Appeal Nos. 25-049 & 25-050 at 1077 Fell Street

Supplementary Chart and Comments submitted by DBI for the hearing on March 4, 2026

DRAFT 1-26-26

To: Board of Appeals

From: Joseph Ospital, Senior Building Inspector

Date: 1/26/26

Re: Appeal Nos. 25-049 & 25-050 @ 1077 Fell Street

Dear Commissioners:

At the hearing on 1/14/26, you requested the permit history for the permits that were recommenced under the permits that are the subject of Appeal Nos. 25-049 and 25-050. The details for the recommenced permits are set forth in the tables, below.

The appealed permits were properly issued under the Building Code:

- Both appealed permits recommenced work for permits that had expired (and work had not been completed). Therefore, DBI requests that both appeals be denied.

The legal authority for recommencement of work on permits expired due to work not completed is found in SFBC Sec 106A.4.4.2:

> **106A.4.4.2 Recommencement of work on permit expired due to work not completed.** An alteration permit shall be secured for the work not completed. See Section 110A, Table 1A-F – Specialty Permit Fees – for applicable fee to defray cost of certifying site conditions. The permit fee shall be based upon the valuation of the uncompleted work. When the permit is for completing the work as shown on the original approved plans, no additional plan review fee shall be required.

Note: I misspoke at the last Board meeting. All permits, once issued, are stand alone as far as their expiration dates, and even if revised at a later date. The permit being revised maintains it original expiration date and is not extended with the revision permit, which has its own expiration date.

The recommencement or extension of permits is for 360 days.

1-27-26

Appeal No. 25-049

Appealed Permit: PA# 2025-1114-9676 – Recommencement and completion of work approved under No. 2023-0426-6513 and 2023-0609-9711 (below).

- Permit application submitted: 11/14/25
- Permit issued: 11/14/25
- Permit expires: 11/10/26

Recommenced Permits:

PA# 2023-0426-6513: Work on lower unit, kitchen and bathroom remodel in kind, replace ceiling cans in kind (maintain 1-hour rated ceiling), upgrade one subpanel, plumbing as needed; no changes to wall layout, no structural work.

- Permit application submitted: 4/26/23
- Permit issued: 4/26/23
- Permit expired: 4/20/24
- Permit recommenced: 11/14/25

PA# 2023-0609-9711: Revision to PA#2023-0426-6513; layout change to existing bathroom and kitchen; replace two windows like for like and not visible from the street; upgrade lighting in kitchen and dining room.

- Permit application submitted: 6/9/23
- Permit issued: 7/12/23
- Permit expired: 7/6/24
- Permit recommenced: 11/14/25

1-27-26

Appeal No. 25-050

Appealed Permit: PA# 2025-1114-9677—Recommencement and completion of work approved under PA# 2023-0926-7475 and 2024-0517-2393.

- Permit application submitted: 11/14/25
- Permit issued: 11/14/25
- Permit expires: 11/10/26

Recommenced Permits:

PA# 2023-0926-7475—Revision to 2023-0609-9711; upgrade structural under dining room and bath, replace floor joists, new footing

- Permit application submitted: 9/26/23
- Permit issued: 9/26/23
- Permit Expired: 9/20/24
- Permit recommenced: 11/14/25

PA# 2024-0517-2393—Revision to 2023-0426-6513; existing bathroom layout changed, existing kitchen layout changed, addition-lighting upgrade whole unit; replace two windows, like to like, not visible from street, refer to PA # 2023-0609-9711 & 20230926-7475.

- Permit application submitted: 5/17/24
- Permit issued: 10/2/24
- Permit Expired: 9/27/25
- Permit recommenced: 11/14/25

Other permit:

1. **PA# 2025-0626-9586** (Subject of Appeal No. 25-029 which was decided on 9/3/25; Appeal Denied)
   Revisions for approved permit application 2024/0517/2393; structural work-approved plan set inaccurately showed the rear wall dimensions; new architectural/structural plans show correct dimensions; minor structural revision

Appeal No. 25-049

Permit No. 2025-1114-9676

25-049

1

Permit Details Report

Report Date: **1/26/2026 9:50:06 AM**

Application Number:	202511149676
Form Number:	8
Address(es):	0825 / 050 / 0 1077 FELL ST
Description:	Recommencement and completion of work approved under PA# 202304266513 and 202306099711.
Cost:	$31,000.00
Occupancy Code:	R-3
Building Use:	28 - 2 FAMILY DWELLING

Disposition / Stage:

Action Date	Stage	Comments
11/14/2025	TRIAGE	
11/14/2025	FILING	
11/14/2025	FILED	
11/14/2025	APPROVED	
11/14/2025	ISSUED	
11/17/2025	SUSPEND	Per BOA Appeal No.25-049

Contact Details:

Contractor Details:

License Number:	1059825
Name:	DOUGLASS BURROWS
Company Name:	VELOX CONSTRUCTION INC/VELOX DES & CONST
Address:	442 HAIGHT ST * SAN FRANCISCO CA 94117-0000
Phone:	

Addenda Details:

Description:

Station	Rev#	Arrive	Start	In Hold	Out Hold	Finish	Checked By	Review Result	Hold Description
BID-INSP		11/13/25	11/13/25			11/13/25	CHIU JONATHAN	Approved	
INTAKE		11/14/25	11/14/25			11/14/25	RAGASA MARIA	Administrative	
CPB		11/14/25	11/14/25			11/14/25	RAGASA MARIA	Administrative	

This permit has been issued. For information pertaining to this permit, please call 628-652-3450.

Appointments:

Appointment Date	Appointment AM/PM	Appointment Code	Appointment Type	Description	Time Slots

Inspections:

Activity Date	Inspector	Inspection Description	Inspection Status

Special Inspections:

Addenda No.	Completed Date	Inspected By	Inspection Code	Description	Remarks

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Station Code Descriptions and Phone Numbers

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Permit Details Report

Report Date: **1/26/2026 10:08:31 AM**

Application Number:	202304266513
Form Number:	8
Address(es):	0825 / 050 / 0 1077 FELL ST
Description:	WORK ON LOWER UNIT - KITCHEN AND BATH REMODEL IN KIND. REPLACE CEILING CANS IN KIND (MAINTAIN 1 HR RATED CEILING). UPGRADE (1) SUBPANEL- PLUMBING AS NEEDED. NO CHANGES TO FLOOR LAYOUT. NO CHANGES TO WALL LAYOUT. NO STRUCTURAL WORK.
Cost:	$55,000.00
Occupancy Code:	R-3
Building Use:	28 - 2 FAMILY DWELLING

Disposition / Stage:

Action Date	Stage	Comments
4/26/2023	TRIAGE	
4/26/2023	FILING	
4/26/2023	FILED	
4/26/2023	APPROVED	
4/26/2023	ISSUED	

Contact Details:

Contractor Details:

License Number:	1059825
Name:	DOUGLASS BURROWS
Company Name:	VELOX CONSTRUCTION INC/VELOX DES & CONST
Address:	442 HAIGHT ST * SAN FRANCISCO CA 94117-0000
Phone:	

Addenda Details:

Description:

Station	Rev#	Arrive	Start	In Hold	Out Hold	Finish	Checked By	Review Result	Hold Description
INTAKE		4/26/23	4/26/23			4/26/23	GLADNEY JACQULINE		
BLDG		4/26/23	4/26/23			4/26/23	SZETO DAVID		4/26/2023: APPROVED OTC, NO PLANS. KITCHEN AND BATH REMODEL IN KIND AT LOWER UNIT. NO CHANGES TO FLOOR LAYOUT. NO CHANGES TO WALL LAYOUT. NO STRUCTURAL WORK.
CPB		4/26/23	4/26/23			4/26/23	BROWN JANAE		

This permit has been issued. For information pertaining to this permit, please call 628-652-3450.

Appointments:

Appointment Date	Appointment AM/PM	Appointment Code	Appointment Type	Description	Time Slots

Inspections:

Activity Date	Inspector	Inspection Description	Inspection Status
10/19/2023	Paul Matthews	SITE VERIFICATION	START WORK
10/18/2023	Robert Power	START WORK	NO ENTRY/NO PROGRESS

Special Inspections:

Addenda No.	Completed Date	Inspected By	Inspection Code	Description	Remarks

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Permit Details Report

Report Date: **1/26/2026 10:08:52 AM**

Application Number:	202306099711
Form Number:	8
Address(es):	0825 / 050 / 0 1077 FELL ST
Description:	REVISION TO PA 202304266513 LAYOUT CHANGE TO (E) BATHROOM AND KITCHEN. REPLACE 2 WINDOWS (LIKE FOR LIKE & NOT VISIBLE FROM STREET). LIGHTING UPGRADE IN KITCHEN AND DINING ROOM
Cost:	$10,700.00
Occupancy Code:	R-3
Building Use:	28 - 2 FAMILY DWELLING

Disposition / Stage:

Action Date	Stage	Comments
6/9/2023	TRIAGE	
6/9/2023	FILING	
6/9/2023	FILED	
7/12/2023	APPROVED	
7/12/2023	ISSUED	

Contact Details:

Contractor Details:

License Number:	1059825
Name:	DOUGLASS BURROWS
Company Name:	VELOX CONSTRUCTION INC/VELOX DES & CONST
Address:	442 HAIGHT ST * SAN FRANCISCO CA 94117-0000
Phone:	

Addenda Details:

Description:

Station	Rev#	Arrive	Start	In Hold	Out Hold	Finish	Checked By	Review Result	Hold Description
INTAKE		6/9/23	6/9/23			6/9/23	PANGELINAN MARIANNE		
BLDG		6/9/23	6/9/23			6/9/23	SOENKSEN RICHARD		Approved OTC revision to PA#202304266513 Lay out change at Kitchen and Bathroom. 6/9/2023
MECH-E		6/9/23	6/9/23			6/9/23	MASCK ED		N/A
MECH		6/9/23	6/9/23			6/9/23	TAN (PETER) JIA JIAN		Approved OTC
CPB		6/9/23	6/9/23			7/12/23	CHAN CHENG		

This permit has been issued. For information pertaining to this permit, please call 628-652-3450.

Appointments:

Appointment Date	Appointment AM/PM	Appointment Code	Appointment Type	Description	Time Slots

Inspections:

Activity Date	Inspector	Inspection Description	Inspection Status

Special Inspections:

Addenda No.	Completed Date	Inspected By	Inspection Code	Description	Remarks

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Appeal No. 25-050

Permit No. 2025-1114-9677

25-050

Permit Details Report

Report Date: **1/26/2026 9:50:49 AM**

Application Number:	202511149677
Form Number:	8
Address(es):	0825 / 050 / 0 1077 FELL ST
Description:	Recommencement and completion of work approved under PA# 202309267475 and 202405172393.
Cost:	$32,000.00
Occupancy Code:	R-3
Building Use:	28 - 2 FAMILY DWELLING

Disposition / Stage:

Action Date	Stage	Comments
11/14/2025	TRIAGE	
11/14/2025	FILING	
11/14/2025	FILED	
11/14/2025	APPROVED	
11/14/2025	ISSUED	
11/17/2025	SUSPEND	Per BOA Appeal No. 25-050

Contact Details:

Contractor Details:

License Number:	1059825
Name:	DOUGLASS BURROWS
Company Name:	VELOX CONSTRUCTION INC/VELOX DES & CONST
Address:	442 HAIGHT ST * SAN FRANCISCO CA 94117-0000
Phone:	

Addenda Details:

Description:

Station	Rev#	Arrive	Start	In Hold	Out Hold	Finish	Checked By	Review Result	Hold Description
BID-INSP		11/13/25	11/13/25			11/13/25	CHIU JONATHAN	Approved	
INTAKE		11/14/25	11/14/25			11/14/25	RAGASA MARIA	Administrative	
CPB		11/14/25	11/14/25			11/14/25	RAGASA MARIA	Administrative	

This permit has been issued. For information pertaining to this permit, please call 628-652-3450.

Appointments:

Appointment Date	Appointment AM/PM	Appointment Code	Appointment Type	Description	Time Slots

Inspections:

Activity Date	Inspector	Inspection Description	Inspection Status

Special Inspections:

Addenda No.	Completed Date	Inspected By	Inspection Code	Description	Remarks

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Permit Details Report

Report Date: **1/26/2026 10:25:53 AM**

Application Number:	202309267475
Form Number:	8
Address(es):	0825 / 050 / 0 1077 FELL ST
Description:	REVISION TO 202306099711. UPGRADE STRUCTURAL UNDER DINING RM & BATH. REPLAC FLOOR JOISTS. OUR NEW FOOTING
Cost:	$15,000.00
Occupancy Code:	R-3
Building Use:	28 - 2 FAMILY DWELLING

Disposition / Stage:

Action Date	Stage	Comments
9/26/2023	TRIAGE	
9/26/2023	FILING	
9/26/2023	FILED	
9/26/2023	APPROVED	
9/26/2023	ISSUED	

Contact Details:

Contractor Details:

License Number:	1059825
Name:	DOUGLASS BURROWS
Company Name:	VELOX CONSTRUCTION INC/VELOX DES & CONST
Address:	442 HAIGHT ST * SAN FRANCISCO CA 94117-0000
Phone:	

Addenda Details:

Description:

Station	Rev#	Arrive	Start	In Hold	Out Hold	Finish	Checked By	Review Result	Hold Description
INTAKE		9/26/23	9/26/23			9/26/23	JINGJING LU	Administrative	
BLDG		9/26/23	9/26/23			9/26/23	LO JAMES	Approved	OTC PROJECT, APPROVED, PLANS HANDED TO APPLICANT.
CPB		9/26/23	9/26/23			9/26/23	LEE ERIC	Administrative	

This permit has been issued. For information pertaining to this permit, please call 628-652-3450.

Appointments:

Appointment Date	Appointment AM/PM	Appointment Code	Appointment Type	Description	Time Slots

Inspections:

Activity Date	Inspector	Inspection Description	Inspection Status

Special Inspections:

Addenda No.	Completed Date	Inspected By	Inspection Code	Description	Remarks
0			1	CONCRETE (PLACEMENT & SAMPLING)	
0			24E	WOOD FRAMING	
0			4	REINFORCING STEEL AND PRETRESSING TENDONS	reinforcing steel
0			2	BOLTS INSTALLED IN CONCRETE	

For information, or to schedule an inspection, call 628-652-3400 between 8:30 am and 3:00 pm.

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Permit Details Report

Report Date: **1/26/2026 10:26:18 AM**

Application Number:	202405172393
Form Number:	8
Address(es):	0825 / 050 / 0 1077 FELL ST
Description:	REV TO 202304266513; (E) BATHROOM LAYOUT CHANGED; (E) KITCHEN LAYOUT CHANGED; ADDITION - LIGHTING UPGRADE WHOLE UNIT; REPLACE 2-WINDOWS - LIKE TO LIKE, NOT VISIBLE FROM STREET. REF TO PA# 202306099711 & 202309267475
Cost:	$45,000.00
Occupancy Code:	R-3
Building Use:	28 - 2 FAMILY DWELLING

Disposition / Stage:

Action Date	Stage	Comments
5/17/2024	TRIAGE	
5/17/2024	FILING	
5/17/2024	FILED	
10/2/2024	APPROVED	
10/2/2024	ISSUED	

Contact Details:

Contractor Details:

License Number:	1059825
Name:	DOUGLASS BURROWS
Company Name:	VELOX CONSTRUCTION INC/VELOX DES & CONST
Address:	442 HAIGHT ST * SAN FRANCISCO CA 94117-0000
Phone:	

Addenda Details:

Description:

Station	Rev#	Arrive	Start	In Hold	Out Hold	Finish	Checked By	Review Result	Hold Description
INTAKE		5/17/24	5/17/24			5/17/24	BUFKA SUSAN	Administrative	
CP-ZOC		6/12/24	6/12/24			6/12/24	MAU ELIZABETH	Administrative	N/A - interior work only, increase in habitable space less than 800 sqft. No change to unit count. No work to the exterior. (E) garage space being converted to habitable space leaves a (N) garage that still meets dimensions of compact car.
CP-ZOC		7/15/24	7/15/24			7/15/24	OROPEZA EDGAR	Not Applicable	N/A E.O 7/15/2024
BLDG		7/15/24	7/15/24			7/15/24	CHAN PHILIP	Issued Comments	Comments OTC
BLDG	1	8/12/24	8/12/24			8/12/24	CHAN PHILIP	Approved	Approved OTC
MECH		8/12/24	8/12/24			8/12/24	GILMARTIN CHRISTIAN	Approved	OTC
BLDG		8/14/24	8/14/24			8/14/24	CHAN PHILIP	Approved	Approved OTC. EG-02
SFPUC		8/12/24	8/12/24			8/12/24	IMSON GRACE	Approved	08/12/2024 - APPROVED. Capacity Charge not applicable. No change in meter size, not enough fixtures added to warrant a larger meter. Route to MECH
SFFD		8/12/24	8/12/24			8/12/24	LY ROGER	Issued Comments	ISSUED COMMENT
SFFD	1	8/14/24	8/14/24			8/14/24	LY ROGER	Approved	APPROVED OTC PLANS WITH APPLICANT NO INSPECTION REQUIRED
CPB		10/2/24	10/2/24			10/2/24	SAPHONIA COLLINS	Administrative	

This permit has been issued. For information pertaining to this permit, please call 628-652-3450.

Appointments:

Appointment Date	Appointment AM/PM	Appointment Code	Appointment Type	Description	Time Slots
9/23/2025	AM	CS	Clerk Scheduled	ROUGH FRAME	1
8/22/2025	AM	CS	Clerk Scheduled	ROUGH FRAME	1
7/21/2025	PM	CS	Clerk Scheduled	SHEAR WALL	1
1 2					

Inspections:

Activity Date	Inspector	Inspection Description	Inspection Status
9/23/2025	David Lara Araiza	ROUGH FRAME	OTHER
8/22/2025	David Lara Araiza	ROUGH FRAME	SITE VERIFICATION
7/21/2025	Matthew Sum	SHEAR WALL	CANCELLATION FOR INSPECTION SCHEDULE
1 2			

Special Inspections:

Addenda No.	Completed Date	Inspected By	Inspection Code	Description	Remarks
0			1	CONCRETE (PLACEMENT & SAMPLING)	
0			4	REINFORCING STEEL AND PRETRESSING TENDONS	reinforcing steel
0			18A	BOLTS INSTALLED IN EXISTING CONCRETE	
0			24E	WOOD FRAMING	
0			19	SHEAR WALLS AND FLOOR SYSTEMS USED AS SHEAR DIAPHRAGMS	
0			20	HOLDOWNS	
0			24C	CONCRETE CONSTRUCTION	
0			18C	PULL/TORQUE TESTS PER SFBC SEC.1607C & 1615C	

For information, or to schedule an inspection, call 628-652-3400 between 8:30 am and 3:00 pm.

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Soumya, thank you for your thoughtful analysis.

I however disagree that Permit# 2025-0626-9586 be shown as expired. This permit is not pertinent to the permits being addressed at the Board of Appeals on Feb 11, 2026. This permit was appealed and heard on September 03, 2025, under appeal #25-029. The Board denied your appeal.

Regarding your assertion that revision permits expire when the original permit expires, I disagree. Per the language, the SFBC does not distinguish between the original permit or any revision permit affecting the same project. Therefore, all issued building permit expirations are determined by Table-B (see below) and the expiration dates are driven by the permit issuance date.

1.- The building code is clear in SFBC Sec. 106A.4.4. Permit expiration:
"Every permit issued by the Building Official under the provisions of this code, unless an extension of time has been specifically approved by the Building Official, shall expire by limitation and become null and void when the time allowed in Table B is reached, or when any of the following circumstances is applicable:

1. For Building Official-initiated code compliance permits, the work shall start within 30 days from the date of such permit.
2. If the building or work authorized is suspended or abandoned at any time after the work has started, for a period as follows:
   2.1. Thirty days for Building Official-initiated code compliance permits.
   2.2. One-hundred-eighty days for all other permits.
3. An extension of time from the stated periods may be permitted for good reason, provided such requests for an extension are submitted to the Building Official in writing prior to the end of the time period accompanied by payment of a fee. Unless approved by the Building Official, no more than one extension of time may be granted.
   3.1. For all other permits, see Table B – Maximum Time Allowed to Complete All Work Authorized by Building Permit. The maximum time allowed for Building Official-initiated code compliance permits shall be 12 months for all permits exceeding $25,000 total valuation.
4. A demolition permit shall expire 180 days after issuance. Only one extension of time of 180 days shall be granted upon written request to the Building Official, accompanied by payment of a fee. If there is a permit for a replacement structure, the demolition permit shall expire concurrently with the permit for that replacement structure.
5. The Building Official may administratively authorize the processing of applications involving compliance actions initiated by the Department, in a manner other than set forth in this code, so as to effect said compliance most expeditiously; provided, however, that due process is assured all applicants. In this regard, the Building Official may reduce the time periods set forth in this section as they apply to a second application and permit required by the Building Official to effect full compliance with this code and other applicable laws and regulations if by doing so code compliance would be more expeditiously accomplished.

EXCEPTION: In order to avoid repetitive filings and processing of applications to effect code compliance, the Building Official is hereby authorized to establish alternate procedures and extensions of time from cancellation pursuant to Section 106A .4.1 and from expiration pursuant to this section; provided, however, that the Building Official, in establishing alternate procedures and extension of time, shall proceed as expeditiously as possible toward abatement of the violations.

When a permit is issued but delayed due to actions before the Board of Appeals or other City agencies, or cases in any court of competent jurisdiction, or is under review by a State or regional regulatory body, the time allowable shall be computed from the date of the final action of the agency or court of jurisdiction."

TABLE B – MAXIMUM TIME ALLOWED TO COMPLETE ALL WORK AUTHORIZED BY BUILDING PERMIT

Valuation	Time Allowed (1)	Extension Limitation
$1.00 to $100,000	360 days	360 days
$100,001 to $2,499,999	1,080 days	720 days
$2,500,000 and above	1,440 days	720 days

2.- Per SFBC Sec. 106A.4.4.2, "**Recommencement of work on permit expired due to work not completed.** An alteration permit shall be secured for the work not completed. See Section 110A, Table 1A-F – Specialty Permit Fees – for applicable fee to defray cost of certifying site conditions. The permit fee shall be based upon the valuation of the uncompleted work. When the permit is for completing the work as shown on the original approved plans, no additional plan review fee shall be required.

The permits in question are to recommence work previously approved, no changes in scope are proposed. As such per the above language, the recommencement permits were issued for work not completed under the permits being recommenced, in compliance with the above provided code section.

I hope this provides some clarification.

Supplemental Brief Submitted by Appellant for the Hearing on March 4, 2026

Appellant's Brief Appeal Nos. 25-049 & 25-050

DBI has clarified that the permits under appeal were expired, consistent with my briefing. Therefore, the permits are properly in scope for BOA review. Now, Mr. Ospital asserts that the permits were issued correctly per SFBC §106A.4.4.2 as recommencements. Respectfully, that interpretation is also incorrect because §106A.4.4.2 applies only when the work is the fixed scope as shown on the original approved plans ("for completing the work as shown on the original approved plans"). These plans have been modified by 202506269586 and will be further modified by 202601123696. The record reflects that structural plans and calculations have changed, and additional engineering is under review. The project is not simply a continuation of previously approved plans. If, nevertheless, the BOA concludes §106A.4.4.2 can apply, the BOA should (1) clarify which approved plan set governs — pre- or post-Revision permit 202506269586, (2) clarify the role of 202601123696, and (3) confirm that the scope being recommenced matches that approved plan set.

DBI's structural manager Jimmy Cheung is currently reviewing the site engineering holistically, including new calculations and plans. We hope this will resolve many of the engineering concerns. As he is expected to finish this analysis soon and will ultimately provide a written statement, staying the decision until that process is complete is both prudent and will not result in a meaningful delay.

On January 14, President Trasviña rightly focused on Applicant's lack of cooperation since August 2025, despite explicit BOA requests and Applicant and team's statements under oath. Mr. Cheung noted the same. I had sent Applicant and team Mr. Cheung's request, though they suggested otherwise. Applicant shared new calculations and plans with DBI, but has not

provided me a courtesy copy, even though these plans and calculations may address some of the previous concerns and sharing would reduce DBI's workload. Transparency is essential. Continued piecemeal revisions without coordinated disclosure increases the likelihood of repeated appeals.

I respectfully request:

- A decision on the threshold issue of whether §106A.4.4.2 can apply at all when the approved plan set/scope is changing with 202506269586 and 202601123696.
- If §106A.4.4.2 does apply, specification on what plan set governs and confirmation that the scope being recommenced matches that approved plan set.
- Clarification on the record about President Trasviña several statements that expired permits do not benefit from previous inspections, including what that means in practical and legal terms.
- A statement that Applicant should provide structural plans and calculations to me and that the Board again recommend coordination between engineers before further permit action, including 202601123696. I request that DBI provide me and my engineer one opportunity to review and provide feedback before permit action proceeds.
- Clarification on what the expiration of the four permits in question means for Revision Permit 202506269586. My understanding is that a revision permit replaces sheets in the plan set, but has no independent life separate from the original permit. If that understanding is correct, then 202506269586 should also be treated as expired.

My goal is not delay, but a single comprehensive, code-conforming structural permit. I do not want to come before the BOA again appealing the next permit.

DOCUMENTS SUBMITTED FOR THE HEARING ON JANUARY 14, 2026

BOARD OF APPEALS, CITY & COUNTY OF SAN FRANCISCO

Appeal of
SOUMYA SASTRY,)
Appellant(s))
)
vs.)
)
DEPARTMENT OF BUILDING INSPECTION,)
PLANNING DEPARTMENT APPROVAL Respondent

Appeal No. **25-049**

NOTICE OF APPEAL

NOTICE IS HEREBY GIVEN THAT on November 17, 2025, the above named appellant(s) filed an appeal with the Board of Appeals of the City and County of San Francisco from the decision or order of the above named department(s), commission, or officer.

The substance or effect of the decision or order appealed from is the ISSUANCE on November 14, 2025 to Steven Huang, of an Alteration Permit (Recommencement and completion of work approved under PA# 202304266513 (work on lower unit-kitchen & bath remodel in kind; replace ceiling cans in kind (maintain one-hour rated ceiling); upgrade one subpanel-plumbing as needed; no changes to floor layout; no changes to wall layout; no structural work) and PA #202306099711 (revision to 202304266513 layout change to existing bathroom & kitchen; replace two windows (like for like and not visible from street); lighting upgrade in Kitchen and dining room)) at 1077 Fell Street.

APPLICATION NO. 2025/11/14/9676

FOR HEARING ON March 4, 2026

Address of Appellant(s):	Address of Other Parties:
Soumya Sastry, Appellant(s) 1075 Fell Street San Francisco, CA 94117	Steven Huang, Permit Holder(s) c/o Jefferson Jie Chen, Agent for Permit Holder(s) Enertia Designs 1167 Mission Street San Francisco, CA 94103

Date Filed: November 17, 2025

CITY & COUNTY OF SAN FRANCISCO
BOARD OF APPEALS

PRELIMINARY STATEMENT FOR APPEAL NO. 25-049

I / We, **Soumya Sastry**, hereby appeal the following departmental action: **ISSUANCE** of **Alteration Permit No. 2025/11/14/9676** by the **Department of Building Inspection** which was issued or became effective on: **November 14, 2025**, to: **Steven Huang,** for the property located at: **1077 Fell Street**.

BRIEFING SCHEDULE:

Appellant's Brief is due on or before: 4:30 p.m. on **December 24, 2025**, **(note, this is one day earlier than the Board's regular briefing schedule due to the Christmas holiday)**. The brief may be up to 12 pages in length with unlimited exhibits. It shall be double-spaced with a minimum 12-point font. An electronic copy shall be emailed to: boardofappeals@sfgov.org, julie.lamarre@sfgov.org, corey.teague@sfgov.org, Natalia.fossi@sfgov.org joseph.ospital@sfgov.org, thestevenhuang@gmail.com and Jefferson@enertiadesigns.net

Respondent's and Other Parties' Briefs are due on or before: 4:30 p.m. on **January 8, 2026**, **(no later than one Thursday prior to hearing date)**. The brief may be up to 12 pages in length with unlimited exhibits. It shall be doubled-spaced with a minimum 12-point font. An electronic copy shall be emailed to: boardofappeals@sfgov.org, julie.lamarre@sfgov.org, corey.teague@sfgov.org, Natalia.fossi@sfgov.org joseph.ospital@sfgov.org soumya.sastry@gmail.com

Hard copies of the briefs do NOT need to be submitted to the Board Office or to the other parties.

Hearing Date: **Wednesday, January 14, 2026, 5:00 p.m., Room 416 San Francisco City Hall, 1 Dr. Carlton B. Goodlett Place.** The parties are encouraged to attend in-person, but may also attend remotely via Zoom. Information for access to the hearing will be provided before the hearing date.

All parties to this appeal must adhere to the briefing schedule above, however if the hearing date is changed, the briefing schedule MAY also be changed. Written notice will be provided of any changes to the briefing schedule.

In order to have their documents sent to the Board members prior to hearing, **members of the public** should email all documents of support/opposition no later than one Thursday prior to hearing date by 4:30 p.m. to boardofappeals@sfgov.org. Please note that names and contact information included in submittals from members of the public will become part of the public record. Submittals from members of the public may be made anonymously.

Please note that in addition to the parties' briefs, any materials that the Board receives relevant to this appeal, including letters of support/opposition from members of the public, are distributed to Board members prior to hearing. All such materials are available for inspection on the Board's website at www.sfgov.org/boa. You may also request a hard copy of the hearing materials that are provided to Board members at a cost of 10 cents per page, per S.F. Admin. Code Ch. 67.28.

The reasons for this appeal are as follows:

See attachment to the Preliminary Statement of Appeal.

Appellant or Agent:

Signature: Via Email

Print Name: Soumya Sastry, appellant

Hello Julie and team,

I am the owner of 1075 Fell Street and the President of the 1075–1077 Fell Street HOA. The Association is appealing the issuance of permits 202511149676 and 202511149677.

1077 Fell has been performing construction without an active building permit and now requires renewal and revision permits. Despite the BOA's direction that the parties work together, 1077 Fell has not coordinated with the HOA regarding the content of these permits. Permit 202511149677, which renews permit 202405172393, is especially concerning. Additionally, the HOA paid for all of the structural work for 202405172393.

The HOA has a sworn declaration from a licensed structural engineer stating that the work referenced in permit 202405172393 should not have been approved by DBI in its original form. I am therefore concerned that DBI issued this renewal without requiring additional corrections.

The building permits under which 1077 Fell has been conducting work expired no later than September 2025. The Applicant and their contractors have continued construction despite knowing that no active building permit was in place. While these new permits appear intended to address some of the unpermitted work, the Applicant has a documented history of presenting inaccurate or misleading site conditions, which underscores the need for a pause and a coordinated review of all outstanding permits and required corrections.

Attached are the permit descriptions from the DBI website..

Permit Details Report

Report Date:	**1/5/2026 12:45:39 PM**
Application Number:	202511149676
Form Number:	8
Address(es):	0825 / 050 / 0 1077 FELL ST
Description:	Recommencement and completion of work approved under PA# 202304266513 and 202306099711.
Cost:	$31,000.00
Occupancy Code:	R-3
Building Use:	28 - 2 FAMILY DWELLING

Disposition / Stage:

Action Date	Stage	Comments
11/14/2025	TRIAGE	
11/14/2025	FILING	
11/14/2025	FILED	
11/14/2025	APPROVED	
11/14/2025	ISSUED	
11/17/2025	SUSPEND	Per BOA Appeal No.25-049

Contact Details:

Contractor Details:

License Number:	1059825
Name:	DOUGLASS BURROWS
Company Name:	VELOX CONSTRUCTION INC/VELOX DES & CONST
Address:	442 HAIGHT ST * SAN FRANCISCO CA 94117-0000
Phone:	

Addenda Details:

Description:

Station	Rev#	Arrive	Start	In Hold	Out Hold	Finish	Checked By	Review Result	Hold Description
BID-INSP		11/13/25	11/13/25			11/13/25	CHIU JONATHAN	Approved	
INTAKE		11/14/25	11/14/25			11/14/25	RAGASA MARIA	Administrative	
CPB		11/14/25	11/14/25			11/14/25	RAGASA MARIA	Administrative	

This permit has been issued. For information pertaining to this permit, please call 628-652-3450.

Appointments:

Appointment Date	Appointment AM/PM	Appointment Code	Appointment Type	Description	Time Slots

Inspections:

Activity Date	Inspector	Inspection Description	Inspection Status

Special Inspections:

Addenda No.	Completed Date	Inspected By	Inspection Code	Description	Remarks

For information, or to schedule an inspection, call 628-652-3400 between 8:30 am and 3:00 pm.

Station Code Descriptions and Phone Numbers

Online Permit and Complaint Tracking home page.

Technical Support for Online Services

If you need help or have a question about this service, please visit our FAQ area.

City and County of San Francisco © 2026

Permit Details Report

Report Date:	**1/5/2026 12:41:10 PM**
Application Number:	202304266513
Form Number:	8
Address(es):	0825 / 050 / 0 1077 FELL ST
Description:	WORK ON LOWER UNIT - KITCHEN AND BATH REMODEL IN KIND. REPLACE CEILING CANS IN KIND (MAINTAIN 1 HR RATED CEILING). UPGRADE (1) SUBPANEL- PLUMBING AS NEEDED. NO CHANGES TO FLOOR LAYOUT. NO CHANGES TO WALL LAYOUT. NO STRUCTURAL WORK.
Cost:	$55,000.00
Occupancy Code:	R-3
Building Use:	28 - 2 FAMILY DWELLING

Disposition / Stage:

Action Date	Stage	Comments
4/26/2023	TRIAGE	
4/26/2023	FILING	
4/26/2023	FILED	
4/26/2023	APPROVED	
4/26/2023	ISSUED	

Contact Details:

Contractor Details:

License Number:	1059825
Name:	DOUGLASS BURROWS
Company Name:	VELOX CONSTRUCTION INC/VELOX DES & CONST
Address:	442 HAIGHT ST * SAN FRANCISCO CA 94117-0000
Phone:	

Addenda Details:

Description:

Station	Rev#	Arrive	Start	In Hold	Out Hold	Finish	Checked By	Review Result	Hold Description
INTAKE		4/26/23	4/26/23			4/26/23	GLADNEY JACQULINE		
BLDG		4/26/23	4/26/23			4/26/23	SZETO DAVID		4/26/2023: APPROVED OTC, NO PLANS. KITCHEN AND BATH REMODEL IN KIND AT LOWER UNIT. NO CHANGES TO FLOOR LAYOUT. NO CHANGES TO WALL LAYOUT. NO STRUCTURAL WORK.
CPB		4/26/23	4/26/23			4/26/23	BROWN JANAE		

This permit has been issued. For information pertaining to this permit, please call 628-652-3450.

Appointments:

Appointment Date	Appointment AM/PM	Appointment Code	Appointment Type	Description	Time Slots

Inspections:

Activity Date	Inspector	Inspection Description	Inspection Status
10/19/2023	Paul Matthews	SITE VERIFICATION	START WORK
10/18/2023	Robert Power	START WORK	NO ENTRY/NO PROGRESS

Special Inspections:

Addenda No.	Completed Date	Inspected By	Inspection Code	Description	Remarks

For information, or to schedule an inspection, call 628-652-3400 between 8:30 am and 3:00 pm.

Station Code Descriptions and Phone Numbers

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Technical Support for Online Services

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Permit Details Report

Report Date:	**1/5/2026 12:44:15 PM**
Application Number:	202306099711
Form Number:	8
Address(es):	0825 / 050 / 0 1077 FELL ST
Description:	REVISION TO PA 202304266513 LAYOUT CHANGE TO (E) BATHROOM AND KITCHEN. REPLACE 2 WINDOWS (LIKE FOR LIKE & NOT VISIBLE FROM STREET). LIGHTING UPGRADE IN KITCHEN AND DINING ROOM
Cost:	$10,700.00
Occupancy Code:	R-3
Building Use:	28 - 2 FAMILY DWELLING

Disposition / Stage:

Action Date	Stage	Comments
6/9/2023	TRIAGE	
6/9/2023	FILING	
6/9/2023	FILED	
7/12/2023	APPROVED	
7/12/2023	ISSUED	

Contact Details:

Contractor Details:

License Number:	1059825
Name:	DOUGLASS BURROWS
Company Name:	VELOX CONSTRUCTION INC/VELOX DES & CONST
Address:	442 HAIGHT ST * SAN FRANCISCO CA 94117-0000
Phone:	

Addenda Details:

Description:

Station	Rev#	Arrive	Start	In Hold	Out Hold	Finish	Checked By	Review Result	Hold Description
INTAKE		6/9/23	6/9/23			6/9/23	PANGELINAN MARIANNE		
BLDG		6/9/23	6/9/23			6/9/23	SOENKSEN RICHARD		Approved OTC revision to PA#202304266513 Lay out change at Kitchen and Bathroom. 6/9/2023
MECH-E		6/9/23	6/9/23			6/9/23	MASCK ED		N/A
MECH		6/9/23	6/9/23			6/9/23	TAN (PETER) JIA JIAN		Approved OTC
CPB		6/9/23	6/9/23			7/12/23	CHAN CHENG		

This permit has been issued. For information pertaining to this permit, please call 628-652-3450.

Appointments:

Appointment Date	Appointment AM/PM	Appointment Code	Appointment Type	Description	Time Slots

Inspections:

Activity Date	Inspector	Inspection Description	Inspection Status

Special Inspections:

Addenda No.	Completed Date	Inspected By	Inspection Code	Description	Remarks

For information, or to schedule an inspection, call 628-652-3400 between 8:30 am and 3:00 pm.

Station Code Descriptions and Phone Numbers

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City and County of San Francisco © 2026

BOARD OF APPEALS, CITY & COUNTY OF SAN FRANCISCO

Appeal of
SOUMYA SASTRY,)
Appellant(s))
)
vs.)
)
DEPARTMENT OF BUILDING INSPECTION,)
PLANNING DEPARTMENT APPROVAL Respondent

Appeal No. **25-050**

NOTICE OF APPEAL

NOTICE IS HEREBY GIVEN THAT on November 17, 2025, the above named appellant(s) filed an appeal with the Board of Appeals of the City and County of San Francisco from the decision or order of the above named department(s), commission, or officer.

The substance or effect of the decision or order appealed from is the ISSUANCE on November 14, 2025 to Steven Huang, of an Alteration Permit (recommencement and completion of work approved under PA# 202309267475 (revision to 202306099711; upgrade structural under dining room & bathroom; replace floor joists, new footing) and PA #202405172393 (revision to 202304266513; existing bathroom layout changed; existing kitchen layout changed; addition-lighting upgrade whole unit; replace two windows like to like, not visible from street; refer to PA# 202306099711 & 202309267475)) at 1077 Fell Street.

APPLICATION NO. 2025/11/14/9677

FOR HEARING ON March 4, 2026

Address of Appellant(s):	Address of Other Parties:
Soumya Sastry, Appellant(s) 1075 Fell Street San Francisco, CA 94117	Steven Huang, Permit Holder(s) c/o Jefferson Jie Chen, Agent for Permit Holder(s) Enertia Designs 1167 Mission Street San Francisco, CA 94103

Date Filed: November 17, 2025

CITY & COUNTY OF SAN FRANCISCO
BOARD OF APPEALS

PRELIMINARY STATEMENT FOR APPEAL NO. 25-050

I / We, **Soumya Sastry**, hereby appeal the following departmental action: **ISSUANCE** of **Alteration Permit No. 2025/11/14/9677** by the **Department of Building Inspection** which was issued or became effective on: **November 14, 2025**, to: **Steven Huang,** for the property located at: **1077 Fell Street**.

BRIEFING SCHEDULE:

Appellant's Brief is due on or before: 4:30 p.m. on **December 24, 2025**, **(note, this is one day earlier than the Board's regular briefing schedule due to the Christmas holiday)**. The brief may be up to 12 pages in length with unlimited exhibits. It shall be double-spaced with a minimum 12-point font. An electronic copy shall be emailed to: boardofappeals@sfgov.org, julie.lamarre@sfgov.org, corey.teague@sfgov.org, Natalia.fossi@sfgov.org, joseph.ospital@sfgov.org, jefferson@enertiadesigns.net and thestevenhuang@gmail.com

Respondent's and Other Parties' Briefs are due on or before: 4:30 p.m. on **January 8, 2026**, **(no later than one Thursday prior to hearing date)**. The brief may be up to 12 pages in length with unlimited exhibits. It shall be doubled-spaced with a minimum 12-point font. An electronic copy shall be emailed to: boardofappeals@sfgov.org, julie.lamarre@sfgov.org, corey.teague@sfgov.org, Natalia.fossi@sfgov.org, joseph.ospital@sfgov.org, and soumya.sastry@gmail.com

Hard copies of the briefs do NOT need to be submitted to the Board Office or to the other parties.

