

Treasurer's Report reflects
bank account balances

Treasurer's Report

JANUARY 2022

#101 General Fund	General Fund Huntington		\$ 1,064,087.00	***	
#203 Metro Authority	Huntington Bank		\$ 51,739.12		
#206 Fire Fund	Huntington Bank		\$ 767,179.55		
#207 Police	Huntington Bank		\$ 513.22		
#212 Liquor Control Fund	Huntington Bank		***	\$ 3,434.20	
#590 Sewer CD Mat May 2018	Sewer Huntington		\$ 407,447.14		
#591 Timberlee H20	Huntington Bank		\$ 402,146.99		
#592 Greilickville H20	Huntington Bank		\$ 137,068.56		
#594 Marino	Marina Huntington		\$ 839,661.73		
#701 Trust & Agency	Huntington Bank		\$ 1,455.49		
#703 Current Tax	Huntington Bank		\$ 459,031.05		
#815 E. Timberwoods	Huntington Bank		\$ 31,944.79	-\$ 31,989.53	
#816 GSAD Receivable	Savings Huntington		\$ 6,160.76		
#817 SBlue & Old Orch	Huntington Bank		\$ 3,929.18	-\$ 12,419.32	
#818 Old Orchard	Huntington Bank		\$ 5,261.31	-\$ 3,125.56	
#820 Maintenance E.R. Rds	Huntington Bank		\$ 10,051.85		
#821 Maintenance S.B. Rds	Huntington Bank		\$ 11,282.26		
#861 Boyview Estates Lights	Huntington Bank		\$ 2,521.42		
	TOTAL		\$ 4,201,481.42		

INVESTMENT ACCOUNTS CO'S	PURCHASED AMOUNT	PRIOR MONTH VALUE	CURRENT VALUE	EST MONTHLY INT	PAID INTEREST
#101 Goldman Sachs	\$200,000.00		\$ 201,448.54	-\$ 551.46	
#101 SYNCHRONY BK	\$202,000.00		\$ 202,365.67	\$ 5.16	\$5.16
#101 FIDELITY GOV MMKT DAILY		\$ 202,360.51	\$ 202,365.67		
#590 Ally Bank	\$250,000.00		\$ 252,357.50	\$ 2,357.50	
#590 Morgan Stanley	\$150,000.00		\$ 152,001.00	\$ 2,001.00	
#590 Flagstar Bank	\$250,000.00		\$ 248,977.50	-\$ 1,022.50	
#590 BMW BK	\$131,000.00		\$ 130,642.37	-\$ 357.63	
BOND INTEREST		\$ 5,474.24	\$ 5,474.38	\$ 0.14	\$0.14
#594 Dreyfus MMKT	\$ 150,000.00		\$ 248,957.50	-\$ 1,042.50	
#594 UBS Bank	\$ 250,000.00		\$ 157,494.18	\$ 55.38	\$55.38
BOND INTEREST		\$ 157,438.80			
TOTAL	\$1,583,000.00		\$ 1,599,718.64	\$ 1,445.09	\$60.68
GRAND TOTAL		\$ 5,801,200.06			

Connie M. Preston, Clerk

Chris Milkowski, Treasurer

To: Elmwood Township Board

From: Sarah Clarren, Planner/Zoning Administrator

RE: January 2022 Planning and Zoning Report

Permits:

	1/2022	1/2021	YTD 2022	YTD 2022
Single Family Dwelling	0	2	0	2
Attached SFD	0	0	0	0
Accessory Building	1	1	1	1
AG Building	0	0	0	0
Residential Addition	0	0	0	0
Deck	1	1	1	1
Sign	0	0	0	0
Commercial	0	0	0	0
Misc.	0	0	0	0
Total Permit	2	4	2	4
Fees Collected	\$60.00	\$222.00	\$60.00	\$222.00

Zoning Board of Appeals:

Past Meeting – November 2021, mentioned in previous Report

Future Meeting - TBD based on applications.

Planning Commission:

Past Meeting

- January 18th
 - SU/SPR# 2021-09 **Public Hearing**- West Shore Marina – approved with conditions
 - Discussion on Twp Board Motion re: an overlay district or amendment to the Zoning Districts – deferred back to Twp Board for clarification on location; also pending map of STR locations from ZA
 - Selection of Officers – Bechtold, Chair; Aprill, Vice-Chair; Kuzma, Secretary

Future Meeting

- February 15th
 - SPR 2022-01, Kaiser Building, Motel, 13356 S West-Bay Shore Drive
 - Discussion on Upcoming Meeting (changing date)
 - Discussion on Workshop

Office Updates

- Has begun working with Parks & Rec Committee on the 5-year update to the Parks & Rec Plan.
- ZA obtained MSU Citizen Planner Certificate / Completed first module in MSU Zoning Administrator Certificate program (other modules via Zoom in February)
- STRs. As of 2/8, please note the following:
 - A total of 73 licenses have been issued to complete applications;
 - 4 applications are currently in progress (applicants working on missing items);
 - (1) application has been withdrawn;
 - (1) application did not meet the definition of an STR;
 - 1 new application was received on 2/4 and will be reviewed by the ZA in a timely manner.

Elmwood Township Fire and Rescue Department

Fire Department Monthly Report – January 2022

From: Keith Tampa, Fire Chief
 To: The Township Board of Trustees, Charter Township of Elmwood

Total Calls for the Month: **38**

Incident Type Breakdown per the National Fire Incident Reporting System (NFIRS)

- **Fire Incidents:** 0
- **Overpressure Rupture, Explosion, Overheat (no fire):** 0
- **Rescue & EMS Incidents:** 31
 - 26 EMS calls
 - 3 Motor vehicle accident with injuries
 - 2 Motor vehicle accident with no injuries
- **Hazard Condition (No Fire):** 0
- **Service Calls:** 5
 - 1 Smoke alarm installation
 - 4 Lift assists
- **Good Intent Call:** 1
 - 1 Welfare check, no emergency found
- **False Alarm/False Calls** 1
 - 1 Smoke detector activation due to malfunction
- **Severe Weather** 0

- **No EFD Resource (Non-NFIRS category)** 0
This category represents the number of requests for service that EFD was unable to provide assistance. Calls may have been unfulfilled or covered by mutual aid.
- **Overlapping Incident(s) (Non-NFIRS category)** 0

Mutual Aid – Given / Received

<u>Type of Aid</u>	<u>Incidents</u>	<u>Departments</u>
Received	0	-
Given	1	Vehicle Accident (TCFD)

Response Times (averages)

<u>Type</u>	<u>Times (hh:mm:ss)</u>	<u>Notes</u>
• Alarm Handling (call to dispatch)	00:00:48	All calls
○ Alarm Hand. – Adjusted	00:00:48	Minus delays (Sheriff or another agency sent earlier. EFD usually requested after the fact.)
• Turnout Time (dispatch to enroute)	00:01:39	All calls*

*Mutual aid (given) may increase the turnout time. EFD maintains 2 personnel in the station to staff the ambulance, requiring off duty or paid-on-call to come in for the response or back fill. Mutual aid is provided sooner when more than 2 personnel are on duty.

General Updates

ADMINISTRATION / OPERATIONS

- **General Run Information.**
 There was a drop of 21% from 2021 (48 calls). The decrease was in “false alarms” and household medicals. There was however, a small increase in vehicle accidents.

- **Grants.**
 - MI Dept. of Treasury (MDT) First Responder Training and Recruitment Grant (MDT First Responder Grant). EFD is researching eligible projects for consideration. This is a competitive reimbursement grant with \$100,000 cap on each category, Training & Recruitment/Retention. Deadline for submittal is February 15th, 2022.
- **EMS Protocols.**
 - COVID. The Northwest Regional Medical Control Authority (NRMCA) has updated protocols related to COVID response. The biggest change is an increase in the level and use frequency of personal protective equipment (PPE), requiring N95 respirator masks be worn by EMS responders for every patient contact. This will likely impact our reserve supply of PPE. We are currently ordering more supply and seeking alternative sources for N95/KN95 respirators.
- **Personnel.**
 - Firefighter School. Madeline will be wrapping up fire school in late February with written and practical testing. Live fire training was rescheduled for early February.
 - New Hire. Andrew Bakker has been hired as a part-time/paid-on-call firefighter/EMT and has begun orientation.
 - Illness & Staffing. Two (2) staff were out with COVID for a period of time. Both have recovered and are back to work. During this time, one additional staff member was sick (non-COVID) and another was in a non-work-related vehicle accident. Minimum staffing requirements were achieved through our dedicated staff and the use of overtime. Thankfully all staff have recovered and are back to work.

APPARATUS AND EQUIPMENT

- **Apparatus**
 - Engine 111. Allied Fire has been contacted to deal with minor maintenance and “punch-list” items for our new engine. They are still waiting on material to replace a delaminating chevron sticker on the rear of the apparatus.
 - Engine 112. Engine 112 has been sent to Halt Fire (Wixom, MI) for electrical and suspension issues. Halt Fire is a Pierce service center, the manufacturer of the engine. Engine 113 has been moved up from reserve status to fill the gap.
 - Engine 113. Main pump drain stuck open. Contacted B & B Fire Truck Repair. Drain rebuilt and functioning properly.
 - Brush 141. The water tank gauge was not reading correctly. B & B Fire Truck Repair recalibrated. EFD staff to monitor if the issue returns.
- **Equipment**
 - Extrication Tools. Annual preventative maintenance completed by MI Rescue Resources. The service technician commented that our tools are in great condition.

FACILITIES AND GROUNDS

- Water Damage. A blocked humidifier drain overflowed causing damage to the office space provided to the Leelanau County Sheriffs' Office (LCSO). The office was secure and the issue went unnoticed. John E. Green was contacted to inspect and clear out any additional blockages. EFD staff cleaned the space and notified the LCSO. Most issues have been attended to with replacement of a few ceiling tiles still outstanding.

PUBLIC EDUCATION AND RELATIONS

- **Reviews / Inspections**
 - West Shore Marina. Provided review to Elmwood Planning Commission.
- **Fire Prevention**
 - Nothing to report.

TRAINING

- **Trainings this Month:**
 - Pump Operations – Engine 113.
 - Hose Loads.
 - Hazardous Materials Operations.
 - Traffic Incident Management – Blocking Apparatus Refresher
- **Training Requested:**
 - None

MEETINGS ATTENDED

- Elmwood Township Board Regular General Meeting
- Township Supervisor
- EFD Officers' Meeting
- Munson Occupational Health and Medicine (MOHM) – EFD Health & Wellness Protocol Review.
- Elmwood Township Planning Commission.

Check Register Report

Date: 02/07/2022
 Time: 7:08 pm
 Page: 1

ELMWOOD TOWNSHIP

BANK:

Check Number	Check Date	Status	Void/Stop Date	Reconcile Date	Vendor Number	Vendor Name	Check Description	Amount
Checks								
36194	01/24/2022	Reconciled		02/04/2022	A127	AT&T MOBILITY	ACCT#287303700094	152.92
36195	01/24/2022	Printed			B111	BLUECROSS BLUESHIELD OF MI	GROUP 007015150710 0000	458.22
36196	01/24/2022	Printed			C029	CHARTER COMMUNICATIONS	ACCT#8245 12 895 0008281	514.78
36197	01/24/2022	Reconciled		02/04/2022	C010	CHERRYLAND ELECTRIC COOR	ACCT#9902700	125.48
36198	01/24/2022	Reconciled		02/04/2022	C093	CITY OF TRAVERSE CITY	ACCT#531765-118432 04-47	20.63
36199	01/24/2022	Reconciled		02/04/2022	C040	CONSUMERS ENERGY	ACCT#1000 2967 1334	2,549.79
36200	01/24/2022	Reconciled		02/04/2022	M020	DTE ENERGY	ACCT#9100 215 3143 9	1,385.53
36201	01/24/2022	Reconciled		02/04/2022	E013	ELEVATE NET	MARINA PHONE	149.97
36202	01/24/2022	Reconciled		02/04/2022	M008	GFL ENVIRONMENTAL	ACCT#002119662	82.00
36203	01/24/2022	Printed			G425	GUARDIAN	GROUP 00 357534	482.92
36204	01/24/2022	Reconciled		02/04/2022	P043	PRIORITY HEALTH	GROUP ID 790105 S001	5,230.85
36205	01/24/2022	Reconciled		02/04/2022	V023	VSP	CLIENT ID 30031936	297.59
36206	01/24/2022	Reconciled		02/04/2022	W027	WELLS FARGO FINANCIAL	CONTRACT #603-0180923-000	95.40
						LEASING		

Total Checks: 13

Checks Total (excluding void checks):

11,546.08

Total Payments: 13

Bank Total (excluding void checks):

11,546.08

Check Register Report

Date: 02/07/2022
 Time: 7:08 pm
 Page: 2

ELMWOOD TOWNSHIP

BANK: ONLINE PAYMENTS

Check Number	Check Date	Status	Void/Stop Date	Reconcile Date	Vendor Number	Vendor Name	Check Description	Amount
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ONLINE PAYMENTS Checks

500006	01/18/2022	Printed			S146	SUPERFLEET MASTERCARD PROGRAM	FB627	685.96
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Total Checks: 1	Checks Total (excluding void checks):	685.96
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Total Payments: 1	Bank Total (excluding void checks):	685.96
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Total Payments: 14	Grand Total (excluding void checks):	12,232.04
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Check Register Report

