

# Field Investigation of Downdrag on Concrete Piles in Sandy Soil



GRIP 2024

Project Manager  
*Larry Jones*

Principal Investigator  
*Gray Mullins*

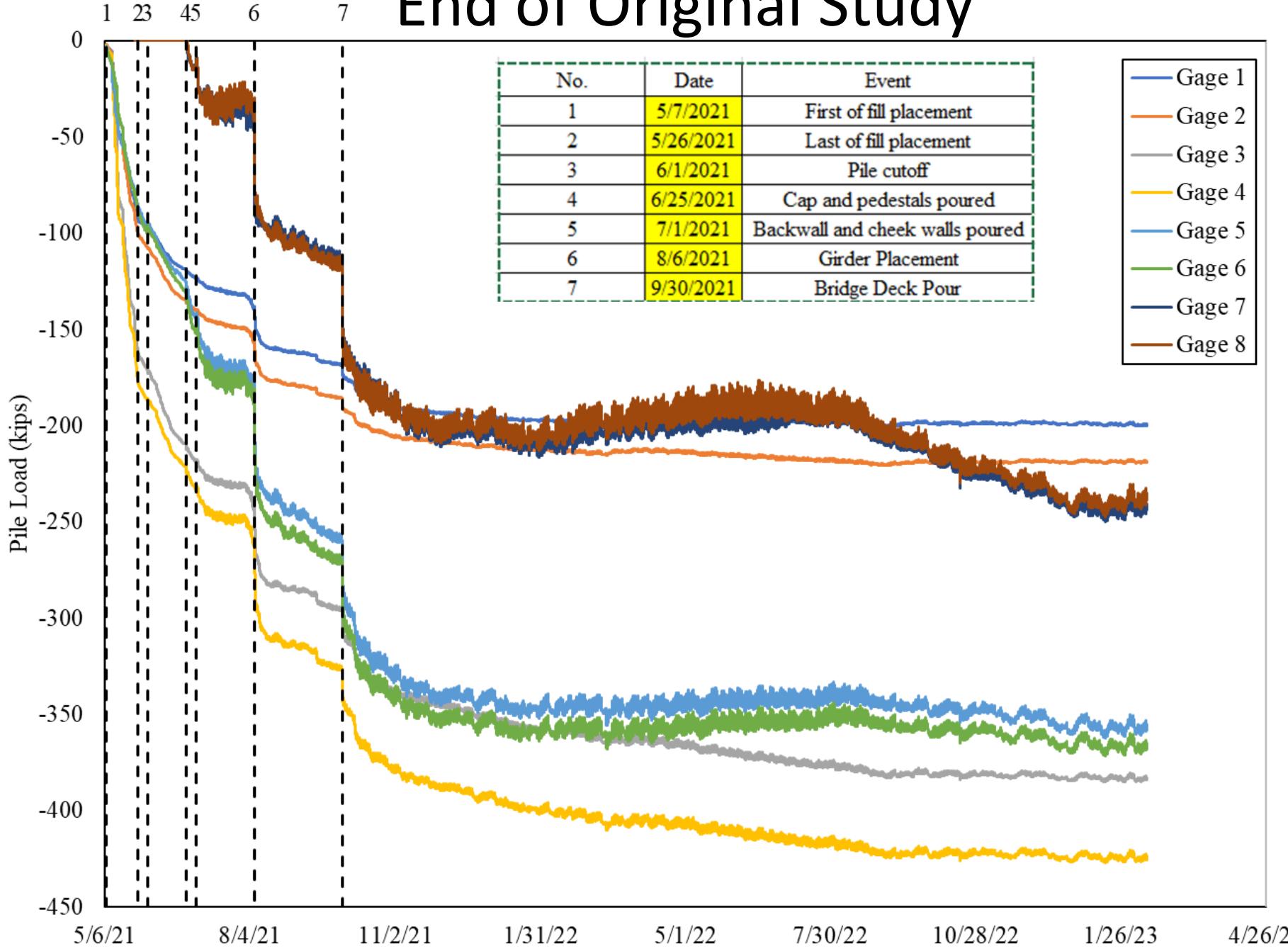
Graduate Researchers  
*K. Kupselaitis and T. Mee*



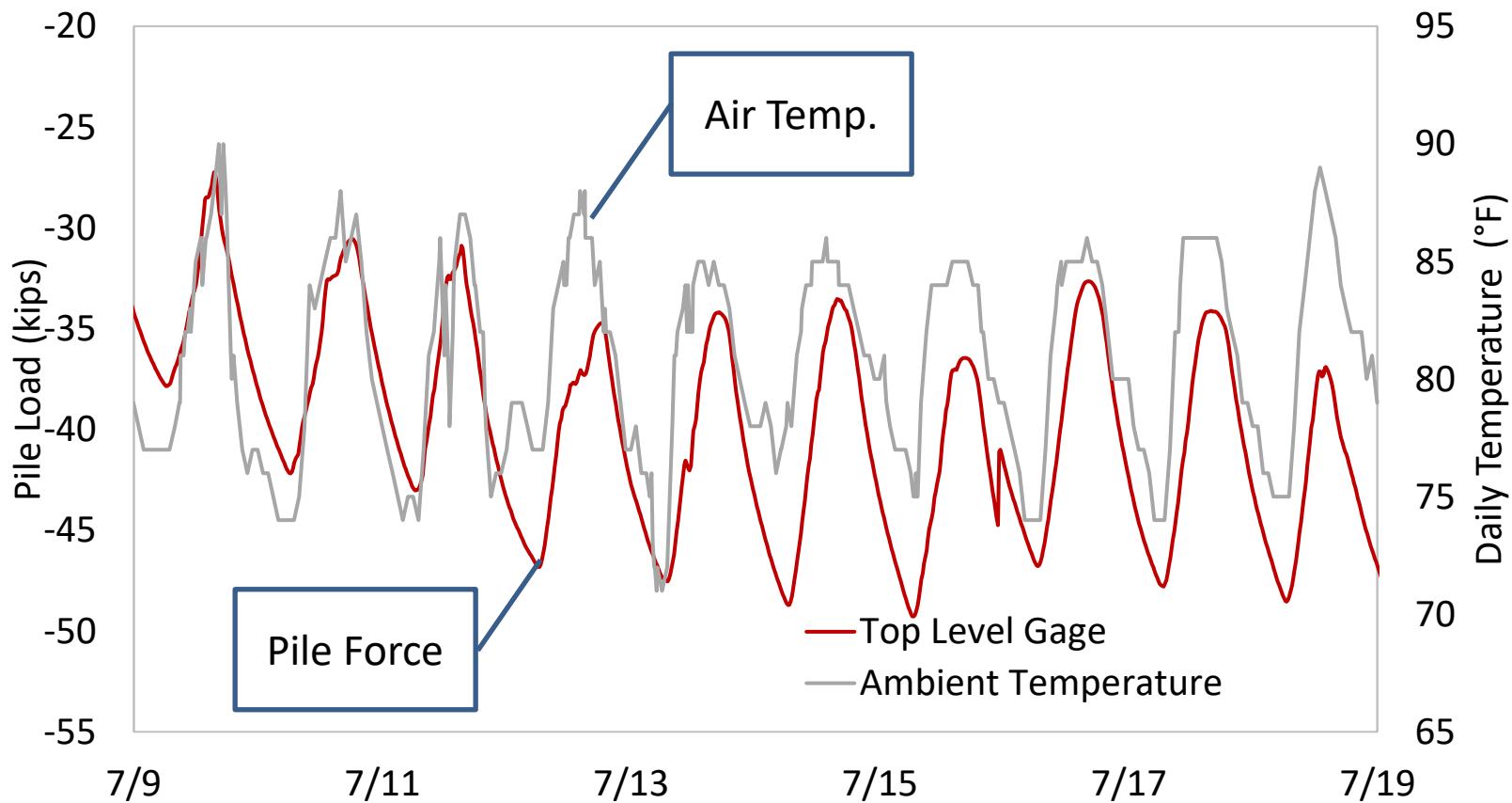
**USF** UNIVERSITY OF  
SOUTH FLORIDA.