Hearing Date: **Wednesday, January 14, 2026, 5:00 p.m., Room 416 San Francisco City Hall, 1 Dr. Carlton B. Goodlett Place.** The parties are encouraged to attend in-person but may also attend remotely via Zoom. Information for access to the hearing will be provided before the hearing date.

All parties to this appeal must adhere to the briefing schedule above, however if the hearing date is changed, the briefing schedule MAY also be changed. Written notice will be provided of any changes to the briefing schedule.

In order to have their documents sent to the Board members prior to hearing, **members of the public** should email all documents of support/opposition no later than one Thursday prior to hearing date by 4:30 p.m. to boardofappeals@sfgov.org. Please note that names and contact information included in submittals from members of the public will become part of the public record. Submittals from members of the public may be made anonymously.

Please note that in addition to the parties' briefs, any materials that the Board receives relevant to this appeal, including letters of support/opposition from members of the public, are distributed to Board members prior to hearing. All such materials are available for inspection on the Board's website at www.sfgov.org/boa. You may also request a hard copy of the hearing materials that are provided to Board members at a cost of 10 cents per page, per S.F. Admin. Code Ch. 67.28.

The reasons for this appeal are as follows:

See attachment to the Preliminary Statement of Appeal

Appellant or Agent:

Signature: Via Email

Print Name: Soumya Sastry, appellant

Hello Julie and team,

I am the owner of 1075 Fell Street and the President of the 1075–1077 Fell Street HOA. The Association is appealing the issuance of permits 202511149676 and 202511149677.

1077 Fell has been performing construction without an active building permit and now requires renewal and revision permits. Despite the BOA's direction that the parties work together, 1077 Fell has not coordinated with the HOA regarding the content of these permits. Permit 202511149677, which renews permit 202405172393, is especially concerning. Additionally, the HOA paid for all of the structural work for 202405172393.

The HOA has a sworn declaration from a licensed structural engineer stating that the work referenced in permit 202405172393 should not have been approved by DBI in its original form. I am therefore concerned that DBI issued this renewal without requiring additional corrections.

The building permits under which 1077 Fell has been conducting work expired no later than September 2025. The Applicant and their contractors have continued construction despite knowing that no active building permit was in place. While these new permits appear intended to address some of the unpermitted work, the Applicant has a documented history of presenting inaccurate or misleading site conditions, which underscores the need for a pause and a coordinated review of all outstanding permits and required corrections.

Attached are the permit descriptions from the DBI website..

Permit Details Report

Report Date:	**1/5/2026 12:54:07 PM**
Application Number:	202511149677
Form Number:	8
Address(es):	0825 / 050 / 0 1077 FELL ST
Description:	Recommencement and completion of work approved under PA# 202309267475 and 202405172393.
Cost:	$32,000.00
Occupancy Code:	R-3
Building Use:	28 - 2 FAMILY DWELLING

Disposition / Stage:

Action Date	Stage	Comments
11/14/2025	TRIAGE	
11/14/2025	FILING	
11/14/2025	FILED	
11/14/2025	APPROVED	
11/14/2025	ISSUED	
11/17/2025	SUSPEND	Per BOA Appeal No. 25-050

Contact Details:

Contractor Details:

License Number:	1059825
Name:	DOUGLASS BURROWS
Company Name:	VELOX CONSTRUCTION INC/VELOX DES & CONST
Address:	442 HAIGHT ST * SAN FRANCISCO CA 94117-0000
Phone:	

Addenda Details:

Description:

Station	Rev#	Arrive	Start	In Hold	Out Hold	Finish	Checked By	Review Result	Hold Description
BID-INSP		11/13/25	11/13/25			11/13/25	CHIU JONATHAN	Approved	
INTAKE		11/14/25	11/14/25			11/14/25	RAGASA MARIA	Administrative	
CPB		11/14/25	11/14/25			11/14/25	RAGASA MARIA	Administrative	

This permit has been issued. For information pertaining to this permit, please call 628-652-3450.

Appointments:

Appointment Date	Appointment AM/PM	Appointment Code	Appointment Type	Description	Time Slots

Inspections:

Activity Date	Inspector	Inspection Description	Inspection Status

Special Inspections:

Addenda No.	Completed Date	Inspected By	Inspection Code	Description	Remarks

For information, or to schedule an inspection, call 628-652-3400 between 8:30 am and 3:00 pm.

Station Code Descriptions and Phone Numbers

Online Permit and Complaint Tracking home page.

Technical Support for Online Services

If you need help or have a question about this service, please visit our FAQ area.

City and County of San Francisco © 2026

Permit Details Report

Report Date:	**1/5/2026 12:55:24 PM**
Application Number:	202309267475
Form Number:	8
Address(es):	0825 / 050 / 0 1077 FELL ST
Description:	REVISION TO 202306099711. UPGRADE STRUCTURAL UNDER DINING RM & BATH. REPLAC FLOOR JOISTS. OUR NEW FOOTING
Cost:	$15,000.00
Occupancy Code:	R-3
Building Use:	28 - 2 FAMILY DWELLING

Disposition / Stage:

Action Date	Stage	Comments
9/26/2023	TRIAGE	
9/26/2023	FILING	
9/26/2023	FILED	
9/26/2023	APPROVED	
9/26/2023	ISSUED	

Contact Details:

Contractor Details:

License Number:	1059825
Name:	DOUGLASS BURROWS
Company Name:	VELOX CONSTRUCTION INC/VELOX DES & CONST
Address:	442 HAIGHT ST * SAN FRANCISCO CA 94117-0000
Phone:	

Addenda Details:

Description:

Station	Rev#	Arrive	Start	In Hold	Out Hold	Finish	Checked By	Review Result	Hold Description
INTAKE		9/26/23	9/26/23			9/26/23	JINGJING LU	Administrative	
BLDG		9/26/23	9/26/23			9/26/23	LO JAMES	Approved	OTC PROJECT, APPROVED, PLANS HANDED TO APPLICANT.
CPB		9/26/23	9/26/23			9/26/23	LEE ERIC	Administrative	

This permit has been issued. For information pertaining to this permit, please call 628-652-3450.

Appointments:

Appointment Date	Appointment AM/PM	Appointment Code	Appointment Type	Description	Time Slots

Inspections:

Activity Date	Inspector	Inspection Description	Inspection Status

Special Inspections:

Addenda No.	Completed Date	Inspected By	Inspection Code	Description	Remarks
0			1	CONCRETE (PLACEMENT & SAMPLING)	
0			24E	WOOD FRAMING	
0			4	REINFORCING STEEL AND PRETRESSING TENDONS	reinforcing steel
0			2	BOLTS INSTALLED IN CONCRETE	

For information, or to schedule an inspection, call 628-652-3400 between 8:30 am and 3:00 pm.

Station Code Descriptions and Phone Numbers

Online Permit and Complaint Tracking home page.

Technical Support for Online Services

If you need help or have a question about this service, please visit our FAQ area.

City and County of San Francisco © 2026

Permit Details Report

Report Date: **1/5/2026 12:56:10 PM**

Application Number:	202405172393
Form Number:	8
Address(es):	0825 / 050 / 0 1077 FELL ST
Description:	REV TO 202304266513; (E) BATHROOM LAYOUT CHANGED; (E) KITCHEN LAYOUT CHANGED; ADDITION - LIGHTING UPGRADE WHOLE UNIT; REPLACE 2-WINDOWS - LIKE TO LIKE, NOT VISIBLE FROM STREET. REF TO PA# 202306099711 & 202309267475
Cost:	$45,000.00
Occupancy Code:	R-3
Building Use:	28 - 2 FAMILY DWELLING

Disposition / Stage:

Action Date	Stage	Comments
5/17/2024	TRIAGE	
5/17/2024	FILING	
5/17/2024	FILED	
10/2/2024	APPROVED	
10/2/2024	ISSUED	

Contact Details:

Contractor Details:

License Number:	1059825
Name:	DOUGLASS BURROWS
Company Name:	VELOX CONSTRUCTION INC/VELOX DES & CONST
Address:	442 HAIGHT ST * SAN FRANCISCO CA 94117-0000
Phone:	

Addenda Details:

Description:

Station	Rev#	Arrive	Start	In Hold	Out Hold	Finish	Checked By	Review Result	Hold Description
INTAKE		5/17/24	5/17/24			5/17/24	BUFKA SUSAN	Administrative	
CP-ZOC		6/12/24	6/12/24			6/12/24	MAU ELIZABETH	Administrative	N/A - interior work only, increase in habitable space less than 800 sqft. No change to unit count. No work to the exterior. (E) garage space being converted to habitable space leaves a (N) garage that still meets dimensions of compact car.
CP-ZOC		7/15/24	7/15/24			7/15/24	OROPEZA EDGAR	Not Applicable	N/A E.O 7/15/2024
BLDG		7/15/24	7/15/24			7/15/24	CHAN PHILIP	Issued Comments	Comments OTC
BLDG	1	8/12/24	8/12/24			8/12/24	CHAN PHILIP	Approved	Approved OTC
MECH		8/12/24	8/12/24			8/12/24	GILMARTIN CHRISTIAN	Approved	OTC
BLDG		8/14/24	8/14/24			8/14/24	CHAN PHILIP	Approved	Approved OTC. EG-02
SFPUC		8/12/24	8/12/24			8/12/24	IMSON GRACE	Approved	08/12/2024 - APPROVED. Capacity Charge not applicable. No change in meter size, not enough fixtures added to warrant a larger meter. Route to MECH
SFFD		8/12/24	8/12/24			8/12/24	LY ROGER	Issued Comments	ISSUED COMMENT
SFFD	1	8/14/24	8/14/24			8/14/24	LY ROGER	Approved	APPROVED OTC PLANS WITH APPLICANT NO INSPECTION REQUIRED
CPB		10/2/24	10/2/24			10/2/24	SAPHONIA COLLINS	Administrative	

This permit has been issued. For information pertaining to this permit, please call 628-652-3450.

Appointments:

Appointment Date	Appointment AM/PM	Appointment Code	Appointment Type	Description	Time Slots
9/23/2025	AM	CS	Clerk Scheduled	ROUGH FRAME	1
8/22/2025	AM	CS	Clerk Scheduled	ROUGH FRAME	1
7/21/2025	PM	CS	Clerk Scheduled	SHEAR WALL	1
1 2					

Inspections:

Activity Date	Inspector	Inspection Description	Inspection Status
9/23/2025	David Lara Araiza	ROUGH FRAME	OTHER
8/22/2025	David Lara Araiza	ROUGH FRAME	SITE VERIFICATION
7/21/2025	Matthew Sum	SHEAR WALL	CANCELLATION FOR INSPECTION SCHEDULE
1 2			

Special Inspections:

Addenda No.	Completed Date	Inspected By	Inspection Code	Description	Remarks
0			1	CONCRETE (PLACEMENT & SAMPLING)	
0			4	REINFORCING STEEL AND PRETRESSING TENDONS	reinforcing steel
0			18A	BOLTS INSTALLED IN EXISTING CONCRETE	
0			24E	WOOD FRAMING	
0			19	SHEAR WALLS AND FLOOR SYSTEMS USED AS SHEAR DIAPHRAGMS	
0			20	HOLDOWNS	
0			24C	CONCRETE CONSTRUCTION	
0			18C	PULL/TORQUE TESTS PER SFBC SEC.1607C & 1615C	

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BRIEF SUBMITTED BY THE APPELLANT(S)

APPELLANT'S BRIEF FOR APPEALS 25-049 AND 25-050

This appeal concerns PA# 202511149676 and 202511149677 which together aim to allow recommencement and completion of work approved under PA# 202304266513, 202306099711, 202309267475 and 202405172393.

Under SFBC §106A.3, DBI may issue a permit only when the plans on file are sufficiently clear to demonstrate compliance with code requirements. In this case, two licensed Structural Engineers found that the project in the 7 interconnected permits is not code compliant. Appellant's structural engineer, Detlev Doring, S.E stated, under penalty of perjury, "**the structure as designed and currently permitted does not meet applicable code requirements. The design is potentially dangerous, incomplete, and borders on negligence.**" (See Attachment A, pg. 1-8, Doring Declaration) These concerns were discussed in Appeal 25-029 on PA# 202506269586. In the re-hearing discussion, the BOA directed DBI to review Mr. Doring's findings and DBI committed to doing so in follow-up emails. However, DBI did not do this review prior to issuing 202511149676 and 202511149677. Appellant therefore seeks conditioning or revocation of permits 202511149676 and 202511149677 until DBI completes the structural review and discusses this review with Appellant's engineer.

Appellant is Soumya Sastry, owner of 1075 Fell street and the President of the 1075-1077 Fell Street Homeowner's Association. The structural work in the above listed permits is on HOA property and not solely within the 1077 Unit (defined in the CC&Rs) though the structural permit (202405172393) was pulled on 1077 Fell merely for the original contractor's logistical convenience. The HOA paid for 100% of the structural work on 202405172393 and has the obligation to ensure that this work meets the seismic intent and is code compliant.

Building permits on 1077 Fell:

Permit	Status	Description from Website
202304266513	Expired	WORK ON LOWER UNIT - KITCHEN AND BATH REMODEL IN KIND. REPLACE CEILING CANS IN KIND (MAINTAIN 1 HR RATED CEILING). UPGRADE (1) SUBPANEL- PLUMBING AS NEEDED. NO CHANGES TO FLOOR LAYOUT. NO CHANGES TO WALL LAYOUT. NO STRUCTURAL WORK.
202306099711	Expired	REVISION TO PA 202304266513 LAYOUT CHANGE TO (E) BATHROOM AND KITCHEN. REPLACE 2 WINDOWS (LIKE FOR LIKE & NOT VISIBLE FROM STREET). LIGHTING UPGRADE IN KITCHEN AND DINING ROOM
202309267475	Expired	REVISION TO 202306099711. UPGRADE STRUCTURAL UNDER DINING RM & BATH. REPLAC FLOOR JOISTS. OUR NEW FOOTING
202405172393 (included HOA work)	Expired, Corrections Required	REV TO 202304266513; (E) BATHROOM LAYOUT CHANGED; (E) KITCHEN LAYOUT CHANGED; ADDITION - LIGHTING UPGRADE WHOLE UNIT; REPLACE 2-WINDOWS - LIKE TO LIKE, NOT VISIBLE FROM STREET. REF TO PA# 202306099711 & 202309267475
202506269586	In Effect, Corrections Required	REVISIONS FOR APPROVED PA 202405172393: structural work - this approved plan set inaccurately showed rear wall dimensions. New arch/structural plan show correct dimensions. Minor structural revision.
202511149676	Suspended	Recommencement and completion of work approved under PA# 202304266513 and 202306099711.
202511149677	Suspended	Recommencement and completion of work approved under PA# 202309267475 and 202405172393.

BOA'S PREVIOUS DIRECTION AND DBI'S INTENT TO REVIEW

On **October 8, 2025,** the BOA encouraged the parties and DBI to review the calculations provided by Mr. Doring. Attachment B has the meeting minutes (PDF pg 211). On **October 9, 2025,** Appellant emailed Applicant, contractors, and the Engineer of Record, Enertia, a package including Detlev Doring, SE's September 16, 2025 stamped calculations showing multiple code failures and Chiawang Yeh, SE's redlined October 2024 comments on the 2024 plan and calculations.

On **October 15, 2025**, DBI Structural Review Manager Jimmy Cheung sent Appellant (with Applicant's engineer BCC'd) an email acknowledging the BOA's 10/8 direction and asking Appellant to coordinate with Applicant on the new permit needed. DBI stated they would "review the project's permitted scopes of work holistically." (Attachment C, PDF pg. 213). Appellant forwarded this email to Applicant's team requesting a coordinated plan forward (Attachment C, PDF pg. 213). Applicant has not responded as of writing to these emails.

On **November 3, 2025, DBI's Jimmy Cheung stated that part of the holistic review of the project would include the level of "lateral strengthening or seismic upgrade required based on the area of work" (**Attachment C, PDF pg. 215). Despite this plan for a holistic review, on **November 14, 2025**, the DBI issued the two new building permits at issue in this appeal without any such holistic review.

THE CODE FOR PERMIT ISSUANCE:

Based on discussions with DBI, DBI distinguishes between different types of building permits: original building permits, "renewal" permits, and "revision" permits. However, the code does not support issuing *any* type of new building permit when the permit does not conform to code. Below are relevant code sections:

- SFBC 106A.3.3 requires plans that are of sufficient clarity to show conformance to code and all relevant laws, ordinances, rules and regulations. Information required may include "Structural plans and calculations detailing all components of the vertical load carrying system," "Structural plans and calculations detailing all elements of the lateral force resisting system," and "All other information necessary for determining compliance with applicable codes and regulations."
- 106A.3.8 states DBI shall disapprove applications that do not meet code.

- 106A.4.4.2 covers recommencement of work on permit expired due to work not completed as shown on the original approved plans (a.k.a renewal permits).
- 106A.4.7 covers separate permits required for alteration when an approved permit has been issued, including: "Construction differing from the approved construction documents sufficiently to require revised plans or additional plans to be submitted to the Department for approval." (revision permits)
- 106A.4.5 Suspension or revocation, the DBI may suspend or revoke a permit when the permit was issued based on incorrect information supplied or does not meet code.

The building code directly says that (1) applications must demonstrate compliance on their face; (2) non-compliant applications must be disapproved; and (3) permits issued in error or on incorrect/incomplete information may be suspended or revoked. A "renewal" permit issued per 106A.4.4.2 may not be issued if the underlying plans do not conform to 106A.3.3.

THESE RULES MAKE THE NOVEMBER PERMITS IMPROPER

The November permits violate these code provisions: Appellant has provided extensive documentation about site conditions and concerns from two licensed Structural Engineers, including stamped documents and a declaration under penalty of perjury, that 202405172393 (and therefore, these currently appealed permits) were not sufficiently clear to show conformance to code. Now, existing conditions not on 202405172393 include the worsened front lateral irregularity, the dry rot found during construction, the rough opening not in the original plans, and the brick chimney in the middle of one the shear walls.

DBI intends to review the engineering concerns, including the front lateral irregularity, the lack of seismic calculations at the back, the diaphragm ties, and additional hold-downs

required. **DBI has already directed Applicant on at least 3 occasions to provide a revision permit.**

DBI renewed the permits via SFBC §106A.4.4.2's simplified renewal process, but this code section should not apply when there are materially different site conditions, meaning that the work may not proceed as shown on the original approved plans. Here, the DBI has already called for a separate revision permit under §106A.4.7.

Therefore, the logical, lawful path is to require revised plans and a new, code-compliant review, not a "renewal" that treats a non-conforming job as if it still matched the original approval. Otherwise, the DBI has issued permits that have bypassed code requirements and do not conform to site conditions.

ENGINEERING FINDINGS AND REQUESTED CORRECTIONS:

The HOA signed up for a voluntary Seismic Upgrade, but the Engineer of Record, Enertia, or Appellant's contractor submitted the plans to the DBI under the lesser "Voluntary Strengthening" standard. Mr. Doring and Chiawang Yeh, SE found multiple life-safety concerns with the structural work of the permits above as described in Attachment A (Doring Declaration), with supporting stamped calculations showing code failure, under both Seismic Upgrade and Voluntary Strengthening classifications (Exhibit 7 of Doring's Declaration in Attachment A, PDF pg. 118- 148). Based on the extent of construction, Mr. Doring further concluded that the construction scope appears to meet the criteria for a Substantial Structural Alteration (SSA) under SFEBC §503.13. DBI must review whether this work meets Substantial Structural Alteration definition, which would require different permit review standards.

All members of Applicants' team have known about engineering critiques since October-November of 2024, with Doring's stamped calculations since October 2025. We have received no written response from the Engineer of Record, so we do not know if we are aligned on any solution.

Based on discussions with Mr. Doring, what is required to fix the problems is straightforward and would have been accomplished with less time and money than has been expended to date fighting the concerns. The fixes include:

- Additional hold-downs at Lines B and D
- Drag struts/ Diaphragm ties at various locations, especially at Line D
- Strengthening at Line A to address the irregularity
- Lengthening the concrete footing at Line E or some other method to address overturning forces.
- Corrected calculations with actual site conditions (heights, beams)

NOW IS THE OPPORTUNITY TO ADDRESS ERRORS IN THE 2024 PERMIT (202405172393)

DBI's previous statements on process underscore that the current permit on appeal is the appropriate time to address the engineering criticisms. On September 3, 2025, DBI official Joe Ospital stated that the comments from Chiawang Yeh, SE were on PA 202405172393 and, therefore, not relevant to the September 3 appealed permit (202506269586). However, they are relevant to these current appeals, which are for new building permits (202511149676 and 202511149677) addressing exactly the plans Mr. Yeh critiqued.

Furthermore, based on Mr. Ospital's statements and our experience with 202506269586, revision permits do not entail all original calculations nor do they address the code non-compliance of the original calculations. They narrowly address only the correction. For example, the calculations for 202506269586 were only a narrow subset of 202405172393.

In October 2025, Applicant resumed intense construction activities. While 202506269586 was valid, 202405172393 expired on September 27, 2025. Given the limited work covered under 202506269586, most of the work done in October- November was done on an expired permit (Attachment E, PDF pg 220). On November 6, 2025, Appellant discussed this with Mr. Lara Araiza, who stated, while he did not believe a stop work order was necessary because of any imminent danger, that he would not continue the unpermitted work if he were Applicant's team.

On October 28 and November 3, 2025, Applicant's construction team was onsite, and Velox expressed concern that installing hold-downs at Line D would be difficult because the shearwall nailing had already been completed, and that plumbing would obstruct additional hold-downs at Line B. Certain solutions to structural code deficiencies are hindered by advancing construction or concealed by finish work.

On November 18 and December 2, 2025, Applicant held site inspections with David Lara Araiza, both of which resulted in corrections notices (Attachment D, PDF pg. 217-218). Mr. Lara Araiza had already told Applicant about required corrections on September 23, 2025. Mr. Lara Araiza has stated that Applicant nailed over uninspected work and that the floor had been nailed down despite no insulation inspection, which is not the norm. Applicant's team asked if a letter from an engineer would serve instead of a new permit for at least one item.

The BOA was clear in its direction to the DBI to review Mr. Doring's findings. **Given that (1) it appears a revision permit may have a fraction of calculations of the original**

permit, (2) no revision calculations have been provided in 6 months, (3) Applicant's team has a history of undertaking construction before a properly issued permit is in hand, and (4) Applicant has stated that no further structural work exists, it is appropriate for the DBI to follow the BOA's direction now, and not at some nebulous time in the future.

CONCLUSION & RELIEF REQUESTED

Just as with Appeal 25-029, Appellant's goal is that all parties cooperate to establish **one** comprehensive and safe permit versus piece-meal permitting.

DBI asked for corrections multiple times and expects a revision permit. DBI has committed to reviewing lateral strengthening and code concerns. A reasonable reading of DBI's responsibilities in this situation would conclude that the present permit sets (202511149676 and 202511149677) should not be treated as an administrative extension since the plans and calculations are not code compliant. DBI should perform its review of code compliance, including the Substantial Structural Alteration calculation, now, and not some unknown time in the future. Appellant requests that the results of this review be discussed with Mr. Doring to ensure understanding of DBI's analysis and prevent further misunderstandings about the site. Appellant requests that the Board suspend, condition, or revoke permits 202511149676 and 202511149677 pending completion of this review.

Attachments

- Attachment A- Declaration of Detlev Doring, SE and accompanying Exhibits 1-14
    - Exhibit 7 to Attachment A: Doring's stamped calculations showing code failure
- Attachment B- October 8, 2025 BOA minutes
- Attachment C- Emails with DBI on holistic strucutral review
- Attachment D - Corrections status
- Attachment E- Job card with 9/27/25 expiration

Attachment A

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Attorneys for Plaintiff,
SOUMYA SASTRY

SAN FRANCISCO SUPERIOR COURT

SOUMYA SASTRY, Plaintiff, vs. STEVEN HUANG, and Does 1-10, inclusive Defendant.	Case No.: **DECLARATION OF DETLEV DORING IN SUPPORT OF MOTION FOR TEMPORARY RESTRAINING ORDER** Date: December 8, 2025 Time: 9:00 a.m. Dept. 501

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I, Detlev Doring, declare as follows.

1. I have personal knowledge of the following facts, and I would testify truthfully thereto if called to do so.

2. I am a Structural Engineer (S 3634) licensed in the State of California with 45 years' experience. I am principal of Detlev P. Doring S.E., Inc. I began my career at H.J. Brunnier Associates (San Francisco) in 1975; served as Vice President 1997–2001; and founded Detlev P. Doring S.E., Inc. in 2001. During my career, my focus has been on commercial, industrial and residential wood framed buildings. A copy of my resume is attached as "**Exhibit 1**."

3. I have extensive expertise in seismic evaluation and strengthening of buildings, with projects including the United Airlines Maintenance Base, the Chronicle Building, Bechman Instruments, Laguna Honda Hospital, 315 Montgomery Street (32 stories) and One California Street (32 stories).

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Project Review

4. I was retained by the 1075–1077 Fell Street HOA and Soumya Sastry to review structural work at 1075–1077 Fell Street. Based on my review of Enertia Design's 2024/2025 plans and calculations for Permits 2025 0626 9586 and 2024 0517 2393, my own calculations and code review, and a site visit, the project—approved as a voluntary upgrade—includes elements that fail structural code and do not comply with the SFEBC. My review included:

(a) 2024 independent comments on Enertia Design's March 12, 2024 calculations and structural plans from Chiawang Yeh, S.E., true and correct copies of which are attached hereto as "**Exhibit 2**" and **Exhibit 3**."

(b) The architectural plans contained in the 2024 building permit, a true and correct copy of which is attached hereto as "**Exhibit 4**."

(c) Enertia's May 27, 2025 calculations and updated plans (true and correct copies of which are attached hereto as "**Exhibit 5**" and "**Exhibit 6**.")

(d) Site visit on August 8, 2025

(e) My own calculations of structural elements at the site using actual site measurements: Engineering check AP # 0825-50 September 16, 2025 (a true and correct copy of which is attached hereto as "**Exhibit 7**.")

5. Based on the above and as more specifically set forth below, it is my opinion Enertia's plans do not address the vertical structural irregularity currently present in the building; they strengthened the structure in an unbalanced way without considering resulting stiffness redistribution, and they neglect design of code required load paths (e.g., drag struts, foundations, collectors). Due to the extent of work that has been done at the site under the Enertia 2024 and 2025 plans, the scope triggers a Substantial Structural Alteration (SFEBC 503.13). This, as further explained in comment 11 below, means that the lateral load-resisting system of the Enertia design needs to satisfy the requirements of Section 1613 (Seismic Load) of the California Building Code. However, even if this work did not trigger this particular code section, other code sections also required Enertia to address this irregularity. The conclusions below are highlights and are not intended to be an exhaustive list. These are life safety concerns that should be corrected now, while walls are open and accessible.

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Simpson Strong Wall Overturning Forces:

6. Enertia's Plans include a new Simpson Strong Wall at Line E which is supported on a new concrete footing. Code requires that this footing is designed for all code forces including earthquake forces. Enertia's calculations (**Exhibit 2 Calc. Sh. 27**) omitted the earthquake forces from the footing design and no calculations for the two other new shear wall footings were provided. **Exhibit 2** Calc. Sh. 15 show incorrect floor heights of 9 feet when architectural drawings show them at 11 ft. **Exhibit 3** Sh. S2 contains Chiawang Yeh's comment that the architectural elevation does not match the calculation and the strong wall height needs to be verified. **Exhibit 5** Calc. Sh. 10 and Sh. 13 show the 2025 calculations still use incorrect floor heights of 8 feet.

7. My calculations show that with earthquake forces included, the newly constructed footing will fail during a code level earthquake (**See Exhibit 7 Fn 6-15**). To make the new footing comply with code, it would need to be 16 ft long instead of the 12 ft provided. This footing should be modified to satisfy the code requirements.

Missing Shear wall at Line A

8. Because of the in-plane discontinuous in vertical lateral force resisting element at Line A, an irregularity per ASCE 12.3.2 exists. CEBC 503.13 requires that irregularities are addressed even in voluntary lateral load-resisting system alterations. The calculations submitted by Enertia include 5 lines of lateral load resistance in the short direction, including a 4-ft shear wall at Line A (See **Exhibit 2** Calc. Sh. 15 and **Exhibit 5** Calc. Sh. 13). In contrast, the drawings show 4 lines of resistance in the short and 2 lines in the long direction of the building (See **Exhibit 3** Sh. S2 and **Exhibit 6** Sh. S2). The drawings omitted the shear wall along Line A, keeping the vertical irregularity and making it worse by stiffening the building close to this wall.

> **CEBC 503.13 Voluntary lateral force-resisting system alterations.** Structural alterations that are intended exclusively to improve the lateral force-resisting system and are not required by other sections of this code shall not be required to meet the requirements of Section 1609 or 1613 of the California Building Code, provided that all of the following apply:
>
> 1. The capacity of existing structural systems to resist forces is not reduced.

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2. New structural elements are detailed and connected to existing or new structural elements as required by the California Building Code for new construction.

3. New or relocated nonstructural elements are detailed and connected to existing or new structural elements as required by the California Building Code for new construction.

4, The alterations **do not create a structural irregularity** as defined in ASCE 7 or **make an existing structural irregularity more severe.**

9. Enertia has provided several reasons why they did not need to address Line A. First, based on our conversation on August 8, 2025, an email shared by Ms. Sastry, and Mr. Huang's Board of Appeals briefing (true and correct copies of which are attached hereto as "**Exhibit 8**" pg. 2 Tues. April 29, 2025 at 9:06 am and "**Exhibit 9**" pg. 6 item 1.b), Enertia stated that the front wall was not touched and is therefore outside the scope of their work. As can be seen by the definition of a Voluntary Lateral Force Resisting System Alteration above, this is specifically prohibited by item 4, because by strengthening 80% of the lower story, stiffness was redistributed making the condition at the front worse.

10. Second, Enertia mentions that the redundancy factor roe shows that the shear wall along Line B can resist the forces from Line A. (See **Exhibit 9**, page 6). The redundancy factor Roe needs to be applied to the earthquake force for the entire building in seismic zone D if the building is irregular. Roe is not a pick and choose factor. My calculations based on Enertia's forces (**Exhibit 7 Calcs. Sh. L5**) show that the wall at Line B is failing if the force from Line A is transferred back to Line B. The cantilever diaphragms also need to be modeled as rigid or semi-rigid per Special Design Provisions for Wind and Seismic 4.2.5.2 item 3. However, this building was analyzed as a flexible diaphragm.

Substantial Structural Alteration

11. Enertia listed their Plans as "Voluntary Strengthening" (See **Exhibit 3** Sh. S1.0 and **Exhibit 6** Sh. S1.0). Enertia obtained a permit for the "Voluntary Strengthening" work. I am not aware of any building code section that allows to arbitrarily add shear walls to a building without considering its effects. CEBC 503.13 provides requirements for voluntary strengthening which were not followed,

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in particular, item 2 and 4 of CEBC 503.13.

12. This 1890 building has never previously been seismically upgraded despite having undergone several alterations, including an entire lower unit addition and the front garages. This current remodel involved a down to the studs gutting of 1077 Fell, altered floor joists of 1075 Fell, altered 1077 Fell floor joists, moving of stairs, and alteration of load bearing structures. (See true and correct copies of photos attached hereto in "**Exhibit 10**" and **Exhibit 4**, A-1.01**, Exhibit 3**, Sh. S-2, and **Exhibit 6**, Sh. S-2). This means that the current project may be a "Substantial Structural Alteration."

Definitions:

SFEBC 202 Definition of Substantial Structural Alteration: An alteration in which the gravity load-carrying structural elements altered **since the original construction** support more than 30 percent of the total floor and roof area of the building or structure. The areas to be counted toward the 30 percent shall include mezzanines, penthouses, and in-filled courts and shafts tributary to the altered structural elements.

SFEBC 503.11 Substantial structural alteration. Where work involves a substantial structural alteration, the lateral load-resisting system of the altered building shall satisfy the requirements of Sections 1609 and 1613 of the San Francisco Building Code. Reduced seismic forces shall be permitted.

Exceptions:

1. Buildings of Group R occupancy with not more than five dwelling or sleeping units used solely for residential purposes that **are altered based on the conventional light-frame construction methods** of the San Francisco Building Code.

2. Where the intended alteration involves only the lowest story of a building and Section 506 does not apply, only the lateral load resisting components in and below that story need comply with this section.

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13. Mr. Huang's response to Ms. Sastry's appeal of Enertia's permit, included assertions from an Architect by the name of Tom Biggs (who is not a licensed engineer). He concluded that CEBC 503.11 above does not apply because of Exemption 1 (See a true and correct copy of Bigg's letter as included in Mr. Huang's briefing attached hereto in "**Exhibit 11**"). Mr. Biggs did not read the entire Exemption however, because it states that the work being done needs to be based on the Conventional Construction section of the California Building Code. The engineering analysis and shear wall strengthening for this project are not based on that section. The Conventional Construction section is a prescriptive non-calculation section. The conventional construction section is also limited to buildings of 1 story in San Francisco's Seismic Zone D. In any case, if an Engineer chooses to analyses a building for earthquake forces, he needs to follow CEBC 503.13.

Perforated Shear wall at Line D:

14. Enertia's 2024 Plans showed a window at Line D. (See **Exhibit 3 Sh. S2**) However, the contractors cut an opening for a 3'-6" x 8'-3" door opening in the wall. (See "**Exhibit 12**"). Enertia was required to address this opening size in the 2025 Plans, but Enertia did so incorrectly. The calculations by Enertia used a program called EnerCalc, which I also use. Enertia did not include the horizontal earthquake load in this program. Horizontal earthquake forces tip (overturning) walls over unless they are properly anchored to the floor. I included the earthquake forces in my calculations and found that the solid wall panels on each side of the door jamb require a hold-down (See **Exhibit 7** at P2). Without these hold-down anchors, the perforated shear wall potentially fails and tips over.

15. The section 8/S3 on Enertia's structural drawings do not show the correct conditions. The shear wall is shown to sit on the floor, but in reality it extends past the floor 15 inches or so and sits directly on the new footing. This makes the shear wall taller and changes the overturning forces. (See **Exhibit 6** Section 8 on S-3)

North South Shear Walls

16. Enertia's plans shows shear walls in the N–S (Long) direction also, but do not provide any calculations for these walls (See **Exhibit 6** Sh. S-2 and **Exhibit 5** Calc. Sh. 12 and 13 N-S only). If earthquake and wind forces are calculated, as they are in these permits, the building code (CEBC 503.13, Item 2) requires that the shear walls and related structural elements be designed for these

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forces. These include overturning forces and anchorage to existing or new concrete, drag struts among other things. Therefore, calculations are required.

Cantilever Floor Connections

17. The 1075 Fell residence continues over a shared deck, protruding over and supported by the Simpson Strongwall at Line E. Based on conversations and pictures shared by Ms. Sastry, significant dry rot existed in beams supporting the elevated structure at the rear between Lines D and E, where this cantilevered floor joined the main building structure at Line D. I saw evidence of the dry rot repair during my site visit. (See true and correct copies of photos attached hereto in "**Exhibit 13.**") Ms. Sastry shared an Enertia field sketch of the repair with me (a true and correct copy is attached hereto in "**Exhibit 14**.") However, such repairs require calculations and details verifying their adequacy per CEBC 105.2.2 below.

> **CEBC 105.2.2 Repairs**. Application or notice to the code official is not required for repairs to structures and items listed in Section 105.2 provided that such repairs do not include any of the following:
>
> 1. **The cutting away of any wall, partition or portion thereof.**
>
> 2. **The removal or cutting of any structural beam** or load-bearing support.
>
> 3. The removal or change of any required means of egress or rearrangement of parts of a structure affecting the egress requirements.
>
> 4, Any addition to, alteration of, replacement or relocation of any standpipe, water supply, sewer, drainage, drain leader, gas, soil, waste, vent or similar piping, or electric wiring.
>
> 5. Mechanical or other work affecting public health or general safety.

18. Chiawang Yeh commented that the Enertia 2024 Plan neglected to provide a connection for the cantilevered diaphragm to the main building (See **Exhibit 3** Sh. S2). Drag strut connection and dry rot repair calculations including details are required to be part of the permit set prior to construction. Per CEBC 105.2.1 Emergency repairs: Where equipment replacements and repairs must be performed in an emergency situation, the permit application shall be submitted within the next working business day to the code official. Also CEBC 503.13 requires new or relocated structural elements to be designed as if for a new building per 503.13 item 2.

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Plans Do Not Reflect As- Built and Site Conditions.

19. Based on my review and inspections, I find that the permitted drawings and calculations do not reflect actual conditions in the field. Building Inspectors inspect work at the project site based on approved permit documents. If the construction work does not substantially match the permit documents, the design professional is required to modify them and resubmit for a permitted revision. As described above, Story/shear wall heights, the installation of the perforated shear wall, dry rot repairs, the splicing of the beams under the cantilever floor, a shear wall which is shown on the drawings to extend through an existing brick chimney, footings and hold-downs either do not reflect actual field conditions or are not substantiated by calculations as required by code. This is significant, as all of these issues, including the height and width of shear walls, are critical to how the building responds during an earthquake.

Conclusion

20. In my professional opinion, the structure as designed and currently permitted does not meet applicable code requirements. The design is potentially dangerous, incomplete, and borders on negligence. The issues above, along with those identified by Mr. Yeh and observed on site, should be corrected before permit closure. As a Structural Engineer licensed by the State of California I have a responsibility to point out when the safety of the structure is an issue. The effort to remedy the code and field issues in this project are not difficult or time consuming and could have been accomplished already. The result would be a structure that would make occupants at the upper and lower level safer.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct. Executed on Nov. 7, 2025, at Mill Valley, California.



Detlev Doring, S.E.
California License No. S 3634
D.P. Doring S.E., Inc.

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180 MONTGOMERY STREET, SUITE 1950
SAN FRANCISCO, CALIFORNIA 94104

EXHIBIT 1

DETLEV P. DORING, S.E., Inc.
STRUCTURAL ENGINEER
216 CLEVELAND COURT, MILL VALLEY, CA 94941

Education

University of Colorado, Boulder 1972 to 1974
University of California, Berkeley 1980 to 1982
Bachelor of Civil Engineering UC Berkeley 1982

Engineering Registration

Civil Engineer	No. 36366	Year 1983
Structural Engineer	No. 3634	Year 1991

Experience

I started my engineering career in San Francisco with H.J. Brunnier Associates, Structural Engineers in October 1975. In May of 2001, I resigned as managing partner and started my own firm in Mill Valley. During my time with Brunnier and subsequently on my own, I have worked on and have been responsible for a large number of projects. Currently I am focusing on Residential remodel and new construction as well as small and medium size Commercial and Industrial projects.

Over the course of my currier I have been in charge of and worked on over 1200 Residential wood framed buildings, both new, additions, remodels and repairs costing from $30,000 to $10,000,000. I'm working on between 60 and 120 projects a year going back to 1991

Steel moment frame and steel braced buildings for commercial and industrial use ranging in height from one to 35 stories, i.e. commercial building at 555 Beach Street in San Francisco, Printing plants for the San Francisco Newspaper Agency in San Francisco and Union City, glass manufacturing plants for Owens-Brockway, both domestic and international.

Seismic evaluation and strengthening of buildings including the United Airlines Maintenance Base, the Chronicle Building, Bechman Instruments, Laguna Honda Hospital, 315 Montgomery Street (32 stories) and One California Street (32 stories).

During the late 1980's, I was responsible for bringing H.J. Brunnier Associates into the computer age. From mid-1997 to May 2001, as Vice President, I managed the computer and CAD departments, oversaw new and existing projects and was responsible for staffing the office with Engineers and CAD drafters.