Emp. Code Desc.: 01
ELMWOOD TWP

Date: 2/7/2022
Time: 19:30:19

Check No.	Check Date	Recon.Date	Status	Employee ID	Pay To	Check Description	Amount
36186	01/13/2022	02/04/2022	R	00053	Duane Merritt	January 13, 2022	\$232.73
36187	01/14/2022	02/04/2022	R	00003	Deborah Allen	January 15, 2022	\$251.45
36188	01/14/2022	02/04/2022	R	00056	Terry Lautner	January 15, 2022	\$263.58
36189	01/14/2022	02/04/2022	R	00001	Jeffrey Aprill	January 15, 2022	\$74.89
36190	01/14/2022	02/04/2022	R	00077	Frederick Bechtold Jr.	January 15, 2022	\$101.58
36191	01/14/2022	02/04/2022	R	00055	Carrie Schaub	January 15, 2022	\$687.44
36192	01/14/2022	02/04/2022	R	SDU	MiSDU	Remittance Check	\$147.82
36193	01/14/2022	02/04/2022	R	VOY	Voya Institutional Trust Co.	Remittance Check	\$1,257.99
36207	01/27/2022	02/04/2022	R	00053	Duane Merritt	January 27,2021	\$205.66
36208	01/28/2022	02/04/2022	R	AFLAC	AFLAC	Remittance Check	\$335.28
36209	01/28/2022		P	PFIA	PFIA	Remittance Check	\$38.62
36210	01/28/2022	02/04/2022	R	SDU	MiSDU	Remittance Check	\$147.82
36211	01/28/2022		P	VOY	Voya Institutional Trust Co.	Remittance Check	\$1,408.08
83175	01/13/2022		P	00083	Carrie Schaub	January 13, 2022	\$1,048.47
83176	01/13/2022		P	00032	Andrew Bakker	January 13, 2022	\$162.32
83177	01/13/2022		P	00035	Benjamin Bakker	January 13, 2022	\$960.91
83178	01/13/2022		P	00180	Benjamin Bakker	January 13, 2022	\$206.57
83179	01/13/2022		P	00157	Jay Davis	January 13, 2022	\$1,601.04
83180	01/13/2022		P	00195	Jay Davis	January 13, 2022	\$209.61
83181	01/13/2022		P	00216	Madeline Hall	January 13, 2022	\$245.19
83182	01/13/2022		P	00111	Matthew Johnson	January 13, 2022	\$1,734.10
83183	01/13/2022		P	00140	Matthew Johnson	January 13, 2022	\$191.88
83184	01/13/2022		P	00189	Jacob Kuiper	January 13, 2022	\$1,639.95
83185	01/13/2022		P	00210	Shirl Martin	January 13, 2022	\$175.28
83186	01/13/2022		P	00160	Daniel Mosholder	January 13, 2022	\$82.46
83187	01/13/2022		P	00186	Jason Newfer	January 13, 2022	\$1,441.45
83188	01/13/2022		P	00212	Robert Sokolnicki	January 13, 2022	\$1,783.90
83189	01/13/2022		P	184	Sara Sokolnicki	January 13, 2022	\$170.74
83190	01/13/2022		P	00109	Landon VanderRoest	January 13, 2022	\$1,616.01
83191	01/13/2022		P	00114	Landon VanderRoest	January 13, 2022	\$191.99
83192	01/13/2022		P	00126	Abbigail VanRaalte	January 13, 2022	\$1,018.13
83193	01/13/2022		P	00102	Alex Werly	January 13, 2022	\$1,323.36
83194	01/13/2022		P	00178	Alex Werly	January 13, 2022	\$198.26
83195	01/13/2022		P	00022	Colleen Gallagher	January 13, 2022	\$519.41
83196	01/14/2022		P	209	David Darga	January 15, 2022	\$251.45
83197	01/14/2022		P	00089	James O'Rourke	January 15, 2022	\$251.45
83198	01/14/2022		P	00130	Jeffrey Shaw	January 15, 2022	\$1,892.25
83199	01/14/2022		P	00072	Keith Tampa	January 15, 2022	\$2,085.12
83200	01/14/2022		P	00098	Barbara Jones	January 15, 2022	\$1,603.78
83201	01/14/2022		P	00095	Connie Preston	January 15, 2022	\$1,733.07
83202	01/14/2022		P	00155	Chris Mikowski	January 15, 2022	\$1,520.19
83203	01/14/2022		P	00187	Jonah Kuzma	January 15, 2022	\$78.50
83204	01/14/2022		P	00198	Kendra Luta	January 15, 2022	\$74.89
83205	01/14/2022		P	00094	Whitney Roberts	January 15, 2022	\$78.50
83206	01/14/2022		P	00029	Sarah Clarren	January 15, 2022	\$1,961.90
83207	01/14/2022		P	00116	Peter Moon	January 15, 2022	\$1,402.03
83208	01/14/2022		P	IRSEF	IRSEFT	Remittance Check	\$10,439.39
83209	01/27/2022		P	00083	Carrie Schaub	January 27,2021	\$1,048.47
83210	01/27/2022		P	00032	Andrew Bakker	January 27,2021	\$210.66
83211	01/27/2022		P	00035	Benjamin Bakker	January 27,2021	\$1,238.91
83212	01/27/2022		P	00180	Benjamin Bakker	January 27,2021	\$206.57
83213	01/27/2022		P	00157	Jay Davis	January 27,2021	\$1,849.29
83214	01/27/2022		P	00195	Jay Davis	January 27,2021	\$209.61
83215	01/27/2022		P	00143	Erin Goodrich	January 27,2021	\$1,817.61
83216	01/27/2022		P	00111	Matthew Johnson	January 27,2021	\$1,601.44
83217	01/27/2022		P	00140	Matthew Johnson	January 27,2021	\$191.88
83218	01/27/2022		P	00189	Jacob Kuiper	January 27,2021	\$1,485.11

Check Register Report

Emp. Code Desc.: 01
ELMWOOD TWP

Date: 2/7/2022
Time: 19:30:19

Check No.	Check Date	Recon.Date	Status	Employee ID	Pay To	Check Description	Amount
83219	01/27/2022		P	00210	Shirl Martin	January 27,2021	\$401.68
83220	01/27/2022		P	00160	Daniel Mosholder	January 27,2021	\$140.93
83221	01/27/2022		P	00186	Jason Newfer	January 27,2021	\$1,811.06
83222	01/27/2022		P	00212	Robert Sokolnicki	January 27,2021	\$2,324.84
83223	01/27/2022		P	184	Sara Sokolnicki	January 27,2021	\$129.59
83224	01/27/2022		P	00109	Landon VanderRoest	January 27,2021	\$2,056.00
83225	01/27/2022		P	00114	Landon VanderRoest	January 27,2021	\$191.99
83226	01/27/2022		P	00126	Abbigail VanRaalte	January 27,2021	\$922.08
83227	01/27/2022		P	00102	Alex Werly	January 27,2021	\$1,698.53
83228	01/27/2022		P	00178	Alex Werly	January 27,2021	\$198.26
83229	01/27/2022		P	00022	Colleen Gallagher	January 27,2021	\$563.28
83230	01/27/2022		P	00071	Sara Kopriva	January 27,2021	\$29.95
83231	01/28/2022		P	00130	Jeffrey Shaw	January 28, 2022	\$1,892.25
83232	01/28/2022		P	00072	Keith Tampa	January 28, 2022	\$2,085.12
83233	01/28/2022		P	00098	Barbara Jones	January 28, 2022	\$1,603.78
83234	01/28/2022		P	00095	Connie Preston	January 28, 2022	\$1,733.07
83235	01/28/2022		P	00155	Chris Mikowski	January 28, 2022	\$1,464.01
83236	01/28/2022		P	00158	Aric Kuester	January 28, 2022	\$449.06
83237	01/28/2022		P	00029	Sarah Clarren	January 28, 2022	\$1,961.90
83238	01/28/2022		P	00116	Peter Moon	January 28, 2022	\$1,402.03
83239	01/28/2022		P	IRSEF	IRSEFT	Remittance Check	\$11,606.71
83240	01/28/2022		P	MICH	State of Michigan Tax	Remittance Check	\$3,336.62

Total Checks: 79

	Sub-Total:	\$92,908.78
	Total Void/Stop Payment:	\$0.00
	Grand Total:	\$92,908.78

Supervisor's Report

2/14/22

1. If there are no objections by the Board, I would like to organize a meeting for residents of Timberlee to discuss their options regarding upgrading the Timberlee Water System. DEQ and now EGLE have been asking Elmwood Township for years to upgrade the Timberlee Water System to meet their requirements. Our Engineers did a report at our regular Board Meeting October 12, 2020 outlining the options to upgrade the water system in Timberlee. I think it would be good to gather the residents of Timberlee together with Jamie Wade from EGLE, John Divozzo from the DPW and Brian Sousa from Wade Trim, to get their opinion on how they would like to proceed.
2. I would like to start asking residents on Cherry Bend if they are interested in sidewalks. As you know, MDOT is going to redo the Greilickville Corridor in 2024, complete with sidewalks and crosswalks. That may be a good time for us to look at sidewalks on Cherry Bend, if there is interest. It may be a good use for some of the American Rescue Plan funds which we received. If there appears to be interest, I think a meeting with Leelanau County Road Commission, TART representatives, MDOT, Elmwood Engineers, and Elmwood Residents would be a good place to start. I met with Brendan Mullane, Manager of the Leelanau County Road Commission. They are interested in upgrading Cherry Bend Road in the near future, and putting in sidewalks at the same time would make sense.

Summary of Old Fire Barn Furnace Proposals

Large room is about 30 ft Wide x 75 ft Long x 11 ft High

Calculated heat requirement: 127,000 BTU/Hr for 70 degrees

Company	Proposed Unit On South Wall	BTU Input - Output	Throw Feet	Output FPM	Installed Cost
D & W Mechanical	Reznor UDX125	120,000	63	763	\$4,129.00
	Reznor UDX150	150,000	73	752	\$4,329.00
Sheren Plum. & Heat.	Modine PDP250A To heat to 70 deg.	250,000	67		\$4,534.00
	Modine PDP150A To heat to 55 deg.	150,000	55		\$3,633.00
Team Bob's	Reznor UDAP150 Now UDX150	150,000	73	752	\$3,411.77
Walters & Hemming	Beacon Morris150	150,000		555	\$3,656.00



Call Us Toll Free: 1 (866) 554-HEAT (4328)

Monday - Thursday: 8am - 6pm CST

Friday: 9am - 5pm CST

Saturday and Sunday: Closed

Basic Room & Home

Room Type	Garage
Room Size	2250 sq. ft.
ZIP Code	49684
Building Age	Before 1975

Walls

Wall Type	Frame Wall (Siding or Stucco)
Wall Insulation Quality	No Insulation
North Wall Exposed Area	330 sq.ft.
East Wall Exposed Area	825 sq.ft.
South Wall Exposed Area	330 sq.ft.
West Wall Exposed Area	0 sq.ft.

Ceiling

Ceiling Exposed	Yes
Ceiling Insulation Quality	No Insulation
Ceiling Type	Ceiling Under Attic

Garage Door

# of Garage Doors	1
Garage Door Insulation Quality	Uninsulated

Temperature

Avg. Outdoor Temp. High	86
Avg. Outdoor Temp. Low	2
Desired Indoor Cooling	75
Desired Indoor Heating	70

Windows

Window Type	Single Pane
	0 Windows
North Wall	1 Sliding Doors
	0 French Doors
	0 Windows
East Wall	0 Sliding Doors
	0 French Doors
	0 Windows
South Wall	0 Sliding Doors
	0 French Doors
	0 Windows
West Wall	0 Sliding Doors
	0 French Doors

Floor

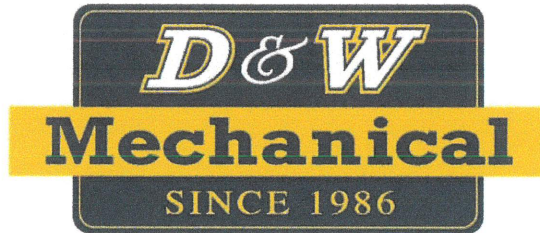
Floor Exposed	Yes
Floor Insulation Quality	No Insulation
Floor Type	Slab On Grade

Load Results (BTU/hr)

	Cooling load	Heating load
Wall	4494	22636
Window	606	2570
Ceiling	33966	62424
Floor	0	10832
Bay	437	2285
Infiltration	2396	26227
Internal	0	
MRA *	18016	
Total	<u>59,900 BTU/hr</u>	<u>127,000 BTU/hr</u>

* MRA - Moisture Removal Allowance: It is typical for roughly 30% of your air conditioner's capacity to be used to reduce the humidity in your home.

Disclaimer: This sizing tool, although based on a version of the ACCA Manual J, is for informational use and is intended only as a guide to assist with finding the best product for your needs. Since the calculations are based on the information provided, Power Equipment Direct, Inc. assumes no responsibility for inaccuracies resulting from improperly sized equipment. For a complete, professional sizing estimate, please call us at 866-554-HEAT (4328).



COMMERCIAL | RESIDENTIAL | PLUMBING | HVAC | SERVICE

Jan 12, 2022

Elmwood Township Fire Department
10090 Lincoln Rd.
Traverse City, MI 49684
Phone/231-941-1647
Attn: Duane Merritt 231-946-1396

Project Location: Fire Department Garage at 10750 Cherry Bend Rd, Traverse City

The following is the observations made upon inspection of unit heater at the above location

- Venting material is rotted and exhaust gases are spilling into the conditioned space
- Existing vent piping is single wall all the way up through roof against current codes, single wall venting can not be within 6" of combustibles
- Roofing material is bonded to the single wall piping on roof for roof flashing and will need to be changed if new venting is installed
- The current heat exchanger has small cracks and it would be our recommendation to replace the unit

Replace Vent Piping:

Scope of work: Replace all vent piping from existing unit heater to through roof and outside

- Double wall vent piping through roof to include rain collar, and cap
- Single wall piping and fitting for inside piping from double wall piping to unit
- Remove and dispose of all existing piping

Total..... \$895

Clarification:

- A Licensed Roofing Contractor will be needed to install a new roof flashing, this is not included in proposal, D&W can coordinate if desired

Reznor Unit Heater:

- (1) Reznor UDX125 gas unit heater 125,000 BTU Input to mount from ceiling at existing unit location or back wall where unit used to hang
- Single wall venting to B-vent to through roof

- Gas piping into unit
- Heat only thermostat
- Electrical into unit
- Start up, check and test
- Mechanical permit

Total \$4,129

Options:

- Add \$200 to total for 150,000 Btu unit instead of 125,000 Btu unit as quoted above

Clarifications:

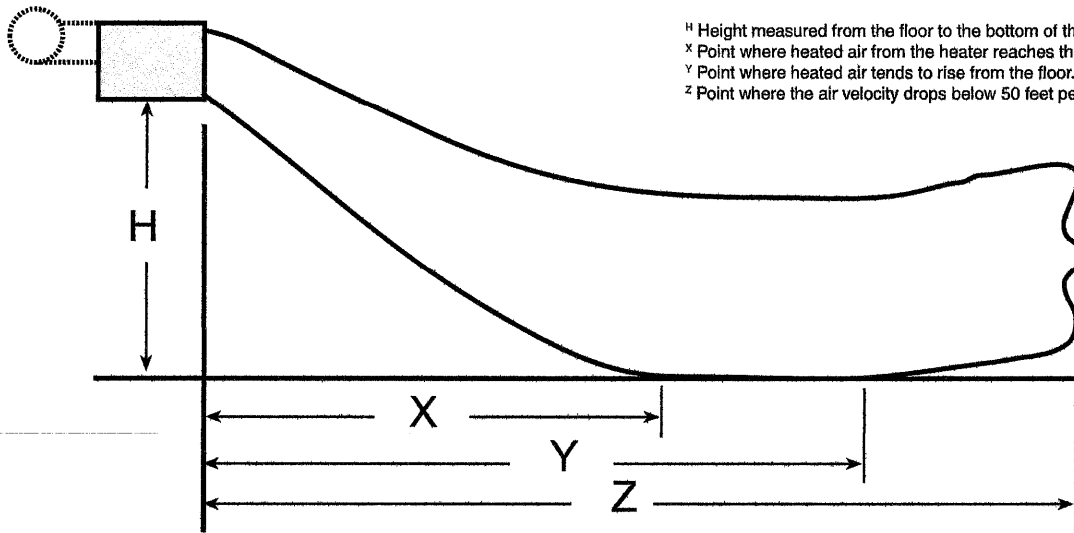
- This quote is for either location, either on the side where the current unit is or at the back wall where a unit used to hang. The cost difference would be that on the side where the current unit hangs, there will be the cost of a roofer to reflash the new vent pipe through the roof whereas the back location we can vent up through the existing piping and a new flashing will not be needed.
- A Licensed Roofing Contractor will be needed to install a new roof flashing if unit is installed at current location, this is not included in proposal, D&W can coordinate if desired

Thank you for this opportunity, please let me know if you have any questions.

