

CHARTER TOWNSHIP OF GARFIELD TOWNSHIP BOARD MEETING

Tuesday, March 8, 2022 at 6:00pm
Garfield Township Hall
3848 Veterans Drive
Traverse City, MI 49684
Ph: (231) 941-1620

AGENDA

ORDER OF BUSINESS

Call meeting to order

Pledge of Allegiance

Roll call of Board Members

1. Public Comment

Public Comment Guidelines:

Any person shall be permitted to address a meeting of The Township Board, which is required to be open to the public under the provision of the Michigan Open Meetings Act, as amended. MCLA 15.261, et.seq.) Public Comment shall be carried out in accordance with the following Board Rules and Procedures: a.) any person wishing to address the Board is requested to state his or her name and address. b.) No person shall be allowed to speak more than once on the same matter, excluding time needed to answer Township Board Member's questions. Where constrained by available time the Chairperson may limit the amount of time each person will be allowed to speak to (3) minutes. 1.) The Chairperson may at his or her own discretion, extend the amount of time any person is allowed to speak. 2.) Whenever a Group wishes to address a Committee, the Chairperson may require that the Group designate a spokesperson; the Chairperson shall control the amount of time the spokesperson shall be allowed to speak when constrained by available time.

2. Review and approval of the Agenda - Conflict of Interest

3. Consent Calendar

The purpose of the Consent calendar is to expedite business by grouping non-controversial items together to be dealt with in one Board motion without discussion. Any member of the Board, staff or the public may ask that any item on the Consent Calendar be removed there from and placed elsewhere on the Agenda for full discussion. Such requests will be automatically respected. If any item is not removed from the Consent Calendar, the action noted in parentheses on the Agenda is approved by a single Board action adopting the Consent Calendar.

- a. Minutes – February 23, 2022 Regular Meeting
Minutes – February 23, 2022 Joint Township Board and Planning Commission Meeting
(Recommend Approval)
- b. Bills -
General Fund \$39,262.45
(Recommend Approval)
- c. State of Michigan Revenue Sharing Report (Receive and File)

4. Items removed from the Consent Calendar

5. Correspondence

- a. Grand Traverse Conservation District Report February 2022

6. Reports

- a. County Commissioner's Report
- b. Sheriff's Report
- c. Planning Dept. Monthly Report for March 2022, PD 2022-19
- d. Parks & Rec Report
- e. Clerk's Report
- f. Supervisor's Report

7. Unfinished Business

8. New Business

- a. Consideration of Authorizing an Amendment to Cellular Tower Lease
- b. Consideration of a New Phone System
- c. Consideration of Proposal for Engineering Services for River East Park Projects Phase II

9. Public Comment

10. Other Business

11. Adjournment

Lanie McManus, Clerk

The Garfield Township Board will provide necessary reasonable auxiliary aids and services, such as signers for hearing impaired and audio tapes of printed materials being considered at the meeting to individuals with disabilities upon the provision of reasonable advance notice to the Garfield Township Board. Individuals with disabilities requiring auxiliary aids or services should contact the Garfield Township Board by writing or calling Lanie McManus, Clerk, Ph: (231) 941-1620, or TDD #922-4412.

**CHARTER TOWNSHIP OF GARFIELD
TOWN BOARD MEETING
February 23, 2022**

Supervisor Chuck Korn called the Town Board Meeting to order at the Garfield Township Hall on February 23, 2022 at 6:00p.m.

Pledge of Allegiance

Roll Call of Board Members

Present: Chris Barsheff, Chuck Korn, Chloe Macomber,
Lanie McManus and Denise Schmuckal,

Absent and Excused: Molly Agostinelli and Steve Duell
Staff Present: Planning Director John Sych

1. Public Comment (6:01)

None

2. Review and Approval of the Amended Agenda - Conflict of Interest (6:02)

Korn added agenda item 5B - Email from Lisa Chenard.

Schmuckal moved and Barsheff seconded to approve the amended agenda.

Yeas: Schmuckal, Barsheff, Macomber, McManus, Korn

Nays: None

3. Consent Calendar (6:02)

a. Minutes

February 8, 2022 Regular Board Meeting
(Recommend Approval)

b. Bills

(i) General Fund \$22,257.61
(Recommend Approval)

(ii) Gourdie-Fraser
Developer's Escrow Fund – Storm Water Reviews, Utility Plan
Review, Oversight and Closeout \$23,805.50
General Utilities 18,585.00
Total \$42,390.50
(Recommend Approval)

- c. **MTT Update (Receive and File)**
- d. **Consideration of proposed new road name of Greenstone Lane (Recommend Approval)**
- e. **PD 2022-10 – Parks and Recreation Commission 2021 Annual Report (Receive and File)**
- f. **PD 2022-18 – BATA/TCHC Transit-Oriented Mixed-Use PUD Final Review – Set Public Hearing for Township Board Meeting on March 22, 2022 (Recommend Approval)**
- g. **Consideration of Close-out and Turnover documents for Chick-fil-A Water Main Extension (Recommend Approval)**

Barsheff moved and Schmuckal seconded to adopt the Consent Calendar as presented.

*Yeas: Barsheff, Schmuckal, McManus, Macomber, Korn
Nays: None*

4. **Items Removed from the Consent Calendar**

5. **Correspondence (6:07)**

- a. **Grand Traverse Conservation District – January 2022 Report**
- b. **Email from Lisa Chenard**

6. **Reports**

a. **Construction Report (6:07)**

Township Engineer Jennifer Hodges (Graham) stated that the extension to Long Lake Road has been moving forward and the township hall carpet and tile replacement RFP has been posted. She is working on long term capital improvement projects and East River Park is complete for the time being.

b. **GT Metro Fire Report**
No report

c. **MMR Report (6:09)**

Amy Fairchild reported that staffing levels are steady and MMR is fully staffed in Traverse City. MMR may hold an EMT bootcamp that runs for 5 days a week for 7 weeks and then the student will be a certified EMT. MMR is purchasing an Echo unit which is an ALS intercept SUV. There

were 281 calls in Garfield Township in December and 320 calls in January. Response times are well within range.

d. County Commissioners Report (6:13)

County Commissioner Brad Jewett stated that a committee has been put together to discuss ARPA funds and a new mental health provider has been approved for the County Jail.

e. Supervisor's Report (6:14)

Supervisor Korn stated that there is some interest for an indoor sports facility from some agencies in the area. Childcare is still an issue in the area and discussions about housing continue. The proposed East/West corridor was discussed at a recent meeting and the Township and Sheriff's Department have been discussing the addition of a CPO as a school liaison.

7. Unfinished Business

None

8. New Business

a. Consideration of approving Resolution 2022-02-T, a resolution adopting updates to the Township Fee Schedule (6:18)

Schmuckal moved and Macomber seconded to approve Resolution 2022-02-T, a resolution adopting updates to the Township Fee Schedule.

Yeas: Schmuckal, Macomber, McManus, Barsheff, Korn

Nays: None

9. Public Comment: (6:18)

None

10. Other Business (6:19)

11. Adjournment

Korn adjourned the meeting at 6:20pm.

Chuck Korn, Supervisor
Charter Township of Garfield
3848 Veterans Drive
Traverse City, MI 49686

Lanie McManus, Clerk
Charter Township of Garfield
3848 Veterans Drive
Traverse City, MI 49684

CHARTER TOWNSHIP OF GARFIELD
GRAND TRAVERSE COUNTY, MICHIGAN

RESOLUTION # 2022-02-T

RESOLUTION ADOPTING A REVISED FEE SCHEDULE COVERING VARIOUS PLANNING,
ZONING, LAND USE, MAPPING AND LICENSE FEES

WHEREAS, the Charter Township of Garfield has an adopted fee schedule; and

WHEREAS, the Charter Township of Garfield has reviewed the adopted Fee Schedule and has determined that a revised Fee Schedule is necessary and appropriate; and

WHEREAS, the Charter Township of Garfield has determined that it is in the best interests of the Township and its residents to adopt a revised Fee Schedule;

NOW, THEREFORE, BE IT RESOLVED:

1. **THAT** the revised Charter Township of Garfield Fee Schedule, attached hereto as Exhibit "A" and made a part of this resolution, is hereby adopted by the Charter Township of Garfield.
2. **THAT** the previous Charter Township of Garfield Fee Schedule, adopted by resolution 2021-28-T, is hereby repealed.
3. **THAT** this resolution and the Fee Schedule attached hereto shall be in full force and effect from and after its approval.

Moved: Denise Schmuckal

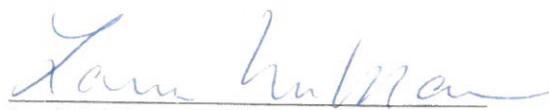
Supported: Chloe Macomber

Ayes: Schmuckal, Macomber, Barsheff, McManus and Korn

Nays: None

Absent and Excused: Agostinelli and Duell

By:



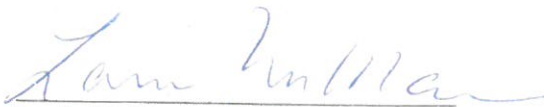
Lanie McManus, Clerk
Charter Township of Garfield

CERTIFICATE

I, Lanie McManus, Clerk of the Charter Township of Garfield, do hereby certify that the above is a true and correct copy of Resolution #2022-02-T which was adopted by the Township Board of the Charter Township of Garfield on the 23rd day of February, 2022.

Dated:

2-24-2022



Lanie McManus, Clerk
Charter Township of Garfield

Charter Township of Garfield Fee Schedule

DRAFT Potential Fee Schedule 2022

PLANNING COMMISSION/DEPARTMENT APPLICATION FEES	
Site Plan Reviews	
Site Diagram	\$50*
Administrative Site Plan	\$400
Site Development Plan	\$400**
Special Use Permits (SUP), Planned Unit Developments (PUD), and Planned Unit Residential Developments (PURD)	
New Application	\$1,000
Major Amendment	\$800
Minor Amendment	\$600
Administrative Amendment	\$400
Request for Extension of Approval	\$100
Condominium Development / Site Condominium Subdivision / Platted Subdivision	
New Application or Major Amendment	\$1,000 + \$30 per lot/unit
Minor Amendment	\$400
Conceptual Reviews	
With no notice	\$100
With direct mail notice only	\$150
With full public notice	\$300
Petitions for Zoning Ordinance Amendments	
Map Amendment (Rezoning)	\$800
Text Amendment	\$1,200
Conditional Rezoning	\$1,200
Other Fees	
Completeness Review (after the first 2)	\$150
Petition for Master Plan Amendment	\$1,200
Medical Marijuana Cultivation	\$250
Child Care, Small Group Home (7-12) Review	\$200
Planned Development / C-P Sign Review	\$400
*waived when submitted with a Land Use Permit application	
**waived when submitted with a Special Use Permit application	

RESIDENTIAL LAND USE PERMITS	
Single Family Dwelling	\$50
Residential Additions	\$50
Residential Garages	\$50
Accessory Uses	\$50
Two Family (Duplex) Dwelling	\$50 per unit
Multi-Family Dwelling	\$50 + \$20 per unit / per structure
Manufactured Home Park	\$50 + \$20 per site

OTHER LAND USE PERMITS	
Agricultural Buildings	\$50
Structures up to 1,000 sf	\$50
1,001 to 5,000 sf	\$100
5,001 to 7,500 sf	\$150
7,501 to 10,000 sf	\$200
10,001 sf+	\$250
No structure yet uses that require a permit	\$50

PARK FACILITY RESERVATIONS		
Silver Lake Recreation Area	Resident	Non-Resident
Playground Pavilion - 4-Hour	\$15	\$20
Playground Pavilion - All Day	\$25	\$35
Dog Park Pavilion - 4 Hour	\$20	\$35
Dog Park Pavilion - All Day	\$40	\$50
Bill's Pavilion - 4-Hour	\$25	\$40
Bill's Pavilion - All Day	\$45	\$60
Multi-Purpose Fields - 4-Hour	\$50	\$65
Multi-Purpose Fields - All Day	\$85	\$100
River East Recreation Area Pavilion - 4-hour	\$20	\$35
River East Recreation Area Pavilion - All Day	\$40	\$50
Recurring Reservation	Board Approval	

DOCUMENT FEES	
Zoning Verification Letter	\$50
Zoning Determination Letter	\$100

MARIJUANA SAFETY COMPLIANCE FACILITIES	
Initial License Application	\$2,500
Annual Renewal of License	\$500

ZONING BOARD OF APPEALS	
Variance / appeal / interpretation requests	
Single-family residence & Accessory uses	\$400
Two-family residence & Accessory uses	\$400
Residential Developments	\$750
Non-residential	\$750

LAND DIVISIONS AND COMBINATIONS	
Land Divisions	
2 parcels created	\$150
3-4 parcels created	\$50/parcel
5-10 parcels created	\$40/parcel
11+ parcels created	\$30/parcel
Platted Lot Combinations	\$25/lot
Metes and Bounds Lot Combinations	
With a survey	\$25/parcel
Without a survey - 2-3 parcels	\$150
Without a survey - 4+ parcels (minimum fee, dependent on project complexity)	\$25/parcel
Boundary adjustment/property transfer	\$50
Conceptual land division review/parcel	\$35

PAYMENT IN LIEU OF TAXES	
Application Fee (non-refundable)	\$1,500

OUTDOOR SALES / EVENTS / SIGNS / GATHERING	
Temporary Outdoor Sales (per ord. regs)	\$40
Non-Profit Temporary Outdoor Event (1)	\$10
Sign Permit Application (per sign)	\$50
Outdoor Gathering License	\$50
(1) Events include food drives, clothes drives and similar uses	

SPECIAL MEETINGS	
Planning Commission	\$1,500
Zoning Board of Appeals	\$1,200
Township Board	\$1,500
All special meeting fees are in addition to application fees	

MAPS AND GIS - SPECIALTY MAPS	
Minimum Fee	\$35
Maximum Fee	\$39.75/hour
Per Parcel Fee	\$0.50
Requests for digital formats (e.g., shapefiles) of Township GIS data shall be made through a Freedom of Information Act (FOIA) request. Township GIS data includes parcels, aerial imagery, topography, zoning, utilities, future land use, environmental data, etc.	

COPY REQUESTS		
Base Cost	\$26.49/hour	
Cost per Sheet	Black/White	Color
8 1/2" x 11" (Letter) or 8 1/2" x 14" (Legal)	\$0.10	\$0.15
11" x 17"	\$0.13	\$0.18
Plotter up to 24" x 36"	\$5.00	\$20.00
Plotter larger than 24" x 36" - custom quote based on size		

INDUSTRIAL FACILITY TAX ABATEMENTS	
New Facility & Speculative	\$750
Rehabilitation Facility	\$1,000

LATE FEES	
100% of application fee, or \$500.00, whichever is less	
Fees may be waived in whole or part by the Township Board	

**CHARTER TOWNSHIP OF GARFIELD
JOINT MEETING
TOWNSHIP BOARD and PLANNING COMMISSION
February 23, 2022**

Call Meeting to Order: Township Supervisor Korn called the February 23, 2022 Joint Township Board and Planning Commission meeting to order at 6:30pm at the Garfield Township Hall.

Roll Call of Commission Members:

Planning Commissioners Present: Joe McManus, Pat Cline, Chris DeGood, Robert Fudge, Joe Robertson, and John Racine

Board Members Present: Denise Schmuckal, Chris Barsheff, Lanie McManus, Chloe Macomber, Chuck Korn

Absent and Excused: Planning Commissioner Molly Agostinelli and Trustee Steve Duell

Staff Present: Planning Director John Sych and Deputy Planning Director Steve Hannon

1. Public Comment (6:30)

None

2. Review and Approval of the Agenda – Conflict of Interest (6:31)

McManus moved and Fudge seconded to approve the agenda as presented.

Yeas: McManus, Fudge, Cline, DeGood, Robertson, Racine, Schmuckal, Barsheff, L. McManus, Macomber and Korn

Nays: None

3. Minutes (6:31)

a. Planning Commission – Review and Approval of Minutes – February 9, 2022 Regular Meeting

Fudge moved and Robertson seconded to approve the February 9, 2022 Regular Meeting minutes as presented.

Yeas: Fudge, Robertson, McManus, Cline, DeGood, Racine

Nays: None

4. Business

a. Where are we now? Existing conditions, trends, and build-out analysis

Hannon shared a PowerPoint which depicted trends in the township and noted that many of the trends are positive. Garfield Township is part of a growing community and has an excellent tax base with a great variety of homes. The population estimate in the township was over 20,000 in 2021.

b. Where do we want to go? – Discussion topics

Sych discussed infrastructure planning and projects, starter homes, blighted properties and how to revive them, transportation, potential corridor priorities and desired development. Topics discussed will contribute to the upcoming update of the Master Plan in 2023. Discussion centered upon the following:

- Board member Barsheff talked about development in terms of emergency services and the greater needs a growing population.
- Redevelopment of the Cherryland Center was discussed. Board members and commissioners agreed that with three owners, it was difficult to sell or redevelop the property.
- Parks were highlighted as an important part of development in the township and are a very important part of the township to keep developing.
- Infrastructure was discussed as being an important future topic for the development of new single family homes and other developments.
- The commissioners and board members talked about the high cost of vacant land and how to make lots more affordable. All agreed that the materials and supply shortages do not help the situation.
- Sych stated that in terms of the zoning ordinance, a vision is needed first for a piece of property, then the tools for putting such a vision into reality can follow. Sych stated that the PUD has been the dominant form of building in the region in the past years. These ideas will all be incorporated into the update of the Master Plan.
- The shift in the economy and jobs was discussed as the Professional Office zoning designation may not be in demand since many people come to the region with a work at home job.
- Township Engineer Jennifer Graham spoke and said that monitoring the infrastructure is important and continuing to make capital investments in such infrastructure will continue to be important.

5. Public Comment (8:09)

Brad Jewett of North West Silver Lake Road spoke and appreciated the discussion this evening. He commented on supply and demand in the housing market.

6. Adjournment

Supervisor Korn adjourned the meeting at 8:10pm.

Chuck Korn, Supervisor
Charter Township of Garfield
3848 Veterans Drive
Traverse City, MI 49686

Lanie McManus, Clerk
Charter Township of Garfield
3848 Veterans Drive
Traverse City, MI 49686

Check Date	Bank	Check #	Payee	Description	GL #	Amount
02/23/2022	GEN	40297	AFLAC	AFLAC	101-000-227.001	436.82
02/23/2022	GEN	40298	BLUE CROSS BLUE SHIELD OF MICHIGAN	EMPLOYEE HEALTH	101-851-873.030	24,140.36
02/23/2022	GEN	40299	VOYA INSTITUTIONAL TRUST COMPANY	DEFERRED COMP VF3202	101-000-227.000	1,340.00
02/23/2022	GEN	40300	CITY OF TRAVERSE CITY	170975-98310	101-448-920.005	10.61
02/23/2022	GEN	40301	FIFTH THIRD BANK	1319 EDUCATION, BUILDING STAMP	101-215-960.000	38.31
		40301		1319 EDUCATION, BUILDING STAMP	101-371-726.000	28.99
						67.30
02/23/2022	GEN	40302	FIFTH THIRD BANK	1319 PARK SIGN	308-000-935.000	118.61
02/23/2022	GEN	40303	GARFIELD CHARTER TOWNSHIP	HSA	101-000-237.000	523.84
02/23/2022	GEN	40304	STATE OF MICHIGAN	WATER USE REPORTING FEE	308-000-935.000	200.00
02/23/2022	GEN	40305	SUPERFLEET	GAS	101-806-862.000	148.22
02/23/2022	GEN	40306	TRAVERSE CITY RECORD EAGLE	ADVERTISING	101-101-901.000	85.85
		40306		ADVERTISING	101-400-901.000	136.95
						222.80
02/23/2022	GEN	40307	UNITED WAY	UNITED WAY	101-000-238.000	90.00
02/23/2022	GEN	40308	VC3 INC.	MICROSOFT 365	101-258-935.015	699.00
03/01/2022	GEN	40309	ANNE WENDLING	CONTRACTED SVCS	101-101-805.000	125.50
		40309		CONTRACTED SVCS	101-400-805.000	157.50
						283.00
03/01/2022	GEN	40310	ANNE WENDLING	CONTRACTED SVCS	308-000-935.000	65.50
03/01/2022	GEN	40311	CHERRYLAND ELECTRIC COOP.	ELECTRIC	101-000-084.861	310.76
		40311		ELECTRIC	101-265-920.603	1,041.73
		40311		ELECTRIC	101-448-920.005	808.62
						2,161.11
03/01/2022	GEN	40312	CHERRYLAND ELECTRIC COOP.	ELECTRIC	308-000-935.000	695.68
03/01/2022	GEN	40313	CONSUMERS ENERGY	100018131597	101-448-920.005	30.21
03/01/2022	GEN	40314	CONTEMPORARY CLEANING	CONTRACTED SVCS	101-265-935.603	1,350.00
03/01/2022	GEN	40315	CONTEMPORARY CLEANING	CONTRACTED SVCS	308-000-935.000	450.00
03/01/2022	GEN	40316	FIFTH THIRD BANK	3637 EDUCION/ROTARY DUES	101-171-960.000	1.11
		40316		3637 EDUCION/ROTARY DUES	101-171-965.000	411.82

3.b.

