

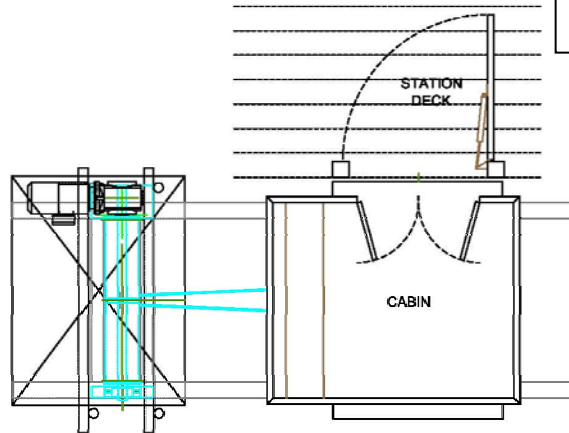
# Finger Lakes Tram

## General Arrangement Drawing

### REVISIONS

DESCRIPTION	DATE	APPROVED

### PLAN VIEW



### CONTROLS

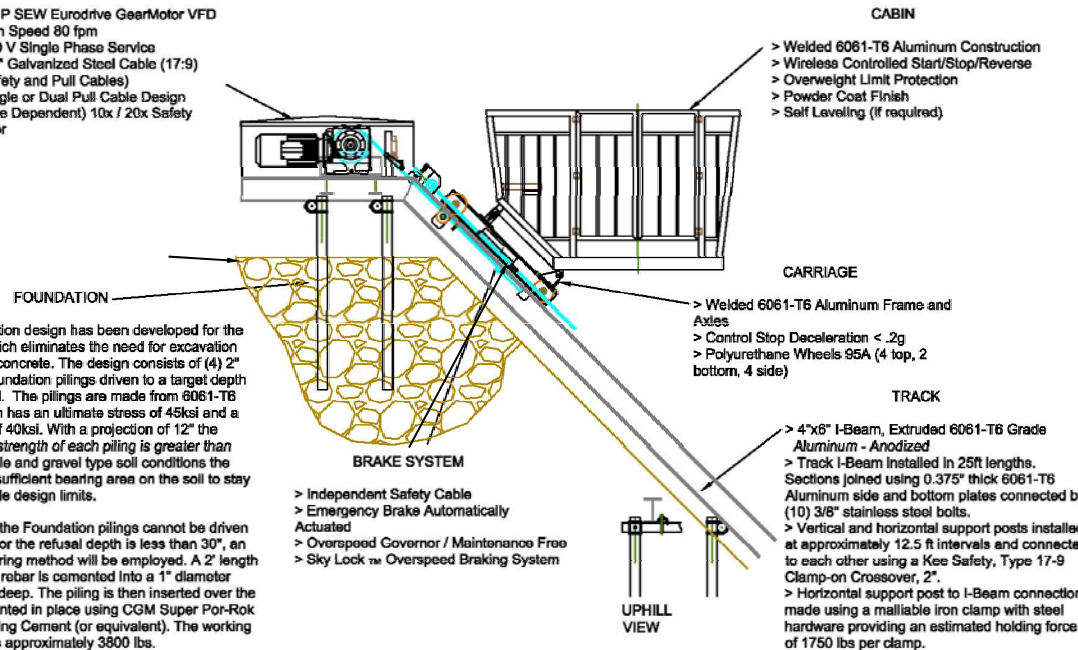
- > Soft Start/Stop
- > Reverse Acting Brake
- > Failsafe Mechanical Brake
- > Cable Slack Detection
- > Interlocked Station Gates Top and Bottom

NOTE: Refer to site plan for cabin and upper and lower station configuration. (if required)

### HOIST STATION

- > 3 HP SEW Eurodrive GearMotor VFD
- > Run Speed 80 fpm
- > 230 V Single Phase Service
- > 3/8" Galvanized Steel Cable (17:9) (Safety and Pull Cables)
- > Single or Dual Pull Cable Design (Slope Dependent) 10x / 20x Safety Factor

### ELEVATION VIEW



### CABIN

- > Welded 6061-T6 Aluminum Construction
- > Wireless Controlled Start/Stop/Reverse
- > Overweight Limit Protection
- > Powder Coat Finish
- > Self Levelling (if required)

### CARRIAGE

- > Welded 6061-T6 Aluminum Frame and Axles
- > Control Stop Deceleration < .2g
- > Polyurethane Wheels S5A (4 top, 2 bottom, 4 side)

### TRACK

- > 4"x6" I-Beam, Extruded 6061-T6 Grade Aluminum - Anodized
- > Track I-Beam Installed in 25ft lengths. Sections joined using 0.375" thick 6061-T6 Aluminum side and bottom plates connected by (10) 3/8" stainless steel bolts.
- > Vertical and horizontal support posts installed at approximately 12.5 ft intervals and connected to each other using a Kee Safety, Type 17-9 Clamp-on Crossover, 2".
- > Horizontal support post to I-Beam connection made using a malleable iron clamp with steel hardware providing an estimated holding force of 1750 lbs per clamp.