Respectfully,
D&W Mechanical

Mike Litwiller

THROW/FLOOR COVERAGE



^H Height measured from the floor to the bottom of the unit heater.
^X Point where heated air from the heater reaches the floor.
^Y Point where heated air tends to rise from the floor.
^Z Point where the air velocity drops below 50 feet per minute (254 mm/sec).

Dimensions in Feet

Size	30				45				60				75				100				125				150							
Mounting Height	X	Y	Z	Lvr. Angle	X	Y	Z	Lvr. Angle	X	Y	Z	Lvr. Angle	X	Y	Z	Lvr. Angle	X	Y	Z	Lvr. Angle	X	Y	Z	Lvr. Angle	X	Y	Z	Lvr. Angle				
5	6	14	30	-21°	7	16	40	-20°	8	18	45	-16°	9	20	57	-14°	9	20	59	-18°	10	22	65	-14°	--	--	--	--				
8	7	13	26	-39°	9	16	37	-34°	10	18	42	-29°	12	22	54	-25°	11	21	56	-28°	12	23	63	-24°	13	24	73	-26°				
10	6	11	22	-52°	9	15	33	-43°	10	17	39	-37°	12	22	52	-32°	12	20	52	-36°	13	24	60	-30°	14	24	69	-32°				
12	--	--	--	--	8	12	27	-55°	10	16	34	-46°	12	21	48	-39°	11	19	47	-44°	14	23	57	-36°	14	24	64	-39°				
14	--	--	--	--	--	--	--	--	9	14	29	-56°	12	19	44	-46°	11	17	42	-51°	14	22	53	-43°	14	22	59	-45°				
16	--	--	--	--	--	--	--	--	--	--	--	--	11	17	38	-54°	10	14	34	-58°	13	20	47	-50°	13	20	53	-51°				
18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	11	17	40	-57°	11	17	44	-58°				
Size	175				200				225				250				300				350				400							
Mounting Height	X	Y	Z	Lvr. Angle	X	Y	Z	Lvr. Angle	X	Y	Z	Lvr. Angle	X	Y	Z	Lvr. Angle	X	Y	Z	Lvr. Angle	X	Y	Z	Lvr. Angle	X	Y	Z	Lvr. Angle	X	Y	Z	Lvr. Angle
8	15	28	90	-22°	16	30	93	-20°	14	27	86	-24°	16	29	93	-21°	15	28	94	-24°	17	31	105	-20°	18	34	113	-17°				
10	17	29	87	-27°	17	31	91	-25°	15	27	82	-30°	17	30	90	-26°	16	28	89	-29°	18	32	103	-25°	20	35	110	-21°				
12	18	29	84	-32°	18	31	88	-30°	16	27	78	-35°	18	30	87	-31°	17	28	85	-34°	19	32	98	-30°	21	36	108	-25°				
14	18	28	79	-37°	19	30	84	-34°	16	26	73	-41°	18	30	83	-36°	17	27	80	-40°	20	32	95	-34°	23	35	105	-29°				
16	18	27	74	-42°	19	29	79	-39°	16	24	67	-47°	19	28	78	-41°	17	25	74	-45°	21	31	90	-38°	23	35	101	-33°				
18	17	26	68	-48°	19	28	74	-44°	14	22	60	-53°	18	27	72	-46°	16	24	66	-51°	20	30	85	-43°	23	35	97	-37°				

Dimensions in Meters

Size	30				45				60				75				100				125				150							
Mounting Height	X	Y	Z	Lvr. Angle	X	Y	Z	Lvr. Angle	X	Y	Z	Lvr. Angle	X	Y	Z	Lvr. Angle	X	Y	Z	Lvr. Angle	X	Y	Z	Lvr. Angle	X	Y	Z	Lvr. Angle	X	Y	Z	Lvr. Angle
1.5	1.8	4.3	9.1	-21°	2.1	4.9	12.2	-20°	2.4	5.5	13.7	-16°	2.7	6.1	17.4	-14°	2.7	6.1	18.0	-18°	3.0	6.7	19.8	-14°	--	--	--	--				
2.4	2.1	4.0	7.9	-39°	2.7	4.9	11.3	-34°	3.0	5.5	12.8	-29°	3.7	6.7	16.5	-25°	3.4	6.4	17.1	-28°	3.7	7.0	19.2	-24°	4.0	7.3	22.3	-26°				
3.0	1.8	3.4	6.7	-52°	2.7	4.6	10.1	-43°	3.0	5.2	11.9	-37°	3.7	6.7	15.8	-32°	3.7	6.1	15.8	-36°	4.0	7.3	18.3	-30°	4.3	7.3	21.0	-32°				
3.7	--	--	--	--	2.4	3.7	8.2	-55°	3.0	4.9	10.4	-46°	3.7	6.4	14.6	-39°	3.4	5.8	14.3	-44°	4.3	7.0	17.4	-36°	4.3	7.3	19.5	-39°				
4.3	--	--	--	--	--	--	--	--	2.7	4.3	8.8	-56°	3.7	5.8	13.4	-46°	3.4	5.2	12.8	-51°	4.3	6.7	16.2	-43°	4.3	6.7	18.0	-45°				
4.9	--	--	--	--	--	--	--	--	--	--	--	--	3.4	5.2	11.6	-54°	3.0	4.3	10.4	-58°	4.0	6.1	14.3	-50°	4.0	6.1	16.2	-51°				
5.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3.4	5.2	12.2	-57°	3.4	5.2	13.4	-58°				
Size	175				200				225				250				300				350				400							
Mounting Height	X	Y	Z	Lvr. Angle	X	Y	Z	Lvr. Angle	X	Y	Z	Lvr. Angle	X	Y	Z	Lvr. Angle	X	Y	Z	Lvr. Angle	X	Y	Z	Lvr. Angle	X	Y	Z	Lvr. Angle	X	Y	Z	Lvr. Angle
2.4	4.6	8.5	27.4	-22°	4.9	9.1	28.3	-20°	4.3	8.2	26.2	-24°	4.9	8.8	28.3	-21°	4.6	8.5	28.7	-24°	5.2	9.4	32.0	-20°	5.5	10.4	34.4	-17°				
3.0	5.2	8.8	26.5	-27°	5.2	9.4	27.7	-25°	4.6	8.2	25.0	-30°	5.2	9.1	27.4	-26°	4.9	8.5	27.1	-29°	5.5	9.8	31.4	-25°	6.1	10.7	33.5	-21°				
3.7	5.5	8.8	25.6	-32°	5.5	9.4	26.8	-30°	4.9	8.2	23.8	-35°	5.5	9.1	26.5	-31°	5.2	8.5	25.9	-34°	5.8	9.8	29.9	-30°	6.4	11.0	32.9	-25°				
4.3	5.5	8.5	24.1	-37°	5.8	9.1	25.6	-34°	4.9	7.9	22.3	-41°	5.5	9.1	25.3	-36°	5.2	8.2	24.4	-40°	6.1	9.8	29.0	-34°	7.0	10.7	32.0	-29°				
4.9	5.5	8.2	22.6	-42°	5.8	8.8	24.1	-39°	4.9	7.3	20.4	-47°	5.8	8.5	23.8	-41°	5.2	7.6	22.6	-45°	6.4	9.4	27.4	-38°	7.0	10.7	30.8	-33°				
5.5	5.2	7.9	20.7	-48°	5.8	8.5	22.6	-44°	4.3	6.7	18.3	-53°	5.5	8.2	21.9	-46°	4.9	7.3	20.1	-51°	6.1	9.1	25.9	-43°	7.0	10.7	29.6	-37°				

Louver angle listed in the table is relative to the top of the unit heater.

UDX UNIT HEATER

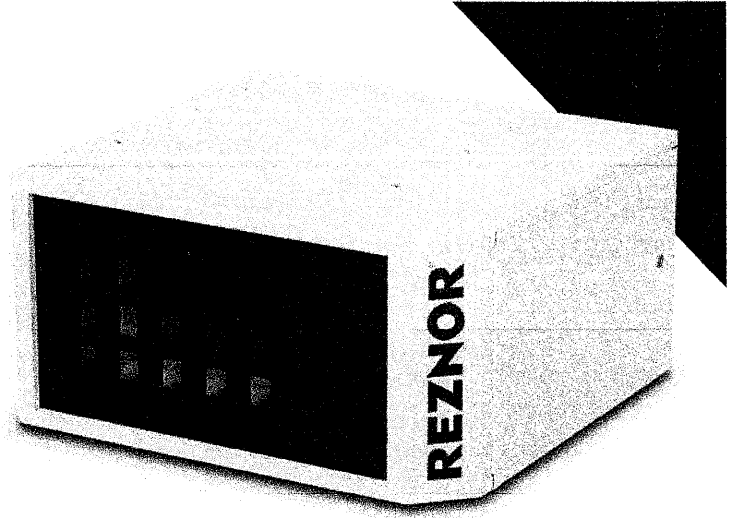
POWER VENTED, LOW STATIC AXIAL FAN COMMERCIAL/INDUSTRIAL UNIT HEATERS

82 - 83% THERMAL EFFICIENCY

Reznor® Model UDX gas-fired unit heaters are available in 14 sizes ranging from 30,000 to 400,000 BTUH gas input. Model UDX heaters are approved for installation in the United States and Canada by ETL.

Each size cabinet is easily suspended from either 2 or 4 suspension points. Or, an optional hanger kit for Sizes 30-125 allows for ceiling mounting. The low voltage terminal strip on the outside of the cabinet makes connecting control wiring easy with no panels to remove. The addition of a "G" terminal to the strip, along with the new design of the circuit board, allows for fan only operation (without adding relays).

Reznor model UDX unit heaters feature a two-tone black and white powder coated, scratch-resistant paint scheme. Each unit has clean rounded corners and edges with no visible screws or fasteners. Model UDX unit heaters provide the same superior performance customers have relied on for more than 100 years along with added features that make servicing the unit easier, installation safer and improve monitoring capabilities.



STANDARD FEATURES AND BENEFITS

- Sizes 30-400 MBTUH certified for commercial/industrial heating application
- Sizes 30-125 MBTUH carry an additional approval for use in residential garage/workshop heating applications
- 50-60°F Rise range
- Integrated circuit board with 7 segment display
- External status indicating LED
- Hinged door with ¼ turn latch
- Improved cabinet design with removable front face and two tone white and black powder paint.
- Tcore²® titanium stabilized aluminized steel heat exchanger
- Patented^A single burner combustion system including a one-piece burner assembly
- 115V, 1 phase, 60 Hz Supply voltage
- 115 Volt open fan motor with internal overload protection
- Transformer for 24-volt controls
- Multi-try direct spark ignition with timed lockout
- Fan relay (included on the circuit board)
- Single-stage natural gas valve (field adjustable for operation to 10,000 ft. elevation^B)
- Vibration/noise isolated fan and venter motors – designed for low noise operation
- 2-pt and 4-pt Suspension – standard on all sizes
- External terminal strip for 24-volt wiring
- External gas pipe connection
- Full fan guard

OPTIONAL FEATURES

- Single-stage propane gas valve (field adjustable for operation to 10,000 ft.)
- Two-stage gas valve (sizes 60-400)
- 409 or 316 stainless steel heat exchangers
- Totally enclosed fan motor (sizes 30-400, 115v only)
- Vent cap
- Thermostat
- Integrated vertical louvers
- Integrated 30° & 60° downturn nozzles
- Gas conversion kits (natural and propane)
- Primary/secondary controls for zoning up to six units
- Ceiling suspension kit - Sizes 30-125
- Hanger kits for 1" pipe
- Stepdown transformer (for 208/115, 230/115 or 460/115 supply voltage)
- Manual shutoff valves

For installations where dirt, dust, and other air borne contamination is present in the indoor environment, it is recommended to use separated combustion units (Model UDZ). These models use air from outside the space for combustion. This will help reduce the build up of contaminants on the burner which would affect the combustion process. Refer to the installation manuals for recommended frequency of maintenance and cleaning.

^A U.S. Patent Number 6,889,686

^B Pressure switch change required for installations above 6,000 ft.

UDX TECHNICAL DATA

Size		30	45	60	75	100	125	150
Input Heating Capacity	BTUH	30,000	45,000	60,000	75,000	105,000	120,000	150,000
	kw/h	8.8	13.2	17.6	22.0	30.8	35.2	43.9
Thermal Efficiency (%)		82	83	83	83	83	83	83
Output Heating Capacity ^C	BTUH	24,600	37,350	49,800	62,250	87,150	99,600	124,500
	kw/h	7.2	11.0	14.6	18.3	25.6	29.2	36.4
Gas Connection (inches) ^D	Natural	1/2	1/2	1/2	1/2	1/2	1/2	1/2
	Propane	1/2	1/2	1/2	1/2	1/2	1/2	1/2
Vent Connection Size (inches diameter) ^E		4	4	4	4	4	4	5
Control Amps (24 volt)		1.0	1.0	1.0	1.0	1.0	1.0	1.0
Full-Load Amps (115 volt)		1.9	2.4	2.4	3.7	4.3	5.6	3.8
Maximum Over Current Protection (115V) ^F		15	15	15	15	15	15	15
Normal Power Consumption (watts)		109	155	155	217	276	354	392
Discharge Air Temperature Rise (°F)		50	55	60	60	60	60	60
Air Volume	CFM	456	629	769	961	1345	1537	1921
	M ³ /minute	12.9	17.8	21.8	27.5	36.7	45.9	54.4
Discharge Air Opening Area	ft ²	0.96	0.96	1.25	1.25	2.01	2.01	2.56
	M ²	0.09	0.09	0.12	0.12	0.19	0.19	0.24
Outlet Velocity	FPM	475	656	616	770	668	763	752
	M/minute	145	200	188	238	196	245	229
Fan Motor HP ^G	Open	0.02	0.03	0.03	0.06	1/30	1/20	1/6
	Enclosed	0.06	0.06	0.06	0.06	1/4	1/4	1/4
Fan Motor RPM		1550	1550	1550	1550	1050	1050	1050
Fan Diameter (inches)		10	10	12	12	16	16	18
Sound Level	dba @ 15 ft	40	40	40	49	54	55	51
Approximate Net Weight	lbs	57	62	71	76	101	106	178
	kg	26	28	32	34	46	48	81
Approximate Ship Weight	lbs	63	68	76	81	120	125	206
	kg	29	31	34	37	54	57	93