Check Date	Bank	Check #	Payee	Description	GL #	Amount
03/01/2022	GEN	40317	FIFTH THIRD BANK	3406 DUES, SUPPLIES, EDUCATION	101-253-726.000	412.93
		40317		3406 DUES, SUPPLIES, EDUCATION	101-253-960.000	37.25
		40317		3406 DUES, SUPPLIES, EDUCATION	101-253-965.000	565.72
						75.00
						677.97
03/01/2022	GEN	40318	GOURDIE-FRASER, INC.	CARPET/TILE RFP	101-101-805.000	825.00
03/01/2022	GEN	40319	HOME DEPOT CREDIT SERVICES	SALT BUCKET	101-265-726.003	4.98
03/01/2022	GEN	40320	HOME DEPOT CREDIT SERVICES	PICNIC TABLE SUPPLIES / MOUSE TRAPS	308-000-935.000	652.71
03/01/2022	GEN	40321	KCI	NEWSLETTER / ASSESSMENTS	101-101-900.000	1,180.25
		40321		NEWSLETTER / ASSESSMENTS	101-171-900.000	1,804.93
						2,985.18
03/01/2022	GEN	40322	NORTHERN OFFICE EQUIP	SVC CONTRACT	101-101-726.002	325.62
03/01/2022	GEN	40323	O'HEARN PEST CONTROL LLC	BAIT STATIONS	101-265-935.608	50.00
03/01/2022	GEN	40324	VERIZON	PHONES	101-265-850.000	295.00
			TOTAL - ALL FUNDS	TOTAL OF 28 CHECKS		39,262.45

--- GL TOTALS ---

101-000-084.861	DUE FROM #861 STREET LIGHTS	310.76
101-000-227.000	DEFERRED COMP	1,340.00
101-000-227.001	AFLAC	436.82
101-000-237.000	HSA (FORMERLY FLEX)	523.84
101-000-238.000	UNITED WAY	90.00
101-101-726.002	SUPPLIES - COPIER MAINTENANCE	325.62
101-101-805.000	CONTRACTED AND OTHER SERVICES	950.50
101-101-900.000	PRINTING & PUBLISHING	1,180.25
101-101-901.000	ADVERTISING	85.85
101-171-900.000	PRINTING & PUBLISHING	1,804.93
101-171-960.000	EDUCATION & TRAINING	1.11
101-171-965.000	DUES & PUBLICATIONS	411.82
101-215-960.000	EDUCATION & TRAINING	38.31
101-253-726.000	SUPPLIES	37.25
101-253-960.000	EDUCATION & TRAINING	565.72
101-253-965.000	DUES & PUBLICATIONS	75.00
101-258-935.015	COMPUTER SUPPORT SYSTEMS	699.00
101-265-726.003	SUPPLIES-MAINTANCE	4.98
101-265-850.000	TELEPHONE	295.00
101-265-920.603	LIGHTS BUILDING	1,041.73
101-265-935.603	CLEANING SERVICE	1,350.00
101-265-935.608	MAINTENANCE-OTHER	50.00
101-371-726.000	SUPPLIES	28.99
101-400-805.000	CONTRACTED AND OTHER SERVICES	157.50
101-400-901.000	ADVERTISING	136.95
101-448-920.005	STREET LIGHTS TOWNSHIP	849.44
101-806-862.000	GAS & CAR WASHES	148.22
101-851-873.030	INSURANCE - EMPLOYEE HEALTH	24,140.36
308-000-935.000	MAINTENANCE - MISC, EQUIP	2,182.50

Check Date	Bank	Check #	Payee	Description	GL #	Amount
TOTAL						39,262.45

2021 State of Michigan Revenue Sharing - Constitutional & CVT

Period For	2018	CVT	2018 Total	2019	CVT	2019 Total	2020	CVT	2020 Total	2021	CVT	2021 Total	(%) of Change from 2020	Difference From 2020 to 2021
Nov - Dec PD Mar	\$ 220,248.00	\$ 9,370.00	\$ 229,618.00	\$ 231,217.00	\$ 9,364.00	\$ 240,581.00	\$ 241,649.00	\$ 9,579.00	\$ 251,228.00	\$ 235,666.00	\$ 9,579.00	\$ 245,245.00	-2.38%	\$ (5,983.00)
Jan - Feb PD May	\$ 209,998.00	\$ 9,370.00	\$ 219,368.00	\$ 214,862.00	\$ 9,364.00	\$ 224,226.00	\$ 234,720.00	\$ 9,579.00	\$ 244,299.00	\$ 244,580.00	\$ 9,579.00	\$ 254,159.00	4.04%	\$ 9,860.00
Mar - Apr PD July	\$ 207,404.00	\$ 9,370.00	\$ 216,774.00	\$ 218,924.00	\$ 9,364.00	\$ 228,288.00	\$ 204,151.00	\$ 9,579.00	\$ 213,730.00	\$ 254,197.00	\$ 9,579.00	\$ 263,776.00	23.42%	\$ 50,046.00
May - Jun PD Sept	\$ 235,957.00	\$ 9,373.00	\$ 245,330.00	\$ 244,196.00	\$ 9,365.00	\$ 253,561.00	\$ 205,456.00	\$ 14,894.00	\$ 205,456.00	\$ 297,657.00	\$ 9,582.00	\$ 307,239.00	49.54%	\$ 101,783.00
July - Aug PD Nov	\$ 248,099.00	\$ 9,364.00	\$ 257,463.00	\$ 253,080.00	\$ 9,579.00	\$ 262,659.00	\$ 285,785.00	\$ 9,579.00	\$ 295,364.00	\$ 297,766.00	\$ 9,771.00	\$ 307,537.00	4.12%	\$ 12,173.00
Sept - Oct PD Jan	\$ 247,255.00	\$ 9,364.00	\$ 256,619.00	\$ 264,132.00	\$ 9,579.00	\$ 273,711.00	\$ 273,177.00	\$ 9,579.00	\$ 282,756.00	\$ 290,586.00	\$ 9,771.00	\$ 300,357.00	6.22%	\$ 17,601.00
TOTAL	\$ 1,368,961.00	\$ 56,211.00	\$ 1,425,172.00	\$ 1,426,411.00	\$ 56,615.00	\$ 1,483,026.00	\$ 1,444,938.00	\$ 62,789.00	\$ 1,492,833.00	\$ 1,620,452.00	\$ 57,861.00	\$ 1,678,313.00		\$ 185,480.00

Township Budgeted for 2021 (Constitutional \$1,350,000 & CVT \$56,000)

YTD Received from State

Difference

State Projected for 2022 (Constitutional \$1,504,792 & CVT \$58,627)

Constitutional and Statutory Revenue Sharing Projections **FY 2021 and FY 2022 Projected Executive Budget Recommendation - May Consensus**

Revshare Code	Local Unit Name	Unit Type	County	FY 2021 Projected			FY 2022 Projected				
				Const	CVTRS	Total	Const	CVTRS	Total		
280000	Gd Traverse	Cnty	Grand Traverse	\$0	\$0	\$0	\$0	\$0	\$0	\$0	N/A
281010	Acme	Twp	Grand Traverse	\$417,726	\$0	\$417,726	\$404,986	\$0	\$404,986	(\$12,740)	(3.0)%
281020	Blair	Twp	Grand Traverse	\$783,798	\$29,025	\$812,823	\$759,894	\$29,606	\$789,500	(\$23,323)	(2.9)%
281030	East Bay	Twp	Grand Traverse	\$1,018,107	\$37,702	\$1,055,809	\$987,057	\$38,456	\$1,025,513	(\$30,296)	(2.9)%
281040	Fife Lake	Twp	Grand Traverse	\$160,788	\$0	\$160,788	\$155,885	\$0	\$155,885	(\$4,903)	(3.0)%
281050	Garfield	Twp	Grand Traverse	\$1,552,129	\$57,477	\$1,609,606	\$1,504,792	\$58,627	\$1,563,419	(\$46,187)	(2.9)%
281060	Grant	Twp	Grand Traverse	\$101,782	\$0	\$101,782	\$98,677	\$0	\$98,677	(\$3,105)	(3.1)%
281070	Green Lake	Twp	Grand Traverse	\$552,258	\$0	\$552,258	\$535,415	\$0	\$535,415	(\$16,843)	(3.0)%
281080	Long Lake	Twp	Grand Traverse	\$827,051	\$30,627	\$857,678	\$801,827	\$31,240	\$833,067	(\$24,611)	(2.9)%
281090	Mayfield	Twp	Grand Traverse	\$147,994	\$0	\$147,994	\$143,481	\$0	\$143,481	(\$4,513)	(3.0)%
281100	Paradise	Twp	Grand Traverse	\$308,688	\$0	\$308,688	\$299,273	\$0	\$299,273	(\$9,415)	(3.1)%
281110	Peninsula	Twp	Grand Traverse	\$518,745	\$0	\$518,745	\$502,924	\$0	\$502,924	(\$15,821)	(3.0)%
281120	Union	Twp	Grand Traverse	\$38,669	\$0	\$38,669	\$37,490	\$0	\$37,490	(\$1,179)	(3.0)%
281130	Whitewater	Twp	Grand Traverse	\$247,962	\$0	\$247,962	\$240,400	\$0	\$240,400	(\$7,562)	(3.0)%
282010	Traverse City	City	Grand Traverse	\$1,375,204	\$183,270	\$1,558,474	\$1,333,263	\$186,935	\$1,520,198	(\$38,276)	(2.5)%
283010	Fife Lake	Vil	Grand Traverse	\$42,297	\$3,475	\$45,772	\$41,007	\$4,253	\$45,260	(\$512)	(1.1)%
283020	Kingsley	Vil	Grand Traverse	\$141,310	\$14,987	\$156,297	\$137,001	\$15,287	\$152,288	(\$4,009)	(2.6)%
County Totals:				\$8,234,508	\$356,563	\$8,591,071	\$7,983,372	\$364,404	\$8,347,776	(\$243,295)	(2.8)%



Grand Traverse Conservation District

February 2022 Report

CONSERVATION TEAM

OWNER/PARKLAND: Garfield Township - Various

Administration

- Continued communication with Garfield Township Park Steward, Derek Morton, in regards to project planning and park maintenance needs.
- Held a site visit for NPS representatives and parkland stakeholders involved with an upcoming signage development project that encompasses trails from Beitner Rd north to Medalie Park, including Boardman Valley Nature Preserve.
- Solicited a letter of support from Garfield Twp for the aforementioned signage project and the associated application for assistance from the National Parks Service - Rivers, Trails, and Conservation Assistance program.

Monitoring and Maintenance

- Forwarded trail reports and concerns to Township staff as they were received.

Grand Traverse Conservation District

February 2022 Report

CONSERVATION TEAM

OWNER/PARKLAND: Recreational Authority – Hickory Meadows

Administration

- Attended the monthly Rec Authority Board meeting and provided updates.
- Facilitated the Hickory Meadows Advisory Committee (HMAC) monthly meeting held at the Boardman River Nature Center. Drafted an agenda and follow-up minutes for HMAC review.
- Attended a Hickory stakeholders meeting to discuss future planning across the three park properties.
- Communicated with Gene Ullery-Smith to request a revision of the former wayfinding signage proposal to now incorporate all three Hickory properties, including the Meadows, Hills, and upcoming Forest.
- Reviewed recommended amendments to Hickory Meadows Management Plan and provided edits as necessary.
- Prepared and submitted GT County Soil Erosion and Sedimentation Control permit application for upcoming trail construction project; created digital conceptual designs depicting boardwalks and crossings.
- Sought out quotes from four suppliers and secured lumber for upcoming boardwalk construction this spring.
- Communicated with a property neighbor regarding informal access into the park from Incochee subdivision.
- Prepared a work order for invasive cut-stump treatment to be conducted at Hickory Meadows in March.

Monitoring and Maintenance

- Performed trailhead checks on a weekly basis and refilled dog bag dispensers as necessary, including at Historic Barns Park trailhead to GT Commons.
- Downloaded and analyzed trail counter data on a monthly basis.



- Provided reconnaissance of groomed trails and associated signage. Reposted missing trailside signage where necessary.
- Provided sanding and salting of the M-72 parking area due to hazardous conditions reported from thaw and freeze weather.
- Posted 'no motorized vehicles' sign at the Randolph St entry after reports of unauthorized snowmobile access to main meadow was reported.

Grand Traverse Sheriff's Office Citation, Accident & Arrest Statistics

February 2022

Location	Citations	Traffic Crashes			Arrests		Traffic Crash Totals
		Fatal	PIA	PDA	OWI	Criminal	
01 Acme	13	0	2	9	0	5	11
02 Blair	28	0	5	14	2	19	19
03 East Bay	26	0	0	29	4	9	29
04 Fife Lake	12	0	2	7	0	5	9
05 Garfield	60	0	6	65	7	58	71
06 Grant	0	0	0	4	0	0	4
07 Green Lake	4	0	0	12	1	0	12
08 Long Lake	2	0	1	5	1	7	6
09 Mayfield	3	0	0	9	2	1	9
10 Peninsula	13	0	0	6	2	1	6
11 Paradise	11	0	1	11	0	3	12
12 Union	2	0	0	3	0	1	3
13 Whitewater	18	0	1	13	1	2	14
29 Fife Lake Vlg	0	0	0	0	0	0	0
30 Kingsley Vlg	2	0	0	1	0	2	1
66 Traverse City	3	0	0	3	2	26	3
84 Out of County	0	0	0	0	0	10	0
Totals	197	0	18	191	22	149	209
Garfield Twp %	30.5%	0.0%	33.3%	34.0%	31.8%	38.9%	34.0%

Ticket stats are based on what District Court has entered as of 3/01/22.

Arrest stats are as of 3/01/22.

 Charter Township of Garfield Planning Department Report No. 2022-19			
Prepared:	March 1, 2022	Pages:	3
Meeting:	March 8, 2022 Township Board	Attachments:	☐
Subject:	Planning Department Monthly Report for March 2022		

PURPOSE:

Staff provides a monthly report to the Township Board on activities of the Planning Department and the Planning Commission. Presentation of this report also provides a venue for the Township Board to have dialog with staff about any of the activities or planning-related issues facing the Township.

DEVELOPMENTS:

The Planning Commission is currently conducting the following development review activity:

BATA / Traverse City Housing Commission Mixed-Use Project Planned Unit Development (PUD)

- Location: Northeast corner of LaFranier and Hammond Roads
- Development Description: A proposed mixed-use PUD with BATA headquarters facility and bus garage, bus transfer facility, apartments, single-family homes, a day care center, and café
- Status: Township Board granted Preliminary PUD approval on 5/25/2021. The project application is now in Final PUD review. Planning Commission received an update on the PUD application on 9/8/2021. Planning Commission reviewed the Final PUD plans on 2/9/2022 and recommended to the Township Board approval with conditions. The Township Board has set the public hearing for the Final PUD for 3/22/2022.

Gauthier Property – Proposed R-3 Rezoning

- Location: 2105 N US 31 South, west side of US 31, south of South Airport Road intersection
- Development Description: Proposed rezoning from current split zoning of Highway Commercial (C-H) and Agricultural (A) to Multi-Family Residential (R-3)
- Status: Application was introduced to the Planning Commission on 1/12/2022 and a public hearing was held on 2/9/2022. Planning Commission will consider proposed Findings of Fact on 3/9/2022.

3525 West Front Street – Conceptual Review

- Location: South side of West Front Street along border with City of Traverse City
- Development Description: Proposed rezoning of a portion of the site from current zoning district of C-O Office Commercial to R-3 Multi-Family Residential
- Status: Planning Commission conducted a conceptual review of the proposed project on 2/9/2022. Commissioners discussed including the West Front Street area as a focused study area as part of the upcoming Township Master Plan update.

Sportsman's Warehouse Display Area – Site Plan Review

- Location: 3500 Marketplace Circle, west side of US 31
- Development Description: Proposed designation of outdoor display area in front of existing store.
- Status: Planning Commission will review the proposed project on 3/9/2022.

PLANNING:

Other planning activities include the following:

- Staff continues to meet regularly with the Michigan State University students in the Urban Planning Practicum course regarding their project analyzing sidewalks and trails in the Township. Students completed a draft of their final report. Staff has reviewed this draft and will meet with the students to provide feedback as the project moves toward completion. The Practicum course will conclude in April 2022, including a presentation at the Planning Commission study session on 4/27/2022.
- A meeting between Environmental Consulting & Technology, Inc. (ECT) and Township Staff was held on 2/7/2022 to kick off the Grand Traverse Commons Natural Area Design Plan, including an overview of the project and expectations for first tasks to be completed. ECT also met with Parks and Recreation Commissioners prior to their 2/7/2022 meeting. The next tasks include meetings with stakeholders and preparing for a public engagement event in the spring. Details of this event will be reviewed with the Parks and Recreation Commission on 4/4/2022.
- The Township Board and Planning Commission held a joint meeting on 2/23/2022. The meeting allowed for discussion on current trends in the Township (where are we now?), topics that warrant further study (where do we want to go?), and an overview of the process for updating the Township Master Plan (how do we get there?).

The Township is seeing many positive trends, including a growing population exceeding 20,000 and property sales at their highest point ever over the last three years. Since 2019, 817 building permits have been issued in the Township for a construction value over \$152 million. Over the last three years, the Township has approved over 1,100 new housing units – of which 97% are multi-family residential units.

The Board and Planning Commission discussed many topics and generally considered top priorities were:

- To balance out the increased focus on multi-family residential development, there is interest in promoting the construction of new single-family homes
 - Identify where new single-family homes are designated in an updated future land use plan.
 - Change our vision of what is a single-family home by considering zoning ordinance changes to allow for smaller lots and smaller home sizes
- Continue to support improvements to the park and trail systems
 - Identify new trail connections between homes and parks, stores and other locations to provide an improved quality of life
- Ensure resources for public safety are sufficient as the Township continues to grow
 - Assess current public safety needs and available services
- Explore and support mechanisms to encourage the redevelopment of blighted properties
 - Continue redevelopment of Cherryland Center as a priority, including the use of brownfield redevelopment financing tools
 - Attracting private sector investment is key to redevelopment
 - As an incentive, the Cherryland Center site and surrounding neighborhood are part of the Opportunity Zone
 - Our vision is to have an “active space” with a mix of community uses for the Cherryland Center site, such as housing and smaller commercial/retail that could include a neighborhood grocery store

- Interest on improving the east side of the Township
 - Improve the River East Park, including creation of a dog park
 - Redevelop the Cherryland Center properties
 - Continued housing development along LaFranier Road supports the redevelopment of the Cherryland Center
 - Improve the Barlow Street corridor
- Expand water and sewer infrastructure and extend streets where necessary to support development
 - Identify potential places for growth that include water and sewer services
 - Move to require hookups to new water infrastructure
 - Improve key road corridors including the extension of Zimmerman Road north of Long Lake Road, the proposed Hartman-Hammond cross-town connection, and improvement to South Airport Road
- Other planning considerations
 - Well-paying jobs are needed in the local economy
 - Less demand for professional office allows for considering a greater mix of office and multi-family residential

Staff anticipates gathering data and initial public input in 2022 to start the process for updating the Master Plan, with full Master Plan writing and development in 2023. Staff will use the priorities identified from the discussion at the joint meeting to guide Master Plan update activities.