Civil & Environmental Engineering

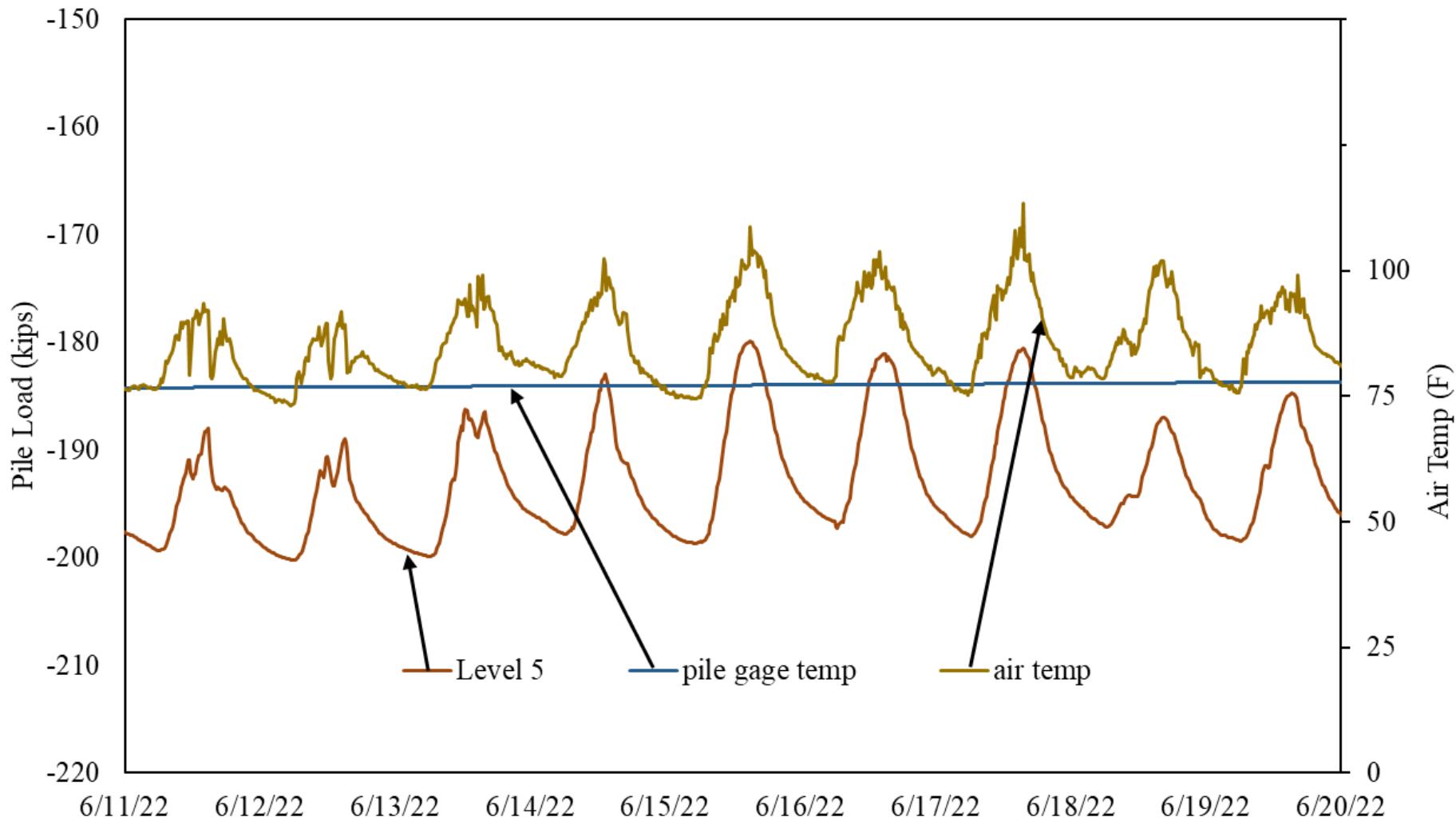
# End of Original Study



# Sandridge Road

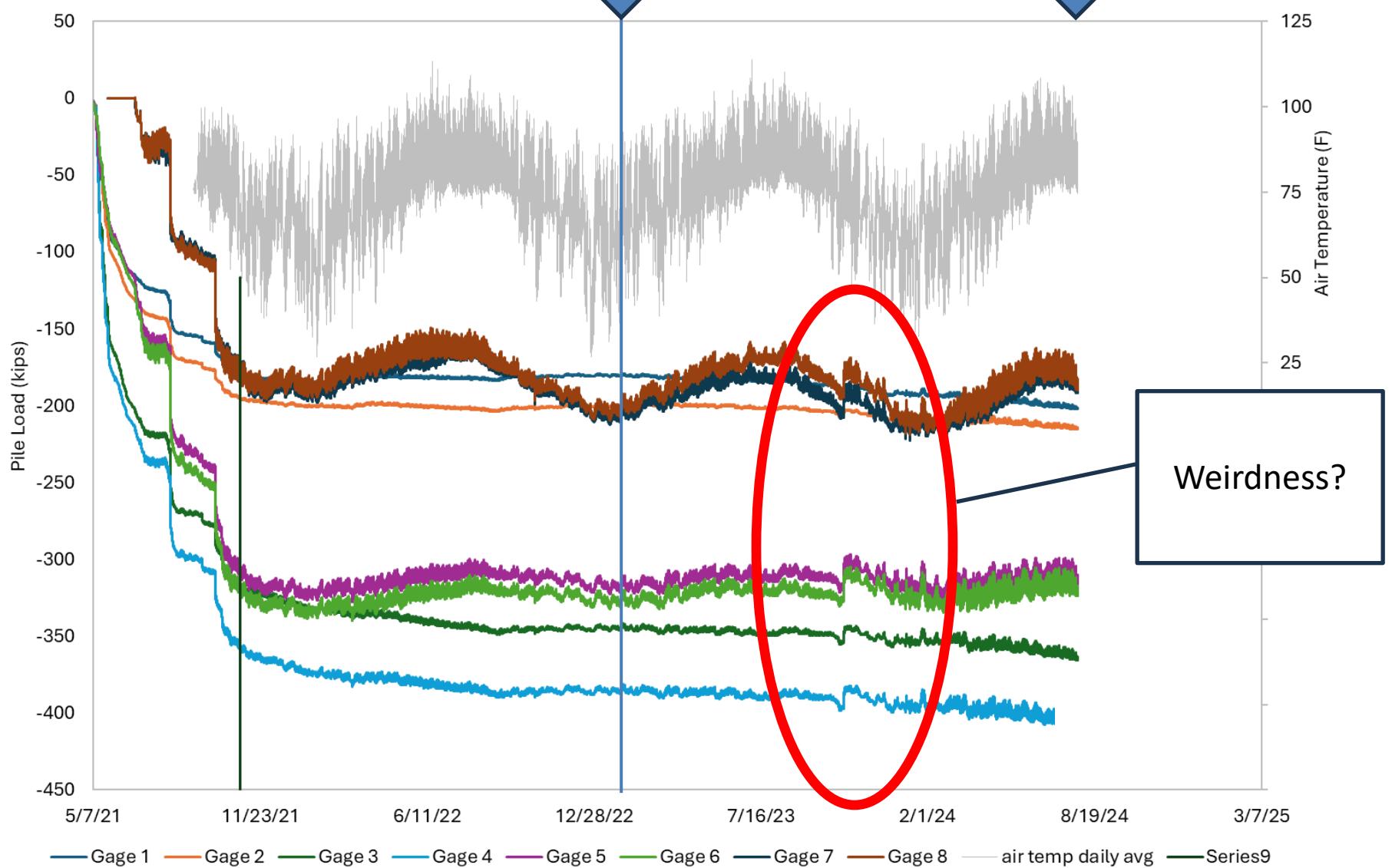


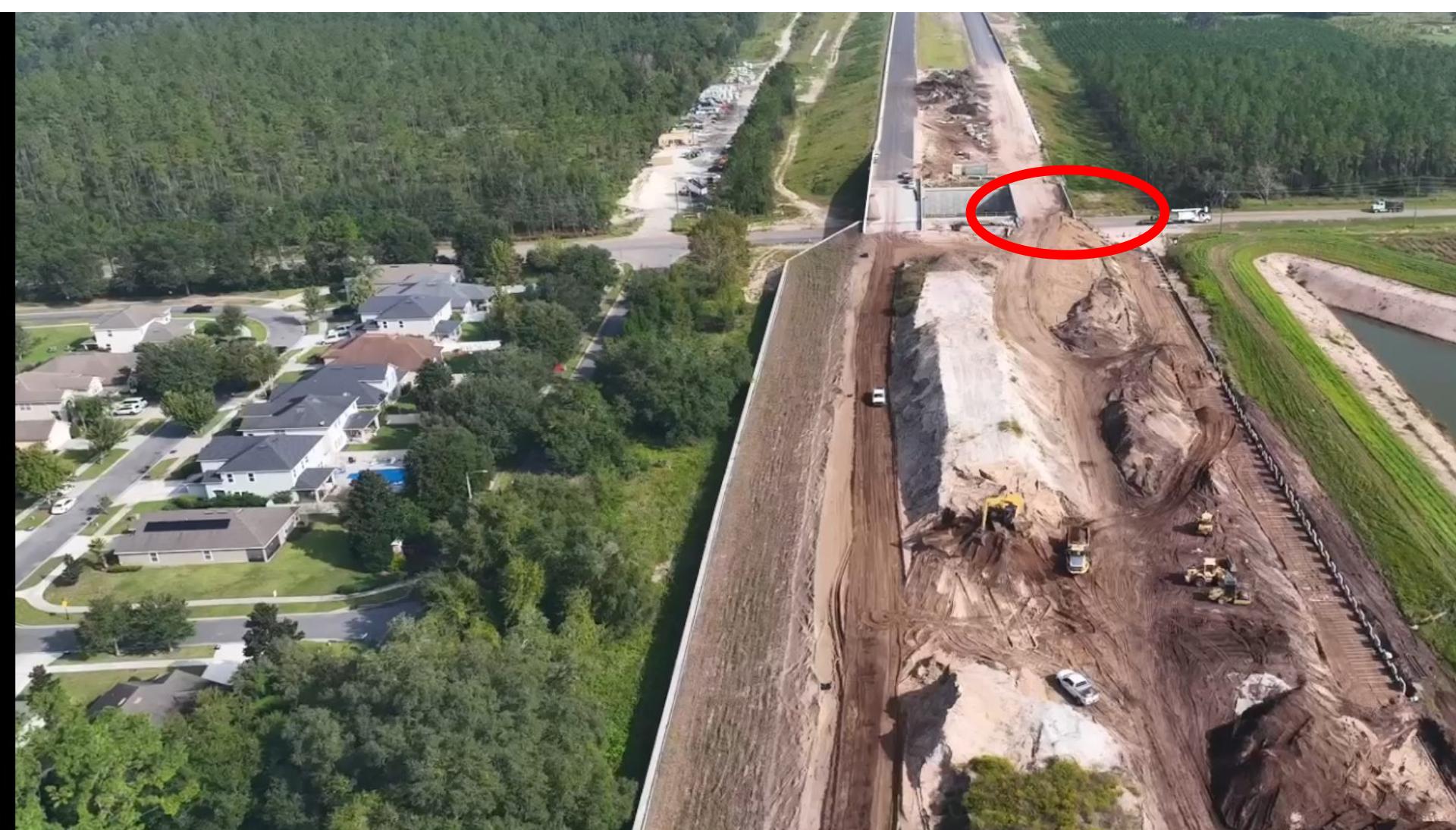
# Not caused by change in pile temp



# Then

# Now

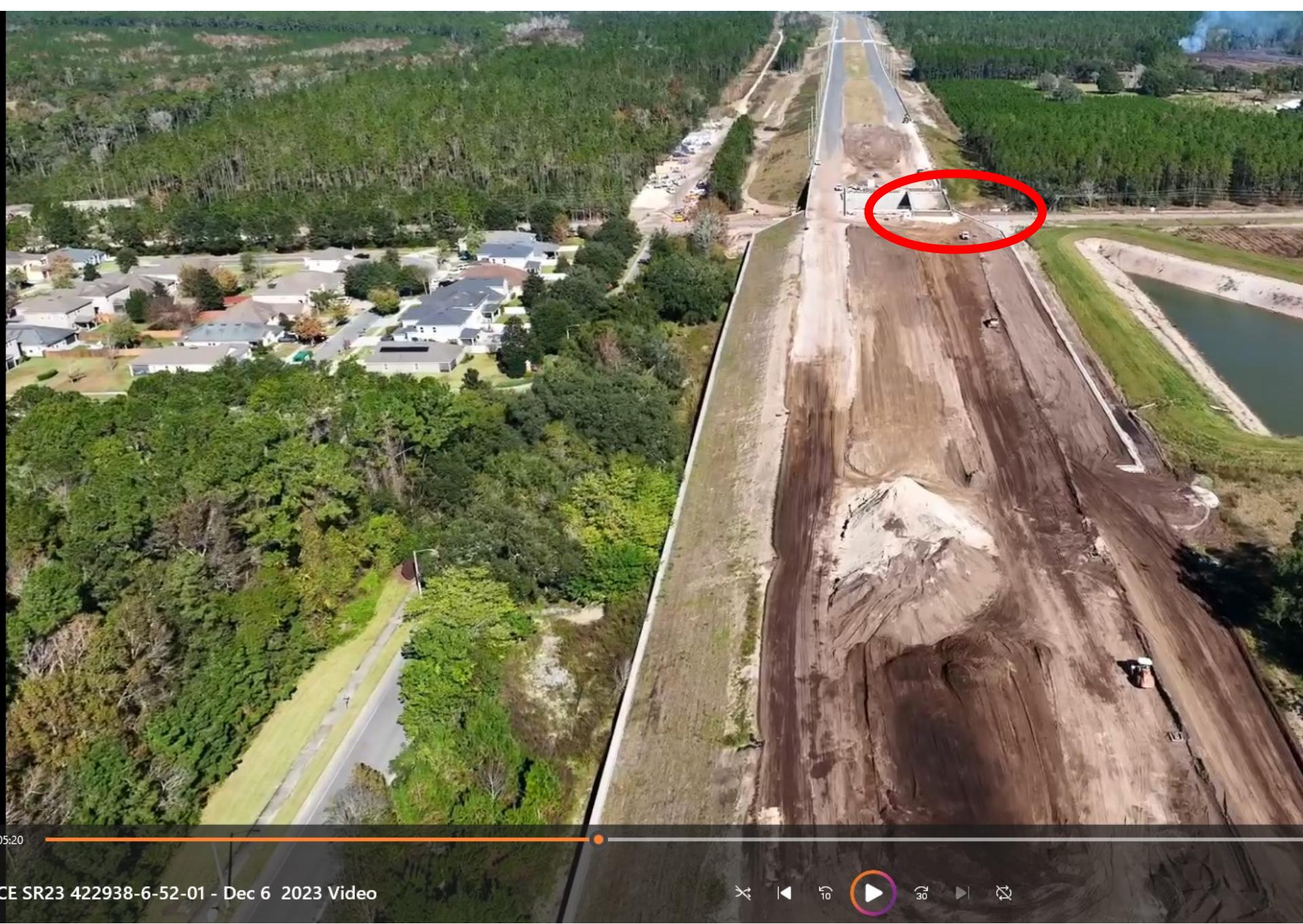




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FCE FPN- 422938-6-52-01 - October 4 2023



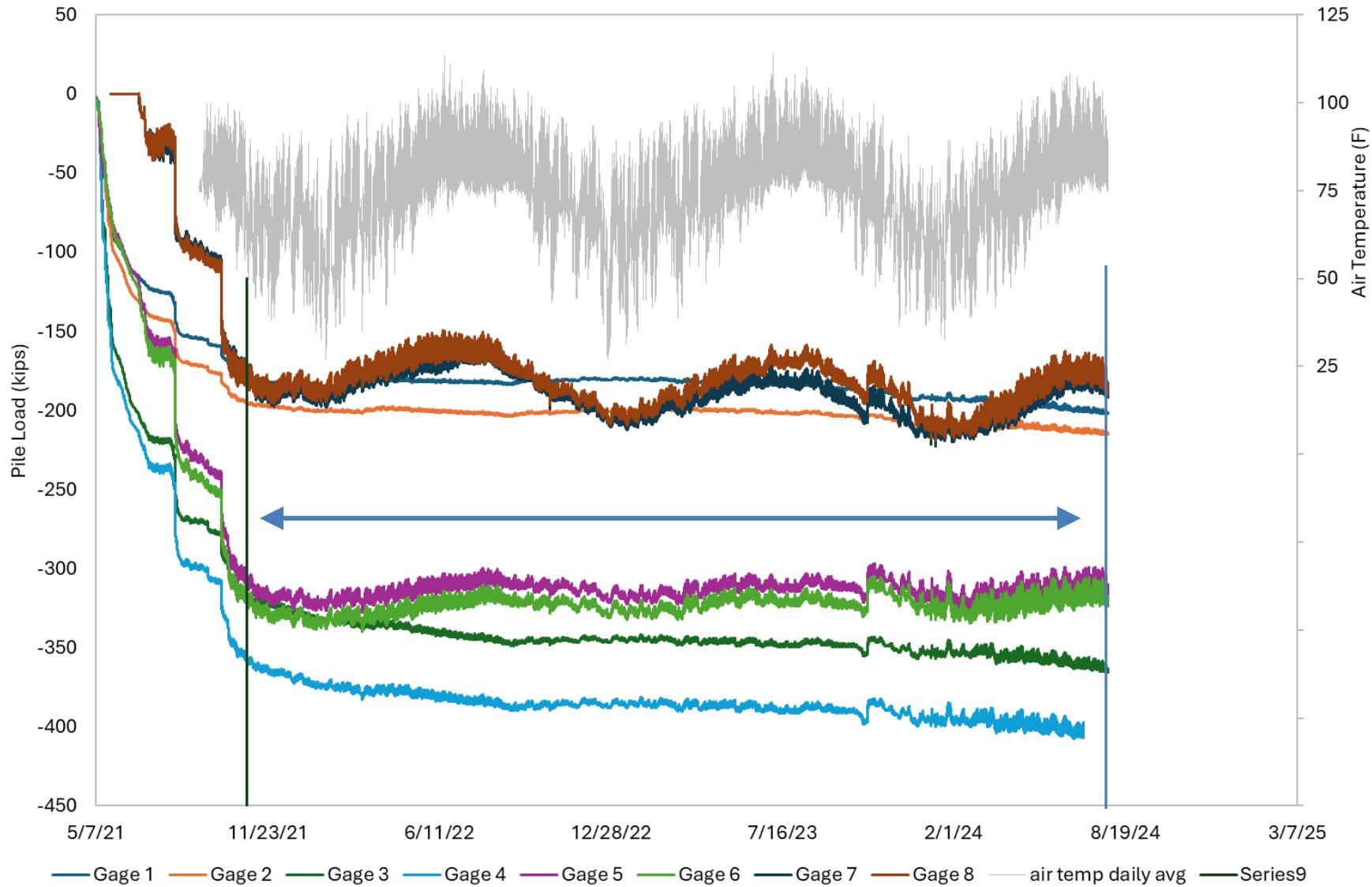


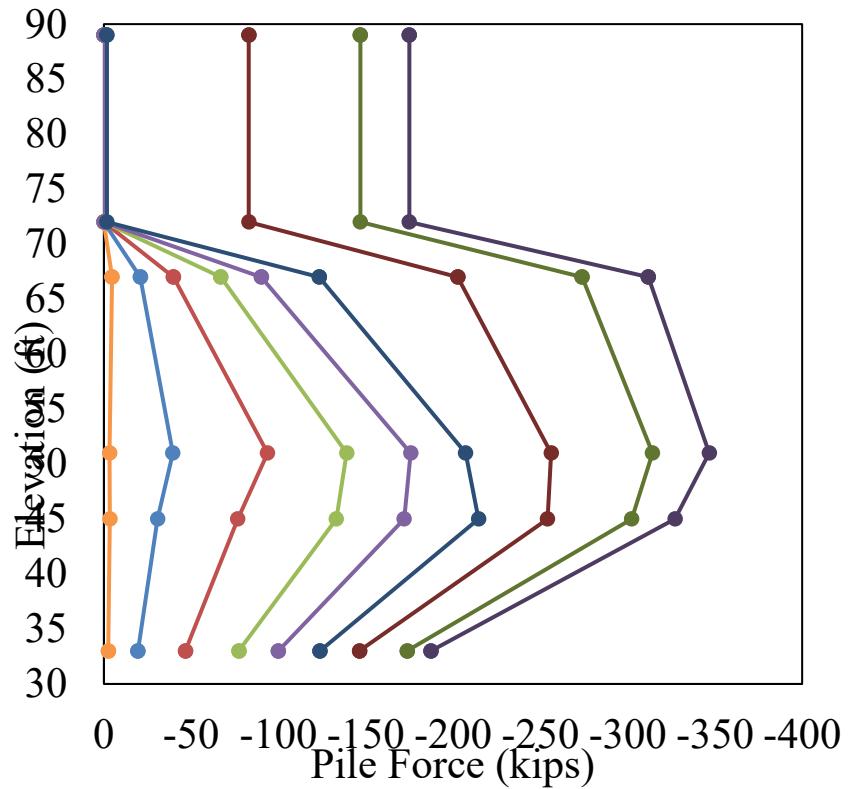
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CE SR23 422938-6-52-01 - Dec 6 2023 Video



