Wood Buffalo Environmental Association

Ambient Air Monitoring Station Site Documentation

Stony Mountain

LAST UPDATED: MARCH 28, 2024

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Tables and Figures

General Site Information

Revision Date: March 28, 2024

Station

Station ID	AMS 18
Station name	Stony Mountain
Date station established	June 2015

Location

Station street address	NA
Legal land description	1-33-076-08 W4
Airshed Zone	Wood Buffalo Environmental Association
Latitude	55.621487
Longitude	-111.172798
UTM East	489125
UTM North	6163958
Nearest community	Conklin
Community population	229
Census Year	2018

Owner/Operator/Approval Holder

Operating Agency	Wood Buffalo Environmental Association
Address of Operating Agency	Unit 3-805 Memorial Drive, Fort McMurray, Alberta T9K 0K4
Name of Approval Holder	NA
Approval number	NA
Contact Name	Wood Buffalo Environmental Association
Address	Unit 3-805 Memorial Drive, Fort McMurray, Alberta, T9K 0K4
Phone number	780-799-4420
Email address	info@wbea.org

Site Description

Land use by sector	0 – 90 degrees	Trees
	91 – 180 degrees	Trees
	181 – 270 degrees	Trees
	271 – 360 degrees	Fire tower, trees
Site elevation (m) (above sea level)	673	
Angle of elevation to nearby buildings	Greatest angle	0
	Building direction	NA
Airflow restrictions	North	None
	East	None

	South	None
	West	None
Distance to nearest trees (m)	North	30
	East	30
	West	30
	South	30
Sample manifold	Type	All glass
	Inlet height above roof	1 metre
Wind Sensors	Type	Cup and vane
	Height above ground (m)	20
	Distance from station (m)	2

Site Influences

Localized Sources (within 20 metres of station)

Type	Distance (m)	Description
Fire watch tower	100 m NW of Station	Fire lookout tower, operated by the province of Alberta
Communication Tower	30 m E of Station	Cell tower

Roadway Influences

Type	Traffic Volume	Distance (m)	Description
Access road	Low	10	Dirt/sand road

Major Point Sources

Facility Name	Source Type	Distance from site (km)	Compass direction from site
Cenovus	SAGD	12.26	SE
CNRL	SAGD	15	SE

Station Equipment

Equipment Owner:

Analytical Equipment

Parameter	Make	Model	Serial Number	Date Instrument Installed	WBEA Data Start Date
Continuous					
SO_2	Thermo Environmental	43i	1501301453	2015	August, 2015
TRS	Thermo Environmental	43i – TLE	1218153359	2021	August, 2015
$NO/NO_x/NO_2$	Thermo Environmental	42i	1336160088	2016	August, 2015
$THC/CH_4/NMHC$	Thermo Environmental	55i	1193585647	2023	September, 2015
O_3	Teledyne API	T400	825	2019	August, 2015
CO	Teledyne API	T300	3504	2021	July, 2019
CO_2	Teledyne API	T360	283	2022	July, 2019
$PM_{2.5}$	Teledyne API	T640	1335	2022	August, 2015
Time-Integrated					
PC	N-CON Systems	00-120-2	60140	2018	-
$PM_{2.5}$ EC/OC	Thermo Environmental	2000i-A-N	2000IW 20691 1702	2018	-

Meteorological Equipment

Parameter	Make	Model	Serial Number	WMO Site Class	Date Sensor Installed	WBEA Data Start Date
AT/RH	Vaisala	HMP155	G0840106	3	2018	August, 2015
WS	Met One	010C-1	A1406	4	2022	August, 2015
WD	Met One	020C-1	NA	4	2022	August, 2015
PC	OTT	OTT Pluvio-2	363526	3	2016	December, 2015
LW	Decagon Devices	LWS-L	NA	N/A	2022	October, 2015
GR	Epply	8-48 Solar Rad	38007	N/A	2021	August, 2015

Support Equipment

Name	Description	Make	Model	Serial Number
Datalogger	Datalogger	Campbell Scientific	CR3000	12345
Gas Dilution Calibrator	Dynamic dilution calibrator	Teledyne/API	T700	12345
Zero air generator	Zero Air Generator	Teledyne/API	701	12345

