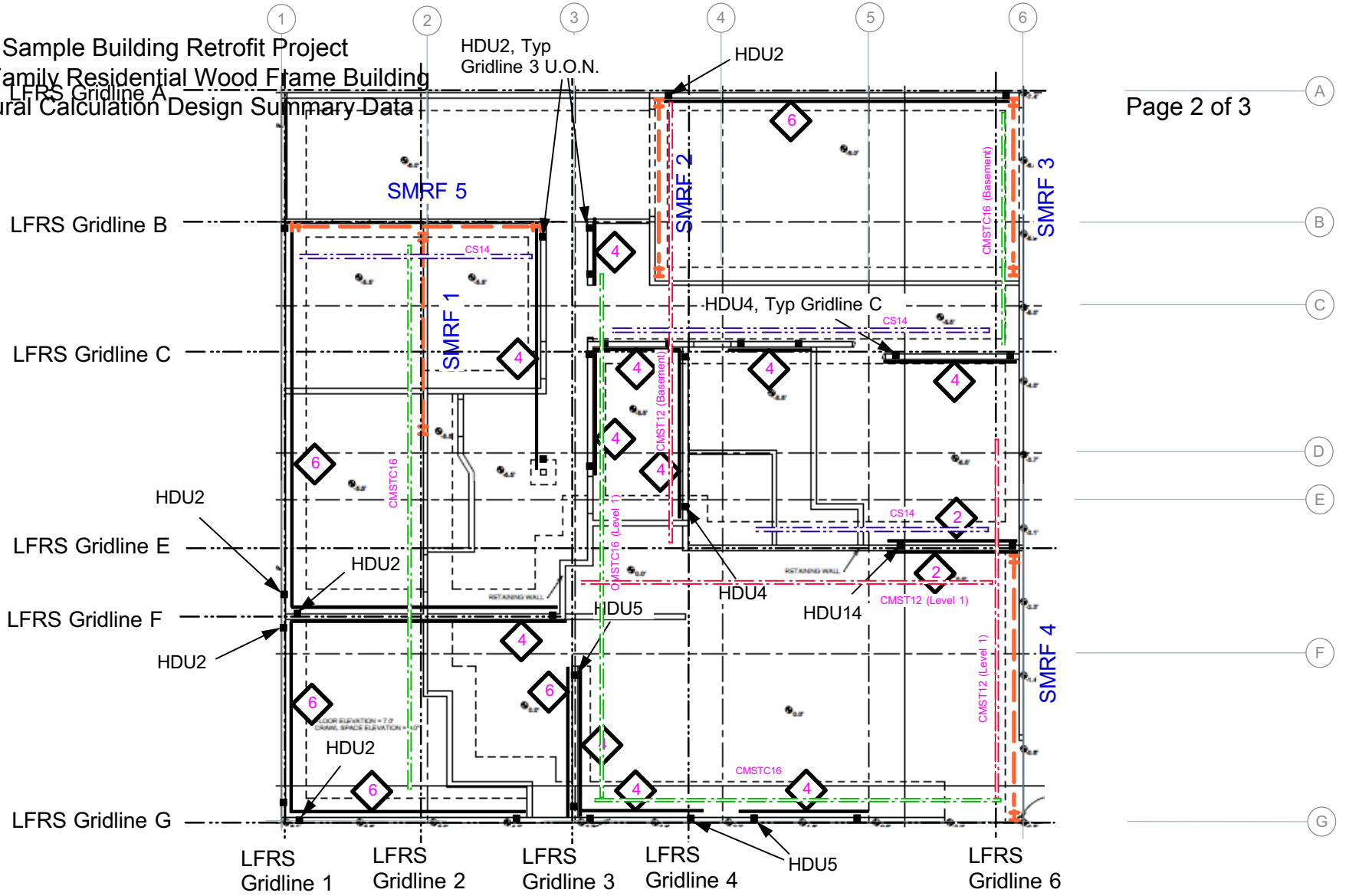
2019-2020 Sample Retrofit Project - San Francisco, CA

Performed Seismic Retrofit (ground floor level) of multi-family residential building in San Francisco (three adjacent buildings built at separate times, as early as 1913) using wood framed shear walls and AISC Steel Welded Special Moment Resisting Frames.