Other representative projects include

Standard Oil Company – Richmond Refinery Administration Building/Earthquake bracing
NASA Ames Research Center – Moffet Field Aerodynamics Simulator Facility Building
San Francisco Public Library – Seismic Strengthening Study
San Francisco Civic Auditorium – Rehabilitation and remodel
The Gap Corp. – Various remodel projects
CSAA – Various remodel, seismic evaluation and upgrade project
United Airlines Maintenance Base – Computer room, Training Center
St. Mary's Hospital – Architectural remodel work
Sandia Laboratories - Computer Facility

Professional Memberships

Structural Engineers Association of Northern California

EXHIBIT 2

STRUCTURAL CALCULATIONS FOR:

VOLUNTARY STRENGTHENING

1077 FELL STREET
SAN FRANCISCO, CA

REPORT PREPARED BY:

ENERTIA DESIGNS
1167 MISSION STREET, FL.1
SAN FRANCISCO, CA 94103
P: (415) 626-8300
F: (415) 701-0212



ED PROJECT #23059

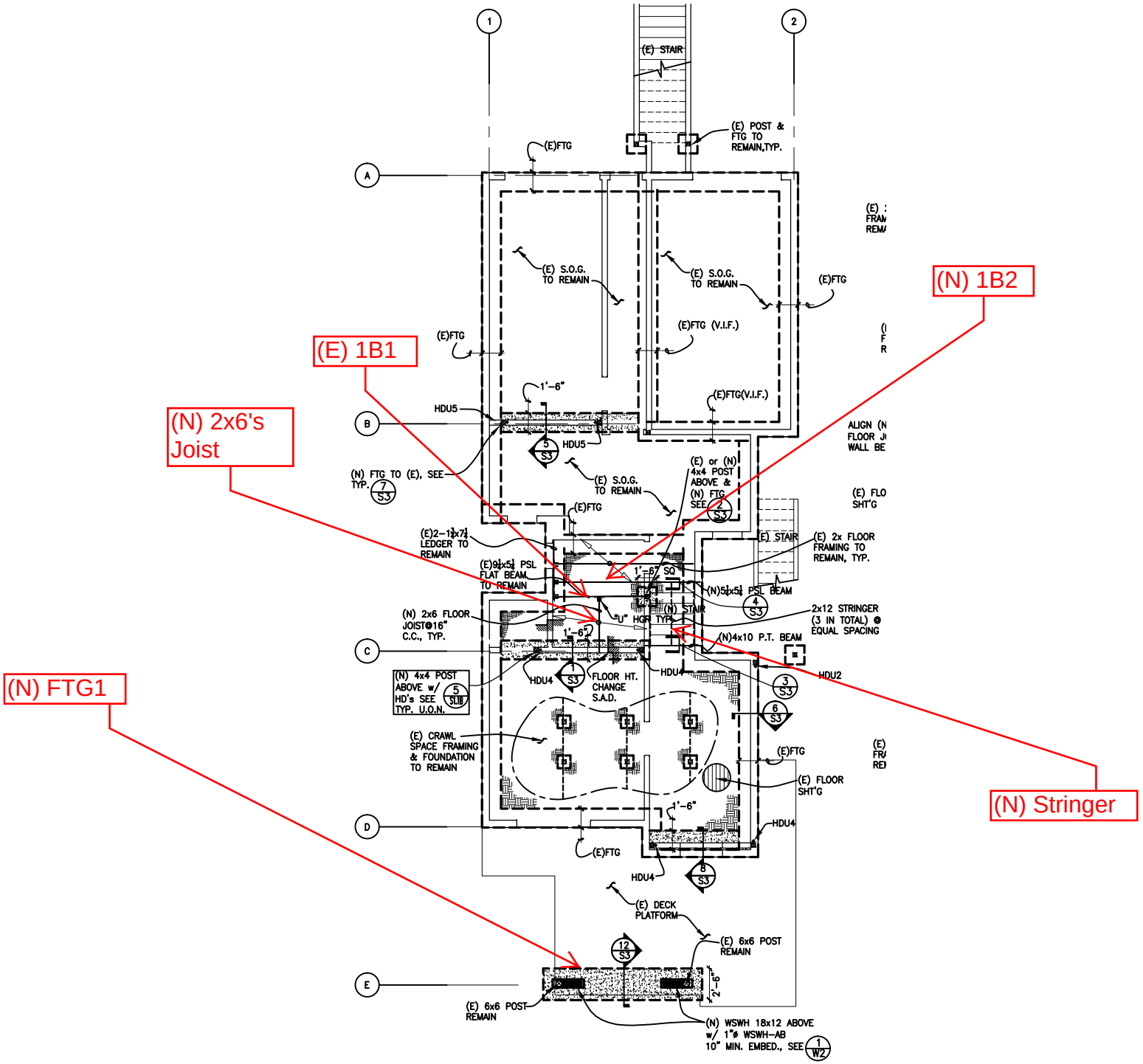
DATE: March 12, 2024

ENERTIA DESIGNS

1077 FELL STREET
ED PROJECT #23059

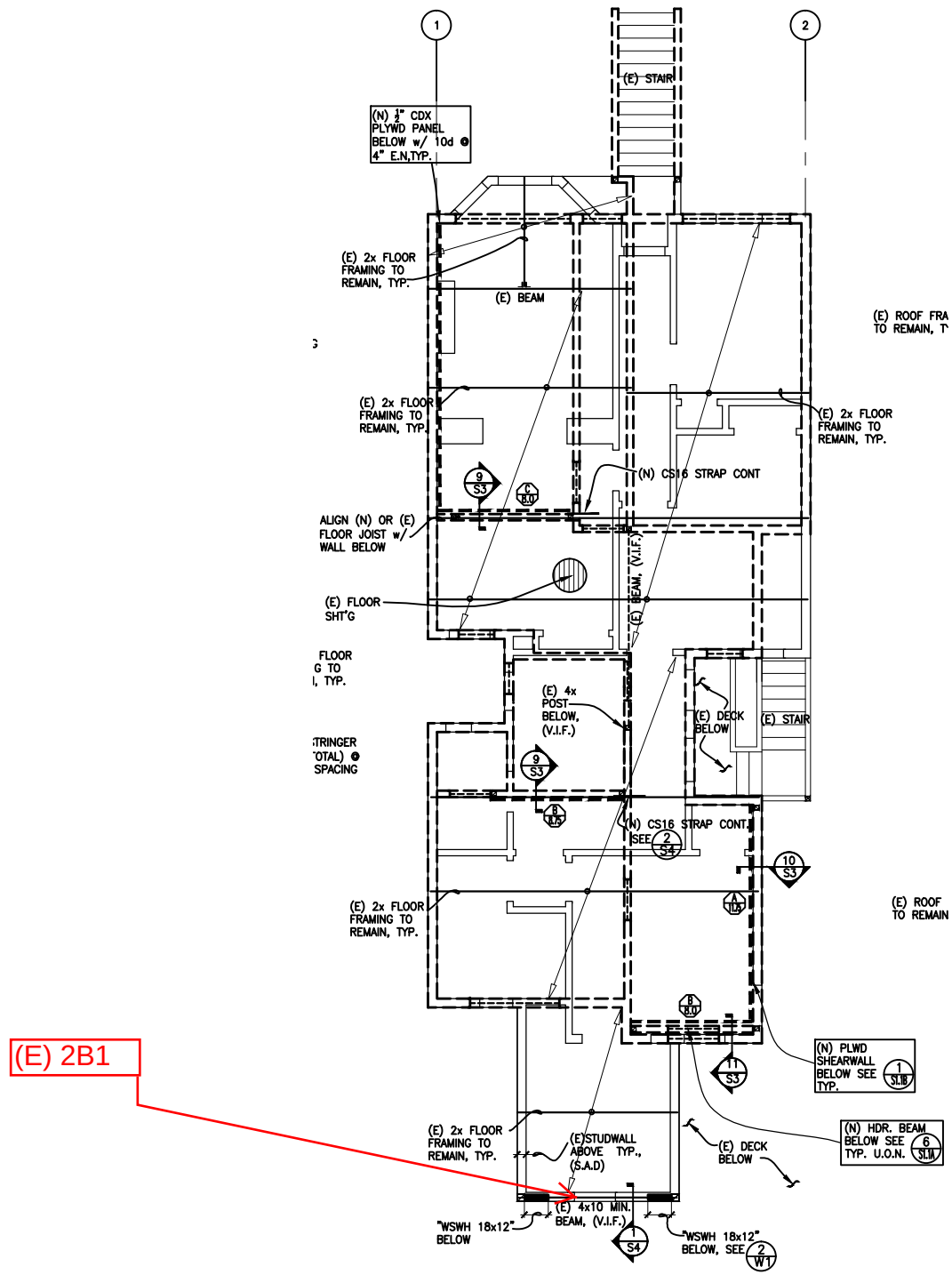
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Lateral base shear	8 – 13
Shear wall and Holdowns	14–15
Legend	16
GRAVITY:	
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FIRST FLOOR / FOUNDATION PLAN

SCALE: 1/4"=1'-0"

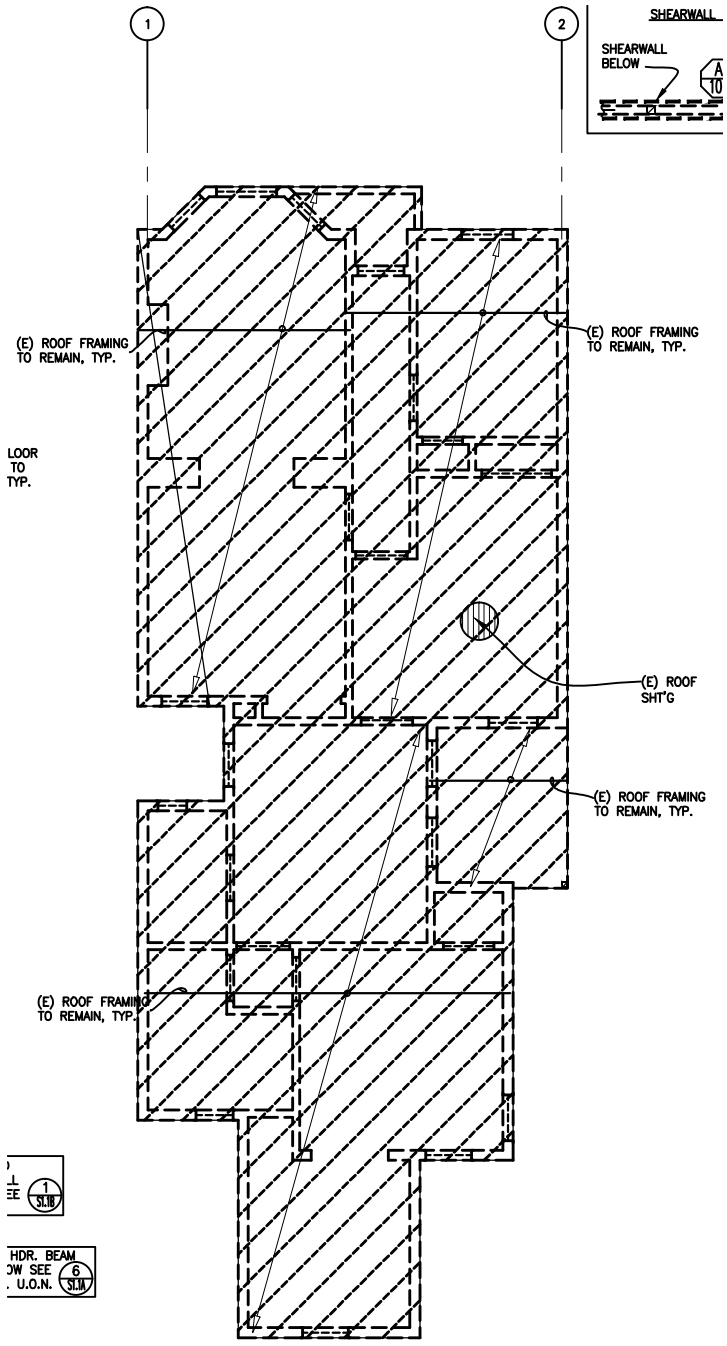


(E) 2B1

NO WORK ABOVE THIS LEVEL

SECOND FLOOR FRAMING PLAN

SCALE: 1/4"=1'-0"



ROOF FRAMING PLAN

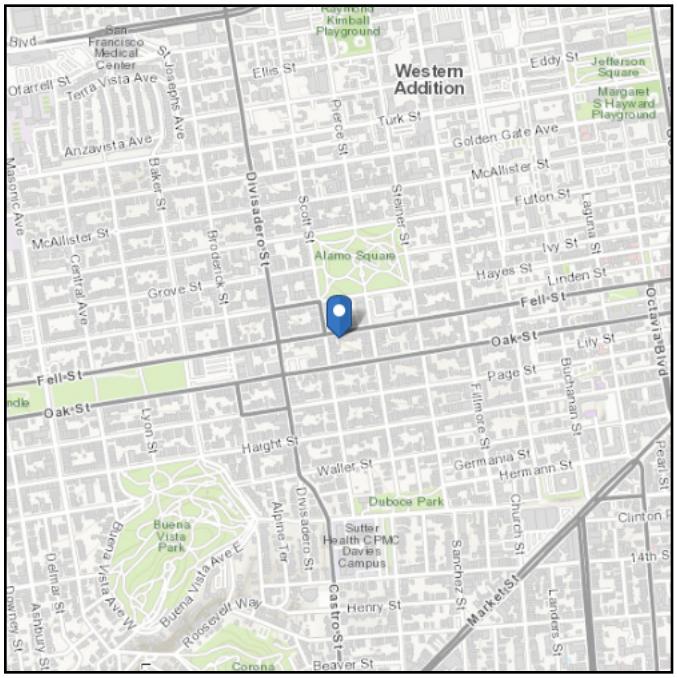
SCALE: 1/4"=1'-0"

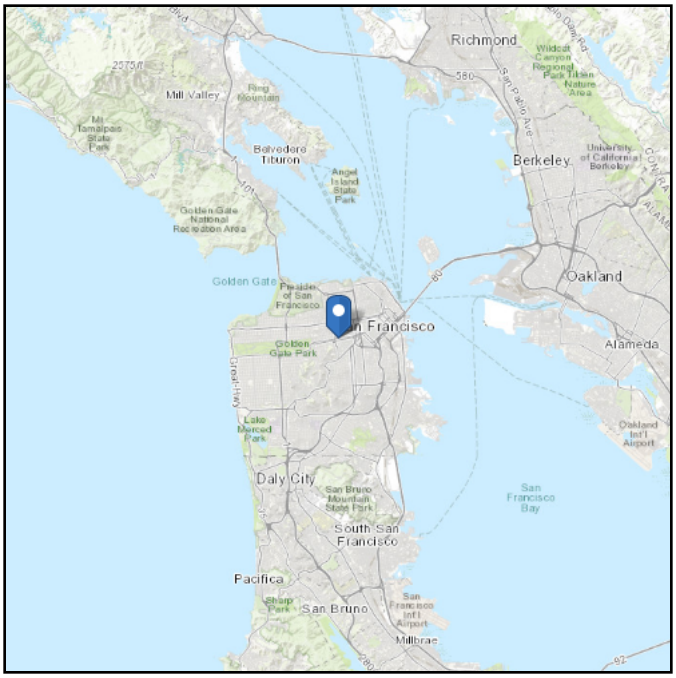
ASCE Hazards Report

Address:
1077 Fell St
San Francisco, California
94117

Standard: ASCE/SEI 7-22
Risk Category: II
Soil Class: Default

Latitude: 37.774145
Longitude: -122.435446
Elevation: 195.3952831817827 ft (NAVD 88)





Seismic

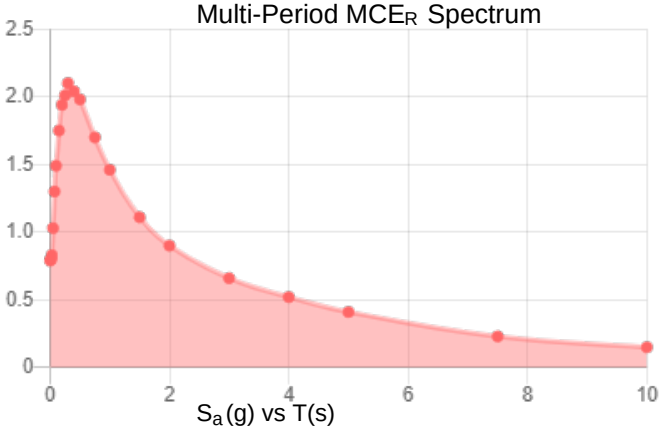
Site Soil Class: Default

Results:

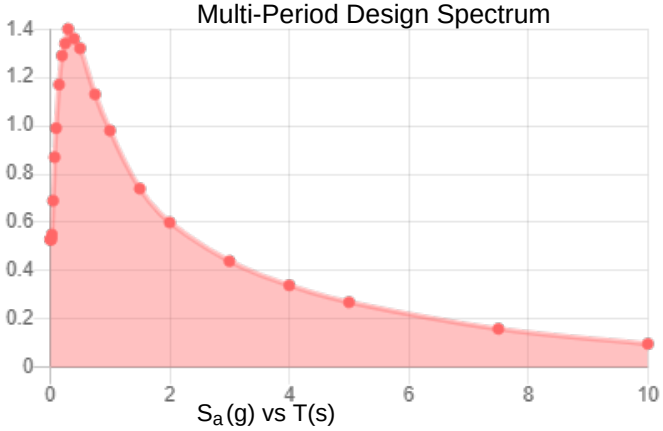
PGA_M :	0.66	T_L :	12
S_{MS} :	1.89	S_S :	1.66
S_{M1} :	1.85	S_1 :	0.62
S_{DS} :	1.26	V_{S30} :	260
S_{D1} :	1.24		

Seismic Design Category: D

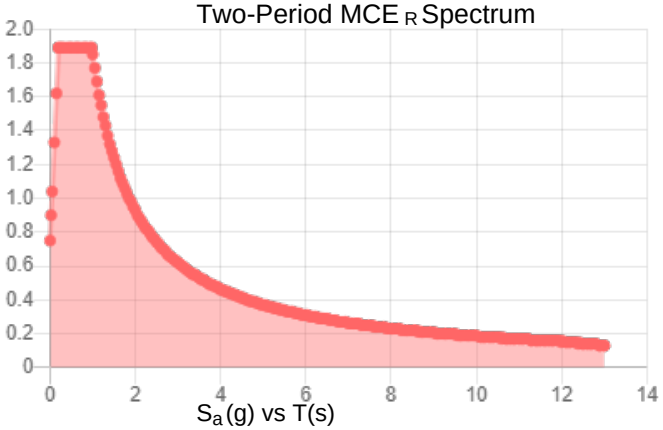
Multi-Period MCE_R Spectrum



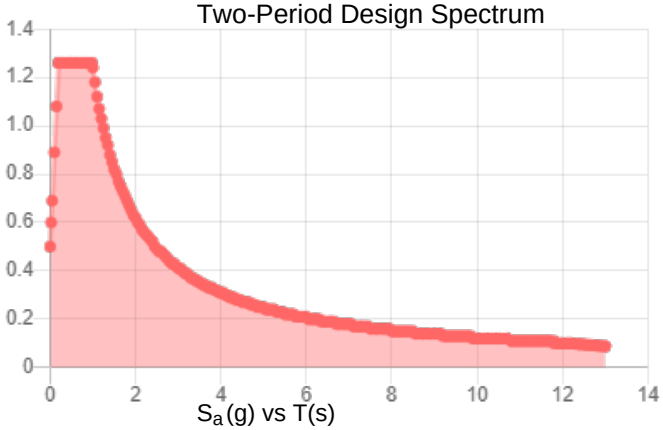
Multi-Period Design Spectrum



Two-Period MCE_R Spectrum



Two-Period Design Spectrum



MCE_R Vertical Response Spectrum

Vertical ground motion data has not yet been made available by USGS.

Design Vertical Response Spectrum

Vertical ground motion data has not yet been made available by USGS.

Data Accessed: **Tue Feb 27 2024**

Date Source:
USGS Seismic Design Maps based on ASCE/SEI 7-22 and ASCE/SEI 7-22 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-22 Ch. 21 are available from USGS.

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PROJECT:	SHEET NO	
VOLUNTARY STRENGTHENING	JOB No.	0
3941 23rd Street	REV. NO.	DATE
94117	00	02/27/24

Design Criteria **2016 California Building Code based on 2015 IBC**

1. MATERIAL SPECIFICATIONS

1.1 Concrete f'c = 2500 psi (28 day compressive strength)

1.2 Concrete Block f'm = 1500 psi (Type N or S)

1.3 Reinforcing Steel
Grade 40 : #4 and smaller
Grade 60 : #5 and larger

1.4 Lumber

2" to 4" thick		DF No.2	Fb= 900 psi	
2" to 4" wide		DF No.1	Fb= 1000 psi	
Roof/ Ceiling Joist		DF No.2	Fb= 900 psi	
Beam/ Post	4x	DF No.2	Fb= 875 psi	Fc= 600 psi
	6x	DF No.1	Fb= 1350 psi	Fc= 925 psi
Mudsill		DF Pressure Treated		
Glu-Lam Beam		DF/ DF Simple Span		24F-V4
		DF/ DF Cantilever		24F-V8
Parallam (PSL)		2.2 E Truss Joist MacMillan		
Micro-Lam (ML)		2.0 E Truss Joist MacMillan		
Floor I-Joist (TJI)		Manufactured by Trus Joist Corporation		

1.5 Plywood Diaphragm Roof 1/2" CDX APA(32/16)
Floor 3/4" T&G CDX APA(48/24)

1.6 Structural Steel ASTM A-992 or per latest AISC provision

1.7 Manufactured Shear Panels Simpson Strongwall: Manufactured by Simpson Strong-Tie
Hardy Frame Panels: Manufactured by Mitek Company

2. FOUNDATION PARAMETERS

2.1 Minimum Building Code Requirements **USED**

2.2

Geotechnical Engineer:	N.A.
Project Reference No.:	N.A.
Date:	N.A.
Telephone No.	N.A.

Allowable Soil Bearing Capacity	1500	psf
Allowable Pier Skin Friction	N.A.	psf

PROJECT:	SHEET NO	
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3. GRAVITY LOADS

3.1 Live Load / Snow Load

Verify if there is additional ceiling framing underneath the roof framing which is common in SF

LLr = 20 psf

LL = 40 psf

S = 0 psf (Snow Load)

oof Slope 0.0 : 12

ope Factor 1.00

3.2 Dead Load

3.21 Roof

Composition Shingles	5.0	psf	
5/8" Plywood Sheathing	2.0	psf	
2x8 @ 16" Framing	2.2	psf	
Insulation	1.0	psf	
Ceiling/ 1 Layers of G.B.	2.7	psf	
Miscellaneous	1.0	psf	
Total =	14.0	x 1	
	14.0	psf	

3.22 Lower Roof/ Roof Deck

5.0	psf
2.0	psf
2.2	psf
1.0	psf
2.7	psf
1.0	psf
14.0	psf

3.23 Floors

Hard Wood Flooring	4.0	psf
3/4" Plywood Sheathing	2.5	psf
2x10 @ 16" Framing	2.9	psf
Insulation	1.0	psf
Ceiling 1 Layes of G.B.	2.7	psf
Miscellaneous	1.5	psf
Total =	**14.6**	psf

3.24 Deck/Balcony

4.0	psf
2.5	psf
2.9	psf
1.0	psf
2.7	psf
1.5	psf
14.6	psf

3.25 Exterior Walls

Stucco	9.0	psf
1/2" thk Plywd sht'g	2.0	psf
2x Studs	2.5	psf
Gypboard	2.0	psf
Miscellaneous	1.5	psf
Total =	**17.0**	psf

3.26 Interior Walls

-	-	
→	2	psf
→	2.0	psf
→	4.0	psf
→	2.0	psf
	10.0	psf

PROJECT:	SHEET NO	
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4. LATERAL LOADS ASD

4.1 Seismic Parameters

Site Class (Use deafult 'D1' if no Soil Report)		D1
Occupancy Category		II
Seismic Design Category **(SDC)**		D
Response Modification Coefficient **(R)**	R=	6.50
Importance Factor **(I)**	I=	1.00
Site Coordinates	37.774 ° N	-122.435 ° W
Short Period Response **(S_S)**	S_S=	1.66
One Second Period Response **(S_1)**	S_1=	0.62

15. Light frame (wood) walls sheathed with wo

Location

4.2 Wind Parameters

Exposure Type		B
Basic Wind Speed		95 mph

5.1 Wind Forces

Exposure Type =	B	Kd =	0.85	Cp = 0.80
Basic Wind Speed =	95 mph	K_{ZT} =	1.00	GCpi = 0.18
Occupancy Category =	II	G =	0.85	

Z	15'-0"	20'-0"	25'-0"	30'-0"	40'-0"	60'-0"
Z_{min}	30	30	30	30	40	60
Zg	1200	1200	1200	1200	1200	1200
α	7.00	7.00	7.00	7.00	7.00	7.00
Kz	0.70	0.70	0.70	0.70	0.76	0.85
qz	8.26	8.26	8.26	8.26	8.96	10.06
P (psf)	**7.10**	**7.10**	**7.10**	**7.10**	**7.71**	**8.65**

$Kz = 2.01\ (Z/Zg)^{(2/\alpha)}$

$qz = 0.00256\ K_z K_{ZT} K_d V^2$

$P = qz\ (GCp + GCpi)$

5.2 Seismic Forces

5.21 Site Coefficients

Site Coefficient (Fa)

SITE CLASS	Ss < 0.25	0.50	0.75	1.00	1.25	>1.5
A	0.8	0.8	0.8	0.8	0.8	0.8
B	0.9	0.9	0.9	0.9	0.9	0.9
C	1.3	1.3	1.2	1.2	1.2	1.2
D	1.6	1.4	1.2	1.1	1.0	1.0
E	2.4	1.7	1.3	SEE SEC 11.4.8		

Table 1613.5.3 (1)

Site Coefficient (Fv)

SITE CLASS	S1 < 0.1	0.2	0.3	0.4	0.5	0.6
A	0.8	0.8	0.8	0.8	0.8	0.8
B	0.8	0.8	0.8	0.8	0.8	0.8
C	1.5	1.5	1.5	1.5	1.5	1.4
D	2.4	2.2	2.0	1.9	1.8	1.7
E	4.2	SEE SECTION 11.4.8				

Table 1613.5.3 (2)

Tabulated Result

Site Class =	**D1**
S_S=	**1.66**
S_1=	**0.62**
By Interpolation:	
Fa =	**1.20**
Fv =	**3.00**

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5.22 Spectral Response Acceleration

S_{MS}=	Fa S_S =	1.20 x 1.66=	1.89	S_{DS}=	2/3 (S_{MS}) =	**1.26**
S_{M1}=	Fv S_1 =	3.00 x 0.62=	1.85	S_{D1}=	2/3 (S_{M1}) =	**1.24**

5.23 Horizontal Sismic Load Effect w/ Overstrength Load Combinations (ASCE 12.4.3.1)

Ωo = **2.50**

LC 5: (1.0 + 0.14 S_{DS})D + 0.7 Ωo Qe = **1.18D+2.5Qe**

LC 6: (1.0 + 0.15 S_{DS})D + 0.525 Ωo Qe +0.75L +0.75 LLr = **1.19D+1.88Qe+0.75(LL+LLr)**

LC 8: (0.6 - 0.14 S_{DS})D - 0.7 Ωo Qe = **0.43D+2.5Qe**

5.24 Design Base Shear

R =	6.50		**C_r =**	**0.020**	All other structural system
I =	1.00		**x =**	0.75	
TL =	8.00	sec	**h_n =**	20.0	ft
Redundancy Factor **ρ =**	**1.30**		**T =**	$C_r (h_n)^X$ =	0.189

ASCE (12.8-2)	*ASCE (12.8-3)*	*ASCE (12.8-4)*	*ASCE (12.8-6)*	*ASCE (12.8-5)*
	($T \le$ TL)	($T >$ TL)	$S_1 \ge$ 0.60	
$Cs = \frac{S_{DS}}{(R/I)}$	$Cs_{max} = \frac{S_{D1}}{T\,(R/I)}$	$Cs_{max} = \frac{S_{D1}\,T_L}{T^2\,(R/I)}$	$Cs_{min} = \frac{0.5\,S_1}{(R/I)}$	Cs_{min}= 0.01
Cs = 0.194	**Cs =** 1.009	**Cs =** 0.000	**Cs =** 0.048	**Cs =** 0.01
		NOT USED		

Use **Cs** = **0.194**

V = Cs W **Apply 0.7 Reduction for ASD*

GOVERNING DESIGN BASE SHEAR **V = 0.136W ASD**

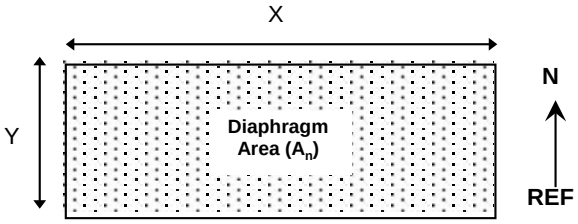
6. BUILDING PARAMETERS

6.1 Building Dimensions

No. of Floor/s Levels **2**

Total building height 18.0 ft

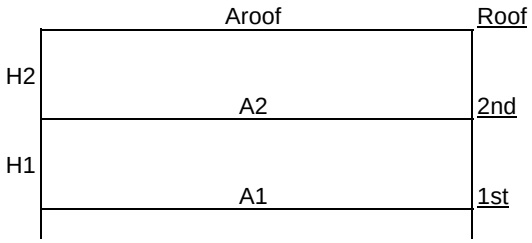
Basement/Crawl Space 3.00 ft



PLAN

Nomenclature:

n	Subscript for floor levels
Xn	Building width
Yn	Building length
An	Diaphragm area
Hn	Floor height between levels



SECTION

PROJECT:	SHEET NO	
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6.2 Roof /Floor Areas

Floor Level	Area A_n (ft^2)	Low Roof Area A_n (ft^2)	Deck Area A_n (ft^2)	Bldg Length X_n (ft)	Bldg Width Y_n (ft)
Roof	1406	~~0~~	~~0~~	56	25
2nd floor	1212		193	48	25

6.3 Wall Heights

Floor Level	Floor Height H_n (ft)	Exterior Wall Length (ft)	Interior Wall Length (ft)	Tributary Ext. Wall (ft^2)	Tributary Int. Wall (ft^2)	Height of Diaphragm
Roof	~~0~~	~~0~~	~~0~~	815	770	20.0
2nd floor	9.0	181	171	1566	1308	12.0
1st floor	9.0	167	120	752	538	3.0
				0	0	0.0
				0	0	~~0~~

Warning Check Bldg height !!!

6.3 Building Weights

6.3a Roof weight

Floor Level	Area A_n (ft^2)	Unit weight (psf)	Material Weight (lbs)
Roof	1406	14.0	19684
Ext Walls	815	17.0	13847
Int Walls	770	10.0	7704
Misc			0

Level Weight = **41,235** lbs

NOT USED

Floor Level	Area A_n (ft^2)	Unit weight (psf)	Material Weight (lbs)
Floor	0	14.6	0
Low Roof	0	14.0	0
Deck	0	14.6	0
Ext Walls	0	17.0	0
Int Walls	0	10.0	0
Misc			0

Level Weight = **0** lbs

6.3b 2nd floor

Floor Level	Area A_n (ft^2)	Unit weight (psf)	Material Weight (lbs)
Floor	1212	14.6	17695
Low Roof	0	14.0	0
Deck	193	14.6	2821
Ext Walls	1566	17.0	26622
Int Walls	1308	10.0	13082
Misc			0

Level Weight = **60,220** lbs

NOT USED

Floor Level	Area A_n (ft^2)	Unit weight (psf)	Material Weight (lbs)
Floor			
Low Roof			
Deck			
Ext Walls			
Int Walls			
Misc			

Level Weight = **0** lbs

6. 4 Building Weight Summary

Floor Level	Level Weights (lbs)	S Weights (lbs)
Roof	41,235	41,235
2nd floor	60,220	101,455
	-	-
	-	-
S	**101,455**	

6. 5 Base Shear

Vu = 0.136 x 101,455

V =	**13,767**	**lbs**
V x ρ =	**17.897**	**kips**
	ASD	

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7. LATERAL FORCES

T= 0.189

k= 1.00

7.1 Seismic Forces

7.1a Lateral Force Distribution

C_{vx} $F_x = C_{vx} V$

Floor Level (x)	h_x (ft)	h^k_x (ft)	Wx (kips)	$h^k x$ Wx (kip-ft)	$\frac{h^k x \text{ Wx}}{S\, h^k x \text{ Wx}}$	Fx (kips)	Diaphragm Area (ft^2)	Fx / Area (lbs/ ft^2)
Roof	20.0	20.0	41.23	824.69	0.53	9.54	1406	**6.78**
2nd floor	12.0	12.0	60.22	722.64	0.47	8.36	1405	**5.95**
0	0.0	0.0	0.0	0.0	0.00	0.00	0	**0.00**
0	0.0	0.0	0.0	0.0	0.00	0.00	0	**0.00**
		SUM	101.5	1547.3	1.00	**17.90**		

7.1b Lateral Diaphragm Force Distribution

$Fpx\ max = 0.4 S_{DS}\ I\ wpx$ = 0.50 wpx (%)

$Fpx\ min = 0.2 S_{DS}\ I\ wpx$ = 0.25 wpx (%)

S_{DS}= 1.26

I= 1.00

Floor Level	Fx (kips)	S Forces (kips)	S Weights (kips)	$\frac{\text{S Forces}}{\text{S Weights}}$ (% Level)	% Level Fpx min Fpx max	Level Weight (kips)	Level Diaphragm Force (kips)	Fx / Area (lbs/ ft^2)
Roof	9.54	9.54	41.23	0.23	0.25	41.23	10.39	**7.39**
2nd floor	8.36	17.90	101.45	0.18	0.25	60.22	15.18	**10.80**
0	0.00	0.0	0.0	0.0	0.00	0.00	0.00	**0.00**
0	0.00	0.0	0.0	0.0	0.00	0.00	0.00	**0.00**

7.2 Wind Load

	North -South Direction			East West Direction	
Floor Level	Wind Height Projection (ft)	Building Length X_n (ft)	Projected Wind Area (ft^2)	Building Length Y_n (ft)	Projected Wind Area (ft^2)
Roof	1.5	56.2	84.4	25.0	37.5
2nd floor	9.0	48.5	436.3	25.0	225.0
0	0.0	0.0	0.0	0.0	0.0
0	0.0	0.0	0.0	0.0	0.0

*** (See 5.1 for wind pressures)*

	North -South Direction				East West Direction		
Floor Level	Floor Level Height (ft)	Projected Wind Area (ft^2)	Wind Pressure** (psf)	**Wind Force (kip)**	Projected Wind Area (ft^2)	Wind Pressure** (psf)	**Wind Force (kip)**
Roof	20.0	84.4	7.10	**0.60**	37.5	7.10	**0.27**
2nd floor	12.0	436.3	7.10	**3.10**	225.0	7.10	**1.60**
0	0.0	0.0	0.00	**0.00**	0.0	0.00	**0.00**
0	0.0	0.0	0.00	**0.00**	0.0	0.00	**0.00**
			S	**3.70**		**S**	**1.86**

SEISMIC LOAD GOVERNS

PROJECT:	SHEET NO		
VOLUNTARY STRENGTHENING	JOB No.		0
1077 FELL STREET	BY	REV	DATE
94117	DM	00	02/27/24

SEISMIC LOAD DISTRIBUTION TO SHEARWALL & FRAMES

Distribution of Seismic Forces per Tributary Area (**for Story Levels from Roof to 1st Floor**) ** With Wood Diaphragm

Total Seismic Base Shear, **V =** **17.90** kips

Lateral Force F_{roof} = **9.54** kips

$V3r_d$ = **9.54** kips

A_{roof} = **1,406** ft^2

Allowable Aspect Ratio = 3.5 : 1

(See AF & PA ADPWS Table 4.3.4 Note '1' on blocked Shearwall panel aspect ratio greater than 2)

Reduction on Allowable Shear Value = $\frac{2w}{h}(V_{allow})$

DL reduction per 1605.3 of CBC 2010 and ASCE 7 12.4 (0.6 -0.14Sds)DL= **0.42**

Seismic Load Distribution to Shear Walls & Frames in N-S direction

Line	System	Tributary Area (ft²)	Wall properties					Portion of Area (%)	Wall loading and capacity					Wall Type	For Hold Down use Simpson PHD/MST							H.D.
			Length (ft)	Height	Aspect Ratio	$V_{allowable}$ (plf)	$V_{all} > V_{demand}$				Σ v_x (lbs)	v_{total} (lbs)	v_{demand} (plf)		Wall wt. (psf)	Tri. Width for DL (ft)	DL (lbs)		OTM(V_i) (kip-ft)	OTM(DL) (kip-ft)	T (kip)	
A	PW	419	3	9	**3.0**	**510**	**OK**	**15%**			**1421**	**1421**	**474**	***B***	17	**1.30**	**525**		**12.79**	**0.71**	**4.03**	***HDU4***
A	PW		3	9	**3.0**	**510**	**OK**	**15%**			**1421**	**1421**	**474**	***B***	17	**1.30**	**525**		**12.79**	**0.71**	**4.03**	***HDU4***
B	PW	362	6.5	9	**1.4**	**510**	**OK**	**26%**			**2456**	**2456**	**378**	***B***	17	**1.30**	**1138**		**22.10**	**3.33**	**2.89**	***HDU2***
C	PW	312	4.5	9	**2.0**	**510**	**OK**	**22%**			**2117**	**2117**	**470**	***B***	17	**1.30**	**788**		**19.05**	**1.60**	**3.88**	***HDU4***
D	PW	247	3	9	**3.0**	**340**	**OK**	**9%**			**898**	**898**	**299**	***A***	17	**1.30**	**525**		**8.08**	**0.71**	**2.46**	***HDU2***
	PW		2.6	9	**3.5**	**340**	**OK**	**8%**			**778**	**778**	**299**	***A***	17	**1.30**	**455**		**7.00**	**0.53**	**2.49**	***HDU2***
E	PW	66	3.5	9	**2.6**	**340**	**OK**	**2%**			**209**	**209**	**60**	***A***	17	**1.30**	**613**		**1.88**	**0.97**	**0.26**	***HDU2***
	PW		4	9	**2.3**	**340**	**OK**	**3%**			**239**	**239**	**60**	***A***	17	**1.30**	**700**		**2.15**	**1.26**	**0.22**	***HDU2***
		1406						100%			9538	9538										

FOR REFERENCE ONLY

PROJECT:	SHEET NO		
VOLUNTARY STRENGTHENING	JOB No.		0
1077 FELL STREET	BY	REV	DATE
94117	DM	00	02/27/24

SHEARWALL ALONG LINE A IS MISSING ON PLAN S2

SEISMIC LOAD DISTRIBUTION TO SHEARWALL & FRAMES

Lateral Force F3rd = 8.36 kips
V2nd = 17.90 kips
A3rd = 1,405 ft^2

Seismic Load Distribution to Shear Walls & Frames in N-S direction

Line	System	Tributary Area (ft^2)	Wall properties: Length (ft)	Height	Aspect Ratio	$V_{allowable}$ (plf)	$V_{all} > V_{demand}$	Portion of partial area (%)	Wall loading and capacity: Σv_{Above} roof	Σv_x (lbs)	v_{total} (lbs)	v_{demand} (plf)	Wall Type	For Hold Down use Simpson PHD/MST: Wall wt. (psf)	Tri. Width for DL (ft)	DL (lbs)	$DL_{(above)}$	OTM(V_i) (kip-ft)	OTM(DL) (kip-ft)	T (kip)	H.D.
A	PW	279	4	9	2.3	1330	OK	20%	2843	1659	4502	1125	E	17	8.00			40.52	0.00	10.13	HDU14
B	PW	417	8	9	1.1	665	OK	30%	2456	2480	4936	617	C	17	8.00			44.42	0.00	5.55	HDU5
C	PW	383	8.75	9	1.0	510	OK	27%	2117	2278	4395	502	B	17	8.00			39.55	0.00	4.52	HDU4
D	PW	201	8	9	1.1	510	OK	14%	1676	1196	2871	359	B	17	8.00			25.84	0.00	3.23	HDU4
E	WSWH	125	1.5	9	N.A.	N.A.	N.A.	4%	224	372	596	397		17	8.00			5.36	0.00	3.57	
	WSWH		1.5	9	N.A.	N.A.	N.A.	4%	224	372	596	397		17	8.00			5.36	0.00	3.57	
		1405						100%	9539	8356.7	17895.4										

VERIFY WALL HEIGHT THE ARCHITECTURAL ELEVATION SHOWS THE WALL IS 11' TALL INSTEAD OF 9'