Shelter / Building	Air monitoring portable	ITB	8 x 16 trailer	12345
HVAC	Heating and air conditioning system. Wall mount unit	BARD	1 ton	12345

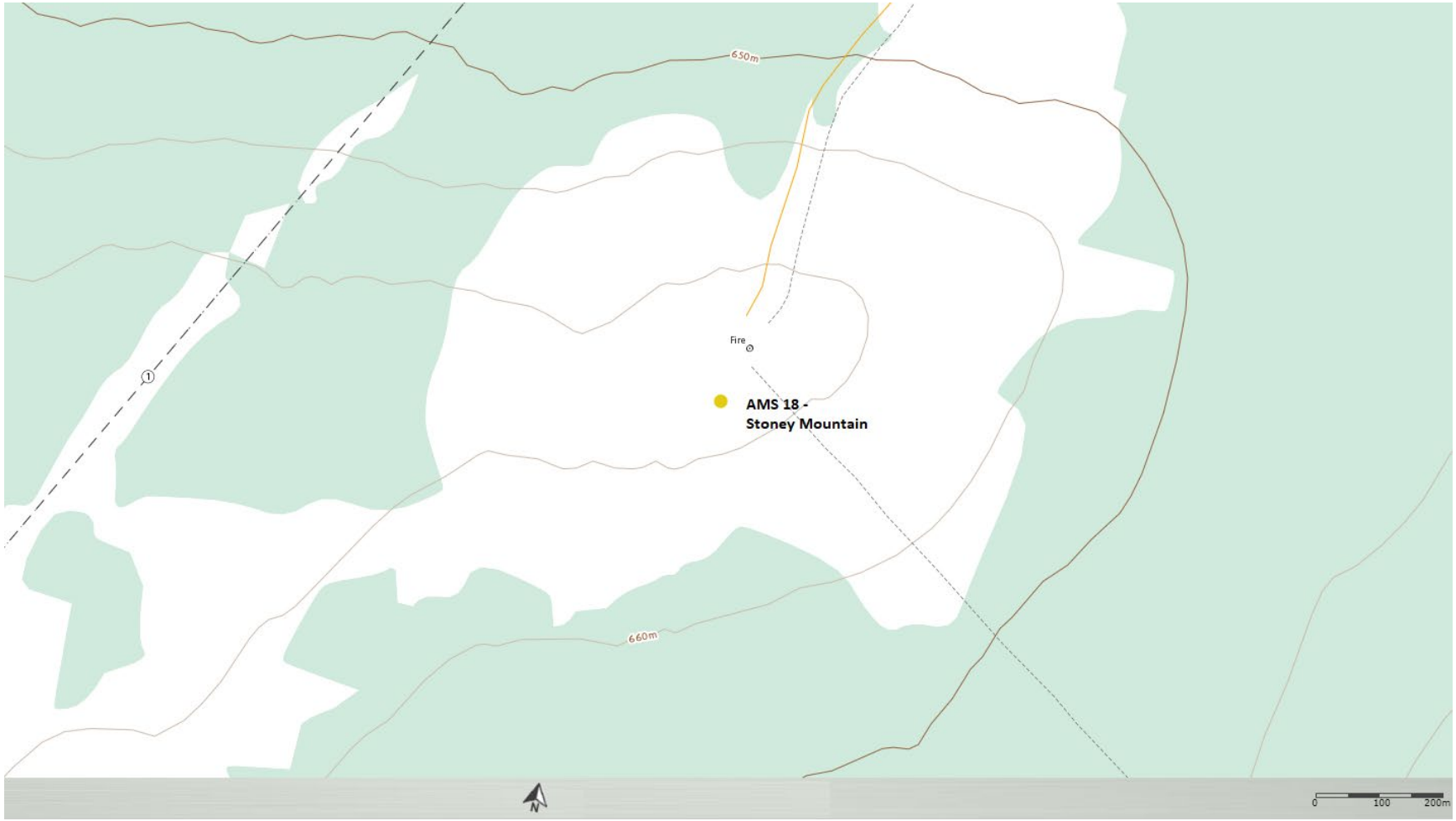

Figure 1 – Area topographic map showing AMS 18

