agreed to pursue the option of Cascade purchasing the water utility infrastructure from Caledonia Township and connecting it to the Grand Rapids system. Caledonia would then be responsible for installing new watermain to serve their needs. The purchase agreement was approved by each Township Board in June 2017, and Cascade Township has agreed to purchase the section of watermain for \$139,531.

As part of the project, the Township is required to make the necessary steps to disconnect the watermain from the Caledonia system and connect it to the Grand Rapids system. An initial connection needs to be made at the intersection of Kraft and 60th Street. When the Garden Apartments project moves forward, the developer will be responsible for the looping connection between the 60th Street watermain and Town Center Drive, or as otherwise required by the City of Grand Rapids.

The purchase agreement with Caledonia Township called for the transfer of ownership of the watermain to take place 180 days after closing, or at a time otherwise agreed upon by the Townships. We have delayed the transfer of ownership of the watermain until Caledonia Township has completed their new looping watermain, which should be completed this fall.

In anticipation of the transfer of ownership of the watermain, Fishbeck was directed to seek bids for the connection of the acquired watermain to the Grand Rapids system. Bids were sought from three pre-qualified contractors, and the results of the bids are attached for your review.

Attached for your review are:

- Approved 60th Street Water Main Purchase Agreement
- Memo from Fishbeck outlining bidding results and recommendation
- Bid tabulation form detailing bids from all three contractors.

ANALYSIS & CONCLUSIONS:

The low bidder for the project is Dykema Excavators, Inc. While the firm has not completed projects for Cascade Township in recent years, they have completed City of Grand Rapids watermain work and have worked with Fishbeck on successful projects in other jurisdictions. Fishbeck has recommended approval of the bid from Dykema.

This project was originally bid with a construction timeframe of October 30, 2017 – November 17, 2017. After consideration of several factors including the MDEQ permitting process, the KCRC permitting process and the completion timeframe of the new Caledonia Township watermain loop by the Caledonia Township contractor, it was determined that the Township should consider a spring 2018 construction period. Dykema Excavators have agreed to honor their pricing for a spring 2018 construction period, and the Garden Apartments developer has indicated that a change to the spring 2018 construction period would not negatively affect their project.

FINANCIAL CONSIDERATIONS:

If approved, the connection project, as well as some engineering, will be budgeted in the Infrastructure Revolving Fund (IRF) in the FY18 Budget. The IRF has a fund balance of \$1.6 million as of 12/31/16. The cost of the project is broken down as follows

<i>Watermain Purchase:</i>	\$139,531 (FY17 Budget)
<i>Watermain Connection:</i>	\$101,309 (FY18 Budget)
<i><u>Project Engineering:</u></i>	<i><u>\$12,000 (FY17 – FY18 Budget)</u></i>
	\$252,840

When completed, the Garden Apartments development project alone could produce over \$1 million in water and sewer connection fees at the current connection fee rate structure.

RECOMMENDED ACTION:

Approve the bid from Dykema Excavators, Inc for the 60th Street Water Main Connection and authorize the Township Manager to sign the contract documents on behalf of the Township.

PURCHASE AGREEMENT

THIS PURCHASE AGREEMENT (this "Agreement") is made by **CALEDONIA CHARTER TOWNSHIP**, a municipal corporation and political subdivision of the State of Michigan, whose mailing address is 8196 Broadmoor Avenue SE, Caledonia, Michigan 49316 ("Seller"), and **CASCADE CHARTER TOWNSHIP**, a municipal corporation and political subdivision of the State of Michigan, whose mailing address is 2865 Thornhills Avenue SE, Grand Rapids, Michigan 49546 ("Buyer"). Seller and Buyer agree as follows:

Background

A. Seller is the owner of that certain water main situated in the public right of way on the north side of 60th Street, commonly known as the 60th Street Water Main, and described and depicted on the attached Exhibit A (the "**Water Main**"). Seller constructed the Water Main in 2002.