PROVIDE PERFORATED SHEARWALL CALCULATION



PROVIDE DESIGN LOADS FOR SHEAWALLS DESIGNED IN LONGITUDINAL DIRECTIONS

PROJECT:	SHEET NO	
VOLUNTARY STRENGTHENING 1077 FELL STREET 94117	JOB No.	0
	BY DM	DATE 02/27/24

LEGEND

HF	HARDY FRAME
TS	TUBE STEEL (CANTILEVER COLUMN)
PW	PLYWOOD SHEARWALL
MF	STEEL MOMENT FRAME
SW	STRONGWALL
SSW	STL. STRONGWALL
CMU	CONRETE MASONRY
CON.	CONCRETE WALL
L	LENGTH OF WALL
BETA (β)	FACTOR TO ACCOUNT TO ANGLE VARIATION OF LATERAL
OTM (V_i)	OVERTURNING MOMENT DUE TO TOTAL SHEAR FORCE ON SHEARWALL
OTM (DL)	RESISTING MOMENT DUE TO TOTAL DEADWEIGHT OF WALL

NOTE :

1. PLYWOOD SHEARWALLS WITH CAPACITY OF 300LBS/FT SHALL BE INSPECTED BY A DEPUTY INSPECTOR
2. PLYWOOD SHALL BE AT LEAST 4-PLY 3-PLY SHALL ONLY HAVE A MAX CAP OF 200LBS/FT
3. USE ONLY COMMON NAILS FOR PLYWOOD SHEARWALLS AND DIAPRAGHM

SHEARWALL SCHEDULE

MARK	TYPE	MATERIALS	NAILING	ALLOW. SHEAR PLF
1	A	1/2" STRUC 1	10d @6 oc	340
2	B	1/2" STRUC 1	10d @4 oc	510
3	C	1/2" STRUC 1	10d @3 oc	665
4	D	1/2" STRUC 1	10d @2 oc	870
5	E	1/2", PLY STRUC 1 BOTH SIDES	10d @4 oc ea side	1330
6	F	1/2", PLY STRUC 1 BOTH SIDES	10d @3 oc ea side	1740

HOLDOWN CAPACITIES

FOUNDATION		UPPER FLOOR	
(SIMPSON) (ICC ESR 2330	4x4 POST kips	(SIMPSON)	4x4 POST kips
HDU2	3.080	MST37	5.080
HDU4	4.560	MST48	5.310
HDU5	5.645	MST60	6.730
HDU8	6.97	2-MST48	10.620
HDU11	9.54	2-MST60	13.46
HDU14	14.37		
HD12	15.51		
HD19	19.07		

Note : For HDU14, HD12, HD19 : Capacity is based on 6x6 wood post

Wood Beam

Project File: 1077 Fell street- 02.28.24.ec6

LIC# : KW-06019663, Build:20.24.01.25 Enertia Designs Inc. (c) ENERCALC INC 1983-2023

DESCRIPTION: (E) 2B1

CODE REFERENCES

Calculations per NDS 2018, IBC 2018, CBC 2019, ASCE 7-16
Load Combination Set : ASCE 7-16

Material Properties

Analysis Method : Allowable Stress Design
Load Combination : ASCE 7-16

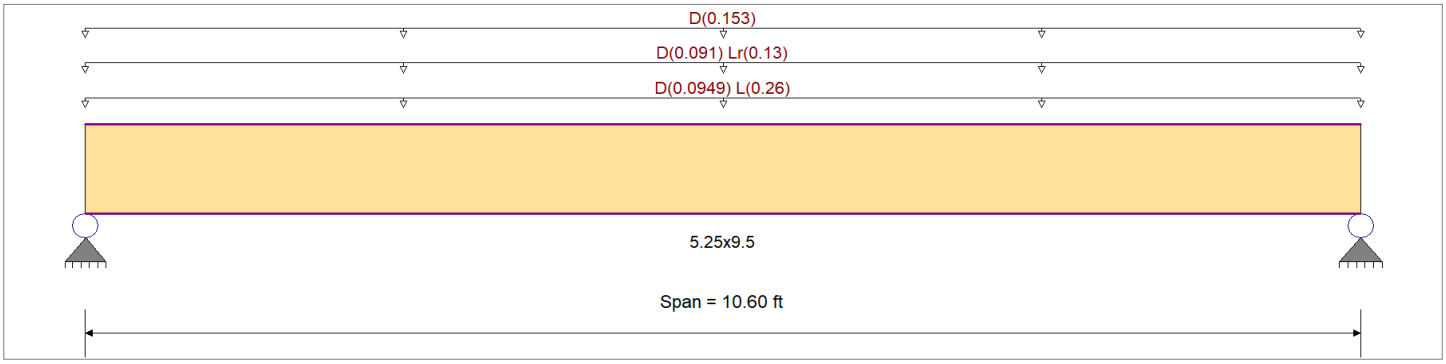
Wood Species : iLevel Truss Joist
Wood Grade : Parallam PSL 2.2E

Beam Bracing : Beam is Fully Braced against lateral-torsional buckling

Fb +	2,900.0 psi
Fb -	2,900.0 psi
Fc - Prll	2,900.0 psi
Fc - Perp	750.0 psi
Fv	290.0 psi
Ft	2,025.0 psi

E : Modulus of Elasticity

Ebend- xx	2,200.0 ksi
Eminbend - xx	1,118.19 ksi
Density	45.070 pcf



Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loading
Uniform Load : D = 0.01460, L = 0.040 ksf, Tributary Width = 6.50 ft, (FLOOR LOAD)
Uniform Load : D = 0.0140, Lr = 0.020 ksf, Tributary Width = 6.50 ft, (ROOF LOAD)
Uniform Load : D = 0.0170 ksf, Tributary Width = 9.0 ft, (WALL)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio	=	0.441 : 1	Maximum Shear Stress Ratio	=	0.288 : 1
Section used for this span		5.25x9.5	Section used for this span		5.25x9.5
fb: Actual	=	1,311.53 psi	fv: Actual	=	83.65 psi
F'b	=	2,976.18 psi	F'v	=	290.00 psi
Load Combination		+D+L	Load Combination		+D+L
Location of maximum on span	=	5.300 ft	Location of maximum on span	=	0.000 ft
Span # where maximum occurs	=	Span # 1	Span # where maximum occurs	=	Span # 1

Maximum Deflection

Max Downward Transient Deflection	0.090 in	Ratio =	1413 >=300	Span: 1 : L Only
Max Upward Transient Deflection	0 in	Ratio =	0 <300	n/a
Max Downward Total Deflection	0.224 in	Ratio =	567 >=400	Span: 1 : +D+0.750Lr+0.750L
Max Upward Total Deflection	0 in	Ratio =	0 <400	n/a

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Max Stress Ratios M	V	CD	CM	C_t	CLx	C_F	Cfu	C_i	C_r	Moment Values M	fb	F'b	Shear Values V	fv	F'v
D Only														0.0	0.00	0.0	0.0
Length = 10.60 ft	1	0.282	0.185	0.90	1.00	1.00	1.00	1.026	1.00	1.00	1.00	4.98	756.6	2,678.6	1.60	48.3	261.0
+D+L					1.00	1.00	1.00	1.026	1.00	1.00	1.00			0.0	0.00	0.0	0.0
Length = 10.60 ft	1	0.441	0.288	1.00	1.00	1.00	1.00	1.026	1.00	1.00	1.00	8.63	1,311.5	2,976.2	2.78	83.7	290.0
+D+Lr					1.00	1.00	1.00	1.026	1.00	1.00	1.00			0.0	0.00	0.0	0.0
Length = 10.60 ft	1	0.278	0.182	1.25	1.00	1.00	1.00	1.026	1.00	1.00	1.00	6.80	1,034.1	3,720.2	2.19	66.0	362.5
+D+0.750Lr+0.750L					1.00	1.00	1.00	1.026	1.00	1.00	1.00			0.0	0.00	0.0	0.0
Length = 10.60 ft	1	0.371	0.243	1.25	1.00	1.00	1.00	1.026	1.00	1.00	1.00	9.09	1,380.9	3,720.2	2.93	88.1	362.5
+D+0.750L					1.00	1.00	1.00	1.026	1.00	1.00	1.00			0.0	0.00	0.0	0.0

Wood Beam

Project File: 1077 Fell street- 02.28.24.ec6

LIC# : KW-06019663, Build:20.24.01.25 Enertia Designs Inc. (c) ENERCALC INC 1983-2023

DESCRIPTION: (E) 2B1

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Max Stress Ratios M	V	CD	CM	C_t	CLx	C_F	Cfu	C_i	C_r	Moment Values M	fb	F'b	Shear Values V	fv	F'v
Length = 10.60 ft	**1**	0.343	0.224	1.15	1.00	1.00	1.00	1.026	1.00	1.00	1.00	7.72	1,172.8	3,422.6	2.49	74.8	333.5
+0.60D					1.00	1.00	1.00	1.026	1.00	1.00	1.00			0.0	0.00	0.0	0.0
Length = 10.60 ft	**1**	0.095	0.062	1.60	1.00	1.00	1.00	1.026	1.00	1.00	1.00	2.99	454.0	4,761.9	0.96	29.0	464.0

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+0.750Lr+0.750L	1	0.2240	5.339		0.0000	0.000

Vertical Reactions

Support notation : Far left is #1 Values in KIPS

Load Combination	Support 1	Support 2
Max Upward from all Load Conditions	3.429	3.429
Max Upward from Load Combinations	3.429	3.429
Max Upward from Load Cases	1.879	1.879
D Only	1.879	1.879
+D+L	3.257	3.257
+D+Lr	2.568	2.568
+D+0.750Lr+0.750L	3.429	3.429
+D+0.750L	2.912	2.912
+0.60D	1.127	1.127
Lr Only	0.689	0.689
L Only	1.378	1.378

Wood Beam

Project File: 1077 Fell street- 02.28.24.ec6

LIC# : KW-06019663, Build:20.24.01.25 Enertia Designs Inc. (c) ENERCALC INC 1983-2023

DESCRIPTION: (E) 1B1

CODE REFERENCES

Calculations per NDS 2018, IBC 2018, CBC 2019, ASCE 7-16
Load Combination Set : ASCE 7-16

Material Properties

Analysis Method : Allowable Stress Design
Load Combination : ASCE 7-16

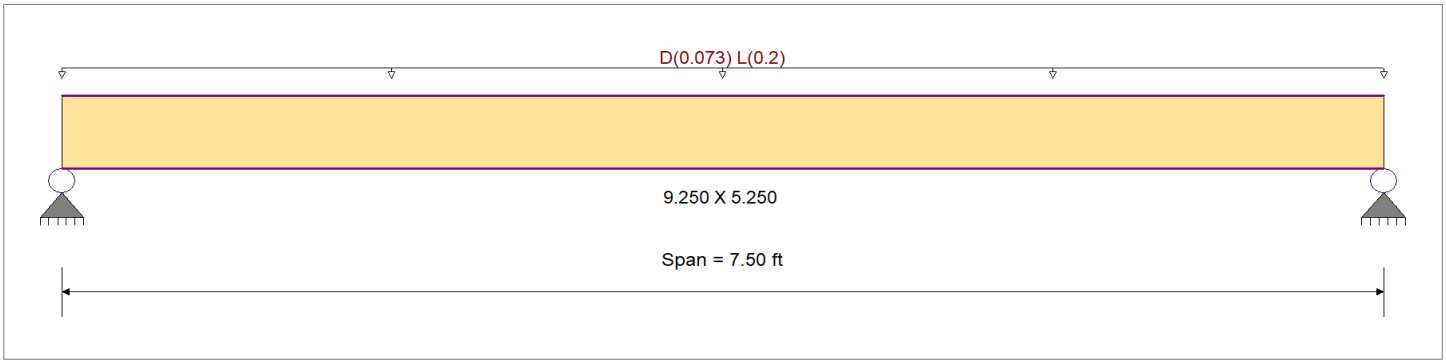
Wood Species : iLevel Truss Joist
Wood Grade : Parallam PSL 2.2E

Beam Bracing : Beam is Fully Braced against lateral-torsional buckling

Fb +	2,900.0 psi
Fb -	2,900.0 psi
Fc - Prll	2,900.0 psi
Fc - Perp	750.0 psi
Fv	290.0 psi
Ft	2,025.0 psi

E : Modulus of Elasticity

Ebend- xx	2,200.0 ksi
Eminbend - xx	1,118.19 ksi
Density	45.070 pcf



Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loading
Uniform Load : D = 0.01460, L = 0.040 ksf, Tributary Width = 5.0 ft, (FLOOR LOAD)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio	=	0.197 : 1	Maximum Shear Stress Ratio	=	0.103 : 1
Section used for this span		9.250 X 5.250	Section used for this span		9.250 X 5.250
fb: Actual	=	572.27 psi	fv: Actual	=	29.73 psi
F'b	=	2,900.00 psi	F'v	=	290.00 psi
Load Combination		+D+L	Load Combination		+D+L
Location of maximum on span	=	3.750 ft	Location of maximum on span	=	7.089 ft
Span # where maximum occurs	=	Span # 1	Span # where maximum occurs	=	Span # 1

Maximum Deflection

Max Downward Transient Deflection	0.058 in	Ratio =	1542	>=300	Span: 1 : L Only
Max Upward Transient Deflection	0 in	Ratio =	0	<300	n/a
Max Downward Total Deflection	0.084 in	Ratio =	1070	>=400	Span: 1 : +D+L
Max Upward Total Deflection	0 in	Ratio =	0	<400	n/a

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Max Stress Ratios M	V	CD	CM	C_t	CLx	C_F	Cfu	C_i	C_r	Moment Values M	fb	F'b	Shear Values V	fv	F'v
D Only														0.0	0.00	0.0	0.0
Length = 7.50 ft	1	0.067	0.035	0.90	1.00	1.00	1.00	1.000	1.00	1.00	1.00	0.62	175.1	2,610.0	0.29	9.1	261.0
+D+L					1.00	1.00	1.00	1.000	1.00	1.00	1.00			0.0	0.00	0.0	0.0
Length = 7.50 ft	1	0.197	0.103	1.00	1.00	1.00	1.00	1.000	1.00	1.00	1.00	2.03	572.3	2,900.0	0.96	29.7	290.0
+D+0.750L					1.00	1.00	1.00	1.000	1.00	1.00	1.00			0.0	0.00	0.0	0.0
Length = 7.50 ft	1	0.130	0.068	1.25	1.00	1.00	1.00	1.000	1.00	1.00	1.00	1.67	473.0	3,625.0	0.80	24.6	362.5
+0.60D					1.00	1.00	1.00	1.000	1.00	1.00	1.00			0.0	0.00	0.0	0.0
Length = 7.50 ft	1	0.023	0.012	1.60	1.00	1.00	1.00	1.000	1.00	1.00	1.00	0.37	105.1	4,640.0	0.18	5.5	464.0

Wood Beam

Project File: 1077 Fell street- 02.28.24.ec6

LIC# : KW-06019663, Build:20.24.01.25 Enertia Designs Inc. (c) ENERCALC INC 1983-2023

DESCRIPTION: (E) 1B1

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+L	1	0.0841	3.777		0.0000	0.000

Vertical Reactions

Support notation : Far left is #1 Values in KIPS

Load Combination	Support 1	Support 2
Max Upward from all Load Conditions	1.081	1.081
Max Upward from Load Combinations	1.081	1.081
Max Upward from Load Cases	0.750	0.750
D Only	0.331	0.331
+D+L	1.081	1.081
+D+0.750L	0.893	0.893
+0.60D	0.198	0.198
L Only	0.750	0.750

Wood Beam

Project File: 1077 Fell street- 02.28.24.ec6

LIC# : KW-06019663, Build:20.24.01.25 Enertia Designs Inc. (c) ENERCALC INC 1983-2023

DESCRIPTION: (N) 1B2

CODE REFERENCES

Calculations per NDS 2018, IBC 2018, CBC 2019, ASCE 7-16
Load Combination Set : ASCE 7-16

Material Properties

Analysis Method : Allowable Stress Design
Load Combination : ASCE 7-16

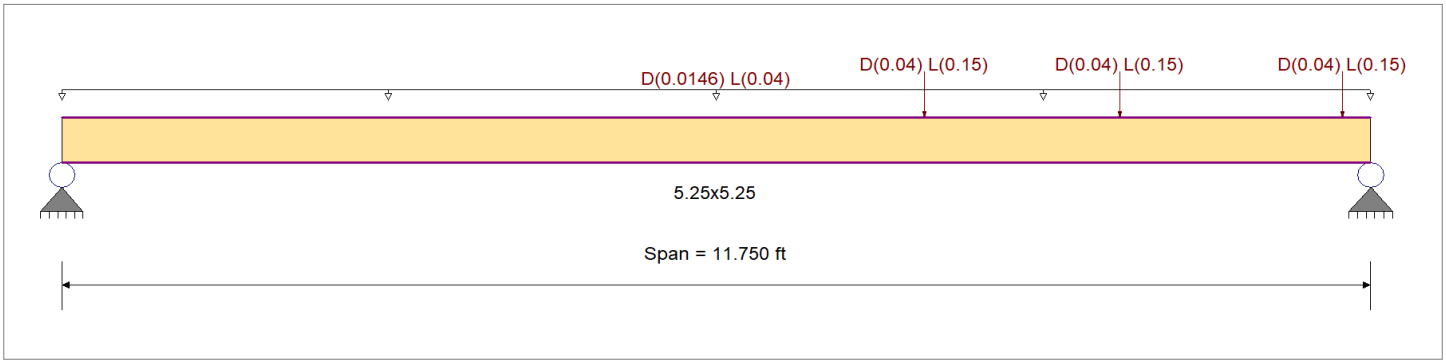
Wood Species : iLevel Truss Joist
Wood Grade : Parallam PSL 2.2E

Beam Bracing : Beam is Fully Braced against lateral-torsional buckling

Fb +	2,900.0 psi
Fb -	2,900.0 psi
Fc - Prll	2,900.0 psi
Fc - Perp	750.0 psi
Fv	290.0 psi
Ft	2,025.0 psi

E : Modulus of Elasticity

Ebend- xx	2,200.0 ksi
Eminbend - xx	1,118.19 ksi
Density	45.070 pcf



Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loading
Uniform Load : D = 0.01460, L = 0.040 ksf, Tributary Width = 1.0 ft, (FLOOR LOAD)
Point Load : D = 0.040, L = 0.150 k @ 7.750 ft, (STRINGER 1)
Point Load : D = 0.040, L = 0.150 k @ 9.50 ft, (STRINGER 2)
Point Load : D = 0.040, L = 0.150 k @ 11.50 ft, (STRINGER 3)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio	=	0.281 : 1	Maximum Shear Stress Ratio	=	0.116 : 1
Section used for this span		5.25x5.25	Section used for this span		5.25x5.25
fb: Actual	=	893.64 psi	fv: Actual	=	33.70 psi
F'b	=	3,178.70 psi	F'v	=	290.00 psi
Load Combination		+D+L	Load Combination		+D+L
Location of maximum on span	=	7.547 ft	Location of maximum on span	=	11.321 ft
Span # where maximum occurs	=	Span # 1	Span # where maximum occurs	=	Span # 1

Maximum Deflection

Max Downward Transient Deflection	0.218 in	Ratio =	648 >=300	Span: 1 : L Only
Max Upward Transient Deflection	0 in	Ratio =	0 <300	n/a
Max Downward Total Deflection	0.314 in	Ratio =	448 >=400	Span: 1 : +D+L
Max Upward Total Deflection	0 in	Ratio =	0 <400	n/a

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Max Stress Ratios M	V	CD	CM	C_t	CLx	C_F	Cfu	C_i	C_r	Moment Values M	fb	F'b	Shear Values V	fv	F'v
D Only														0.0	0.00	0.0	0.0
Length = 11.750 ft	1	0.094	0.038	0.90	1.00	1.00	1.00	1.096	1.00	1.00	1.00	0.54	269.4	2,860.8	0.18	10.0	261.0
+D+L					1.00	1.00	1.00	1.096	1.00	1.00	1.00			0.0	0.00	0.0	0.0
Length = 11.750 ft	1	0.281	0.116	1.00	1.00	1.00	1.00	1.096	1.00	1.00	1.00	1.80	893.6	3,178.7	0.62	33.7	290.0
+D+0.750L					1.00	1.00	1.00	1.096	1.00	1.00	1.00			0.0	0.00	0.0	0.0
Length = 11.750 ft	1	0.185	0.077	1.25	1.00	1.00	1.00	1.096	1.00	1.00	1.00	1.48	736.9	3,973.4	0.51	27.8	362.5
+0.60D					1.00	1.00	1.00	1.096	1.00	1.00	1.00			0.0	0.00	0.0	0.0
Length = 11.750 ft	1	0.032	0.013	1.60	1.00	1.00	1.00	1.096	1.00	1.00	1.00	0.32	161.6	5,085.9	0.11	6.0	464.0

Wood Beam

Project File: 1077 Fell street- 02.28.24.ec6

LIC# : KW-06019663, Build:20.24.01.25 Enertia Designs Inc. (c) ENERCALC INC 1983-2023

DESCRIPTION: (N) 1B2

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+L	1	0.3144	6.132		0.0000	0.000

Vertical Reactions

Support notation : Far left is #1 Values in KIPS

Load Combination	Support 1	Support 2
Max Upward from all Load Conditions	0.477	0.836
Max Upward from Load Combinations	0.477	0.836
Max Upward from Load Cases	0.318	0.602
D Only	0.159	0.234
+D+L	0.477	0.836
+D+0.750L	0.397	0.686
+0.60D	0.095	0.141
L Only	0.318	0.602

Wood Beam

Project File: 1077 Fell street- voluntary 02.28.24.ec6

LIC# : KW-06019663, Build:20.24.01.25 Enertia Designs Inc. (c) ENERCALC INC 1983-2023

DESCRIPTION: (N) 2x6 JOISTS

CODE REFERENCES

Calculations per NDS 2018, IBC 2018, CBC 2019, ASCE 7-16
Load Combination Set : ASCE 7-16

Material Properties

Analysis Method : Allowable Stress Design
Load Combination : ASCE 7-16

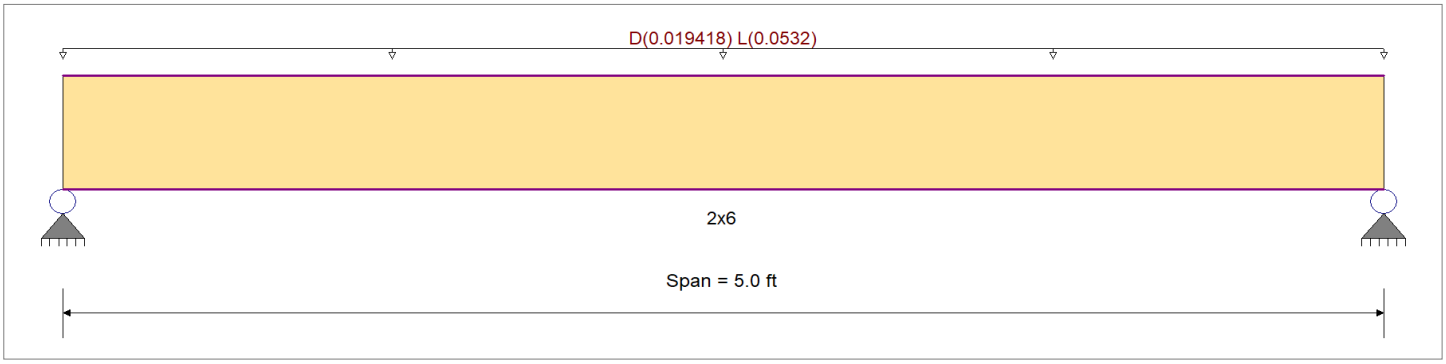
Wood Species : Douglas Fir-South
Wood Grade : No.1

Beam Bracing : Beam is Fully Braced against lateral-torsional buckling

Fb +	925 psi
Fb -	925 psi
Fc - Prll	1450 psi
Fc - Perp	520 psi
Fv	180 psi
Ft	600 psi

E : Modulus of Elasticity

Ebend- xx	1300 ksi
Eminbend - xx	470 ksi
Density	28.72 pcf



Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loading
Uniform Load : D = 0.01460, L = 0.040 ksf, Tributary Width = 1.330 ft, (FLOOR LOAD)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio	=	0.306 : 1	Maximum Shear Stress Ratio	=	0.153 : 1
Section used for this span		2x6	Section used for this span		2x6
fb: Actual	=	368.25 psi	fv: Actual	=	27.60 psi
F'b	=	1,202.50 psi	F'v	=	180.00 psi
Load Combination		+D+L	Load Combination		+D+L
Location of maximum on span	=	2.500 ft	Location of maximum on span	=	0.000 ft
Span # where maximum occurs	=	Span # 1	Span # where maximum occurs	=	Span # 1

Maximum Deflection

Max Downward Transient Deflection	0.028 in	Ratio =	2155 >=300	Span: 1 : L Only
Max Upward Transient Deflection	0 in	Ratio =	0 <300	n/a
Max Downward Total Deflection	0.039 in	Ratio =	1544 >=400	Span: 1 : +D+L
Max Upward Total Deflection	0 in	Ratio =	0 <400	n/a

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Max Stress Ratios M	V	CD	CM	C_t	CLx	C_F	Cfu	C_i	C_r	Moment Values M	fb	F'b	Shear Values V	fv	F'v
D Only														0.0	0.00	0.0	0.0
Length = 5.0 ft	1	0.097	0.048	0.90	1.00	1.00	1.00	1.300	1.00	1.00	1.00	0.07	104.4	1,082.3	0.04	7.8	162.0
+D+L					1.00	1.00	1.00	1.300	1.00	1.00	1.00			0.0	0.00	0.0	0.0
Length = 5.0 ft	1	0.306	0.153	1.00	1.00	1.00	1.00	1.300	1.00	1.00	1.00	0.23	368.2	1,202.5	0.15	27.6	180.0
+D+0.750L					1.00	1.00	1.00	1.300	1.00	1.00	1.00			0.0	0.00	0.0	0.0
Length = 5.0 ft	1	0.201	0.101	1.25	1.00	1.00	1.00	1.300	1.00	1.00	1.00	0.19	302.3	1,503.1	0.12	22.7	225.0
+0.60D					1.00	1.00	1.00	1.300	1.00	1.00	1.00			0.0	0.00	0.0	0.0
Length = 5.0 ft	1	0.033	0.016	1.60	1.00	1.00	1.00	1.300	1.00	1.00	1.00	0.04	62.7	1,924.0	0.03	4.7	288.0

Wood Beam

Project File: 1077 Fell street- voluntary 02.28.24.ec6

LIC# : KW-06019663, Build:20.24.01.25 Enertia Designs Inc. (c) ENERCALC INC 1983-2023

DESCRIPTION: (N) 2x6 JOISTS

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+L	1	0.0389	2.518		0.0000	0.000

Vertical Reactions

Support notation : Far left is #1 Values in KIPS

Load Combination	Support 1	Support 2
Max Upward from all Load Conditions	0.186	0.186
Max Upward from Load Combinations	0.186	0.186
Max Upward from Load Cases	0.133	0.133
D Only	0.053	0.053
+D+L	0.186	0.186
+D+0.750L	0.152	0.152
+0.60D	0.032	0.032
L Only	0.133	0.133

Wood Beam

Project File: 1077 Fell street- voluntary 02.28.24.ec6

LIC# : KW-06019663, Build:20.24.01.25 Enertia Designs Inc. (c) ENERCALC INC 1983-2023

DESCRIPTION: (N) STRINGER

CODE REFERENCES

Calculations per NDS 2018, IBC 2018, CBC 2019, ASCE 7-16
Load Combination Set : ASCE 7-16

Material Properties

Analysis Method : Allowable Stress Design
Load Combination : ASCE 7-16

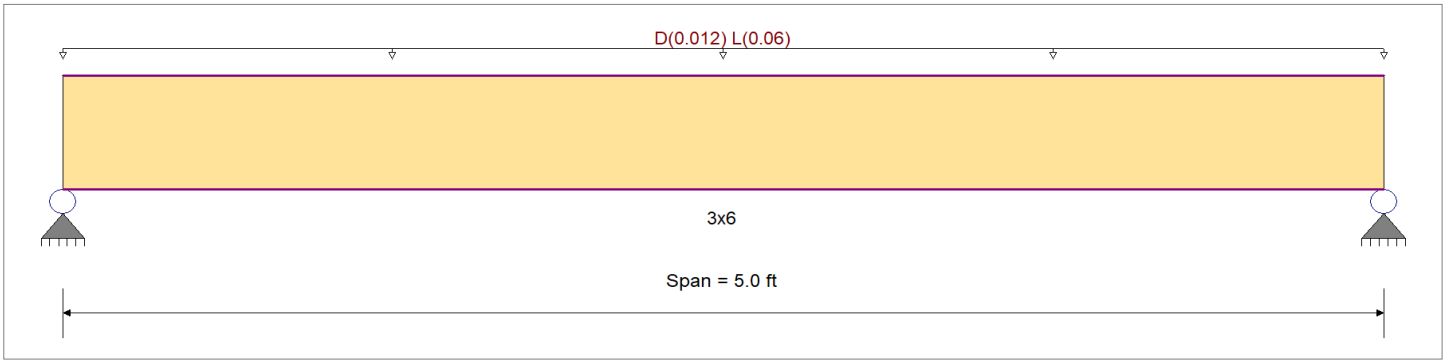
Wood Species :
Wood Grade :

Beam Bracing : Beam is Fully Braced against lateral-torsional buckling

Fb +	1,000.0 psi
Fb -	1,000.0 psi
Fc - Prll	1,000.0 psi
Fc - Perp	1,000.0 psi
Fv	65.0 psi
Ft	65.0 psi

E : Modulus of Elasticity

Ebend- xx	1,300.0 ksi
Eminbend - xx	1,300.0 ksi
Density	34.0 pcf



Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loading
Uniform Load : D = 0.0080, L = 0.040 ksf, Tributary Width = 1.50 ft, (STAIR LOAD)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio	=	0.224 : 1	Maximum Shear Stress Ratio	=	0.258 : 1
Section used for this span		3x6	Section used for this span		3x6
fb: Actual	=	223.87 psi	fv: Actual	=	16.78 psi
F'b	=	1,000.00 psi	F'v	=	65.00 psi
Load Combination		+D+L	Load Combination		+D+L
Location of maximum on span	=	2.500 ft	Location of maximum on span	=	0.000 ft
Span # where maximum occurs	=	Span # 1	Span # where maximum occurs	=	Span # 1

Maximum Deflection

Max Downward Transient Deflection	0.019 in	Ratio =	3185 >=300	Span: 1 : L Only
Max Upward Transient Deflection	0 in	Ratio =	0 <300	n/a
Max Downward Total Deflection	0.024 in	Ratio =	2540 >=400	Span: 1 : +D+L
Max Upward Total Deflection	0 in	Ratio =	0 <400	n/a

Maximum Forces & Stresses for Load Combinations

Load Combination		Max Stress Ratios										Moment Values			Shear Values		
Segment Length	Span #	M	V	CD	CM	C_t	CLx	C_F	Cfu	C_i	C_r	M	fb	F'b	V	fv	F'v
D Only														0.0	0.00	0.0	0.0
Length = 5.0 ft	1	0.050	0.058	0.90	1.00	1.00	1.00	1.000	1.00	1.00	1.00	0.05	45.4	900.0	0.03	3.4	58.5
+D+L					1.00	1.00	1.00	1.000	1.00	1.00	1.00			0.0	0.00	0.0	0.0
Length = 5.0 ft	1	0.224	0.258	1.00	1.00	1.00	1.00	1.000	1.00	1.00	1.00	0.24	223.9	1,000.0	0.15	16.8	65.0
+D+0.750L					1.00	1.00	1.00	1.000	1.00	1.00	1.00			0.0	0.00	0.0	0.0
Length = 5.0 ft	1	0.143	0.165	1.25	1.00	1.00	1.00	1.000	1.00	1.00	1.00	0.19	179.2	1,250.0	0.12	13.4	81.3
+0.60D					1.00	1.00	1.00	1.000	1.00	1.00	1.00			0.0	0.00	0.0	0.0
Length = 5.0 ft	1	0.017	0.020	1.60	1.00	1.00	1.00	1.000	1.00	1.00	1.00	0.03	27.2	1,600.0	0.02	2.0	104.0

Wood Beam

Project File: 1077 Fell street- voluntary 02.28.24.ec6

LIC# : KW-06019663, Build:20.24.01.25 Enertia Designs Inc. (c) ENERCALC INC 1983-2023

DESCRIPTION: (N) STRINGER

Overall Maximum Deflections

Load Combination	Span	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
+D+L	1	0.0236	2.518		0.0000	0.000

Vertical Reactions

Support notation : Far left is #1 Values in KIPS

Load Combination	Support 1	Support 2
Max Upward from all Load Conditions	0.188	0.188
Max Upward from Load Combinations	0.188	0.188
Max Upward from Load Cases	0.150	0.150
D Only	0.038	0.038
+D+L	0.188	0.188
+D+0.750L	0.151	0.151
+0.60D	0.023	0.023
L Only	0.150	0.150

Combined Footing

Project File: 1077 Fell street- 02.28.24.ec6

LIC# : KW-06019663, Build:20.24.01.25 Enertia Designs Inc. (c) ENERCALC INC 1983-2023

DESCRIPTION: FTG1

Code References

Calculations per ACI 318-14, IBC 2018, CBC 2019, ASCE 7-16
Load Combinations Used : IBC 2021

General Information

Material Properties

f'c : Concrete 28 day strength	2.50	ksi
fy : Rebar Yield	60.0	ksi
Ec : Concrete Elastic Modulus	3,122.0	ksi
Concrete Density	145.0	pcf
ϕ : Phi Values Flexure :	0.90	
Shear :	0.750	

Analysis/Design Settings

Calculate footing weight as dead load ?	Yes
Calculate Pedestal weight as dead load ?	No
Min Steel % Bending Reinf (based on 'd')	
Min Allow % Temp Reinf (based on thick)	0.00180
Min. Overturning Safety Factor	1.0: 1
Min. Sliding Safety Factor	1.0: 1

Soil Information

Allowable Soil Bearing	1.50	ksf
Increase Bearing By Footing Weight	No	
Soil Passive Sliding Resistance	250.0	pcf
(Uses entry for "Footing base depth below soil surface" for force)		
Coefficient of Soil/Concrete Friction	0.30	

Soil Bearing Increase

Footing base depth below soil surface	ft
Increases based on footing Depth	
Allowable pressure increase per foot	ksf
when base of footing is below	ft
Increases based on footing Width . . .	
Allowable pressure increase per foot	ksf
when maximum length or width is greater tha	ft
Maximum Allowed Bearing Pressure	10.0 ksf
(A value of zero implies no limit)	
Adjusted Allowable Soil Bearing	1.50 ksf
(Allowable Soil Bearing adjusted for footing weight and depth & width increases as specified by user.)	

Dimensions & Reinforcing

Distance Left of Column #1	=	1.0 ft
Between Columns	=	10.0 ft
Distance Right of Column #2	=	1.0 ft
Total Footing Length	=	12.0 ft
Footing Width	=	1.50 ft
Footing Thickness	=	18.0 in

Pedestal dimensions...