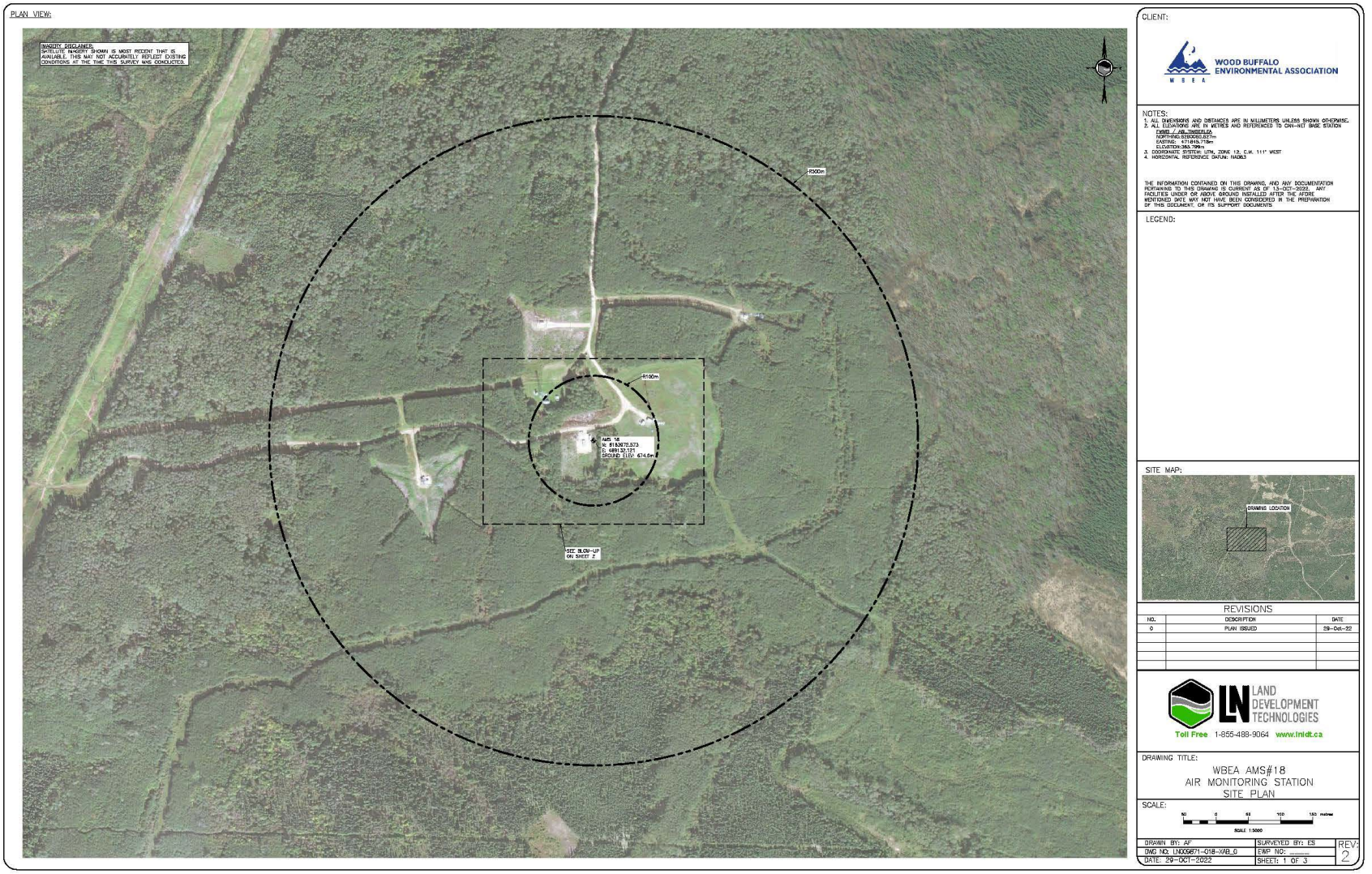

Figure 2 – Aerial photo showing AMS 18

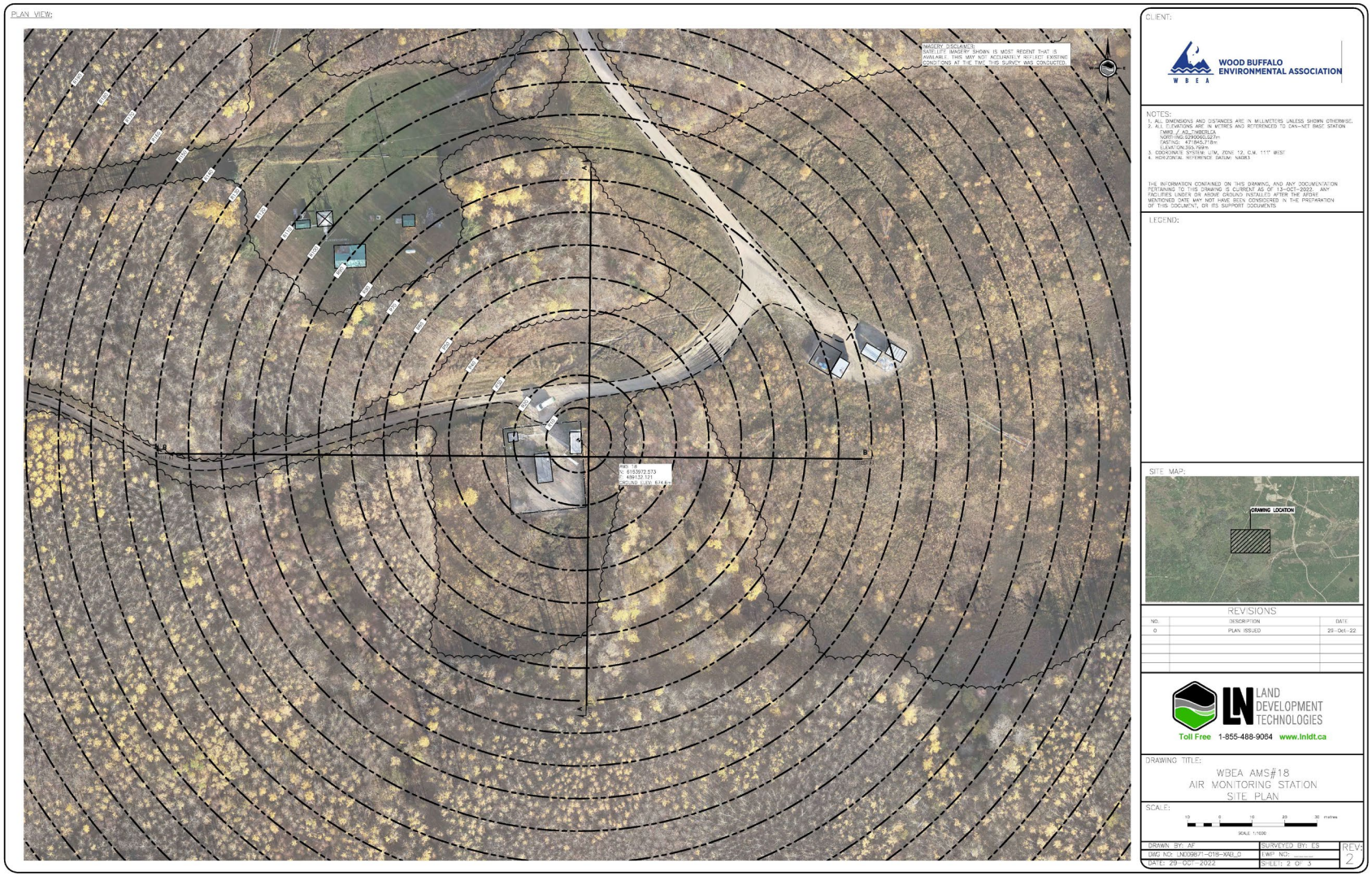

Figure 3 – Plan view sketch for AMS 18 site

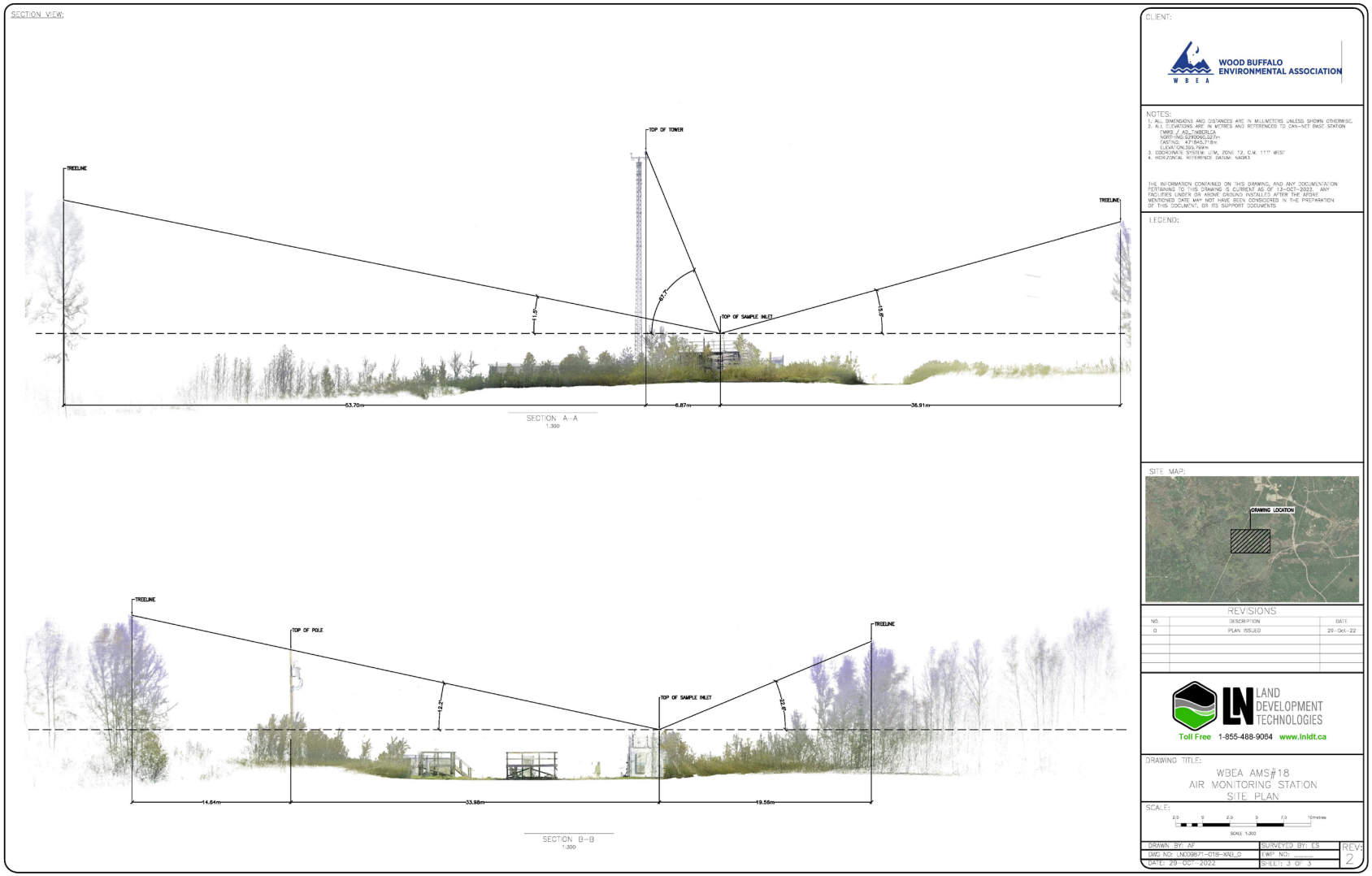

Figure 4 – Elevation view sketch for AMS 18 site

Site photos

The following photos show the environment surrounding the monitoring station.

Figure 5 – Environment looking North

Figure 6 – Environment looking East

Figure 7 – Environment looking South

Figure 8 – Environment looking West

Figure 9 – Meteorological Tower

Station Photos

The following photos show the monitoring station and instrumentation.