B. 60th Street is the township borderline street between Buyer and Seller.

C. On December 1, 2002, Buyer and Seller entered into a 60th Street Water Main Agreement (the "**Water Main Agreement**"), whereby Buyer and Seller set forth their respective rights and obligations regarding the Water Main and its location within the public right of way.

D. Seller has agreed to sell, and Buyer has agreed to purchase, the Water Main in accordance with the terms and conditions set forth in this Agreement.

In consideration of their mutual covenants, the parties agree as follows:

Agreement

1. Sale of Water Main. Upon and subject to the terms and conditions of this Agreement, Seller shall sell and convey to Buyer, and Buyer shall purchase from and pay Seller for, (i) the Water Main, and (ii) any service agreements, maintenance contracts, equipment leasing agreements, warranties, or other contracts for the supplying of labor and services to the Water Main listed on the attached Exhibit B (the "**Service Contracts**"). All of the foregoing described in subsections (i) and (ii) are referred to in this Agreement as the "**Water Main.**"

2. Purchase Price. Buyer shall pay to Seller as the purchase price for the Water Main the sum of One Hundred Thirty-Nine Thousand Five Hundred Thirty and 97/100 Dollars (\$139,530.97) (the "**Purchase Price**"), payable at Closing (defined below). The Purchase Price is calculated by taking the cost of installing the Water Main, minus straight line depreciation over seventy-five (75) years for tax years 2002 through 2016, as set forth below:

Water Main Installation Costs	\$174,413.62
Depreciation Per Year	(\$2,325.51)
Total Depreciation (2002 – 2016)	(\$34,882.65)
Purchase Price	\$139,530.97

3. No Assumption of Liabilities. Buyer expressly does not assume or agree to assume any liability or obligation of Seller of any kind or nature, whether known or unknown, absolute or contingent, and Buyer shall not be deemed to have assumed any such liability or obligation. Seller agrees that it is responsible for all debts, liabilities, and obligations incurred before or arising from the Water Main prior to the Closing. Seller further warrants that all such debts, liabilities, and obligations, if any, will be retired within thirty (30) days of the Closing, and Seller shall jointly and severally defend, indemnify and hold Buyer and the Water Main harmless from and against any and all such liabilities.

4. Closing; Title. The consummation of the sale and purchase of the Water Main (the "**Closing**") shall take place one hundred eighty (180) days after approval by resolution of this Agreement by the Township Boards of both Buyer and Seller, or on another date mutually agreed upon by Buyer and Seller (the "**Closing Date**"). At the Closing, Seller shall convey title to the Water Main to Buyer by Bill of Sale, free from all liens, encumbrances and restrictions.

5. Delivery of Documents. Within five (5) business days after the Effective Date, Seller shall deliver or make available to Buyer and Buyer's agents for their review all documents, reports, and assessments with regard to the Water Main, including by way of example and not limitation, all contracts and agreements, insurance policies, inspection reports, plans and specifications, environmental permits, documents, and reports, governmental approvals relating to the Water Main, and similar items within Seller's possession or control. Seller shall also deliver to Buyer the following documents pursuant to the terms of this Section: (1) as-built drawings of the Water Main, including cover sheets; (2) engineering certification(s) of the Water Main to be transferred to Buyer; (3) a copy of the Michigan Department of Environmental Quality permit regarding the Water Main; (4) pressure testing and chlorination records and results for the Water Main; (5) maintenance records for any and all repairs to the Water Main; and (6) records for any additional service lines added to the Water Main after its installation.

6. Inspections. Buyer shall have a period of thirty (30) days following the Effective Date of this Agreement (the "**Inspection Period**") to complete all inspections and investigations of the Water Main as Buyer deems reasonable or necessary to determine whether the Water Main will be suitable, in Buyer's sole judgment, for Buyer's acquisition (the "**Inspections**"). During the Inspection Period, Seller shall afford Buyer and Buyer's representatives (including employees, engineers, consultants, contractors and other agents) reasonable access to the Water Main to conduct the Inspections.