# Seasonal Effect on Pile Load

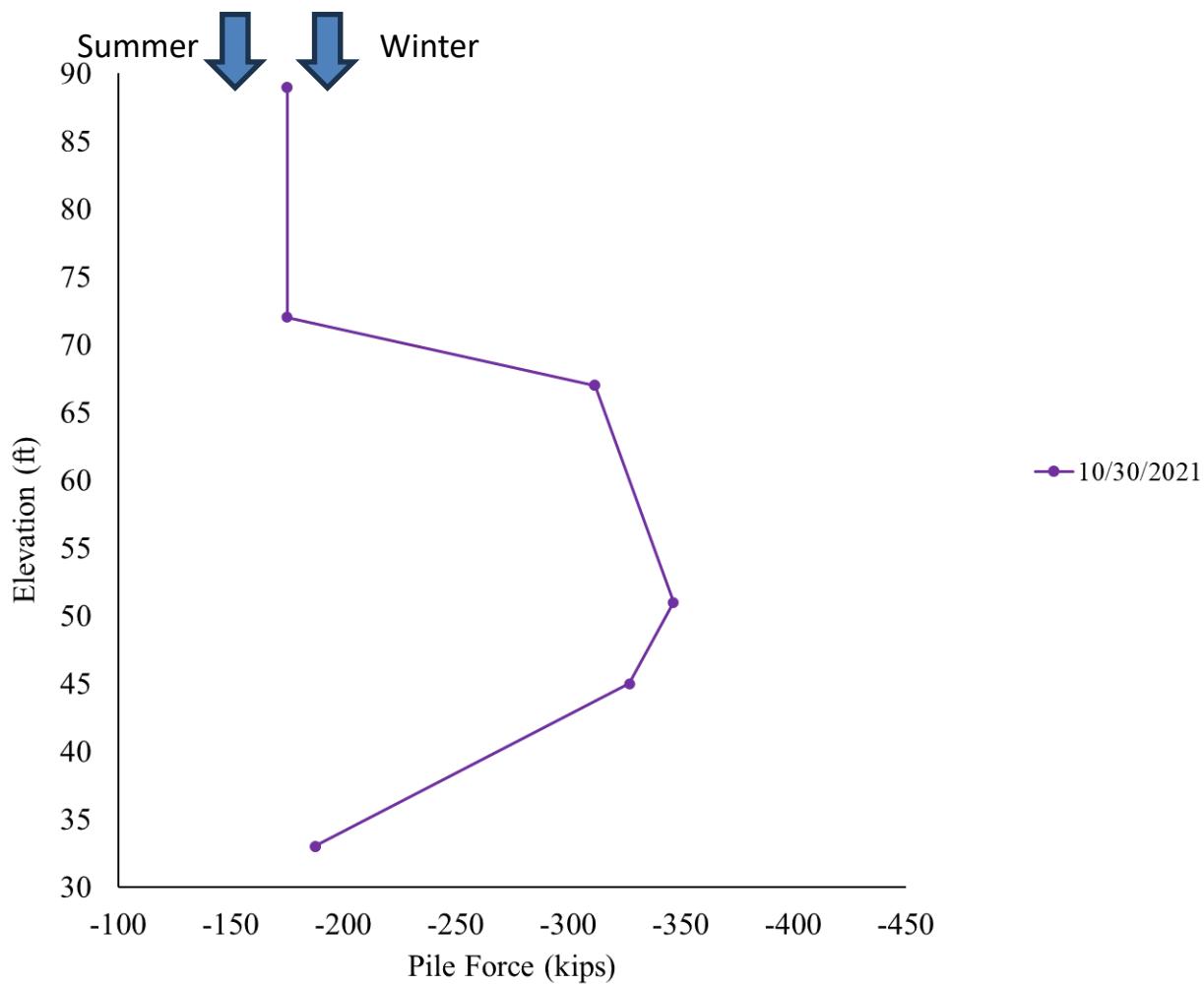


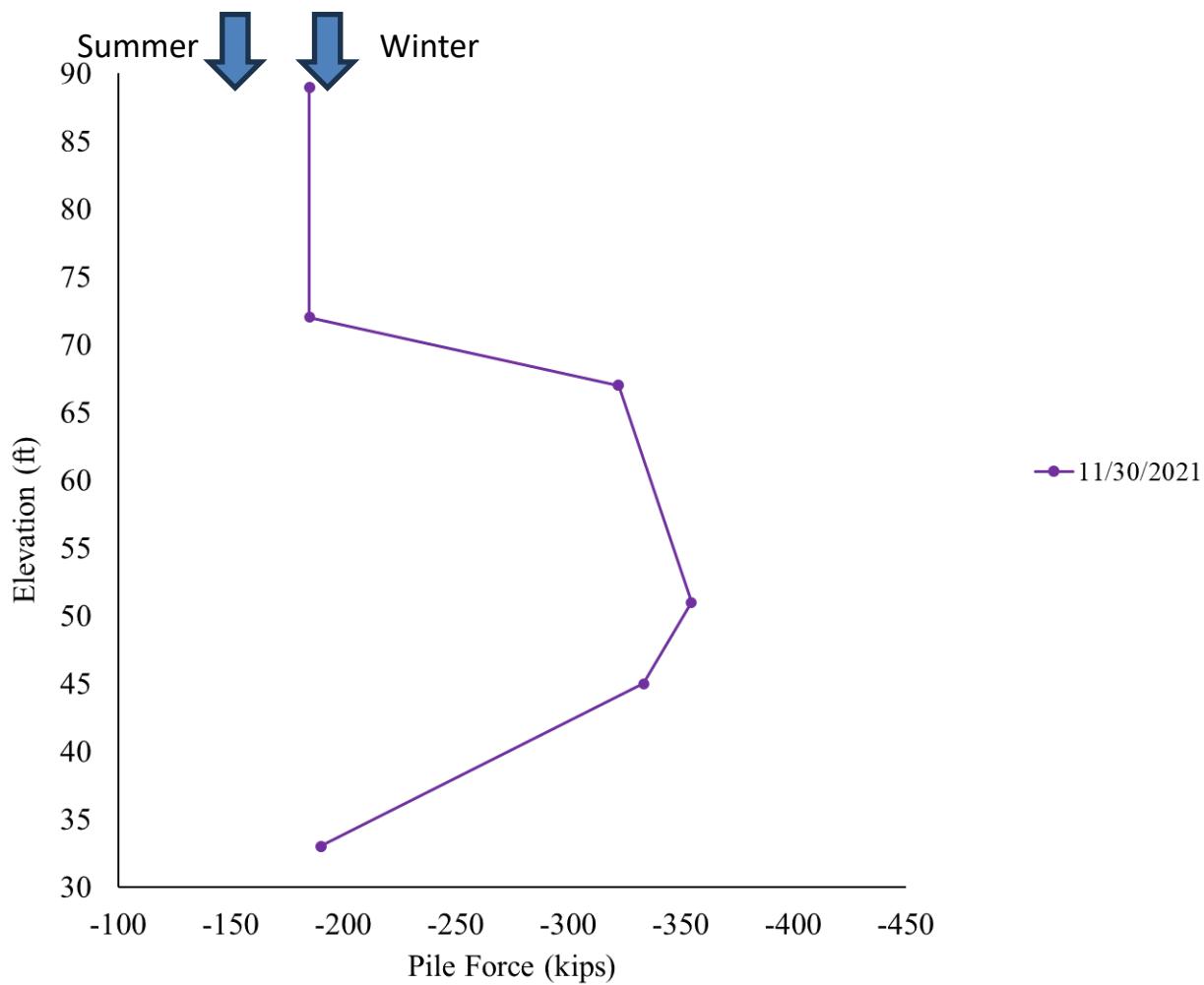


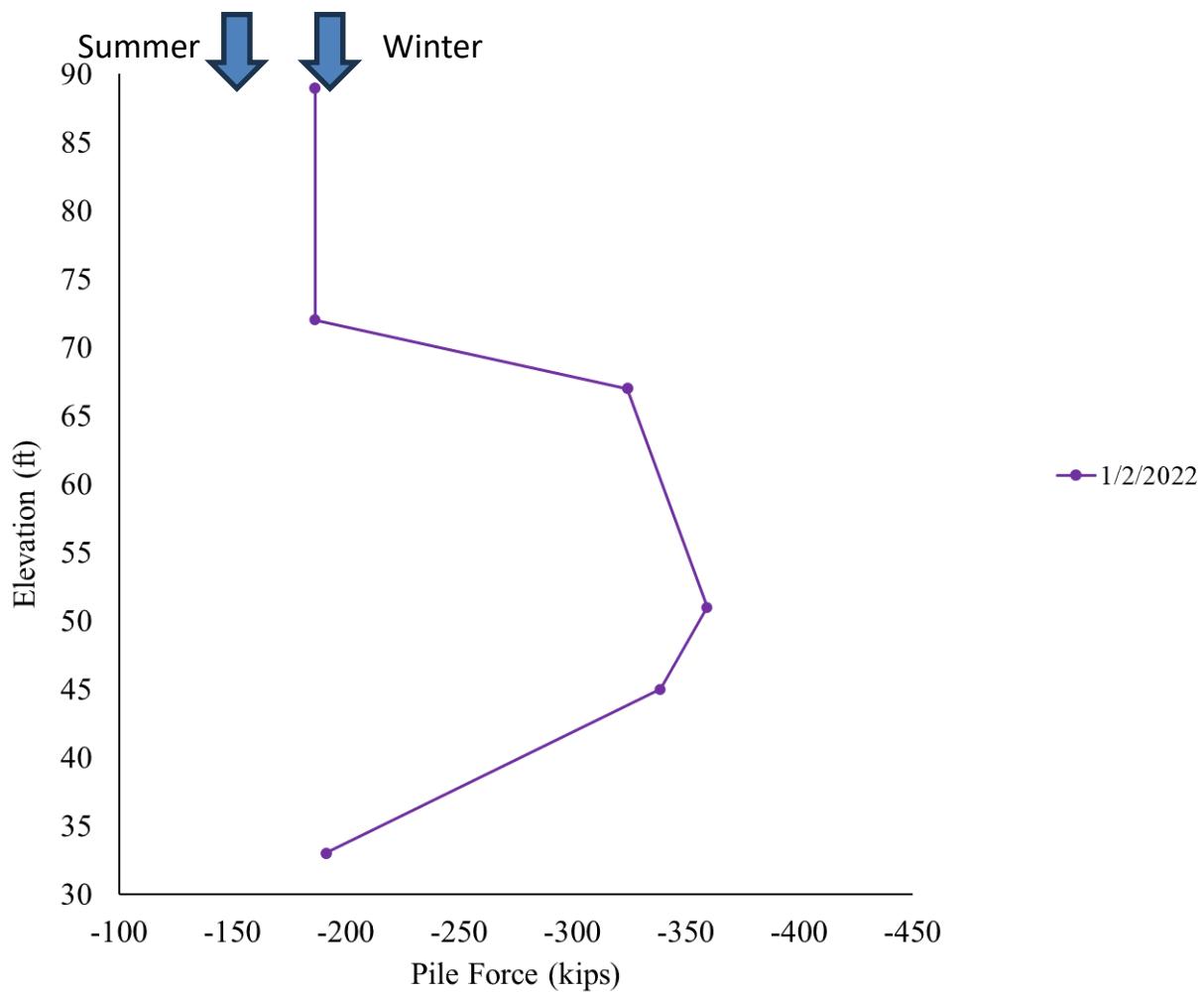
- 0% Fill (5/7/21)
- 25% Fill (5/11/21)
- 50% Fill (5/14/21)
- 75% Fill (5/21/21)
- 100% Initial Fill (6/1/21)
- Cap/Pedestal (6/25/21)
- Girders (8/7/21)
- Deck (9/30/21)
- Barriers (10/30/21)