Figure 10 – Photo showing the inlet and sample manifold

Figure 11 – Curb shot of the monitoring station

Figure 12 –Photo of the front and the back of instrument rack

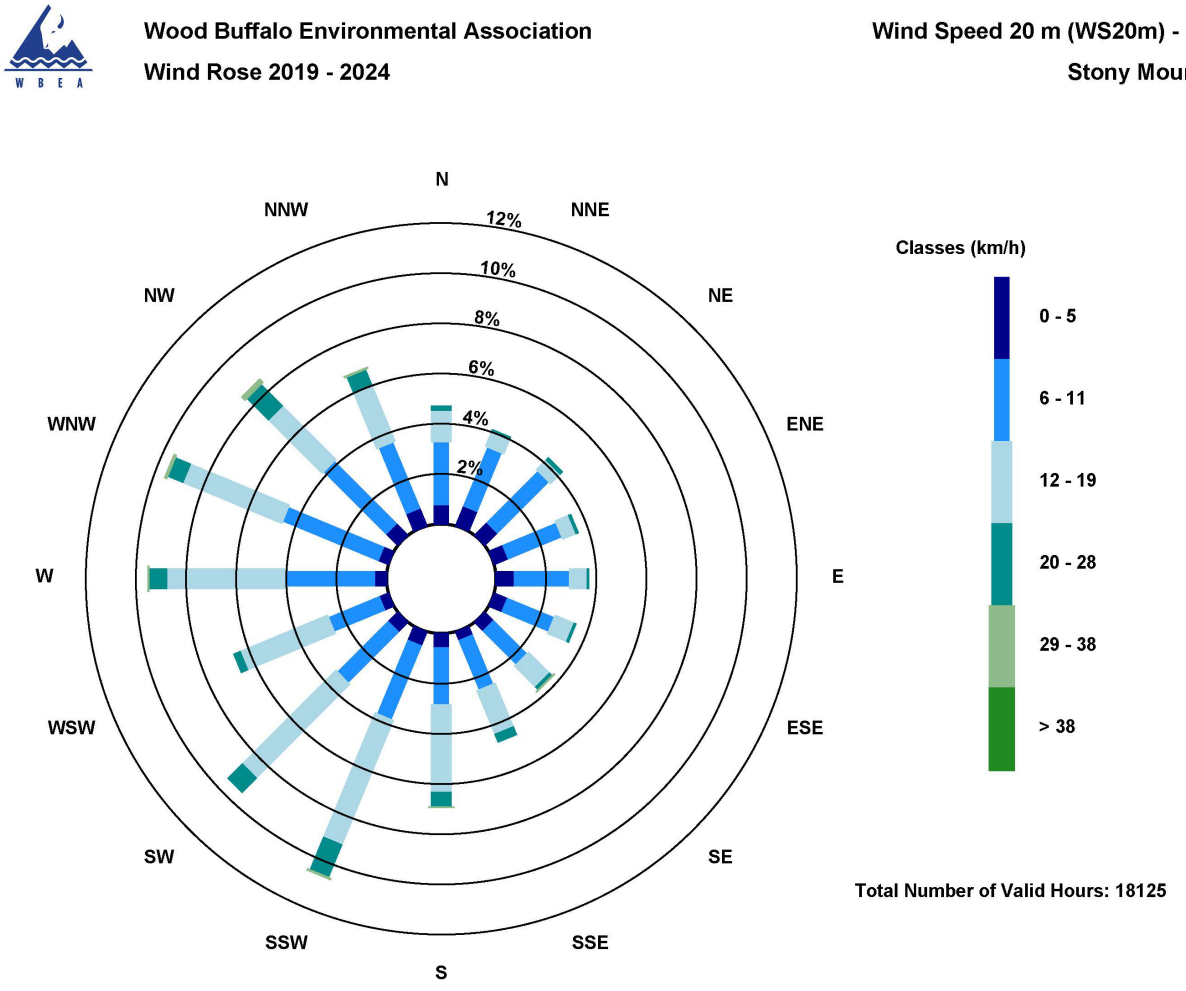

Figure 13 – Windrose (2019-2024)