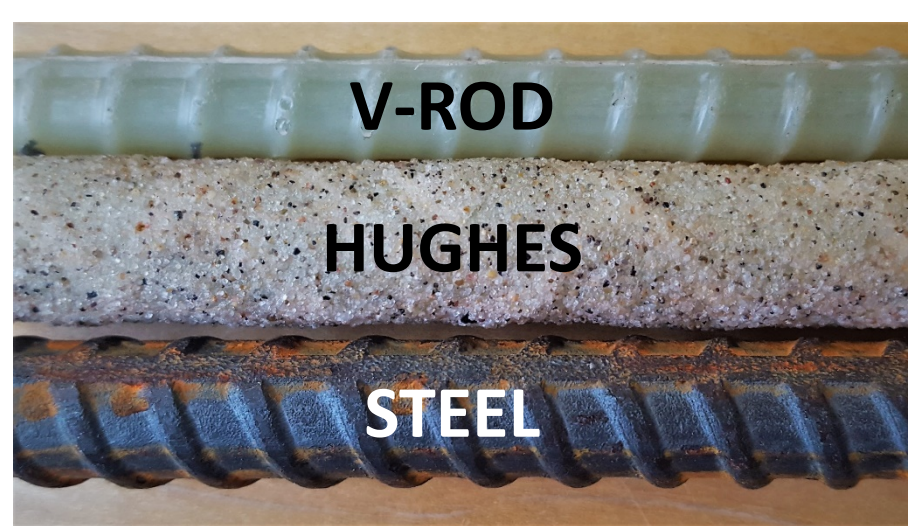
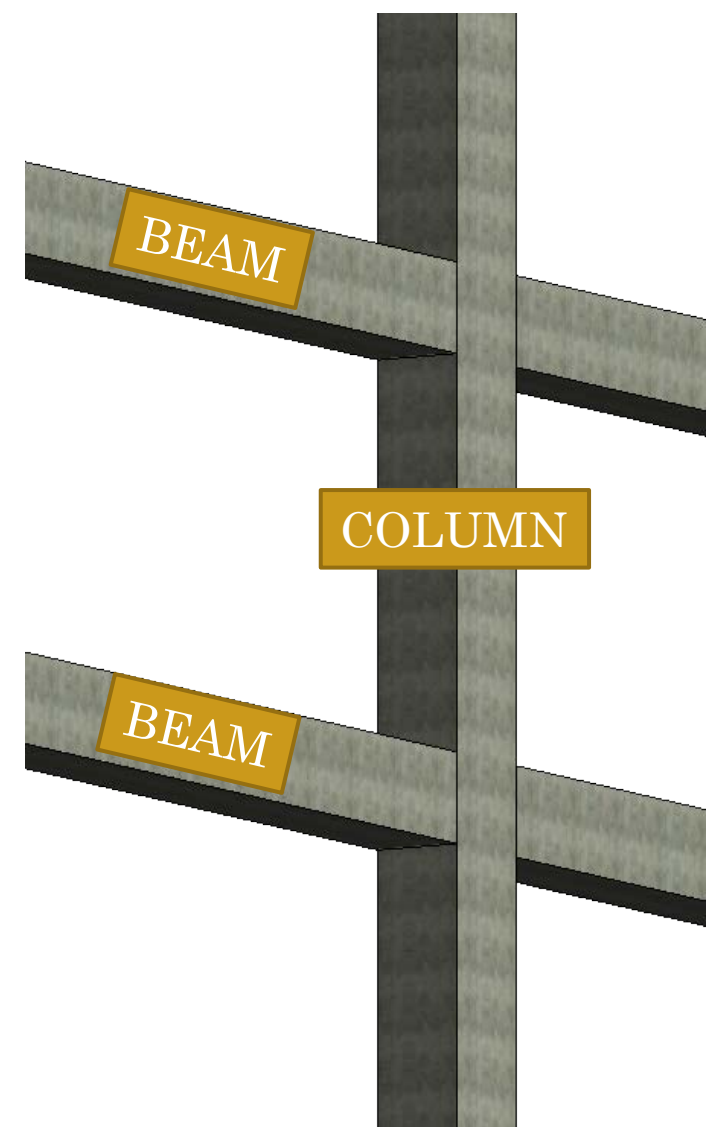