STAFF:

John Sych, AICP, Planning Director
Email: jsych@garfield-twp.com
Direct Line: (231) 225-3155

Stephen Hannon, AICP, Deputy Planning Director
Email: shannon@garfield-twp.com
Direct Line: (231) 225-3156



Charter Township of Garfield

Parks Report

Silver Lake Recreation Area

Working on new kiosk flyers for Spring.

Rugby Teams (Mens & Womens) offering to assist on clean-up of the park in Spring. May help spread mulch & paint kiosks.

Cleared ice build up from gates at dog park.

Monitoring heaters in restrooms. Someone has been changing settings. Signs posted on dog park gates reminding owners to pick up after their dogs.

Commons

Working on new kiosk flyers for Spring.

Monitoring trails & trailheads for issues.

Staying in contact with ECT for the initial walk through when weather breaks & initial meetings with stakeholders.

River East

MTPP Grant for security grant was approved for \$2,500.00 (see attached approval letter). Installation of the four cameras will be week of March 1st.

Pavilion is completed and permit closed by inspectors and soil and erosion.

Approved rental fees with Parks & Township Board of pavilion.

Building picnic tables.

Monitoring for camps. Nothing to date.

New trail users are fat tire biking and cross-country skiing.

In contact with Jennifer Hodges for Phase II development.

RFP Package to follow.

Talked with neighbor to work on his crosswalks he installed to traverse over the creeks.

Boardman Valley

Working on new kiosk flyers for Spring.

Monitoring for encampments. Nothing to date found.

Snow Removal Contractor did call back and will assess damages when weather breaks.

Met with TART, Conservation District & Federal Park Steward for potential grant funding of way finding connecting Boardman Loop, BRV and Boardman Valley Nature Preserve trails.

Miller Creek

Working on new kiosk flyers for Spring.

Contact with Aldi's about their snow removal contractor pushing snow over the bank onto trail.

No encampments to date.

Kid's Creek

Working on new kiosk flyers for Spring.

Monitored trails.

Website

Updating our website with new pictures and verbiage for each park. Adding parks@garfield-twp.com email to website.

Submitted March 2, 2022

Derek Morton

Sean Kehoe



MICHIGAN TOWNSHIP

PARTICIPATING PLAN

January 28, 2022

Charter Township of Garfield
3848 Veterans Drive
Traverse City, MI 49684

Re: MTPP Cycle 21 Grant Application

Dear Derek Morton:

We are excited to inform you that the Michigan Township Participating Plan Board of Directors has approved your grant request in the amount of **\$2,500.00**. Please complete and return the enclosed Risk Reduction Grant Program Agreement as soon as possible indicating your acceptance of the grant terms.

Upon completion of your project, copies of all invoices, photos and evidence of payment for the specific grant purpose must be submitted to the Par Plan to receive reimbursement.

All grant documents may be submitted via email at mtpprrgp@tmhcc.com or by mail to:

Michigan Township Participating Plan
1700 Opdyke Court
Auburn Hills, MI 48326

Please note that all invoices for grant expenditures must be dated after the date of the grant agreement.

The grant project, as specified on the agreement, must be started after and completed within six(6) months from the date of this grant notification letter. The program does not allow for completion date extensions. If the grant project is not completed within the six month time frame as stated above; the grant will be considered forfeited.

Please do not hesitate to contact us should you have any questions regarding the grant process.

Sincerely,

Linda Preston, Chairperson
Michigan Township Participating Plan

Encl: RRGP Grant Agreement

Clerk's Report

For February 28, 2022

Submitted 03/2/22

To: The Garfield Township Board:

On the following pages you will find a copy of the Revenue and Expenditure Report. This Report is an informational report that gives you an overview of what has happened in that month, along with what has happened for the whole year. It also compares what has happened for the year with the Budget and gives you a final figure of what is left in that budgeted line item. The Budget is a tool to go by for that year. Nothing is guaranteed in the Budget, it is your best estimate. The Township's Budget is also a Cost Center Budget not a Line Item Budget, which means that what is important is the final figure. Some line items may run over so long as the final cost center total is not over. On this Report you will find the following captions on the top: Original and Amended Budget, Annual and Current Month, and finally Balance.

For the month of February in the General Fund, you will find that we had a total of \$1,302,543.09 Revenues and \$134,330.03 Expenditures. For the year we have a total of \$2,008,173.48 Revenues and \$971,089.55 Expenditures.

If you have any questions or would like further clarification, please feel free to contact me at: 231-941-1620.

Lanie McManus

Township Clerk

User: Lanie
DB: Garfield

PERIOD ENDING 02/28/2022

2022

ACTIVITY FOR

MONTH
02/28/2022YTD BALANCE
02/28/20222022
AMENDED BUDGETORIGINAL
BUDGET

GL NUMBER DESCRIPTION

Fund 101 - GENERAL OPERATING FUND

Revenues

Dept 000

101-000-403.000	CURRENT REAL PROPERTY TAXES	2,063,466.84	2,063,466.84	1,672,137.73	917,681.28	391,329.11
101-000-407.000	DEL PERSONAL PROP TAXES	500.00	500.00	0.00	0.00	500.00
101-000-412.000	SWAMP TAX COLLECTIONS	50.00	50.00	0.00	0.00	50.00
101-000-414.000	Protested PRE Interest	500.00	500.00	0.00	0.00	500.00
101-000-423.000	TRAILER PARK FEES	9,000.00	9,000.00	2,277.00	1,524.50	6,723.00
101-000-441.000	Local Community Stabilization Share Tax	35,000.00	35,000.00	0.00	0.00	35,000.00
101-000-445.000	PENALTIES & INT. ON TAXES	4,000.00	4,000.00	0.00	0.00	4,000.00
101-000-476.000	BUILDING PERMITS	150,000.00	150,000.00	9,125.00	2,261.00	140,875.00
101-000-476.001	PLANNING FEES	10,000.00	10,000.00	1,100.00	400.00	8,900.00
101-000-476.002	MAINT INSPECTION FEES	50.00	50.00	0.00	0.00	50.00
101-000-476.003	TREASURER FEES	900.00	900.00	0.00	0.00	900.00
101-000-476.004	PARK USE FEES	0.00	0.00	905.00	580.00	(905.00)
101-000-476.005	ZONING FEES	15,000.00	15,000.00	2,350.00	1,150.00	12,650.00
101-000-528.000	OTHER FEDERAL GRANTS	922,410.00	922,410.00	3,737.55	0.00	918,672.45
101-000-574.000	STATE SHARED REVENUE	1,504,000.00	1,504,000.00	286,972.00	286,972.00	1,217,028.00
101-000-574.001	STATE SHARED REV. - LIQUOR LA	22,000.00	22,000.00	137.50	137.50	21,862.50
101-000-574.002	EVIP DISTRIBUTION	58,600.00	58,600.00	9,771.00	9,771.00	48,829.00
101-000-612.000	CHARGES FOR TOWNSHIP SERVICES	5,000.00	5,000.00	1,010.37	709.48	3,989.63
101-000-627.000	TAX COLLECTION FEES	25,000.00	25,000.00	0.00	0.00	25,000.00
101-000-656.000	Ordinance Enforcement Fees	700.00	700.00	0.00	0.00	700.00
101-000-664.000	EARNED INTEREST	40,000.00	40,000.00	6,393.24	6,343.24	33,606.76
101-000-668.002	RENTS & ROYALTIES CABLE VIS	250,000.00	250,000.00	65,964.55	65,964.55	184,035.45
101-000-668.003	RENTS & ROYALTIES CABLE EQUIP	22,000.00	22,000.00	6,332.59	6,332.59	15,667.41
101-000-670.000	UNREALIZED LOSS ON INVESTMENT	0.00	0.00	(62,756.00)	0.00	62,756.00
101-000-673.000	SALE OF FIXED ASSETS	50.00	50.00	0.00	0.00	50.00
101-000-676.000	REIMBURSEMENTS	100.00	100.00	2,715.95	2,715.95	(2,615.95)
101-000-676.001	Reimbursed Treasurer Legal Fees	100.00	100.00	0.00	0.00	100.00
101-000-676.003	Reimburse Essential Services (PILOT)	17,000.00	17,000.00	0.00	0.00	17,000.00
Total Dept 000		5,155,426.84	5,155,426.84	2,008,173.48	1,302,543.09	3,147,253.36
TOTAL REVENUES		5,155,426.84	5,155,426.84	2,008,173.48	1,302,543.09	3,147,253.36

Fund 101 - GENERAL OPERATING FUND:

TOTAL REVENUES

5,155,426.84	5,155,426.84	2,008,173.48	1,302,543.09	3,147,253.36
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PERIOD ENDING 02/28/2022

2022

ACTIVITY FOR

GL NUMBER	DESCRIPTION	2022 ORIGINAL BUDGET	2022 AMENDED BUDGET	YTD BALANCE 02/28/2022	MONTH 02/28/22	AVAILABLE BALANCE	% BDGT USED
Fund 101 - GENERAL OPERATING FUND							
Expenditures							
Dept 101 - TOWNBOARD							
101-101-701.100	WAGES - TRUSTEE	13,000.00	13,000.00	850.00	850.00	12,150.00	6.54
101-101-701.101	WAGES - FILE CLERK	41,986.81	41,986.81	6,460.80	3,230.40	35,526.01	15.39
101-101-701.102	WAGES - TRUSTEE	13,000.00	13,000.00	600.00	600.00	12,400.00	4.62
101-101-701.103	WAGES - TRUSTEE	13,000.00	13,000.00	600.00	600.00	12,400.00	4.62
101-101-701.104	WAGES - TRUSTEE	13,000.00	13,000.00	650.00	650.00	12,350.00	5.00
101-101-701.105	WAGES - OFFICE COORDINATOR	39,098.59	39,098.59	6,016.00	3,008.00	33,082.59	15.39
101-101-726.000	SUPPLIES	6,000.00	6,000.00	557.07	502.07	5,442.93	9.28
101-101-726.001	POSTAGE	10,000.00	10,000.00	2,000.00	0.00	8,000.00	20.00
101-101-726.002	SUPPLIES - COPIER MAINTENANCE	7,500.00	7,500.00	145.18	145.18	7,354.82	1.94
101-101-801.002	LEGAL SERVICES - TOWNBOARD	10,000.00	10,000.00	1,185.65	63.65	8,814.35	11.86
101-101-801.004	LEGAL -Tax Tribunal	10,000.00	10,000.00	0.00	0.00	10,000.00	0.00
101-101-802.000	AUDIT AND ACCOUNTING	23,100.00	23,100.00	0.00	0.00	23,100.00	0.00
101-101-805.000	CONTRACTED AND OTHER SERVICES	7,500.00	7,500.00	195.50	65.50	7,304.50	2.61
101-101-860.000	MILEAGE	500.00	500.00	0.00	0.00	500.00	0.00
101-101-900.000	PRINTING & PUBLISHING	3,500.00	3,500.00	0.00	0.00	3,500.00	0.00
101-101-901.000	ADVERTISING	7,500.00	7,500.00	85.85	85.85	7,414.15	1.14
101-101-960.000	EDUCATION & TRAINING	4,000.00	4,000.00	0.00	0.00	4,000.00	0.00
101-101-965.101	DUES & PUBLICATIONS -TOWNBOAR	3,000.00	3,000.00	431.88	180.00	2,568.12	14.40
101-101-965.102	DUES - MICHIGAN TOWNSHIP ASSO	7,000.00	7,000.00	0.00	0.00	7,000.00	0.00
Total Dept 101 - TOWNBOARD		232,685.40	232,685.40	19,777.93	9,980.65	212,907.47	8.50
Dept 171 - TOWNSHIP SUPERVISOR							
101-171-701.201	WAGES - SUPERVISOR	84,682.61	84,682.61	13,028.08	6,514.04	71,654.53	15.38
101-171-701.202	WAGES - APPRAISER II	44,595.20	44,595.20	6,860.80	3,430.40	37,734.40	15.38
101-171-701.203	WAGES - GIS	5,000.00	5,000.00	2,010.00	1,155.00	2,990.00	40.20
101-171-701.204	WAGES - APPRAISER III	58,974.96	58,974.96	9,072.00	4,536.00	49,902.96	15.38
101-171-701.205	WAGES - ASSESSOR	104,556.18	104,556.18	16,085.56	8,042.78	88,470.62	15.38
101-171-726.000	SUPPLIES	2,000.00	2,000.00	72.00	0.00	1,928.00	3.60
101-171-726.001	POSTAGE	3,500.00	3,500.00	3,641.90	0.00	(141.90)	104.05
101-171-805.000	CONTRACTED AND OTHER SERVICES	32,500.00	32,500.00	0.00	0.00	32,500.00	0.00
101-171-860.200	MILEAGE - SUPERVISOR	1,000.00	1,000.00	0.00	0.00	1,000.00	0.00
101-171-860.201	MILEAGE - ASSESSOR	1,000.00	1,000.00	0.00	0.00	1,000.00	0.00
101-171-900.000	PRINTING & PUBLISHING	2,850.00	2,850.00	0.00	0.00	2,850.00	0.00
101-171-901.000	ADVERTISING	500.00	500.00	0.00	0.00	500.00	0.00
101-171-960.000	EDUCATION & TRAINING	7,750.00	7,750.00	53.35	53.35	7,696.65	0.69
101-171-960.200	EDUCATION - SUPERVISOR	1,000.00	1,000.00	0.00	0.00	1,000.00	0.00
101-171-965.000	DUES & PUBLICATIONS	3,000.00	3,000.00	0.00	0.00	3,000.00	0.00
Total Dept 171 - TOWNSHIP SUPERVISOR		352,908.95	352,908.95	50,823.69	23,731.57	302,085.26	14.40
Dept 191 - ELECTIONS							
101-191-701.000	WAGES	80,000.00	80,000.00	2,880.00	1,440.00	77,120.00	3.60
101-191-726.000	SUPPLIES	16,000.00	16,000.00	0.00	0.00	16,000.00	0.00
101-191-726.001	POSTAGE	10,500.00	10,500.00	0.00	0.00	10,500.00	0.00
101-191-860.000	MILEAGE	400.00	400.00	0.00	0.00	400.00	0.00
101-191-901.000	ADVERTISING	600.00	600.00	0.00	0.00	600.00	0.00
101-191-935.010	MACHINE MAINTENANCE	3,000.00	3,000.00	0.00	0.00	3,000.00	0.00
101-191-935.015	COMPUTER SUPPORT SYSTEMS	5,000.00	5,000.00	0.00	0.00	5,000.00	0.00
Total Dept 191 - ELECTIONS		115,500.00	115,500.00	2,880.00	1,440.00	112,620.00	2.49

PERIOD ENDING 02/28/2022

GL NUMBER	DESCRIPTION	2022		YTD BALANCE 02/28/2022	ACTIVITY FOR MONTH 02/28/22	AVAILABLE BALANCE	% BDGT USED
		ORIGINAL BUDGET	AMENDED BUDGET				
Fund 101 - GENERAL OPERATING FUND							
Expenditures							
Dept 215 - TOWNSHIP CLERK							
101-215-701.300	WAGES - CLERK	84,682.61	84,682.61	13,028.08	6,514.04	71,654.53	15.38
101-215-701.302	WAGES - DEPUTY CLERK	54,693.00	54,693.00	8,414.32	4,207.16	46,278.68	15.38
101-215-701.303	WAGES - ACCOUNTANT	5,000.00	5,000.00	0.00	0.00	5,000.00	0.00
101-215-726.000	SUPPLIES	1,500.00	1,500.00	18.80	18.80	1,481.20	1.25
101-215-860.300	MILEAGE - CLERK	400.00	400.00	0.00	0.00	400.00	0.00
101-215-860.301	MILEAGE - DEPUTY CLERK	400.00	400.00	0.00	0.00	400.00	0.00
101-215-956.016	MISCELLANEOUS	500.00	500.00	0.00	0.00	500.00	0.00
101-215-960.000	EDUCATION & TRAINING	6,000.00	6,000.00	38.31	38.31	5,961.69	0.64
101-215-965.000	DUES & PUBLICATIONS	700.00	700.00	0.00	0.00	700.00	0.00
Total Dept 215 - TOWNSHIP CLERK		153,875.61	153,875.61	21,499.51	10,778.31	132,376.10	13.97
Dept 247 - BOARD OF REVIEW							
101-247-701.400	WAGES - B OF R	1,500.00	1,500.00	0.00	0.00	1,500.00	0.00
101-247-701.401	WAGES - B OF R	1,500.00	1,500.00	0.00	0.00	1,500.00	0.00
101-247-701.402	WAGES - B OF R	1,500.00	1,500.00	0.00	0.00	1,500.00	0.00
101-247-701.403	WAGES - B OF R	1,500.00	1,500.00	0.00	0.00	1,500.00	0.00
101-247-960.000	EDUCATION & TRAINING	200.00	200.00	0.00	0.00	200.00	0.00
Total Dept 247 - BOARD OF REVIEW		6,200.00	6,200.00	0.00	0.00	6,200.00	0.00
Dept 253 - TOWNSHIP TREASURER							
101-253-701.500	WAGES - TREASURER	84,682.61	84,682.61	13,028.08	6,514.04	71,654.53	15.38
101-253-701.501	WAGES - ASSISTANT	5,000.00	5,000.00	0.00	0.00	5,000.00	0.00
101-253-701.502	WAGES - DEPUTY TREASURER	54,693.00	54,693.00	8,414.32	4,207.16	46,278.68	15.38
101-253-726.000	SUPPLIES	2,500.00	2,500.00	0.00	0.00	2,500.00	0.00
101-253-726.001	POSTAGE	6,000.00	6,000.00	0.00	0.00	6,000.00	0.00
101-253-801.000	LEGAL SERVICES	3,000.00	3,000.00	0.00	0.00	3,000.00	0.00
101-253-809.000	Bank Fees	300.00	300.00	0.00	0.00	300.00	0.00
101-253-860.500	MILEAGE - TREASURER	700.00	700.00	0.00	0.00	700.00	0.00
101-253-860.501	MILEAGE - DEPUTY TREASURER	500.00	500.00	0.00	0.00	500.00	0.00
101-253-900.000	PRINTING & PUBLISHING	2,000.00	2,000.00	0.00	0.00	2,000.00	0.00
101-253-901.000	ADVERTISING	100.00	100.00	0.00	0.00	100.00	0.00
101-253-960.000	EDUCATION & TRAINING	4,500.00	4,500.00	15.00	15.00	4,485.00	0.33
101-253-965.000	DUES & PUBLICATIONS	500.00	500.00	75.00	75.00	425.00	15.00
Total Dept 253 - TOWNSHIP TREASURER		164,475.61	164,475.61	21,532.40	10,736.20	142,943.21	13.09
Dept 258 - COMPUTER SUPPORT							
101-258-726.000	SUPPLIES	3,000.00	3,000.00	0.00	0.00	3,000.00	0.00
101-258-935.015	COMPUTER SUPPORT SYSTEMS	40,000.00	40,000.00	6,548.00	699.00	33,452.00	16.37
101-258-935.016	COMPUTER NETWORK	2,000.00	2,000.00	227.49	137.50	1,772.51	11.37
Total Dept 258 - COMPUTER SUPPORT		45,000.00	45,000.00	6,775.49	836.50	38,224.51	15.06
Dept 265 - TOWNSHIP HALL							
101-265-701.011	Maintenance Wages	2,500.00	2,500.00	0.00	0.00	2,500.00	0.00
101-265-726.003	SUPPLIES-MAINTANCE	3,500.00	3,500.00	401.81	147.71	3,098.19	11.48
101-265-850.000	TELEPHONE	18,000.00	18,000.00	1,933.82	622.00	16,066.18	10.74
101-265-920.601	HEATING / GAS	12,000.00	12,000.00	2,139.97	2,139.97	9,860.03	17.83
101-265-920.602	WATER / SEWER	6,000.00	6,000.00	143.35	143.35	5,856.65	2.39