		Col #1	Col #2	
Sq. Dim.	=	0.50	0.50	in
Height	=	150.0	150.0	in

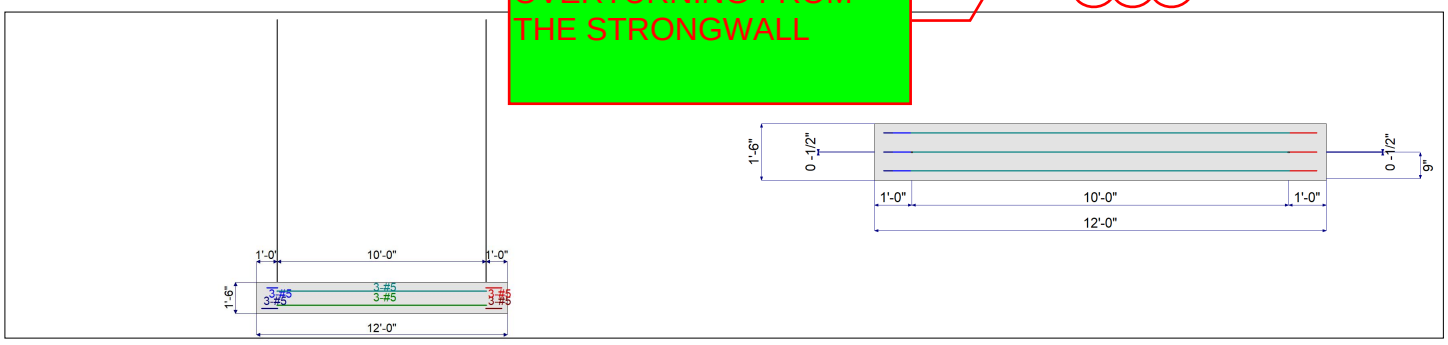
Rebar Center to Concrete Edge @ Top	=	3.0 in
Rebar Center to Concrete Edge @ Bottom	=	3.0 in

Bars left of Col #1	Count	Size #	As Provided	As Req'd
Bottom Bars	3.0	5	0.930	0.5832 in^2
Top Bars	3.0	5	0.930	0.0 in^2
Bars Btwn Cols				
Bottom Bars	3.0	5	0.930	0.5832 in^2
Top Bars	3.0	5	0.930	0.5832 in^2
Bars Right of Col #2				
Bottom Bars	3.0	5	0.930	0.5832 in^2
Top Bars	3.0	5	0.930	0.0 in^2

Applied Loads

Applied @ Left Column		D	Lr	L	S	W	E	H	
Axial Load Downward	=	1.880	0.690	1.380					k
Moment (+CW)	=								k-ft
Shear (+X)	=								k
Applied @ Right Column									
Axial Load Downward	=	1.880	0.690	1.380					k
Moment (+CW)	=								k-ft
Shear (+X)	=								k
Overburden	=								

SEISMIC LOADS/ OVERTURNING FROM THE STRONGWALL



Combined Footing

Project File: 1077 Fell street- 02.28.24.ec6

LIC# : KW-06019663, Build:20.24.01.25 Enertia Designs Inc. (c) ENERCALC INC 1983-2023

DESCRIPTION: FTG1

DESIGN SUMMARY

Design OK

Factor of Safety	Item	Applied	Capacity	Governing Load Combination
PASS No OTM	Overturning	0.0 k-ft	0.0 k-ft	No OTM
PASS No Sliding	Sliding	0.0 k	2.303 k	No Sliding
PASS No Uplift	Uplift	0.0 k	0.0 k	No Uplift

Utilization Ratio	Item	Applied	Capacity	Governing Load Combination
PASS 0.3993	Soil Bearing	0.5989 ksf	1.50 ksf	+D+0.750Lr+0.750L
PASS 0.1471	1-way Shear - Col #1	11.030 psi	75.0 psi	+1.20D+0.50Lr+1.60L
PASS 0.1471	1-way Shear - Col #2	11.030 psi	75.0 psi	+1.20D+0.50Lr+1.60L
PASS 0.02814	2-way Punching - Col #1	4.221 psi	150.0 psi	+1.20D+0.50Lr+1.60L
PASS 0.02814	2-way Punching - Col #2	4.221 psi	150.0 psi	+1.20D+0.50Lr+1.60L
PASS No Bending	Flexure - Left of Col #1 - Top	0.0 k-ft	0.0 k-ft	N/A
PASS 0.006183	Flexure - Left of Col #1 - Bottom	0.3693 k-ft	59.722 k-ft	+1.20D+0.50Lr+1.60L
PASS 0.1610	Flexure - Between Cols - Top	-9.618 k-ft	59.722 k-ft	+1.20D+0.50Lr+1.60L
PASS 0.003372	Flexure - Between Cols - Bottom	0.2014 k-ft	59.722 k-ft	+1.20D+0.50Lr+1.60L
PASS No Bending	Flexure - Right of Col #2 - Top	0.0 k-ft	0.0 k-ft	N/A
PASS 0.006183	Flexure - Right of Col #2 - Bottom	0.3693 k-ft	59.722 k-ft	+1.20D+0.50Lr+1.60L

Soil Bearing

Load Combination...	Total Bearing	Eccentricity from Ftg CL	Actual Soil Bearing Stress @ Left Edge	@ Right Edge	Allowable	Actual / Allow Ratio
D Only	7.68 k	0.000 ft	0.43 ksf	0.43 ksf	1.50 ksf	0.284
+D+L	10.44 k	0.000 ft	0.58 ksf	0.58 ksf	1.50 ksf	0.386
+D+Lr	9.06 k	0.000 ft	0.50 ksf	0.50 ksf	1.50 ksf	0.335
+D+0.750Lr+0.750L	10.78 k	0.000 ft	0.60 ksf	0.60 ksf	1.50 ksf	0.399
+D+0.750L	9.75 k	0.000 ft	0.54 ksf	0.54 ksf	1.50 ksf	0.361
+0.60D	4.61 k	0.000 ft	0.26 ksf	0.26 ksf	1.50 ksf	0.171

Overturning Stability

Load Combination...	Moments about Left Edge k-ft Overturning	Resisting	Ratio	Moments about Right Edg k-ft Overturning	Resisting	Ratio
D Only	0.00	0.00	999.000	0.00	0.00	999.000
+D+L	0.00	0.00	999.000	0.00	0.00	999.000
+D+Lr	0.00	0.00	999.000	0.00	0.00	999.000
+D+0.750Lr+0.750L	0.00	0.00	999.000	0.00	0.00	999.000
+D+0.750L	0.00	0.00	999.000	0.00	0.00	999.000
+0.60D	0.00	0.00	999.000	0.00	0.00	999.000

Sliding Stability

Load Combination...	Sliding Force	Resisting Force	Sliding SafetyRatio
D Only	0.00 k	2.30 k	999
+D+L	0.00 k	3.13 k	999
+D+Lr	0.00 k	2.72 k	999
+D+0.750Lr+0.750L	0.00 k	3.23 k	999
+D+0.750L	0.00 k	2.92 k	999
+0.60D	0.00 k	1.38 k	999

Z-Axis Footing Flexure - Maximum Values for Load Combination

Load Combination...	Mu (ft-k)	Distance from left (ft)	Tension Side	As Req'd (in^2)	Governed by	Actual As (in^2)	Phi*Mn (ft-k)	Mu / PhiMn
+0.60D	0.000	0.000	0	0.000	0	0.000	0.000	0.000
+0.60D	0.000	0.030	0	0.000	0	0.000	0.000	0.000
+0.60D	0.000	0.060	0	0.000	0	0.000	0.000	0.000
+0.60D	0.000	0.090	0	0.000	0	0.000	0.000	0.000
+0.60D	0.000	0.120	0	0.000	0	0.000	0.000	0.000
+0.60D	0.000	0.150	0	0.000	0	0.000	0.000	0.000
+1.20D+0.50Lr+1.60L	0.013	0.180	Bottom	0.583	Min Temp %	0.930	59.722	0.000
+1.20D+0.50Lr+1.60L	0.018	0.210	Bottom	0.583	Min Temp %	0.930	59.722	0.000
+1.20D+0.50Lr+1.60L	0.023	0.240	Bottom	0.583	Min Temp %	0.930	59.722	0.000

Combined Footing

LIC# : KW-06019663, Build:20.24.01.25 Enertia Designs Inc. (c) ENERCALC INC 1983-2023

DESCRIPTION: FTG1

Z-Axis Footing Flexure - Maximum Values for Load Combination

Load Combination...	Mu (ft-k)	Distance from left (ft)	Tension Side	As Req'd (in^2)	Governed by	Actual As (in^2)	Phi*Mn (ft-k)	Mu / PhiMn
+1.20D+0.50Lr+1.60L	0.029	0.270	Bottom	0.583	Min Temp %	0.930	59.722	0.000
+1.20D+0.50Lr+1.60L	0.036	0.300	Bottom	0.583	Min Temp %	0.930	59.722	0.001
+1.20D+0.50Lr+1.60L	0.044	0.330	Bottom	0.583	Min Temp %	0.930	59.722	0.001
+1.20D+0.50Lr+1.60L	0.052	0.360	Bottom	0.583	Min Temp %	0.930	59.722	0.001
+1.20D+0.50Lr+1.60L	0.061	0.390	Bottom	0.583	Min Temp %	0.930	59.722	0.001
+1.20D+0.50Lr+1.60L	0.071	0.420	Bottom	0.583	Min Temp %	0.930	59.722	0.001
+1.20D+0.50Lr+1.60L	0.081	0.450	Bottom	0.583	Min Temp %	0.930	59.722	0.001
+1.20D+0.50Lr+1.60L	0.092	0.480	Bottom	0.583	Min Temp %	0.930	59.722	0.002
+1.20D+0.50Lr+1.60L	0.104	0.510	Bottom	0.583	Min Temp %	0.930	59.722	0.002
+1.20D+0.50Lr+1.60L	0.117	0.540	Bottom	0.583	Min Temp %	0.930	59.722	0.002
+1.20D+0.50Lr+1.60L	0.130	0.570	Bottom	0.583	Min Temp %	0.930	59.722	0.002
+1.20D+0.50Lr+1.60L	0.144	0.600	Bottom	0.583	Min Temp %	0.930	59.722	0.002
+1.20D+0.50Lr+1.60L	0.159	0.630	Bottom	0.583	Min Temp %	0.930	59.722	0.003
+1.20D+0.50Lr+1.60L	0.175	0.660	Bottom	0.583	Min Temp %	0.930	59.722	0.003
+1.20D+0.50Lr+1.60L	0.191	0.690	Bottom	0.583	Min Temp %	0.930	59.722	0.003
+1.20D+0.50Lr+1.60L	0.208	0.720	Bottom	0.583	Min Temp %	0.930	59.722	0.003
+1.20D+0.50Lr+1.60L	0.225	0.750	Bottom	0.583	Min Temp %	0.930	59.722	0.004
+1.20D+0.50Lr+1.60L	0.244	0.780	Bottom	0.583	Min Temp %	0.930	59.722	0.004
+1.20D+0.50Lr+1.60L	0.263	0.810	Bottom	0.583	Min Temp %	0.930	59.722	0.004
+1.20D+0.50Lr+1.60L	0.283	0.840	Bottom	0.583	Min Temp %	0.930	59.722	0.005
+1.20D+0.50Lr+1.60L	0.303	0.870	Bottom	0.583	Min Temp %	0.930	59.722	0.005
+1.20D+0.50Lr+1.60L	0.325	0.900	Bottom	0.583	Min Temp %	0.930	59.722	0.005
+1.20D+0.50Lr+1.60L	0.347	0.930	Bottom	0.583	Min Temp %	0.930	59.722	0.006
+1.20D+0.50Lr+1.60L	0.369	0.960	Bottom	0.583	Min Temp %	0.930	59.722	0.006
+1.20D+0.50Lr+1.60L	0.364	0.990	Bottom	0.583	Min Temp %	0.930	59.722	0.006
+1.20D+0.50Lr+1.60L	0.307	1.020	Bottom	0.583	Min Temp %	0.930	59.722	0.005
+1.20D+0.50Lr+1.60L	0.201	1.050	Bottom	0.583	Min Temp %	0.930	59.722	0.003
+1.20D+0.50Lr+1.60L	0.083	1.080	Bottom	0.583	Min Temp %	0.930	59.722	0.001
+1.20D+0.50Lr+1.60L	-0.035	1.110	Top	0.583	Min Temp %	0.930	59.722	0.001
+1.20D+0.50Lr+1.60L	-0.152	1.140	Top	0.583	Min Temp %	0.930	59.722	0.003
+1.20D+0.50Lr+1.60L	-0.269	1.170	Top	0.583	Min Temp %	0.930	59.722	0.005
+1.20D+0.50Lr+1.60L	-0.385	1.200	Top	0.583	Min Temp %	0.930	59.722	0.006
+1.20D+0.50Lr+1.60L	-0.500	1.230	Top	0.583	Min Temp %	0.930	59.722	0.008
+1.20D+0.50Lr+1.60L	-0.614	1.260	Top	0.583	Min Temp %	0.930	59.722	0.010
+1.20D+0.50Lr+1.60L	-0.728	1.290	Top	0.583	Min Temp %	0.930	59.722	0.012
+1.20D+0.50Lr+1.60L	-0.841	1.320	Top	0.583	Min Temp %	0.930	59.722	0.014
+1.20D+0.50Lr+1.60L	-0.953	1.350	Top	0.583	Min Temp %	0.930	59.722	0.016
+1.20D+0.50Lr+1.60L	-1.064	1.380	Top	0.583	Min Temp %	0.930	59.722	0.018
+1.20D+0.50Lr+1.60L	-1.175	1.410	Top	0.583	Min Temp %	0.930	59.722	0.020
+1.20D+0.50Lr+1.60L	-1.285	1.440	Top	0.583	Min Temp %	0.930	59.722	0.022
+1.20D+0.50Lr+1.60L	-1.394	1.470	Top	0.583	Min Temp %	0.930	59.722	0.023
+1.20D+0.50Lr+1.60L	-1.503	1.500	Top	0.583	Min Temp %	0.930	59.722	0.025
+1.20D+0.50Lr+1.60L	-1.611	1.530	Top	0.583	Min Temp %	0.930	59.722	0.027
+1.20D+0.50Lr+1.60L	-1.718	1.560	Top	0.583	Min Temp %	0.930	59.722	0.029
+1.20D+0.50Lr+1.60L	-1.824	1.590	Top	0.583	Min Temp %	0.930	59.722	0.031
+1.20D+0.50Lr+1.60L	-1.930	1.620	Top	0.583	Min Temp %	0.930	59.722	0.032
+1.20D+0.50Lr+1.60L	-2.035	1.650	Top	0.583	Min Temp %	0.930	59.722	0.034
+1.20D+0.50Lr+1.60L	-2.139	1.680	Top	0.583	Min Temp %	0.930	59.722	0.036
+1.20D+0.50Lr+1.60L	-2.243	1.710	Top	0.583	Min Temp %	0.930	59.722	0.038
+1.20D+0.50Lr+1.60L	-2.345	1.740	Top	0.583	Min Temp %	0.930	59.722	0.039
+1.20D+0.50Lr+1.60L	-2.447	1.770	Top	0.583	Min Temp %	0.930	59.722	0.041
+1.20D+0.50Lr+1.60L	-2.549	1.800	Top	0.583	Min Temp %	0.930	59.722	0.043
+1.20D+0.50Lr+1.60L	-2.649	1.830	Top	0.583	Min Temp %	0.930	59.722	0.044
+1.20D+0.50Lr+1.60L	-2.749	1.860	Top	0.583	Min Temp %	0.930	59.722	0.046
+1.20D+0.50Lr+1.60L	-2.848	1.890	Top	0.583	Min Temp %	0.930	59.722	0.048
+1.20D+0.50Lr+1.60L	-2.947	1.920	Top	0.583	Min Temp %	0.930	59.722	0.049
+1.20D+0.50Lr+1.60L	-3.045	1.950	Top	0.583	Min Temp %	0.930	59.722	0.051
+1.20D+0.50Lr+1.60L	-3.142	1.980	Top	0.583	Min Temp %	0.930	59.722	0.053
+1.20D+0.50Lr+1.60L	-3.238	2.010	Top	0.583	Min Temp %	0.930	59.722	0.054
+1.20D+0.50Lr+1.60L	-3.334	2.040	Top	0.583	Min Temp %	0.930	59.722	0.056
+1.20D+0.50Lr+1.60L	-3.428	2.070	Top	0.583	Min Temp %	0.930	59.722	0.057
+1.20D+0.50Lr+1.60L	-3.523	2.100	Top	0.583	Min Temp %	0.930	59.722	0.059
+1.20D+0.50Lr+1.60L	-3.616	2.130	Top	0.583	Min Temp %	0.930	59.722	0.061

Combined Footing

Project File: 1077 Fell street- 02.28.24.ec6

LIC# : KW-06019663, Build:20.24.01.25 Enertia Designs Inc. (c) ENERCALC INC 1983-2023

DESCRIPTION: FTG1

Z-Axis Footing Flexure - Maximum Values for Load Combination

Load Combination...	Mu (ft-k)	Distance from left (ft)	Tension Side	As Req'd (in^2)	Governed by	Actual As (in^2)	Phi*Mn (ft-k)	Mu / PhiMn
+1.20D+0.50Lr+1.60L	-3.709	2.160	Top	0.583	Min Temp %	0.930	59.722	0.062
+1.20D+0.50Lr+1.60L	-3.801	2.190	Top	0.583	Min Temp %	0.930	59.722	0.064
+1.20D+0.50Lr+1.60L	-3.892	2.220	Top	0.583	Min Temp %	0.930	59.722	0.065
+1.20D+0.50Lr+1.60L	-3.982	2.250	Top	0.583	Min Temp %	0.930	59.722	0.067
+1.20D+0.50Lr+1.60L	-4.072	2.280	Top	0.583	Min Temp %	0.930	59.722	0.068
+1.20D+0.50Lr+1.60L	-4.161	2.310	Top	0.583	Min Temp %	0.930	59.722	0.070
+1.20D+0.50Lr+1.60L	-4.250	2.340	Top	0.583	Min Temp %	0.930	59.722	0.071
+1.20D+0.50Lr+1.60L	-4.337	2.370	Top	0.583	Min Temp %	0.930	59.722	0.073
+1.20D+0.50Lr+1.60L	-4.424	2.400	Top	0.583	Min Temp %	0.930	59.722	0.074
+1.20D+0.50Lr+1.60L	-4.510	2.430	Top	0.583	Min Temp %	0.930	59.722	0.076
+1.20D+0.50Lr+1.60L	-4.596	2.460	Top	0.583	Min Temp %	0.930	59.722	0.077
+1.20D+0.50Lr+1.60L	-4.681	2.490	Top	0.583	Min Temp %	0.930	59.722	0.078
+1.20D+0.50Lr+1.60L	-4.765	2.520	Top	0.583	Min Temp %	0.930	59.722	0.080
+1.20D+0.50Lr+1.60L	-4.848	2.550	Top	0.583	Min Temp %	0.930	59.722	0.081
+1.20D+0.50Lr+1.60L	-4.931	2.580	Top	0.583	Min Temp %	0.930	59.722	0.083
+1.20D+0.50Lr+1.60L	-5.013	2.610	Top	0.583	Min Temp %	0.930	59.722	0.084
+1.20D+0.50Lr+1.60L	-5.094	2.640	Top	0.583	Min Temp %	0.930	59.722	0.085
+1.20D+0.50Lr+1.60L	-5.174	2.670	Top	0.583	Min Temp %	0.930	59.722	0.087
+1.20D+0.50Lr+1.60L	-5.254	2.700	Top	0.583	Min Temp %	0.930	59.722	0.088
+1.20D+0.50Lr+1.60L	-5.333	2.730	Top	0.583	Min Temp %	0.930	59.722	0.089
+1.20D+0.50Lr+1.60L	-5.411	2.760	Top	0.583	Min Temp %	0.930	59.722	0.091
+1.20D+0.50Lr+1.60L	-5.489	2.790	Top	0.583	Min Temp %	0.930	59.722	0.092
+1.20D+0.50Lr+1.60L	-5.565	2.820	Top	0.583	Min Temp %	0.930	59.722	0.093
+1.20D+0.50Lr+1.60L	-5.642	2.850	Top	0.583	Min Temp %	0.930	59.722	0.094
+1.20D+0.50Lr+1.60L	-5.717	2.880	Top	0.583	Min Temp %	0.930	59.722	0.096
+1.20D+0.50Lr+1.60L	-5.792	2.910	Top	0.583	Min Temp %	0.930	59.722	0.097
+1.20D+0.50Lr+1.60L	-5.866	2.940	Top	0.583	Min Temp %	0.930	59.722	0.098
+1.20D+0.50Lr+1.60L	-5.939	2.970	Top	0.583	Min Temp %	0.930	59.722	0.099
+1.20D+0.50Lr+1.60L	-6.011	3.000	Top	0.583	Min Temp %	0.930	59.722	0.101
+1.20D+0.50Lr+1.60L	-6.083	3.030	Top	0.583	Min Temp %	0.930	59.722	0.102
+1.20D+0.50Lr+1.60L	-6.154	3.060	Top	0.583	Min Temp %	0.930	59.722	0.103
+1.20D+0.50Lr+1.60L	-6.224	3.090	Top	0.583	Min Temp %	0.930	59.722	0.104
+1.20D+0.50Lr+1.60L	-6.294	3.120	Top	0.583	Min Temp %	0.930	59.722	0.105
+1.20D+0.50Lr+1.60L	-6.363	3.150	Top	0.583	Min Temp %	0.930	59.722	0.107
+1.20D+0.50Lr+1.60L	-6.431	3.180	Top	0.583	Min Temp %	0.930	59.722	0.108
+1.20D+0.50Lr+1.60L	-6.499	3.210	Top	0.583	Min Temp %	0.930	59.722	0.109
+1.20D+0.50Lr+1.60L	-6.565	3.240	Top	0.583	Min Temp %	0.930	59.722	0.110
+1.20D+0.50Lr+1.60L	-6.631	3.270	Top	0.583	Min Temp %	0.930	59.722	0.111
+1.20D+0.50Lr+1.60L	-6.697	3.300	Top	0.583	Min Temp %	0.930	59.722	0.112
+1.20D+0.50Lr+1.60L	-6.761	3.330	Top	0.583	Min Temp %	0.930	59.722	0.113
+1.20D+0.50Lr+1.60L	-6.825	3.360	Top	0.583	Min Temp %	0.930	59.722	0.114
+1.20D+0.50Lr+1.60L	-6.888	3.390	Top	0.583	Min Temp %	0.930	59.722	0.115
+1.20D+0.50Lr+1.60L	-6.950	3.420	Top	0.583	Min Temp %	0.930	59.722	0.116
+1.20D+0.50Lr+1.60L	-7.012	3.450	Top	0.583	Min Temp %	0.930	59.722	0.117
+1.20D+0.50Lr+1.60L	-7.073	3.480	Top	0.583	Min Temp %	0.930	59.722	0.118
+1.20D+0.50Lr+1.60L	-7.133	3.510	Top	0.583	Min Temp %	0.930	59.722	0.119
+1.20D+0.50Lr+1.60L	-7.193	3.540	Top	0.583	Min Temp %	0.930	59.722	0.120
+1.20D+0.50Lr+1.60L	-7.252	3.570	Top	0.583	Min Temp %	0.930	59.722	0.121
+1.20D+0.50Lr+1.60L	-7.310	3.600	Top	0.583	Min Temp %	0.930	59.722	0.122
+1.20D+0.50Lr+1.60L	-7.367	3.630	Top	0.583	Min Temp %	0.930	59.722	0.123
+1.20D+0.50Lr+1.60L	-7.424	3.660	Top	0.583	Min Temp %	0.930	59.722	0.124
+1.20D+0.50Lr+1.60L	-7.480	3.690	Top	0.583	Min Temp %	0.930	59.722	0.125
+1.20D+0.50Lr+1.60L	-7.535	3.720	Top	0.583	Min Temp %	0.930	59.722	0.126
+1.20D+0.50Lr+1.60L	-7.589	3.750	Top	0.583	Min Temp %	0.930	59.722	0.127
+1.20D+0.50Lr+1.60L	-7.643	3.780	Top	0.583	Min Temp %	0.930	59.722	0.128
+1.20D+0.50Lr+1.60L	-7.696	3.810	Top	0.583	Min Temp %	0.930	59.722	0.129
+1.20D+0.50Lr+1.60L	-7.748	3.840	Top	0.583	Min Temp %	0.930	59.722	0.130
+1.20D+0.50Lr+1.60L	-7.800	3.870	Top	0.583	Min Temp %	0.930	59.722	0.131
+1.20D+0.50Lr+1.60L	-7.851	3.900	Top	0.583	Min Temp %	0.930	59.722	0.131
+1.20D+0.50Lr+1.60L	-7.901	3.930	Top	0.583	Min Temp %	0.930	59.722	0.132
+1.20D+0.50Lr+1.60L	-7.950	3.960	Top	0.583	Min Temp %	0.930	59.722	0.133
+1.20D+0.50Lr+1.60L	-7.999	3.990	Top	0.583	Min Temp %	0.930	59.722	0.134
+1.20D+0.50Lr+1.60L	-8.047	4.020	Top	0.583	Min Temp %	0.930	59.722	0.135

Combined Footing

Project File: 1077 Fell street- 02.28.24.ec6

LIC# : KW-06019663, Build:20.24.01.25 Enertia Designs Inc. (c) ENERCALC INC 1983-2023

DESCRIPTION: FTG1

Z-Axis Footing Flexure - Maximum Values for Load Combination

Load Combination...	Mu (ft-k)	Distance from left (ft)	Tension Side	As Req'd (in^2)	Governed by	Actual As (in^2)	Phi*Mn (ft-k)	Mu / PhiMn
+1.20D+0.50Lr+1.60L	-8.094	4.050	Top	0.583	Min Temp %	0.930	59.722	0.136
+1.20D+0.50Lr+1.60L	-8.141	4.080	Top	0.583	Min Temp %	0.930	59.722	0.136
+1.20D+0.50Lr+1.60L	-8.186	4.110	Top	0.583	Min Temp %	0.930	59.722	0.137
+1.20D+0.50Lr+1.60L	-8.232	4.140	Top	0.583	Min Temp %	0.930	59.722	0.138
+1.20D+0.50Lr+1.60L	-8.276	4.170	Top	0.583	Min Temp %	0.930	59.722	0.139
+1.20D+0.50Lr+1.60L	-8.320	4.200	Top	0.583	Min Temp %	0.930	59.722	0.139
+1.20D+0.50Lr+1.60L	-8.362	4.230	Top	0.583	Min Temp %	0.930	59.722	0.140
+1.20D+0.50Lr+1.60L	-8.405	4.260	Top	0.583	Min Temp %	0.930	59.722	0.141
+1.20D+0.50Lr+1.60L	-8.446	4.290	Top	0.583	Min Temp %	0.930	59.722	0.141
+1.20D+0.50Lr+1.60L	-8.487	4.320	Top	0.583	Min Temp %	0.930	59.722	0.142
+1.20D+0.50Lr+1.60L	-8.527	4.350	Top	0.583	Min Temp %	0.930	59.722	0.143
+1.20D+0.50Lr+1.60L	-8.566	4.380	Top	0.583	Min Temp %	0.930	59.722	0.143
+1.20D+0.50Lr+1.60L	-8.605	4.410	Top	0.583	Min Temp %	0.930	59.722	0.144
+1.20D+0.50Lr+1.60L	-8.643	4.440	Top	0.583	Min Temp %	0.930	59.722	0.145
+1.20D+0.50Lr+1.60L	-8.680	4.470	Top	0.583	Min Temp %	0.930	59.722	0.145
+1.20D+0.50Lr+1.60L	-8.716	4.500	Top	0.583	Min Temp %	0.930	59.722	0.146
+1.20D+0.50Lr+1.60L	-8.752	4.530	Top	0.583	Min Temp %	0.930	59.722	0.147
+1.20D+0.50Lr+1.60L	-8.787	4.560	Top	0.583	Min Temp %	0.930	59.722	0.147
+1.20D+0.50Lr+1.60L	-8.821	4.590	Top	0.583	Min Temp %	0.930	59.722	0.148
+1.20D+0.50Lr+1.60L	-8.855	4.620	Top	0.583	Min Temp %	0.930	59.722	0.148
+1.20D+0.50Lr+1.60L	-8.888	4.650	Top	0.583	Min Temp %	0.930	59.722	0.149
+1.20D+0.50Lr+1.60L	-8.920	4.680	Top	0.583	Min Temp %	0.930	59.722	0.149
+1.20D+0.50Lr+1.60L	-8.951	4.710	Top	0.583	Min Temp %	0.930	59.722	0.150
+1.20D+0.50Lr+1.60L	-8.982	4.740	Top	0.583	Min Temp %	0.930	59.722	0.150
+1.20D+0.50Lr+1.60L	-9.012	4.770	Top	0.583	Min Temp %	0.930	59.722	0.151
+1.20D+0.50Lr+1.60L	-9.041	4.800	Top	0.583	Min Temp %	0.930	59.722	0.151
+1.20D+0.50Lr+1.60L	-9.069	4.830	Top	0.583	Min Temp %	0.930	59.722	0.152
+1.20D+0.50Lr+1.60L	-9.097	4.860	Top	0.583	Min Temp %	0.930	59.722	0.152
+1.20D+0.50Lr+1.60L	-9.124	4.890	Top	0.583	Min Temp %	0.930	59.722	0.153
+1.20D+0.50Lr+1.60L	-9.151	4.920	Top	0.583	Min Temp %	0.930	59.722	0.153
+1.20D+0.50Lr+1.60L	-9.176	4.950	Top	0.583	Min Temp %	0.930	59.722	0.154
+1.20D+0.50Lr+1.60L	-9.201	4.980	Top	0.583	Min Temp %	0.930	59.722	0.154
+1.20D+0.50Lr+1.60L	-9.225	5.010	Top	0.583	Min Temp %	0.930	59.722	0.154
+1.20D+0.50Lr+1.60L	-9.249	5.040	Top	0.583	Min Temp %	0.930	59.722	0.155
+1.20D+0.50Lr+1.60L	-9.271	5.070	Top	0.583	Min Temp %	0.930	59.722	0.155
+1.20D+0.50Lr+1.60L	-9.293	5.100	Top	0.583	Min Temp %	0.930	59.722	0.156
+1.20D+0.50Lr+1.60L	-9.315	5.130	Top	0.583	Min Temp %	0.930	59.722	0.156
+1.20D+0.50Lr+1.60L	-9.335	5.160	Top	0.583	Min Temp %	0.930	59.722	0.156
+1.20D+0.50Lr+1.60L	-9.355	5.190	Top	0.583	Min Temp %	0.930	59.722	0.157
+1.20D+0.50Lr+1.60L	-9.374	5.220	Top	0.583	Min Temp %	0.930	59.722	0.157
+1.20D+0.50Lr+1.60L	-9.393	5.250	Top	0.583	Min Temp %	0.930	59.722	0.157
+1.20D+0.50Lr+1.60L	-9.410	5.280	Top	0.583	Min Temp %	0.930	59.722	0.158
+1.20D+0.50Lr+1.60L	-9.427	5.310	Top	0.583	Min Temp %	0.930	59.722	0.158
+1.20D+0.50Lr+1.60L	-9.443	5.340	Top	0.583	Min Temp %	0.930	59.722	0.158
+1.20D+0.50Lr+1.60L	-9.459	5.370	Top	0.583	Min Temp %	0.930	59.722	0.158
+1.20D+0.50Lr+1.60L	-9.474	5.400	Top	0.583	Min Temp %	0.930	59.722	0.159
+1.20D+0.50Lr+1.60L	-9.488	5.430	Top	0.583	Min Temp %	0.930	59.722	0.159
+1.20D+0.50Lr+1.60L	-9.501	5.460	Top	0.583	Min Temp %	0.930	59.722	0.159
+1.20D+0.50Lr+1.60L	-9.514	5.490	Top	0.583	Min Temp %	0.930	59.722	0.159
+1.20D+0.50Lr+1.60L	-9.526	5.520	Top	0.583	Min Temp %	0.930	59.722	0.159
+1.20D+0.50Lr+1.60L	-9.537	5.550	Top	0.583	Min Temp %	0.930	59.722	0.160
+1.20D+0.50Lr+1.60L	-9.547	5.580	Top	0.583	Min Temp %	0.930	59.722	0.160
+1.20D+0.50Lr+1.60L	-9.557	5.610	Top	0.583	Min Temp %	0.930	59.722	0.160
+1.20D+0.50Lr+1.60L	-9.566	5.640	Top	0.583	Min Temp %	0.930	59.722	0.160
+1.20D+0.50Lr+1.60L	-9.574	5.670	Top	0.583	Min Temp %	0.930	59.722	0.160
+1.20D+0.50Lr+1.60L	-9.582	5.700	Top	0.583	Min Temp %	0.930	59.722	0.160
+1.20D+0.50Lr+1.60L	-9.589	5.730	Top	0.583	Min Temp %	0.930	59.722	0.161
+1.20D+0.50Lr+1.60L	-9.595	5.760	Top	0.583	Min Temp %	0.930	59.722	0.161
+1.20D+0.50Lr+1.60L	-9.600	5.790	Top	0.583	Min Temp %	0.930	59.722	0.161
+1.20D+0.50Lr+1.60L	-9.605	5.820	Top	0.583	Min Temp %	0.930	59.722	0.161
+1.20D+0.50Lr+1.60L	-9.609	5.850	Top	0.583	Min Temp %	0.930	59.722	0.161
+1.20D+0.50Lr+1.60L	-9.612	5.880	Top	0.583	Min Temp %	0.930	59.722	0.161
+1.20D+0.50Lr+1.60L	-9.615	5.910	Top	0.583	Min Temp %	0.930	59.722	0.161

Combined Footing

Project File: 1077 Fell street- 02.28.24.ec6

LIC# : KW-06019663, Build:20.24.01.25 Enertia Designs Inc. (c) ENERCALC INC 1983-2023

DESCRIPTION: FTG1

Z-Axis Footing Flexure - Maximum Values for Load Combination

Load Combination...	Mu (ft-k)	Distance from left (ft)	Tension Side	As Req'd (in^2)	Governed by	Actual As (in^2)	Phi*Mn (ft-k)	Mu / PhiMn
+1.20D+0.50Lr+1.60L	-9.617	5.940	Top	0.583	Min Temp %	0.930	59.722	0.161
+1.20D+0.50Lr+1.60L	-9.618	5.970	Top	0.583	Min Temp %	0.930	59.722	0.161
+1.20D+0.50Lr+1.60L	-9.618	6.000	Top	0.583	Min Temp %	0.930	59.722	0.161
+1.20D+0.50Lr+1.60L	-9.618	6.030	Top	0.583	Min Temp %	0.930	59.722	0.161
+1.20D+0.50Lr+1.60L	-9.617	6.060	Top	0.583	Min Temp %	0.930	59.722	0.161
+1.20D+0.50Lr+1.60L	-9.615	6.090	Top	0.583	Min Temp %	0.930	59.722	0.161
+1.20D+0.50Lr+1.60L	-9.612	6.120	Top	0.583	Min Temp %	0.930	59.722	0.161
+1.20D+0.50Lr+1.60L	-9.609	6.150	Top	0.583	Min Temp %	0.930	59.722	0.161
+1.20D+0.50Lr+1.60L	-9.605	6.180	Top	0.583	Min Temp %	0.930	59.722	0.161
+1.20D+0.50Lr+1.60L	-9.600	6.210	Top	0.583	Min Temp %	0.930	59.722	0.161
+1.20D+0.50Lr+1.60L	-9.595	6.240	Top	0.583	Min Temp %	0.930	59.722	0.161
+1.20D+0.50Lr+1.60L	-9.589	6.270	Top	0.583	Min Temp %	0.930	59.722	0.161
+1.20D+0.50Lr+1.60L	-9.582	6.300	Top	0.583	Min Temp %	0.930	59.722	0.160
+1.20D+0.50Lr+1.60L	-9.574	6.330	Top	0.583	Min Temp %	0.930	59.722	0.160
+1.20D+0.50Lr+1.60L	-9.566	6.360	Top	0.583	Min Temp %	0.930	59.722	0.160
+1.20D+0.50Lr+1.60L	-9.557	6.390	Top	0.583	Min Temp %	0.930	59.722	0.160
+1.20D+0.50Lr+1.60L	-9.547	6.420	Top	0.583	Min Temp %	0.930	59.722	0.160
+1.20D+0.50Lr+1.60L	-9.537	6.450	Top	0.583	Min Temp %	0.930	59.722	0.160
+1.20D+0.50Lr+1.60L	-9.526	6.480	Top	0.583	Min Temp %	0.930	59.722	0.159
+1.20D+0.50Lr+1.60L	-9.514	6.510	Top	0.583	Min Temp %	0.930	59.722	0.159
+1.20D+0.50Lr+1.60L	-9.501	6.540	Top	0.583	Min Temp %	0.930	59.722	0.159
+1.20D+0.50Lr+1.60L	-9.488	6.570	Top	0.583	Min Temp %	0.930	59.722	0.159
+1.20D+0.50Lr+1.60L	-9.474	6.600	Top	0.583	Min Temp %	0.930	59.722	0.159
+1.20D+0.50Lr+1.60L	-9.459	6.630	Top	0.583	Min Temp %	0.930	59.722	0.158
+1.20D+0.50Lr+1.60L	-9.443	6.660	Top	0.583	Min Temp %	0.930	59.722	0.158
+1.20D+0.50Lr+1.60L	-9.427	6.690	Top	0.583	Min Temp %	0.930	59.722	0.158
+1.20D+0.50Lr+1.60L	-9.410	6.720	Top	0.583	Min Temp %	0.930	59.722	0.158
+1.20D+0.50Lr+1.60L	-9.393	6.750	Top	0.583	Min Temp %	0.930	59.722	0.157
+1.20D+0.50Lr+1.60L	-9.374	6.780	Top	0.583	Min Temp %	0.930	59.722	0.157
+1.20D+0.50Lr+1.60L	-9.355	6.810	Top	0.583	Min Temp %	0.930	59.722	0.157
+1.20D+0.50Lr+1.60L	-9.335	6.840	Top	0.583	Min Temp %	0.930	59.722	0.156
+1.20D+0.50Lr+1.60L	-9.315	6.870	Top	0.583	Min Temp %	0.930	59.722	0.156
+1.20D+0.50Lr+1.60L	-9.293	6.900	Top	0.583	Min Temp %	0.930	59.722	0.156
+1.20D+0.50Lr+1.60L	-9.271	6.930	Top	0.583	Min Temp %	0.930	59.722	0.155
+1.20D+0.50Lr+1.60L	-9.249	6.960	Top	0.583	Min Temp %	0.930	59.722	0.155
+1.20D+0.50Lr+1.60L	-9.225	6.990	Top	0.583	Min Temp %	0.930	59.722	0.154
+1.20D+0.50Lr+1.60L	-9.201	7.020	Top	0.583	Min Temp %	0.930	59.722	0.154
+1.20D+0.50Lr+1.60L	-9.176	7.050	Top	0.583	Min Temp %	0.930	59.722	0.154
+1.20D+0.50Lr+1.60L	-9.151	7.080	Top	0.583	Min Temp %	0.930	59.722	0.153
+1.20D+0.50Lr+1.60L	-9.124	7.110	Top	0.583	Min Temp %	0.930	59.722	0.153
+1.20D+0.50Lr+1.60L	-9.097	7.140	Top	0.583	Min Temp %	0.930	59.722	0.152
+1.20D+0.50Lr+1.60L	-9.069	7.170	Top	0.583	Min Temp %	0.930	59.722	0.152
+1.20D+0.50Lr+1.60L	-9.041	7.200	Top	0.583	Min Temp %	0.930	59.722	0.151
+1.20D+0.50Lr+1.60L	-9.012	7.230	Top	0.583	Min Temp %	0.930	59.722	0.151
+1.20D+0.50Lr+1.60L	-8.982	7.260	Top	0.583	Min Temp %	0.930	59.722	0.150
+1.20D+0.50Lr+1.60L	-8.951	7.290	Top	0.583	Min Temp %	0.930	59.722	0.150
+1.20D+0.50Lr+1.60L	-8.920	7.320	Top	0.583	Min Temp %	0.930	59.722	0.149
+1.20D+0.50Lr+1.60L	-8.888	7.350	Top	0.583	Min Temp %	0.930	59.722	0.149
+1.20D+0.50Lr+1.60L	-8.855	7.380	Top	0.583	Min Temp %	0.930	59.722	0.148
+1.20D+0.50Lr+1.60L	-8.821	7.410	Top	0.583	Min Temp %	0.930	59.722	0.148
+1.20D+0.50Lr+1.60L	-8.787	7.440	Top	0.583	Min Temp %	0.930	59.722	0.147
+1.20D+0.50Lr+1.60L	-8.752	7.470	Top	0.583	Min Temp %	0.930	59.722	0.147
+1.20D+0.50Lr+1.60L	-8.716	7.500	Top	0.583	Min Temp %	0.930	59.722	0.146
+1.20D+0.50Lr+1.60L	-8.680	7.530	Top	0.583	Min Temp %	0.930	59.722	0.145
+1.20D+0.50Lr+1.60L	-8.643	7.560	Top	0.583	Min Temp %	0.930	59.722	0.145
+1.20D+0.50Lr+1.60L	-8.605	7.590	Top	0.583	Min Temp %	0.930	59.722	0.144
+1.20D+0.50Lr+1.60L	-8.566	7.620	Top	0.583	Min Temp %	0.930	59.722	0.143
+1.20D+0.50Lr+1.60L	-8.527	7.650	Top	0.583	Min Temp %	0.930	59.722	0.143
+1.20D+0.50Lr+1.60L	-8.487	7.680	Top	0.583	Min Temp %	0.930	59.722	0.142
+1.20D+0.50Lr+1.60L	-8.446	7.710	Top	0.583	Min Temp %	0.930	59.722	0.141
+1.20D+0.50Lr+1.60L	-8.405	7.740	Top	0.583	Min Temp %	0.930	59.722	0.141
+1.20D+0.50Lr+1.60L	-8.362	7.770	Top	0.583	Min Temp %	0.930	59.722	0.140
+1.20D+0.50Lr+1.60L	-8.320	7.800	Top	0.583	Min Temp %	0.930	59.722	0.139

Combined Footing

Project File: 1077 Fell street- 02.28.24.ec6

LIC# : KW-06019663, Build:20.24.01.25 Enertia Designs Inc. (c) ENERCALC INC 1983-2023