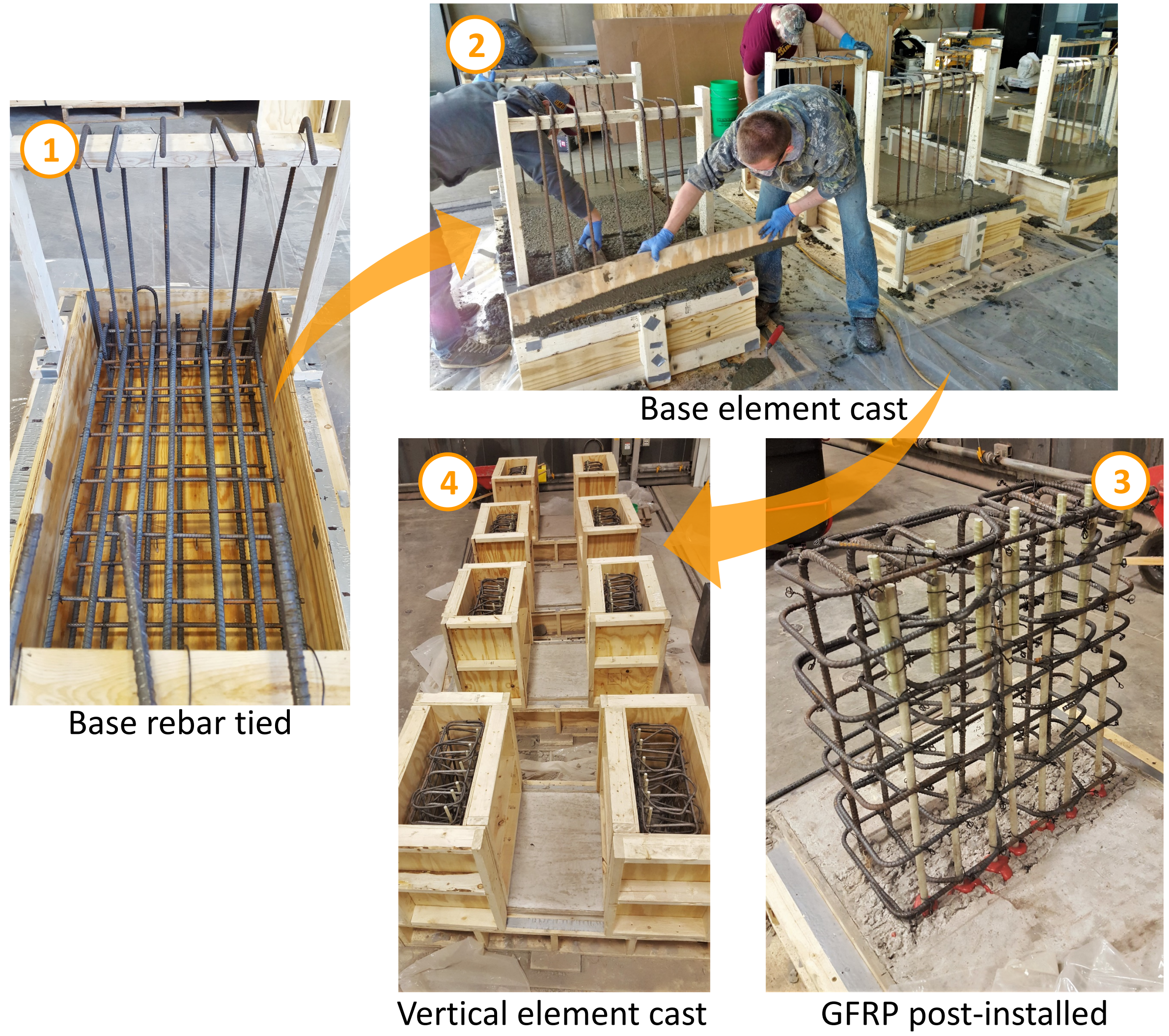