EXPENDITURE REPORT FOR GARFIELD TOWNSHIP

PERIOD ENDING 02/28/2022

2022

GL NUMBER	DESCRIPTION	2022		YTD BALANCE 02/28/2022	ACTIVITY FOR MONTH 02/28/22	AVAILABLE BALANCE	% BDC USED
		ORIGINAL BUDGET	AMENDED BUDGET				
Fund 101 - GENERAL OPERATING FUND							
Expenditures							
101-265-920.603	LIGHTS BUILDING	14,000.00	14,000.00	980.90	980.90	13,019.10	7.01
101-265-935.601	SNOW PLOWING	10,000.00	10,000.00	1,740.00	1,740.00	8,260.00	17.40
101-265-935.602	LAWN MAINTENANCE	10,000.00	10,000.00	0.00	0.00	10,000.00	0.00
101-265-935.603	CLEANING SERVICE	27,381.02	27,381.02	1,350.00	1,350.00	26,031.02	4.93
101-265-935.604	RUBBISH REMOVAL	1,200.00	1,200.00	209.88	104.94	990.12	17.49
101-265-935.605	BUILDING REPAIR	10,000.00	10,000.00	0.00	0.00	10,000.00	0.00
101-265-935.606	ELECTRONIC PROTECTION SYSTEM	1,500.00	1,500.00	365.40	0.00	1,134.60	24.36
101-265-935.608	MAINTENANCE-OTHER	20,000.00	20,000.00	0.00	0.00	20,000.00	0.00
Total Dept 265 - TOWNSHIP HALL		136,081.02	136,081.02	9,265.13	7,228.87	126,815.89	6.81
Dept 301 - POLICE SERVICES							
101-301-830.000	POLICE CONTRACT	1,400,000.00	1,400,000.00	0.00	0.00	1,400,000.00	0.00
Total Dept 301 - POLICE SERVICES		1,400,000.00	1,400,000.00	0.00	0.00	1,400,000.00	0.00
Dept 371 - TOWNSHIP BUILDING INSPECTOR							
101-371-701.702	WAGES BUILDING ASSISTANT	17,688.32	17,688.32	2,723.80	1,361.92	14,964.52	15.40
101-371-701.703	WAGES - BUILDING OFFICIAL	87,508.80	87,508.80	13,462.88	6,731.44	74,045.92	15.38
101-371-701.704	WAGES - BUILDING INSPECTOR	25,750.00	25,750.00	3,100.00	1,736.00	22,650.00	12.04
101-371-701.705	WAGES - CONSTRUCTION BOARD	1,000.00	1,000.00	0.00	0.00	1,000.00	0.00
101-371-726.000	SUPPLIES	1,000.00	1,000.00	28.99	28.99	971.01	2.90
101-371-960.000	EDUCATION & TRAINING	1,000.00	1,000.00	0.00	0.00	1,000.00	0.00
101-371-965.000	DUES & PUBLICATIONS	1,000.00	1,000.00	345.00	0.00	655.00	34.50
Total Dept 371 - TOWNSHIP BUILDING INSPECTOR		134,947.12	134,947.12	19,660.67	9,858.35	115,286.45	14.57
Dept 400 - PLANNING COMMISSION							
101-400-701.800	WAGES - PLANNING	3,200.00	3,200.00	250.00	250.00	2,950.00	7.81
101-400-701.801	WAGES - PLANNING	3,200.00	3,200.00	250.00	250.00	2,950.00	7.81
101-400-701.802	WAGES - PLANNING	3,200.00	3,200.00	250.00	250.00	2,950.00	7.81
101-400-701.804	WAGES - PLANNING	3,200.00	3,200.00	250.00	250.00	2,950.00	7.81
101-400-701.805	WAGES - PLANNING	3,200.00	3,200.00	250.00	250.00	2,950.00	7.81
101-400-701.806	WAGES - PLANNING	3,200.00	3,200.00	250.00	250.00	2,950.00	7.81
101-400-701.808	WAGES - PLANNING	3,200.00	3,200.00	250.00	250.00	2,950.00	7.81
101-400-801.000	LEGAL SERVICES	25,000.00	25,000.00	99.00	99.00	24,901.00	0.40
101-400-805.000	CONTRACTED AND OTHER SERVICES	6,000.00	6,000.00	171.50	171.50	5,828.50	2.86
101-400-900.000	PRINTING & PUBLISHING	1,000.00	1,000.00	0.00	0.00	1,000.00	0.00
101-400-901.000	ADVERTISING	2,000.00	2,000.00	136.95	136.95	1,863.05	6.85
101-400-960.000	EDUCATION & TRAINING	2,000.00	2,000.00	0.00	0.00	2,000.00	0.00
101-400-965.000	DUES & PUBLICATIONS	1,000.00	1,000.00	0.00	0.00	1,000.00	0.00
Total Dept 400 - PLANNING COMMISSION		59,400.00	59,400.00	2,157.45	2,157.45	57,242.55	3.63
Dept 401 - TOWNSHIP PLANNER							
101-401-701.900	WAGES - DIRECTOR OF PLANNING	82,781.14	82,781.14	12,735.56	6,367.78	70,045.58	15.38
101-401-701.901	WAGES - DEPUTY PLANNER	59,068.44	59,068.44	9,087.40	4,543.70	49,981.04	15.38
101-401-701.902	WAGES -PLANNER ASSISTANT	13,723.58	13,723.58	2,042.93	1,021.45	11,680.65	14.89
101-401-726.000	SUPPLIES	1,000.00	1,000.00	38.94	0.00	961.06	3.89
101-401-860.900	MILEAGE - TOWNSHIP PLANNER	300.00	300.00	0.00	0.00	300.00	0.00
101-401-860.901	MILEAGE - DEPUTY PLANNER	300.00	300.00	0.00	0.00	300.00	0.00
101-401-900.000	PRINTING & PUBLISHING	2,000.00	2,000.00	0.00	0.00	2,000.00	0.00

PERIOD ENDING 02/28/2022

GL NUMBER	DESCRIPTION	2022		YTD BALANCE 02/28/2022	ACTIVITY FOR MONTH 02/28/22	AVAILABLE BALANCE	% BDDG USED
		ORIGINAL BUDGET	2022 AMENDED BUDGET				
Fund 101 - GENERAL OPERATING FUND							
Expenditures							
101-401-960.000	EDUCATION & TRAINING	5,000.00	5,000.00	250.00	0.00	4,750.00	5.00
101-401-965.000	DUES & PUBLICATIONS	1,000.00	1,000.00	0.00	0.00	1,000.00	0.00
Total Dept 401 - TOWNSHIP PLANNER		165,173.16	165,173.16	24,154.83	11,932.93	141,018.33	14.62
Dept 410 - ZONING BOARD OF APPEALS							
101-410-701.001	WAGES - ZONING	1,200.00	1,200.00	125.00	125.00	1,075.00	10.42
101-410-701.002	WAGES - ZONING	1,200.00	1,200.00	125.00	125.00	1,075.00	10.42
101-410-701.003	WAGES - ZONING	1,200.00	1,200.00	125.00	125.00	1,075.00	10.42
101-410-701.004	WAGES - ZONING	1,200.00	1,200.00	125.00	125.00	1,075.00	10.42
101-410-701.005	WAGES - ZONING	1,200.00	1,200.00	125.00	125.00	1,075.00	10.42
101-410-801.000	LEGAL SERVICES	10,000.00	10,000.00	0.00	0.00	10,000.00	0.00
101-410-805.000	CONTRACTED AND OTHER SERVICES	1,000.00	1,000.00	0.00	0.00	1,000.00	0.00
101-410-901.000	ADVERTISING	2,000.00	2,000.00	0.00	0.00	2,000.00	0.00
101-410-960.000	EDUCATION & TRAINING	1,000.00	1,000.00	0.00	0.00	1,000.00	0.00
Total Dept 410 - ZONING BOARD OF APPEALS		20,000.00	20,000.00	625.00	625.00	19,375.00	3.13
Dept 412 - ZONING ADMINISTRATOR							
101-412-701.601	WAGES - ZONING ADMINISTRATOR	59,068.44	59,068.44	9,087.44	4,543.72	49,981.00	15.38
101-412-701.602	WAGES - ZONING CODE ENFORCER	27,809.60	27,809.60	4,543.90	2,139.20	23,265.70	16.34
101-412-726.000	SUPPLIES	1,000.00	1,000.00	0.00	0.00	1,000.00	0.00
101-412-860.601	MILEAGE - ZONING ADMIN	150.00	150.00	0.00	0.00	150.00	0.00
101-412-860.602	MILEAGE - DEPT ZONING	150.00	150.00	0.00	0.00	150.00	0.00
101-412-960.000	EDUCATION & TRAINING	2,000.00	2,000.00	0.00	0.00	2,000.00	0.00
101-412-965.000	DUES & PUBLICATIONS	500.00	500.00	0.00	0.00	500.00	0.00
Total Dept 412 - ZONING ADMINISTRATOR		90,678.04	90,678.04	13,631.34	6,682.92	77,046.70	15.03
Dept 448 - STREET LIGHTS - TOWNSHIP							
101-448-920.005	STREET LIGHTS TOWNSHIP	96,000.00	96,000.00	4,644.93	4,614.72	91,355.07	4.84
Total Dept 448 - STREET LIGHTS - TOWNSHIP		96,000.00	96,000.00	4,644.93	4,614.72	91,355.07	4.84
Dept 747 - COMMUNITY PROMOTIONS							
101-747-880.003	COM. PROM. - ECONOMIC DEVELOPMENT	1,000.00	1,000.00	0.00	0.00	1,000.00	0.00
101-747-880.004	COM. PROM. - TC-TALUS	3,000.00	3,000.00	0.00	0.00	3,000.00	0.00
101-747-880.007	COM. PROM. - COMMUNITY AWAREN	20,000.00	20,000.00	0.00	0.00	20,000.00	0.00
101-747-880.008	COM. PROM. - CONTRACTED SERVI	50.00	50.00	0.00	0.00	50.00	0.00
101-747-880.009	COM. PROM. - TREE CARE	1,000.00	1,000.00	0.00	0.00	1,000.00	0.00
101-747-880.011	COM. PROM. - P.E.G.	100,000.00	100,000.00	21,442.12	0.00	78,557.88	21.44
Total Dept 747 - COMMUNITY PROMOTIONS		125,050.00	125,050.00	21,442.12	0.00	103,607.88	17.15
Dept 806 - TOWNSHIP VEHICLES							
101-806-862.000	GAS & CAR WASHES	2,500.00	2,500.00	255.69	148.22	2,244.31	10.23
101-806-863.000	OIL CHANGES	500.00	500.00	0.00	0.00	500.00	0.00
101-806-864.000	MISCELLANEOUS	1,500.00	1,500.00	0.00	0.00	1,500.00	0.00
Total Dept 806 - TOWNSHIP VEHICLES		4,500.00	4,500.00	255.69	148.22	4,244.31	5.68

EXPENDITURE REPORT FOR GARFIELD TOWNSHIP

PERIOD ENDING 02/28/2022

2022

ACTIVITY FOR

YTD BALANCE

2022

2022

ORIGINAL

DESCRIPTION

GL NUMBER

2022

AMENDED BUDGET

02/28/2022

MONTH

02/28/22

AVAILABLE

BALANCE

% BDT

USED

Fund 101 - GENERAL OPERATING FUND

Expenditures

Dept 851 - EMPLOYEE BENEFITS & INSURANCES

101-851-701.000 WAGES

101-851-701.027 UNEMPLOYMENT

101-851-873.001 John Hancock 403B

101-851-873.010 SOCIAL SECURITY - EMPLOYER

101-851-873.020 VACATION & PERSONAL PAYOUT

101-851-873.030 INSURANCE - EMPLOYEE HEALTH

101-851-873.040 INSURANCE - EMPLOYEE LIFE

101-851-912.001 INSURANCE - LIABILITY

101-851-912.002 INSURANCE - WORKMENS COMP.

Total Dept 851 - EMPLOYEE BENEFITS & INSURANCES

Dept 890 - CONTINGENCIES

101-890-890.000 CONTINGENCIES

Total Dept 890 - CONTINGENCIES

Dept 900 - CAPITAL OUTLAY

101-900-970.001 CAPITAL OUTLAY - ELECTIONS

101-900-970.002 CAPITAL OUTLAY - TOWNSHIP HAL

101-900-970.003 CAPITAL OUTLAY - COMPUTER

101-900-970.004 CAPITAL OUTLAY - VEHICLES

101-900-970.005 CAPITAL OUTLAY - LAND

Total Dept 900 - CAPITAL OUTLAY

Dept 965 - TRANSFERS TO OTHER FUNDS

101-965-990.308 TRANSFERS TO #308 PARK SYS

Total Dept 965 - TRANSFERS TO OTHER FUNDS

TOTAL EXPENDITURES

Fund 101 - GENERAL OPERATING FUND:

TOTAL EXPENDITURES

PERIOD ENDING 02/28/2022

2022

2022

ACTIVITY FOR

GL NUMBER	DESCRIPTION	ORIGINAL BUDGET	AMENDED BUDGET	YTD BALANCE 02/28/2022	MONTH 02/28/22	AVAILABLE BALANCE	% BDGT USED
Fund 308 - PARK SYSTEM FUND							
Expenditures							
Dept 000							
308-000-701.905	WAGES - REC BOARD	5,200.00	5,200.00	0.00	0.00	5,200.00	0.00
308-000-701.906	Parks Steward	27,809.60	27,809.60	4,278.40	2,139.20	23,531.20	15.38
308-000-701.907	Park Steward 2	22,089.60	22,089.60	3,324.06	1,699.20	18,765.54	15.05
308-000-801.000	LEGAL SERVICES	1,000.00	1,000.00	0.00	0.00	1,000.00	0.00
308-000-805.000	CONTRACTED AND OTHER SERVICES	400.00	400.00	0.00	0.00	400.00	0.00
308-000-864.000	MISCELLANEOUS	800.00	800.00	0.00	0.00	800.00	0.00
308-000-880.001	COM. PROM. - SILVER LAKE PARK	100.00	100.00	0.00	0.00	100.00	0.00
308-000-880.006	COM. PROM. - BYNP (YMCA)	100.00	100.00	0.00	0.00	100.00	0.00
308-000-880.008	COM. PROM. - Cont. Serv GTCD	15,000.00	15,000.00	0.00	0.00	15,000.00	0.00
308-000-880.012	COM. PROM. - GT COMMONS	100.00	100.00	0.00	0.00	100.00	0.00
308-000-880.013	COM. PROM. - BOARDMAN RIVER	100.00	100.00	0.00	0.00	100.00	0.00
308-000-880.014	COM. PROM. - MILLER CREEK	100.00	100.00	0.00	0.00	100.00	0.00
308-000-880.016	COM. PROM. - KIDS CREEK PARK	100.00	100.00	0.00	0.00	100.00	0.00
308-000-880.019	RIVER EAST RECREATION AREA	100.00	100.00	0.00	0.00	100.00	0.00
308-000-890.000	CONTINGENCIES	9,503.30	9,503.30	0.00	0.00	9,503.30	0.00
308-000-935.000	MAINTENANCE - MISC, EQUIP	97,190.00	97,190.00	8,020.80	5,085.79	89,169.20	8.25
308-000-970.000	CAPITAL OUTLAY	460,000.00	460,000.00	0.00	0.00	460,000.00	0.00
Total Dept 000		639,692.50	639,692.50	15,623.26	8,924.19	624,069.24	2.44
Dept 851 - EMPLOYEE BENEFITS & INSURANCES							
308-851-873.010	SOCIAL SECURITY - EMPLOYER	4,784.20	4,784.20	573.91	289.80	4,210.29	12.00
Total Dept 851 - EMPLOYEE BENEFITS & INSURANCES		4,784.20	4,784.20	573.91	289.80	4,210.29	12.00
TOTAL EXPENDITURES							
		644,476.70	644,476.70	16,197.17	9,213.99	628,279.53	2.51
Fund 308 - PARK SYSTEM FUND:							
TOTAL EXPENDITURES							
		644,476.70	644,476.70	16,197.17	9,213.99	628,279.53	2.51

Market: MI/IN
Cell Site Number: TRAVMI3147
Cell Site Name: Heritage WT
Fixed Asset Number: 10123909

FOURTH AMENDMENT TO SITE LEASE AGREEMENT

THIS FOURTH AMENDMENT TO SITE LEASE AGREEMENT ("**Fourth Amendment**"), dated as of the latter of the signature dates below, is by and between the **Charter Township of Garfield**, a Michigan municipal corporation, having a mailing address of 3848 Veterans Drive, Traverse City, Michigan 49684 (hereinafter referred to as "**Landlord**"), and **New Cingular Wireless PCS, LLC**, a Delaware limited liability company, as successor in interest to NPI-Omnipoint Wireless, LLC, having a mailing address of 1025 Lenox Park Blvd NE, 3rd Floor, Atlanta, GA 30319 (hereinafter referred to as "**Tenant**").

WHEREAS, Landlord and Tenant (or its predecessor in interest) entered into a Site Lease Agreement dated November 17, 2003, as amended by the First Amendment dated July 21, 2009, as amended by the Second Amendment dated June 24, 2014, as amended by the Third Amendment dated January 12, 2015, whereby Landlord leased to Tenant certain Premises, therein described, that are a portion of the Property located at 5600 Heritage Way, Traverse City, MI 49684 ("**Agreement**"); and

WHEREAS, Landlord and Tenant desire to amend the Agreement to allow Tenant to modify Tenant's existing communications equipment on the Leased Premises, to modify the notice section of the Agreement, and to otherwise amend the Agreement as set forth more fully below;

NOW THEREFORE, in consideration of the foregoing and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Landlord and Tenant agree as follows:

- A. Landlord and Tenant agree and acknowledge that as of the date this Fourth Amendment is fully executed, Tenant equipment information set forth in the Lease shall hereby be deleted in part and shall be replaced with Exhibit A and B attached hereto and incorporated herein by this reference.
- B. Landlord agrees to the equipment upgrade with the following provisions: (a) Dixon Engineering completes all appropriate structural changes; (b) all structural changes are installed to the specifications included in the Construction Drawings attached hereto as Exhibit A; (c) all equipment upgrades shall adhere to the drawings and specifications attached hereto as Exhibit B; and (d) all building and construction permits, and inspections are approved by Landlord's agents and appropriate regulatory authorities.
- C. Tenant agrees to address the following additions to Exhibit A:
 - i. All tank penetrations during the upgrade must remain temporarily sealed. Upon the completion of the upgrade permanent sealing must be installed to prevent moisture, insects and varmints from access to the tank's inner area.

- ii. All new and existing areas where tank penetrations are located must be checked for rust, corrosion, pitting, etc. Repair all areas either from the upgrade or the original installation. Repair shall follow the guidelines provided by the engineering firm listed in Exhibit B as "GENERAL PAINTING INSTRUCTIONS".
- iii. The parties agree that, within 48 hours of completion of Tenant's modifications of its equipment on the water tank as described above, Dixon Engineering, Inc. ("Dixon") shall complete an inspection of the water tank. All costs for such inspection shall be the responsibility of Tenant. Within 15 days of Dixon's inspection, Landlord shall request that Dixon provide a written report of the inspection to both Landlord and Tenant. Within 15 days of receipt of the report provided to Landlord by Dixon (the date of receipt will be deemed to be the date Tenant receives the report), Landlord shall review, and if found satisfactory, provide its approval by signing and sending the form attached hereto as Exhibit C ("Township Acceptance") to Tenant, or if not found satisfactory, will provide written notice to Tenant of the problems or deficiencies identified in the report that it requires to be corrected. In the event that Tenant must correct any such problems or deficiencies, it shall do so within a 30 day timeframe from receipt of notice from either Dixon Engineering or the Landlord and then provide notice to Landlord upon completion. Within 15 days of receipt of notice of completion, Landlord shall provide its approval by signing and sending the Township Acceptance to Tenant.

1. Rental. Commencing on the first day of the month following the latter of the signature dates to this instrument below and continue thereafter, rent shall be increased by **Three Hundred and Sixty Nine and 47/100 Dollars** (\$369.47) per month, subject to further adjustments as provided in the Agreement including any annual escalators in CPI or other percentage increases, for the duration of this Agreement

2. Use of Premises. Effective at the commencement of construction of the Modified Equipment the Agreement is hereby amended to reflect the following as the equipment Tenant is permitted to install on the Landlord's tower at the 68' RAD center:

Antennas:	(3) Powerwave RA21.7775.00A (6) Andrew NNH4-65C-R6-V3
TMA's:	(6) LGP21401
Coax:	(6) 1-5/8" Coax (1) FB-L98B-034 (1) PWRT-608-S (1) FB-L98B-235 (3) PWRT-606-S
RRHs:	(3) RRH4x25-B30 (3) AirScale RRH 4T4R B5 160W AHCA (3) AirScale Dual RRH 4T4R B25/66 320W AHFIB (3) AirScale TRI RRH 4T4R B12/14/29 370W AHLBBA

Demarcation Boxes:

(1) DC6-48-60-18-8C

(1) DC9-48-60-24-8C-EV

Ground Space:

No change to existing 200 Sq. Ft. Lease Area

3. Professional Services Fees. Tenant agrees to reimburse Landlord for professional services fees, including but not limited to engineering inspection and review incurred in conjunction with Landlord's review of this Agreement in the amount of Three Thousand and Five Hundred and No/ 100 Dollars (\$3,000.00) within ten (10) days after the amendment is signed by the Landlord. A fee of (1.5%) per month interest shall be issued against the balance of Professional Services Fees not paid within the (30) day execution period.