If, on or before the expiration of the Inspection Period, Buyer determines that the Water Main is unacceptable, Buyer may terminate this Agreement by delivery of written notice to Seller, whereupon this Agreement shall terminate, and Buyer and Seller shall be released of all obligation or liability hereunder, except for liability which expressly survives such termination. If Buyer fails to deliver written notice to Seller terminating this Agreement on or before expiration of the Inspection Period, Buyer shall have no further right to terminate this Agreement pursuant to this Section.

7. Termination of Water Main Agreement; Indemnification. Upon consummation of the Closing, the Water Main Agreement between Buyer and Seller shall

terminate, along with the parties' respective rights and obligations thereunder. Notwithstanding the foregoing, Seller hereby indemnifies and agrees to save Buyer, its successors and assigns, harmless of and from all loss, cost, damage, liability and expense, including, but not limited to reasonable counsel fees, arising from or connected with Seller's obligations with respect to the Water Main which accrued prior to the Closing Date. Buyer hereby indemnifies and agrees to save Seller, its successors and assigns, harmless of and from all loss, cost, damage, liability and expense, including, but not limited to reasonable counsel fees, arising from or connected with Seller's obligations with respect to the Water Main which accrue on or after the Closing Date. The terms of this Section shall survive the Closing

8. Seller's Representations and Warranties. Seller makes the following representations and warranties, which representations and warranties are true and correct as of the Effective Date and shall be recertified as true and correct in all material respects as of the Closing Date:

(a) Authority. Seller has full power and authority to enter into this Agreement and other related documents and to consummate the transactions contemplated by this Agreement. Seller has duly executed and delivered this Agreement as its lawful, valid, and legally binding obligation, and this Agreement is enforceable in accordance with its terms. Seller is not a party to any contract, settlement, judicial order, or other agreement of any kind that would prohibit or otherwise restrict the ability of Seller to sell the Water Main to Buyer pursuant to this Agreement.

(b) Owner of Water Main. Seller is the owner of the Water Main and, on the Closing Date, shall deliver good title to the Water Main free from all security interests, equities, adverse claims, liens, encumbrances, easements, leases, options, rights of first refusal, offers of purchase, and any possessory rights of third parties.

(c) Compliance with Laws. To the best of Seller's knowledge, Seller is not in violation of any federal, state, or local statute, law, ordinance, regulation, order, or ruling affecting the Water Main, including, but not limited to, zoning or land use statutes, regulations, orders, or rulings, and Seller has complied with all ordinances and laws affecting the Water Main.

(d) No Litigation. There are no claims, litigation or proceedings pending, or to Seller's knowledge, threatened against Seller or the Water Main.

(e) No Improvements. No improvements, repairs, or construction have occurred on the Water Main within one hundred twenty (120) days prior to the Effective Date of this Agreement, or Seller shall provide evidence to Buyer that all such work has been paid for prior to the Closing.

These representations and warranties set forth in this Section shall survive the Closing.

9. Buyer's Contingencies. Buyer's obligation to purchase the Water Main is subject to fulfillment of the conditions described in this Section and elsewhere in this Agreement. All conditions are for the benefit of Buyer, and Buyer may waive in writing any of the conditions.

(a) Inspections. Buyer's obligation to close this transaction is contingent upon Buyer having satisfied itself, in its discretion, that the Water Main is suitable for Buyer's intended purposes according to the Inspections permitted by Section 6 of this Agreement.

(b) Board Approval. Buyer's obligation to close this transaction is contingent upon Buyer's receipt of approval by resolution of this Agreement from its Township Board.

(c) No Liens. Seller shall have paid or discharged all liens, and other encumbrances on the Water Main and shall have furnished proof of payment or discharge to Buyer.

(d) No Default. Seller shall not be in default of this Agreement.

(e) Required Consents. All permits, approvals, consents, waivers and other authorizations of any and all governmental agencies and other persons and all filings, if any, required to (i) consummate the transaction contemplated hereby, and (ii) effectuate Buyer's intended use of the Water Main, shall have been obtained and shall not have been revoked, terminated or otherwise rendered ineffective.