INTRODUCTION

- Post-Installing Background:
 - Method of concrete structural connections
 - Often desirable or necessary
 - Either mechanical or adhesive
- Benefits of GFRP:
 - Noncorrosive
 - Lightweight
 - Economically desirable
- Research Objective:
 - Confirm post-installed GFRP anchorage behavior



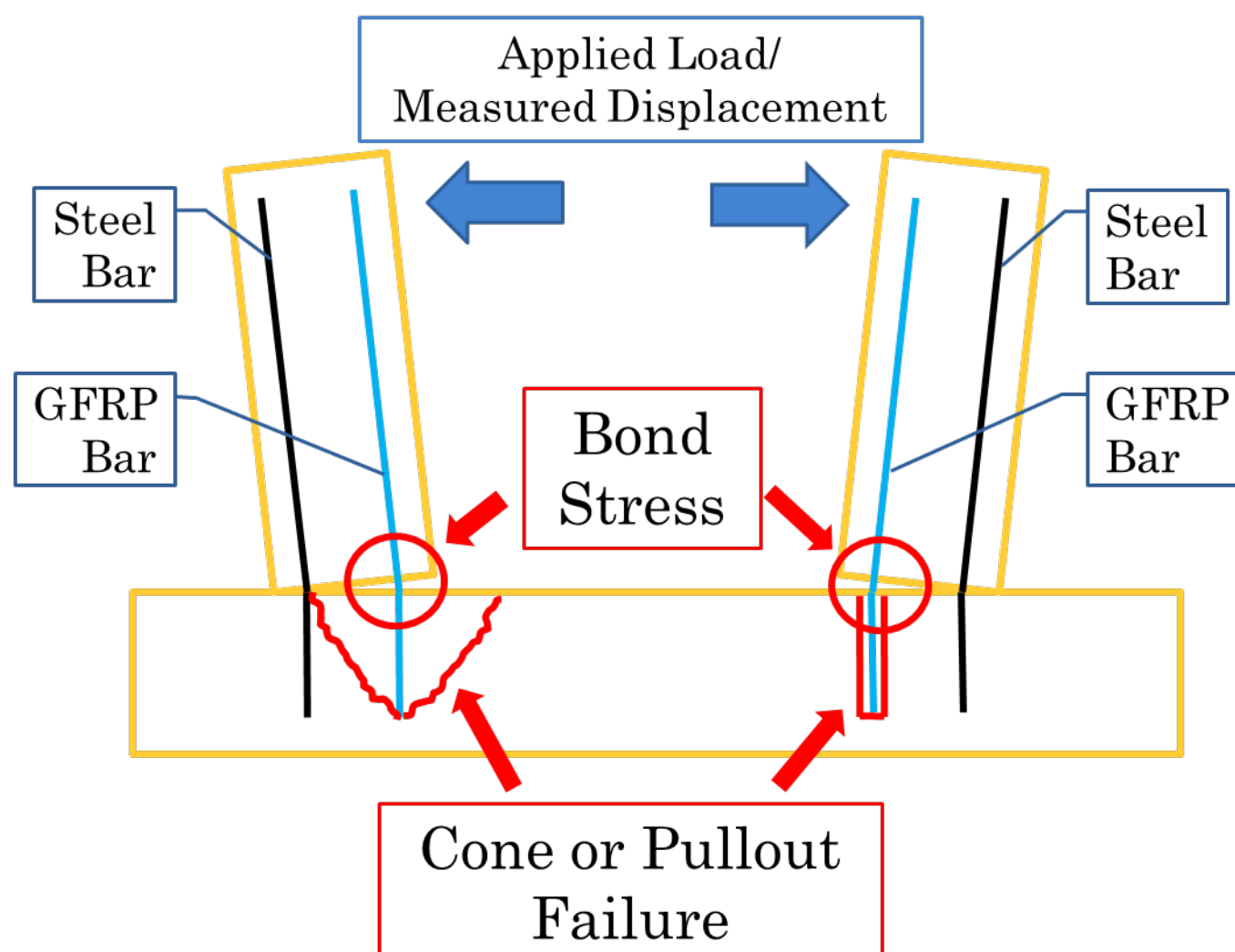
CONSTRUCTION



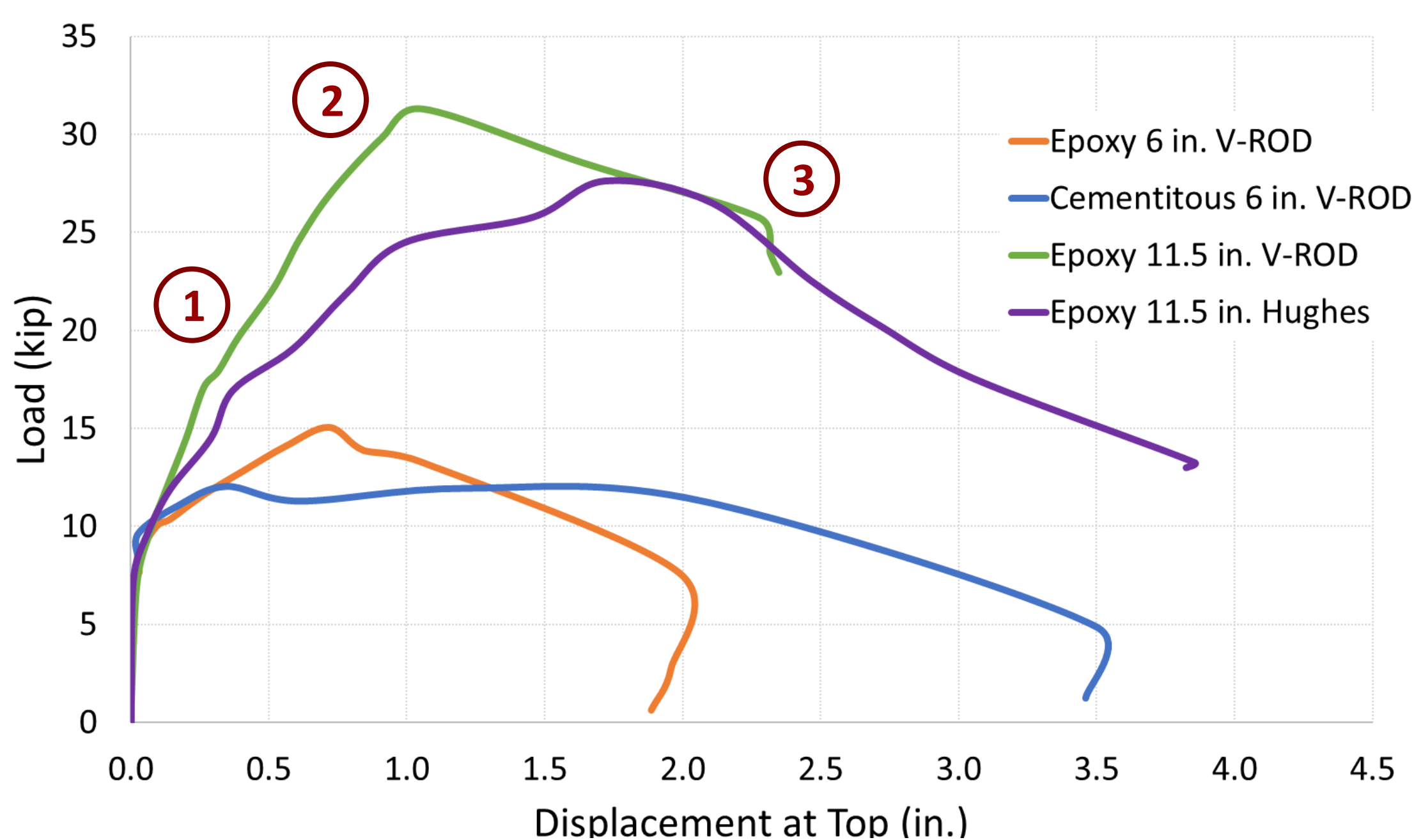
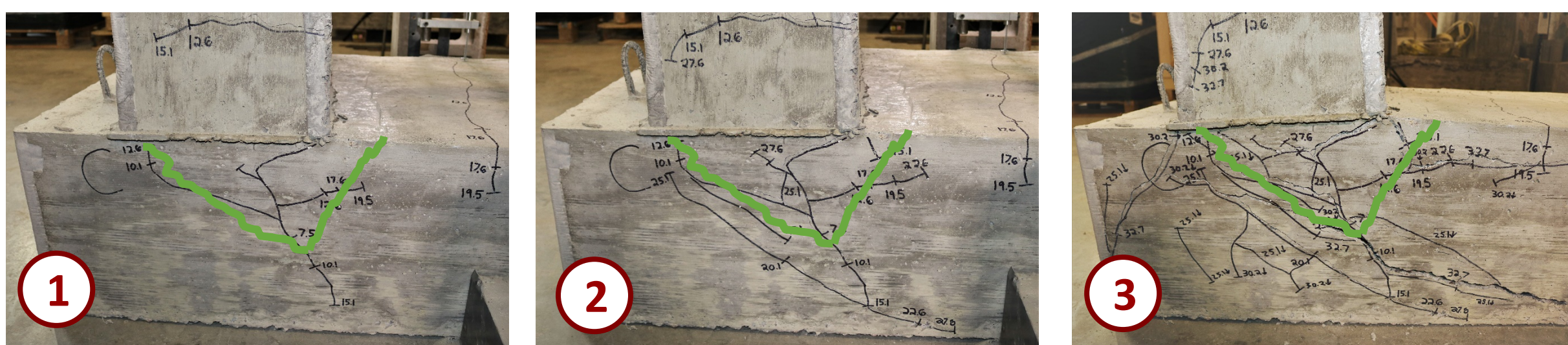
TESTING

- Consider: Embedment length, bar type, and adhesive
- Static load applied to induce tensile force in GFRP
- Observations of interest:
 - Peak Loads
 - Ductility
 - Failure Mode

Specimen	Embedment	Bar	Adhesive
1	6 in.	V-ROD	Epoxy
2	6 in.	V-ROD	Cementitious
3	11.5 in.	V-ROD	Epoxy
4	11.5 in.	Hughes	Epoxy



RESULTS



CONCLUSIONS

- Peak Loads:
 - Linear relationship with embedment
 - V-ROD (ribs) outperformed Hughes (flat)
 - Similar magnitude as steel bar tests
- Ductility:
 - Substantial ductility demonstrated, not brittle
 - Promotes safety in structural applications
- Failure Mode:
 - Cone failures observed in all specimens
 - Demonstrates adhesive performance

FUTURE WORK

- M.S. student to construct and test 12 more specimens over the coming year
- Bar size and concrete strength to be varied
- Ultimately will provide recommendations for GFRP implementation in the field