4. Notices. Section 25 of the Agreement is hereby deleted in its entirety and replaced with the following:

NOTICES. All notices, requests, demands and communications hereunder will be given by first class certified or registered mail, return receipt requested, or by a nationally recognized overnight courier, postage prepaid, to be effective when properly sent and received, refused or returned undelivered. Notices will be addressed to the parties as follows.

If to TENANT:

New Cingular Wireless PCS, LLC
Attn: TAG – LA
Re: Cell Site # MI3147
Cell Site Name: Heritage WT (MI)
Fixed Asset #: 10123909
1025 Lenox Park Blvd NE
3rd Floor
Atlanta, GA 30319

With copy to:

New Cingular Wireless PCS, LLC
Attn: Legal Department
Re: Cell Site # MI3147
Cell Site Name: Heritage WT (MI)
Fixed Asset #: 10123909
208 S. Akard Street
Dallas, Texas, 75202-4206

If to LANDLORD:

The copy sent to the Legal Department is an administrative step which alone does not constitute legal notice. Either party hereto may change the place for the giving of notice to it by thirty (30) days prior written notice to the other as provided herein.

5. Other Terms and Conditions Remain. In the event of any inconsistencies between the Agreement and this Amendment, the terms of this Amendment shall control. Except as expressly set forth in this Amendment, the Agreement otherwise is unmodified and remains

in full force and effect. Each reference in the Agreement itself shall be deemed also to refer to this Amendment.

6. Capitalized Terms. All capitalized terms used but not defined herein shall have the same meanings as defined in the Agreement.

[SIGNATURES APPEAR ON THE NEXT PAGE]

[REMAINDER OF PAGE LEFT BLANK INTENTIONALLY]

IN WITNESS WHEREOF, the parties have caused their properly authorized representatives to execute and seal this Fourth Amendment to Site Lease Agreement on the dates set forth below.

“LANDLORD”:

The Charter Township of Garfield,
A Michigan municipal corporation

By: _____

Print Name: Chuck Korn

Its: Township Supervisor

Date: _____

“TENANT”:

New Cingular Wireless PCS, LLC,
a Delaware limited liability company

By: AT&T Mobility Corporation
Its: Manager

By: _____

Print Name: Michael Bridwell

Its: Area Manager-Construction &
Engineering

Date: _____

[ACKNOWLEDGEMENTS APPEAR ON NEXT PAGE]

STATE OF MICHIGAN)
) ss:
COUNTY OF KENT)

Notary Public: _____

LANDLORD ACKNOWLEDGEMENT

STATE OF MICHIGAN)
) ss:
COUNTY OF _____)

Notary Public: _____

My Commission Expires: _____

EXHIBIT A
CONSTRUCTION DRAWINGS PREPARED BY BLACK AND VEATCH DATED
1/5/22

Notes:

1. This Exhibit may be replaced by a land survey and/or construction drawings of the Premises once received by Tenant.
2. Any setback of the Premises from the Property's boundaries shall be the distance required by the applicable governmental authorities.
3. Width of access road shall be the width required by the applicable governmental authorities, including police and fire departments.
4. The type, number and mounting positions and locations of antennas and transmission lines are illustrative only. Actual types, numbers and mounting positions may vary from what is shown above.

EXHIBIT B

**DIXON STRUCTURAL ANALYSIS AND STRUCTURAL SHEETS DATED
12/21/21**

Market: MI/IN
Cell Site Number: TRAVMI3147
Cell Site Name: Heritage WT
Fixed Asset Number: 10123909

THIRD AMENDMENT TO SITE LEASE AGREEMENT

THIS THIRD AMENDMENT TO SITE LEASE AGREEMENT ("**Third Amendment**"), dated as of the latter of the signature dates below, is by and between the **Charter Township of Garfield**, a Michigan municipal corporation, having a mailing address of 3848 Veterans Drive, Traverse City, Michigan 49684 (hereinafter referred to as "**Landlord**"), and **New Cingular Wireless PCS, LLC**, a Delaware limited liability company, as successor in interest to NPI-Omnipoint Wireless, LLC, having a mailing address of 575 Morosgo Drive, Atlanta, GA 30324 (hereinafter referred to as "**Tenant**").

WHEREAS, Landlord and Tenant (or its predecessor in interest) entered into a Site Lease Agreement dated November 17, 2003, as amended by the First Amendment dated July 21, 2009, and as further amended by the Second Amendment dated June 24, 2014, whereby Landlord leased to Tenant certain Premises, therein described, that are a portion of the Property located at 5600 Heritage Way, Traverse City, MI 49684 ("Agreement"); and

WHEREAS, Landlord and Tenant desire to amend the Agreement to allow Tenant to modify Tenant's existing communications equipment on the Leased Premises, to modify the notice section of the Agreement, and to otherwise amend the Agreement as set forth more fully below;

NOW THEREFORE, in consideration of the foregoing and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Landlord and Tenant agree as follows:

- A. Landlord and Tenant agree and acknowledge that as of the date this Third Amendment is fully executed, Tenant equipment information set forth in the Lease shall hereby be deleted in part and shall be replaced with Exhibit A and B attached hereto and incorporated herein by this reference.
- B. Landlord agrees to the equipment upgrade with the following provisions: (a) Dixon Engineering completes all appropriate structural changes; (b) all structural changes are installed to the specifications included in the Construction Drawings attached hereto as Exhibit B; (c) all equipment upgrades shall adhere to the drawings and specifications attached hereto as Exhibit A; and (d) all building and construction permits, and inspections are approved by Landlord's agents and appropriate regulatory authorities.
- C. Tenant agrees to address the following additions to Exhibit B:
 - i. All tank penetrations during the upgrade must remain temporarily sealed. Upon the completion of the upgrade permanent sealing must be installed to prevent moisture, insects and varmints from access to the tank's inner area.

- ii. All new and existing areas where tank penetrations are located must be checked for rust, corrosion, pitting, etc. Repair all areas either from the upgrade or the original installation. Repair shall follow the guidelines provided by the engineering firm listed in Exhibit B as "GENERAL PAINTING INSTRUCTIONS".
- iii. The parties agree that, within 48 hours of completion of Tenant's modifications of its equipment on the water tank as described above, Dixon Engineering, Inc. ("Dixon") shall complete an inspection of the water tank. All costs for such inspection shall be the responsibility of Tenant. Within 15 days of Dixon's inspection, Landlord shall request that Dixon provide a written report of the inspection to both Landlord and Tenant. Within 15 days of receipt of the report provided to Landlord by Dixon (the date of receipt will be deemed to be the date Tenant receives the report), Landlord shall review, and if found satisfactory, provide its approval by signing and sending the form attached hereto as Exhibit C ("Township Acceptance") to Tenant, or if not found satisfactory, will provide written notice to Tenant of the problems or deficiencies identified in the report that it requires to be corrected. In the event that Tenant must correct any such problems or deficiencies, it shall do so within a 30 day timeframe from receipt of notice from either Dixon Engineering or the Landlord and then provide notice to Landlord upon completion. Within 15 days of receipt of notice of completion, Landlord shall provide its approval by signing and sending the Township Acceptance to Tenant.

1. Rental. Landlord and Tenant agree and acknowledge that Section 3 of the Agreement shall be amended to increase the monthly rent. As consideration for such modifications to the current loading of 20.00%, Tenant shall pay to Owner a monthly rental increase of 10.22% (in the amount of \$452.98/month plus the current value of \$4,512.79) which will take effect as of the 1st day of the first calendar month following the latter of the signature dates to this instrument below and continue thereafter along with original agreement annual escalators in CPI or other percentage increases, for the duration of this Agreement.

2. Use of Premises. Effective at the commencement of construction of the Modified Equipment, the Agreement is hereby amended to reflect the following as the equipment Tenant is permitted to install on the Landlord's tower at the 64' RAD center:

Antennas:	(6) Powerwave RA21.7775.00A antennas
	(6) Andrew SBNHH-1D65C antennas
TMA's:	(12) Powerwave LGP21401 tower mounted amplifiers
Coax:	(12) 1-5/8" coax line
	(1) 3/8" RET Cable
	(4) 19.7mm DC cables
	(1) 10mm fiber optic cable
RRUS:	(3) Alcatel-Lucent RRH2x40 (700/850)
	(3) Alcatel-Lucent RRH2x40 (AWS)
	(3) Alcatel-Lucent RRH4X25-WCS

Demarcation Boxes: (1) Raycap DC6-48-60-18-8F
(1) Raycap DC6-48-60-0-8F
Ground Space: No Change to Existing 200 SF Lease Area

3. Professional Services Fees. Tenant agrees to reimburse Landlord for professional services fees, including but not limited to engineering inspection and review incurred in conjunction with Landlord's review of this Agreement in the amount of Two Thousand and Five Hundred and No/100 Dollars (\$2,500.00) within ten (10) days after the amendment is signed by the Landlord. A fee of (1.5%) per month interest shall be issued against the balance of Professional Services Fees not paid within the (30) day execution period.

4. Term. The parties acknowledge that this Third Amendment does not constitute a renewal or extension of the Lease Term, and Tenant acknowledges that the Landlord cannot guarantee that the Heritage Water Tower will continue to be maintained beyond 2018. Landlord acknowledges its commitment to abide by the notice provisions of the original Site Lease and its subsequent amendments.

5. Other Terms and Conditions Remain. In the event of any inconsistencies between the Agreement and this Amendment, the terms of this Amendment shall control. Except as expressly set forth in this Amendment, the Agreement otherwise is unmodified and remains in full force and effect. Each reference in the Agreement itself shall be deemed also to refer to this Amendment.

6. Capitalized Terms. All capitalized terms used but not defined herein shall have the same meanings as defined in the Agreement.

[SIGNATURES APPEAR ON THE NEXT PAGE]

[REMAINDER OF PAGE LEFT BLANK INTENTIONALLY]

IN WITNESS WHEREOF, the parties have caused their properly authorized representatives to execute and seal this Third Amendment to Site Lease Agreement on the dates set forth below.

"LANDLORD"

The Charter Township of Garfield, a Michigan municipal corporation

By: 

Name: Chuck Korn

Title: Township Supervisor

Date: 1-12, 201~~4~~⁵



"TENANT"

New Cingular Wireless PCS, LLC,
a Delaware limited liability company

By: AT&T Mobility Corporation

Its: Manager

By: 

Name: NAME DAREAN

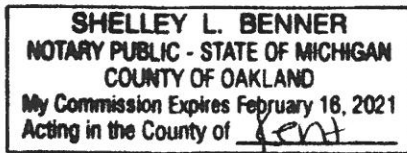
Title: VP of Sales & Marketing

Date: Dec 18, 2014

TENANT ACKNOWLEDGEMENT

STATE OF MI)
COUNTY OF Kent) ss:

On the 16th day of December in the year 2014 before me, the undersigned, a notary public in and for said state, personally appeared ANNE DIXON, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me she that was authorized to execute the instrument and acknowledged it as the Gr. Real Estate Agent of AT&T Mobility Corporation, the Manager of New Cingular Wireless PCS, LLC, to be the free and voluntary act of such party for the uses and purposes mentioned in the instrument..



Shelley L. Benner
Notary Public: Shelley L. Benner
My Commission Expires: 02/18/21

LANDLORD ACKNOWLEDGEMENT

STATE OF MICHIGAN)
COUNTY OF GRAND TRAVERSE) ss:

BE IT REMEMBERED, that on this 12th day of January, 2014⁵ before me, the subscriber, a person authorized to take oaths in the State of Michigan, personally appeared Chuck Korn who, being duly sworn on his/her oath, deposed and made proof to my satisfaction that he/she is the person(s) named in the within instrument; and I, having first made known to him/her the contents thereof, he/she did acknowledge that he/she signed, sealed and delivered the same as his/her/their voluntary act and deed for the purposes therein contained.



Lisa C. Ritter
Notary Public: Lisa C. Ritter
My Commission Expires: 9/16/2020



32255 Northwestern Highway
Suite 100
Farmington Hills, MI 48334

14398206

DATE	BY	REVISION	DESCRIPTION
01/11/11	WJ	1	ISSUED FOR PERMIT
01/11/11	WJ	2	ISSUED FOR PERMIT
01/11/11	WJ	3	ISSUED FOR PERMIT
01/11/11	WJ	4	ISSUED FOR PERMIT
01/11/11	WJ	5	ISSUED FOR PERMIT
01/11/11	WJ	6	ISSUED FOR PERMIT
01/11/11	WJ	7	ISSUED FOR PERMIT
01/11/11	WJ	8	ISSUED FOR PERMIT
01/11/11	WJ	9	ISSUED FOR PERMIT
01/11/11	WJ	10	ISSUED FOR PERMIT



GoodmanNetworks



LANDTECH
Professional Surveying & Engineering
AL, AR, AZ, CA, CO, CT, DE, FL, GA, IL, IN, IA, KS, KY, LA, MI, MN, MO, NE, NH, NJ, NY, OH, OK, OR, PA, RI, SC, SD, TN, TX, VA, VT, WA, WI, WY

HERITAGE WT
TRAVMI3147

FA#: 10123909

SITE ADDRESS:
5600 HERITAGE WAY
TRAVERSE CITY, MI 49686
COUNTY: GRAND TRAVERSE

Sheet Title:

SITE PLAN

Sheet Number:

C-1

COMPOUND NOTES

HAND GAS REQUIRED TO PROTECT EXISTING UNDERGROUND CABLES AND UTILITIES

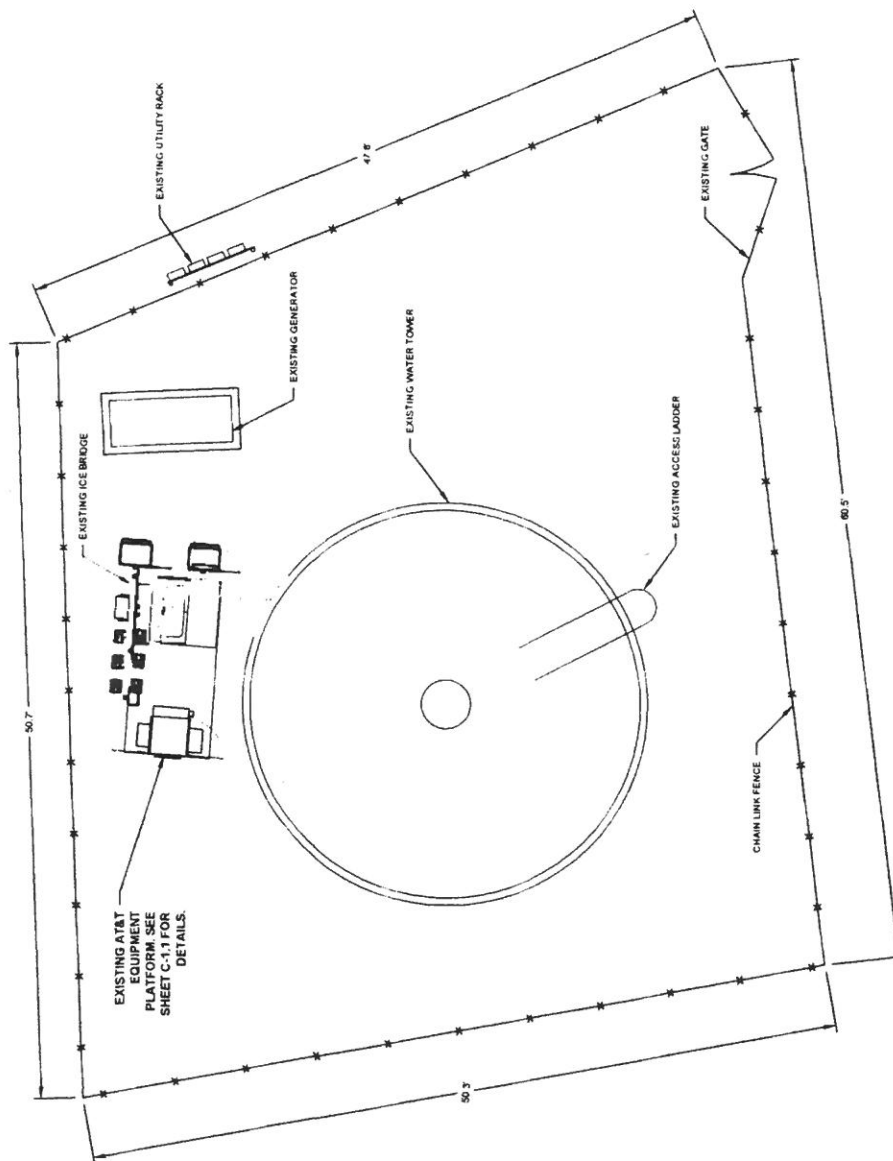
RESTORE EXISTING SURFACES TO ORIGINAL CONDITIONS AFTER CONSTRUCTION IS COMPLETED. IF SURFACE IS ASPHALT OR CONCRETE, SAW CUT AND PATCHING IS REQUIRED.

ANY LANDSCAPING DAMAGE CAL-SEC 9 THIS INSTALLATION SHALL BE REPAIRED TO ORIGINAL CONDITIONS OR BETTER.

EXISTING COMPOUND AND EQUIPMENT LAYOUT WAS PROVIDED TO LANDTECH. ON TO VERIFY EXISTING CONDITIONS PRIOR TO CONSTRUCTION.

GENERAL NOTES

1. NO PROPOSED MUNICIPAL SEWER OR WATER UTILITIES ARE REQUIRED FOR THIS SITE.
2. THE PROPOSED INSTALLATION SHALL BE IN ACCORDANCE WITH THE CITY OF TRAVERSE CITY ZONING ORDINANCE.
3. THERE WILL BE NO CHANGE IN LANDSCAPE PATTERN DUE TO THE PROPOSED INSTALLATION.
4. THE PROPOSED INSTALLATION SHALL BE IN ACCORDANCE WITH THE CITY OF TRAVERSE CITY ZONING ORDINANCE.
5. SOIL EROSION / SEDIMENTATION CONTROLS NOT NECESSARY.
6. EXISTING UTILITIES SHALL BE MAINTAINED AND NOT BE MOVED OR DELETED.
7. TOWER LIGHTING SHALL COMPLY WITH FAA STANDARDS AS REQUIRED.
8. ALL STRUCTURES SHALL CONFORM TO FAA FCC REGULATIONS.
9. NO OFF-STREET PARKING AREAS OR LOADING AREAS ARE PROPOSED.
10. NO UTILITIES EXIST WITHIN COMPOUND AREA.



SITE PLAN

SCALE: 1"=8'



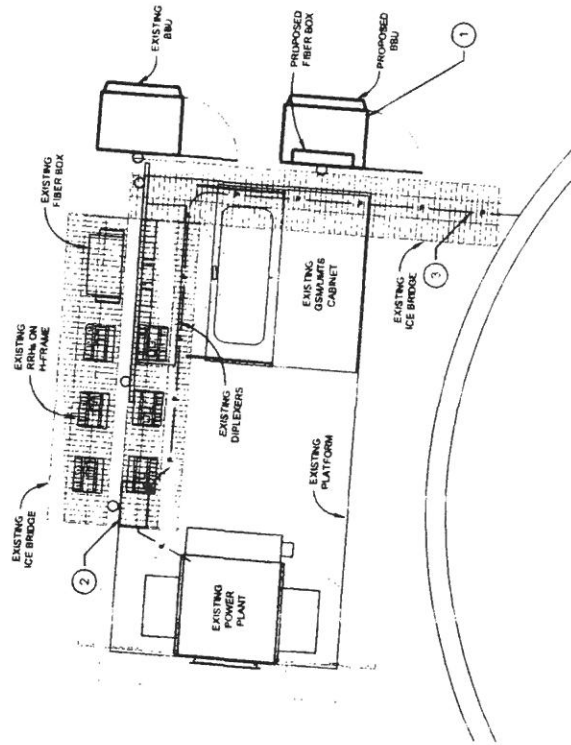
CRANE NOTE:
ON SITES WHERE A CRANE IS NECESSARY, THE CONTRACTOR SHALL CONFIRM AN UNOBSTRUCTED ROUTE FOR THE CRANE FROM PUBLIC ROAD TO TOWER SITE PRIOR TO CONSTRUCTION. NO AERIAL OBSTRUCTIONS UNDER FIFTEEN FEET SHALL BE ALLOWED. INCLUDING AERIAL UTILITY LINES ARE ALLOWED ALONG SMOKE ROUTE.