Size		175	200	225	250	300	350	400
Input Heating Capacity	BTUH	175,000	200,000	225,000	250,000	300,000	350,000	400,000
	kw/h	51.2	58.6	65.9	73.2	87.8	102.5	117.1
Thermal Efficiency (%)		83	83	83	83	83	83	83
Output Heating Capacity ^C	BTUH	145,250	166,000	186,750	207,500	249,000	290,500	332,000
	kw/h	42.5	48.6	54.7	60.8	72.9	85.1	97.2
Gas Connection (inches) ^D	Natural	1/2	1/2	3/4	3/4	3/4	3/4	3/4
	Propane	1/2	1/2	3/4	3/4	3/4	3/4	3/4
Vent Connection Size (inches diameter) ^E		5	5	5	5	6	6	6
Control Amps (24 volt)		1.0	1.0	1.0	1.0	1.0	1.0	1.0
Full-Load Amps (115 volt)		3.8	4.6	7.5	7.5	11.0	11.0	11.0
Maximum Over Current Protection (115V) ^F		15	15	15	15	20	20	20
Normal Power Consumption (watts)		392	491	747	747	1086	1086	1086
Discharge Air Temperature Rise (°F)		60	60	60	60	60	60	60
Air Volume	CFM	2242	2562	2882	3202	3843	4483	5123
	M ³ /minute	63.5	72.5	81.6	90.7	108.8	126.9	145.1
Discharge Air Opening Area	ft ²	2.56	2.56	3.51	3.51	4.79	4.79	4.79
	M ²	0.24	0.24	0.33	0.33	0.45	0.45	0.45
Outlet Velocity	FPM	877	1003	820	911	802	936	1069
	M/minute	267	306	250	278	244	285	326
Fan Motor HP ^G	Open	1/6	1/6	1/4	1/4	1/2	1/2	1/2
	Enclosed	1/4	1/4	1/4	1/4	1/2	1/2	1/2
Fan Motor RPM		1050	1050	1050	1050	1050	1050	1050
Fan Diameter (inches)		18	18	20	20	24	24	24
Sound Level	dba @ 15 ft	52	53	56	56	59	61	62
Approximate Net Weight	lbs	193	193	211	223	277	303	316
	kg	88	88	96	101	126	137	143
Approximate Ship Weight	lbs	221	221	247	259	323	348	360
	kg	100	100	112	117	147	158	163

^C ETL rating for altitudes to 2000 ft.

^D Size shown is for gas connection to a single stage gas valve, not supply line size.

^E Smaller or larger vent pipe diameters may be allowed; refer to the Venting Installation Manual, Form I-V-PV. If vent diameter is different from vent connection, reducer/enlargers will be field-required.

^F MOP = 2.25 x largest motor FLA + remaining load. Answer is rounded down to the next size of commercially available circuit breaker or fuse.

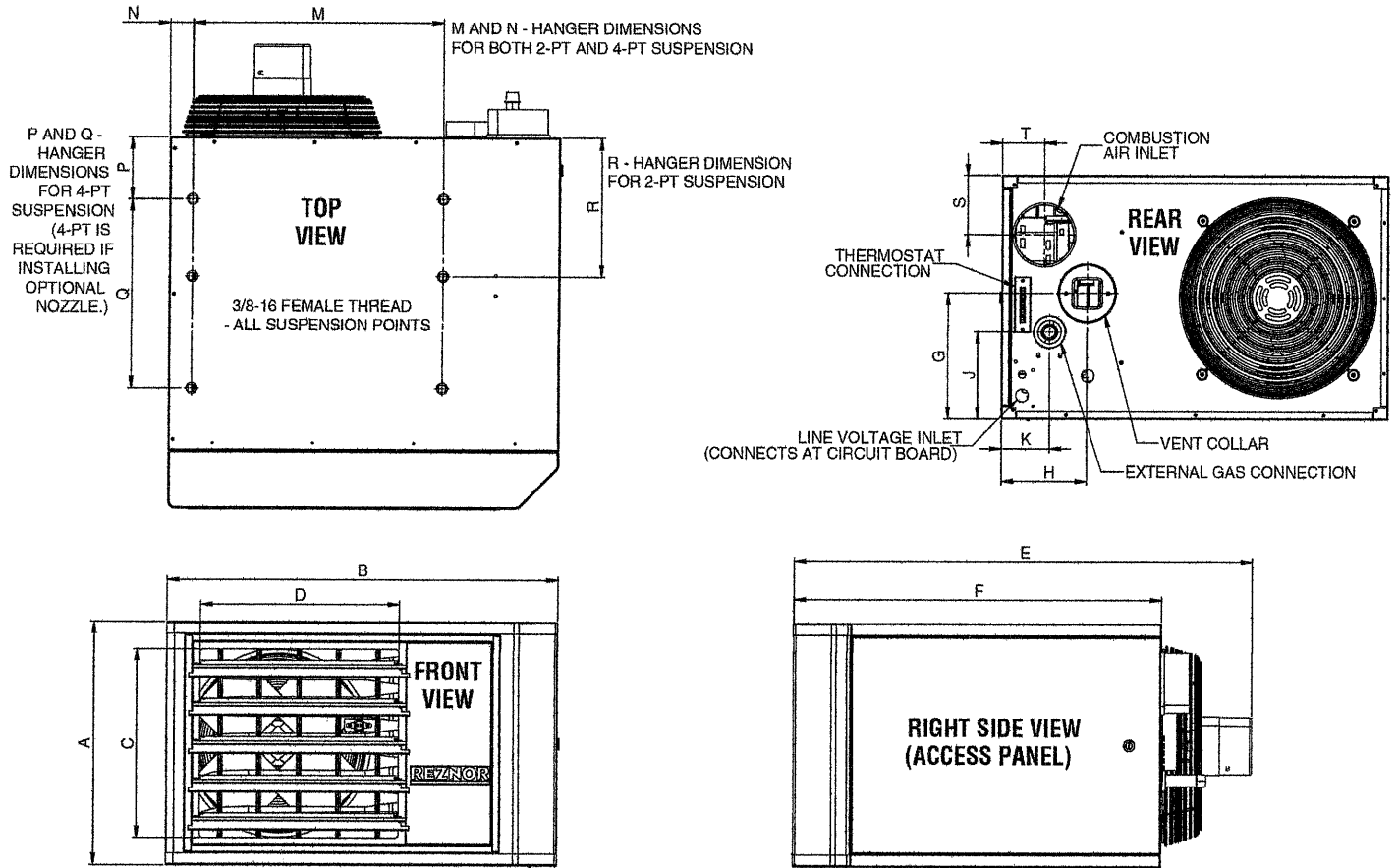
^G All other information in this table is based on a heater equipped with a standard 115 volt open fan motor.



UDX DIMENSIONS

±1/16" (2MM)

UNIT SIZE	A	B	C	D	E	F	G	H	J	K	M	N	P	Q	R	S	T
	INCHES (±1/16) (mm (± 2))																
030, 045	13 3/4 (349)		10 (254)		29 3/4 (756)		6 (152)		3 1/2 (89)							3 3/4 (95)	
060					32 23/32 (831)												
075	16 3/4 (425)	27 (686)	13 (330)	13 13/16 (351)	31 29/32 (810)	25 9/16 (649)	8 11/16 (221)	5 15/16 (151)	6 (152)	3 11/32 (85)	17 3/8 (441)	1 9/16 (40)	4 9/32 (109)	13 (330)	9 9/16 (243)	4 1/16 (103)	2 15/16 (75)
100																	
125	24 3/4 (629)		21 (533)		34 9/32 (871)		15 5/16 (389)		8 29/32 (226)							5 15/32 (139)	
150,175,200	20 1/8 (511)	38 3/16 (970)	16 (406)		48 7/16 (1230)	40 (1016)	9 5/8 (244)	8 5/16 (211)	5 3/8 (137)	6 1/2 (165)	25 11/16 (652)	1 13/32 (36)	8 1/8 (206)	22 3/16 (564)	16 3/8 (416)	5 1/2 (140)	4 1/4 (108)
225,250	26 1/8 (664)		22 (559)	23 (584)			13 1/16 (332)		9 (229)							8 1/16 (205)	4 5/16 (110)
300,350,400	34 1/8 (867)	41 (1041)	30 (762)		48 29/32 (1243)		17 1/16 (433)	8 1/2 (216)	11 13/16 (300)	7 5/16 (186)	27 11/16 (703)				16 1/4 (413)	11 9/16 (294)	4 1/2 (114)



CLEARANCES FROM COMBUSTIBLES

Size	Top		Flue Connector		Access Panel ^J		Non-Access Side		Bottom ^K		Rear ^L	
	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
30-125	1	25	6	152	18	457	1	25	1	25	18	457
150-400	4	102	6	152	18	457	2	51	1	25	18	457

^J Access Panel clearance is required for service clearance to controls

^K Suspend the heater so that the bottom is a minimum of 5' (1.5M) above the floor.

^L Rear clearance is required for air movement. Rear clearance should be measured from the fan motor.

REZNOR



PROPOSAL



3801 Rennie School Rd.
 Traverse City, MI 49685
 231-943-7916

Date: 01/11/2022

Email #: dnpmerritt@gmail.com

Contact # 231-946-1396

Contact Duane Merritt

Job Name: Elmwood Township

Customer Name: Elmwood Township
 Site Address: 10750 E. Cherry Bend Rd.
 City, State Zip: Traverse City, MI 49684

Project Manager: Brandon Plamondon

PM Contact: 231-342-9345

We Hear by Submit Specifications and Estimates for the Following:

<u>Unit Heater</u>	<u>Price Each</u>	<u>Qty</u>	<u>Total</u>
<i>Modine PDP250A 250,000 BTU Unit Heater</i>	\$4,409	1	\$4,409
Option:			
<i>Modine PDP150A 150,000 BTU Unit Heater</i>	\$3,508	1	\$3,508
<i>*Will maintain roughly 50 to 55 degrees during winter</i>			
<i>*Similar to existing unit</i>			
<i>Remove existing Unit Heater on Eastern Wall</i>	\$400	1	\$400
<i>*Includes disposal of unit and cap existing vent/ gas connections</i>			
Notes to Proposal			
<i>Permit Fee</i>	\$125	1	\$125

Terms: 50% down, balance due upon completion
PROPOSAL DOES NOT INCLUDE ANY PREVIOUS SERVICE CALL FEES

Proposal Includes

- *Install new unit heater located on south side of building*
- *Connection of Gas, Low Voltage, Line Voltage and Venting*
- *Utilize current thermostat location*
- *Proper Start up/testing of new equipment*



PROPOSAL



**3801 Rennie School Rd.
Traverse City, MI 49685
231-943-7916**

Customer Name: Elmwood Township
Site Address: 10750 E. Cherry Bend Rd.
City, State Zip: Traverse City, MI 49684

Date: 01/11/2022

Email #: dnpmerritt@gmail.com

Contact # 231-946-1396

Contact Duane Merritt

Job Name: Elmwood Township

Project Manager: Brandon Plamondon

PM Contact: 231-342-9345

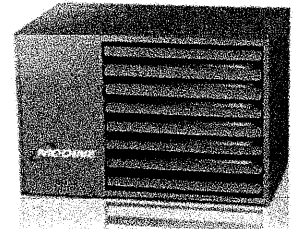
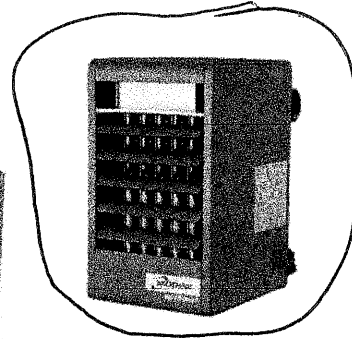
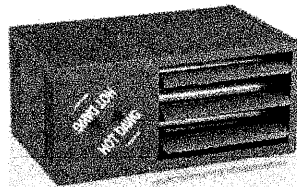
We Hear by Submit Specifications and Estimates for the Following:

Signed: _____

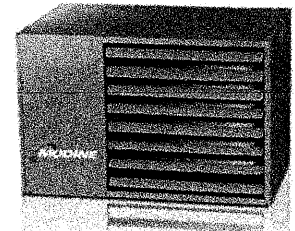
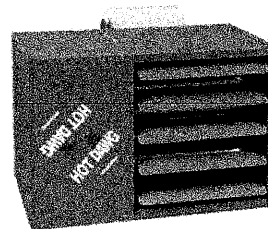
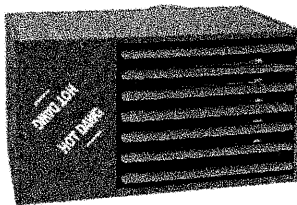
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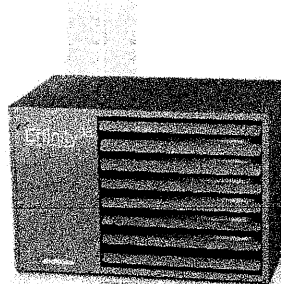
**GAS-FIRED UNIT HEATERS
RESIDENTIAL, COMMERCIAL & INDUSTRIAL**



**POWER VENTED
HD, HDB, PDP, BDP, PTP, BTP**



**SEPARATED COMBUSTION
HDS, HDC, PTS, BTS**



**HIGH-EFFICIENCY SEPARATED COMBUSTION
PTC, BTC**

GAS-FIRED, POWER-EXHAUSTED, PROPELLER

• 82% Thermal Efficiency (HD/PTP) • 83% Thermal Efficiency (PDP) • Horizontal or Vertical Venting • Field Convertible to Propane • 100% Shut-Off with Continuous Retry • Commercial or Residential Applications

For applications requiring a low profile unit, Modine offers the Hot Dawg® unit heater. The Hot Dawg® may be installed in residential or commercial applications just one inch below the ceiling. The superior quality matched with the following features makes the Hot Dawg® unit heater an easy choice for a variety of applications:

- 82% thermal efficiency (HD/PTP), 83% thermal efficiency (PDP) for fuel savings.
- Uses natural or propane gas (field convertible from natural to propane gas).
- Certified for residential, commercial and industrial use.
- Lightweight, easily installs 1" from ceiling with only two angle brackets (standard on 30-75, accessory for 100-125).
- Install quickly and easily with knockouts for quick access to gas and electricity.
- The standard power exhauster allows the unit to be vented vertically or horizontally and is designed to use the smallest diameter vent pipe possible.
- Permanently-lubricated motor for trouble-free dependability.
- Full 10-year warranty on heat exchanger.
- Available in both propeller fan and centrifugal blower configurations.

The PDP propeller, power vented gas-fired unit heater is a product that is inexpensive to install, easy to use, and offers excellent in-service economy. The PDP model series expands on the size range of the HD model series providing product that is certified for commercial and industrial applications in sizes from 150 through 400MBH.

For blower model data, see page 6.