If any of the contingencies set forth in subsections (a)-(e) of this Section are not satisfied, Buyer may terminate this Agreement by written notice to Seller sent prior to the Closing Date. If the Closing does not occur because of the failure of any of the conditions contained in this Section or elsewhere in this Agreement, then Buyer shall have no further obligation or liability to Seller under this Agreement.

10. Interim Operating Covenants. Seller covenants to Buyer that Seller shall undertake the following between the Effective Date and Closing:

(a) Operations. Seller shall continue to operate, manage and maintain the Water Main in the ordinary course.

(b) Compliance with Governmental Regulations. Seller shall not take any action that would result in a failure to comply in all material respects with any governmental regulations applicable to the Water Main.

(c) Notices. Seller shall promptly deliver to Buyer copies of written default notices, notices of lawsuits, and notices of violations affecting the Water Main received by Seller.

11. Post-Closing Obligations. Buyer agrees to undertake the following after Closing:

(a) Emergency Connection Points. Buyer shall coordinate with Seller and the City of Grand Rapids to establish emergency connection points between the Seller's water system, the City of Grand Rapids' Water System, and Buyer's water system in one or both of the following areas: (1) Kraft Avenue and 60th Street, and/or (2) the Beltline and 60th Street. Plans and specifications relating to the above described emergency connection points shall be subject to the approval of Buyer, Seller, and the City of Grand Rapids.

12. Risk of Loss and Condemnation. Seller shall bear the risk of loss from casualty, condemnation, or other cause prior to Closing. If any portion of the Water Main is condemned or damaged by casualty prior to Closing, Buyer may, at Buyer's option, terminate this Agreement by written notice to Seller.

13. Default. If either party defaults under this Agreement, the non-defaulting party may give written notice of the default to the other party and the defaulting party shall have ten (10) days to cure the default (the "**Cure Period**"). If the defaulting party fails to cure the default within the Cure Period, the other party shall be entitled to exercise all available remedies, including the filing of a lawsuit to seek specific performance of this Agreement or to seek damages for a breach of this Agreement.

14. Seller's Closing Obligations.

At the Closing, Seller shall deliver the following documents to Buyer:

- (a) The Bill of Sale for the Water Main;
- (b) An assignment of any of the Service Contracts that Buyer desires to assume;
- (c) The documents and other items identified in Section 5 of this Agreement; and
- (d) Any other documents reasonably requested by Buyer to carry out the intentions of this Agreement.

15. Buyer's Closing Obligations.

At the Closing, Buyer shall deliver the following to Seller:

- (a) The Purchase Price; and

- (b) Any other documents reasonably requested by Seller to carry out the intentions of this Agreement.

16. Binding Nature and Final Agreement. This Agreement shall be binding upon and shall inure to the benefit of the parties and their successors and assigns. This Agreement sets forth the entire agreement between the parties and may not be amended except in writing signed by both parties.

17. Construction. This Agreement shall be governed by and construed according to the laws of the State of Michigan.

18. Notices. Any notice required or permitted to be given hereunder shall be deemed to have been properly given, if in writing and delivered to the parties at the addresses listed in the preamble, and shall be deemed received (a) upon delivery, if delivered in person, (b) one (1) business day after having been deposited for next day overnight delivery with a nationally recognized overnight courier service, or (c) two (2) business days after having been deposited in any U.S. post office or mail depository and sent by certified mail, postage paid, return receipt requested.

19. Waiver. No term, condition, covenant, or provision contained in this Agreement may be waived, except in writing, signed by the waiving party; no oral statements, course of conduct, or course of dealings shall be deemed a waiver. No waiver by any party of any violation or breach of this Agreement shall be deemed or construed to constitute a waiver of any other violation or breach, or as a continuing waiver of any violation or breach.