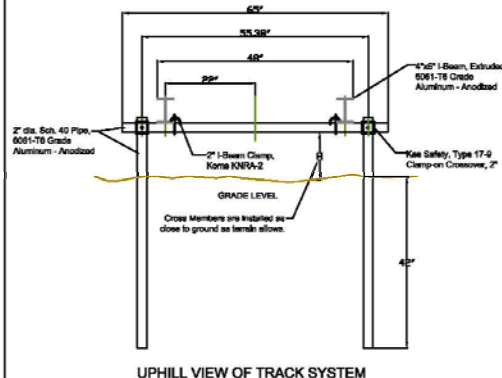
### BRAKE SYSTEM

- > Independent Safety Cable
- > Emergency Brake Automatically Actuated
- > Overspeed Governor / Maintenance Free
- > Sky Lock™ Overspeed Braking System

A pillar Foundation design has been developed for the hoist station which eliminates the need for excavation and pouring of concrete. The design consists of (4) 2" dia. Sch. 40 Foundation pilings driven to a target depth of 42" or refusal. The pilings are made from 6061-T6 aluminum which has an ultimate stress of 45ksi and a yield strength of 40ksi. With a projection of 12" the horizontal load strength of each piling is greater than 1880 lbs. In shale and gravel type soil conditions the pilings provide sufficient bearing area on the soil to stay within acceptable design limits.

In cases where the Foundation pilings cannot be driven into the ground or the refusal depth is less than 30", an alternate anchoring method will be employed. A 2" length of #4 (0.5" dia.) rebar is cemented into a 1" diameter drilled hole 12" deep. The piling is then inserted over the rebar and cemented in place using CGM Super Por-Rok Exterior Anchoring Cement (or equivalent). The working bond strength is approximately 3800 lbs.

The hoist frame is secured to the entire track system and becomes one integrated unit. A typical 100' long track system with hoist is secured by a total of 20 pilings. This produces a combined foundation load strength of 37,800 lbs. This Foundation design provides a 37 times safety factor of the design load of the tram. This approach eliminates excavation of virgin soil and the pouring of concrete. The pilings also support the soil on the hillside and help prevent erosion.