Table 2.1 - Propeller Unit Model HD and PDP General Performance Data

	Model HD Sizes						Model PDP Sizes						
	30	45	60	75	100	125	150	175	200	250	300	350	400
Btu/Hr Input ①	30,000	45,000	60,000	75,000	100,000	125,000	150,000	175,000	200,000	250,000	300,000	350,000	400,000
Btu/Hr Output ②	24,600	36,900	49,200	61,500	82,000	102,500	124,500	145,250	166,000	207,500	249,000	290,500	332,000
Entering Airflow (CFM) @ 70°F	505	720	990	1160	1490	1980	2180	2550	2870	3700	4460	4870	5440
Air Temp. Rise (°F)	44	46	45	48	50	47	51	51	52	50	50	53	54
Max. Mounting Height (Ft.) ③	10	10	12	14	12	16	16	17	15	19	21	20	19
Heat Throw (Ft.) @ Max Mtg Ht ④	25	27	36	38	42	56	55	59	51	67	74	70	69

The PTP features a stainless steel tubular heat exchanger as STANDARD on all units with a 10-year heat exchanger warranty, providing customers with a peace of mind. Users of the PTP will also benefit from a low profile design that allows quick and easy installations.

Table 2.2 - Propeller Unit Model PTP General Performance Data

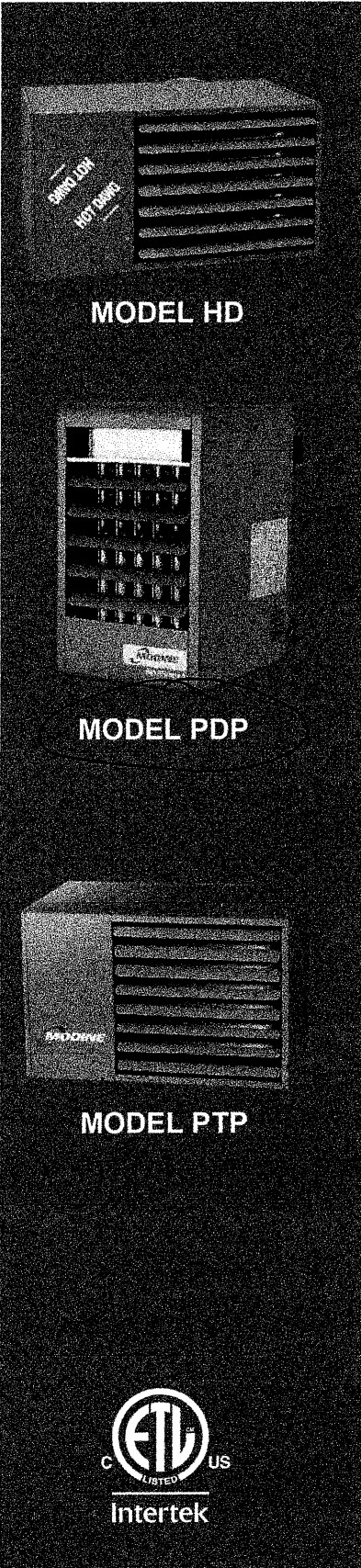
	Model PTP Sizes						
	150	175	200	250	300	350	400
Btu/Hr Input ①	150,000	175,000	200,000	250,000	300,000	350,000	400,000
Btu/Hr Output ②	123,000	143,500	164,000	205,000	246,000	287,000	328,000
Entering Airflow (CFM) @ 70°F	2140	2725	2870	3995	4545	5280	5995
Air Temp. Rise (°F)	53	48	52	47	50	50	51
Max. Mounting Height (Ft.) ③	15	14	15	18	19	18	21
Heat Throw (Ft.) (@ Max Mtg Ht)	51	50	53	62	69	65	74

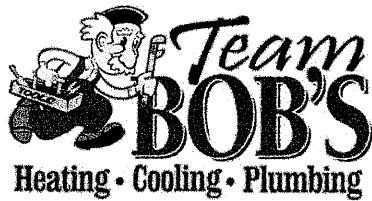
① Ratings shown are for elevations up to 2,000 Ft. For elevations above 2,000 feet, ratings should be reduced at the rate of 4% for each 1,000 feet above sea level. (In Canada see rating plate.) Reduction of ratings requires use of a high altitude kit.

② Data taken at 55°F air temperature rise. At 65°F ambient and unit fired at full-rated input. Mounting height as measured from bottom of unit, and without deflector hoods. For units equipped with deflector hoods.

DO NOT LOCATE ANY GAS-FIRED UNIT IN AREAS WITH CHLORINATED, HALOGENATED, OR ACIDIC VAPORS IN ATMOSPHERE.

Request Catalog 6-189 For Complete Technical Information and Specifications.





1797 Park Dr. | Traverse City | MI | 49686
 "The One You Can Recommend"

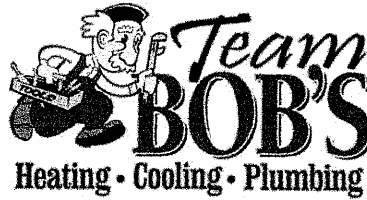
Name:	elmwood township	Proposal#:	R801072022011516-1	Date:	01/07/2022
Site Address:	Old Fire Barn off Cherry Bend by recycling plant	Billing Address:	Old Fire Barn off Cherry Bend by recycling plant	Consultant:	Patrick Mcallister
City:	Traverse City	City:	Traverse City	Email:	pmcallister@teambobs.com
State:	MI	State:	MI	Cell Phone:	(231) 463-8684
Phone:	2319461396	Zip Code:	49684	Homeowner Email:	noemail@email.com

Zone 1

System Investment	
Term: 12	Rate: 0% Est Payment: \$284.31
Investment Type :Finance (With Approved Credit)	Service Finance 12 month deferred interest - #1012
Base System	\$3517.29
Optional Items Total	\$0.00
Instant Rebate Total(Before & After Tax Rebates Applied)	<\$105.52>
System Total	\$3411.77
Initial Investment	\$0
Balance	\$3411.77
Net Investment After Credits & Rebate	\$3411.77
Rebates	
\$105.52	

Removal of Regnor Furnace \$312.00

By signing this agreement I acknowledge that I have read and understand each page, including the terms and conditions.		Representative:	Date:
Customer:	Date:	Approved By:	Date:



1797 Park Dr. | Traverse City | MI | 49686
 "The One You Can Recommend"



Name: **elmwood township** Proposal#: **R801072022011516-1** Date: **01/07/2022**

Component In Base System Investment		
Qty	Model #	Description
1	UDAP-150	SPARK TO PILOT POWER VENT 150K FAN STYLE BLOWER
1	Furnace service (Silver)	Furnace Clean and Check
1	ElecReconnect	RECONNECT ELECTRICAL TO EQUIPMENT
1	GP-reconnect only	RECONNECT GAS PIPE AT UNIT
1	VENTCONN-C	VENT CONNECTOR SINGLE WALL TO B-VENT
1	Hang Pkg-Vert	Hanging hardware for a unit heater
1	PERMIT - SMALL	MECHANICAL PERMIT SMALL
1	FURN1	REMOVE/REPLACE FURNACE, LEVEL 1

Inclusions
<ul style="list-style-type: none"> • Includes Home owner walk through and training. • Complete system start up • Mechanical permit/inspection Ensures safety and insurability • Clean up worksite daily. • Timely completion and scheduling process. • Includes Permits.

By signing this agreement I acknowledge that I have read and understand each page, including the terms and conditions.

Representative:

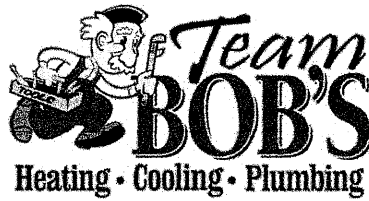
Date:

Customer:

Date:

Approved By:

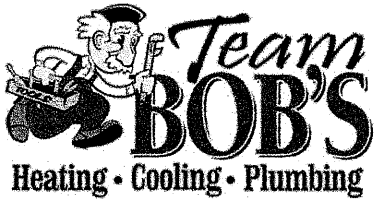
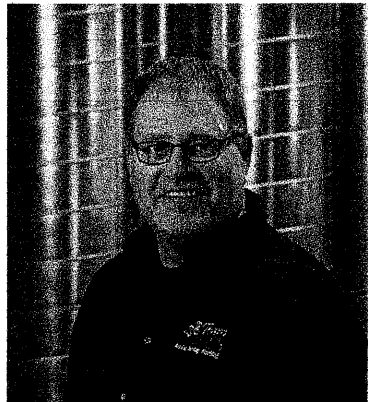
Date:



1797 Park Dr. | Traverse City | MI | 49686
"The One You Can Recommend"



Name:	elmwood township	Proposal#:	R801072022011516-1	Date:	01/07/2022
Site Address:	Old Fire Barn off Cherry Bend by recycling plant	Billing Address:	Old Fire Barn off Cherry Bend by recycling plant	Consultant:	Patrick Mcallister
City:	Traverse City	City:	Traverse City	Email:	pmcallister@teambobs.com
State:	MI	State:	MI	Cell Phone:	(231) 463-8684
Phone:	2319461396	Zip Code:	49684	Phone:	2319461396
		Zip Code:	49684		

Your Home	Your Consultant
	

Proposal Notes

Supply and install new Reznor 150,000 BTU low profile natural gas fired unit heater. Installation includes: first years clean and check, gas piping, 24v wiring, 115v wiring, venting, hanging bracket, seal all penetrations, clean up, complete system start up, and all necessary permits.

PAYMENTS TO BE MADE AS FOLLOWS: Half down and remainder upon completion or contact our office for arrangements.

TERMS: All accounts are due upon completion of work. When an account is past due, no further credit will be extended and a DELINQUENCY CHARGE OF 1-1/2 % PER MONTH, which is an ANNUAL PERCENTAGE RATE OF 18% WILL BE ADDED each 30 days thereafter.

ACCEPTANCE OF PROPOSAL: The above prices, specifications and conditions are satisfactory and are hereby accepted. Payments will be made as outlined above. This proposal may be withdrawn if not accepted within 10 days of proposals date. At which time, prices may also be changed due to unforeseen cost increases of products, raw materials, regulations, etc. Some products listed may be unavailable, therefore some variations between product brands may occur.

SIGNATURE: _____ DATE: _____
(customer)

SIGNATURE: _____ DATE: _____
(contractor)

We hereby propose to furnish material and labor in complete accordance with the above specifications for the sum of Three Thousand Four Hundred Eleven Dollars and Seventy Seven Cents (Total extended Price with Tax after Discount)	\$3,411.77
--	-------------------

By signing this agreement I acknowledge that I have read and understand each page, including the terms and conditions.	Representative:	Date:
Customer:	Approved By:	Date:
Date:		

UDX UNIT HEATER

POWER VENTED, LOW STATIC AXIAL FAN COMMERCIAL/INDUSTRIAL UNIT HEATERS

82 - 83% THERMAL EFFICIENCY

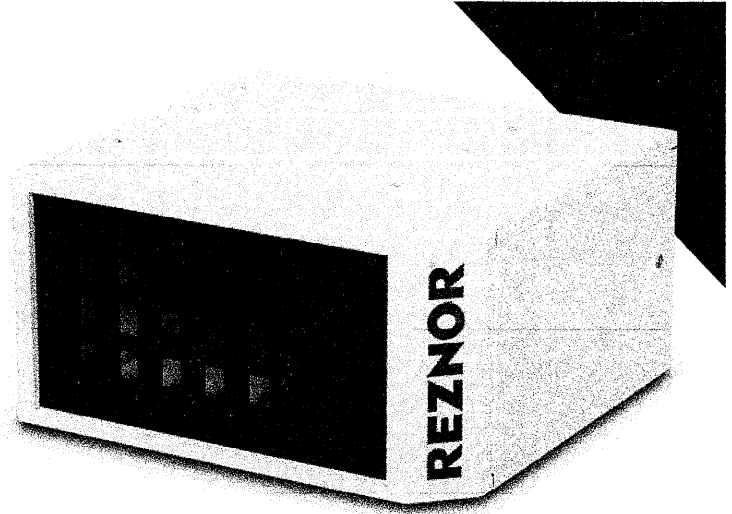
Reznor® Model UDX gas-fired unit heaters are available in 14 sizes ranging from 30,000 to 400,000 BTUH gas input. Model UDX heaters are approved for installation in the United States and Canada by ETL.

Each size cabinet is easily suspended from either 2 or 4 suspension points. Or, an optional hanger kit for Sizes 30-125 allows for ceiling mounting. The low voltage terminal strip on the outside of the cabinet makes connecting control wiring easy with no panels to remove. The addition of a "G" terminal to the strip, along with the new design of the circuit board, allows for fan only operation (without adding relays).

Reznor model UDX unit heaters feature a two-tone black and white powder coated, scratch-resistant paint scheme. Each unit has clean rounded corners and edges with no visible screws or fasteners. Model UDX unit heaters provide the same superior performance customers have relied on for more than 100 years along with added features that make servicing the unit easier, installation safer and improve monitoring capabilities.

STANDARD FEATURES AND BENEFITS

- Sizes 30-400 MBTUH certified for commercial/industrial heating application
- Sizes 30-125 MBTUH carry an additional approval for use in residential garage/workshop heating applications
- 50-60°F Rise range
- Integrated circuit board with 7 segment display
- External status indicating LED
- Hinged door with ¼ turn latch
- Improved cabinet design with removable front face and two tone white and black powder paint.
- T_{CORE}²® titanium stabilized aluminized steel heat exchanger
- Patented^A single burner combustion system including a one-piece burner assembly
- 115V, 1 phase, 60 Hz Supply voltage
- 115 Volt open fan motor with internal overload protection
- Transformer for 24-volt controls
- Multi-try direct spark ignition with timed lockout
- Fan relay (included on the circuit board)
- Single-stage natural gas valve (field adjustable for operation to 10,000 ft. elevation^B)
- Vibration/noise isolated fan and venter motors – designed for low noise operation
- 2-pt and 4-pt Suspension – standard on all sizes
- External terminal strip for 24-volt wiring
- External gas pipe connection
- Full fan guard



OPTIONAL FEATURES

- Single-stage propane gas valve (field adjustable for operation to 10,000 ft.)
- Two-stage gas valve (sizes 60-400)
- 409 or 316 stainless steel heat exchangers
- Totally enclosed fan motor (sizes 30-400, 115v only)
- Vent cap
- Thermostat
- Integrated vertical louvers
- Integrated 30° & 60° downturn nozzles
- Gas conversion kits (natural and propane)
- Primary/secondary controls for zoning up to six units
- Ceiling suspension kit - Sizes 30-125
- Hanger kits for 1" pipe
- Stepdown transformer (for 208/115, 230/115 or 460/115 supply voltage)
- Manual shutoff valves

For installations where dirt, dust, and other air borne contamination is present in the indoor environment, it is recommended to use separated combustion units (Model UDZ). These models use air from outside the space for combustion. This will help reduce the build up of contaminants on the burner which would affect the combustion process. Refer to the installation manuals for recommended frequency of maintenance and cleaning.