20. Counterparts. This Agreement may be executed in one or more counterparts.

21. Effective Date. This Agreement shall become effective (the "Effective Date") when executed by both of the parties listed below.

[Signature page follows.]

SELLER:

CALEDONIA CHARTER TOWNSHIP,
a municipal corporation and political subdivision of
the State of Michigan,

Dated: _____, 2017

By: _____

Name: _____

Its: _____

BUYER:

CASCADE CHARTER TOWNSHIP,
a municipal corporation and political subdivision
of the State of Michigan,

Dated: _____, 2017

By: _____

Name: _____

Its: _____

EXHIBIT A

(Description and Description of Water Main)

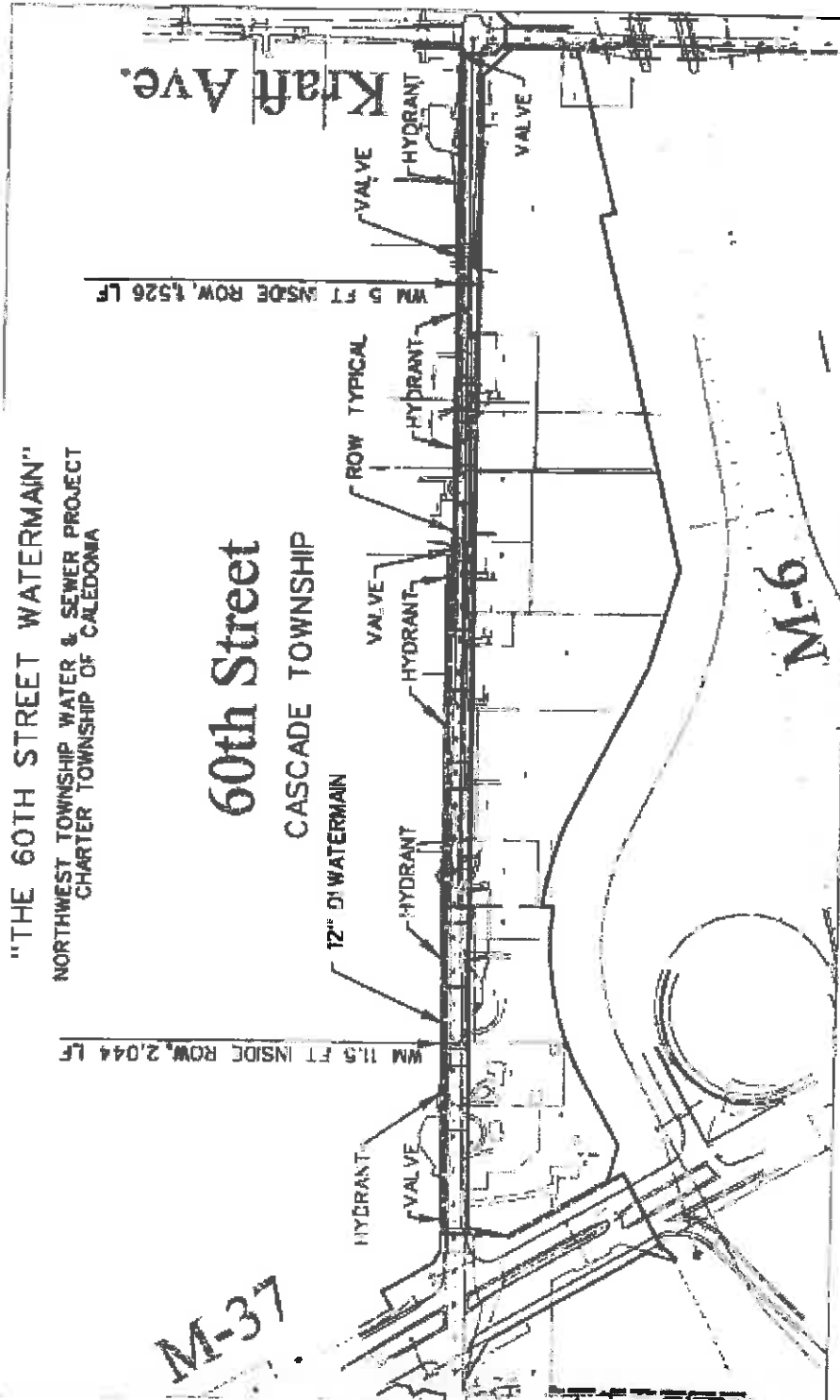


EXHIBIT B

(List of Service Contracts)