REFER TO SHEET E-1 FOR
ELECTRICAL AND GROUNDING
PLANS

- NEW EQUIPMENT LEGEND**
- ① PROPOSED BASE BAND UNIT (BBU) IN
NEW OUTDOOR COMPACT CABINET
MOUNTED TO ICE BRIDGE POST
 - ② PROPOSED SURGE PROTECTION IN NEW
RAYCAP CABINET ENCLOSURE
DC12-48-800-25E
 - ③ (2) NEW DC CABLES FROM DC SURGE
SUPPRESSOR TO RAYCAP DEMARC BOX
ON TOWER

COMPOUND NOTES

HAND DIG AS REQUIRED TO PROTECT EXISTING
UNDERGROUND CABLES AND UTILITIES
RESTORE EXISTING SURFACES TO
PRE-CONSTRUCTION CONDITIONS AFTER
CONSTRUCTION IS COMPLETED
IF SURFACE IS ASPHALT OR CONCRETE SAW
CUT AND PATCHING IS REQUIRED
ANY LANDSCAPING DAMAGE CAUSED BY THIS
INSTALLATION SHALL BE REPAIRED TO
PRE-CONSTRUCTION CONDITIONS
OR BETTER
**EXISTING COMPOUND AND EQUIPMENT LAYOUT WAS
PROVIDED TO LANDTECH ON TO VERIFY EXISTING
CONDITIONS PRIOR TO CONSTRUCTION.**



at&t
32255 Northwestern Highway
Suite 100
Farmington Hills, MI 48334

LANDTECH PROJECT NUMBER		14388206
REV	DATE	DESCRIPTION
0	07/13/14	FINAL LAYOUT AND NOTES
1	08/23/14	REVISIONS FOR CONSTRUCTION

Goodman Networks

DESIGNER'S NOTE: THE DRAWING IS PREPARED FOR
YOUR PROJECT ONLY. IT IS NOT TO BE USED FOR ANY
OTHER PROJECTS WITHOUT THE WRITTEN CONSENT OF LANDTECH.
ALL RIGHTS RESERVED. THIS DRAWING IS THE PROPERTY OF LANDTECH.
ALL RIGHTS RESERVED. THIS DRAWING IS THE PROPERTY OF LANDTECH.

LANDTECH
Professional Surveying & Engineering
5600 HERITAGE WAY
TRAVERSE CITY, MI 49685
COUNTY: GRAND TRAVERSE
www.landtechsurvey.com

HERITAGE WT
TRAVMI3147
FA#: 10123909
SITE ADDRESS:
5600 HERITAGE WAY
TRAVERSE CITY, MI 49685
COUNTY: GRAND TRAVERSE

Sheet Title:
EQUIPMENT PLAN

Sheet Number:
C-1.1

EQUIPMENT PLAN

SCALE: 1"=3'



TOWER ELEVATION VIEW
NOT TO SCALE



32255 Northwestern Highway
Suite 100
Farmington Hills, MI 48334

REV	DATE	DESCRIPTION	BY	CHK
0	06/20/04	NEW HANDRAIL MOUNTING BRACKET	TM	CEL
1	06/20/04	NEW HANDRAIL MOUNTING BRACKET	TM	CEL
2	06/20/04	NEW HANDRAIL MOUNTING BRACKET	TM	CEL
3	06/20/04	NEW HANDRAIL MOUNTING BRACKET	TM	CEL
4	06/20/04	NEW HANDRAIL MOUNTING BRACKET	TM	CEL
5	06/20/04	NEW HANDRAIL MOUNTING BRACKET	TM	CEL
6	06/20/04	NEW HANDRAIL MOUNTING BRACKET	TM	CEL
7	06/20/04	NEW HANDRAIL MOUNTING BRACKET	TM	CEL
8	06/20/04	NEW HANDRAIL MOUNTING BRACKET	TM	CEL
9	06/20/04	NEW HANDRAIL MOUNTING BRACKET	TM	CEL



GoodmanNetworks



LANDTECH
Professional Surveying & Engineering
10000 GRAND TRAVERSE
TRAVERSE CITY, MI 49685
TEL: 616.271.1000 FAX: 616.271.1001
WWW.LANDTECHSURVEYING.COM

HERITAGE WT
TRAVMI3147
FA#: 10123909

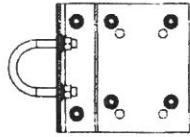
SITE ADDRESS:
6600 HERITAGE WAY
TRAVERSE CITY, MI 49685
COUNTY: GRAND TRAVERSE

Sheet Title:

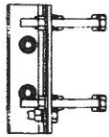
MOUNTING DETAILS

Sheet Number:

C-4

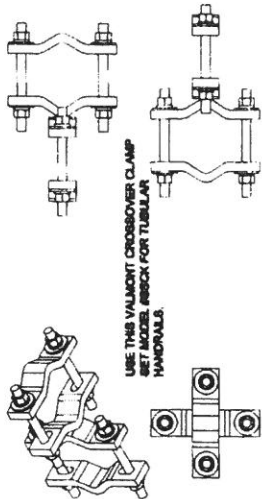


USE THIS VALUANT MOUNTING
BRACKET MODEL 9880-A FOR
ANGLE HANDRAILS



ANGLE HANDRAIL PIPE MOUNTING BRACKET

NOT TO SCALE



USE THIS VALUANT CROSSOVER CLAMP
SET MODEL 9880-B FOR TUBULAR
HANDRAILS

CROSSOVER CLAMP SET

NOT TO SCALE

NEW 2-7/8" DIA
GALV. STL. PIPE, VERIFY
LENGTH IN FIELD

DOWN TILT ASSEMBLY
PROPOSED ANTENNA

NEW HANDRAIL
MOUNT BRACKET
(2 PER PIPE)
SEE DETAIL "A" SHEET

EXISTING HANDRAIL

FIBER AND DC POWER FEEDS
FROM MAIN DEMARCATION BOX

TO DEMARCATION BOX

PROPOSED BRHS PER
SECTOR MOUNTED TO
PIPE MAST PER

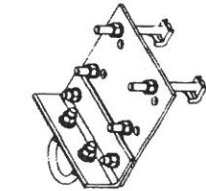
CABLE JUMPERS

EXISTING
WATER TANK ROOF

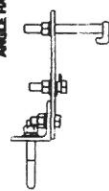
TYPICAL ANTENNA MOUNTING DETAIL

NOT TO SCALE

NOTE:
DO NOT FIELD FABRICATE JUMPERS
JUMPERS SHALL BE PRE-MANUFACTURED
AND INSTALLED ACCORDING TO
MANUFACTURER'S RECOMMENDATIONS

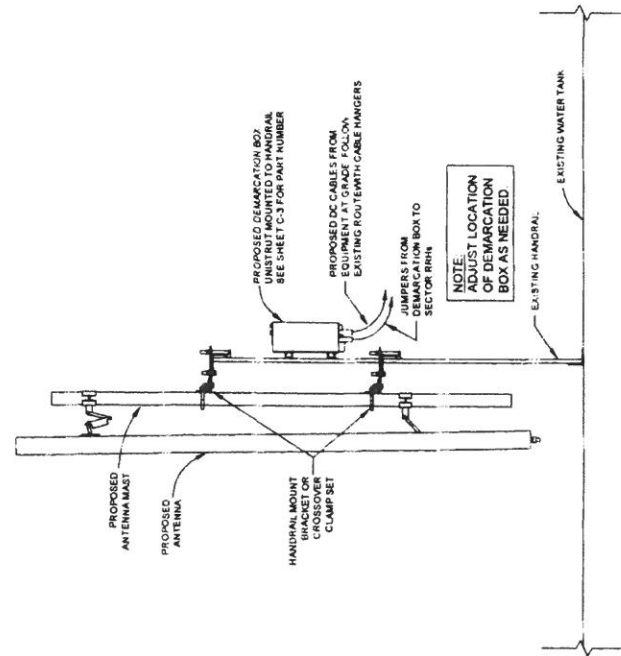


USE THIS VALUANT MOUNTING
BRACKET MODEL 9880-A FOR
ANGLE HANDRAILS



DC DEMARCATION BOX MOUNTING DETAIL

NOT TO SCALE



NOTE:
ADJUST LOCATION
OF DEMARCATION
BOX AS NEEDED



32255 Northwestern Highway
Suite 100
Farmington Hills, MI 48334

14386206

REV	DATE	DESCRIPTION	BY	CHK
1	01/11/11	ISSUED FOR CONSTRUCTION	WJ	
2	01/11/11	REVISED FOR CONSTRUCTION	WJ	
3	01/11/11	REVISED FOR CONSTRUCTION	WJ	
4	01/11/11	REVISED FOR CONSTRUCTION	WJ	
5	01/11/11	REVISED FOR CONSTRUCTION	WJ	
6	01/11/11	REVISED FOR CONSTRUCTION	WJ	
7	01/11/11	REVISED FOR CONSTRUCTION	WJ	
8	01/11/11	REVISED FOR CONSTRUCTION	WJ	
9	01/11/11	REVISED FOR CONSTRUCTION	WJ	
10	01/11/11	REVISED FOR CONSTRUCTION	WJ	
11	01/11/11	REVISED FOR CONSTRUCTION	WJ	
12	01/11/11	REVISED FOR CONSTRUCTION	WJ	
13	01/11/11	REVISED FOR CONSTRUCTION	WJ	
14	01/11/11	REVISED FOR CONSTRUCTION	WJ	
15	01/11/11	REVISED FOR CONSTRUCTION	WJ	
16	01/11/11	REVISED FOR CONSTRUCTION	WJ	
17	01/11/11	REVISED FOR CONSTRUCTION	WJ	
18	01/11/11	REVISED FOR CONSTRUCTION	WJ	
19	01/11/11	REVISED FOR CONSTRUCTION	WJ	
20	01/11/11	REVISED FOR CONSTRUCTION	WJ	

GoodmanNetworks

REVISIONS SHALL BE MADE TO THE DRAWING SET FOR THE PROJECT. THE DRAWING SET SHALL BE THE ONLY SET OF DRAWINGS TO BE USED FOR CONSTRUCTION. ALL DIMENSIONS SHALL BE IN FEET AND INCHES. ALL DIMENSIONS SHALL BE TO THE FACE UNLESS OTHERWISE NOTED.



LANDTECH
Professional Surveying & Engineering
P.O. Box 100, 5600 Heritage Way
Traverse City, MI 49685
Tel: 231.946.1000 Fax: 231.946.1001
www.landtechsurvey.com

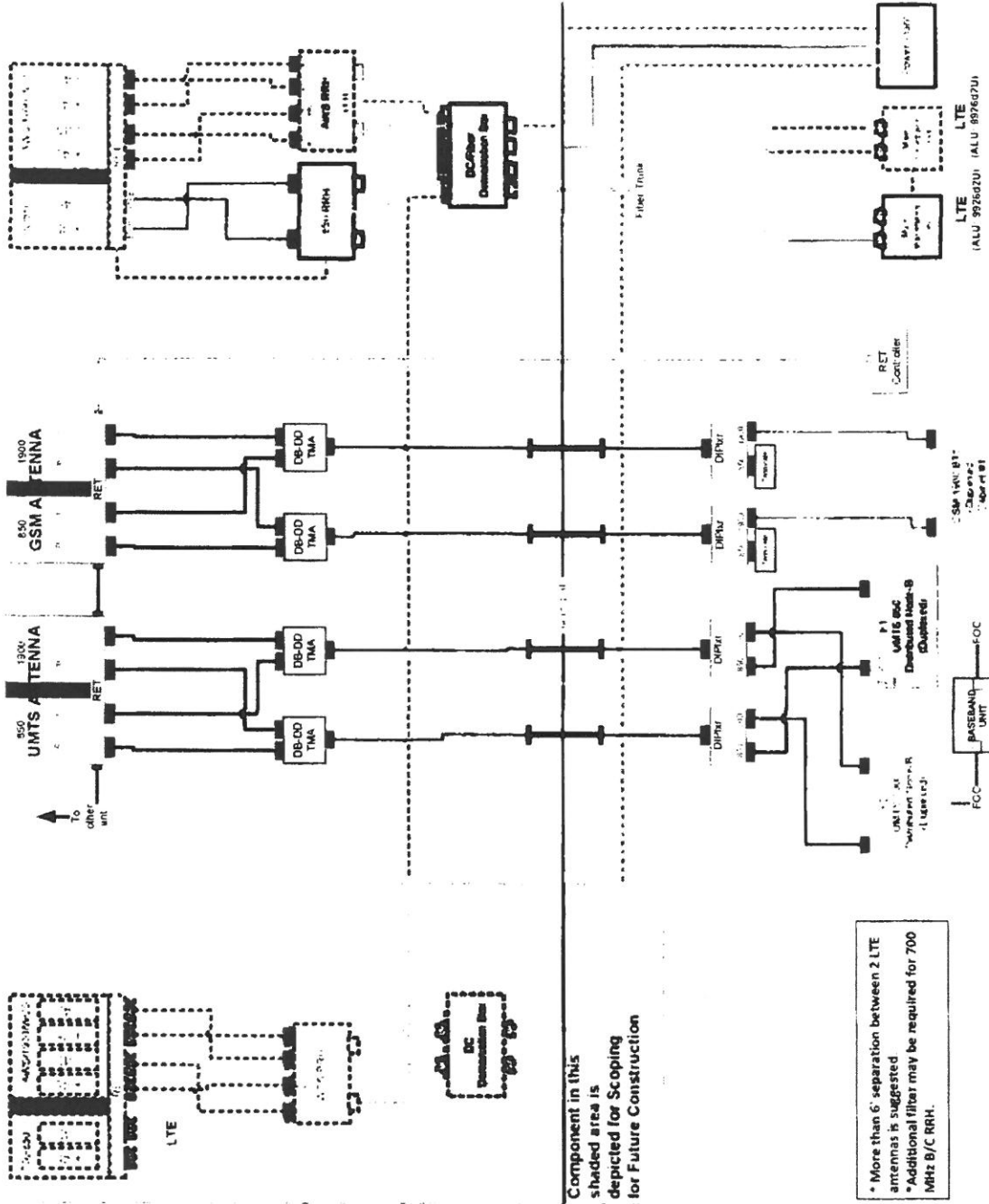
HERITAGE WT
TRAVMI3147
FA#: 10123909

SITE ADDRESS:
5600 HERITAGE WAY
TRAVERSE CITY, MI 49685
COUNTY: GRAND TRAVERSE

Sheet Title:
CABLING DIAGRAM
SECTOR 1

Sheet Number:
RF-1

TRAVMI3147_SECTOR_A_PROPOSED



CABLE DIAGRAM (SECTOR ONE)

NOTE:
NOTES FROM BACK OF
ANTENNAS

* More than 6' separation between 2 LTE antennas is suggested
* Additional filter may be required for 700 MHz B/C RRH.

14386206
LAWRENCE PROJECTIONS[illegible]

BRASSER SCALE HOPE: THE BRASSERS ARE DESIGNED FOR 11" x 17" (28 x 43 cm) sized paper, so the blanketing requires a big cover of paper. LASTEN SHALL PLAT THE BRASSERS AT A RATIO OF 2:1. ALL SUCH COVER SHALL HAVE A SCALE AS THE SHOWS ARE.



LANDTECH

Professional Surveying & Engineering
AL. 474 AZ. 602 FL. GA. IL. IN. IA. KS. KY. LA. ME. MA. MD. MI.
NC. NE. NJ. NM. NY. OH. OK. PA. SC. SD. TN. TX. VA. WV. WY.

HERITAGE WT
TRAVMI3147

FA#: 10123909

SITE ADDRESS:
5600 HERITAGE WAY
TRAVERSE CITY, MI 49685
COUNTY: GRAND TRAVERSE

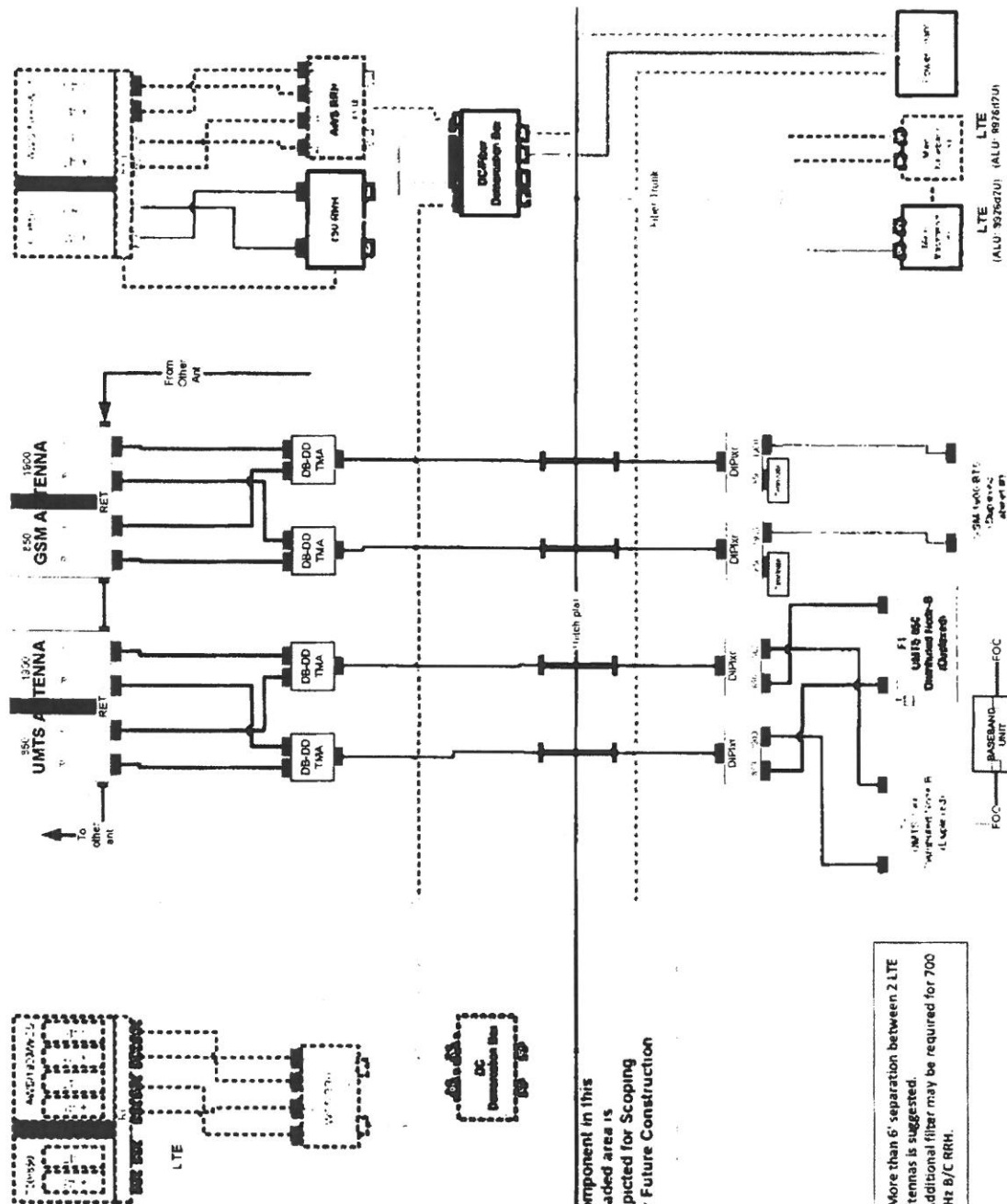
CABLING DIAGRAM SECTORS 2

Sheet Number:

RF-2

NOTE:
VIEW IS FROM BACK OF
ANTENNAS

TRAVMI3147_SECTOR_B_PROPOSED



Component in this shaded area is depicted for Scoping for Future Construction

- * More than 6' separation between 2 LTE antennas is suggested.
* Additional filter may be required for 700 MHz B/C RRH.

