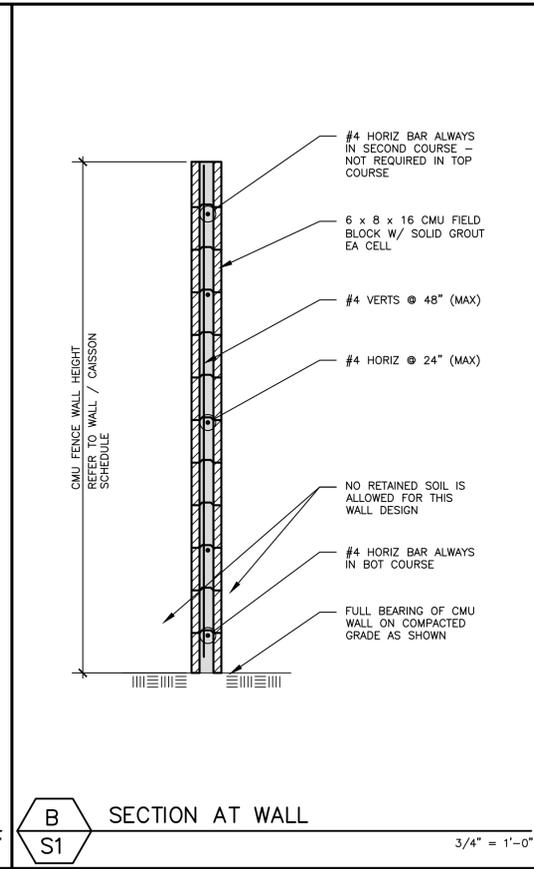
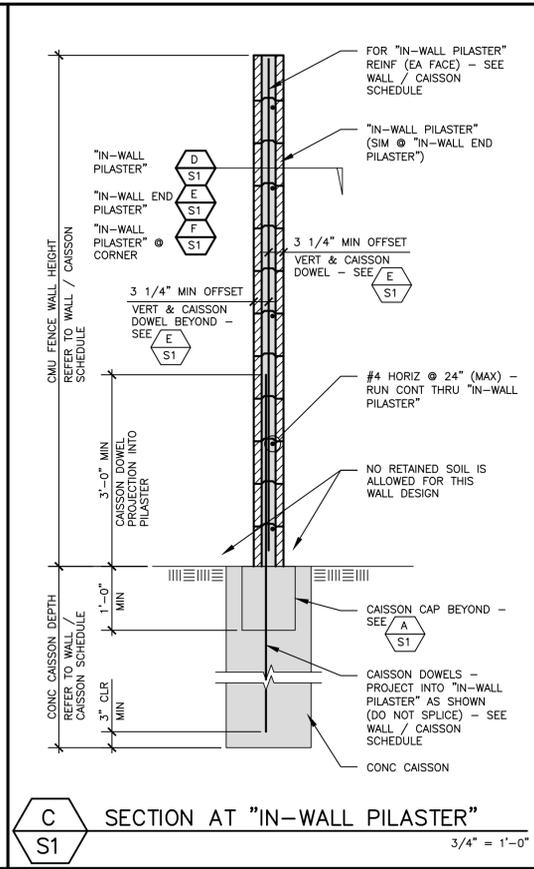


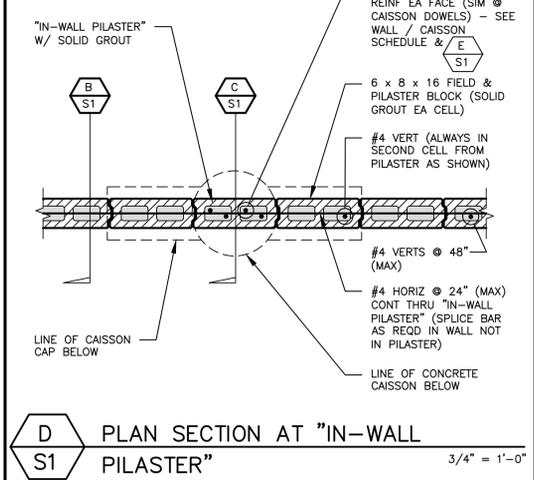
**A** TYPICAL "IN-WALL PILASTER" WALL ELEVATION 1/2" = 1'-0"