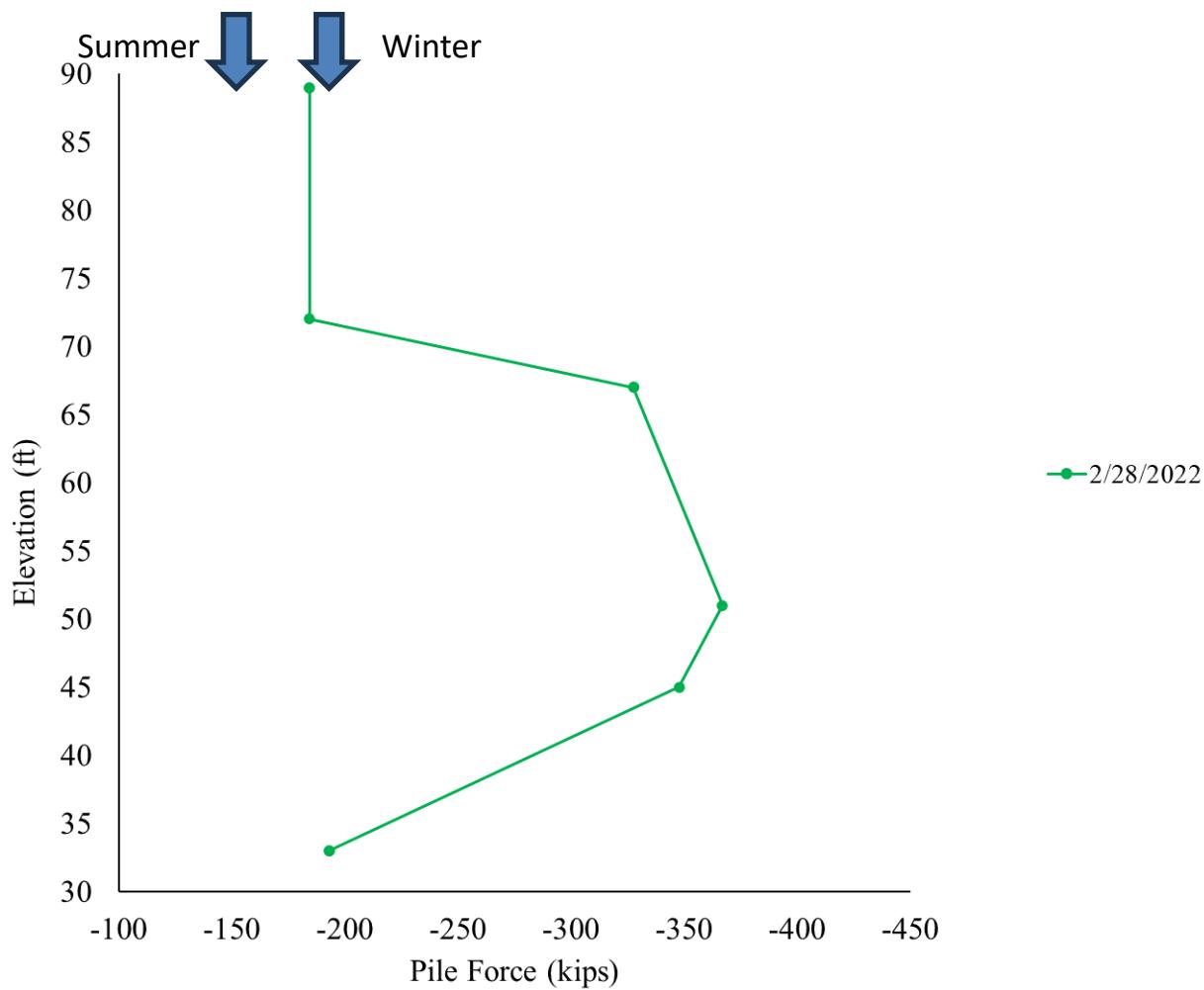


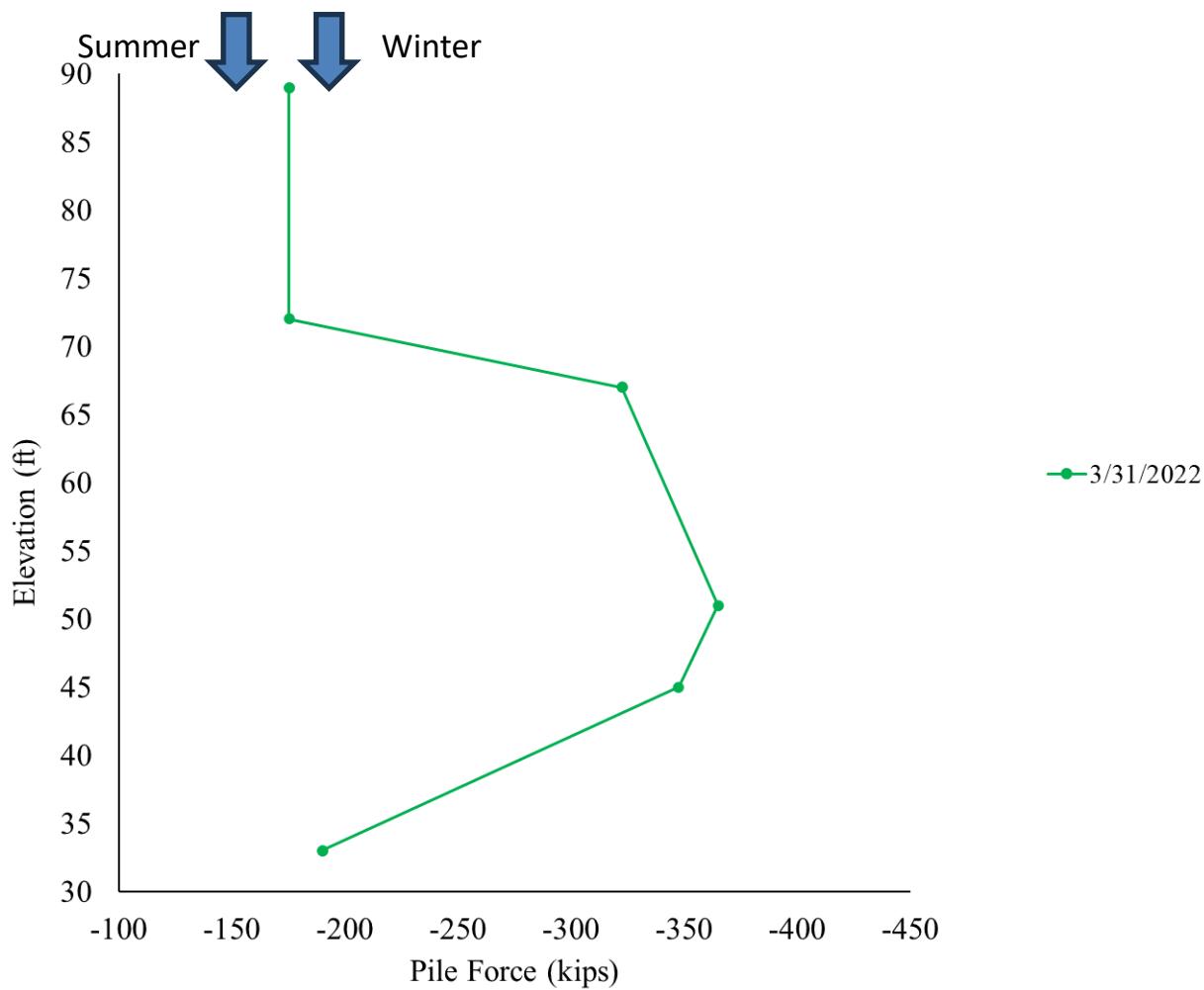
# **SEASONAL EFFECTS**

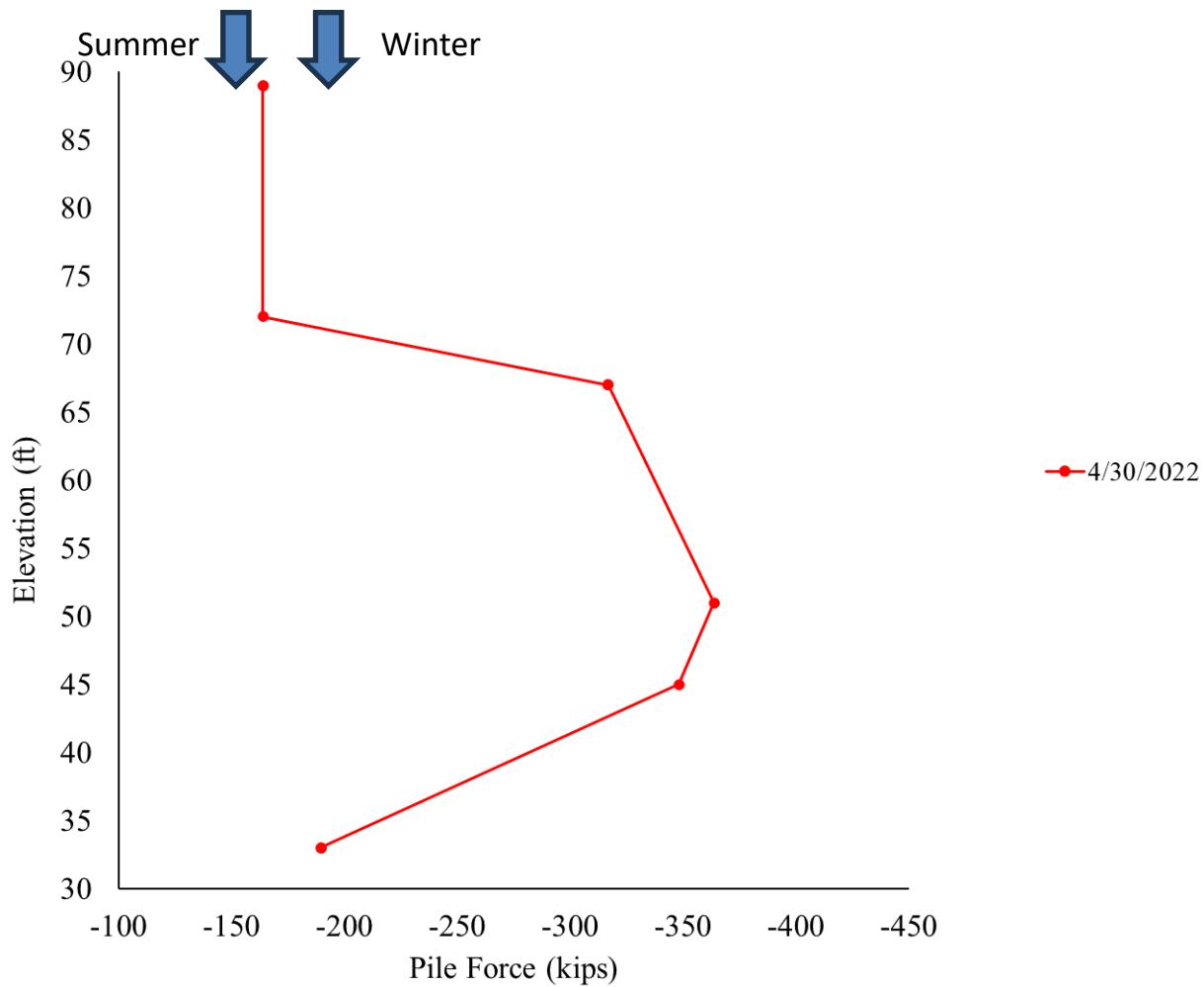


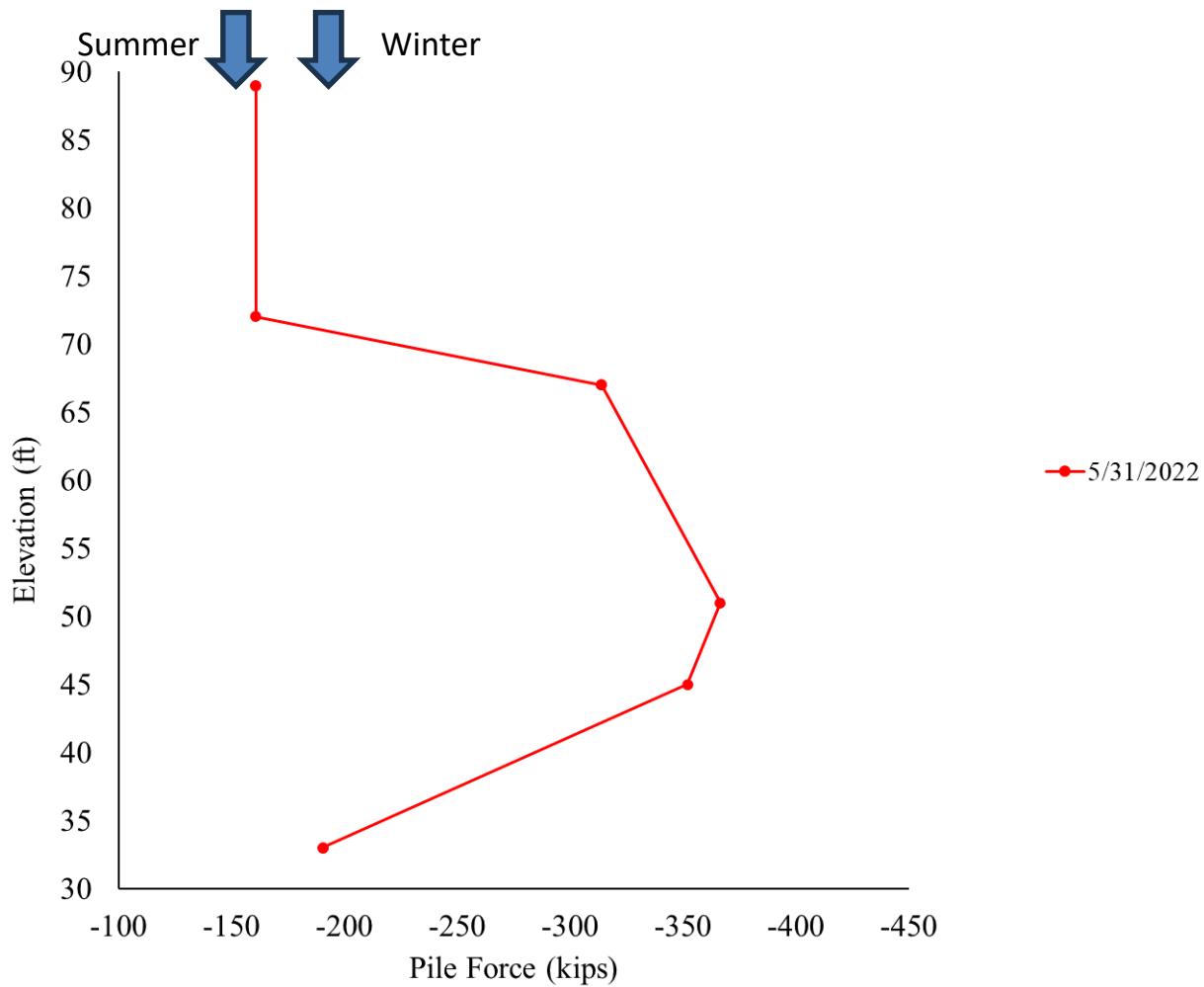


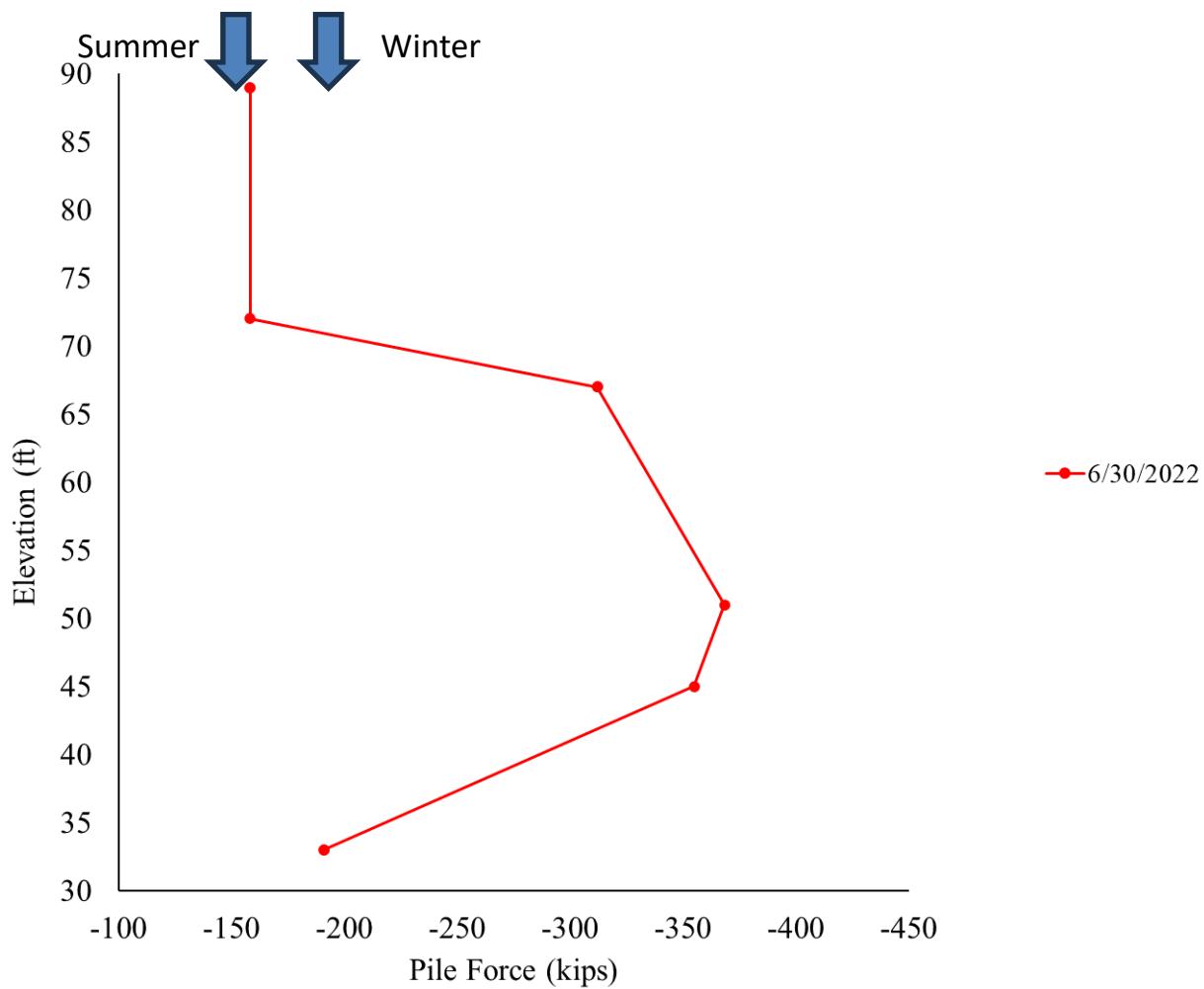