### UPHILL VIEW OF TRACK SYSTEM

## GENERAL ARRANGEMENT DRAWING -CANTILEVER STYLE

## FINGER LAKES TRAM LLC

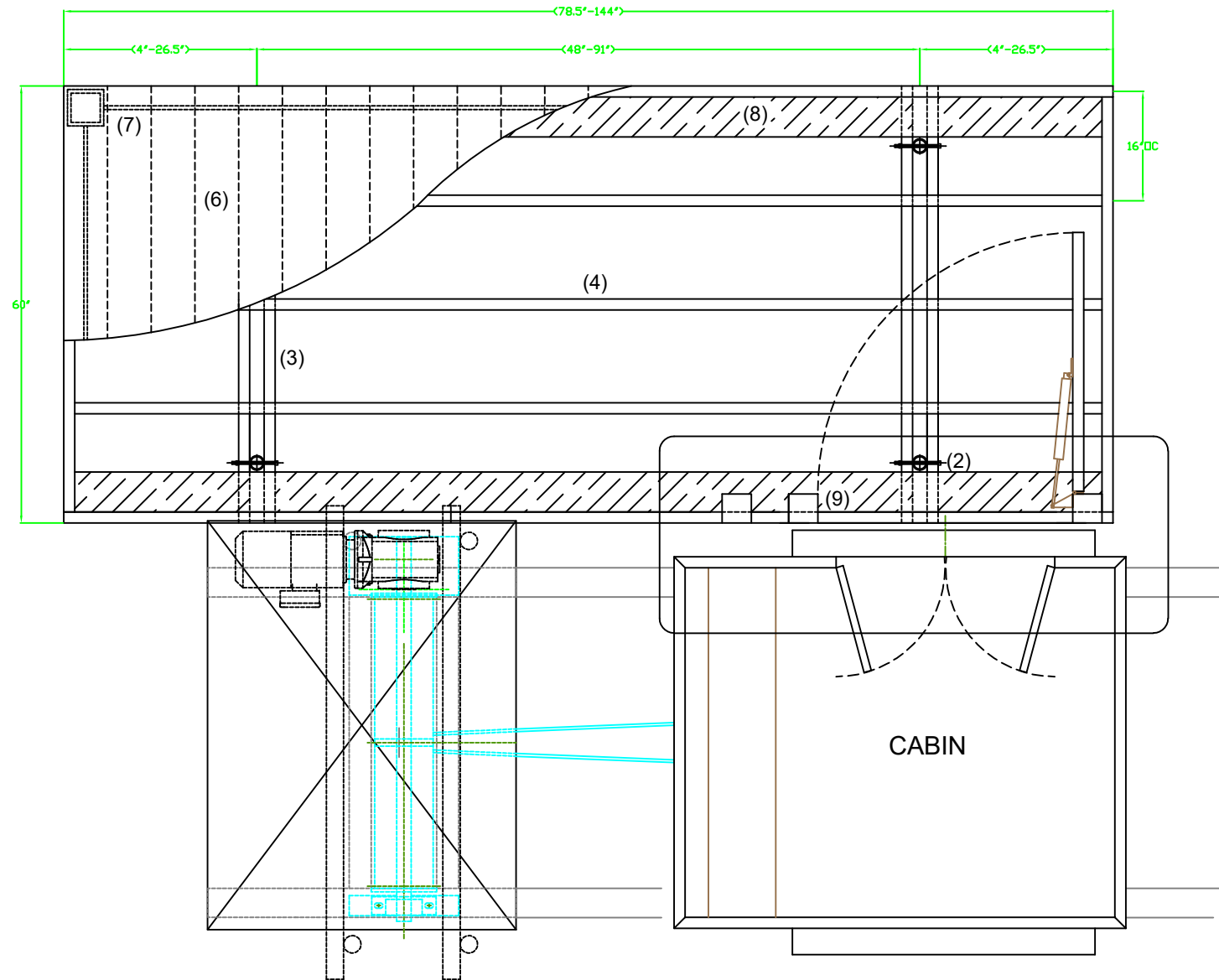
MACEDON, NY

SIZE	FSCM NO.	DWG NO.	REV
B		GA 001 Cantilever	A
SCALE	NONE	DATE	8/20/14
		SHEET	1 OF 1

UPPER STATION DECK  
PLAN VIEW

UPPER DECK

- (1) Upper Station Deck (Standard size - 12' x 5')
- (2) 6061-T6 Aluminum Construction pilings (4)
- (3) 2" x 8" Pressure treated headers (4) (3/8" bolt to pipe)
- (4) 2" x 6" Floor Joists (16" O.C. - 5)
- (5) Joist(s) will cantilever maximum of 2'-2.5"
- (6) 5 / 4 Pressure treated or composite decking boards
- (7) Railing installed on perimeter of deck @ 40" high
- (8) 2" x 6" Blocking for railing post mounts (2)
- (9) Entry Door: 4"x4" spacing - 39" O.C. (35" opening) & 9 1/8" O.C. (5 1/8" opening)



REVISIONS

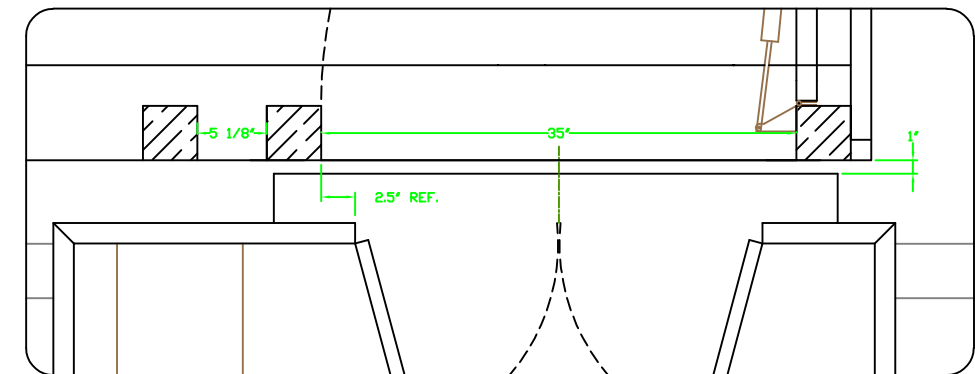
		DESCRIPTION	DATE	APPROVED

HOIST FRAME & UPPER DECK FOUNDATION

A pillar foundation design has been developed for the hoist station & upper station deck which eliminates the need for excavation and pouring of concrete. The design consists of (4) 2" dia. Sch. 40 Foundation pilings driven to a target depth of 42" or refusal. The pilings are made from 6061-T6 aluminum which has an ultimate stress of 45ksi and a yield strength of 40ksi. With a projection of 12" the horizontal load strength of each piling is greater than 1880 lbs. In shale and gravel type soil conditions the pilings provide sufficient bearing area on the soil to stay within acceptable design limits.

In cases where the Foundation pilings cannot be driven into the ground or the refusal depth is less than 30", an alternate anchoring method will be employed. A 2' length of #4 (0.5" dia.) rebar is cemented into a 1" diameter drilled hole 12" deep. The piling is then inserted over the rebar and cemented in place using CGM Super Por-Rok Exterior Anchoring Cement (or equivalent). The working bond strength is approximately 3800 lbs.

The deck is supported by (4) 2" dia Sch. 40 Foundation pilings driven to a target depth of 42" or refusal. Headers are then placed on the pilings using 2"x 8" pressure treated joined together by Exterior 3/8-in x 8" duplex coated carriage bolts (2x more corrosion resistant than galvanized bolts). Joists are framed together using 2"x 6" pressure treated with deck boards (composite or pressure treated) installed last. Hand railing is installed with a minimum height of 40".



STATION DOOR DETAIL

GENERAL ARRANGEMENT UPPER  
STATION

*FINGER LAKES TRAM LLC*

MACEDON, NY

SIZE B	FSCM NO.	DWG NO. GA 003 Upper Station Deck	REV A
SCALE NONE	DATE 11/30/20	SHEET 1 OF 1	