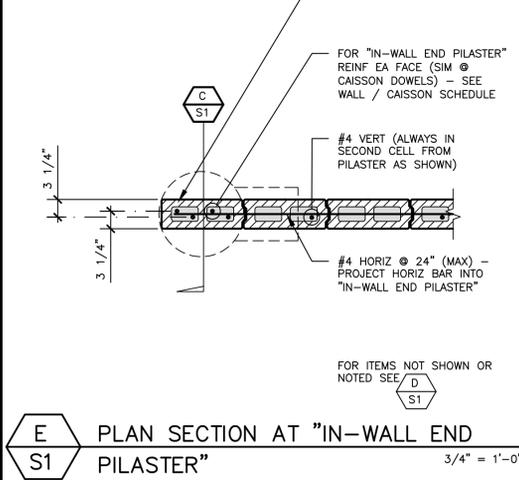
**B** SECTION AT WALL 3/4" = 1'-0"



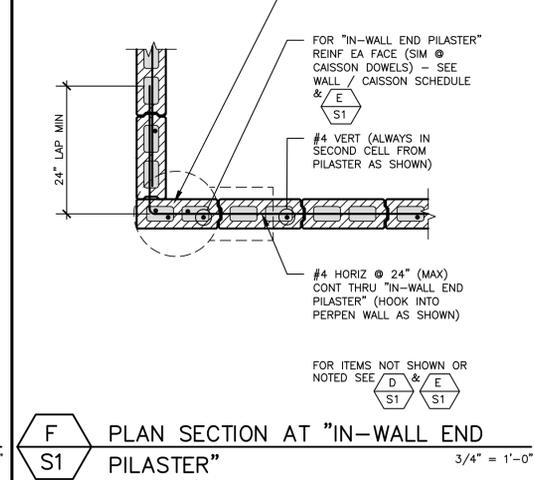
**C** SECTION AT "IN-WALL PILASTER" 3/4" = 1'-0"



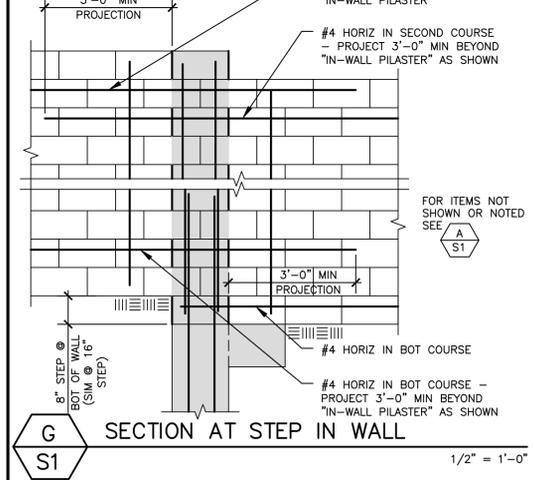
**D** PLAN SECTION AT "IN-WALL PILASTER" 3/4" = 1'-0"



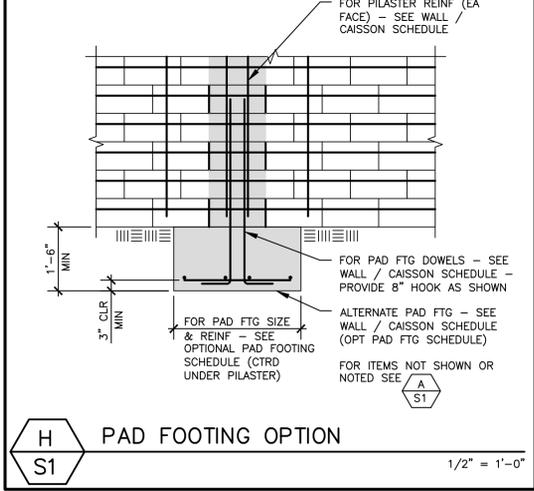
**E** PLAN SECTION AT "IN-WALL END PILASTER" 3/4" = 1'-0"



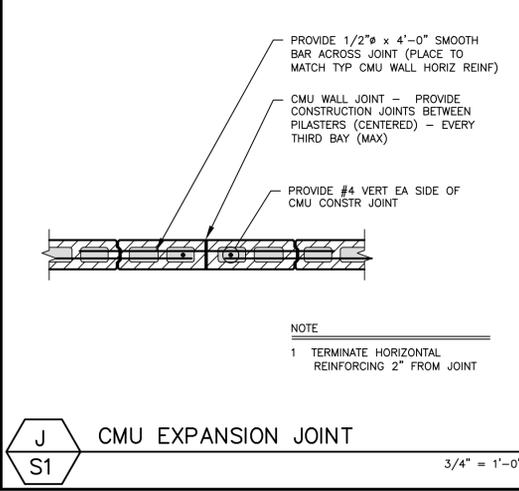
**F** PLAN SECTION AT "IN-WALL END PILASTER" 3/4" = 1'-0"