^A U.S. Patent Number 6,889,686

^B Pressure switch change required for installations above 6,000 ft.

UDX TECHNICAL DATA

Bob's

Size		30	45	60	75	100	125	150
Input Heating Capacity	BTUH	30,000	45,000	60,000	75,000	105,000	120,000	150,000
	kw/h	8.8	13.2	17.6	22.0	30.8	35.2	43.9
Thermal Efficiency (%)		82	83	83	83	83	83	83
Output Heating Capacity ^C	BTUH	24,600	37,350	49,800	62,250	87,150	99,600	124,500
	kw/h	7.2	11.0	14.6	18.3	25.6	29.2	36.4
Gas Connection (Inches) ^D	Natural	1/2	1/2	1/2	1/2	1/2	1/2	1/2
	Propane	1/2	1/2	1/2	1/2	1/2	1/2	1/2
Vent Connection Size (inches diameter) ^E		4	4	4	4	4	4	5
Control Amps (24 volt)		1.0	1.0	1.0	1.0	1.0	1.0	1.0
Full-Load Amps (115 volt)		1.9	2.4	2.4	3.7	4.3	5.6	3.8
Maximum Over Current Protection (115V) ^F		15	15	15	15	15	15	15
Normal Power Consumption (watts)		109	155	155	217	276	354	392
Discharge Air Temperature Rise (°F)		50	55	60	60	60	60	60
Air Volume	CFM	456	629	769	961	1345	1537	1921
	M ³ /minute	12.9	17.8	21.8	27.5	36.7	45.9	54.4
Discharge Air Opening Area	ft ²	0.96	0.96	1.25	1.25	2.01	2.01	2.56
	M ²	0.09	0.09	0.12	0.12	0.19	0.19	0.24
Outlet Velocity	FPM	475	656	616	770	668	763	752
	M/minute	145	200	188	238	196	245	229
Fan Motor HP ^G	Open	0.02	0.03	0.03	0.06	1/30	1/20	1/6
	Enclosed	0.06	0.06	0.06	0.06	1/4	1/4	1/4
Fan Motor RPM		1550	1550	1550	1550	1050	1050	1050
Fan Diameter (inches)		10	10	12	12	16	16	18
Sound Level	dba @ 15 ft	40	40	40	49	54	55	51
Approximate Net Weight	lbs	57	62	71	76	101	106	178
	kg	26	28	32	34	46	48	81
Approximate Ship Weight	lbs	63	68	76	81	120	125	206
	kg	29	31	34	37	54	57	93

Size		175	200	225	250	300	350	400
Input Heating Capacity	BTUH	175,000	200,000	225,000	250,000	300,000	350,000	400,000
	kw/h	51.2	58.6	65.9	73.2	87.8	102.5	117.1
Thermal Efficiency (%)		83	83	83	83	83	83	83
Output Heating Capacity ^C	BTUH	145,250	166,000	186,750	207,500	249,000	290,500	332,000
	kw/h	42.5	48.6	54.7	60.8	72.9	85.1	97.2
Gas Connection (Inches) ^D	Natural	1/2	1/2	3/4	3/4	3/4	3/4	3/4
	Propane	1/2	1/2	3/4	3/4	3/4	3/4	3/4
Vent Connection Size (inches diameter) ^E		5	5	5	5	6	6	6
Control Amps (24 volt)		1.0	1.0	1.0	1.0	1.0	1.0	1.0
Full-Load Amps (115 volt)		3.8	4.6	7.5	7.5	11.0	11.0	11.0
Maximum Over Current Protection (115V) ^F		15	15	15	15	20	20	20
Normal Power Consumption (watts)		392	491	747	747	1086	1086	1086
Discharge Air Temperature Rise (°F)		60	60	60	60	60	60	60
Air Volume	CFM	2242	2562	2882	3202	3843	4483	5123
	M ³ /minute	63.5	72.5	81.6	90.7	108.8	126.9	145.1
Discharge Air Opening Area	ft ²	2.56	2.56	3.51	3.51	4.79	4.79	4.79
	M ²	0.24	0.24	0.33	0.33	0.45	0.45	0.45
Outlet Velocity	FPM	877	1003	820	911	802	936	1069
	M/minute	267	306	250	278	244	285	326
Fan Motor HP ^G	Open	1/6	1/6	1/4	1/4	1/2	1/2	1/2
	Enclosed	1/4	1/4	1/4	1/4	1/2	1/2	1/2
Fan Motor RPM		1050	1050	1050	1050	1050	1050	1050
Fan Diameter (inches)		18	18	20	20	24	24	24
Sound Level	dba @ 15 ft	52	53	56	56	59	61	62
Approximate Net Weight	lbs	193	193	211	223	277	303	316
	kg	88	88	96	101	126	137	143
Approximate Ship Weight	lbs	221	221	247	259	323	348	360
	kg	100	100	112	117	147	158	163

^C ETL rating for altitudes to 2000 ft.

^D Size shown is for gas connection to a single stage gas valve, not supply line size.

^E Smaller or larger vent pipe diameters may be allowed; refer to the Venting Installation Manual, Form I-V-PV. If vent diameter is different from vent connection, reducer/enlargers will be field-required.

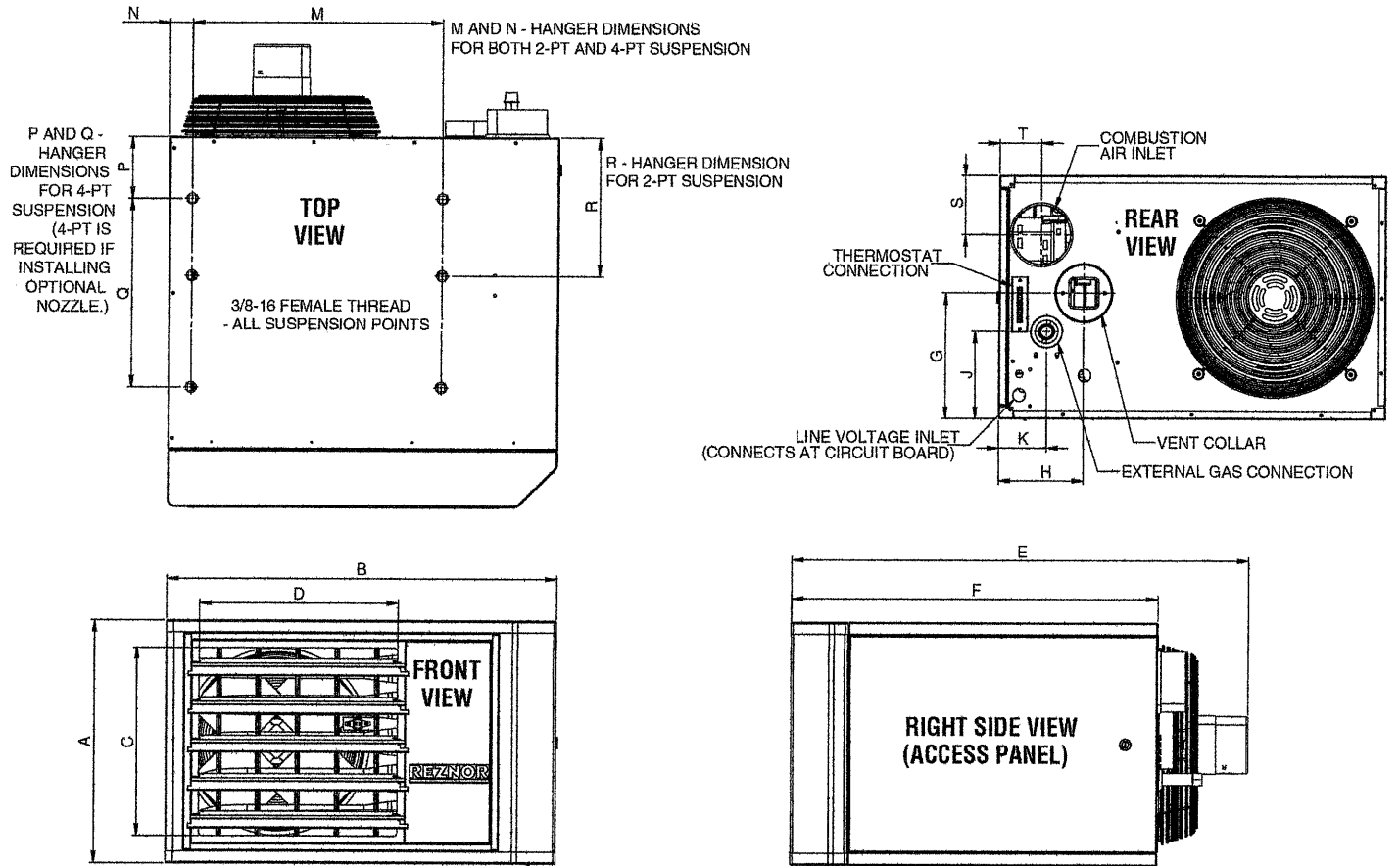
^F MOP = 2.25 x largest motor FLA + remaining load. Answer is rounded down to the next size of commercially available circuit breaker or fuse.

^G All other information in this table is based on a heater equipped with a standard 115 volt open fan motor.

UDX DIMENSIONS

±1/16" (2MM)

UNIT SIZE	A	B	C	D	E	F	G	H	J	K	M	N	P	Q	R	S	T
	INCHES (±1/16) (mm (±2))																
030, 045	13 3/4 (349)		10 (254)		29 3/4 (756)		6 (152)		3 1/2 (89)							3 3/4 (95)	
060					32 23/32 (831)												
075	16 3/4 (425)	27 (686)	13 (330)	13 13/16 (351)	31 29/32 (810)	25 9/16 (649)	8 11/16 (221)	5 15/16 (151)	6 (152)	3 11/32 (85)	17 3/8 (441)	1 9/16 (40)	4 9/32 (109)	13 (330)	9 9/16 (243)	4 1/16 (103)	2 15/16 (75)
100																	
125	24 3/4 (629)		21 (533)		34 9/32 (871)		15 5/16 (389)		8 29/32 (226)							5 15/32 (139)	
150,175,200	20 1/8 (511)	38 3/16 (970)	16 (406)		48 7/16 (1230)		9 5/8 (244)	8 5/16 (211)	5 3/8 (137)	6 1/2 (165)	25 11/16 (652)				16 3/8 (416)	5 1/2 (140)	4 1/4 (108)
225,250	26 1/8 (664)		22 (559)	23 (584)		40 (1016)	13 1/16 (332)		9 (229)	1 13/32 (36)	8 1/8 (206)	22 3/16 (564)			8 1/16 (205)	4 5/16 (110)	
300,350,400	34 1/8 (867)	41 (1041)	30 (762)		48 29/32 (1243)		17 1/16 (433)	8 1/2 (216)	11 13/16 (300)	7 5/16 (186)	27 11/16 (703)				16 1/4 (413)	11 9/16 (294)	4 1/2 (114)



CLEARANCES FROM COMBUSTIBLES

Size	Top		Flue Connector		Access Panel ^J		Non-Access Side		Bottom ^K		Rear ^L	
	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
30-125	1	25	6	152	18	457	1	25	1	25	18	457
150-400	4	102	6	152	18	457	2	51	1	25	18	457

^J Access Panel clearance is required for service clearance to controls

^K Suspend the heater so that the bottom is a minimum of 5' (1.5M) above the floor.

^L Rear clearance is required for air movement. Rear clearance should be measured from the fan motor.

REZNOIR

Proposal



Walters & Hemming, Inc.
421 W. Front Street
Traverse City, MI 49684

Phone: (231) 946-5212
Fax: (231) 946-6449
www.waltersandhemming.com

Date: **January 11, 2022**

Telephone: **946-1396**

Proposal Submitted to: **Elmwood Township**

Address: **10750 East Cherry Bend Rd
Traverse City, MI 49684**

Job Location: **10750 East Cherry Bend Rd
Traverse City, MI 49684**

We propose hereby to furnish material and labor, complete in accordance with the specifications below, for the sum of:

Three Thousand Six Hundred Fifty-Six Dollars and No/100s

\$3,656.00

Payment to be made as follows:

Upon Completion

All material is guaranteed to be as specified. All work to be completed in a workman-like manner according to standard practices. Any alteration or deviation from specifications involving extra costs will be executed only upon written orders, and will become an extra charge over and above the estimate. All agreements contingent upon strikes, accidents or delays beyond our control. Owner to carry fire, tornado, and any other necessary insurance. Our workers are fully covered by Workman's Compensation Insurance.

Jason Rehahn

Authorized Signature

Note: This proposal may be withdrawn if not accepted within 30 days.

We hereby submit specification and estimates for:

Installation of a unit heater in the south end of the old fire barn including the following:

1 Beacon Morris BXF150 150,000 Btu unit heater

Single wall venting to existing 7 inch bvent

Gas pipe from existing piping

Electrical from existing switch

Thermostat wiring from existing thermostat

Labor

Permits

This price does not include removal and disposal of the other unit heater.

My load calculation came up with a load of 107,902 Btu. The heater is rated at 83% AFUE for an output of 124,500 Btu. The next size down would be too small at 103,000 Btu output.

Acceptance of Proposal

The above prices, specifications, and conditions are satisfactory and are hereby accepted. You are authorized to do the work as specified. Payment will be made as outlined above.

