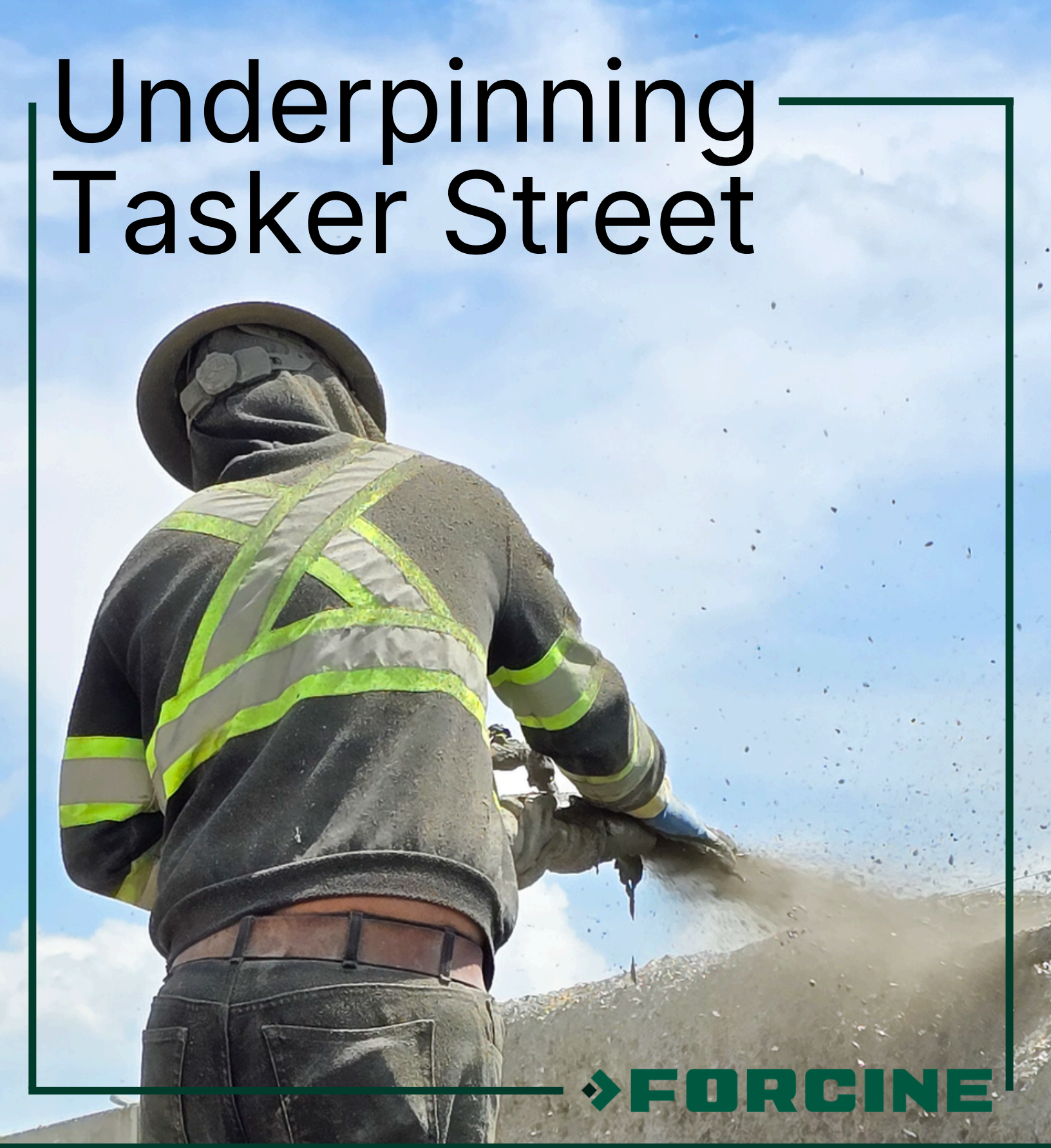
Underpinning Tasker Street



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1850s church

This historic 1850s church was being upgraded to a modern brewery. The existing basement ceiling height was 5'6", but the new use required a height of 11'0". Construction was further complicated by restricted site access into the church and existing foundation walls of friable stacked stone.