BASEMENT AND FIRST FLOOR - RETROFIT PLAN

NTS

Lateral Force Resisting System (LFRS) Elements :

(N) Shear Wall

Simpson Strong Frame

RETROFIT LEGEND:

3 — 1/2" Struct I Sheathing w/ 10d Edge Nailing

■ — Holdown each side, as indicated

STRAP LEGEND:

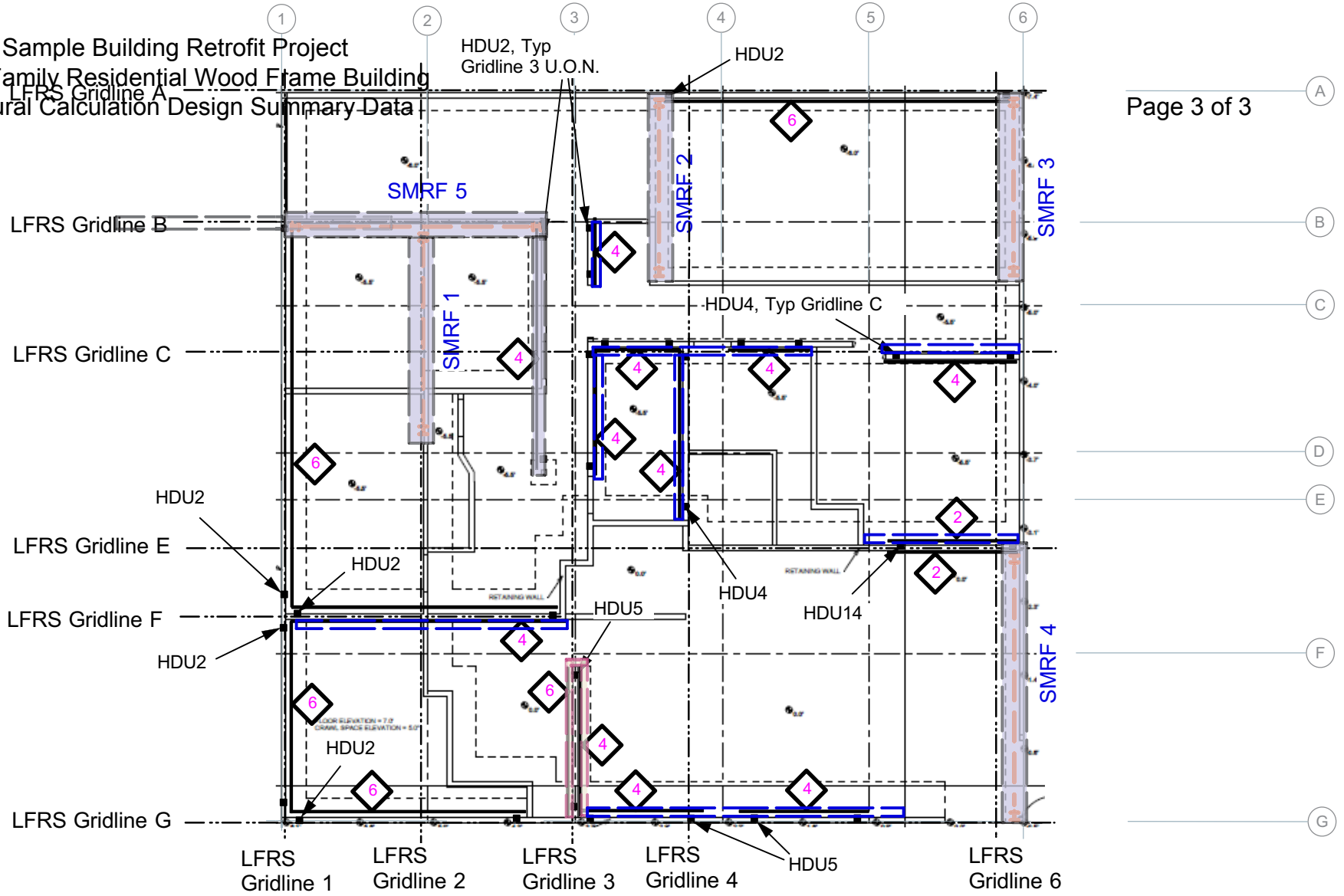
Note: Straps in N-S direction can be replaced with 6 - 3/4" carriage bolts at Floor joist splices at lines of support.

CS14 — CS14 Strap w/ 10d (2,490 #)

CMSTC16 — CMSTC16 Strap w/ 16d (4,585 #)

CMST12 — CMST12 Strap w/ 16d (9,215 #)

Ground Floor Retrofit Plan (from calcs)



FOUNDATION RETROFIT PLAN

NTS

Lateral Force Resisting System (LFRS) Elements :

(N) Shear Wall

AISC Fixed Base SMRF

FOUNDATION RETROFIT ELEMENTS:

(N) Footings

(N) 2-Sided Wall Retrofit

(N) 1-Sided Wall Retrofit

RETROFIT LEGEND:

3 — 1/2" Struct I Sheathing w/ 10d Edge Nailing

■ — Holdown each side, as indicated

Ground Floor Retrofit Plan - AISC Welded SMRF's and Footings (from calcs)