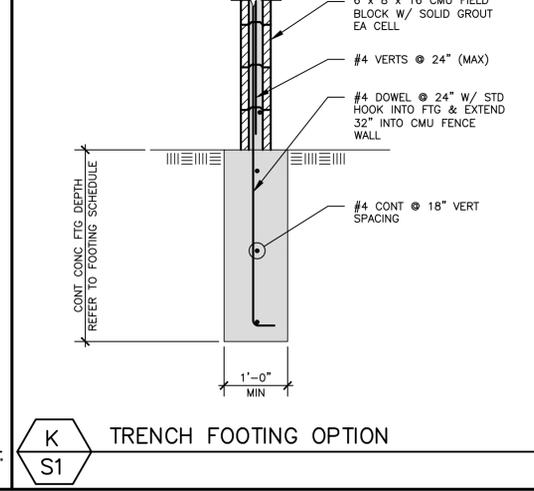
**G** SECTION AT STEP IN WALL 1/2" = 1'-0"



**H** PAD FOOTING OPTION 1/2" = 1'-0"



**J** CMU EXPANSION JOINT 3/4" = 1'-0"



**K** TRENCH FOOTING OPTION 3/4" = 1'-0"

## STRUCTURAL NOTES

- I. GENERAL**
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE SECTIONS OF THE 2022 CALIFORNIA BUILDING CODE (CBC).
  - THE DESIGN CRITERIA ARE:
    - SEISMIC SITE CLASSIFICATION: D
    - WIND SPEED: 95 MPH
    - WIND EXPOSURE: C
  - WHERE SIDEWALKS ARE PRESENT, EXTEND WALL 4" BELOW TOP OF SIDEWALK
- II. FOUNDATION**
- ALL FOUNDATIONS ARE BASED ON THE CBC TABLE FOR SOIL CLASSIFICATION 4 (SAND, SILTY SAND, CLAYEY SAND, SILTY GRAVEL, AND CLAYEY GRAVEL)
    - ALLOWABLE SOIL BEARING PRESSURE: 1500 PSF
    - ALLOWABLE LATERAL SOIL BEARING PRESSURE: 100 PCF
  - IF ANY PROBLEMS OR UNUSUAL CONDITIONS ARISE, THE CONTRACTOR SHALL CONSULT THE PROJECT ENGINEER OR A GEOTECHNICAL ENGINEER.
- III. CONCRETE**
- MATERIAL:
    - REINFORCING: DEFORMED ASTM A615, GRADE 40 (OPTIONAL GRADE 60)
    - CEMENT: PORTLAND CEMENT, TYPE II, ASTM C-150
    - AGGREGATE: ASTM C-33
    - WATER: CLEAN AND DRINKABLE
  - CONCRETE MIX DESIGN:
    - 2500 PSI @ 28 DAYS
    - AGGREGATE SIZE 3/8" MINIMUM AND 1 1/2" MAXIMUM
    - 4" SLUMP (MAXIMUM)
  - ADMIXTURES: ONLY AS APPROVED BY THE ENGINEER
- IV. MASONRY**
- MATERIAL:
    - CONCRETE MASONRY UNITS: ASTM C-90, GRADE N, F<sub>m</sub> = 2000 PSI. SPECIAL INSPECTION IS REQ'D FOR THE CMU WALLS AND PILASTERS.
    - REINFORCING: DEFORMED ASTM A615, GRADE 60. LAP VERTICAL AND HORIZONTAL REINFORCING BARS 48 BAR DIAMETERS (MINIMUM) AT SPLICES UNLESS SHOWN OR NOTED OTHERWISE IN THE DETAILS (LAP #4 BARS 24" MINIMUM).
    - GROUT: 1250 PSI AT 7 DAYS AND 2000 PSI AT 28 DAYS WITH AN 8" TO 11" SLUMP. GROUT ALL CELLS IN THE MASONRY WALL AND PILASTERS SOLID. GROUT SHALL BE CONSOLIDATED BY MECHANICAL VIBRATION DURING GROUTING OPERATION. ALL MECHANICAL VIBRATION IS TO BE DONE BY EXPERIENCED PERSONNEL. ALL GROUTING IS TO FOLLOW CODE PRESCRIBED LOW-LIFT GROUTING PROCEDURES.
    - MORTAR: STRENGTH AT 28 DAYS: TYPE M - 2,500 PSI, TYPE S - 1,800 PSI. COMPOSITION: ASTM C270 - MIN 75% WATER RETENTION, MAX 12% AIR CONTENT, AGGREGATE RATIO NOT LESS THAN 2 1/4 OR MORE THAN 3 1/2 TIMES THE SUM OF THE SEPARATE VOLUMES OF CEMENTITIOUS MATERIALS.
    - ADMIXTURES: ONLY AS APPROVED BY THE ENGINEER.