Problem

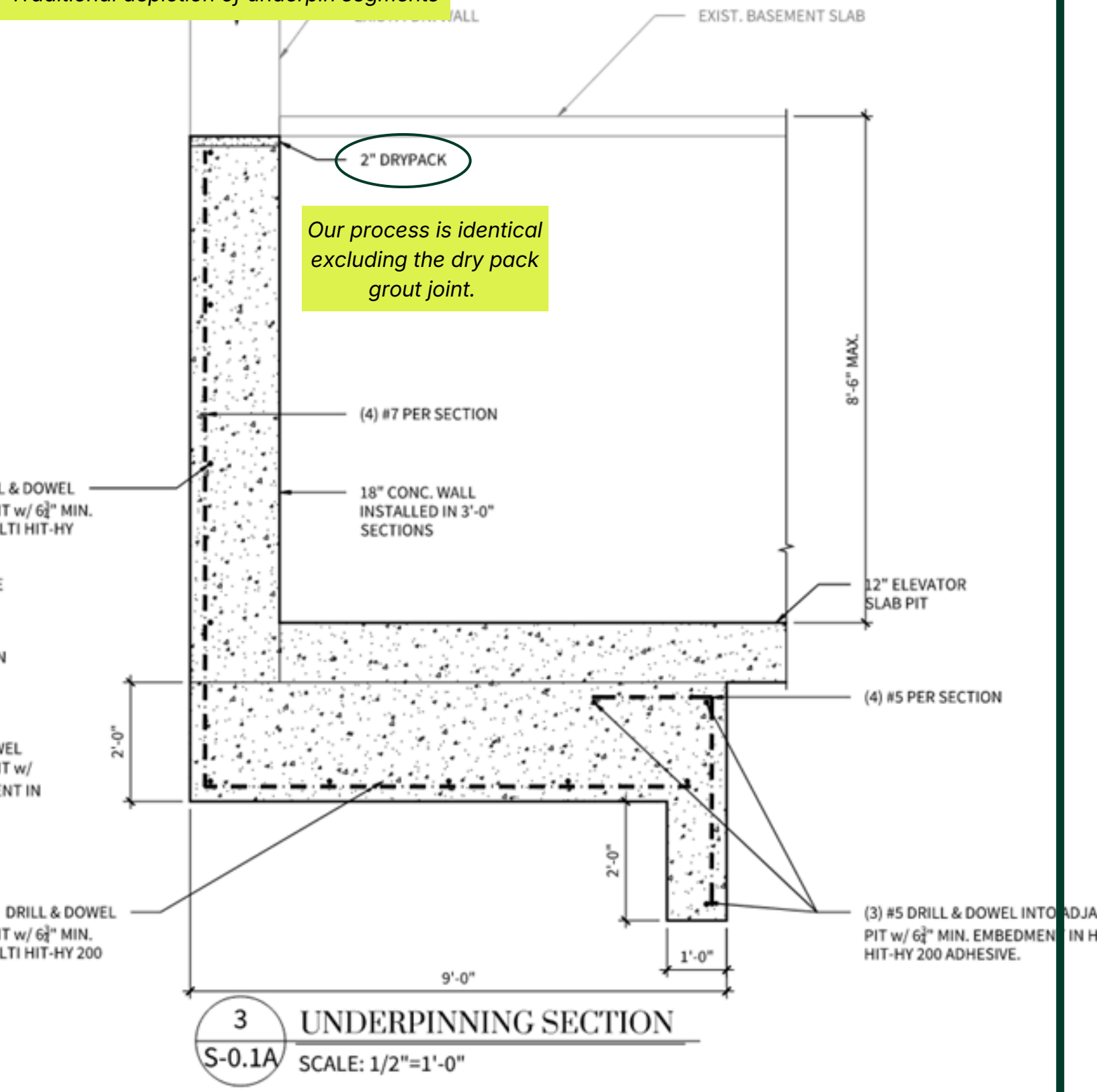
Underpin segments

Underpins with shotcrete

The interior wall was reinforced and stiffened with an 8" shotcrete lining. Underpins were then installed using 400 CY of structural shotcrete, placed without forms, bracing, or grout joints. No dry pack grout joint was required due to the perfect interface of shotcrete to the existing wall. Four heavily loaded brick columns were also reinforced by encapsulating with structural shotcrete, shoring underneath, and shooting them in place.

Solution

Traditional depiction of underpin segments



Our process is identical excluding the dry pack grout joint.

The Design

Results

Entire building underpin

4 MONTHS AHEAD SCHEDULE, COLUMNS SHOT IN ONE DAY

The project was finished 4 months faster than the expected duration with safety increased due to the speed of the underpinning installation. The columns were shot in place to the new elevation in just one day with a flat and smooth finish.