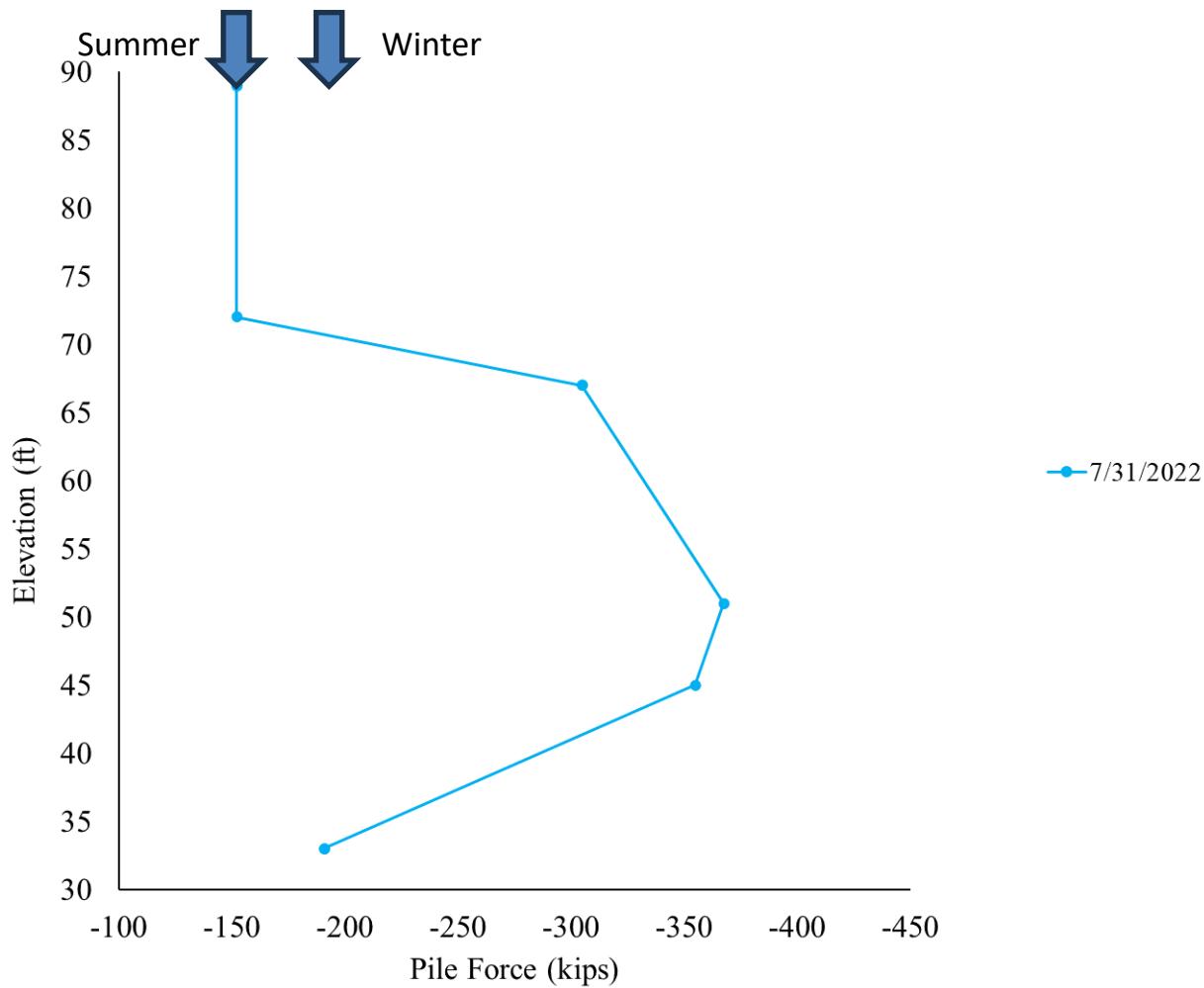


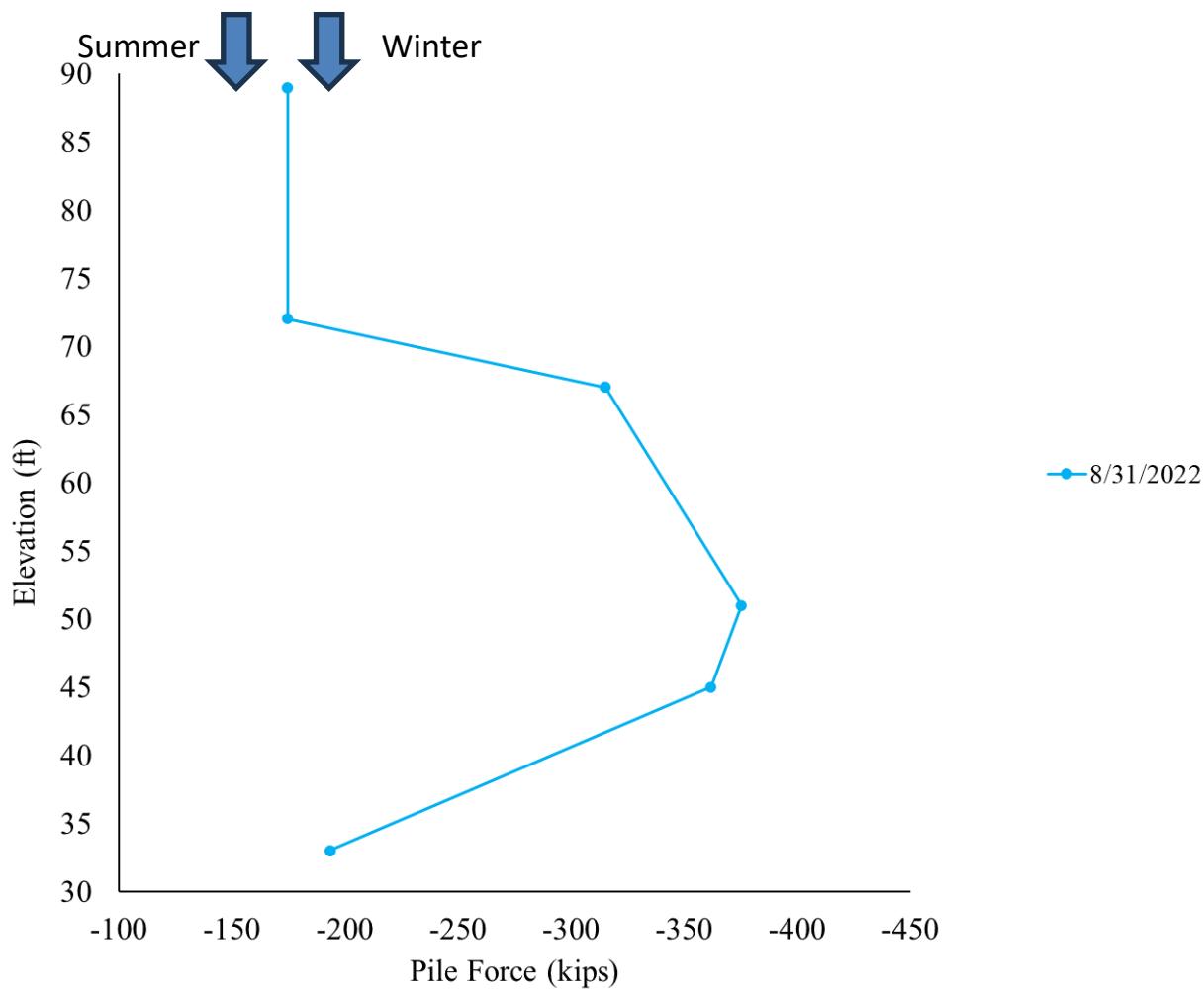


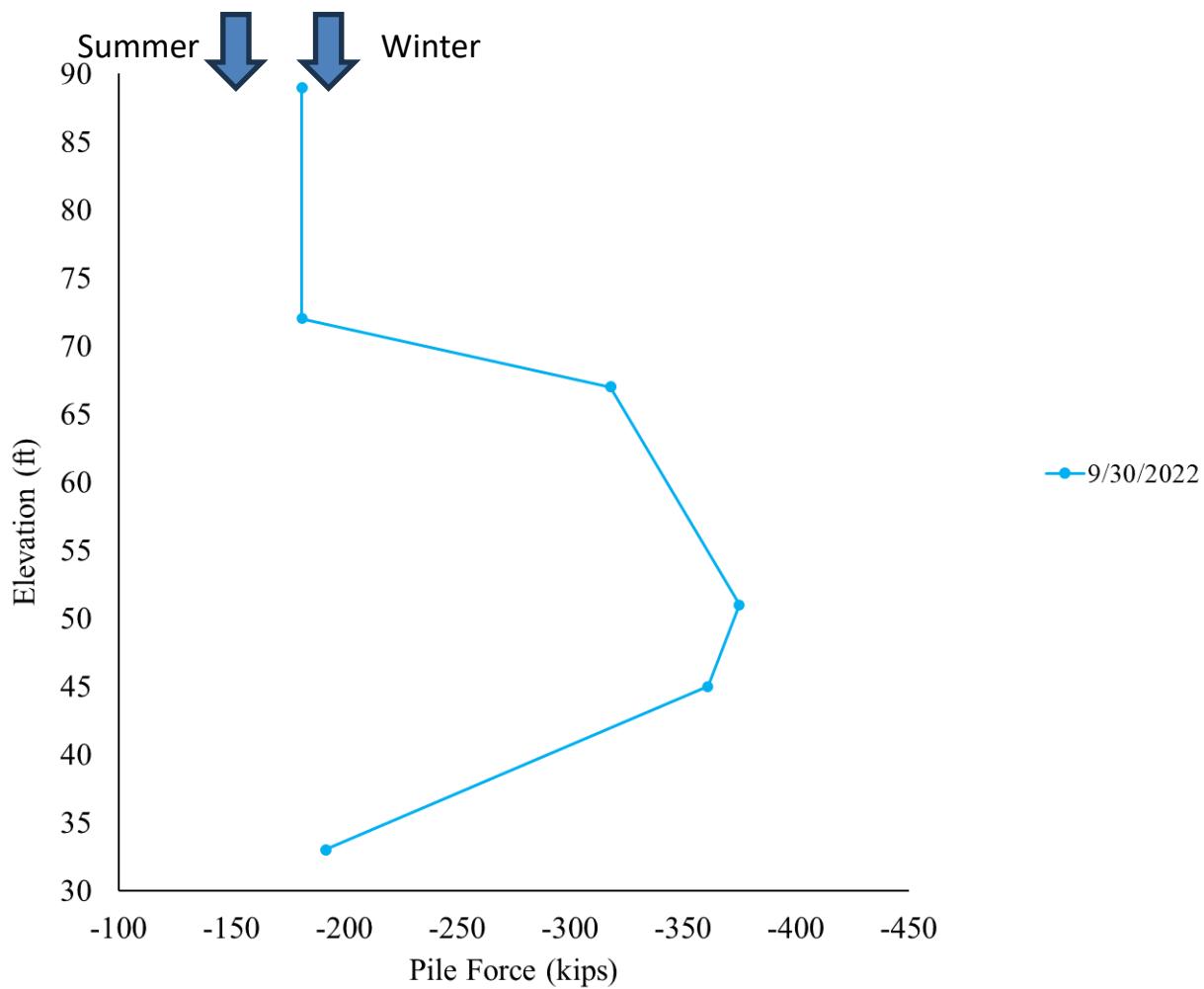


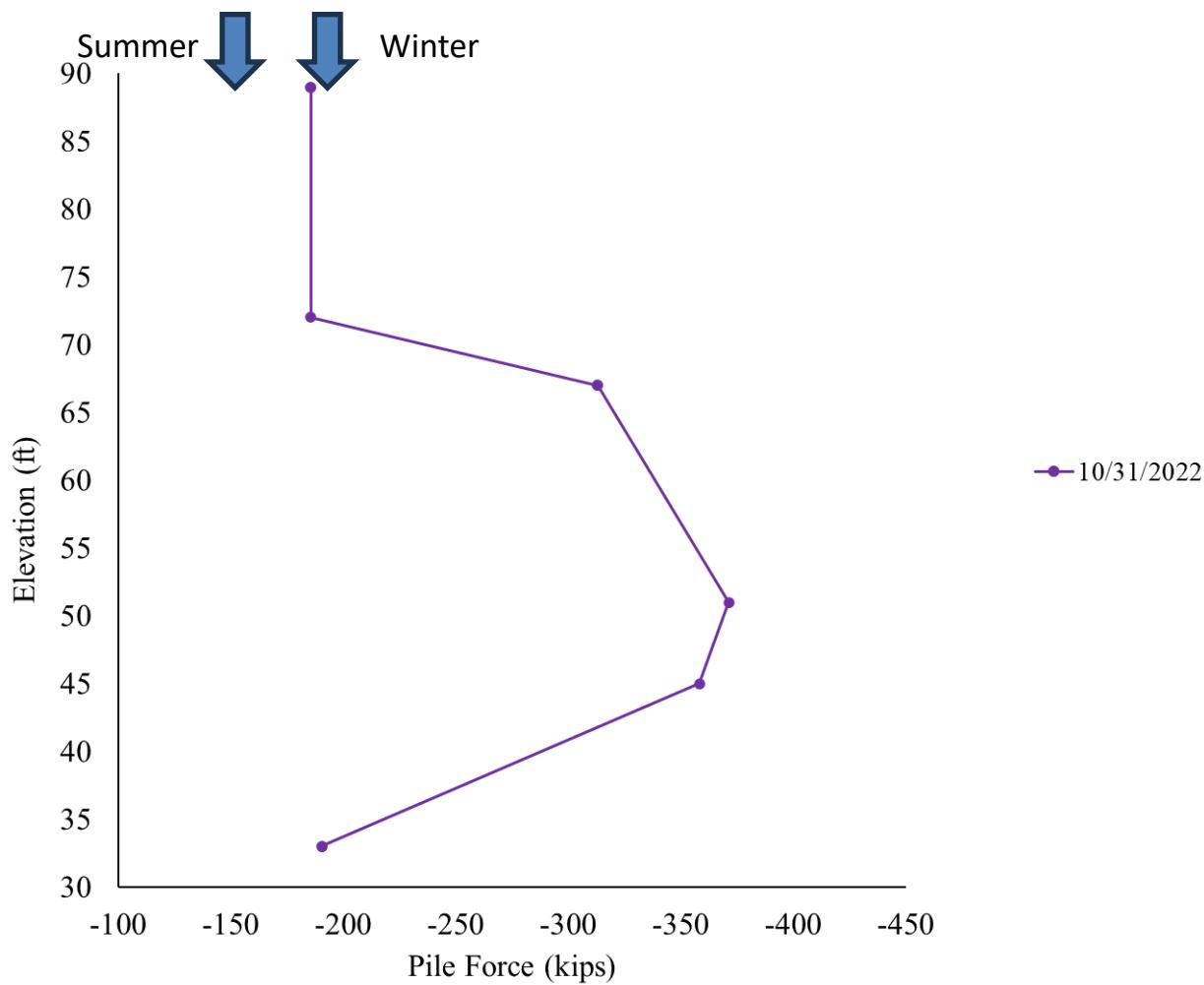


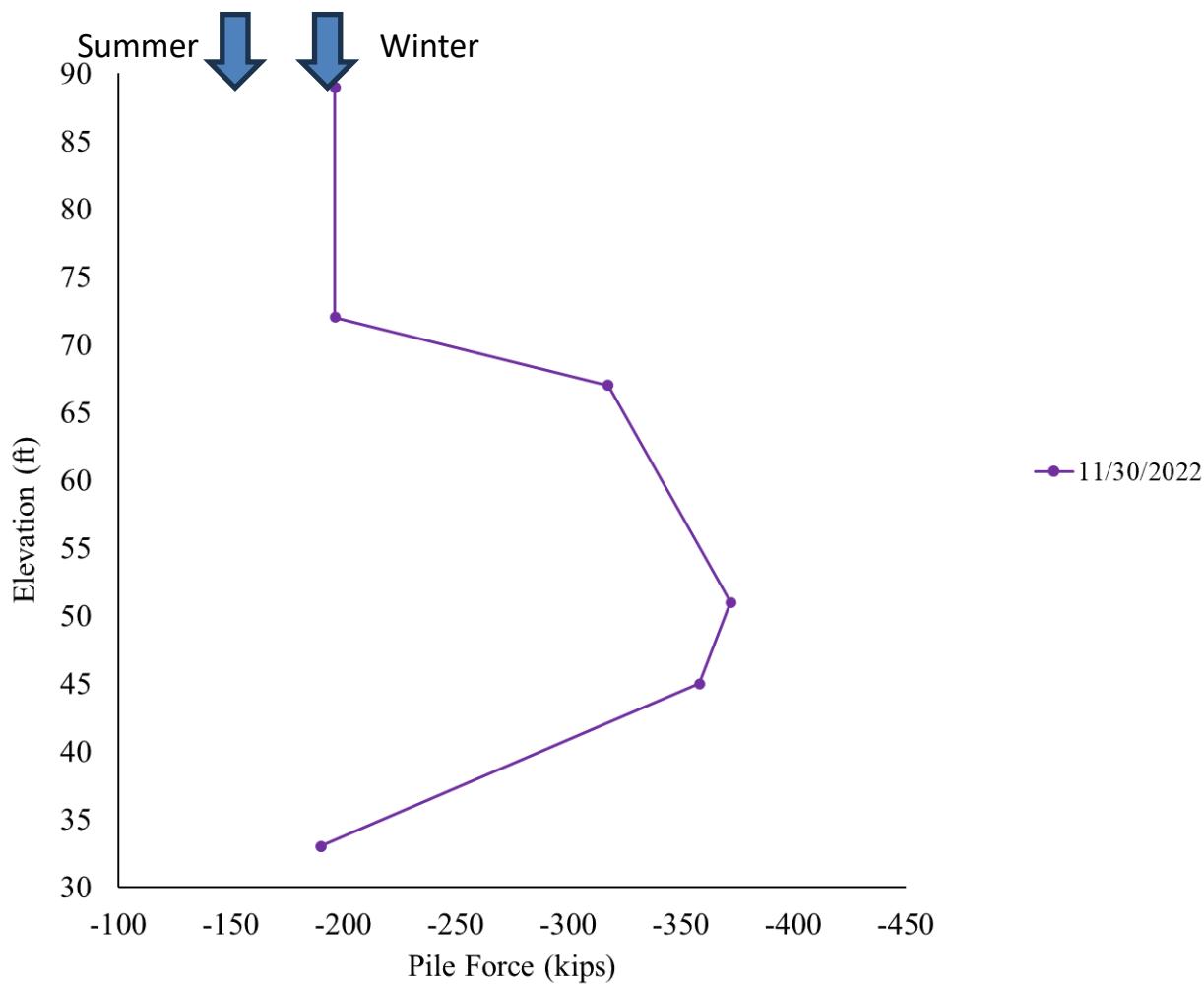


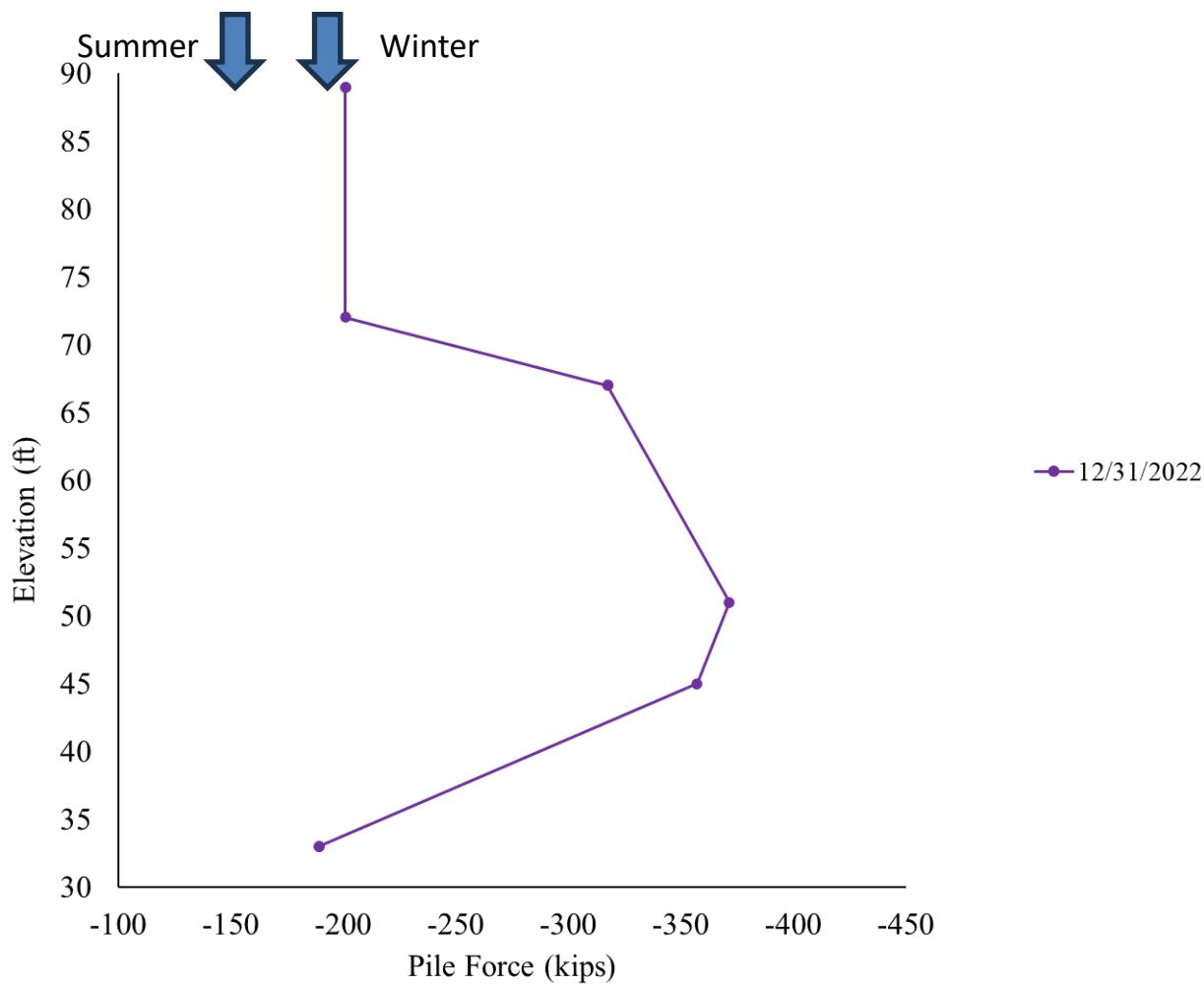


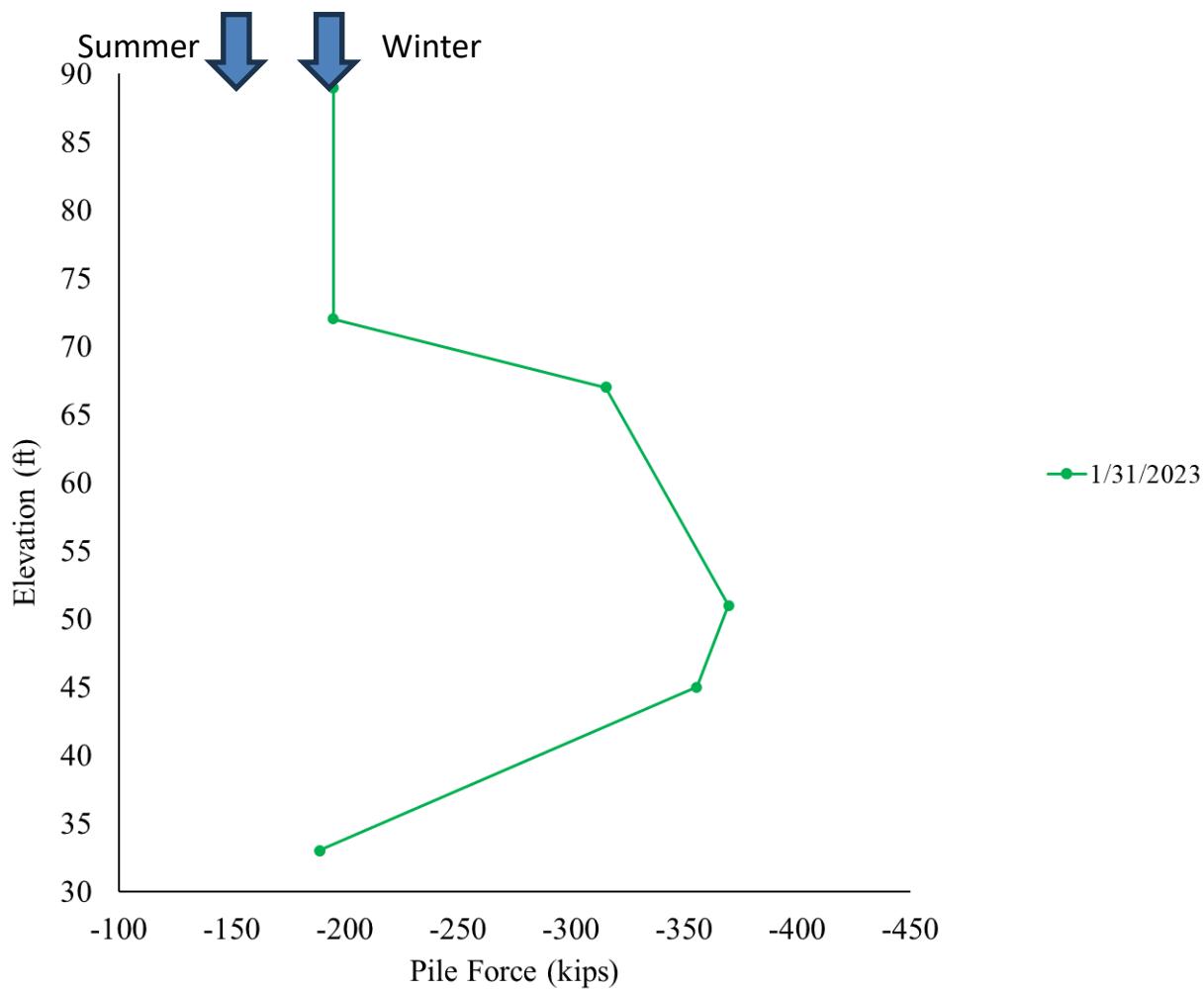