CABLE DIAGRAM (SECTOR TWO)



32255 Northwestern Highway
Suite 100
Farmington Hills, MI 48334

REV	DATE	DESCRIPTION	BY	CHKD
1	07/14/11	PRELIMINARY DRAFTING	TM	CEL
2	08/24/11	REVISIONS	TM	CEL
3	09/01/11	REVISIONS	TM	CEL
4	09/01/11	REVISIONS	TM	CEL
5	09/01/11	REVISIONS	TM	CEL
6	09/01/11	REVISIONS	TM	CEL
7	09/01/11	REVISIONS	TM	CEL
8	09/01/11	REVISIONS	TM	CEL
9	09/01/11	REVISIONS	TM	CEL
10	09/01/11	REVISIONS	TM	CEL
11	09/01/11	REVISIONS	TM	CEL
12	09/01/11	REVISIONS	TM	CEL
13	09/01/11	REVISIONS	TM	CEL
14	09/01/11	REVISIONS	TM	CEL
15	09/01/11	REVISIONS	TM	CEL
16	09/01/11	REVISIONS	TM	CEL
17	09/01/11	REVISIONS	TM	CEL
18	09/01/11	REVISIONS	TM	CEL
19	09/01/11	REVISIONS	TM	CEL
20	09/01/11	REVISIONS	TM	CEL

GoodmanNetworks

GoodmanNetworks



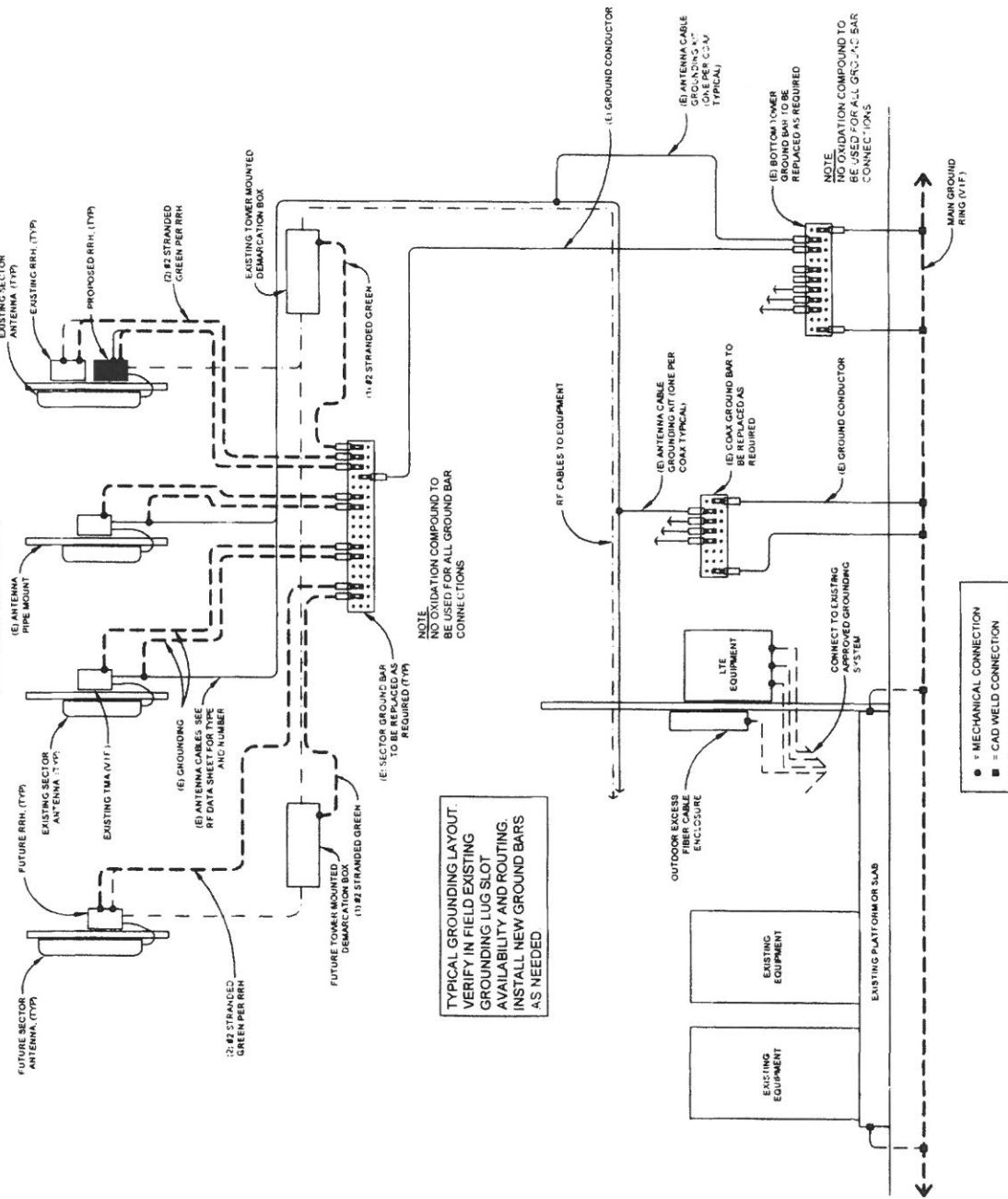
LANDTECH
Professional Surveying & Engineering
A Division of Landmark Engineering, Inc.
14000 E. 15th Ave., Suite 100, Denver, CO 80231
Tel: 303.751.1000 Fax: 303.751.1001
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FA#: 10123909
SITE ADDRESS:
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TRAVERSE CITY, MI 49685
COUNTY: GRAND TRAVERSE

Sheet Title:
**EQUIPMENT & ANTENNA
GROUNDING DIAGRAM**

Sheet Number:
E-1

TYPICAL ANTENNA SECTOR



SCHEMATIC DIAGRAM EQUIPMENT & ANTENNA GROUNDING SYSTEM



14386206

Run	Time	Conc. (ppm)	Area	Height	Width	Area%	Height%
1	48.71	0.001	1.00	1.00	1.00	1.00	1.00
2	48.71	0.001	1.00	1.00	1.00	1.00	1.00
3	48.71	0.001	1.00	1.00	1.00	1.00	1.00
4	48.71	0.001	1.00	1.00	1.00	1.00	1.00
5	48.71	0.001	1.00	1.00	1.00	1.00	1.00
6	48.71	0.001	1.00	1.00	1.00	1.00	1.00
7	48.71	0.001	1.00	1.00	1.00	1.00	1.00
8	48.71	0.001	1.00	1.00	1.00	1.00	1.00
9	48.71	0.001	1.00	1.00	1.00	1.00	1.00
10	48.71	0.001	1.00	1.00	1.00	1.00	1.00
11	48.71	0.001	1.00	1.00	1.00	1.00	1.00
12	48.71	0.001	1.00	1.00	1.00	1.00	1.00
13	48.71	0.001	1.00	1.00	1.00	1.00	1.00
14	48.71	0.001	1.00	1.00	1.00	1.00	1.00
15	48.71	0.001	1.00	1.00	1.00	1.00	1.00
16	48.71	0.001	1.00	1.00	1.00	1.00	1.00
17	48.71	0.001	1.00	1.00	1.00	1.00	1.00
18	48.71	0.001	1.00	1.00	1.00	1.00	1.00
19	48.71	0.001	1.00	1.00	1.00	1.00	1.00
20	48.71	0.001	1.00	1.00	1.00	1.00	1.00
21	48.71	0.001	1.00	1.00	1.00	1.00	1.00
22	48.71	0.001	1.00	1.00	1.00	1.00	1.00
23	48.71	0.001	1.00	1.00	1.00	1.00	1.00
24	48.71	0.001	1.00	1.00	1.00	1.00	1.00
25	48.71	0.001	1.00	1.00	1.00	1.00	1.00
26	48.71	0.001	1.00	1.00	1.00	1.00	1.00
27	48.71	0.001	1.00	1.00	1.00	1.00	1.00
28	48.71	0.001	1.00	1.00	1.00	1.00	1.00
29	48.71	0.001	1.00	1.00	1.00	1.00	1.00
30	48.71	0.001	1.00	1.00	1.00	1.00	1.00
31	48.71	0.001	1.00	1.00	1.00	1.00	1.00
32	48.71	0.001	1.00	1.00	1.00	1.00	1.00
33	48.71	0.001	1.00	1.00	1.00	1.00	1.00
34	48.71	0.001	1.00	1.00	1.00	1.00	1.00
35	48.71	0.001	1.00	1.00	1.00	1.00	1.00
36	48.71	0.001	1.00	1.00	1.00	1.00	1.00
37	48.71	0.001	1.00	1.00	1.00	1.00	1.00
38	48.71	0.001	1.00	1.00	1.00	1.00	1.00
39	48.71	0.001	1.00	1.00	1.00	1.00	1.00
40	48.71	0.001	1.00	1.00	1.00	1.00	1.00
41	48.71	0.001	1.00	1.00	1.00	1.00	1.00
42	48.71	0.001	1.00	1.00	1.00	1.00	1.00
43	48.71	0.001	1.00	1.00	1.00	1.00	1.00
44	48.71	0.001	1.00	1.00	1.00	1.00	1.00
45	48.71	0.001	1.00	1.00	1.00	1.00	1.00
46	48.71	0.001	1.00	1.00	1.00	1.00	1.00
47	48.71	0.001	1.00	1.00	1.00	1.00	1.00



BUSINESS MAIL NOTE: THE ORDERS ARE DESIGNED FOR 10% OFF (ALL ORDERS) SAVED NOTES, SHOPS, MAGAZINES/THESE RESOURCES IN MY COPIES OF PRINTS.

LARGEST WILL PUT THE ORDERS AT A RATIO OF 1:1.

ALL SUCH ORDERS SHALL HAVE A SCALE TO THE SHOWS SIZE.



LANDTECH
Professional Surveying & Engineering
AL, AR, AZ, CA, CO, CT, DE, FL, GA, HI, IL, IN, IA, KS, KY, LA, ME, MI, MN, MO, NE, NH, NJ, NY, OH, OK, PA, RI, SD, TN, TX, VA, WV, WY
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HERITAGE WT
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FA#: 10123909

SITE ADDRESS:
5600 HERITAGE WAY
TRAVERSE CITY, MI 49685
COUNTY: GRAND TRAVERSE

Small Parts

ELECTRICAL & GROUNDING PLAN

Sheet Number:

E-1.1

GROUNDING LEGEND

GROUND BUS'S BAR

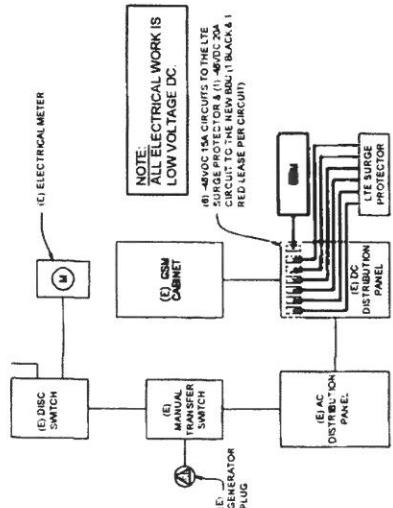
#2 AWG TINNED COPPER WIRE

CROWTHER & CO. LTD.

MECHANICAL CONNECTION

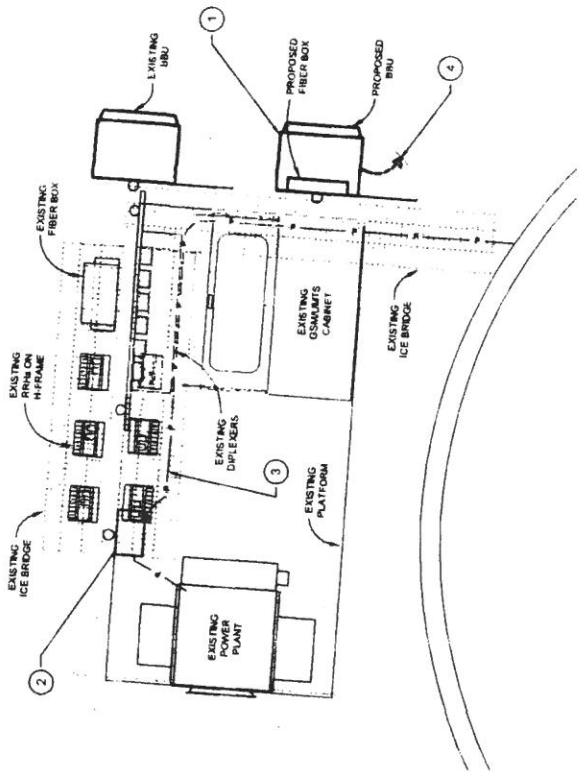
GROUNDING & ELECTRICAL LEGEND

- 1 NEW 1/2" BBU IN (P) OUTDOOR COMPACT CABINET
- 2 DC SURGE PROTECTION
- 3 E.C. TO INSTALL 12" DC POWER RUNS FROM EXISTING DC SURGE SUPPRESSOR TO NEW RAYCAP DEMARC ON TOWER
- 4 GROUND LEADS FROM NEW BBU TO EXISTING GROUND SYSTEM (TYPICAL)



TYPICAL ELECTRICAL ONE LINE DIAGRAM

UTILITY NOTES
 1. CHECK WITH LOCAL UTILITY COMPANIES TO VERIFY LOCATION OF POWER & FIBER SOURCES PRIOR TO CONSTRUCTION
 2. SEE SCOPING NOTES FOR DETAILS REGARDING POWER UPDATES, IF ANY



SCALE: 1"=3'

A horizontal graphic scale bar with alternating black and white segments. It is labeled with '0' at the left end and '6' at the right end. Below the bar, there is a small 'f' and a larger 'y'.

PROPOSED ELECTRICAL & GROUNDING PLAN



Water Tower Antenna Installation Analysis

Prepared For:
Goodman Networks

Prepared By:
Dixon Engineering, Inc.
May 21, 2014

Location:
Garfield Twp, Michigan Heritage Way Water Tank
300,000 Gallon Standpipe Water Storage Tank

Antenna Provider:
AT&T

Site #:
TRAVMI3147



Dixon Engineering, Inc. has completed overturn calculations for the proposed antenna installation with consideration for any affect the antennas will have on the tank with respect to wind loading.

1. The extra weight of the antennas and cables is insignificant in comparison to the weight of water in the tank.
2. The increase in overturning moment is conservatively calculated and is within AWWA D100 design safety factors. This installation will not have any adverse structural effect on the tank.

Owner:	Garfield Twp, Michigan	
Location:	Heritage Way Water Tank	
For:	Goodman Networks	
Date:	May 21, 2014	
Antenna Provider:	AT&T	
Tank Type:	Standpipe	
Tank Volume:	300,000	Gallons

Increase in overturn moment with the existing antennas and the proposed addition of 6 AT&T panel-type antennas mounted on the roof.

Overturn Moment of Structure @100 MPH, antennas @90 MPH		Combined Overturn Moment with Structure		% Increase
969,638	Foot-Pounds	969,638	Foot-Pounds	0.00%
Proposed 6 AT&T Antennas				
74,598	Foot-Pounds	1,044,235	Foot-Pounds	7.69%
Proposed AT&T Miscellaneous Equipment				
25,267	Foot-Pounds	994,904	Foot-Pounds	2.61%
Existing 6 AT&T Antennas				
45,785	Foot-Pounds	1,015,423	Foot-Pounds	4.72%
Existing AT&T Miscellaneous Equipment				
18,180	Foot-Pounds	987,817	Foot-Pounds	1.87%
Existing Roof Handrail				
11,627	Foot-Pounds	981,264	Foot-Pounds	1.20%

Total Percent Increase in Overturn Moment	18.09%
--	---------------

***The Increase in weight added to the tank by the antennas and associated equipment is insignificant with respect to the weight of the tank

FOR DIXON ENGINEERING, INC.

Owner:	Garfield Twp, Michigan	
Location:	Heritage Way Water Tank	
For:	Goodman Networks	
Date:	May 21, 2014	
Antenna Provider:	AT&T	
Tank Type:	Standpipe	
Tank Volume:	300,000	Gallons
Increase in overturn moment with the proposed addition of 6 AT&T panel-type antennas located on the roof.		

Antenna Overturn Moment Calculations for a Standpipe Type Tank Due to Wind Load

Wind Evaluation Speed for tank design

100 MPH

Tank Specifications:

Height to the High Water Level:

60 feet

Diameter of the Tank:

30 feet

Distance Between High Water Level & the Roof:

5 feet

Antenna Specifications:

Number of Antennas:

6 Quantity

Height of Antennas:

8 feet

Width of Antennas:

11.9 inches

Height Above Roof Projection (Est) to the Center of the Antennas:

4 feet

Ice Build Up:

0.5 inches

Areas of Tank Sections & Moment Arm Lengths:

Area of Tank:

1657.5 feet²

Moment Arm of Tank:

32.5 feet

Total Overturn Moment of Tank @ 100 MPH:

969,638 Foot-lbs

Area of Antennas & Moment Arm Lengths:

Antenna Area (with Ice Build Up Factored In):

52.1 feet²

Antenna Moment Arm:

69.0 feet

Overturn Moment of Antennas @ 90 MPH:

74,598 Foot-lbs

Combined Overturn Moment (tank & antennas):

1,044,235 Foot-lbs

Total Percent Increase in Overturn Moment:

7.69%

FOR DIXON ENGINEERING, INC.

Owner:	Garfield Twp, Michigan	
Location:	Heritage Way Water Tank	
For:	Goodman Networks	
Date:	May 21, 2014	
Antenna Provider:	AT&T	
Tank Type:	Standpipe	
Tank Volume:	300,000	Gallons
Increase in overturn moment with the proposed AT&T miscellaneous antenna equipment (3 RRH at 24.4"x10.63", 3 RRH at 19.3"x10.63". 1 FC Box at 17.6"x11.75", 6 DC Boxes at 10.38"x10.25") located on the roof.		

Misc. Equipment Overturn Moment Calcs for a Standpipe Type Tank Due to Wind Load

Wind Evaluation Speed for tank design

100 MPH

Tank Specifications:

Height to the High Water Level:

60 feet

Diameter of the Tank:

30 feet

Distance Between High Water Level & the Roof:

5 feet

Equipment Specifications:

Number of Components:

13 Quantity

Average Height of the Equipment:

1.35 feet

Average Width of the Equipment:

10.54 inches

Average Height Above Roof Projection (Est) to the Center of the Components:

3 feet

Ice Build Up:

0.5 inches

Areas of Tank Sections & Moment Arm Lengths:

Area of Tank:

1657.5 feet²

Moment Arm of Tank:

32.5 feet

Total Overturn Moment of Tank @ 100 MPH:

969,638 Foot-lbs

Area of Miscellaneous Equipment & Moment Arm Lengths:

Equipment Area (with Ice Build Up Factored In):

17.9 feet²

Miscellaneous Equipment Moment Arm:

68.0 feet

Overturn Moment of the Equipment @90 MPH:

25,267 Foot-lbs

Combined Overturn Moment (tank & misc. equipment):

994,904 Foot-lbs

Total Percent Increase in Overturn Moment:

2.61%

FOR DIXON ENGINEERING, INC.

Owner:	Garfield Twp, Michigan	
Location:	Heritage Way Water Tank	
For:	Goodman Networks	
Date:	May 21, 2014	
Antenna Provider:	AT&T	
Tank Type:	Standpipe	
Tank Volume:	300,000	Gallons
Increase in overturn moment with the existing 6 AT&T panel-type antennas located on the roof.		