October 20, 2017
Project No. 171467

Mr. Ben Swayze
Cascade Charter Township
2865 Thornhills Avenue, SE
Grand Rapids, MI 49546-7192

Re: 60th Street Water Main Connection
Executed Contract Documents

Dear Mr. Swayze:

We sent the referenced project to three selected contractors who are pre-qualified by the City of Grand Rapids to complete water main work on the City system. We received bids from all three contractors on October 18, 2017. The three bids are:

Dykema Excavators, Inc	\$101,308.75
Jackson-Merkey Contractors, Inc.	\$139,690.00
Kamminga & Roodvoets, Inc.	\$140,545.00

Fishbeck, Thompson, Carr & Huber, Inc. (FTCH) has reviewed the bids and discussed the project with Mr. Greg Dykema of Dykema Excavators, Inc. (Dykema) is very familiar with the City of Grand Rapids (City) requirements for installation of water main. While Dykema has not completed projects for Cascade Township in recent years we have worked with them on many other projects and are comfortable recommending them for this project.

We requested bids to complete this work between October 30, 2017 and November 17, 2017. As you are aware, there are a few things that are needed before this work can be authorized to begin, namely receipt of the MDEQ permit, KCRC permit and completion of water main work by Caledonia Township's contractor. We recently checked the status of these items and at this time we recommend waiting until spring of 2018 to complete the work. We have discussed with Mr. Dykema the possibility of completing this work in the spring of 2018 and he has agreed to honor the bid prices submitted. We recommend approval of the contract at this time with the understanding that work will occur in early spring of 2018.

Attached for your review are the contract documents which includes the low bidder's signed bid form. Please review these documents and if acceptable, we will forward to Mr. Dykema for his approval and signature. Once Mr. Dykema signs, we will return the contracts to the Township for Township signatures and execution of the contract. The bid tabulation is also attached.

Sincerely,

FISHBECK, THOMPSON, CARR & HUBER, INC.

Michael L. Berrevoets, PE

jc2

Attachments

By email

cc/att: Mr. Greg Dykema – Dykema

Bid Item Tracking
 Project Name: Cascade - 60th Street Water Main
 Project Location: Cascade Township
 Project Number: 171467
 Bid Opening Date: October 18, 2017
 Time: 2:00 PM
 Engineer's Estimate By/Date: MLB, October 13, 2017