DESCRIPTION: FTG1

Z-Axis Footing Flexure - Maximum Values for Load Combination

Load Combination...	Mu (ft-k)	Distance from left (ft)	Tension Side	As Req'd (in^2)	Governed by	Actual As (in^2)	Phi*Mn (ft-k)	Mu / PhiMn
+1.20D+0.50Lr+1.60L	-8.276	7.830	Top	0.583	Min Temp %	0.930	59.722	0.139
+1.20D+0.50Lr+1.60L	-8.232	7.860	Top	0.583	Min Temp %	0.930	59.722	0.138
+1.20D+0.50Lr+1.60L	-8.186	7.890	Top	0.583	Min Temp %	0.930	59.722	0.137
+1.20D+0.50Lr+1.60L	-8.141	7.920	Top	0.583	Min Temp %	0.930	59.722	0.136
+1.20D+0.50Lr+1.60L	-8.094	7.950	Top	0.583	Min Temp %	0.930	59.722	0.136
+1.20D+0.50Lr+1.60L	-8.047	7.980	Top	0.583	Min Temp %	0.930	59.722	0.135
+1.20D+0.50Lr+1.60L	-7.999	8.010	Top	0.583	Min Temp %	0.930	59.722	0.134
+1.20D+0.50Lr+1.60L	-7.950	8.040	Top	0.583	Min Temp %	0.930	59.722	0.133
+1.20D+0.50Lr+1.60L	-7.901	8.070	Top	0.583	Min Temp %	0.930	59.722	0.132
+1.20D+0.50Lr+1.60L	-7.851	8.100	Top	0.583	Min Temp %	0.930	59.722	0.131
+1.20D+0.50Lr+1.60L	-7.800	8.130	Top	0.583	Min Temp %	0.930	59.722	0.131
+1.20D+0.50Lr+1.60L	-7.748	8.160	Top	0.583	Min Temp %	0.930	59.722	0.130
+1.20D+0.50Lr+1.60L	-7.696	8.190	Top	0.583	Min Temp %	0.930	59.722	0.129
+1.20D+0.50Lr+1.60L	-7.643	8.220	Top	0.583	Min Temp %	0.930	59.722	0.128
+1.20D+0.50Lr+1.60L	-7.589	8.250	Top	0.583	Min Temp %	0.930	59.722	0.127
+1.20D+0.50Lr+1.60L	-7.535	8.280	Top	0.583	Min Temp %	0.930	59.722	0.126
+1.20D+0.50Lr+1.60L	-7.480	8.310	Top	0.583	Min Temp %	0.930	59.722	0.125
+1.20D+0.50Lr+1.60L	-7.424	8.340	Top	0.583	Min Temp %	0.930	59.722	0.124
+1.20D+0.50Lr+1.60L	-7.367	8.370	Top	0.583	Min Temp %	0.930	59.722	0.123
+1.20D+0.50Lr+1.60L	-7.310	8.400	Top	0.583	Min Temp %	0.930	59.722	0.122
+1.20D+0.50Lr+1.60L	-7.252	8.430	Top	0.583	Min Temp %	0.930	59.722	0.121
+1.20D+0.50Lr+1.60L	-7.193	8.460	Top	0.583	Min Temp %	0.930	59.722	0.120
+1.20D+0.50Lr+1.60L	-7.133	8.490	Top	0.583	Min Temp %	0.930	59.722	0.119
+1.20D+0.50Lr+1.60L	-7.073	8.520	Top	0.583	Min Temp %	0.930	59.722	0.118
+1.20D+0.50Lr+1.60L	-7.012	8.550	Top	0.583	Min Temp %	0.930	59.722	0.117
+1.20D+0.50Lr+1.60L	-6.950	8.580	Top	0.583	Min Temp %	0.930	59.722	0.116
+1.20D+0.50Lr+1.60L	-6.888	8.610	Top	0.583	Min Temp %	0.930	59.722	0.115
+1.20D+0.50Lr+1.60L	-6.825	8.640	Top	0.583	Min Temp %	0.930	59.722	0.114
+1.20D+0.50Lr+1.60L	-6.761	8.670	Top	0.583	Min Temp %	0.930	59.722	0.113
+1.20D+0.50Lr+1.60L	-6.697	8.700	Top	0.583	Min Temp %	0.930	59.722	0.112
+1.20D+0.50Lr+1.60L	-6.631	8.730	Top	0.583	Min Temp %	0.930	59.722	0.111
+1.20D+0.50Lr+1.60L	-6.565	8.760	Top	0.583	Min Temp %	0.930	59.722	0.110
+1.20D+0.50Lr+1.60L	-6.499	8.790	Top	0.583	Min Temp %	0.930	59.722	0.109
+1.20D+0.50Lr+1.60L	-6.431	8.820	Top	0.583	Min Temp %	0.930	59.722	0.108
+1.20D+0.50Lr+1.60L	-6.363	8.850	Top	0.583	Min Temp %	0.930	59.722	0.107
+1.20D+0.50Lr+1.60L	-6.294	8.880	Top	0.583	Min Temp %	0.930	59.722	0.105
+1.20D+0.50Lr+1.60L	-6.224	8.910	Top	0.583	Min Temp %	0.930	59.722	0.104
+1.20D+0.50Lr+1.60L	-6.154	8.940	Top	0.583	Min Temp %	0.930	59.722	0.103
+1.20D+0.50Lr+1.60L	-6.083	8.970	Top	0.583	Min Temp %	0.930	59.722	0.102
+1.20D+0.50Lr+1.60L	-6.011	9.000	Top	0.583	Min Temp %	0.930	59.722	0.101
+1.20D+0.50Lr+1.60L	-5.939	9.030	Top	0.583	Min Temp %	0.930	59.722	0.099
+1.20D+0.50Lr+1.60L	-5.866	9.060	Top	0.583	Min Temp %	0.930	59.722	0.098
+1.20D+0.50Lr+1.60L	-5.792	9.090	Top	0.583	Min Temp %	0.930	59.722	0.097
+1.20D+0.50Lr+1.60L	-5.717	9.120	Top	0.583	Min Temp %	0.930	59.722	0.096
+1.20D+0.50Lr+1.60L	-5.642	9.150	Top	0.583	Min Temp %	0.930	59.722	0.094
+1.20D+0.50Lr+1.60L	-5.565	9.180	Top	0.583	Min Temp %	0.930	59.722	0.093
+1.20D+0.50Lr+1.60L	-5.489	9.210	Top	0.583	Min Temp %	0.930	59.722	0.092
+1.20D+0.50Lr+1.60L	-5.411	9.240	Top	0.583	Min Temp %	0.930	59.722	0.091
+1.20D+0.50Lr+1.60L	-5.333	9.270	Top	0.583	Min Temp %	0.930	59.722	0.089
+1.20D+0.50Lr+1.60L	-5.254	9.300	Top	0.583	Min Temp %	0.930	59.722	0.088
+1.20D+0.50Lr+1.60L	-5.174	9.330	Top	0.583	Min Temp %	0.930	59.722	0.087
+1.20D+0.50Lr+1.60L	-5.094	9.360	Top	0.583	Min Temp %	0.930	59.722	0.085
+1.20D+0.50Lr+1.60L	-5.013	9.390	Top	0.583	Min Temp %	0.930	59.722	0.084
+1.20D+0.50Lr+1.60L	-4.931	9.420	Top	0.583	Min Temp %	0.930	59.722	0.083
+1.20D+0.50Lr+1.60L	-4.848	9.450	Top	0.583	Min Temp %	0.930	59.722	0.081
+1.20D+0.50Lr+1.60L	-4.765	9.480	Top	0.583	Min Temp %	0.930	59.722	0.080
+1.20D+0.50Lr+1.60L	-4.681	9.510	Top	0.583	Min Temp %	0.930	59.722	0.078
+1.20D+0.50Lr+1.60L	-4.596	9.540	Top	0.583	Min Temp %	0.930	59.722	0.077
+1.20D+0.50Lr+1.60L	-4.510	9.570	Top	0.583	Min Temp %	0.930	59.722	0.076
+1.20D+0.50Lr+1.60L	-4.424	9.600	Top	0.583	Min Temp %	0.930	59.722	0.074
+1.20D+0.50Lr+1.60L	-4.337	9.630	Top	0.583	Min Temp %	0.930	59.722	0.073
+1.20D+0.50Lr+1.60L	-4.250	9.660	Top	0.583	Min Temp %	0.930	59.722	0.071
+1.20D+0.50Lr+1.60L	-4.161	9.690	Top	0.583	Min Temp %	0.930	59.722	0.070

Combined Footing

Project File: 1077 Fell street- 02.28.24.ec6

LIC# : KW-06019663, Build:20.24.01.25 Enertia Designs Inc. (c) ENERCALC INC 1983-2023

DESCRIPTION: FTG1

Z-Axis Footing Flexure - Maximum Values for Load Combination

Load Combination...	Mu (ft-k)	Distance from left (ft)	Tension Side	As Req'd (in^2)	Governed by	Actual As (in^2)	Phi*Mn (ft-k)	Mu / PhiMn
+1.20D+0.50Lr+1.60L	-4.072	9.720	Top	0.583	Min Temp %	0.930	59.722	0.068
+1.20D+0.50Lr+1.60L	-3.982	9.750	Top	0.583	Min Temp %	0.930	59.722	0.067
+1.20D+0.50Lr+1.60L	-3.892	9.780	Top	0.583	Min Temp %	0.930	59.722	0.065
+1.20D+0.50Lr+1.60L	-3.801	9.810	Top	0.583	Min Temp %	0.930	59.722	0.064
+1.20D+0.50Lr+1.60L	-3.709	9.840	Top	0.583	Min Temp %	0.930	59.722	0.062
+1.20D+0.50Lr+1.60L	-3.616	9.870	Top	0.583	Min Temp %	0.930	59.722	0.061
+1.20D+0.50Lr+1.60L	-3.523	9.900	Top	0.583	Min Temp %	0.930	59.722	0.059
+1.20D+0.50Lr+1.60L	-3.428	9.930	Top	0.583	Min Temp %	0.930	59.722	0.057
+1.20D+0.50Lr+1.60L	-3.334	9.960	Top	0.583	Min Temp %	0.930	59.722	0.056
+1.20D+0.50Lr+1.60L	-3.238	9.990	Top	0.583	Min Temp %	0.930	59.722	0.054
+1.20D+0.50Lr+1.60L	-3.142	10.020	Top	0.583	Min Temp %	0.930	59.722	0.053
+1.20D+0.50Lr+1.60L	-3.045	10.050	Top	0.583	Min Temp %	0.930	59.722	0.051
+1.20D+0.50Lr+1.60L	-2.947	10.080	Top	0.583	Min Temp %	0.930	59.722	0.049
+1.20D+0.50Lr+1.60L	-2.848	10.110	Top	0.583	Min Temp %	0.930	59.722	0.048
+1.20D+0.50Lr+1.60L	-2.749	10.140	Top	0.583	Min Temp %	0.930	59.722	0.046
+1.20D+0.50Lr+1.60L	-2.649	10.170	Top	0.583	Min Temp %	0.930	59.722	0.044
+1.20D+0.50Lr+1.60L	-2.549	10.200	Top	0.583	Min Temp %	0.930	59.722	0.043
+1.20D+0.50Lr+1.60L	-2.447	10.230	Top	0.583	Min Temp %	0.930	59.722	0.041
+1.20D+0.50Lr+1.60L	-2.345	10.260	Top	0.583	Min Temp %	0.930	59.722	0.039
+1.20D+0.50Lr+1.60L	-2.243	10.290	Top	0.583	Min Temp %	0.930	59.722	0.038
+1.20D+0.50Lr+1.60L	-2.139	10.320	Top	0.583	Min Temp %	0.930	59.722	0.036
+1.20D+0.50Lr+1.60L	-2.035	10.350	Top	0.583	Min Temp %	0.930	59.722	0.034
+1.20D+0.50Lr+1.60L	-1.930	10.380	Top	0.583	Min Temp %	0.930	59.722	0.032
+1.20D+0.50Lr+1.60L	-1.824	10.410	Top	0.583	Min Temp %	0.930	59.722	0.031
+1.20D+0.50Lr+1.60L	-1.718	10.440	Top	0.583	Min Temp %	0.930	59.722	0.029
+1.20D+0.50Lr+1.60L	-1.611	10.470	Top	0.583	Min Temp %	0.930	59.722	0.027
+1.20D+0.50Lr+1.60L	-1.503	10.500	Top	0.583	Min Temp %	0.930	59.722	0.025
+1.20D+0.50Lr+1.60L	-1.394	10.530	Top	0.583	Min Temp %	0.930	59.722	0.023
+1.20D+0.50Lr+1.60L	-1.285	10.560	Top	0.583	Min Temp %	0.930	59.722	0.022
+1.20D+0.50Lr+1.60L	-1.175	10.590	Top	0.583	Min Temp %	0.930	59.722	0.020
+1.20D+0.50Lr+1.60L	-1.064	10.620	Top	0.583	Min Temp %	0.930	59.722	0.018
+1.20D+0.50Lr+1.60L	-0.953	10.650	Top	0.583	Min Temp %	0.930	59.722	0.016
+1.20D+0.50Lr+1.60L	-0.841	10.680	Top	0.583	Min Temp %	0.930	59.722	0.014
+1.20D+0.50Lr+1.60L	-0.728	10.710	Top	0.583	Min Temp %	0.930	59.722	0.012
+1.20D+0.50Lr+1.60L	-0.614	10.740	Top	0.583	Min Temp %	0.930	59.722	0.010
+1.20D+0.50Lr+1.60L	-0.500	10.770	Top	0.583	Min Temp %	0.930	59.722	0.008
+1.20D+0.50Lr+1.60L	-0.385	10.800	Top	0.583	Min Temp %	0.930	59.722	0.006
+1.20D+0.50Lr+1.60L	-0.269	10.830	Top	0.583	Min Temp %	0.930	59.722	0.005
+1.20D+0.50Lr+1.60L	-0.152	10.860	Top	0.583	Min Temp %	0.930	59.722	0.003
+1.20D+0.50Lr+1.60L	-0.035	10.890	Top	0.583	Min Temp %	0.930	59.722	0.001
+1.20D+0.50Lr+1.60L	0.083	10.920	Bottom	0.583	Min Temp %	0.930	59.722	0.001
+1.20D+0.50Lr+1.60L	0.201	10.950	Bottom	0.583	Min Temp %	0.930	59.722	0.003
+1.20D+0.50Lr+1.60L	0.307	10.980	Bottom	0.583	Min Temp %	0.930	59.722	0.005
+1.20D+0.50Lr+1.60L	0.364	11.010	Bottom	0.583	Min Temp %	0.930	59.722	0.006
+1.20D+0.50Lr+1.60L	0.369	11.040	Bottom	0.583	Min Temp %	0.930	59.722	0.006
+1.20D+0.50Lr+1.60L	0.347	11.070	Bottom	0.583	Min Temp %	0.930	59.722	0.006
+1.20D+0.50Lr+1.60L	0.325	11.100	Bottom	0.583	Min Temp %	0.930	59.722	0.005
+1.20D+0.50Lr+1.60L	0.303	11.130	Bottom	0.583	Min Temp %	0.930	59.722	0.005
+1.20D+0.50Lr+1.60L	0.283	11.160	Bottom	0.583	Min Temp %	0.930	59.722	0.005
+1.20D+0.50Lr+1.60L	0.263	11.190	Bottom	0.583	Min Temp %	0.930	59.722	0.004
+1.20D+0.50Lr+1.60L	0.244	11.220	Bottom	0.583	Min Temp %	0.930	59.722	0.004
+1.20D+0.50Lr+1.60L	0.225	11.250	Bottom	0.583	Min Temp %	0.930	59.722	0.004
+1.20D+0.50Lr+1.60L	0.208	11.280	Bottom	0.583	Min Temp %	0.930	59.722	0.003
+1.20D+0.50Lr+1.60L	0.191	11.310	Bottom	0.583	Min Temp %	0.930	59.722	0.003
+1.20D+0.50Lr+1.60L	0.175	11.340	Bottom	0.583	Min Temp %	0.930	59.722	0.003
+1.20D+0.50Lr+1.60L	0.159	11.370	Bottom	0.583	Min Temp %	0.930	59.722	0.003
+1.20D+0.50Lr+1.60L	0.144	11.400	Bottom	0.583	Min Temp %	0.930	59.722	0.002
+1.20D+0.50Lr+1.60L	0.130	11.430	Bottom	0.583	Min Temp %	0.930	59.722	0.002
+1.20D+0.50Lr+1.60L	0.117	11.460	Bottom	0.583	Min Temp %	0.930	59.722	0.002
+1.20D+0.50Lr+1.60L	0.104	11.490	Bottom	0.583	Min Temp %	0.930	59.722	0.002
+1.20D+0.50Lr+1.60L	0.092	11.520	Bottom	0.583	Min Temp %	0.930	59.722	0.002
+1.20D+0.50Lr+1.60L	0.081	11.550	Bottom	0.583	Min Temp %	0.930	59.722	0.001
+1.20D+0.50Lr+1.60L	0.071	11.580	Bottom	0.583	Min Temp %	0.930	59.722	0.001

Combined Footing

Project File: 1077 Fell street- 02.28.24.ec6

LIC# : KW-06019663, Build:20.24.01.25 Enertia Designs Inc. (c) ENERCALC INC 1983-2023

DESCRIPTION: FTG1

Z-Axis Footing Flexure - Maximum Values for Load Combination

Load Combination...	Mu (ft-k)	Distance from left (ft)	Tension Side	As Req'd (in^2)	Governed by	Actual As (in^2)	Phi*Mn (ft-k)	Mu / PhiMn
+1.20D+0.50Lr+1.60L	0.061	11.610	Bottom	0.583	Min Temp %	0.930	59.722	0.001
+1.20D+0.50Lr+1.60L	0.052	11.640	Bottom	0.583	Min Temp %	0.930	59.722	0.001
+1.20D+0.50Lr+1.60L	0.044	11.670	Bottom	0.583	Min Temp %	0.930	59.722	0.001
+1.20D+0.50Lr+1.60L	0.036	11.700	Bottom	0.583	Min Temp %	0.930	59.722	0.001
+1.20D+0.50Lr+1.60L	0.029	11.730	Bottom	0.583	Min Temp %	0.930	59.722	0.000
+1.20D+0.50Lr+1.60L	0.023	11.760	Bottom	0.583	Min Temp %	0.930	59.722	0.000
+1.20D+0.50Lr+1.60L	0.018	11.790	Bottom	0.583	Min Temp %	0.930	59.722	0.000
+1.20D+0.50Lr+1.60L	0.013	11.820	Bottom	0.583	Min Temp %	0.930	59.722	0.000
+1.20D+0.50Lr+1.60L	0.000	11.850	0	0.000	0	0.000	0.000	0.000
+1.20D+0.50Lr+1.60L	0.000	11.880	0	0.000	0	0.000	0.000	0.000
+1.20D+0.50Lr+1.60L	0.000	11.910	0	0.000	0	0.000	0.000	0.000
+1.20D+0.50Lr+1.60L	0.000	11.940	0	0.000	0	0.000	0.000	0.000
+1.20D+0.50Lr+1.60L	0.000	11.970	0	0.000	0	0.000	0.000	0.000
+1.20D+0.50Lr+1.60L	0.000	12.000	0	0.000	0	0.000	0.000	0.000

One Way Shear

Punching Shear

Load Combination...	Phi Vn	vu @ Col #1	vu @ Col #2	Phi Vn	vu @ Col #1	vu @ Col #2
+1.40D	75.00 psi	6.03 psi	6.03 psi	150.00 psi	2.31 psi	2.31 psi
+1.20D+0.50Lr+1.60L	75.00 psi	11.03 psi	11.03 psi	150.00 psi	4.22 psi	4.22 psi
+1.20D+1.60L	75.00 psi	10.24 psi	10.24 psi	150.00 psi	3.92 psi	3.92 psi
+1.20D+1.60Lr+0.50L	75.00 psi	9.29 psi	9.29 psi	150.00 psi	3.56 psi	3.56 psi
+1.20D+1.60Lr	75.00 psi	7.70 psi	7.70 psi	150.00 psi	2.95 psi	2.95 psi
+1.20D+0.50L	75.00 psi	6.75 psi	6.75 psi	150.00 psi	2.59 psi	2.59 psi
+1.20D	75.00 psi	5.17 psi	5.17 psi	150.00 psi	1.98 psi	1.98 psi
+1.20D+0.50Lr+0.50L	75.00 psi	7.54 psi	7.54 psi	150.00 psi	2.89 psi	2.89 psi
+0.90D	75.00 psi	3.88 psi	3.88 psi	150.00 psi	1.49 psi	1.49 psi

EXHIBIT 3

GENERAL STRUCTURAL NOTES

I GENERAL

A. ALL CONSTRUCTION SHALL CONFORM TO THE CALIFORNIA BUILDING CODE 2019 EDITION w/ AMENDMENTS BY LOCAL JURISDICTIONS.
B. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AT JOB SITE BEFORE COMMENCING WORK AND SHALL REPORT ANY DISCREPANCIES TO THE ARCHITECT OR ENGINEER.
C. OMISSIONS OR CONFLICT BETWEEN VARIOUS ELEMENTS OF THE DRAWINGS, NOTES, AND DETAILS SHALL BE BROUGHT TO THE ATTENTION OF ARCHITECT AND RESOLVED BEFORE PROCEEDING WITH THE WORK.
D. DO NOT USE SCALED DIMENSIONS; USE WRITTEN DIMENSIONS OR WHERE NO DIMENSION IS PROVIDED, CONSULT THE ARCHITECT FOR CLARIFICATION BEFORE PROCEEDING WITH THE WORK.
E. DETAILS SHOWN SHALL BE INCORPORATED INTO THE PROJECT AT ALL APPROPRIATE LOCATIONS WHETHER SPECIFICALLY CALLED OUT OR NOT.
F. FOR WATERPROOFING, FIREPROOFING, ETC. REFER TO DRAWINGS OTHER THAN STRUCTURAL.
G. SEE DRAWINGS OTHER THAN STRUCTURAL FOR: KINDS OF FLOOR FINISH AND THEIR LOCATION, FOR DEPRESSIONS IN FLOOR SLABS, FOR OPENINGS IN WALLS AND FLOORS REQUIRED BY ARCHITECTURAL AND MECHANICAL FEATURES, FOR ROADWAY PAVING, WALKS, RAMPS, STAIRS, CURBS, ETC.
H. HOLES AND OPENINGS THROUGH WALLS AND FLOORS FOR DUCTS, PIPING AND VENTILATION SHALL BE CHECKED BY THE CONTRACTOR, WHO SHALL VERIFY SIZES AND LOCATION OF SUCH HOLES OR OPENINGS WITH THE PLUMBING HEATING, VENTILATING AND ELECTRICAL DRAWINGS AND THESE SUB-CONTRACTORS.
I. NO PIPES AND DUCTS SHALL BE PLACED IN SLABS OR WALLS UNLESS SPECIFICALLY DETAILED OR APPROVED BY THE ARCHITECT.
J. DRAWINGS AND SPECIFICATIONS REPRESENT FINISHED STRUCTURE. SUBCONTRACTOR SHALL BE RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION INCLUDING BUT NOT LIMITED TO SHORING AND TEMPORARY BRACING. THE SUBCONTRACTOR SHALL UNDERTAKE ALL NECESSARY MEASURES TO INSURE SAFETY OF ALL PERSONS AND STRUCTURES AT THE SITE AND ADJACENT TO THE SITE. OBSERVATION VISITS TO THE SITE BY THE ARCHITECT, ENGINEER SHALL NOT RELIEVE THE SUBCONTRACTOR OF SUCH RESPONSIBILITY.
K. NOTE THAT SHEET S1 IS A STANDARD COVER SHEET AND AS SUCH, NOT ALL TYP. DETAILS AND OR NOTES APPLY TO EVERY PROJECT.

II DESIGN CRITERIA

A. APPLICABLE CODE: CALIFORNIA BUILDING CODE 2019 & SFBC 2019.
B. VERTICAL LIVE LOADS: (REDUCIBLE). ROOF: 20 PSF. FLOOR: 40 PSF. HALLWAYS & CORRIDORS: 100 PSF.
C. LATERAL LOADS:
   1. WIND: 110 MPH. BASIC WIND SPEED, EXPOSURE: "B"
   2. SEISMIC: SITE CLASS 'D'
      MAPPED SPECTRAL ACCELERATIONS: S_S= S_1=
      Fa=1.0 Fv=1.5 S_{ds}= .xxx S_{d1}= .xxx
      BASE SHEAR 'V' = .xx W (ASD)
      SEISMIC DESIGN CATEGORY: D
      RESPONSE MODIFICATION FACTOR, R=6.5
      ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE
      IMPORTANCE FACTOR=1 OCCUPANCY CATEGORY=II

III MATERIALS

A. CONCRETE:
   1. REINFORCING STEEL: ASTM A615, GRADE 60, #4 AND SMALLER, GRADE 40.
   2. CONCRETE: NORMAL WEIGHT U.O.N. WITH COMPRESSIVE STRENGTH OF THE FOLLOWING AT 28 DAYS:

FOOTINGS, ~~MAT SLAB~~ & DRILLED PIERS	2500 psi
~~WALLS, COLUMNS~~	~~5000 psi~~
~~STRUCTURAL SLAB (L.W. P.T. SEE S3.2)~~	~~5000 psi~~

   3. MINIMUM CONCRETE COVER FOR REINFORCING STEEL:
      a. SURFACE POURED AGAINST GROUND 3"
      b. FORMED SURFACES BELOW GRADE 2"
      c. SURFACES EXPOSED TO WEATHER 2"
      d. BEAM BARS (INCLUDING STIRRUPS) 1-1/2"
      e. ALL OTHER 1"
   4. ANCHOR BOLT EPOXY*: HILTI HIT-RE 500-SD. (ICC ESR-2322) OR SIMPSON SET-XP (ICC ESR-2508)
   5. SCREW ANCHORS*: SIMPSON TITEN HD (ICC ESR-2713)
      * USE COMPRESSED AIR TO BLOW THE DUST OUT OF ANCHOR BOLT HOLES.
   6. PNEUMATICALLY PLACED CONCRETE (SHOTCRETE) NOTES
      a. ALL CONCRETE WALLS MAY BE SHOTCRETED AT CONTRACTOR'S OPTION. VERIFY COMPATIBILITY OF SHOTCRETE WITH WATE PROOFINGCONTRACTOR.
      b. ALL SHOTCRETE SHALL CONFORM TO THE REQUIREMENTS OF ACI 506.2 AND CBC SECTION 1924.
      c. ALL SHOTCRETE SHALL TEST NOT LESS THAN 4000 PSI AT 28 DAYS.
      d. MAXIMUM AGGREGATE SIZE SHALL BE 3/8 INCH.
      e. LAP ALL REINFORCING BARS 40 DIAMETERS AT SPLICES. SPLICE BARS BY THE NON-CONTACT LAP SPLICE METHOD WITH 2 INCHES CLEAR BETWEEN BARS.
      f. ANY REBOUND SHALL BE REMOVED PRIOR TO PLACING OF CONCRETE.
      g. IN-PLACE SHOTCRETE WHICH SHOW SAGS OR SLOUGHS, SEGREGATION, HONEY COMBING, SAND POCKETS OR OTHER OBVIOUS DEFECTS SHALL BE REMOVED AND REPLACED.
      h. CURE SHOTCRETE BY KEEPING CONTINUOUSLY MOIST FOR A MINIMUM OF 7 DAYS UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE STRUCTURAL ENGINEER.
      i. TEST PANELS: SHOOT ONE TEST PANEL, 18 INCHES SQUARE ,FOR EACH 50 CUBIC YARDS OF SHOTCRETE PLACED, BUT NOT LESS THAN ONE PANEL PER SHIFT. CURE PANELS UNDER SAME CONDITIONS AS THE WORK. TESTING AGENCY SHALL TAKE A MINIMUM OF THREE 2" DIAMETER CORES FROM EACH PANEL. WATER SOAK SPECIMENS 24 HOURS BEFORE TESTING. TEST IN ACCORDANCE WITH UNIFORM BUILDING CODE STANDARD NO. 26-10.
      j. A MINIMUM OF THREE 3" DIAMETER CORES SHALL BE TAKEN FROM THE WORK AT LOCATIONS SPECIFIED BY THE STRUCTURAL ENGINEER. THE SPECIAL INSPECTOR SHALL VISUALLY EXAMINE CORES FOR STRUCTURAL SOUNDNESS AND SUBMIT A REPORT TO THE STRUCTURAL ENGINEER AND THE BUILDING INSPECTION DEPARTMENT.
      k. INSPECTION: PROVIDE CONTINUOUS SPECIAL INSPECTION OF SHOTCRETING OPERATION.

B. CMU: UNITS 1500 PSI, MORTAR (TYPE 'S'), GROUT 2000 PSI

C. STEEL
   1. SHAPES AND PLATES: ASTM A36; TUBES: ASTM A500, GRADE B.
   2. MOMENT FRAMES (BEAMS, COLUMNS): ASTM A992 OR A913 (50 ksi) MOMENT FRAMES (PLATES): A572, GRADE 50.
   3. METAL STUDS, SEE S1.4, NOTES
   4. METAL JOISTS, 50 ksi
   5. BOLTS: ASTM A307, U.O.N.
   6. WELDING ELECTRODES: E-70 FOR FULL PEN WELDS USE CHARPY V-NOTCH WIRE, MIN. 20 ft # @ 0°F
   7. METAL DECKING, SEE S1.5

D. WOOD
   1. FRAMING LUMBER – DOUGLAS FIR LARCH
      a. HEADERS, PLATES, JOISTS: NO.1
      b. STUDS, BLOCKING: NO.2
      c. ALL LUMBER IN CONTACT WITH CONCRETE: PRESERVATIVE TREATED DOUGLAS FIR, (NOT CCA-C)
      d. POSTS AND BEAMS: NO.1
   2. PLYWOOD SHEATHING
      a. SHEARWALL PLYWOOD : 1/2 INCH STRUCTURAL I, C-D EXTERIOR, APA RATED 32/16.
      b. ROOF SHEATHING: 5/8 INCH STRUCTURAL II, C-D EXTERIOR APA RATED 32/16
      c. FLOOR SHEATHING: 3/4 INCH STRUCTURAL II, C-D EXTERIOR APA RATED 48/24
   3. FRAMING HARDWARE AND JOIST HANGERS: AS MANUFACTURED BY SIMPSON STRONGTIE CO. OR APPROVED EQUAL. SIMPSON DESIGNATIONS USED. USE NAILS PER I.C.C. APPROVAL FOR EACH DEVICE.
   4. COMMON NAILS, UNLESS OTHERWISE NOTED. SHORT NAILS MAY BE USED PROVIDED THEY HAVE COMMON CODE SPECIFIED MINIMUM EMBEDMENT. ALL NAILING TO BE PER IBC TABLE NO. 2304.9.1 UNLESS NOTED OTHERWISE.
   5. GLU-LAM BEAMS: 24F-V4 (Fb=2400 PSI)
   6. PARALLAM & MICROLLAM BEAMS AND TJI's TO BE FABRICATED BY TRUS JOIST:
      PARALLAM BEAMS: 2.2E (Fb=2900PSI)
      MICROLLAM BEAMS: 2.0E (Fb=2600PSI)
   7. FOR MICROLLAMS SEE CODE EVALUATION: ICC-ES ESR-1387
   8. FOR TJI JOISTS SEE CODE EVALUATION: ICC-ES ESR-1153

IV EXPOSURE TO WEATHER:

A. STEEL:
   1. ALL EXPOSED MEMBERS SHALL BE COATED WITH A ZINC RICH PRIMER.
   2. BOLTS, NUTS AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED.

B. WOOD:
   1. ALL EXTERIOR TIMBER AND GLU-LAM BEAMS SHALL BE PRESSURE TREATED (BUT NOT CHROMATED COPPER ARSENATE) OR WOOD OF NATURAL RESISTANCE TO DECAY.
   2. ALL EXTERIOR HANGERS AND OTHER SIMPSON TYPE PRODUCTS SHALL BE GALVANIZED.
   3. ALL PLYWOOD SHALL BE OF AN EXTERIOR GRADE.
   4. METAL CONNECTORS IN CONTACT w/ PRESSURE TREATED WOOD SHALL BE HOT-DIPPED GALVANIZED w/ MIN. ZINC COATING OF G185.
   5. ALL NAILS & ANCHOR BOLTS IN CONTACT w/ PRESSURE TREATED WOOD SHALL BE HOT DIPPED GALVANIZED.

V ABBREVIATIONS

B.N. — BOUNDARY NAILING
DIA. — DIAMETER
E.N. — EDGE NAILING
H.P. — HIGH POINT
L.P. — LOW POINT
LVL — LAMINATED VENEER LUMBER
L.W. — LIGHT WEIGHT
M.L. — MICROLLAM
PLWD — PLYWOOD SHEATHING
PSL — PARALLEL STRAND LUMBER
P.T. — PRESSURE TREATED OR POST-TENSIONED
S.A.D. — SEE ARCHITECTURAL DRAWINGS
S.O.G. — SLAB-ON-GRADE
S.S. — STAINLESS STEEL
T.O. — TOP OF
TYP. — TYPICAL
U.O.N. — UNLESS OTHERWISE NOTED
V.I.F. — VERIFY IN FIELD
W.W.F. — WELDED WIRE FABRIC

SYMBOLS

(E) WALL BELOW
(E) WALL ABOVE
(N) CONC. WALL ABOVE
BRICK OR CMU WALL ABOVE
WOOD SHEARWALL (BELOW)
WOOD JOIST HANGER (HUS TYPE, U.O.N.)
WOOD POST BELOW
WOOD POST ABOVE (OR ABOVE & BELOW)
HOLDOWN @ WOOD POST
STEEL COLUMN ABOVE
STEEL COLUMN BELOW
MOMENT CONNECTION
CONCRETE TOPPING OVER PLYWOOD
CONCRETE TOPPING OVER CORRUGATED METAL DECK
CONCRETE COLUMN ABOVE
CONCRETE COLUMN BELOW w/ DROPCAP
DRILLED CONCRETE PIER
PRECAST, PRESTRESSED CONCRETE PILE
DIAGONAL ABOVE
DIAGONAL BELOW

PROJECT NAME: VOLUNTARY STRENGTHENING
ADDRESS: 1077 FELL STREET
BLOCK/LOT: ----
CITY: SAN FRANCISCO, CA

DRAWING INDEX:

S1.0 ——— TITLE SHEET
S1.1A ——— TYPICAL WOOD DETAILS
S2 ——— FOUNDATION PLAN/ 1ST, 2ND AND ROOF FLOOR FRAMING
S3-S4 ——— STRUCTURAL DETAILS
W1-W2 ——— STRONG SIMPSOM WALL

City and County of San Francisco
Department of Building Inspection

London Breed, Mayor
Patrick O'Riordan, Interim Director

Attachment A

SLOPE AND SEISMIC HAZARD ZONE PROTECTION CHECKLIST

A COPY OF THIS DOCUMENT SHALL BE SUBMITTED WITH THE PERMIT APPLICATION

JOB ADDRESS 1077 FELL STREET APPLICATION NO. _____ ADDENDUM NO. ____
OWNER NAME _____ OWNER PHONE NO. (___) _____

1: PROPERTY LOCATION	YES	NO
EARTHQUAKE INDUCED LANDSLIDE AREA ON THE STATE OF CALIFORNIA DEPARTMENT OF CONSERVATION DIVISION OF MINES AND GEOLOGY (CDMG) SEISMIC HAZARD ZONES MAP FOR SAN FRANCISCO, RELEASED NOVEMBER 17, 2000.	☐	☑

2: AVERAGE SLOPE OF PROPERTY	YES	NO
PROPERTY EXCEEDING AN AVERAGE SLOPE OF 4H:1V (25%) GRADE *(APPLICANT WILL NEED TO INCLUDE PLANS ILLUSTRATING SLOPE OF THE PROPERTY AND/OR INCLUDE A SURVEY VERIFYING THE SLOPE OF THE PROPERTY)*	☐	☑

3: PROPOSED CONSTRUCTION	YES	NO
CONSTRUCTION OF NEW BUILDING OR STRUCTURE HAVING OVER 1000 SQFT OF NEW PROJECTED ROOF AREA	☐	☑
HORIZONTAL OR VERTICAL ADDITIONS HAVING OVER 500 SQFT OF NEW PROJECTED ROOF AREA	☐	☑
SHORING	☐	☑
UNDERPINNING	☐	☑
GRADING, INCLUDING EXCAVATION OR FILL, OF OVER 50 CUBIC YARDS OF EARTH MATERIAL	☐	☑
CONSTRUCTION ACTIVITY LISTED BELOW DETERMINED BY THE BUILDING OFFICIAL THAT MAY HAVE A SUBSTANTIAL IMPACT ON THE SLOPE STABILITY:		
RETAINING WALL:	☐	☑
OTHERS: _____	☐	☑

SECTION 4: LICENSED DESIGN PROFESSIONAL VERIFICATION AND SIGNATURES

Under penalty of perjury, I certify that the information provided on this form is based on my personal review of the building and its records, or review by others acting under my direct supervision, and is correct to the best of my knowledge.

Prepared by: JEFFERSON CHEN, P.E.
Engineer/Architect of Record

(415) 626 - 8300 Telephone
jefferson@enertiadesigns.net Email
Signature
Date

REGISTERED PROFESSIONAL ENGINEER JEFFERSON MING CHEN C057898 Exp. 06/30/24 CIVIL STATE OF CALIFORNIA

Permit Services Division
49 South Van Ness Avenue, Suite 500 - San Francisco CA 94103
Phone (628) 652-3600 – www.sfdbi.org

INFORMATION SHEET S-19 ATTACHMENT A — Slope Protection Checklist

FOR DBI USE ONLY

ASSIGNMENT OF REVIEW TIER

EXEMPTED: Reports per Section E and Third Party Peer Review Not Required

☐ If the box in Section 1 "Property Location" **AND** the box in Section 2 "Average Slope of Property" are marked "No" **OR** if all the boxes in Section 3 "Proposed Construction" are marked "No", reports per Section E and Third Party Peer Review are exempted by the SSPA.

TIER I: Reports per Section E Required but Third Party Peer Review Not Required

☐ If the box in Section 2 "Average Slope of Property" **AND** any boxes in Section 3 "Proposed Construction" are marked "Yes" **AND** the property does not lie within any areas of potential landslide hazard, DBI shall require mandatory submittal of reports per Section E only.

TIER II: Reports per Section E and Third Party Peer Review Required

☐ If the box in Section 2 "Average Slope of Property" **AND** any boxes in Section 3 "Proposed Construction" are marked "Yes" **AND** the property lies in the vicinity of mapped landslides, DBI shall require mandatory submittal of reports per Section E and require the permit application be subject to a third party peer review. At the discretion of the SSPA Review Committee, the peer review may be followed by the establishment of a Structural Advisory Committee (SAC) with the project reassigned to Tier III.

If the DBI Plan Review Engineer (or the SSPA Review Committee, if established), in their discretion, determines from the submitted documents that the project has a substantial impact on the slope stability of the site or creates a potential for earthquake induced landslide hazards, DBI may require that the third party peer review be followed by the establishment of a Structural Advisory Committee (SAC) and re-assigned the project to Tier III.

TIER III: Structural Advisory Committee (SAC) Review

☐ If the box in Section 1 "Property Location" **AND** any boxes in Section 3 "Proposed Construction" are marked "Yes", DBI shall require mandatory submittal of reports per Section E and require the permit application be subject to review by a Structural Advisory Committee (SAC), as defined by SFBC Section 105A.6.

Tier assigned by: _____ Phone: (628) _____
DBI Plan Review Engineer

Comment:

City and County of San Francisco
Department of Building Inspection

London N. Breed, Mayor
Patrick O'Riordan, Interim Director

NOTICE

SPECIAL INSPECTION REQUIREMENTS

Please note that the Special Inspections shown on the approved plans and checked on the Special Inspections form issued with the permit are required for this project. The employment of special inspectors is the direct responsibility of the owner or the engineer/architect of record acting as the owner's representative.

These special inspections are required *in addition to* the called inspections performed by the Department of Building Inspection. The name of the special inspector shall be furnished to the district building inspector prior to start of work for which special inspection is required.

For questions regarding the details or extent of required inspection or tests, please call the Plan Checker assigned to this project or **628-652-3407**. If there are any field problems regarding special inspection, please call your District Building Inspector or 628-652-3400 Ext 1.

Before final building inspection is scheduled, documentation of special inspection compliance must be submitted to and approved by the Special Inspection Services staff. To avoid delays in this process, the project owner should request final compliance reports from the architect or engineer of record and/or special inspection agency soon after the conclusion of work requiring special inspection. ***The permit will not be finalized without compliance with the special inspection requirements.***

STRUCTURAL OBSERVATION REQUIREMENTS

Structural observation shall be provided as required per Section 1704.6. **The building permit will not be finalized without compliance with the structural observation requirements.**

Special Inspection Services Contact Information

1. **Telephone: (628) 652-3407**
2. **Email: dbi.specialinspections@sfgov.org**
3. **In person: 49 South Van Ness Ave – Suite 400**

Note: We are moving towards a "paperless" mode of operation. All special inspection submittals, including final letters, may be emailed (preferred) or faxed. We will also be shifting to a paperless fax receipt mode.

Special Inspection Services
49 South Van Ness Ave – Suite 400 – San Francisco CA 94103
Office (628) 652-3407 – www.sfdbi.org

Updated 10/05/2020

SPECIAL INSPECTION AND STRUCTURAL OBSERVATION

A COPY OF THIS DOCUMENT SHALL BE KEPT WITH THE APPROVED STRUCTURAL DRAWING SET

JOB ADDRESS 1077 FELL STREET APPLICATION NO._____ ADDENDUM NO.____

OWNER NAME_____OWNER PHONE NO. (_____)_____

Employment of Special Inspection is the direct responsibility of the OWNER, or the engineer/architect of record acting as the owner's representative. Special inspector shall be one of those as prescribed in Sec. 1704. Name of special inspector shall be furnished to DBI District Inspector prior to start of the work for which the Special Inspection is required. Structural observation shall be performed as provided by Section 1704.6. A preconstruction conference is recommended for owner/builder or designer/builder projects, complex and high-rise projects, and for projects utilizing new processes or materials.

In accordance with Chapter 17 (SFBC), Special Inspection and/or testing is required for the following work:

1. [✓] Concrete (Placement & sampling)
2. [ ] Bolts installed in concrete
3. [ ] Special moment - Resisting concrete frame
4. [✓] Reinforcing steel ~~and prestressing tendons~~
5. **Structural welding:**
   A. Periodic visual inspection
   [ ] Single pass fillet welds 5/16" or smaller
   [ ] Steel deck
   [ ] Welded studs
   [ ] Cold formed studs and joists
   [ ] Stair and railing systems
   [ ] Reinforcing steel
   B. Continuous visual inspection and NDT (Section 1704)
   [ ] All other welding (NDT exception: Fillet weld)
   [ ] Reinforcing steel; and [ ] NDT required
   [ ] Moment-resisting frames
   [ ] Others _____
6. [ ] High-strength bolting
7. [ ] Structural masonry
8. [ ] Reinforced gypsum concrete
9. [ ] Insulating concrete fill
10. [ ] Sprayed-on fireproofing
11. [ ] Piling, drilled piers and caissons
12. [ ] Shotcrete
13. [ ] Special grading, excavation and filling (Geo. Engineered)
14. [ ] Smoke-control system
15. [ ] Demolition
16. [ ] Exterior Facing
17. **Retrofit of unreinforced masonry buildings:**
    [ ] Testing of mortar quality and shear tests
    [ ] Inspection of repointing operations
    [ ] Installation inspection of new shear bolts
    [ ] Pre-installation inspection for embedded
    [ ] Pull/torque tests per SFBC Sec.1607C & 1615C
18. **Bolts Installed in existing concrete or masonry:**
    [ ] Concrete [ ] Masonry
    [ ] Pull/torque tests per SFEBC Sec. 507C & 515C
19. [ ] Shear walls and floor systems used as shear diaphragms
20. [ ] Holdowns
21. **Special cases:**
    [ ] Shoring
    [ ] Underpinning; [ ] Not affecting adjacent property
    [ ] Affecting adjacent property: PA_____
    [ ] Others
22. [ ] Crane safety (Apply to the operation of tower cranes on high-rise building) (Section 1705.22)
23. [ ] Others: "As recommended by professional of record"_____
24. **Structural observation per Sec. 1704.6 (SFBC) for the following:** [ ] Foundations [ ] Steel framing
    [ ] Concrete construction [ ] Masonry construction [✓] Wood framing
    [ ] Other:_____
25. Certification is required for: [ ] Glu-lam components
26. [ ] Firestops in high-rise building

Prepared by: JEFFERSON CHEN, P.E. Phone: (415) 626 - 3800
Engineer/Architect of Record
Required information:
FAX: (415) 701 -0212 Email jefferson@enertiadesigns.net

Review by: _____ Phone: (628) 652-_____
DBI Engineer or Plan Checker

****

APPROVAL (Based on submitted reports.)