Signature: _____

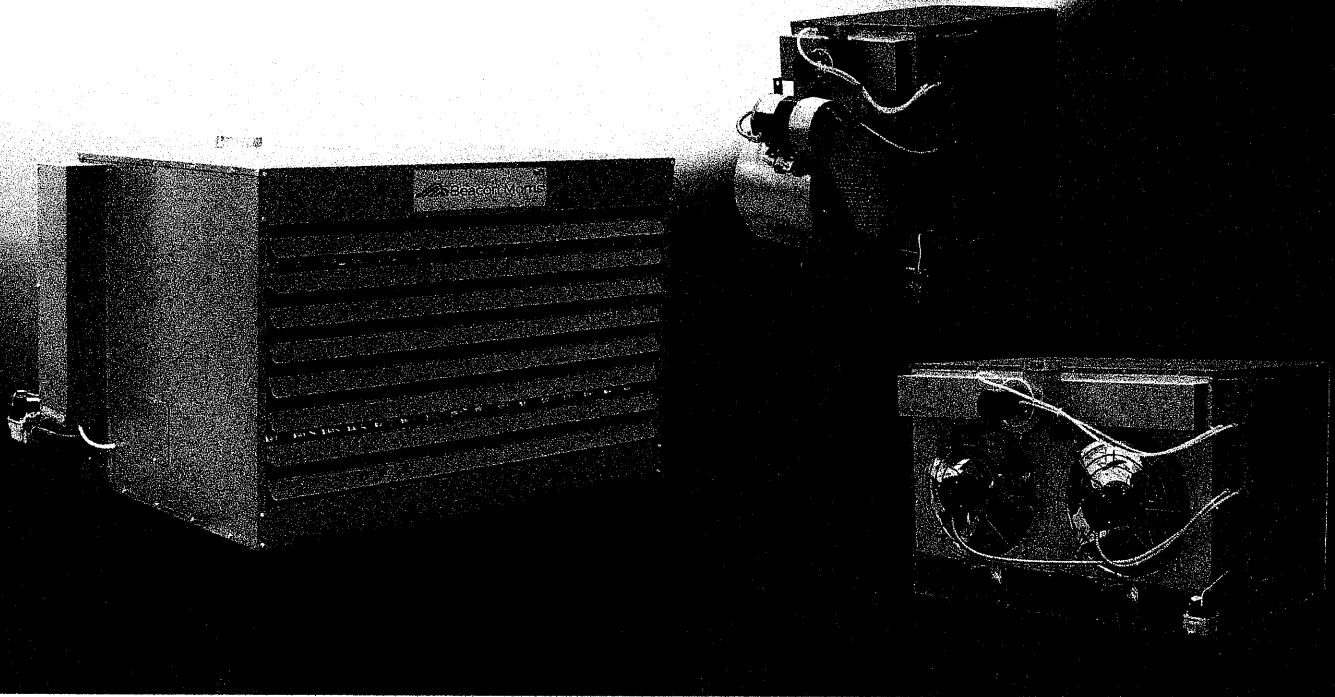
Date of Acceptance: _____

Signature: _____

Customer Copy

BXF/BXC SERIES

Commercial/Light Commercial Unit Heater



STANDARD FEATURES

- Standard or separated combustion all-in-one units
- 20-gauge aluminized steel tubular heat exchanger
- 83% thermal efficiency
- Power venter
- 20-gauge steel cabinetry with baked enamel finish
- Direct spark ignition system
- Redundant single stage gas valve
- Rear burner access for ease of service
- Individually adjustable and removable horizontal louvers
- 10-year heat exchanger, flue collector and burner warranty

OPTIONAL FEATURES

- Stainless steel heat exchanger, burners, and/or flue collector
- Two stage and various electronic modulation gas controls
- Discharge nozzles (30°, 60° & 90°)
- Combustion air inlet kits (concentric vent)
- Supply voltages: 208 & 230/1/60 and 208, 230, 460, 575/3/60




Beacon Morris®

BXF/BXC SERIES

DESCRIPTION

The Beacon Morris "BXF/BXC" Series Convertible Venting Type Tubular Gas-Fired Unit Heater offers a highly efficient, extremely durable alternative to the traditional clam shell design. These propeller and blower type units combine the latest tubular heat exchanger and in-shot burner technology with the quality and reliability you have come to know from Beacon Morris. Units are available in sizes 100 to 400 MBH and have been certified by ETL as providing 83% thermal (combustion) efficiency.

CONVERTIBLE VENTING - STANDARD OR SEPARATED COMBUSTION

Notably, the Beacon Morris "BXF/BXC" unit heater is designed so it can be installed in either standard or separated combustion venting configurations without requiring modification to the unit itself. Located on the rear cover panel of each unit, combustion air inlet collars are left open in a standard combustion venting configuration. When set up for separated combustion, combustion air piping is connected to the inlet collars so that the burners, spark ignitor, and flue system are enclosed within the unit, allowing the entire combustion process to remain unaffected by the atmosphere in the space where the heater is located. Separated combustion venting configurations should be used where dusty, dirty or mildly corrosive conditions exist, or where high humidity or slightly negative pressures prevail.

ADDITIONAL VENTING FLEXIBILITY

The Beacon Morris "BXF/BXC" unit heater is ETL certified in accordance with categories I and III venting requirements. This certification allows units to be vented both vertically and horizontally using either single wall or double wall venting materials. Available as an accessory option, Beacon Morris offers a Combustion Air Inlet Kit that allows for concentric venting of both combustion and exhaust air systems through one termination.

TUBULAR HEAT EXCHANGER

The Beacon Morris tubular heat exchanger has been designed to provide maximum and uniform heat transfer. The low pressure drop associated with this design enables heated air to be evenly distributed to the conditioned space. This curved, non-welded serpentine design experiences less thermally induced stress making it highly durable for significantly longer service life. All Beacon Morris tubular heat exchangers are constructed of heavy duty 20-gauge aluminized steel. Optional 409 stainless steel heat exchangers are also available.

DIRECT SPARK IGNITION SYSTEM & CONTROL ACCESSIBILITY

Beacon Morris "BXF/BXC" units utilize a direct spark pilotless ignition of the burner, providing fast heat delivery. This highly reliable and efficient ignition system incorporates an integrated electronic control board to regulate the system sequence of operation, including an externally mounted LED indicator for simple troubleshooting. Designed with the service person in mind, ignition and fan controls are located in one centrally located control panel.

Unit Size	100	125	150	175	200	250	300	350	400
BXF & BXC									
PERFORMANCE DATA†									
Input - BTU/Hr.	100,000	125,000	150,000	175,000	200,000	250,000	300,000	350,000	400,000
Output - BTU/Hr.	83,000	103,750	124,500	145,250	166,000	207,500	249,000	290,500	332,000
Flue Size Diameter* - in	5	5	5	5	5	5	6	6	6
Gas Inlet, Natural/LP Gas - in	1/2	1/2	1/2	1/2	1/2	3/4	3/4	3/4	3/4
BXF PERFORMANCE/DIMENSIONAL DATA									
Free Air Delivery - CFM	1,600	2,200	2,400	2,850	3,200	3,450	5,000	5,600	5,800
Air Temperature Rise	47°F	42°F	47°F	46°F	47°F	54°F	45°F	47°F	51°F
Full Load Amps at 120V	6.4	6.9	6.9	8	8	8	11.6	13.8	13.8
MOTOR DATA: Motor HP	1/10	1/4	1/4	1/3	1/3	1/3	1/4 (2)	1/3 (2)	1/3 (2)
Motor Type (ODP)	SP	PSC	PSC	PSC	PSC	PSC	PSC	PSC	PSC
RPM	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050	1,050
Amps @ 115V	4.2	4.7	4.7	5.8	5.8	5.8	9.4	11.6	11.6
DIMENSIONAL DATA - inches									
Overall Unit Height	33-3/4	33-3/4	33-3/4	33-3/4	33-3/4	33-3/4	34	34	34
Overall Unit Width	25-1/4	25-1/4	25-1/4	37-1/4	37-1/4	37-1/4	55-1/4	55-1/4	55-1/4
Overall Unit Depth	43-1/2	43-1/2	43-1/2	43-1/2	43-1/2	43-1/2	44-3/4	44-3/4	44-3/4
BXC PERFORMANCE/DIMENSIONAL DATA									
Free Air Delivery - CFM	1,181	1,476	1,771	2,067	2,362	2,953	3,501	4,134	4,724
Air Temperature Rise	65°F	65°F	65°F	65°F	65°F	65°F	65°F	65°F	65°F
Outlet Velocity - FPM	370	463	555	395	451	564	422	498	570
MOTOR DATA: Motor HP	1/4	1/2	1/2	3/4	3/4	1	1	1-1/2	1-1/2
Motor Type ODP**	SPH	SPH	SPH	SPH	SPH	Cap. Start	Cap. Start	Cap. Start	Cap. Start
RPM	1,725	1,725	1,725	1,725	1,725	1,725	1,725	1,725	1,725
Amps @ 115V††	5.1	7.2	7.2	11.6	11.6	13	13	18.2	18.2
DIMENSIONAL DATA - inches									
Overall Unit Height	33-3/4	33-3/4	33-3/4	33-3/4	33-3/4	33-3/4	34	34	34
Overall Unit Width	25-1/4	25-1/4	25-1/4	37-1/4	37-1/4	37-1/4	55-1/4	55-1/4	55-1/4
Overall Unit Depth	49-3/4	49-3/8	49-3/8	56-1/8	56-1/8	56-1/8	53-3/8	56-1/8	56-1/8

† Ratings shown are for unit installations at elevations between 0 and 2,000 ft (0 to 610m). For unit installations in U.S.A. above 2,000 ft. (610m), the unit input must be field derated 4% for each 1,000 ft. (305m) above sea level; refer to local codes, or in absence of local codes, refer to the latest edition of the National Fuel Gas Code, ANSI Standard Z223.1 (N.F.P.A. No. 54).

For installations in Canada, any reference to deration at altitudes in excess of 2,000 ft. (610m) are to be ignored. At altitudes of 2,000 ft. to 4,500 ft. (610 to 1372m), the unit must be field derated to 90% of the normal altitude rating, and be so marked in accordance with the ETL certification. See unit installation manual for field deration information.

†† See installation manual for ODP motor full load amp values at non-standard voltages.

* Flue collar is factory supplied with unit; to be field installed per included instructions.

** LEGEND: SPH = SPLIT PHASE CAP. START = CAPACITOR START ODP = OPEN DRIP PROOF



260 North Elm Street | Westfield, MA 01085 | Tel: (413) 562-5423 Fax: (413) 572-3764
 7555 Tranmere Dr. | Mississauga, Ont. L5S 1L4 Canada | Tel: (905) 670-5888 Fax: (905) 670-5782
 www.beacon-morris.com



To: Elmwood Township Board
From: Sarah Clarren, Planner/Zoning Administrator
RE: Planning Commission Request for Further Clarification
Date: 2/8/2022

Among other items of business, on September 30, 2021, the Township Board made the following motions:

MOTION BY TRUSTEE LAUTNER, SECONDED BY TRUSTEE ALLEN TO APPROVE ORDINANCE AMENDMENT 2021-3 WITH THE CHANGES IN THE 2ND LINE OF THE DEFINITION. A roll call vote yielded ayes from O'Rourke, Allen, Lautner, Mikowski, and Shaw and Nays from Darga and Preston. The motion passed 5-2

MOTION BY TRUSTEE O'ROURKE, SECONDED BY TRUSTEE ALLEN TO ADOPT ORDINANCE 2021-2 WITH THE MODIFICATIONS MADE TONIGHT. A roll call vote yielded ayes from Lautner, Preston, Mikowski, Allen, O'Rourke, and Shaw and Nay from Darga. The motion passed 6-1.

MOTION BY CLERK PRESTON, SECONDED BY TRUSTEE DARGA TO DIRECT THE PLANNING COMMISSION AS SOON AS POSSIBLE TO REMOVE STRS FROM SUBDIVISIONS IN GREILICKVILLE NEIGHBORHOODS USING AN OVERLAY DISTRICT OR AMENDMENT TO THE ZONING DISTRICTS. A roll call vote yielded ayes from Lautner, Allen, O'Rourke, Darga, and Preston and nays from Shaw and Mikowski.

It is worth noting to the Board that since September 30th, 2021, the following has occurred:

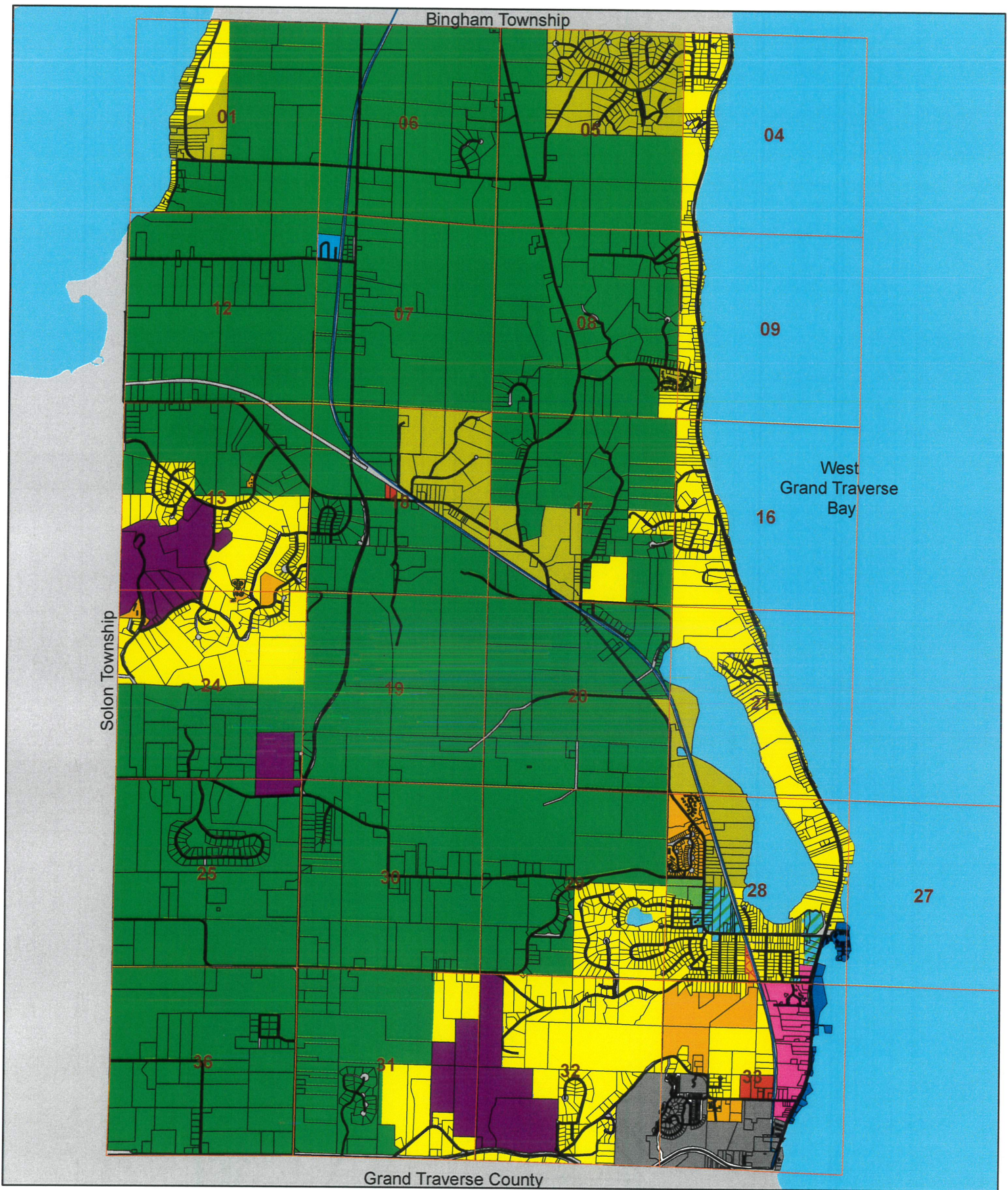
1. On 10/27/21, House Bill-4722 passed the House which if signed in to law would amend the MI Zoning Enabling Act and limit the Township's ability to regulate STRs. To-date, the Bill has not been passed by the MI Senate. The last action on HB-4722 was on 10/27/2021 when it was referred to the Committee on Regulatory Reform.
2. The Zoning Administrator has issued 73 of the 93 allowed licenses.