Antenna Overturn Moment Calculations for a Standpipe Type Tank Due to Wind Load

Wind Evaluation Speed for tank design

100 MPH

Tank Specifications:

Height to the High Water Level:

60 feet

Diameter of the Tank:

30 feet

Distance Between High Water Level & the Roof:

5 feet

Antenna Specifications:

Number of Antennas:

6 Quantity

Height of Antennas:

5.25 feet

Width of Antennas:

11 inches

Height Above Roof Projection (Est) to the Center of the Antennas:

4 feet

Ice Build Up:

0.5 inches

Areas of Tank Sections & Moment Arm Lengths:

Area of Tank:

1657.5 feet²

Moment Arm of Tank:

32.5 feet

Total Overturn Moment of Tank @ 100 MPH:

969,638 Foot-lbs

Area of Antennas & Moment Arm Lengths:

Antenna Area (with Ice Build Up Factored In):

32.0 feet²

Antenna Moment Arm:

69.0 feet

Overturn Moment of Antennas @ 90 MPH:

45,785 Foot-lbs

Combined Overturn Moment (tank & antennas):

1,015,423 Foot-lbs

Total Percent Increase in Overturn Moment:

4.72%

FOR DIXON ENGINEERING, INC.

Owner:	Garfield Twp, Michigan	
Location:	Heritage Way Water Tank	
For:	Goodman Networks	
Date:	May 21, 2014	
Antenna Provider:	AT&T	
Tank Type:	Standpipe	
Tank Volume:	300,000	Gallons
Increase in overturn moment with the existing AT&T miscellaneous antenna equipment (3 RRH at 18.9"x11.5", 12 TMAs at 10"x8") located on the roof.		

Misc. Equipment Overturn Moment Calcs for a Standpipe Type Tank Due to Wind Load

Wind Evaluation Speed for tank design

100 MPH

Tank Specifications:

Height to the High Water Level:

60 feet

Diameter of the Tank:

30 feet

Distance Between High Water Level & the Roof:

5 feet

Equipment Specifications:

Number of Components:

15 Quantity

Average Height of the Equipment:

0.98 feet

Average Width of the Equipment:

8.7 inches

Average Height Above Roof Projection (Est) to the Center of the Components:

3 feet

Ice Build Up:

0.5 inches

Areas of Tank Sections & Moment Arm Lengths:

Area of Tank:

1657.5 feet²

Moment Arm of Tank:

32.5 feet

Total Overturn Moment of Tank @ 100 MPH:

969,638 Foot-lbs

Area of Miscellaneous Equipment & Moment Arm Lengths:

Equipment Area (with Ice Build Up Factored In):

12.9 feet²

Miscellaneous Equipment Moment Arm:

68.0 feet

Overturn Moment of the Equipment @ 90 MPH:

18,180 Foot-lbs

Combined Overturn Moment (tank & misc. equipment):

987,817 Foot-lbs

Total Percent Increase in Overturn Moment:

1.87%

FOR DIXON ENGINEERING, INC.

Owner:	Garfield Twp, Michigan	
Location:	Heritage Way Water Tank	
For:	Goodman Networks	
Date:	May 21, 2014	
Antenna Provider:	AT&T	
Tank Type:	Standpipe	
Tank Volume:	300,000	Gallons
Increase in overturn moment with the existing roof handrail.		

Handrail Overturn Moment Calculations for a Standpipe Type Tank Due to Wind Load

Wind Evaluation Speed for tank design

100 MPH

Tank Specifications:

Height to the High Water Level:

60 feet

Diameter of the Tank:

30 feet

Distance Between High Water Level & the Roof:

5 feet

Handrail Specifications:

Number of Handrail Divisions:

3 Quantity

Average Height of each Division:

3 inches

Diameter of the Handrail:

14 feet

Height Above Roof Projection (Est) to the Center of the Handrail:

1.75 feet

Ice Build Up:

0.5 inches

Areas of Tank Sections & Moment Arm Lengths:

Area of Tank:

1657.5 feet²

Moment Arm of Tank:

32.5 feet

Total Overturn Moment of Tank @ 100 MPH:

969,638 Foot-lbs

Area of Handrail & Moment Arm Length:

Handrail Area (with Ice Build Up Factored In):

14.0 feet²

Handrail Moment Arm:

66.8 feet

Overturn Moment of Handrail @ 90 MPH:

11,627 Foot-lbs

Combined Overturn Moment (tank & handrail):

981,264 Foot-lbs

Total Percent Increase in Overturn Moment:

1.20%

FOR DIXON ENGINEERING, INC.

EXHIBIT C

Township Acceptance

Charter Township of Garfield has reviewed and found satisfactory Dixon's post-installation inspection report, dated _____, 2015.

Signed,

"LANDLORD"

The Charter Township of Garfield,
a Michigan municipal corporation

By: _____

Name: Max Machuta

Title: _____

Date: _____

Consideration of a New Phone System

Phone System*	Upfront Cost	Monthly Fee	Total
Grid 4	\$0.00	\$540.83	\$540.83
Vonage	\$0.00	\$674.00	\$674.00
Anavon	\$6,795.00	\$710.00	\$7,505.00
Netfortis	\$183.00	\$524.22	\$529.00
Nexting	\$4,305.00	\$680.00	\$4,985.00
Tel-net	\$6,187.00	\$457.00	\$6,644.00
Ring Central	\$0.00	\$1,097.00	\$1,097.00
* Service= 36 months; 23 full service phones; 10 simple phones			



Engineering
Surveying
Testing &
Operations

123 West **8.c.**
Traverse City, Mic.
231 946 5874 
231 946 3703 

March 1, 2022

Charter Township of Garfield
Attn: Chuck Korn, Supervisor
3848 Veterans Drive
Traverse City, Michigan 49684

RE: Proposal for engineering services
River East Park Improvement Projects – Phase II
Proposal# 22029C

Dear Chuck:

Thank you for the opportunity to submit this proposal for Civil Engineering services for the River East Park Improvement project. This letter along with the attached "Standard Terms and Conditions" represents our contract for provision of consultant services. Should you have any questions regarding the information contained herein please do not hesitate to contact me.

Project Description

The Charter Township of Garfield owns and operates a 16-acre Recreation Area ("River East") located at 2143 North Keystone Road.

GFA has been working with the Township on the preparation and presentation of conceptual drawings and cost estimates to improve amenities at the existing park including the addition of a parking lot, trail and sidewalk extensions, dog park and pavilion / bathroom structure. GFA was approved in 2021 to assist with the construction of Phase I which is underway and almost complete. The Township Park and Recreation Committee and Township Board have approved their 2022 Capital Improvement Plan to proceed with Phase II of the project to include parking upgrades related to construction of dog parks, benches, and signage. The Township Board has directed staff to coordinate with GFA to provide civil engineering services including design, permitting, bidding, construction oversight and project closeout services to facilitate the completion of the project. Scope of project shall be consistent with the concept drawing and cost estimate attached to this proposal.

Scope of Services

Design Phase

During the design phase, Gourdie Fraser, Inc. will provide services to assure that the project is designed in accordance with the applicable state and local regulatory requirements and based upon input from the Township Board. Design phase services will be provided in the follow sub-categories:



Topographic Survey

As it will be necessary in developing designs for the project, we will perform aerial drone survey and prepare base mapping will be obtained for the site area to be impacted by construction. This service will be necessary to develop grading plans and construction drawings.

Site Design

Design will include establishing finished elevations for project features such as the dog park. Finished grades will be provided on the plans in the form of spot elevations which will clearly define slopes and drainage patterns. The spot elevations, along with the site layout dimensions/geometrics, and cross sections will provide information sufficient for staking and construction of the project.

As part of completion of final engineering for the project components, final plans, specifications, quantities and opinions of probable construction cost will be prepared for review and consideration by the Township. The proposal includes an allowance for meetings with Township staff during this phase to review the final design documents. It is anticipated that the project permit requirements will include Stormwater and SESC permits from the Township and Grand Traverse County. The Contractor will be responsible for these permits however GFA will provide as needed assistance to obtain.

Contract/Bid Documents

Detailed specifications will be included on the construction drawings prepared to be bid and constructed by the contractor. This item also includes preparation of a Request for Proposal and solicitation advertised for contractor bids. GFA will provide assistance to the Township in advertising, addressing contractor questions, preparation of contract addenda as necessary, opening and reviewing bids, and making recommendation of contract award.

Construction Phase

During the construction phase, GFA will provide services to assure that the project is constructed in accordance with the plans, contract documents, and applicable permits. Construction phase services will be provided in the follow sub-categories:

Construction Staking/Layout

Construction staking and layout will include survey crew services to field locate the project features to be constructed in accordance with the final engineering plans. Survey stakes will provide the contractor with instructions regarding, location, alignment and grade of the components to be constructed.

Construction Observation/Materials Testing

As needed on-site observation services will be required during construction for the proposed improvements. Construction observation services will help to assure that construction is in accordance with the approved plans and contract documents. Observation staff will track construction quantities and document construction through the use of observation / testing reports. Observation staff will also be responsible for performing testing on construction materials such as concrete, gravel, and soil density. This proposal estimates that thirty (30) observation work days, 100 hours will be required to complete construction of the project. It should be noted that the actual time required for construction will be highly



dependent upon the contractor's ability to complete their work in a timely manner. As a result, construction observation time required beyond the hours assumed in this proposal may be considered as additional services.

Contract Administration/Construction Engineering

Contract administration and construction engineering (CA/CE) includes services to be provided by GFA office engineering and project management staff during the construction process. Typical CA/CE duties include preparation of contractor pay estimates, review of contractor claims, preparation of change orders (or contract modifications) as needed, and interpretation/application of conditions in the contract documents as it relates to situations which may arise in the field. CA/CE services also include preparing and overseeing design adjustments required due to unforeseen conditions encountered at the construction site.

Clarifications and Assumptions

The project fee budget is based on the following assumptions, and that specific work items listed in this section will not be included in the scope of services:

- Wetland location, determination, mitigation, and permitting.
- Boundary Survey, Preparation of easements, rights-of-way, or boundary documents.
- Title Work / Easement or right-of-way acquisition.
- Permit fees.
- Environmental Impact Statements or Reports.

Responsibilities of Client/Owner

The Client/Owner shall furnish the following minimum information as necessary in reference to the Project:

- Property description where the Project lies outside public rights-of-way or similar lands where creation of this information is not part of the Consultants Services as specifically stated herein or previously provided.
- Deed or other land use restriction information where the Project lies outside public rights-of-ways unless the Consultant's services include research and/or preparation of such information as specifically stated herein or previously provided.
- Property boundary, easement, right-of-way or other information associated with the Project and not part of the Consultants Services as specifically stated herein or previously provided.
- All information available for the Project regarding explorations, tests, subsurface conditions, environmental assessments/audits/impact statements, and any interpretations thereof not part of the Consultants Services as specifically stated herein or previously provided.
- All information, as the Client/Owner becomes aware of, with regard to hazardous environmental conditions or materials that might affect the Project or Project site.

Additional Services



Any work desired by the Charter Township of Garfield in addition to the work scope described above, can be completed by GFA on an hourly time and material basis in accordance with the attached 2022 Rate Schedule (Exhibit 2), or as a revision to this proposal.

Time Schedule

Gourdie Fraser, Inc. can commence services immediately with final design and submission for permits within 45 days. Upon approval from Board and regulatory agencies work can be finalized completed and ready for contractor bids within 15 days thereafter with anticipated bid date in May 2022 (subject to permitting process schedule).

Fee

GFA will perform the project design services on a lump sum basis with the following budgets based on the above scope discussion.

Final Design/Engineering Services

Topographic Survey	\$ 3,200.00
Site Design	\$ 12,500.00
RFP and Bidding	\$ 1,000.00
<u>Final Engineering Subtotal</u>	<u>\$ 16,700.00</u>

Construction Phase Services

Construction Staking/Layout	\$ 1,500.00
Construction Observation/Materials Testing	\$ 2,500.00
Contract Administration/Construction Engineering	\$ 3,500.00
<u>Construction Phase Subtotal</u>	<u>\$ 7,500.00</u>
<u>Total</u>	<u>\$ 24,200.00</u>

Contract Terms and Conditions

The terms and conditions of the Basic Services Agreement for Professional Services shall comply with our current Engineer of Record Contract.



Acceptance

If this proposal is acceptable to you, your signature on the enclosed copy of this will serve as our authorization to proceed. Thank you for giving us the opportunity to be of service. We look forward to working with you on this project.

Gourdie-Fraser, Inc.
CONSULTANT

Charter Township of Garfield
CLIENT/OWNER

_____	(Signature)	_____
Jennifer Hodges, P.E.	(Name)	Chuck Korn
_____	(Title)	_____
Director of Engineering		Supervisor
_____	(Date)	_____
(Date) _____		

Attachments: Exhibit 1 – Concept Rendering of Improvements / OPCC
Exhibit 2 – 2022 Rate Schedule

T:\Projects\20029C\River East Recreation Area\contract.docx

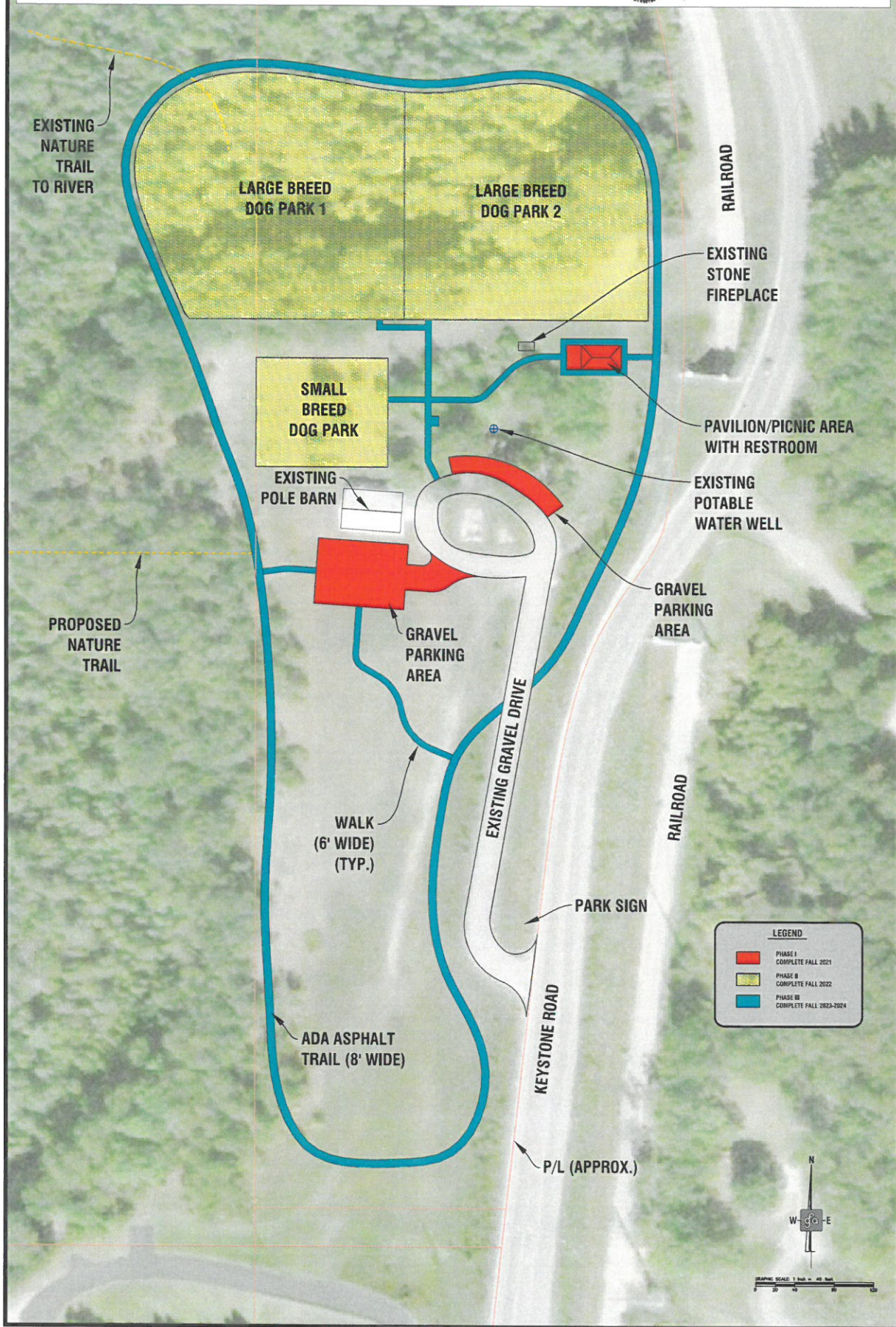
River East Recreation Area Concept



ENGINEERING
SURVEYING
TESTING & OPERATIONS
123 West 1st Street
St. Louis, MO 63102



<http://gfa1c.com>
231.946.5874 (p)
231.946.3703 (f)





YEAR IMPLEMENTED	SITE IMPROVEMENTS	Quantity	Unit	Unit Price	Total Price	TOTALS
2021	PHASE 1: PARKING & PAVILION					
	1 Mobilization	1.00	LS	\$2,000.00	\$2,000.00	
	2 Gravel Parking Area	1,200.00	SYD	\$23.00	\$27,600.00	
	3 Concrete Pad for Pavilion	550.00	SFT	\$6.00	\$3,300.00	
	4 Alternate #1 - Pavilion (Metal Roof)	550.00	SFT	\$67.60	\$37,180.00	
2022	5 Site Restoration and Seeding	1.00	LS	\$3,500.00	\$3,500.00	
	CONSTRUCTION COST					\$73,580.00
	10% CONTINGENCY					\$7,358.00
	ENGINEERING, PERMITTING, BIDDING AND CONSTRUCTION OVERSITE					\$16,197.46
	TOTAL CONSTRUCTION COST					\$97,135.46
2023	PHASE 2: DOG PARKS / GENERAL SITE IMPROVEMENTS					
	1 Mobilization	1.00	LS	\$20,000.00	\$20,000.00	
	2 Chain Link Fencing, 4' High Chain Link	2,100.00	LF	\$45.00	\$94,500.00	
	3 Machine Grading	14,500.00	SYD	\$3.00	\$43,500.00	
	4 Irrigation	1.00	LS	\$25,000.00	\$25,000.00	
	5 Restoration (Topsoil, Seed & Mulch)	14,500.00	SYD	\$4.00	\$58,000.00	
	6 Clearing & Grubbing	14,500.00	SYD	\$2.00	\$29,000.00	
	7 Kiosks	4.00	EA	\$350.00	\$1,400.00	
	8 Park Sign	1.00	EA	\$3,000.00	\$3,000.00	
	9 Trash, Recycle Bins and Animal Waste Receptacles	2.00	EA	\$275.00	\$550.00	
	10 Benches	4.00	EA	\$650.00	\$2,600.00	
2023	11 Picnic Tables	4.00	EA	\$550.00	\$2,200.00	
	CONSTRUCTION COST					\$279,750.00
	10% CONTINGENCY					\$27,975.00
	ENGINEERING, PERMITTING, BIDDING AND CONSTRUCTION OVERSITE					\$35,000.00
	TOTAL CONSTRUCTION COST					\$342,725.00
2023	PHASE 3: BATHROOM, TRAIL & SIDEWALK					
	1 Mobilization	1.00	LS	\$20,000.00	\$20,000.00	
	2 Bathroom, Unisex	250.00	SFT	\$375.00	\$93,750.00	
	3 Electrical Service Extension / Lighting	1.00	LS	\$6,500.00	\$6,500.00	
	4 Clearing & Grubbing	3,200.00	SYD	\$2.00	\$6,500.00	
	5 Machine Grading	4.00	STA	\$1,000.00	\$4,000.00	
	6 Subbase, Class II	3,120.00	CYD	\$15.00	\$46,800.00	
	7 HMA LVSP, 165# / SYD - TRAIL (Asphalt 8' wide)	210.00	TON	\$120.00	\$25,200.00	
2023	8 Erosion Control/Restoration	5,800.00	SFT	\$5.00	\$29,000.00	
	CONSTRUCTION COST					\$256,750.00
	10% CONTINGENCY					\$25,675.00
	ENGINEERING, PERMITTING, BIDDING AND CONSTRUCTION OVERSITE					\$65,000.00
	TOTAL CONSTRUCTION COST					\$347,425.00

NOTES:

- These costs are based on preliminary information. The actual site conditions may result in variations of unit prices or items.
- This cost estimate is approximate and based upon 2021 prices. Actual construction bids may vary significantly from this statement of probable costs due to timing of bidding, construction, changed conditions, labor rate, changes, or other factors beyond the control of the Engineer.