_____
DATE DBI Engineer or Plan Checker / Special Inspection Services Staff

QUESTIONS ABOUT SPECIAL INSPECTION AND STRUCTURAL OBSERVATION SHOULD BE DIRECTED TO:
Special Inspection Services (628) 652-3407; or, dbi.specialinspections@sfgov.org

Updated 10/05/2020

ENERTIA DESIGNS
ARCHITECTURAL ENGINEERING & INTERIOR
EMAIL: INFO@ENERTIADESIGNS.NET
OFFICE: 415.626.8300
FAX: 415.701.0212
1167 MISSION STREET, FL 1
SAN FRANCISCO, CA 94103

REGISTERED PROFESSIONAL ENGINEER JEFFERSON MING CHEN C057898 Exp. 06/30/24 CIVIL STATE OF CALIFORNIA

	DATE	REVISIONS
1		
2		
3		
4		

TITLE SHEET
GENERAL NOTES

VOLUNTARY STRENGTHENING
1077 FELL STREET
SAN FRANCISCO, CA

Date: 03-01-2024
Scale: AS SHOWN
Drawn By: DM
Job No: 23059
Sheet S1.0
Of 7 Sheets

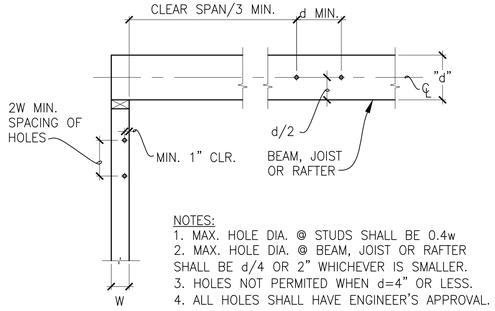
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PLOT DATE: 03-01-24 PLOTTED BY: dangulosmn

NAILING SCHEDULE (PER CBC 2016, TABLE NO. 2304.10.1)

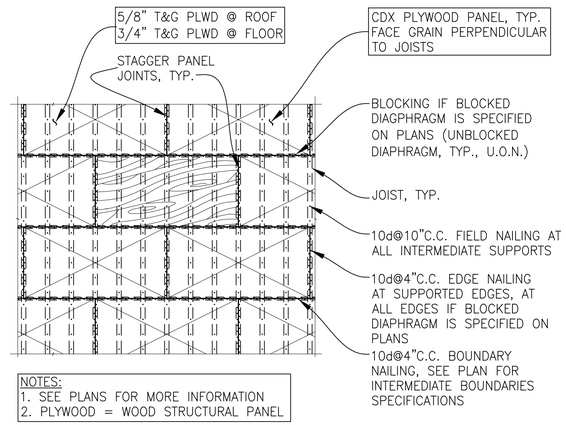
CONNECTION	NAILING [1]
1. JOIST TO SILL OR GIRDER, TOENAIL	3–8d
2. BRIDGING TO JOIST, TOENAIL EACH END	2–8d
3. 1"X6" SUBFLOOR OR LESS TO EACH JOIST, FACE NAIL	2–8d
4. WIDER THAN 1" X 6" SUBFLOOR TO EACH JOIST, FACE NAIL	3–8d
5. 2" SUBFLOOR TO JOIST OR GIRDER, BLIND AND FACE NAIL	2–16d
6. SOLE PLATE TO JOIST OR BLOCKING, TYPICAL FACE NAIL	16d AT 16" O.C.
SOLE PLATE TO JOIST OR BLOCKING, AT BRACED WALL PANELS	3–16d PER 16"
7. TOP PLATE TO STUD, END NAIL	2–16d
8. STUD TO SOLE PLATE	4–8d, TOENAIL OR 2–16d, END NAIL
9. DOUBLE STUDS, FACE NAIL	16d AT 24" O.C.
10. DOUBLED TOP PLATES, TYPICAL FACE NAIL	16d AT 16" O.C.
DOUBLE TOP PLATES, LAP SPLICE	8–16d
11. BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE, TOENAIL	3–8d
12. RIM JOIST TO TOP PLATE, TOINAIL	8d AT 6" O.C.
13. TOP PLATES, LAPS AND INTERSECTIONS, FACE NAIL	2–16d
14. CONTINUOUS HEADER, TWO PIECES	16d AT 16" O.C. ALONG EACH EDGE
15. CEILING JOISTS TO PLATE, TOENAIL	3–8d
16. CONTINUOUS HEADER TO STUD, TOINAIL	4–8d
17. CEILING JOISTS, LAPS OVER PARTITIONS, FACE NAIL	3–16d
18. CEILING JOISTS TO PARALLEL RAFTERS, FACE NAIL	3–16d
19. RAFTER TO PLATE, TOENAIL	3–8d
20. 1" BRACE TO EACH STUD AND PLATE, FACE NAIL	2–8d
21. 1" X 8" SHEATHING OR LESS TO EACH BEARING, FACE NAIL	2–8d
22. WIDER THAN 1" X 8" SHEATHING TO EACH BEARING, FACE NAIL	3–8d
23. BUILT–UP CORNER STUDS	16d AT 24" O.C.
24. BUILT–UP GIRDER AND BEAMS	20d AT 32" O.C. AT TOP AND BOTTOM AND STAGGERED 2–20d AT ENDS AND AT EACH SPLICE
25. 2" PLANKS	2–16d AT EACH BEARING
26. COLLAR TIE TO RAFTER	3–10d AT FACE NAIL
27. JACK RAFTER TO HIP	2–10d AT TOENAIL AND 2–16d AT FACE NAIL
28. ROOF RAFTER TO 2–BY RIDGE BEAM	2–16d AT TOENAIL AND 2–16d AT FACE NAIL
29. JOIST TO BAND JOIST	3–16d AT FACE NAIL
30. LEDGER STRIP	3–16d AT FACE NAIL AT EACH JOIST
31. WOOD STRUCTURAL PANELS AND PARTICLEBOARD [B] SUBFLOOR, ROOF AND WALL SHEATHING (TO FRAMING)	
1/2" AND LESS	6d[C,L]
19/32"–3/4"	8d[D] or 6d[E]
7/8"–1"	10d[D] or 8d[E]
1 1/8"–1 1/4"	10d[D] or 8d[E]
COMBINATION SUBFLOOR–UNDERLAYMENT (TO FRAMING):	
3/4" AND LESS	6d[E]
7/8"–1"	8d[E]
1 1/8"–1 1/4"	10d[D] or 8d[E]
32. PANEL SIDING (TO FRAMING):	
1/2" OR LESS	6d[F]
5/8"	8d[F]
33. FIBERBOARD SHEATHING: [G]	
1/2"	6d[D]
25/32"	8d[D]
34. INTERIOR PANELING	
1/4"	4d[J]
3/8"	6d[K]

CBC TABLE 2304.10.1 FASTENING SCHEDULE NOTES

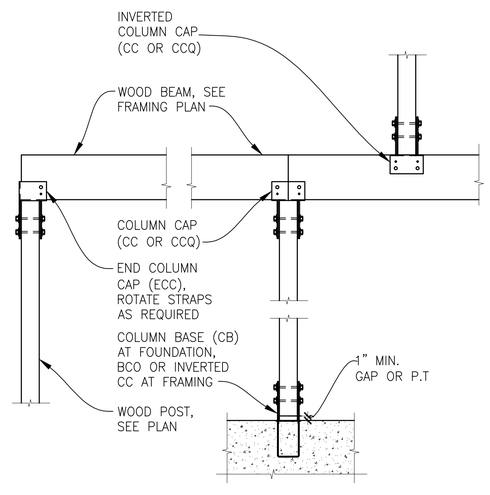
A. COMMON OR BOX NAILS ARE PERMITTED TO BE USED EXCEPT WHERE OTHERWISE STATED.
B. NAILS SPACED AT 6 INCHES ON CENTER AT EDGES, 12 INCHES AT INTERMEDIATE SUPPORTS EXCEPT 6 INCHES AT SUPPORTS WHERE SPANS ARE 48 INCHES OR MORE. FOR NAILING OF WOOD STRUCTURAL PANEL AND PARTICLE BOARD DIAPHRAGMS AND SHEAR WALLS, REFER TO SECTION 2305. NAILS FOR WALL SHEATHING ARE PERMITTED TO BE COMMON, BOX OR CASING.
C. COMMON OR DEFORMED SHANK (6D – 2" X 0.113"; 8D – 2½" X 0.131"; 10D – 3" X 0.148").
D. COMMON (6D – 2" X 0.113"; 8D – 2½" X 0.131"; 10D – 3" X 0.148").
E. DEFORMED SHANK (6D – 2" X 0.113"; 8D – 2½" X 0.131"; 10D – 3" X 0.148").
F. CORROSION–RESISTANT SIDING (6D – 1⅞" X 0.106"; 8D – 2⅜" X 0.128") OR CASING (6D – 2" X 0.099"; 8D – 2½" X 0.113") NAIL.
G. FASTENERS SPACED 3 INCHES ON CENTER AT EXTERIOR EDGES AND 6 INCHES ON CENTER AT INTERMEDIATE SUPPORTS, WHEN USED AS STRUCTURAL SHEATHING. SPACING SHALL BE 6 INCHES ON CENTER ON THE EDGES AND 12 INCHES ON CENTER AT INTERMEDIATE SUPPORTS FOR NONSTRUCTURAL APPLICATIONS.
H. CORROSION–RESISTANT ROOFING NAILS WITH 7/16–INCH–DIAMETER HEAD AND 1½–INCH LENGTH FOR ½–INCH SHEATHING AND 1¾–INCH LENGTH FOR 25/32–INCH SHEATHING.
I. CORROSION–RESISTANT STAPLES WITH NOMINAL 7/16–INCH CROWN AND 1⅛–INCH LENGTH FOR ½–INCH SHEATHING AND 1½–INCH LENGTH FOR 25/32–INCH SHEATHING. PANEL SUPPORTS AT 16 INCHES (20 INCHES IF STRENGTH AXIS IN THE LONG DIRECTION OF THE PANEL, UNLESS OTHERWISE MARKED).
J. CASING (1½" X 0.080") OR FINISH (1½" X 0.072") NAILS SPACED 6 INCHES ON PANEL EDGES, 12 INCHES AT INTERMEDIATE SUPPORTS.
K. PANEL SUPPORTS AT 24 INCHES. CASING OR FINISH NAILS SPACED 6 INCHES ON PANEL EDGES, 12 INCHES AT INTERMEDIATE SUPPORTS.
L. FOR ROOF SHEATHING APPLICATIONS, 8D NAILS (2½" X 0.113") ARE THE MINIMUM REQUIRED FOR WOOD STRUCTURAL PANELS.
M. STAPLES SHALL HAVE A MINIMUM CROWN WIDTH OF 7/16 INCH.
N. FOR ROOF SHEATHING APPLICATIONS, FASTENERS SPACED 4 INCHES ON CENTER AT EDGES, 8 INCHES AT INTERMEDIATE SUPPORTS.
O. FASTENERS SPACED 4 INCHES ON CENTER AT EDGES, 8 INCHES AT INTERMEDIATE SUPPORTS SUB FLOOR AND WALL SHEATHING AND 3 INCHES ON CENTER AT EDGES, 6 INCHES AT INTERMEDIATE SUPPORTS FOR ROOF SHEATHING.
P. FASTENERS SPACED 4 INCHES ON CENTER AT EDGES, 8 INCHES AT INTERMEDIATE SUPPORTS.



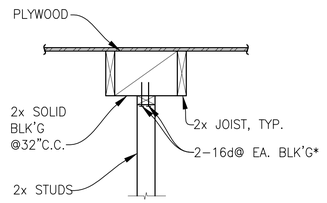
1 — TYPICAL HOLES IN BEAMS, JOISTS, RAFTERS AND STUDS
SCALE: 3/4" = 1'–0"



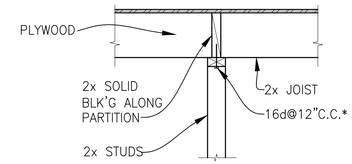
2 — TYPICAL PLYWOOD DIAPHRAGM SHEATHING (PLAN VIEW)
SCALE: 3/4" = 1'–0"



3 — TYPICAL BEAM TO POST CONNECTION
SCALE: 3/4" = 1'–0"



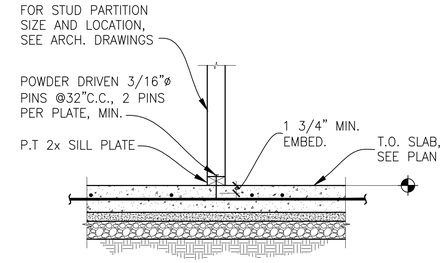
PARTITION PARALLEL TO FLOOR JOISTS



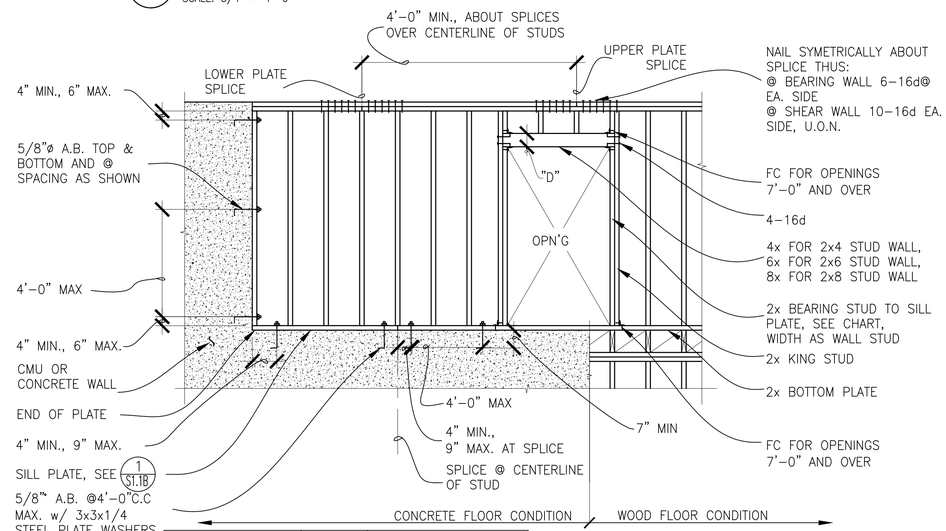
PARTITION PERPENDICULAR TO FLOOR JOISTS

*OPTION: PROVIDE STC CLIP TO ROOF TRUSS OR BEAM

4 — TYPICAL NON–BEARING / NON–SHEARWALL SUPPORT @ ROOF
SCALE: 3/4" = 1'–0"



5 — TYPICAL NON–BEARING / NON–SHEARWALL CONNECTION AT CONCRETE SLAB
SCALE: 3/4" = 1'–0"



HEADER SPANS "S"	"D" MIN.	ADDN'L BEARING STUDS
S ⩽ 4'–0"	5 1/2"	0
4'–0" < S ⩽ 8'–0"	7 1/4"	1
8'–0" < S ⩽ 10'–0"	9 1/4"	2
S > 10'–0"	SEE PLAN	3

NOTE:
THIS DETAIL IS NOT FOR SHEARWALLS, SEE 1 S1.1B

6 — TYPICAL FRAMING @ OPENINGS, TOP PLATE SPLICES, ETC.
SCALE: 3/4" = 1'–0"

ENERTIA DESIGNS
ARCHITECTURAL ENGINEERING & INTERIOR
X
Y
Z
EMAIL: INFO@ENERTIADESIGNS.NET
OFFICE: 415.826.8300
FAX: 415.701.0212
1167 MISSION STREET, FL 1
SAN FRANCISCO, CA 94103

PROFESSIONAL ENGINEER — REGISTERED — JASON JIECHEN — C057898 — REN 06/30/24 — CIVIL — STATE OF CALIFORNIA

	DATE	REVISIONS
1		
2		
3		
4		

TYPICAL WOOD DETAILS

VOLUNTARY STRENGTHENING

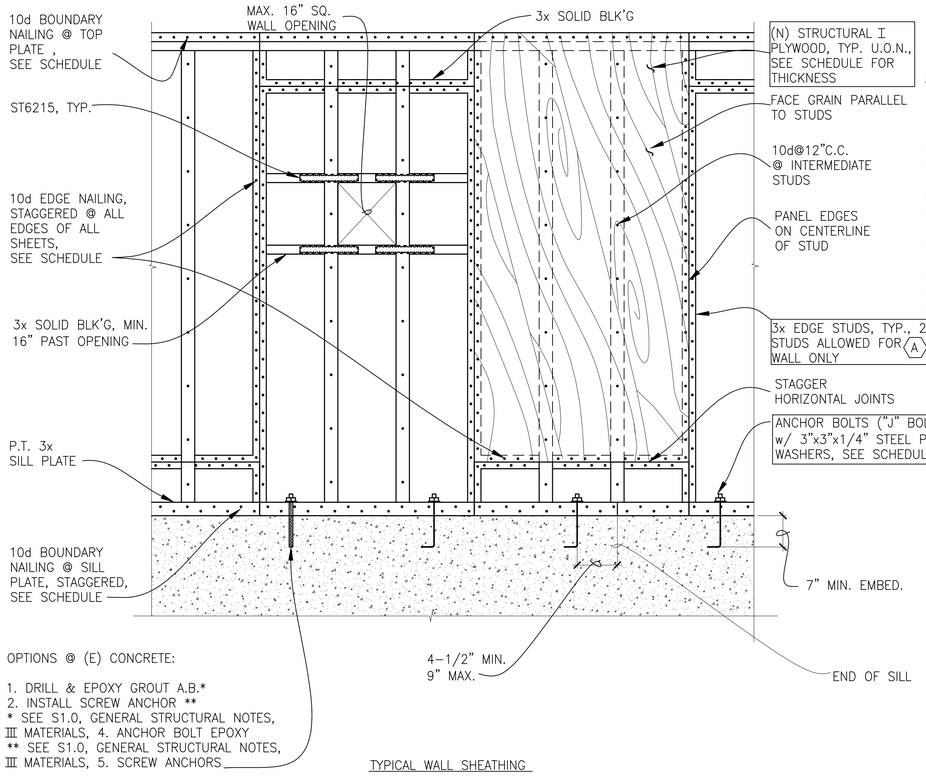
1077 FELL STREET
SAN FRANCISCO, CA

Date: 03-01-2024
Scale: AS SHOWN
Drawn By: DM
Job No: 23059
Sheet S1.1A
Of 7 Sheets

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PLOT DATE: 03-01-24 PLOTTED BY: darquisonm

SHEARWALL SCHEDULE

SYMBOL	PLWD GRADE	PLWD THICKNESS	PLWD ONE SIDE	PLWD TWO SIDES	PLWD EDGE & BOUNDARY NAILING	CONT. JOIST OR SOLID BLK'G	CLIP SPACING	PLATE NAIL SPACING	SDS 1/4x4 1/2" WOOD SCREW SPACING	A.B. SPACING	CAPACITY (PLF)
A	STRUC I	15/32"	X		10d @ 6"C.C.	2x OR 1 3/4" LVL	A35 OR LTP4 @ 16"C.C.	16d @ 4"C.C.	–	5/8"ø @ 32"C.C.	340
B	STRUC I	15/32"	X		10d @ 4"C.C.	2x OR 1 3/4" LVL	A35 OR LTP4 @ 12"C.C.	16d @ 3"C.C.	–	5/8"ø @ 24"C.C.	510
C	STRUC I	15/32"	X		10d @ 3"C.C.	2x OR 1 3/4" LVL	A35 OR LTP4 @ 9"C.C.	–	6"C.C.	5/8"ø @ 16"C.C.	665
D	STRUC I	15/32"	X		10d @ 2"C.C.	2x OR 1 3/4" LVL	A35 OR LTP4 @ 7"C.C.	–	4"C.C.	5/8"ø @ 16"C.C.	870
E	STRUC I	15/32"		X	10d @ 3"C.C.	2–2x's OR 4x OR 3 1/2" PSL	A35 OR LTP4 @ 8"C.C. + (LTP4 @ 8"C.C. OR CONTINUE WALL PLWD UP)	–	3"C.C. STAGGERED	7/8"ø @ 16"C.C.	1330
F	STRUC I	15/32"		X	10d @ 2"C.C.	2–2x's OR 4x OR 3 1/2" PSL	A35 OR LTP4 @ 8"C.C. + (LTP4 @ 8"C.C. OR CONTINUE WALL PLWD UP)	–	2"C.C. STAGGERED	7/8"ø @ 16"C.C.	1740



OPTIONS @ (E) CONCRETE:

1. DRILL & EPOXY GROUT A.B.*
2. INSTALL SCREW ANCHOR **

* SEE S1.0, GENERAL STRUCTURAL NOTES, III MATERIALS, 4. ANCHOR BOLT EPOXY
** SEE S1.0, GENERAL STRUCTURAL NOTES, III MATERIALS, 5. SCREW ANCHORS

TYPICAL WALL SHEATHING

1 TYPICAL PLYWOOD SHEARWALL

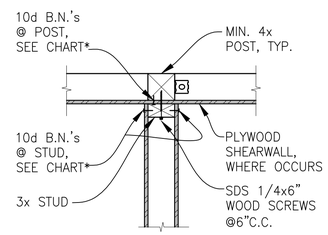
SCALE: 3/4" = 1'–0"

NOTES:
1. PLYWOOD SHALL BE NAILED DIRECTLY TO FRAMING.
2. WHEN PLYWOOD APPLIED TO BOTH FACES, STAGGER SHEETS SO THAT EDGES OCCUR AT DIFFERENT STUDS.
3. DO NOT OVER SHOOT NAILS THROUGH OUTER LAYER OF SHEARWALL PLYWOOD.
4. PLYWOOD = WOOD STRUCTURAL PANEL.
5. ORIENTED STRAND BOARD (OSB) MAY BE USED IN LIEU OF PLYWOOD AT CONTRACTOR'S OPTION.
6. FOR TYPICAL PLYWOOD SHEARWALL INTERSECTION, SEE 3/—
7. USE 3" LONG 10d NAILS.
8. CDX PLYWOOD EXPOSED TO EXTERIOR SHALL BE PRESSURE TREATED.
9. FOR STEEL PLATES, BOLTS, NAILS, SCREWS, ETC. IN CONTACT WITH P.T WOOD, SEE SHEET S1.0, GENERAL STRUCTURAL NOTES, IV EXPOSURE TO WEATHER, B. WOOD

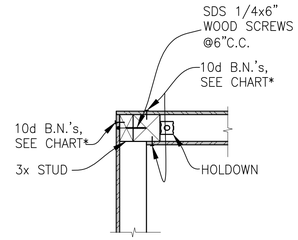
PULL OUT TEST ON HDU HOLDOWNS	
HOLDOWN	PULL OUT VALUE
HDU2	7688 LBS
HDU4	11413 LBS
HDU5	14113 LBS
HDU8	19675 LBS
HDU11	23338 LBS
HDU14	36113 LBS
HD12	28440 LBS
HD19	38140 LBS

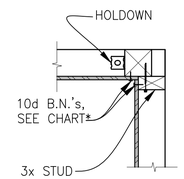
STRAP OPTION	
HOLDOWN	EQUIVALENT STRAP
HDU2	MST60
HDU4	MST60 OR 2–MST37's
HDU5, PHD5 OR HD5A	MST60 OR 2–MST48's
~~PHD6~~ OR ~~HD6A~~	2–MST48's
HDU8, HDQ8	2–MST60's

POST SIZE	LARGEST HOLDDOWN FOR A SINGLE HOLDOWN APPLICATION
4X4 OR (2)2X4	HDU2 TO HDU4
4x6	HDU5 TO HDU8 – HDQ8
6x6	HDU11 TO HDU14 HHDQ11 TO HHDQ14



EXTERIOR PLYWOOD (PLAN)

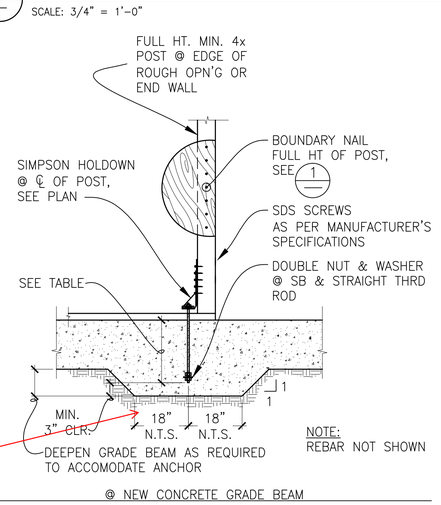




INTERIOR PLYWOOD (PLAN)

3 TYPICAL PLYWOOD SHEARWALL INTERSECTION DETAILS

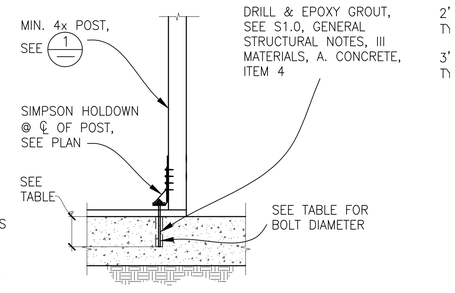
SCALE: 3/4" = 1'–0"



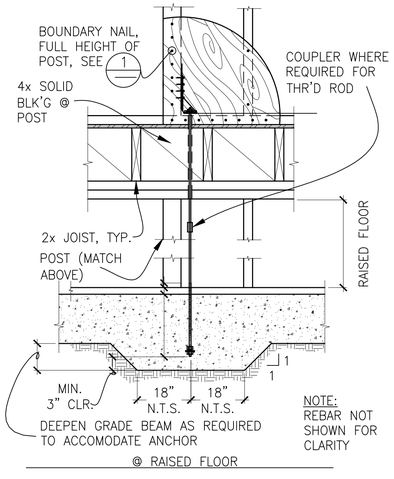
NOTE: REBAR NOT SHOWN

@ NEW CONCRETE GRADE BEAM

NEW FOUNDATION ON PLAN IS NOT IN ON EITHER SIDE OF HOLDOWN ANCHOR



@ EXISTING CONCRETE



NOTE: REBAR NOT SHOWN FOR CLARITY

@ RAISED FLOOR

HOLDOWN	ANCHOR DIAMETER	ANCHOR INTO (N) CONC.	MIN. EMBED. INTO (E) CONC.	PLATE @ P.T. SLAB
HDU2 OR HD3B	5/8"	SSTB16	10"	2"x2"x3/8"
HDU4	5/8"	SSTB20	12"	2"x2"x1/2"
HDU5 OR HD5B	5/8"	SSTB24	14"	2"x2"x1/2"
HD7	7/8"	SB 7/8x24	16"	3"x3"x5/8"
HDU8, HDQ8	7/8"	SB 7/8x24	18"	3"x3"x5/8"
HD9B	7/8"	SB 7/8x24	20"	4"x4"x3/4"
HDU11, HHDQ11 OR HD12	1"	SB 1x30	22"	4"x4"x3/4"
HDU14, HHDQ14	1"*	SB 1x30	24"	4"x4"x3/4"
HD19	1 1/4"*	1 1/4"dx30"**	26"	4"x4"x3/4"

* PROVIDE HEAVY HEX ANCHOR NUT
** STRAIGHT THREADED ROD w/ DOUBLE NUT AND WASHER

5 TYPICAL HOLDOWN DETAIL @ CONCRETE FOUNDATION

SCALE: 3/4" = 1'–0"

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PROFESSIONAL ENGINEER — JASON JI CHEN — C057898 — REG. 05/30/24 — CIVIL — STATE OF CALIFORNIA

	DATE	REVISIONS

TYPICAL WOOD DETAILS

VOLUNTARY STRENGTHENING

1077 FELL STREET
SAN FRANCISCO, CA

Date: 03-01-2024
Scale: AS SHOWN
Drawn By: DM
Job No: 23059
Sheet S1.1B
Of 7 Sheets

© DRAWING NAME: G:\ shared projects by ref\1077 Fell Street\WORKING\ARCHITECTURE\Drawings\Plotting Sheets\1077 Fell Street Drawings Sheets 1-3\1077 Fell Street - S1 - 02.26.24.dwg
PLOT DATE: 09-13-24 PLOTTED BY: dangulsonm

CLASS "B" LAP SPLICES					
Fy	BAR SIZE	SPECIFIED CONCRETE STRENGTH, f'c			
		2500	3000	4000	5000
40	#3	1'-4"	1'-3"	1'-1"	11"
40	#4	1'-9"	1'-7"	1'-5"	1'-3"
60	#5	3'-3"	3'-0"	2'-7"	2'-4"
60	#6	3'-11"	3'-7"	3'-1"	2'-9"
60	#7	5'-9"	5'-3"	4'-6"	4'-1"
60	#8	6'-6"	6'-0"	5'-2"	4'-8"
60	#9	7'-4"	6'-9"	5'-10"	5'-3"
60	#10	8'-3"	7'-7"	6'-7"	5'-10"
60	#11	9'-2"	8'-5"	7'-3"	6'-6"
60	#14	11'-1"	10'-1"	8'-9"	7'-10"

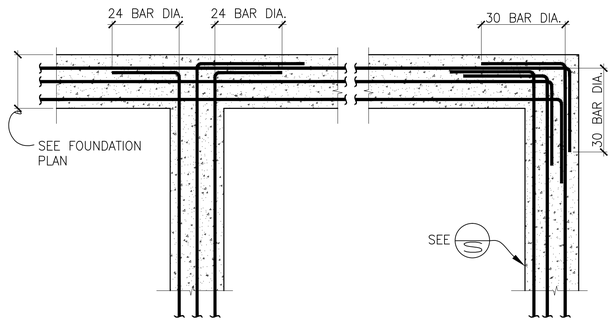
THE ABOVE REQUIREMENTS APPLY TO CONFIGURATIONS WHERE:
1. THE BARS IN QUESTION ARE TOP BARS OR BARS IN LIGHTWEIGHT CONCRETE.
2. BARS ARE UNCOATED
3. CONCRETE IS NORMAL WEIGHT
4. CLEAR SPACING > 2db
   AND CLEAR COVER > db
   OR CLEAR SPACING > db
   AND CLEAR COVER > db
   AND MIN. STIRRUPS OR TIES ARE PROVIDED

FOR OTHER CONFIGURATIONS CONTACT ENGINEER.

DIAMETER OF BENDS	
"D1"	1 1/2" FOR #3 BARS
	2" FOR #4 BARS
	2 1/2" FOR #5 BARS
"D2"	6d FOR #3 THRU #8 BARS
	8d FOR #9 THRU #11 BARS
	10d FOR #4 AND #10 BARS

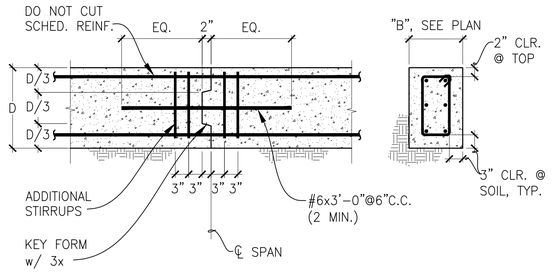
STANDARD HOOK LENGTH				
BAR SIZE	MAIN REINFORCEMENT		STIRRUPS AND TIE HOOKS	
	90°	180°	90°	180°
#3	6"	4"	3	4 1/2"
#4	8"	4"	4"	6"
#5	9 1/2"	4 1/2"	5"	7 1/2"
#6	11 1/2"	5 1/2"	11 1/2"	10"
#7	13 1/2"	6 1/2"	13 1/2"	11 1/2"
#8	15"	7"	15"	13"
#9	18"	9"	–	–
#10	20"	10"	–	–
#11	22"	11"	–	–

NOTES:
"D1" TO BE USED FOR STIRRUPS, TIES & WALLS REINFOCING AT OPENINGS.
"D2" FOR ALL OTHERS

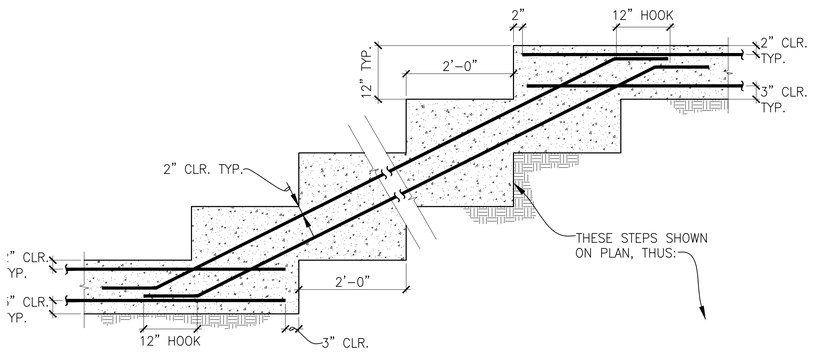


PLAN VIEW

NOTE: STIRRUPS NOT SHOWN

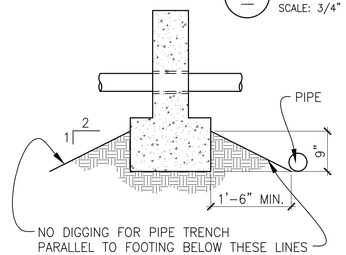


1 TYPICAL OFFSET AND TYPICAL LAP SPLICE
SCALE: 1 1/2" = 1'-0"

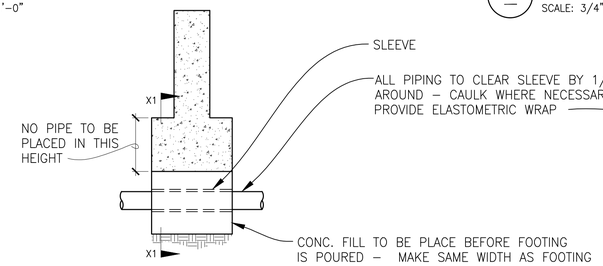


NOTES:
1. DO NOT SLOPE GRADE BEAMS > 1 VERT TO 10 HORIZ.
2. DIMENSIONS AS SHOWN UNLESS OTHERWISE SHOWN ON DRAWINGS

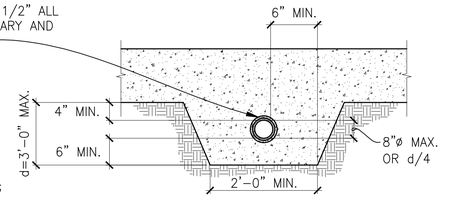
2 STANDARD HOOKS
SCALE: 1 1/2" = 1'-0"



3 TYPICAL GRADE BEAM INTERSECTIONS
SCALE: 3/4" = 1'-0"

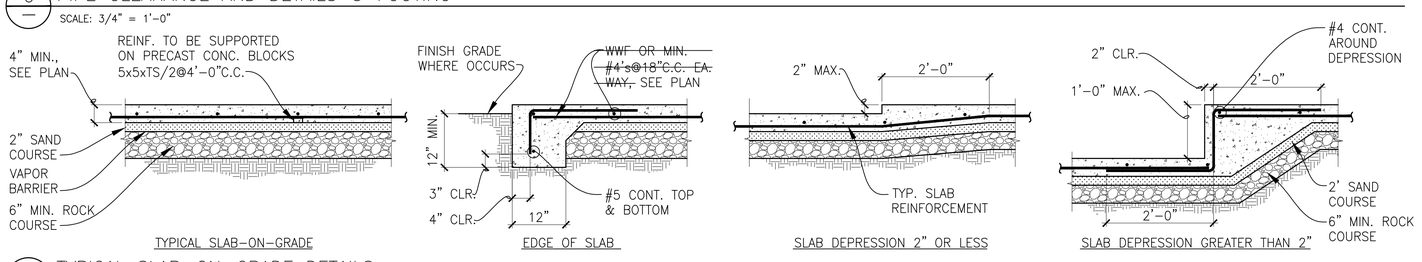


4 TYPICAL GRADE BEAM CONSTRUCTION JOINT
SCALE: 3/4" = 1'-0"



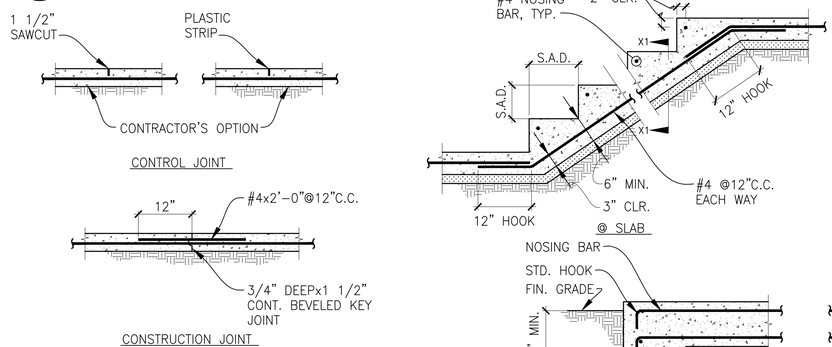
SECTION X1–X1

6 PIPE CLEARANCE AND DETAILS @ FOOTING
SCALE: 3/4" = 1'-0"



TYPICAL SLAB–ON–GRADE | EDGE OF SLAB | SLAB DEPRESSION 2" OR LESS | SLAB DEPRESSION GREATER THAN 2"

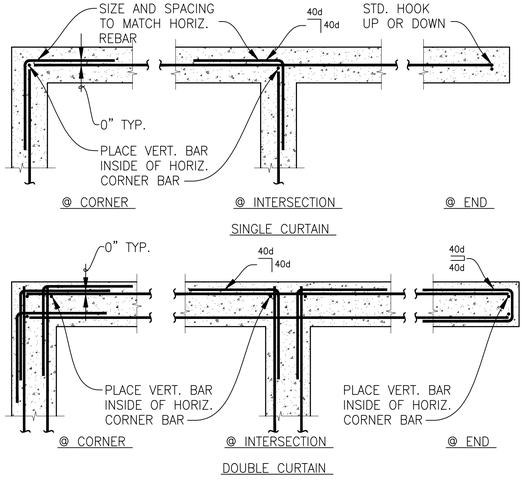
5 TYPICAL STEPS IN GRADE BEAMS AND WALL FOOTING
SCALE: 3/4" = 1'-0"



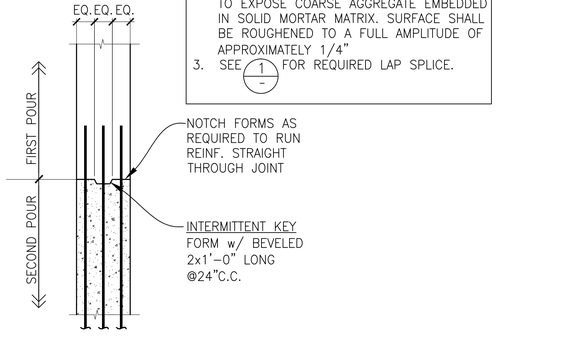
NOTE:
1. LOCATE TO ENCLOSE APPROX. SQUARE AREAS NOT EXCEEDING 400 Q. FT. SUNMIT LAYOUT FOR APPROVAL. LOCATE JOINT UNDER PARTITIONS WHENEVER POSSIBLE

SECTION X1–X1

7 TYPICAL SLAB–ON–GRADE DETAILS
SCALE: 3/4" = 1'-0"



NOTES:
1. PROVIDE LEVEL AND NEAT CONSTRUCTION JOINT.
2. ROUGHEN ALL CONSTRUCTION JOINTS TO EXPOSE COARSE AGGREGATE EMBEDDED IN SOLID MORTAR MATRIX. SURFACE SHALL BE ROUGHENED TO A FULL AMPLITUDE OF APPROXIMATELY 1/4"
3. SEE 1 — FOR REQUIRED LAP SPLICE.