Bid Tab Information

Item No.	Item Description	Unit	Total Estimated Quantity	ENGINEER'S ESTIMATE		Apparent Low Bid		2nd Lowest Bid		3rd Lowest Bid	
				Unit Price	Amount	Unit Price	Amount	Unit Price	Amount	Unit Price	Amount
1	Mobilization (10% Maximum of Bid)	LS	1	\$10,000.00	\$10,000.00	\$9,000.00	\$9,000.00	\$10,500.00	\$10,500.00	\$14,000.00	\$14,000.00
2	Cash Allowance - Testing	Dollars	2,000	\$1.00	\$2,000.00	\$1.00	\$2,000.00	\$1.00	\$2,000.00	\$1.00	\$2,000.00
3	Maintaining Traffic	LS	1	\$7,500.00	\$7,500.00	\$8,000.00	\$8,000.00	\$30,250.00	\$30,250.00	\$16,200.00	\$16,200.00
4	Remove Pavement	SYD	160	\$10.00	\$1,600.00	\$4.00	\$640.00	\$13.50	\$2,160.00	\$8.50	\$1,360.00
5	Remove Curb and Gutter	LF	115	\$10.00	\$1,150.00	\$4.00	\$460.00	\$9.00	\$1,035.00	\$10.00	\$1,150.00
6	Remove and Replace Guardrail	LS	1	\$3,000.00	\$3,000.00	\$3,000.00	\$3,000.00	\$3,800.00	\$3,800.00	\$4,650.00	\$4,650.00
7	18" Water Main (DI CL53, Zinc)	LF	10	\$100.00	\$1,000.00	\$98.00	\$980.00	\$90.00	\$900.00	\$100.00	\$1,000.00
8	12" Water Main (DI CL53, Zinc)	LF	135	\$125.00	\$16,875.00	\$117.25	\$15,828.75	\$110.00	\$14,850.00	\$125.00	\$16,875.00
9	16" Water Main (DI CL53, Zinc)	LF	10	\$150.00	\$1,500.00	\$181.00	\$1,810.00	\$195.00	\$1,950.00	\$150.00	\$1,500.00
10	12" Gate Valve and Box	EA	3	\$2,500.00	\$7,500.00	\$2,400.00	\$7,200.00	\$2,670.00	\$8,010.00	\$2,750.00	\$8,250.00
11	12" Water Main Fitting	EA	11	\$1,000.00	\$11,000.00	\$1,065.00	\$11,605.00	\$1,450.00	\$15,950.00	\$1,600.00	\$17,600.00
12	18" Water Main Fitting	EA	2	\$1,500.00	\$3,000.00	\$1,300.00	\$2,600.00	\$2,080.00	\$4,160.00	\$2,300.00	\$4,600.00
13	15" Hydrant	EA	1	\$2,500.00	\$2,500.00	\$2,300.00	\$2,300.00	\$2,420.00	\$2,420.00	\$2,500.00	\$2,500.00
14	Remove, Salvage and Reinstall Hydrant, Valve and Tee	LS	1	\$2,500.00	\$2,500.00	\$1,300.00	\$1,300.00	\$2,840.00	\$2,840.00	\$2,500.00	\$2,500.00
15	Abandon Existing Water Service	EA	10	\$1,500.00	\$15,000.00	\$1,000.00	\$10,000.00	\$830.00	\$8,300.00	\$1,650.00	\$16,500.00
16	Testing Existing Water Main	LS	1	\$5,000.00	\$5,000.00	\$1,500.00	\$1,500.00	\$2,790.00	\$2,790.00	\$5,000.00	\$5,000.00
17	Subbase	CYD	80	\$15.00	\$1,200.00	\$12.00	\$960.00	\$19.50	\$1,560.00	\$16.00	\$1,280.00
18	Aggregate Base, 8-inch	SYD	160	\$12.00	\$1,920.00	\$10.00	\$1,600.00	\$16.00	\$2,560.00	\$20.00	\$3,200.00
19	Bituminous Pavement, 3C (2.5")	TON	27	\$125.00	\$3,375.00	\$200.00	\$5,400.00	\$280.00	\$7,560.00	\$150.00	\$4,050.00
20	Bituminous Pavement, SE3 (1.5")	TON	18	\$125.00	\$2,250.00	\$200.00	\$3,600.00	\$390.00	\$5,940.00	\$160.00	\$2,880.00
21	Concrete Curb and Gutter	LF	115	\$20.00	\$2,300.00	\$35.00	\$4,025.00	\$17.00	\$1,955.00	\$30.00	\$3,450.00
22	Lawn Restoration	LS	1	\$5,000.00	\$5,000.00	\$2,500.00	\$2,500.00	\$3,200.00	\$3,200.00	\$5,000.00	\$5,000.00
23	Miscellaneous Work Allowance	Dollars	5,000	\$1.00	\$5,000.00	\$1.00	\$5,000.00	\$1.00	\$5,000.00	\$1.00	\$5,000.00
Construction Cost Subtotal (calculated)					\$112,170.00		\$101,308.75		\$139,690.00		\$140,545.00
As-Read (from submitted bid)											