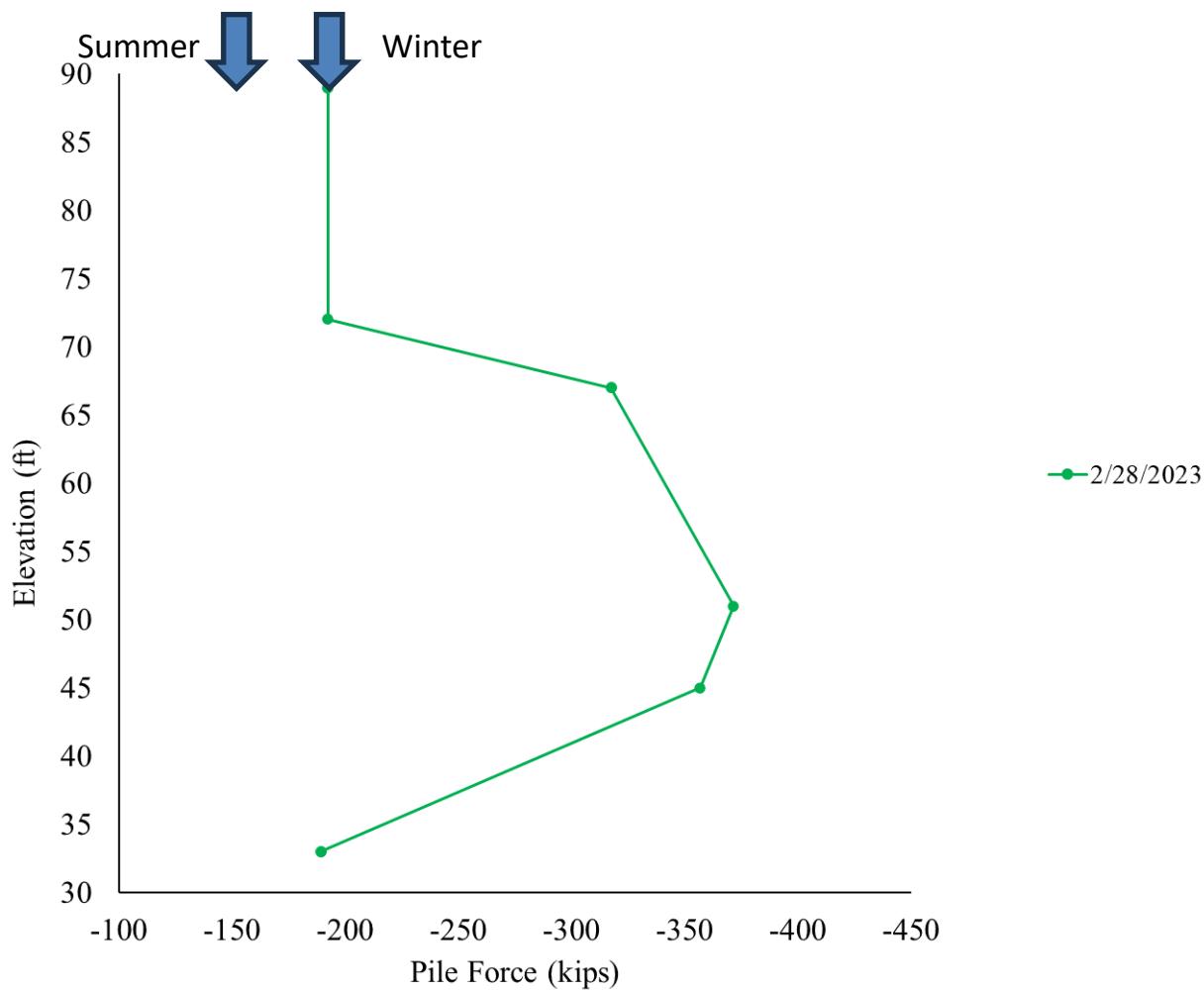


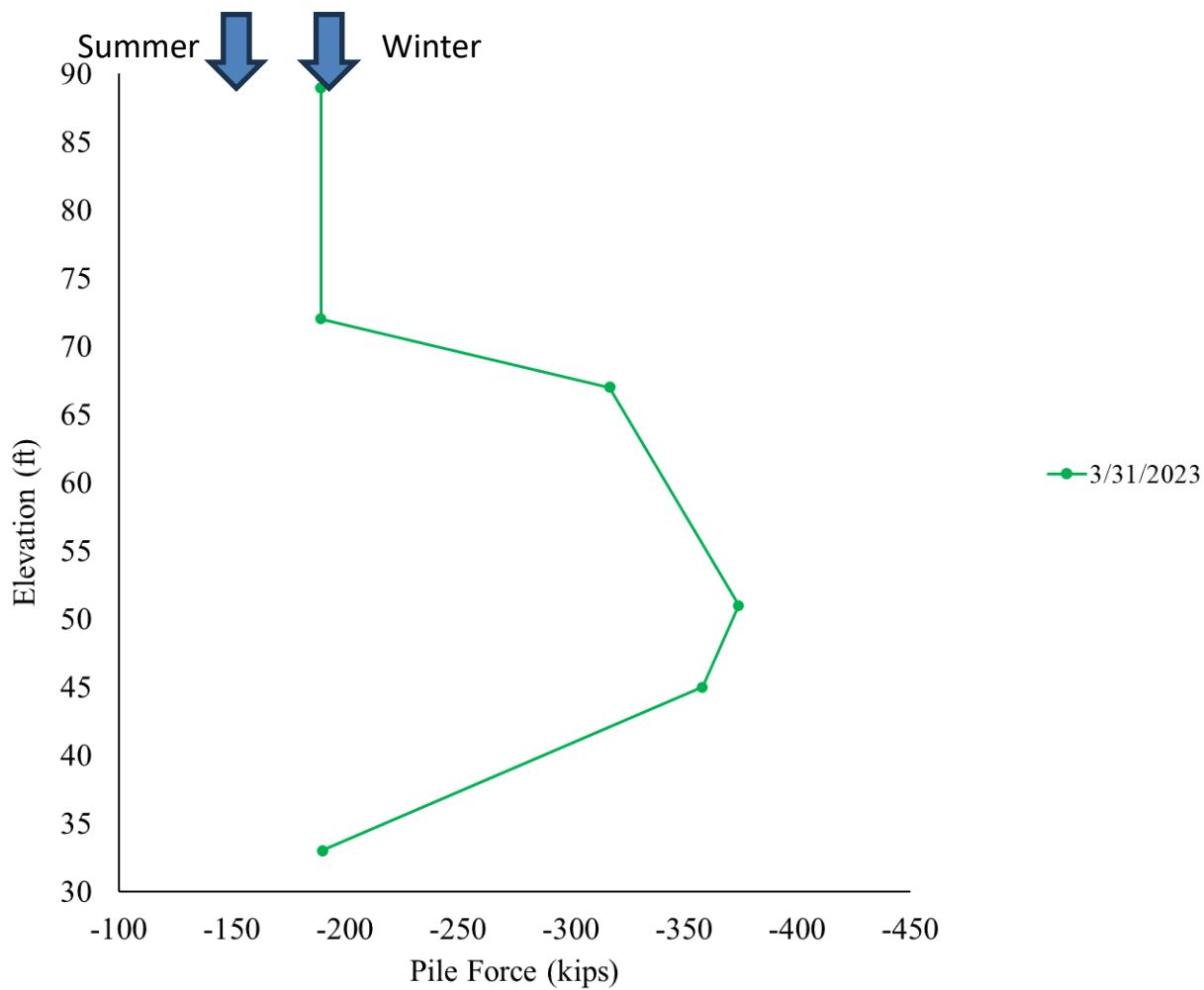


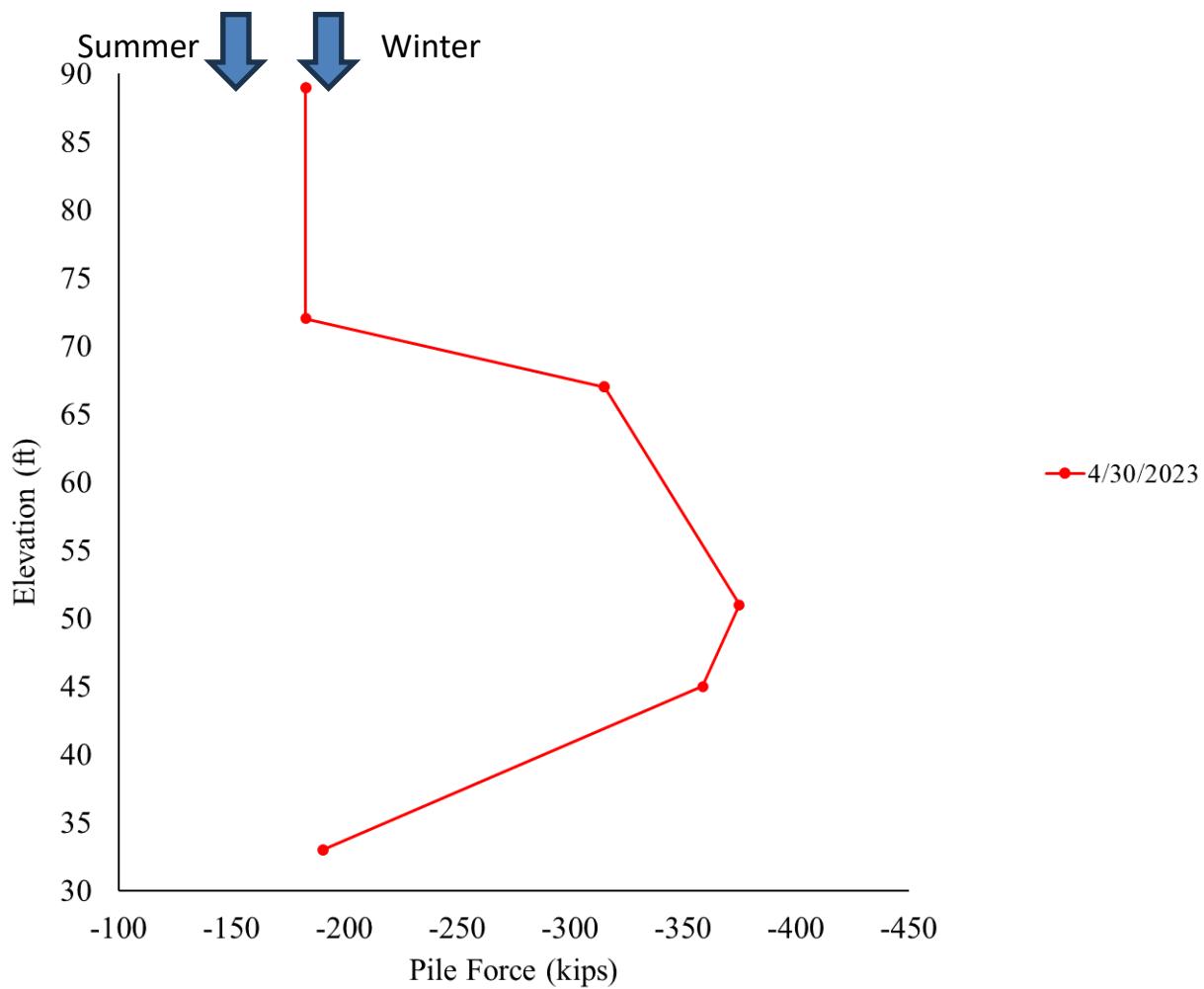


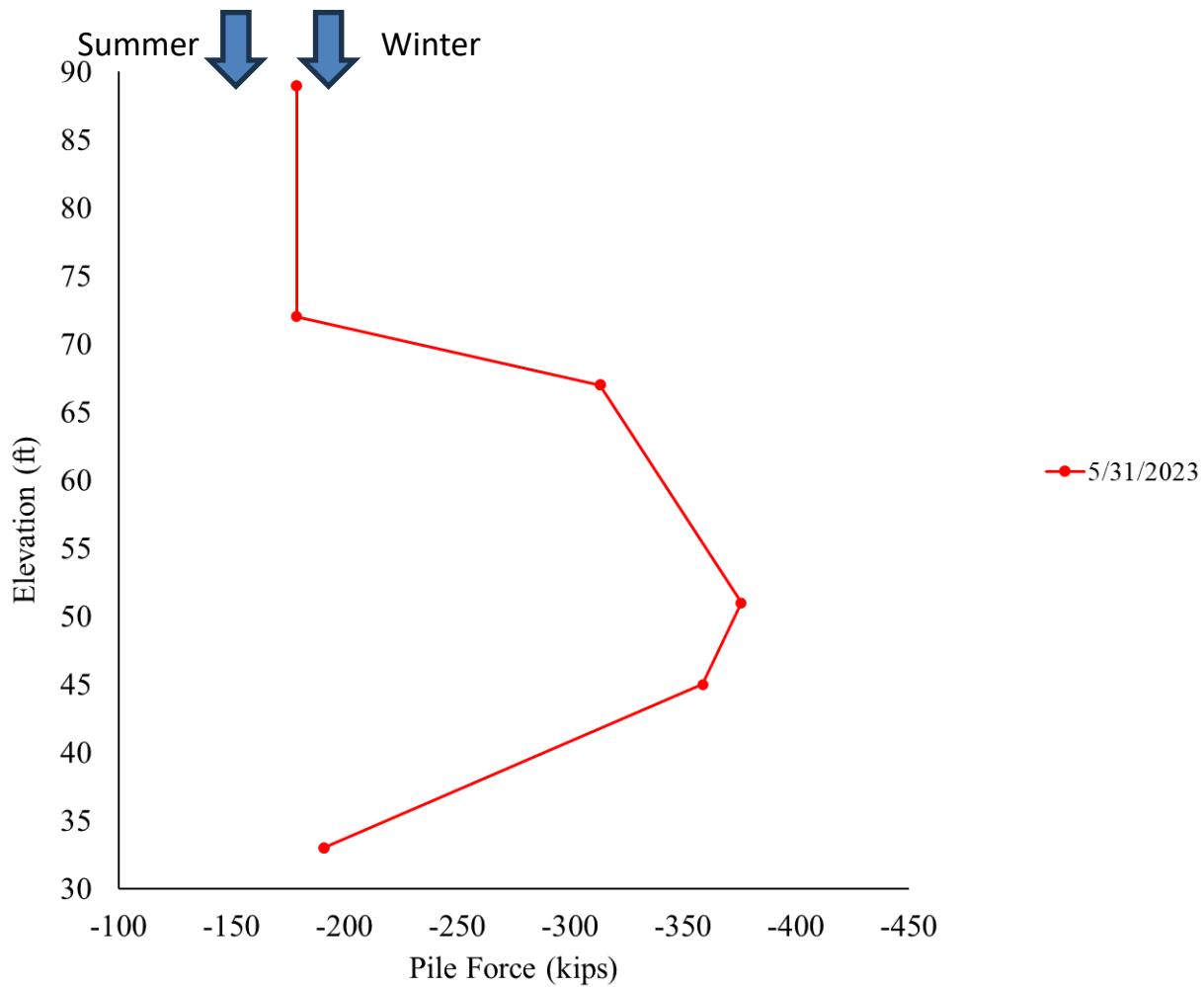


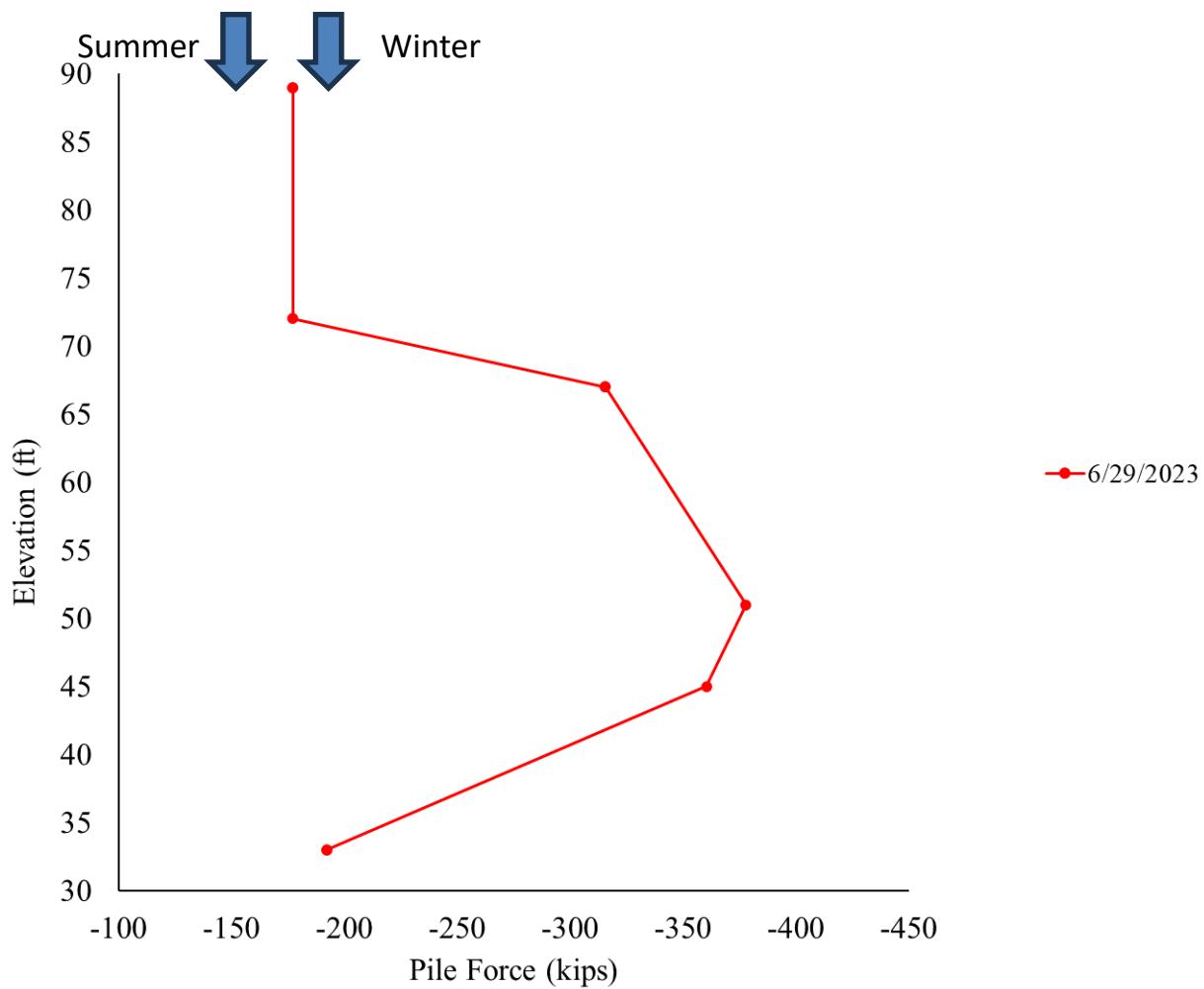


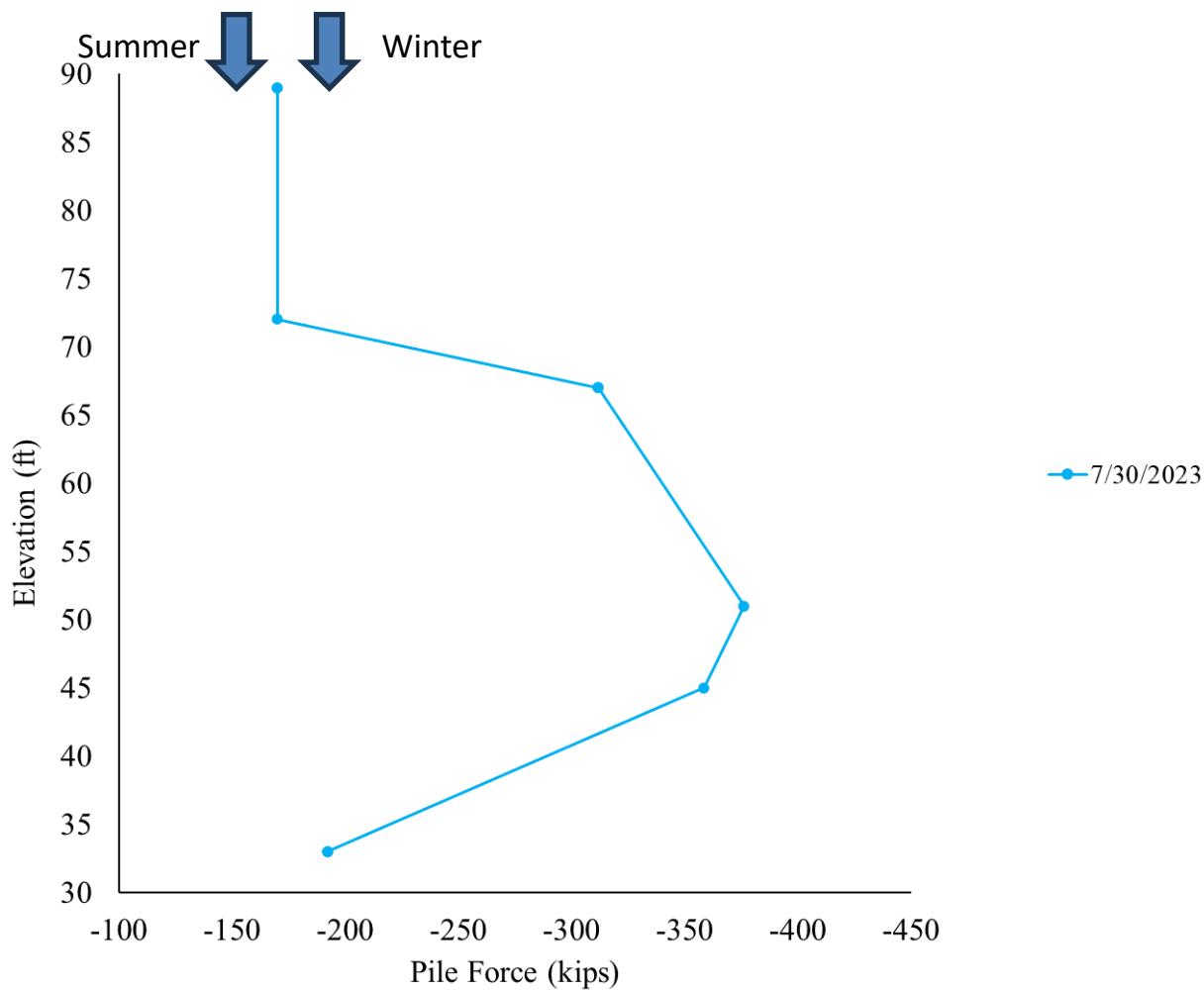