**WALL/CAISSON SCHEDULE (1)**

WALL HEIGHT (2)	PILASTER / CAISSON SPACING (2)(3)	PILASTER REINF EA FACE (2)(3)(6)	CAISSON DEPTH (2)(3)(6)	CAISSON REINF EA FACE (2)(3)(6)	SPECIAL INSPECTION (5)
6'-0"	8'-8"	2- #5	10'-6"	2- #5	REQUIRED
6'-8"	6'-8"	2- #5	10'-0"	2- #5	REQUIRED
7'-4"	6'-0"	2- #5	9'-9"	2- #5	REQUIRED
8'-0"	4'-8"	2- #5	9'-6"	2- #5	REQUIRED

**OPTIONAL PAD FOOTING (3)(4)(7)**

WALL HEIGHT (2)	PILASTER / PAD FTG SPACING (2)(4)	PAD FOOTING SIZE & REINF (7)	SPECIAL INSPECTION (5)
6'-0"	8'-8"	4'-3" SQ W/ 5- #4 EA WAY TOP & BOT	REQUIRED
6'-8"	6'-8"	4'-6" SQ W/ 5- #4 EA WAY TOP & BOT	REQUIRED
7'-4"	6'-0"	4'-6" SQ W/ 5- #4 EA WAY TOP & BOT	REQUIRED
8'-0"	4'-8"	4'-6" SQ W/ 5- #4 EA WAY TOP & BOT	REQUIRED

- (1) THIS SCHEDULE IS FOR A MASONRY FENCE WALL SYSTEM WITH NO RETAINED SOIL ALLOWED.
- (2) FOR THE DEFINITION OF WALL HEIGHT - REFER TO THE WALL ELEVATION (A) S1
- (3) AN ALTERNATE PAD FOOTING DETAIL HAS BEEN PROVIDED WHERE THE STANDARD CAISSON FOOTING CANNOT BE INSTALLED. FOR THE OPTIONAL PAD FOOTING SCHEDULE, REFER TO ITEM (8) BELOW & (H) S1
- (4) THE CAISSON AND PAD FOOTING DEPTHS AND SIZES ARE DESIGNED USING ALLOWABLE FOUNDATION DESIGN CRITERIA PER SECTION II OF THE GENERAL STRUCTURAL NOTES.
- (5) SPECIAL INSPECTION REQUIRES THE CMU WALL AND PILASTER REINFORCING AND THE CMU WALL AND PILASTER GROUTING OPERATION BE OBSERVED AND APPROVED BY A QUALIFIED SPECIAL INSPECTOR. THE SPECIAL INSPECTOR MUST BE APPROVED BY THE BUILDING DEPARTMENT. THE CONTRACTOR IS TO PROVIDE THE SPECIAL INSPECTOR WITH A CERTIFICATE OF QUALITY FROM THE BLOCK MANUFACTURER CERTIFYING THE BLOCK STRENGTH. SPECIAL INSPECTION REPORTS ARE REQUIRED TO BE SUBMITTED TO THE BUILDING DEPARTMENT STATING THE CMU WALL AND PILASTERS WERE CONSTRUCTED PER THESE APPROVED STRUCTURAL DRAWINGS PRIOR TO FINAL APPROVAL OF THE FENCE WALL SYSTEM BY THE BUILDING DEPARTMENT.
- (6) CAISSON SIZE: 1'-4" (MINIMUM). FOR DEPTH - SEE SCHEDULE ABOVE.
- (7) THE DOWELS FROM THE PAD FOOTING INTO THE CMU PILASTER ARE THE SAME SIZE, QUANTITY, AND PROJECTION INTO THE CMU PILASTER AS THE CAISSON REINFORCING IN THE WALL / CAISSON SCHEDULE. PROVIDE AN 8" HOOK INTO THE PAD FOOTING AS SHOWN IN THE ALTERNATE PAD FOOTING DETAIL (H) S1

REVISED BY

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PRELIMINARY VALID FOR DRAWINGS 1.66 ≤ SDS ≤ 2.00 NOT FOR CONSTRUCTION FOR SDS SEE SEISMICMAPS.ORG

MASONRY FENCE SYSTEM FORM:  
**CASTLE-LITE CMU FENCE SYSTEM**

DATE: APRIL 2024  
SCALE: AS NOTED  
DRAWN: SG  
JOB: MIF077-24  
SHEET: **S1**

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