On November 9th, 2021, the Planning Commission discussed the Board's motion regarding the creation of an overlay district and ultimately determined to hold off on discussion until at least January in order to determine what happens in the Legislature and to have further information on where the properties that submitted STR applications are located.

On January 18th, 2022, the Commission further discussed the Board's motion and determined that they would like further clarification from the Board on what the Board meant by the Greilickville neighborhoods. Once the area is further defined, the Commission also requested a map from the ZA showing locations of licensed STRs before concluding if they should move forward with pursuing an overlay district.

In order to aid your discussion on what was meant by the 'Greilickville neighborhoods,' in your above referenced motion I have enclosed the following:

1. Elmwood Township's current Zoning District Map
2. Elmwood Township's Future Land Use Map (includes 'Greilickville Service Center')
3. An undated map of Elmwood Township's Subdivisions & Site Condominiums, as provided by a member of the public (which was obtained from the County)
4. HB-4722, as passed

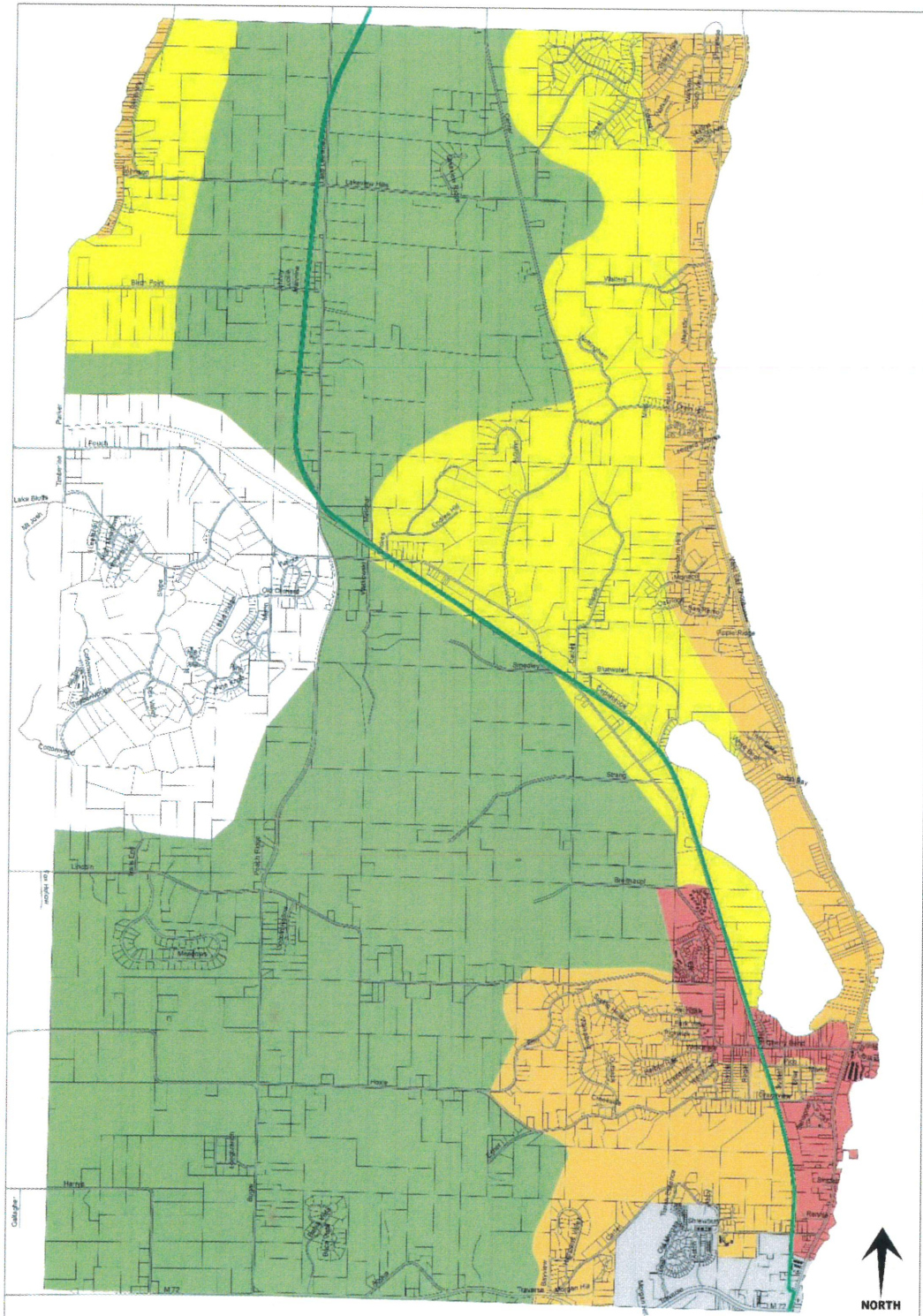


CHARTER TOWNSHIP OF ELMWOOD

Zoning Districts

- | | | | |
|----------------------------|------------------------------|---------------------------|----------------------|
| Agricultural - Rural (A-R) | Manufactured Home Park (MHP) | General Commercial (GC) | Conditional Rezoning |
| Residential 1 (R-1) | Rural Resort (RR) | Light Industrial (LI) | |
| Residential 2 (R-2) | Municipal Center (MC) | Shoreline Commercial (SC) | |
| Residential 3 (R-3) | Neighborhood Commercial (NC) | Traverse City | |

Official Zoning Map
September 1, 2017



CHARTER TOWNSHIP OF ELMWOOD

FUTURE LAND USE MAP

- GREILICKVILLE SERVICE CENTER
- MEDIUM DENSITY RESIDENTIAL
- TIMBERLEE
- HIGH DENSITY RESIDENTIAL
- RURAL LOW DENSITY
- TRAVERSE CITY
- Tart Trail

Date 4/6/2016

**SUBSTITUTE FOR
HOUSE BILL NO. 4722**

A bill to amend 2006 PA 110, entitled
"Michigan zoning enabling act,"
(MCL 125.3101 to 125.3702) by adding section 206b.

THE PEOPLE OF THE STATE OF MICHIGAN ENACT:

1 Sec. 206b. (1) For the purposes of zoning, all of the
2 following apply to the rental of a dwelling, including, but not
3 limited to, short-term rental:

4 (a) It is a residential use of property and a permitted use in
5 all residential zones.

6 (b) It is not subject to a special use or conditional use
7 permit or procedure different from those required for other
8 dwellings in the same zone.

9 (c) It is not a commercial use of property.

1 (2) A local unit of government shall not adopt or enforce
2 zoning ordinance provisions that have the effect of prohibiting
3 short-term rentals.

4 (3) This section does not prohibit a zoning ordinance
5 provision that is applied on a consistent basis to rental and
6 owner-occupied residences and that regulates any of the following:

7 (a) Noise.

8 (b) Advertising.

9 (c) Traffic.

10 (d) Any other condition that may create a nuisance.

11 (4) This section does not prohibit a local unit of government
12 from doing either of the following:

13 (a) Inspecting a residence for compliance with or enforcement
14 of an ordinance of the local unit of government that meets all of
15 the following requirements:

16 (i) Is for the protection of public health and safety.

17 (ii) Is not a zoning ordinance.

18 (iii) Does not have the effect of prohibiting short-term
19 rentals.

20 (b) Collecting taxes otherwise authorized by law.

21 (5) Notwithstanding any other provision of this section, a
22 local unit of government may limit the number of units under common
23 ownership used for short-term rental in the local unit. The limit
24 set by the local unit of government shall not be fewer than 2
25 units.

26 (6) Notwithstanding any other provision of this section, a
27 local unit of government may limit the total number of units used
28 for short-term rental in the local unit. The limit shall not be
29 less than 30% of the number of existing residential units in the

1 local unit of government and shall apply without regard to the
2 location of dwelling units.

3 (7) Notwithstanding any other provision of this section, a
4 local unit of government that, as of July 11, 2019, had zoning
5 ordinance provisions that regulate the rental of dwellings by
6 overlay district without distinction between short-term rental and
7 rental for longer terms, and that, as of July 11, 2019, had a
8 rental overlay district or districts that were initiated by
9 petition, may continue to enforce those zoning ordinance provisions
10 as they existed on that date. Such a local unit of government may
11 revise existing overlay district boundaries or create new overlay
12 districts, but only under the terms of the zoning ordinance
13 provisions as they existed on July 11, 2019.

14 (8) As used in this section:

15 (a) "Common ownership" means ownership in whole or in part by
16 the same individual, individuals, or legal entity.

17 (b) "Short-term rental" means the rental of a single-family
18 residence, a dwelling unit in a 1-to-4-family house, or any unit or
19 group of units in a condominium, for terms of not more than 30
20 consecutive days.

21 Enacting section 1. This amendatory act takes effect 90 days
22 after the date it is enacted into law.

Connie Preston

From: Paul Olson <polson@muwm.net>
Sent: Wednesday, February 09, 2022 12:44 PM
To: Connie Preston
Subject: Re: Insurance Coverage

Additional Premium annually for increase in Non Monetary Coverage

\$50,000/\$100,000 Aggregate	\$300.00
\$100,000/\$100,000 Aggregate	\$450.00

Hope this will be useful.

Paul Olson

Municipal Underwriters of West MI
4171 Wolverine Drive
Williamsburg, MI 49690

Phones:
Toll Free: 888-883-6391
Local: 231-421-5008
Fax: 231-421-3509

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

From: Connie Preston
Sent: Wednesday, February 09, 2022 11:59 AM
To: Paul Olson
Subject: RE: Insurance Coverage

Thanks!

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

From: Paul Olson <polson@muwm.net>
Sent: Wednesday, February 09, 2022 7:35 AM
To: Connie Preston <clerk@elmwoodmi.gov>
Subject: Re: Insurance Coverage

INVOICE APPROVAL LIST REPORT - SUMMARY BY VENDOR

PRELIMINARY

Date: 02/08/2022

Time: 7:57 pm

Page: 1

ELMWOOD TOWNSHIP

Vendor Name	Vendor No.	Invoice Description	Check No.	Check Date	Check Amount
THE ACCUMED GROUP	A026	BILLING SERVICES	0	00/00/0000	1,431.83
				Vendor Total:	1,431.83
ACE HARDWARE	A020	CUST#23468	0	00/00/0000	306.11
				Vendor Total:	306.11
AIRGAS USA, LLC	A004	PAYER 1429245	0	00/00/0000	307.39
				Vendor Total:	307.39
ALLIANCE BUSINESS PRODUCTS I	A033	UNIFORMS	0	00/00/0000	213.79
				Vendor Total:	213.79
BOUNDTREE MEDICAL	B116	ACCT#213121	0	00/00/0000	334.16
				Vendor Total:	334.16
CITY OF TRAVERSE CITY UTILITIE	C093	ACCT#531765-118432	0	00/00/0000	25.52
				Vendor Total:	25.52
CONSUMERS ENERGY	C040	ACCT#1030 3518 7543	0	00/00/0000	454.01
				Vendor Total:	454.01
D&W MECHANICAL	D019	CUST ELMW OLD FIRE STATION	0	00/00/0000	431.55
				Vendor Total:	431.55
DINGES FIRE COMPANY	D055	CUST ID 11435	0	00/00/0000	215.86
				Vendor Total:	215.86
EAGLE ENGRAVING, INC.	E017	ID TAGS	0	00/00/0000	21.00
				Vendor Total:	21.00
EARTHWORKS EXCAVATION, LLC	E006	TIMBERWOODS SNOW PLOWING	0	00/00/0000	4,330.00
				Vendor Total:	4,330.00
GRAND TRAVERSE COUNTY DPW	G040	ACCOUNT 4003411	0	00/00/0000	412.16
				Vendor Total:	412.16
GRANICUS	G039	24/7 hotline/compliance monito	0	00/00/0000	868.35
				Vendor Total:	868.35
INACOMP COMPUTER CENTER	I014	TECH SUPPORT	0	00/00/0000	95.00
				Vendor Total:	95.00
JOHN E. GREEN COMPANY	J031	CUST ID CHAR011	0	00/00/0000	255.00
				Vendor Total:	255.00
BARBARA JONES	J042	MEMBERSHIP RENEWAL	0	00/00/0000	95.00
				Vendor Total:	95.00
KSS ENTERPRISES	K014	CUST ACCT ELMWO110	0	00/00/0000	321.88
				Vendor Total:	321.88
LAND INFORMATION ACCESS ASS	L007	SUPPORT SERVICES	0	00/00/0000	7,414.49
				Vendor Total:	7,414.49
LEELANAU ENTERPRISE & TRIBUN	L020	ADVERTISER 676	0	00/00/0000	64.35
				Vendor Total:	64.35
LEXIPOL, LLC	L126	ANNUAL FIRE POLICY AND TRAININ	0	00/00/0000	3,070.06
				Vendor Total:	3,070.06
MOBILE MEDICAL RESPONSE	M191	ALS INTERCEPT	0	00/00/0000	2,750.00
				Vendor Total:	2,750.00
MUNSON OCCUPATIONAL HEALTH	M103	ACCT 894	0	00/00/0000	1,600.04
				Vendor Total:	1,600.04
NETLINK	M185	QTR MAINT	0	00/00/0000	821.71
				Vendor Total:	821.71
NORTHWEST REGIONAL FIRE	N120	FIREFIGHTER 1&2ACCT 1106503	0	00/00/0000	2,400.00
				Vendor Total:	2,400.00
R&R FIRE TRUCK REPAIR INC	P134	QTR EQUIPMENT MAINT	0	00/00/0000	263.21

INVOICE APPROVAL LIST REPORT - SUMMARY BY VENDOR

PRELIMINARY

Date: 02/08/2022

Time: 7:57 pm

Page: 2

ELMWOOD TOWNSHIP

Vendor Name	Vendor No.	Invoice Description	Check No.	Check Date	Check Amount
				Vendor Total:	263.21
US BANK OPERATIONS SERVICE (U030	ACCT#4702_5 BOND PAYMENT	0	00/00/0000	64,687.50
				Vendor Total:	64,687.50
VERIZON WIRELESS	V014	ACCT#682962913-00001	0	00/00/0000	60.46
				Vendor Total:	60.46
VISIBLE DIFFERENCE BLDG. MAIN	V002		0	00/00/0000	135.00
				Vendor Total:	135.00
WADE TRIM	W107	MISC	0	00/00/0000	2,413.70
				Vendor Total:	2,413.70
WELLS FARGO FINANCIAL LEASIN	W027	CONTRACT#603-0180923-000	0	00/00/0000	95.40
				Vendor Total:	95.40
YOUNG, GRAHAM, & WENDLING P	Y002	MISC LEGAL	0	00/00/0000	1,872.00
				Vendor Total:	1,872.00
				Grand Total:	97,766.53
				Less Credit Memos:	0.00
				Net Total:	97,766.53
				Less Hand Check Total:	0.00
				Outstanding Invoice Total :	97,766.53
	Total Invoices:	53			