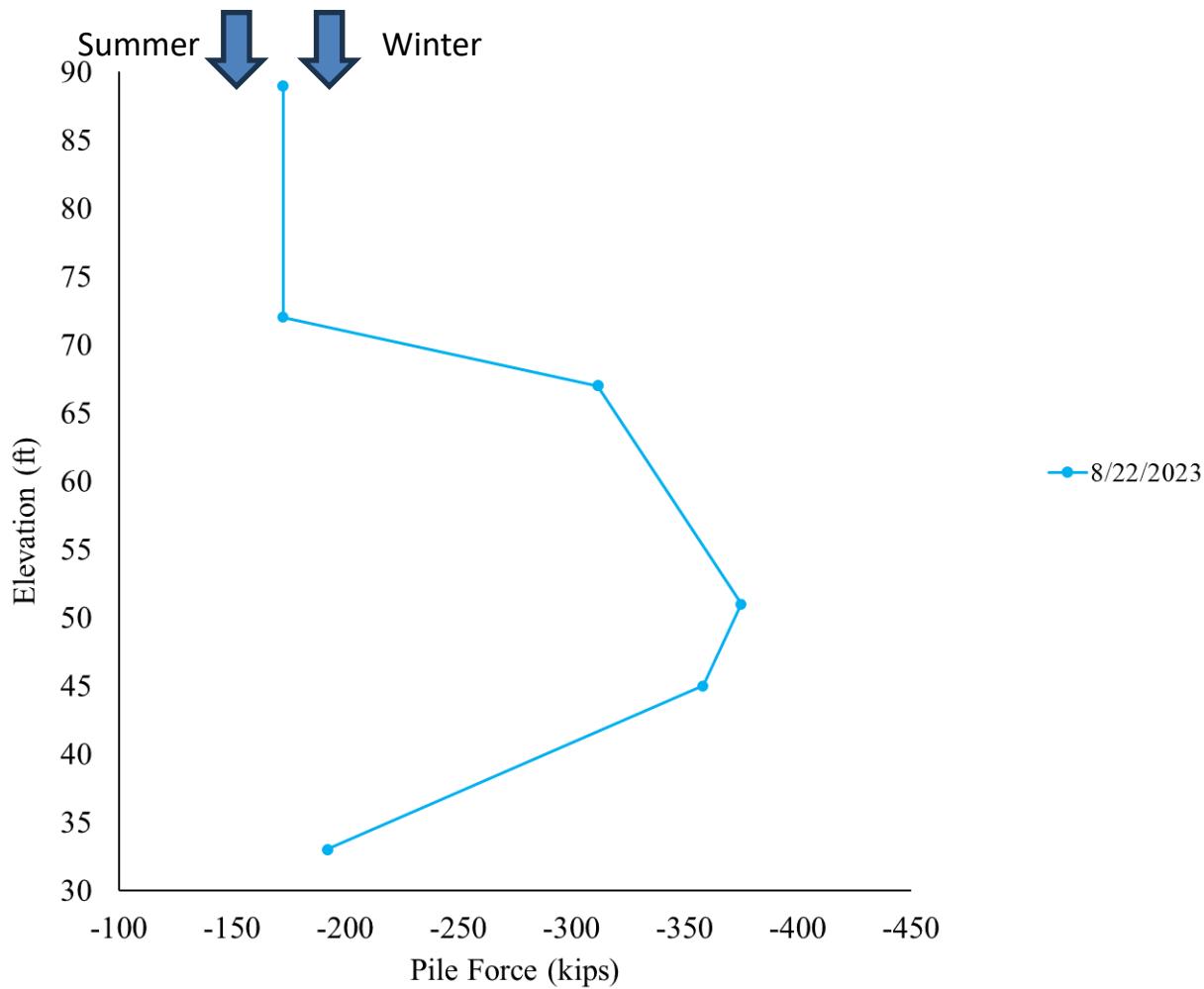


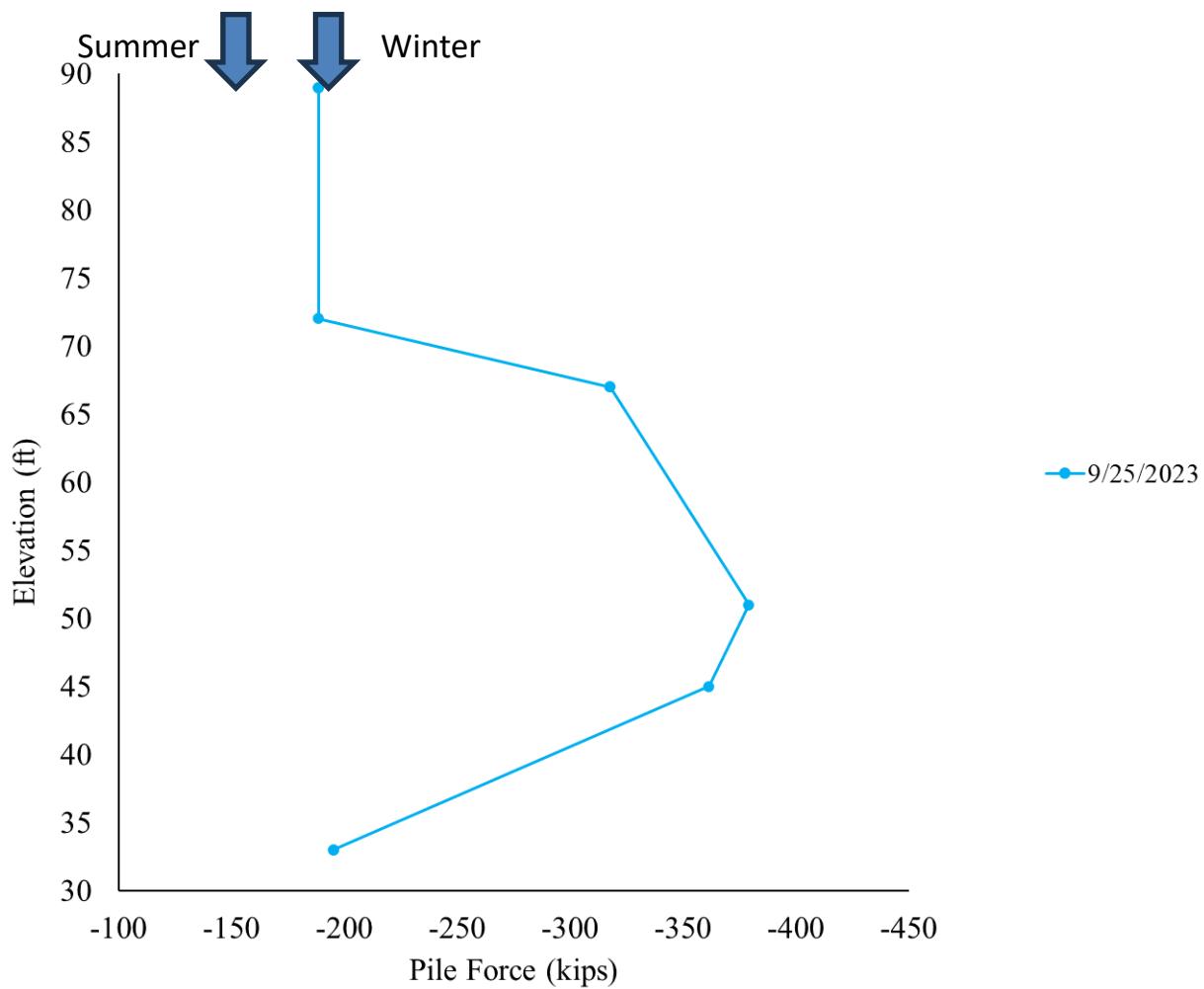


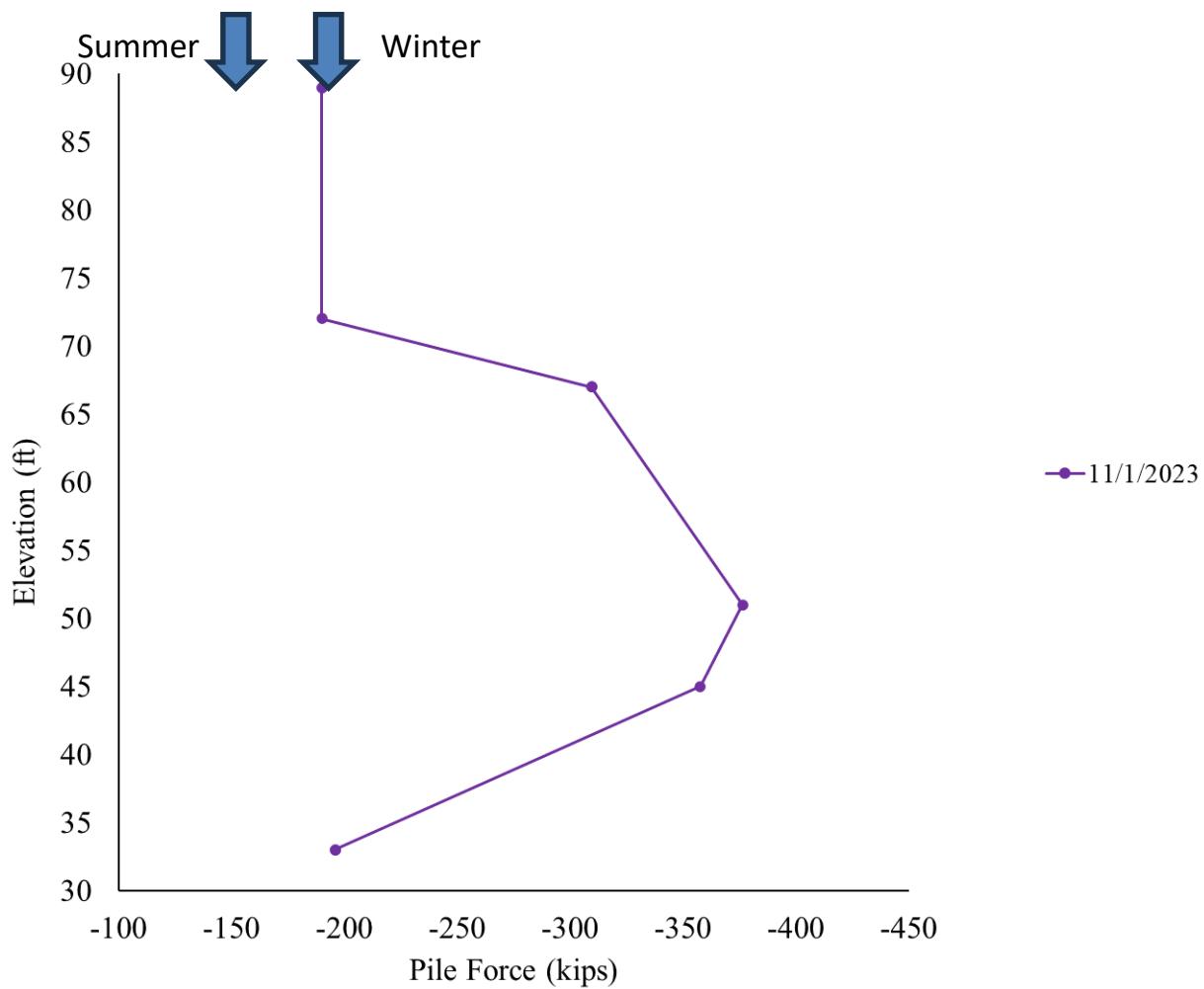


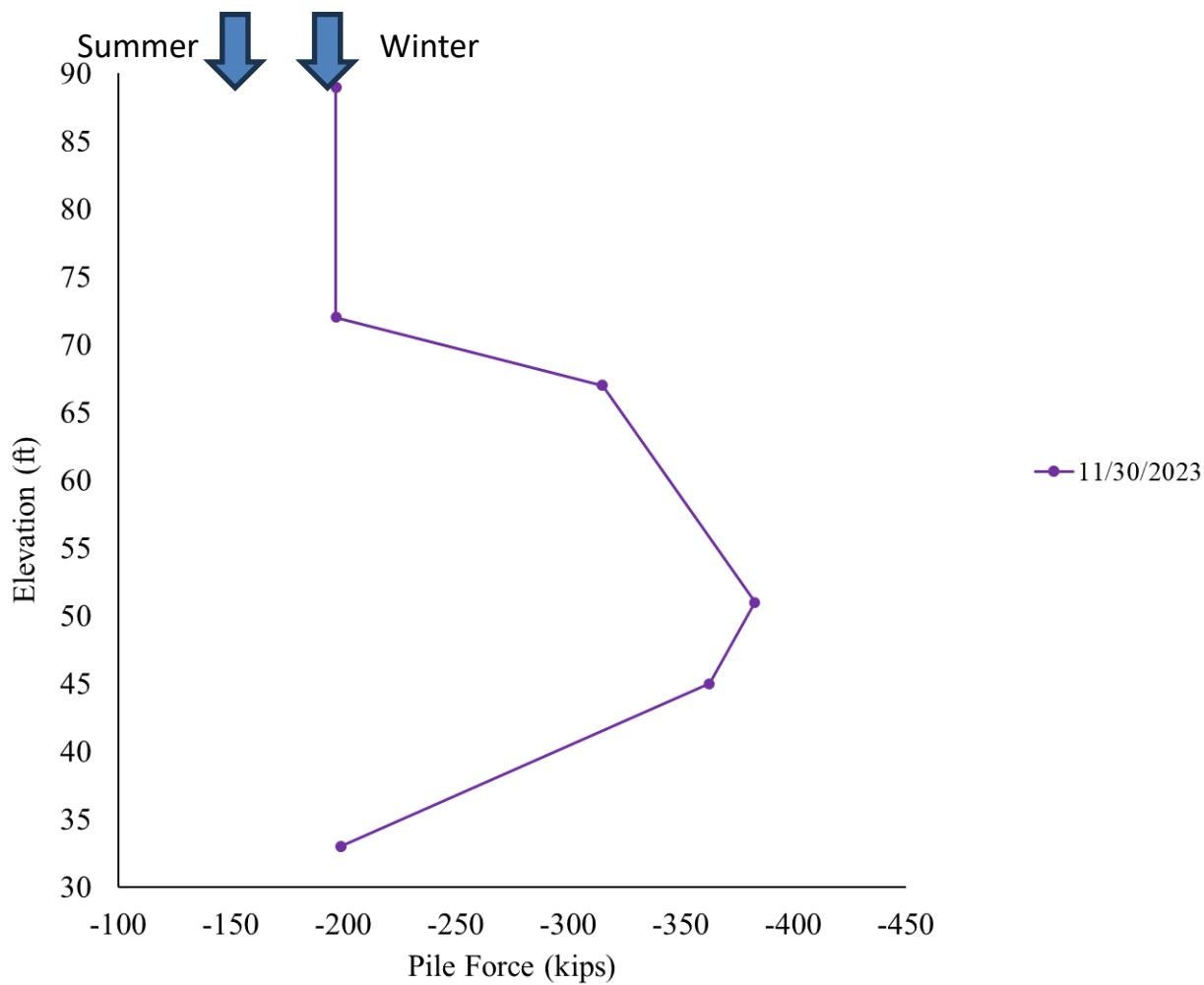


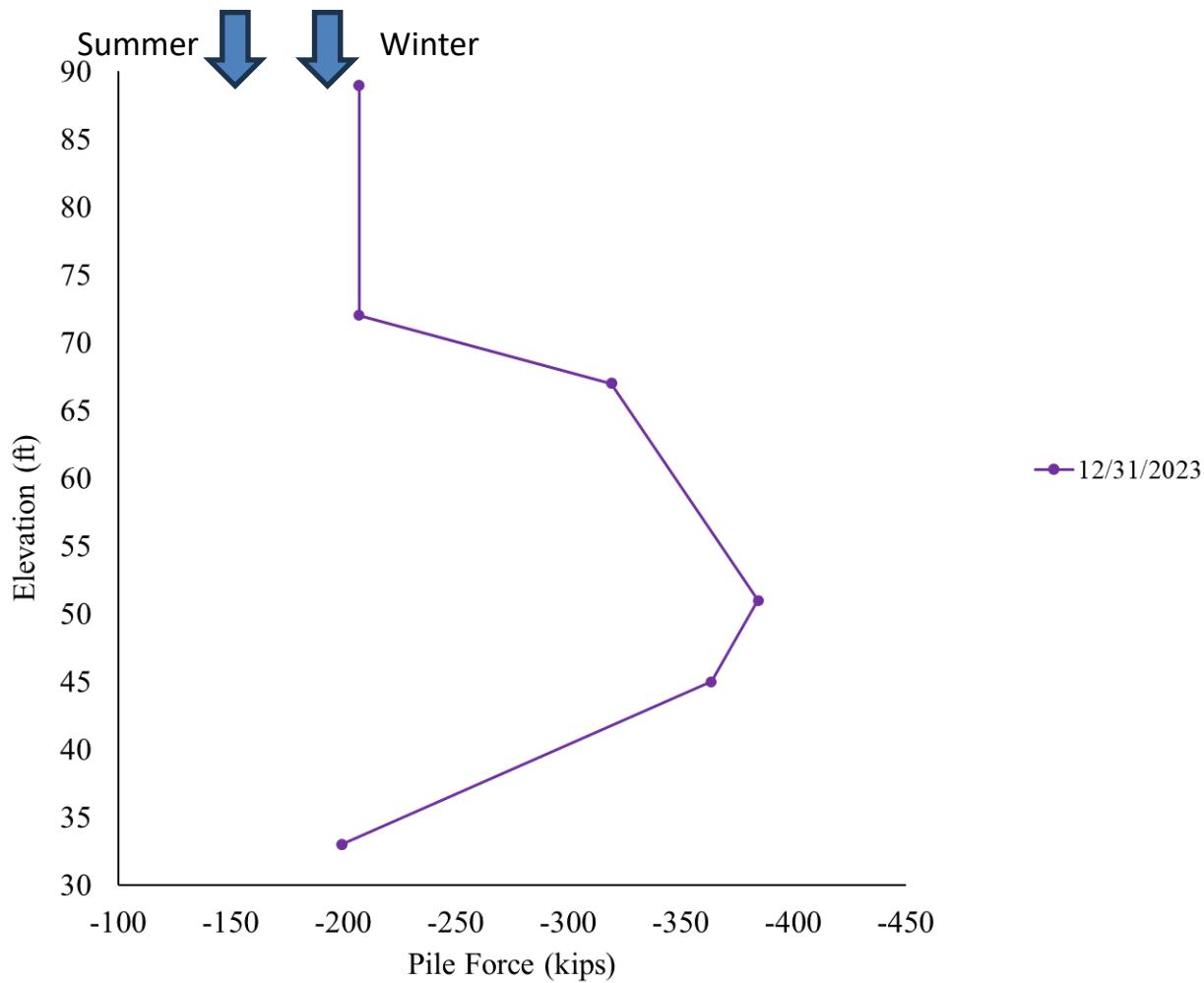


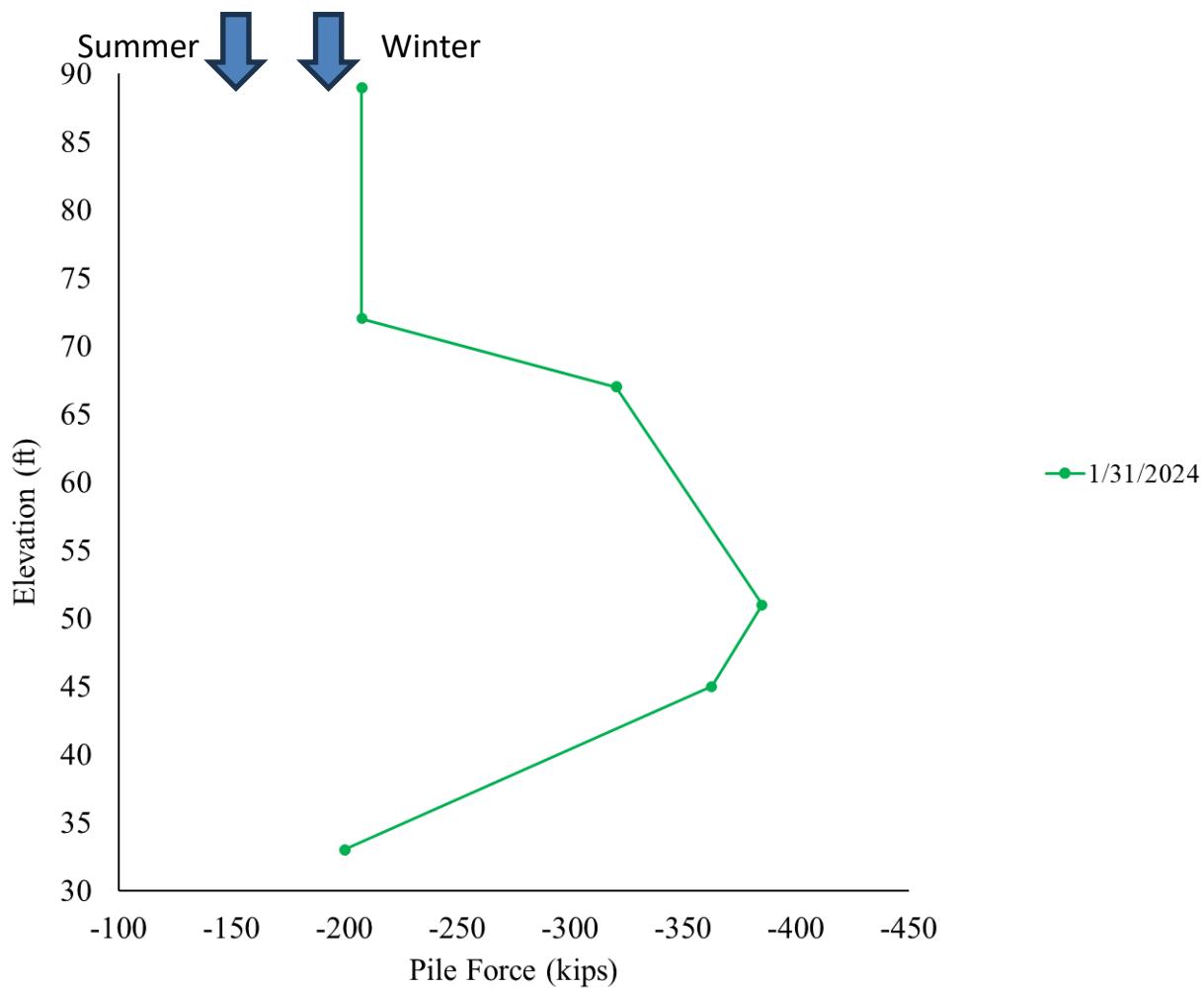


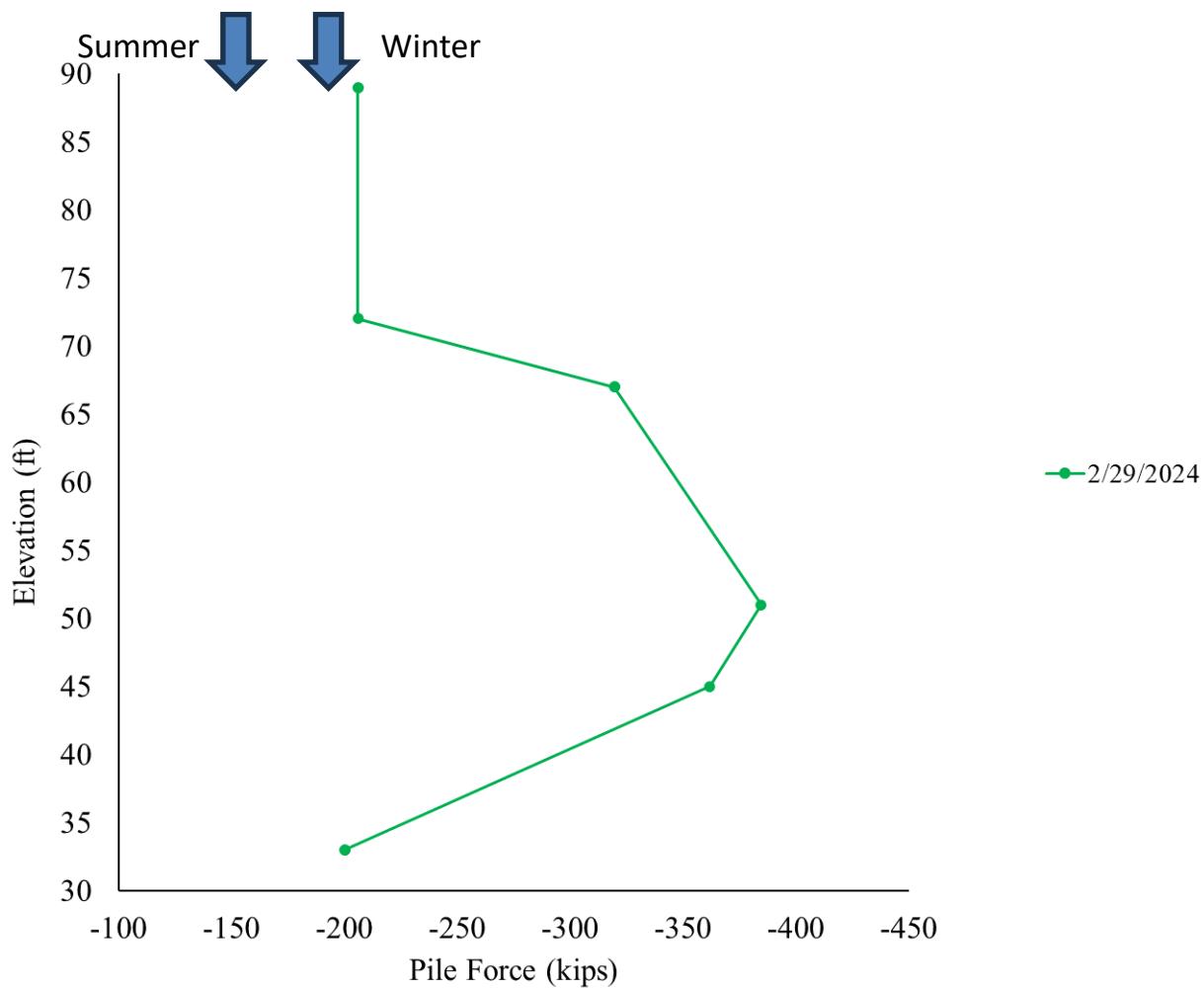


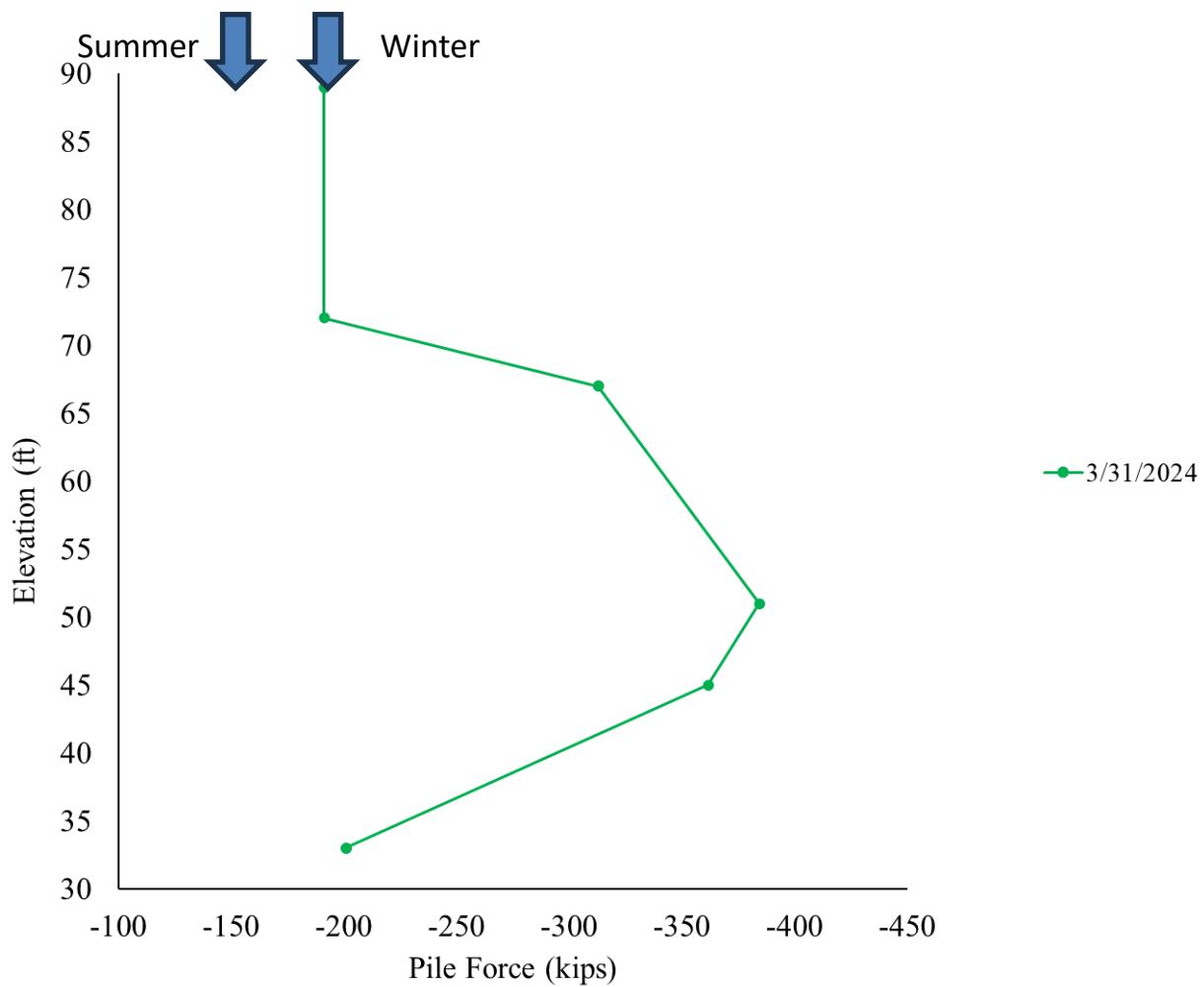


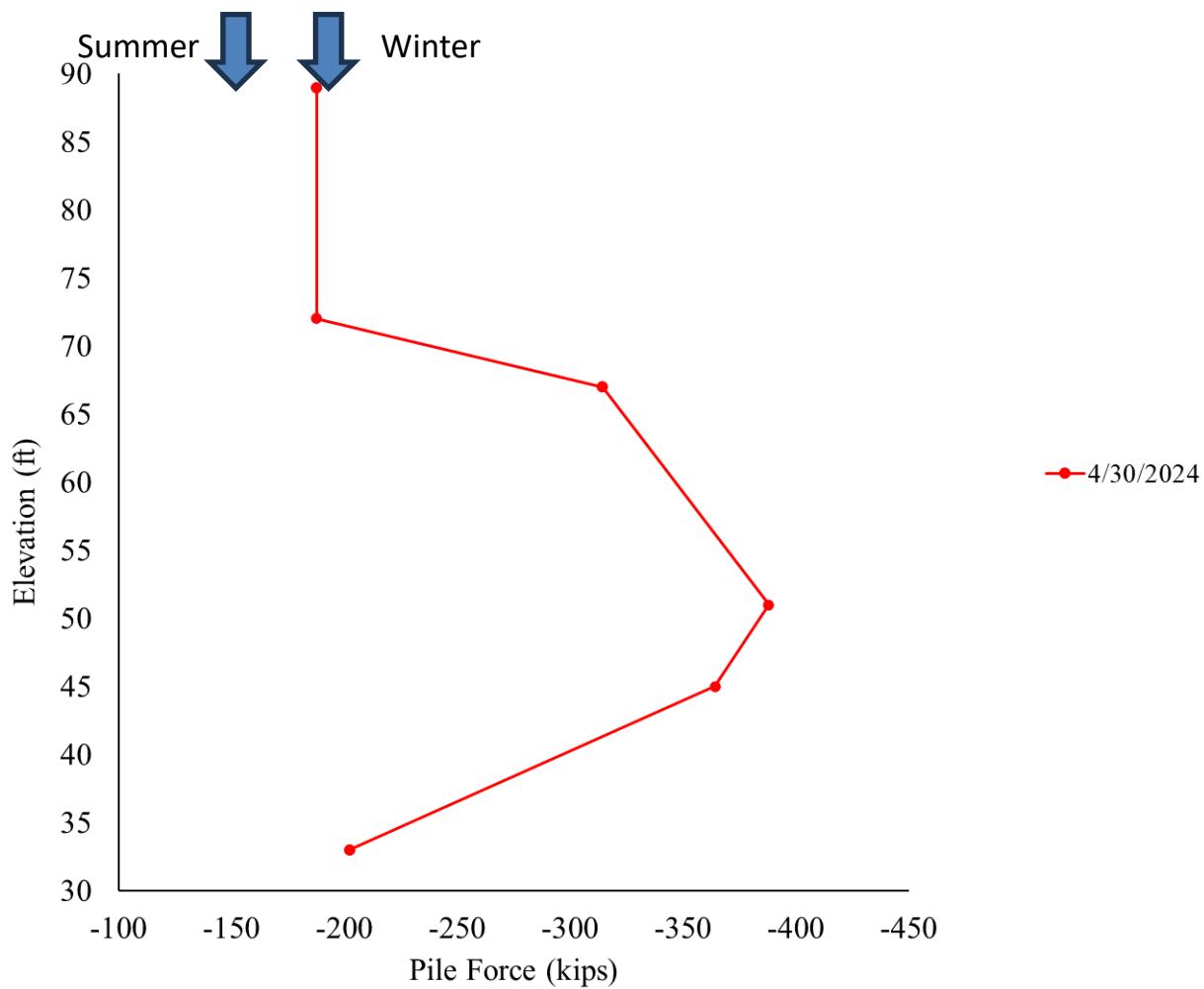


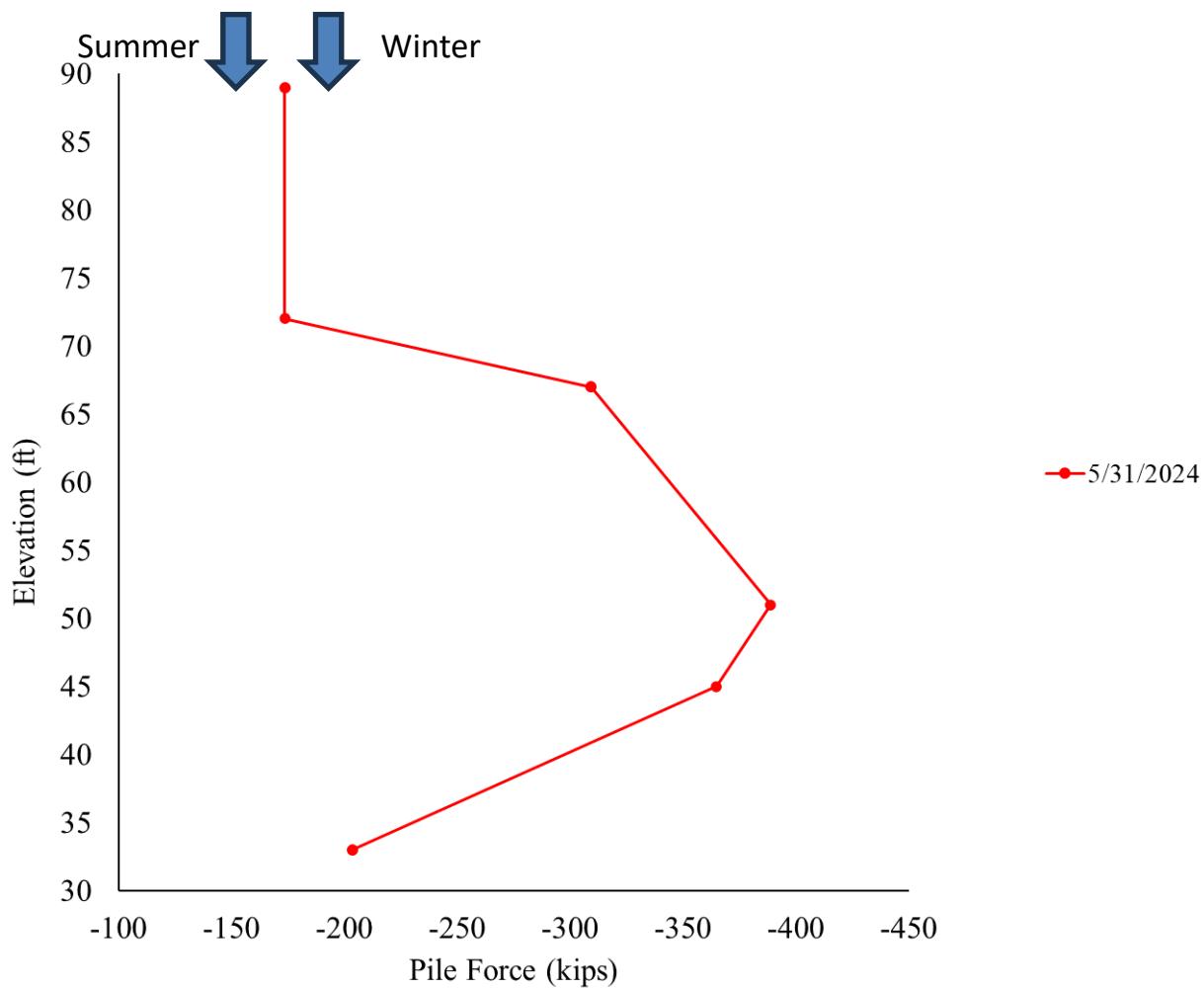


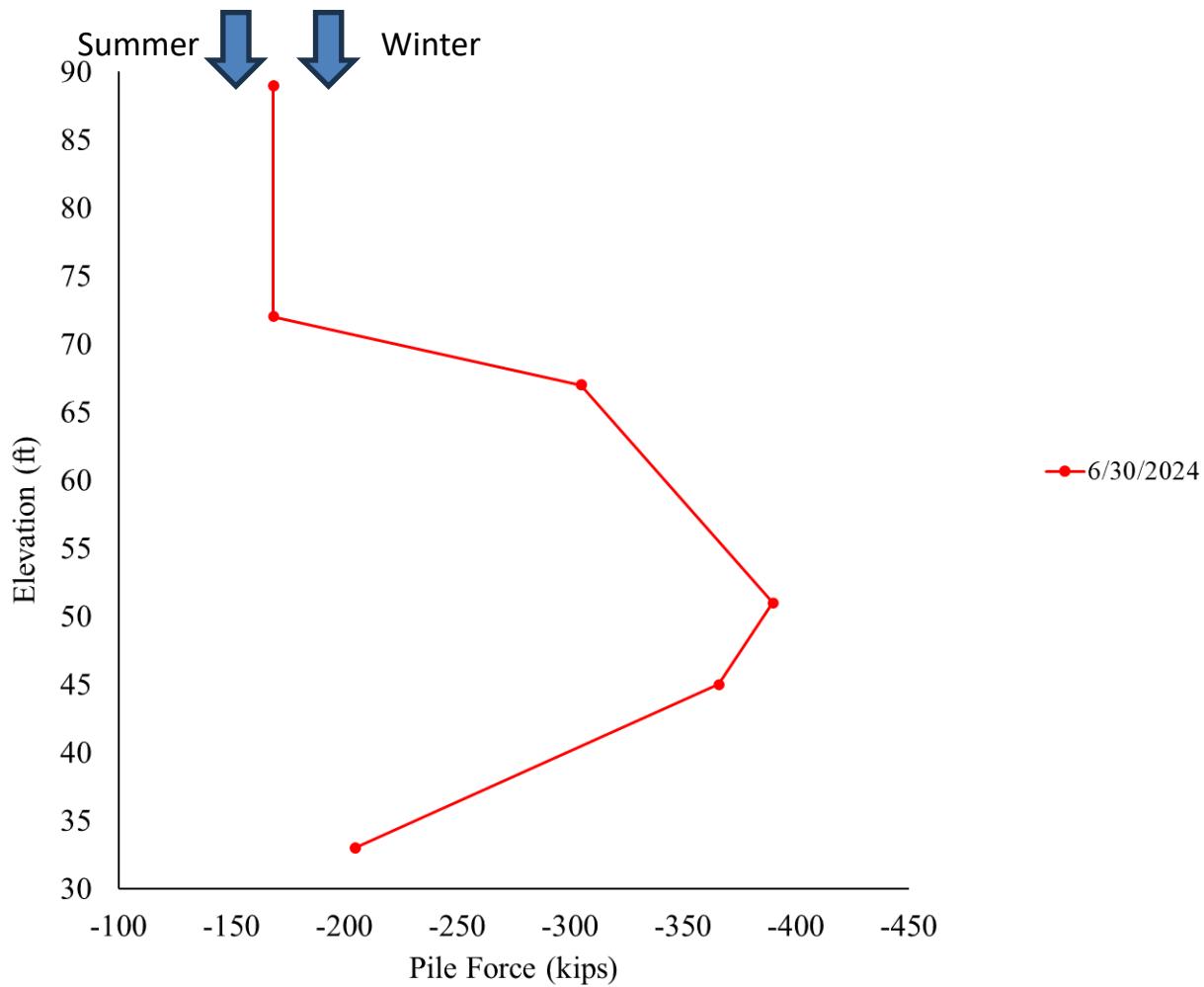












# Questions