8 TYPICAL CONSTRUCTION JOINT DETAILS @ SLAB–ON–GRADE
SCALE: 3/4" = 1'-0"

9 TYPICAL CONCRETE STAIRS ON GRADE
SCALE: 3/4" = 1'-0"

10 TYPICAL CONCRETE WALL INTERSECTION
SCALE: 3/4" = 1'-0"

11 TYPICAL CONCRETE WALL CONSTRUCTION JOINT
SCALE: 3/4" = 1'-0"

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	DATE	REVISIONS
1		
2		
3		
4		

TYPICAL WOOD DETAILS

VOLUNTARY STRENGTHENING

1077 FELL STREET
SAN FRANCISCO, CA

Date:	03-01-2024
Scale:	AS SHOWN
Drawn By:	DM
Job No:	23059
Sheet	S1.2A
Of	7 Sheets

DRAWING NAME: S1.2 structural beam&slab.pln | Model: I:\ENERTIA\PROJECTS\2023\23059 - 1077 Fell Street\Drawings\Revit\1077 Fell Street_S1 - 02.29.24.rvt | PLOT DATE: 09-13-24 PLOTTED BY: dangulsonm

SHEARWALL NOMENCLATURE

SHEARWALL BELOW

SHEARWALL (BELOW) TYPE, SEE SCHEDULE

A 10.1

SHEARWALL LENGTH BELOW

CLARIFY THE DESIGN LOADING OF THIS SHEARWALLIT'S NOT IDENTIFIED IN THE CALCULATION

SSTB24 ANCHOR REQUIRES 20-5/8" EMBEDMENT. INCREASE THE FOOTING DEPTH AS REQUIRED

IT SEEMS LIKE POST HAS BEEN RELOCATED TO MISS BRICK FOUNDATIONADJUST SECOND FLOOR FRAMING PLAN AS REQUIRED

DETAIL 10/S0.3?

4'-0" LONG SHEARWALL ALONG LINE A IS MISSING

LINE B WALL HAS 4936 lbs FORCE ALONG THIS LINE.VERIFY THE IF THE COLLECTOR PROVIDED IS SUFFICIENT OR NOT

CLARIFY IF THE STRAP IS CONTINUOUS THROUGH OUT THE ENTIRE LENGTH OF COLLECTOR. IF NOT, SPECIFY STRAP LENGTH

THIS DETAIL IS SHOWING FOUNDATION TO BE 18" WIDE ON EACH SIDE OF HOLDOWN ANCHOR

JOIST WITH STRAP TOO?

CLARIFY THE DESIGN LOADING OF THIS SHEARWALLIT'S NOT IDENTIFIED IN THE CALCULATION

PROVIDE CONTINUOUS COLLECTOR

NEW FOOTING WILL CUT INTO (E) BRICK FOOTING ON WEST SIDE BUT NOT EAST SIDE? VERIFY

VERIFY IF HDU4 IS BEING EPOXY TO (E) BRICK WALLPROVIDE EPOXY CAPACITY

PROVIDE DIAPHRAGM TIE TO THE MAIN HOUSE

ARCHIECTRUAL ELEVATION ON A-1.02 SHOWS GRADEOR DECK ELEVATION TO UNDERSIDE OF 4X10 IS 11'-0"THERE IS ALSO A 6" CURB PER DEAIL 12/S3 FROM GRADEPLEAE DOUBLE CHECK THE STRONGWALL HEIGHT

CALC SHOWS THIS BEAM IS A 5.25"x9.5" PSLVERIFY

STRONGWALL CAN'T BE EXPOSED TO WEATHER PROVIDE FINISHES TO ENCLOSE THE STRONGWALL

NO WORK ABOVE THIS LEVEL

NO WORK AT THIS LEVEL

FIRST FLOOR / FOUNDATION PLAN

SCALE: 1/4"=1'-0"

SECOND FLOOR FRAMING PLAN

SCALE: 1/4"=1'-0"

ROOF FRAMING PLAN

SCALE: 1/4"=1'-0"

NORTH

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FIRST FLOOR
FOUNDATION PLAN
SECOND FLOOR FRAMING PLAN
ROOF FRAMING PLAN

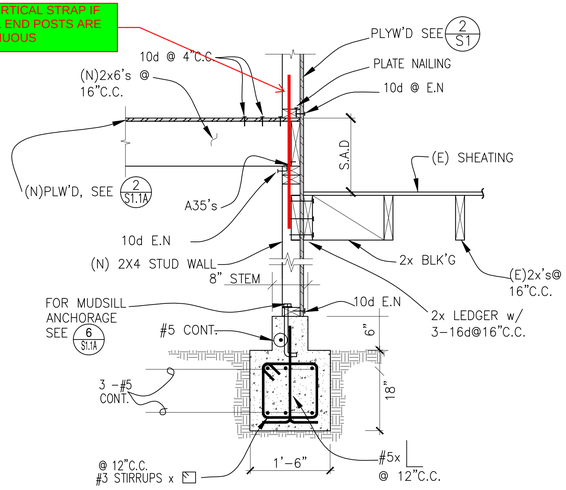
VOLUNTARY STRENGTHENING

1077 FELL STREET
SAN FRANCISCO, CA

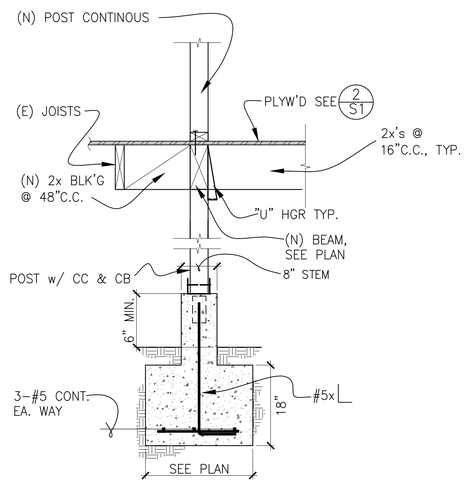
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Of 7 Sheets

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PLOT DATE: 07-24-24 PLOTTED BY: darquisonm

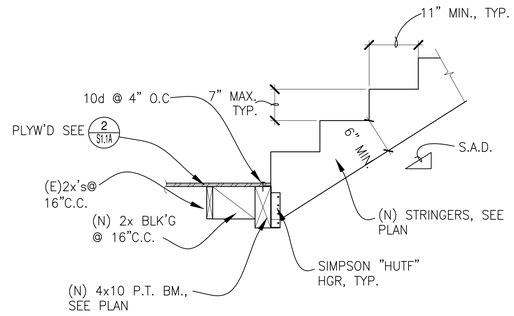
PROVIDE VERTICAL STRAP IF SHEARWALL END POSTS ARE NOT CONTINUOUS



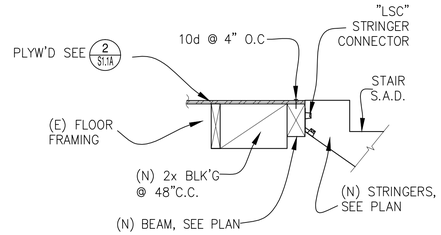
1 SCALE: 3/4" = 1'-0"



2 SCALE: 3/4" = 1'-0"



3 SCALE: 3/4" = 1'-0"



4 SCALE: 3/4" = 1'-0"

5 SCALE: 3/4" = 1'-0"

6 SCALE: 3/4" = 1'-0"

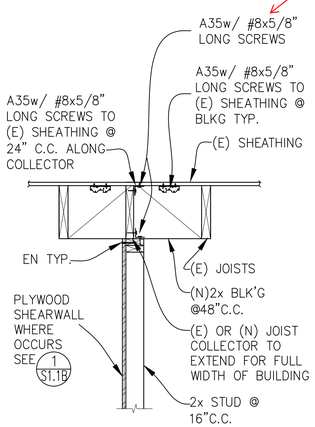
TOP OF GRADE BEAM APPEARS TO BE AT CRAWL SPACE FINISH GRADE OR TOP OF SLAB ON GRADE.
GRADE BEAM WILL BE BELOW THE BOTTOM OF (E) FOUNDATION
ADJUST DETAIL ACCORDINGLY

7 SCALE: 3/4" = 1'-0"

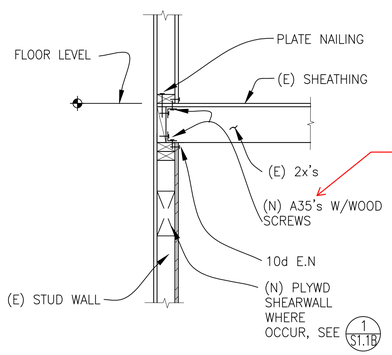
EXISTING FOOTING CONDITION SHOULD BE LIKE DETAIL 6/S3
MODIFY THE NEW FOUNDATION TO ACCOUNT FOR THE EXISTING FOOTING CONDITION. IT SEEMS THE FOOTING WILL BE MORE THAN 1'-6" DEEP

8 SCALE: 3/4" = 1'-0"

CONFIRM SCREW SIZE SIMPSON USES PH612I #6 x 1/2" SCREWS



9 SCALE: 3/4" = 1'-0"



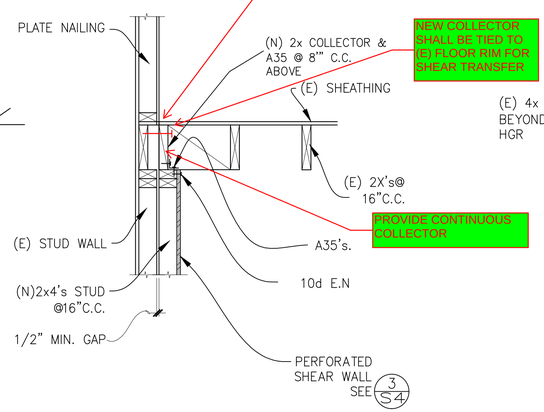
CLARIFY THE AMOUNT OF CLIPS

10 SCALE: 3/4" = 1'-0"

NO WORK ABOVE

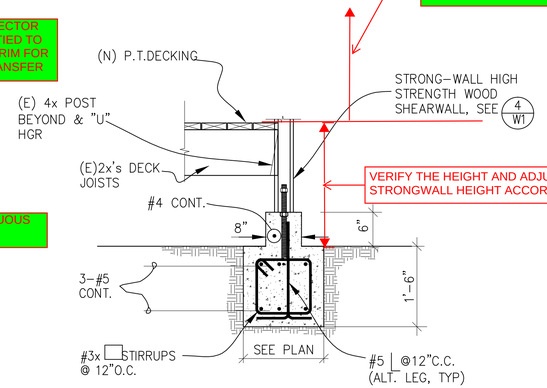
NEW WORK BELOW

PROVIDE CONNECTION TO THE FLOOR SHEATHING ABOVEADD STRAP AS REQUIRED



11 SCALE: 3/4" = 1'-0"

ARCHIECTRUAL ELEVATION ON A-1.02 SHOWS GRADEOR DECK ELEVATION TO UNDERSIDE OF 4x10 IS 11'-0"THERE IS ALSO A 6" CURB PER DEAIL 12/S3 FROM GRADEPLEAE DOUBLE CHECK THE STRONGWALL HEIGHT



VERIFY THE HEIGHT AND ADJUST STRONGWALL HEIGHT ACCORDINGLY

12 SCALE: 3/4" = 1'-0"

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Y
Z
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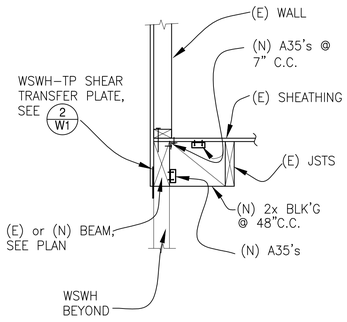
STRUCTURAL DETAILS

VOLUNTARY [illegible]

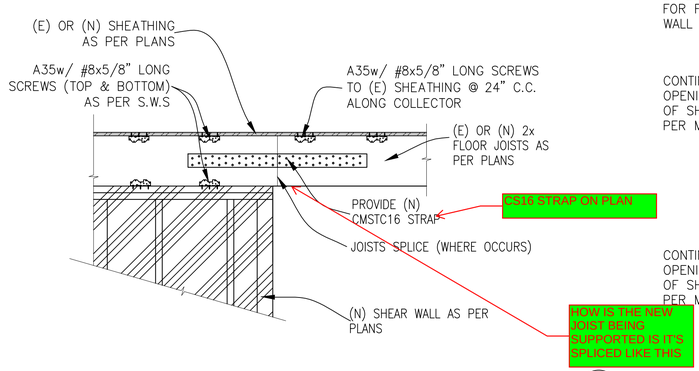
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Date:	03/01/2024
Scale:	AS SHOWN
Drawn By:	DM
Job No:	23059
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Of	7 Sheets

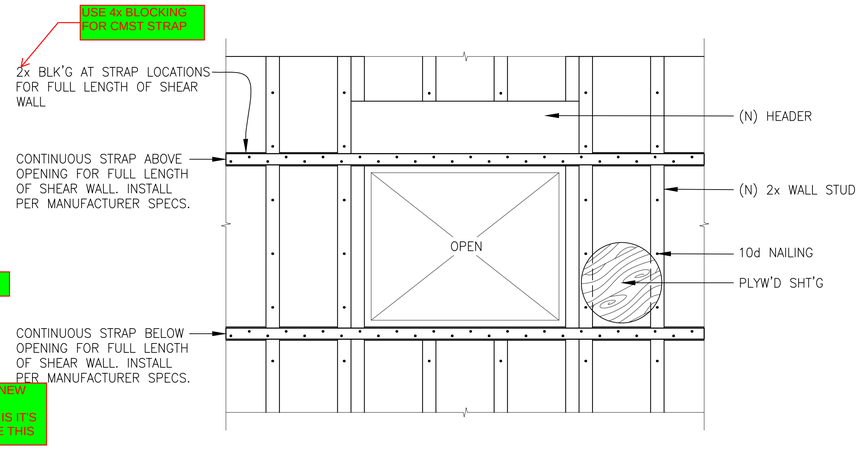
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PLOT DATE: 07-24-24 PLOTTED BY: dangulosnm



1 — SCALE: 3/4" = 1'–0"



2 — SCALE: 3/4" = 1'–0"



3 — SCALE: 3/4" = 1'–0"

1

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STRUCTURAL DETAILS

VOLUNTARY STRENGTHENING

1077 FELL STREET
SAN FRANCISCO, CA

Date: 03/01/2024
Scale: AS SHOWN
Drawn By: DM
Job No: 23059
Sheet S4
Of 7 Sheets

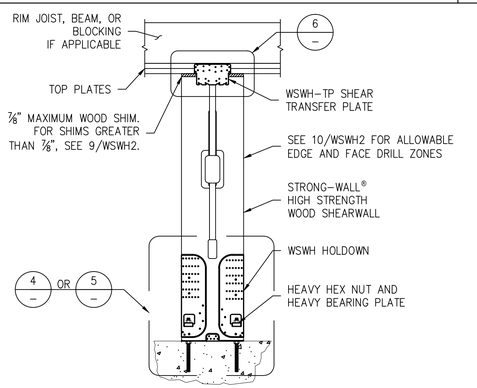
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PLOT DATE: 07-24-24 PLOTTED BY: darquisonm

STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL MODELS

MODEL NO.	W (in.)	H (in.)	ANCHOR BOLTS		TOTAL WALL WEIGHT (lb.)
			QUANTITY	DIA. (in.)	
WSWH12x7	12	84	2	1	105
WSWH18x7	18	84	2	1	155
WSWH12x8	12	96	2	1	120
WSWH18x8	18	96	2	1	175
WSWH24x8	24	96	2	1	225
WSWH12x9	12	108	2	1	130
WSWH18x9	18	108	2	1	195
WSWH24x9	24	108	2	1	250
WSWH12x10	12	120	2	1	145
WSWH18x10	18	120	2	1	210
WSWH24x10	24	120	2	1	275
WSWH12x12	12	144	2	1	165
WSWH18x12	18	144	2	1	245
WSWH24x12	24	144	2	1	325
WSWH18x14	18	168	2	1	285
WSWH24x14	24	168	2	1	370
WSWH24x16	24	192	2	1	420
WSWH18x20	18	240	2	1	390
WSWH24x20	24	240	2	1	520

NOTES :
1. FOR HEIGHTS NOT LISTED, ORDER THE NEXT TALLEST PANEL AND TRIM TO FIT. MINIMUM TRIMMED HEIGHT FOR ALL PANELS IS 74¾".
2. ALL PANELS COME WITH PRE-ATTACHED HOLDOWNS, TWO HEAVY HEX NUTS, TWO HEAVY BEARING PLATES, ONE WSWH-TP TOP CONNECTION PLATE WITH REQUIRED FASTENERS AND INSTALLATION INSTRUCTIONS.
3. ALL PANELS ARE 3½" THICK.

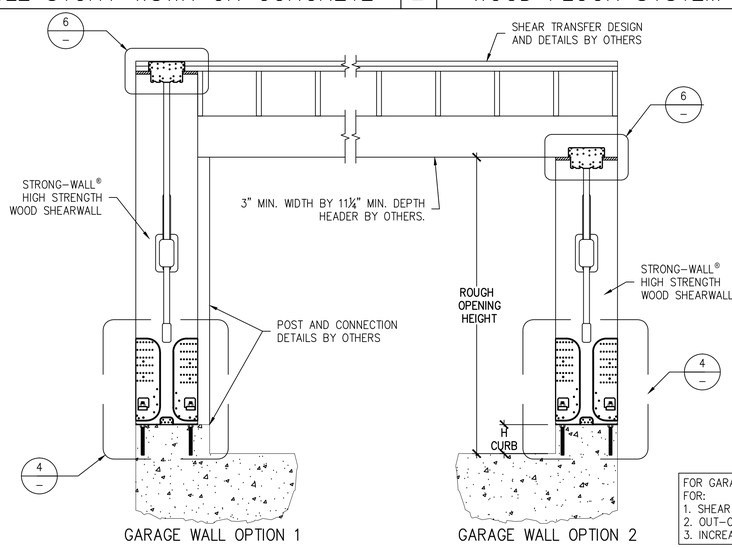
STRONG-WALL® WSWH MODELS | 1



DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

ENSURE CONCRETE IS LEVEL AND SMOOTH BENEATH PANEL. GRIND OR FILL AS NECESSARY.

SINGLE STORY WSWH ON CONCRETE | 2



DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

WHEN WSWH-PS STRAPS OMITTED, ALLOWABLE SHEAR VALUES FOR STANDARD PANEL APPLY.

GARAGE HEADER ROUGH OPENING HEIGHT			
MODEL NO.	TRIMMED PANEL HEIGHT	H CURB	ROUGH OPENING HEIGHT
WSWH12x7 WSWH18x7 WSWH24x7	78"	5½"	6'-11½"
		6"	7'-0"
WSWH12x8 WSWH18x8 WSWH24x8	85½"	0"	7'-1½"
	93¼"	5½"	8'-2¾"
		6"	8'-3¼"

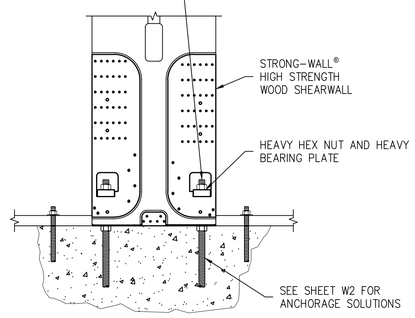
NOTES :
1. IF REQUIRED ROUGH OPENING HEIGHT EXCEEDS TABLE VALUE, SPECIFY NEXT TALLER PANEL AND TRIM AS NECESSARY. THE STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL MAY BE TRIMMED TO A MINIMUM HEIGHT OF 74¾".
2. FURRING DOWN GARAGE HEADER MAY BE REQUIRED FOR CORRECT ROUGH OPENING HEIGHT.

FOR GARAGE WALL OPTION 2, DESIGNER SHALL DESIGN AND DETAIL FOR:
1. SHEAR TRANSFER
2. OUT-OF-PLANE LOADING EFFECT
3. INCREASED OVERTURNING AND DRIFT DUE TO ADDITIONAL HEIGHT

ALTERNATE WSWH GARAGE FRONT OPTIONS | 3

STANDARD INSTALLATION BASE CONNECTION | 4

PLACE STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL OVER THE ANCHOR BOLTS AND SECURE WITH HEAVY BEARING PLATES AND HEAVY HEX NUTS (PROVIDED). DO NOT USE AN IMPACT WRENCH. USE 1⅝" WRENCH FOR 1" NUT. TIGHTEN ANCHOR NUTS FINGER TIGHT + ½" TURN.

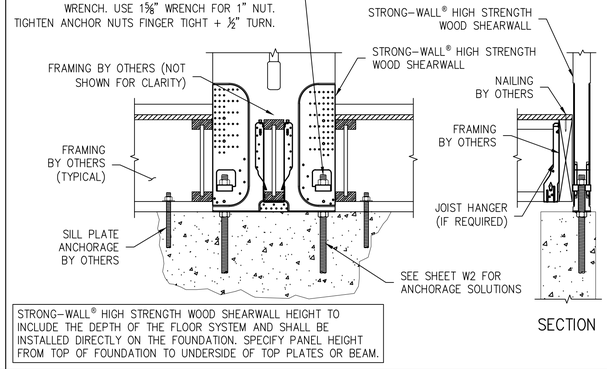


DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL HEIGHT TO INCLUDE THE DEPTH OF THE FLOOR SYSTEM AND SHALL BE INSTALLED DIRECTLY ON THE FOUNDATION. SPECIFY PANEL HEIGHT FROM TOP OF FOUNDATION TO UNDERSIDE OF TOP PLATES OR BEAM.

WOOD FLOOR SYSTEM BASE CONNECTION | 5

PLACE STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL OVER THE ANCHOR BOLTS AND SECURE WITH HEAVY BEARING PLATES AND HEAVY HEX NUTS (PROVIDED). DO NOT USE AN IMPACT WRENCH. USE 1⅝" WRENCH FOR 1" NUT. TIGHTEN ANCHOR NUTS FINGER TIGHT + ½" TURN.



DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

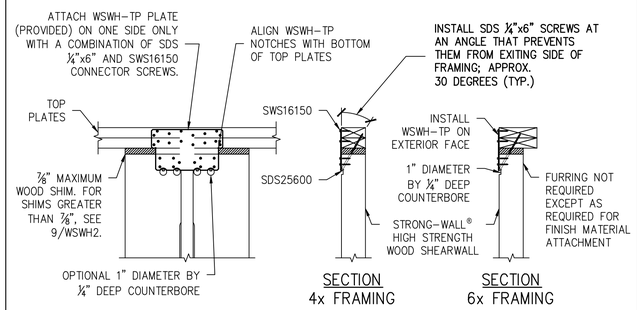
STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL HEIGHT TO INCLUDE THE DEPTH OF THE FLOOR SYSTEM AND SHALL BE INSTALLED DIRECTLY ON THE FOUNDATION. SPECIFY PANEL HEIGHT FROM TOP OF FOUNDATION TO UNDERSIDE OF TOP PLATES OR BEAM.

WOOD FLOOR SYSTEM BASE CONNECTION | 5

TOP CONNECTION | 6

WSWH-TP CONNECTION		
MODEL NO.	FASTENER QUANTITY	
	SWS16150	SDS25600
WSWH-TP12	14	2
WSWH-TP18	26	4
WSWH-TP24	46	8

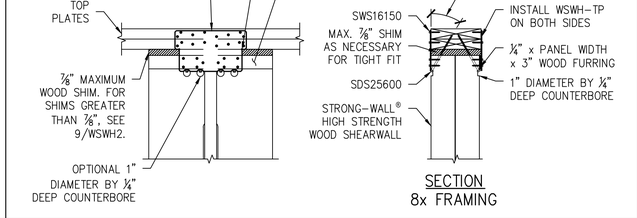
DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.



TOP CONNECTION | 6

WSWH-TP CONNECTION		
MODEL NO.	FASTENER QUANTITY	
	SWS16150	SDS25600
WSWH-TP12	28	4
WSWH-TP18	52	8
WSWH-TP24	92	16

DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

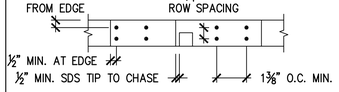


BACK-TO-BACK TOP CONNECTION | 7

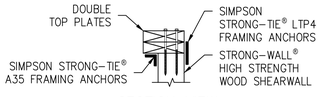
QTY. OF SDS¼"x6" SCREWS REQ'D.	
WSWH12	4
WSWH18	8
WSWH24	16

EDGE DISTANCE FOR SCREWS		
SLOPE	A (in.)	B (in.)
0:12-4:12	2	3
5:12-8:12	1½	4½
9:12-12:12	1½	5½

NOTES :
1. MAINTAIN END DISTANCES TO PREVENT SCREWS FROM PENETRATING THROUGH THE OUTER EDGES.
2. INSTALL SCREWS PERPENDICULAR TO THE TOP PLATE.
3. EDGE DISTANCES ASSUME DOUBLE TOP PLATE.

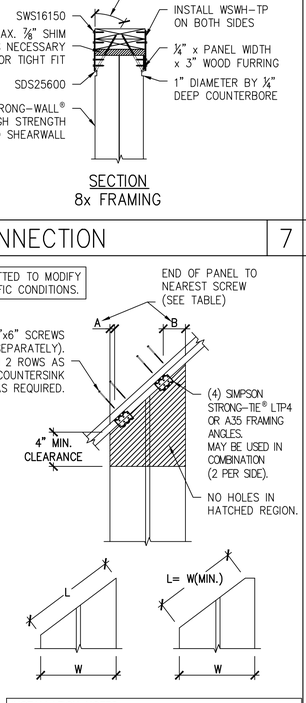


PLAN VIEW
SDS SCREW SPACING



SECTION VIEW
2X6 OR WIDER FRAMING

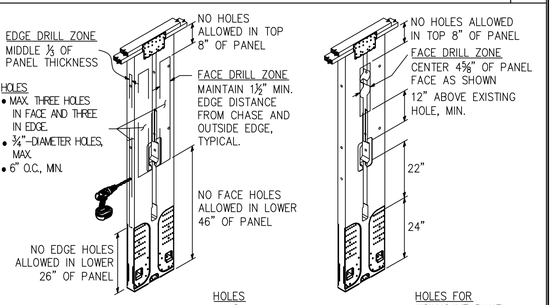
DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.



INSTALLATION NOTES :
1. ACTUAL CUT LENGTH (L) MUST BE GREATER THAN OR EQUAL TO PANEL WIDTH (W).
2. THIS DETAIL APPLICABLE FOR SLOPES UP TO 12:12.
3. PANELS TALLER THAN 12' MUST BE DESIGNED FOR THE APPLICATION.

RAKE WALL | 8

TOP OF WALL HEIGHT ADJUSTMENTS | 9

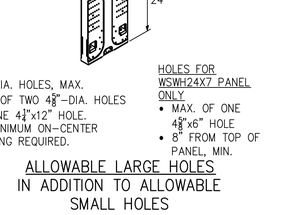


DESIGNER SHALL DESIGN AND DETAIL FOR:
1. SHEAR TRANSFER
2. OUT-OF-PLANE LOADING EFFECT
3. INCREASED OVERTURNING AND DRIFT DUE TO ADDITIONAL HEIGHT

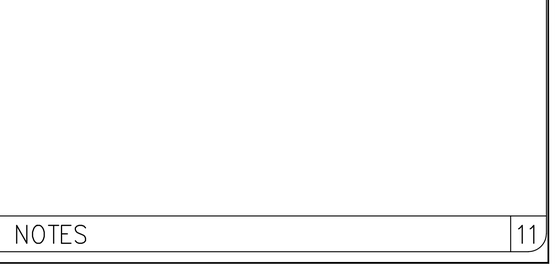
FOR 8" TO 12" BLOCK DEPTHS:
ATTACH SIMPSON STRONG-TIE® CS16 STRAPS AT EDGE OF WSWH PANEL (EACH SIDE) USING 10dx1½" NAILS

SHIM BLOCK HEIGHTS GREATER THAN 8" AND UP TO 10":
- 8 NAILS INTO BLOCK
- 8 NAILS INTO WSWH PANEL

SHIM BLOCK HEIGHTS GREATER THAN 10" AND UP TO 12":
- 10 NAILS INTO BLOCK
- 10 NAILS INTO WSWH PANEL



TOP OF WALL HEIGHT ADJUSTMENTS | 9



TRIM ZONE AND ALLOWABLE HOLES | 10

1. STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL IS MANUFACTURED AND TRADEMARKED BY "SIMPSON STRONG-TIE COMPANY INC." HOME OFFICE: 5956 W. LAS POSITAS BLVD., PLEASANTON, CA 94588 TEL: (800) 999-5099, FAX: (925) 847-1597. "SIMPSON STRONG-TIE COMPANY INC." IS AN ISO 9001-2008 REGISTERED COMPANY.
2. USE OF THIS PRODUCT IS SUBJECT TO THE APPROVAL OF THE LOCAL BUILDING DEPARTMENT.
3. THIS PRODUCT IS PART OF THE OVERALL LATERAL FORCE RESISTING SYSTEM OF THE STRUCTURE. DESIGN OF THE BUILDING'S LATERAL FORCE RESISTING SYSTEM, INCLUDING THE LOAD PATH TO TRANSFER LATERAL FORCES FROM THE STRUCTURE TO THE GROUND, IS THE RESPONSIBILITY OF THE DESIGNER.
4. ENGINEER OF RECORD IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.
5. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, CONDITIONS, ELEVATIONS, ETC. PRIOR TO INSTALLATION OF ANY COMPONENTS FOR THE STRONG-WALL SB SYSTEM. IF ANY DISCREPANCIES ARE FOUND, THEY SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGNER FOR CLARIFICATION PRIOR TO CONSTRUCTION.
6. INSTALLATION OF PRODUCT SHALL BE DONE IN CONFORMANCE TO THESE DRAWINGS. THE PERFORMANCE OF MODIFIED PRODUCTS OR ALTERED INSTALLATION PROCEDURES ARE THE SOLE RESPONSIBILITY OF THE DESIGNER.
7. SIMPSON STRONG-TIE COMPANY INC. RESERVES THE RIGHT TO CHANGE SPECIFICATIONS, DESIGNS, AND MODELS WITHOUT NOTICE OR LIABILITY FOR SUCH CHANGES.
8. ALL HARDWARE CALLED OUT IS SIMPSON STRONG-TIE.
9. SEE ICC-ES ESR-2652 OR CITY OF LOS ANGELES RR25730 AS APPLICABLE FOR ADDITIONAL INFORMATION.

NOTES | 11

ENERTIA DESIGNS
ARCHITECTURAL ENGINEERING & INTERIOR
1167 MISSION STREET, FL 1
SAN FRANCISCO, CA 94103
FAX: 415.701.0212
OFFICE: 415.626.8300
EMAIL: INFO@ENERTIADESIGNS.NET

PROFESSIONAL ENGINEER JASON JIECHEN C057898 06/30/26 CIVIL STATE OF CALIFORNIA

	DATE	REVISIONS

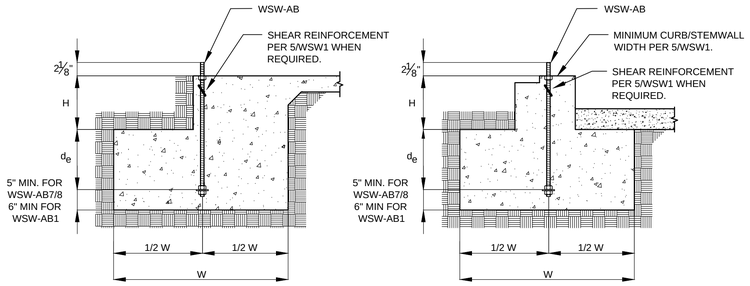
STRUCTURAL DETAILS

VOLUNTARY STRENGTHENING

1077 FELL STREET
SAN FRANCISCO, CA

Date:	03/01/2024
Scale:	AS SHOWN
Drawn By:	DM
Job No:	23059
Sheet	W1
Of	7 Sheets

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PLOT DATE: 07-24-24 PLOTTED BY: darquisnm

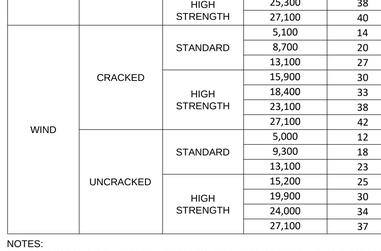


SLAB ON GRADE FOUNDATION

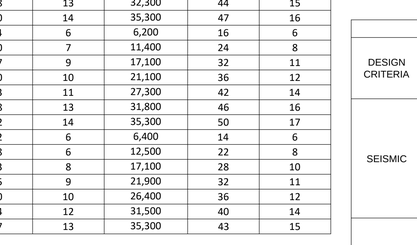
BRICK LEDGE FOUNDATION

NOTES:
1. SEE 2/WSW1 FOR DIMENSIONS AND ADDITIONAL NOTES.
2. SEE 5/WSW1 FOR SHEAR REINFORCEMENT WHEN REQUIRED.
3. MAXIMUM H = l_e - d_e. SEE 3/WSW1 AND 4/WSW1 FOR l_e.

REGISTERED DESIGN PROFESSIONAL IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

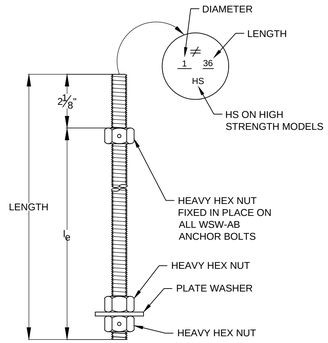


INTERIOR FOUNDATION



CURB OR STEMWALL FOUNDATION

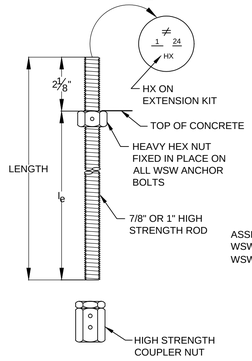
STRONG-WALL® WSW ANCHORAGE - TYPICAL SECTIONS | 1



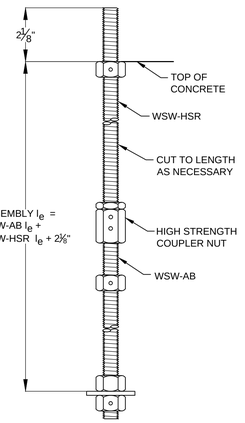
WSW PANEL MODEL	MODEL NO.	DIAMETER	LENGTH	l_e
WSW12 AND WSW18	WSW-AB7/8x24	7/8"	24"	20"
	WSW-AB7/8x24HS	7/8"	24"	20"
	WSW-AB7/8x30	7/8"	30"	26"
	WSW-AB7/8x30HS	7/8"	30"	26"
	WSW-AB7/8x36HS	7/8"	36"	32"
WSW24	WSW-AB1x24	1"	24"	20"
	WSW-AB1x24HS	1"	24"	20"
	WSW-AB1x30	1"	30"	26"
	WSW-AB1x30HS	1"	30"	26"
	WSW-AB1x36HS	1"	36"	32"

WSW ANCHOR BOLTS | 3

WSW-HSR_KT



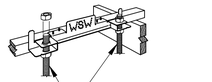
WSW-HSR AND WSW-AB ASSEMBLY



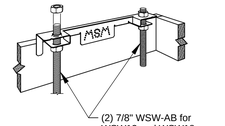
WSW PANEL MODEL	MODEL NO.	DIAMETER	LENGTH	l_e
WSW12 AND WSW18	WSW-HSR7/8x24KT	7/8"	24"	22"
	WSW-HSR7/8x36KT	7/8"	36"	34"
WSW24	WSW-HSR1x24KT	1"	24"	22"
	WSW-HSR1x36KT	1"	36"	34"

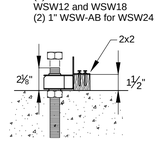
WSW ANCHOR BOLT EXTENSION | 4

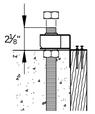
WSW-RT INTERIOR INSTALLATION



WSW-RT EXTERIOR INSTALLATION

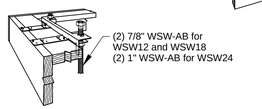


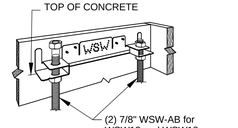




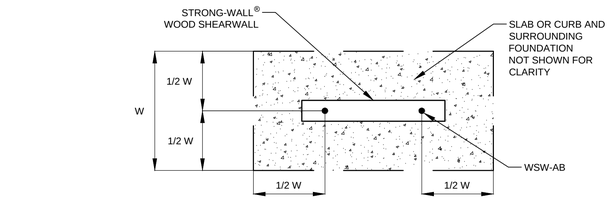
WSW-RTPF PANEL FORM INSTALLATION

WSW-RTBL BRICK LEDGE INSTALLATION





WSW ANCHOR BOLT TEMPLATES | 6



FOUNDATION PLAN VIEW

WSW ANCHORAGE SOLUTIONS FOR 2500 PSI CONCRETE

DESIGN CRITERIA	CONCRETE CONDITION	ANCHOR STRENGTH	WSW-AB7/8 ANCHOR BOLT ASD ALLOWABLE TENSION (lb.)	WSW-AB7/8 ANCHOR BOLT W (in.)	WSW-AB7/8 ANCHOR BOLT d_e (in.)	WSW-AB1 ANCHOR BOLT ASD ALLOWABLE TENSION (lb.)	WSW-AB1 ANCHOR BOLT W (in.)	WSW-AB1 ANCHOR BOLT d_e (in.)
1 SEISMIC	CRACKED	STANDARD	11,900	27	9	16,100	33	11
			13,100	29	10	17,100	35	12
		HIGH STRENGTH	24,900	43	15	33,000	51	17
			27,100	46	16	35,300	54	18
	UNCRACKED	STANDARD	12,500	24	8	15,700	28	10
			13,100	25	9	17,100	30	10
		HIGH STRENGTH	25,300	38	13	32,300	44	15
			27,100	40	14	35,300	47	16
WIND	CRACKED	STANDARD	5,100	14	6	6,200	16	6
			8,700	20	7	11,400	24	8
		HIGH STRENGTH	13,100	27	9	17,100	32	11
			15,900	30	10	21,100	36	12
			18,400	33	11	27,300	42	14
			23,100	38	13	31,800	46	16
			27,100	42	14	35,300	50	17
	UNCRACKED	STANDARD	5,000	12	6	6,400	14	6
			9,300	18	6	12,500	22	8
		HIGH STRENGTH	13,100	23	8	17,100	28	10
			15,200	25	9	21,900	32	11
			19,900	30	10	26,400	36	12
			24,000	34	12	31,500	40	14
			27,100	37	13	35,300	43	15

NOTES:
1. ANCHORAGE DESIGNS CONFORM TO ACI 318-11 APPENDIX D AND ACI 318-14 WITH NO SUPPLEMENTARY REINFORCEMENT FOR CRACKED OR UNCRACKED CONCRETE AS NOTED.
2. ANCHOR STRENGTH INDICATES REQUIRED GRADE OF WSW-AB ANCHOR BOLT. STANDARD (ASTM F1554 GRADE 36) OR HIGH STRENGTH (HS) (ASTM A449).
3. SEISMIC INDICATES SEISMIC DESIGN CATEGORY C - F. DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C MAY USE WIND ANCHORAGE SOLUTIONS. SEISMIC ANCHORAGE DESIGNS CONFORM TO ACI 318-11 SECTION D.3.3.4.3 AND ACI 318-14 SECTION 17.2.3.4.3.
4. WIND INCLUDES SEISMIC DESIGN CATEGORY A AND B AND DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C.
5. FOUNDATION DIMENSIONS ARE FOR ANCHORAGE ONLY. FOUNDATION DESIGN (SIZE AND REINFORCEMENT) BY OTHERS. THE REGISTERED DESIGN PROFESSIONAL MAY SPECIFY ALTERNATE EMBEDMENT, FOOTING SIZE OR ANCHOR BOLT.
6. REFER TO 1/WSW1 FOR d_e.

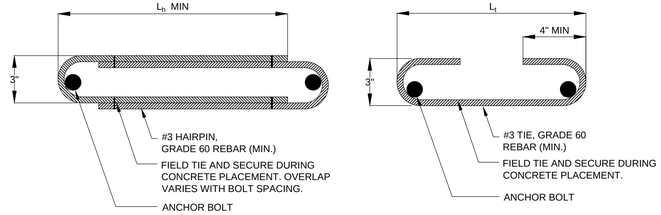
WSW ANCHORAGE SOLUTIONS FOR 3000 PSI CONCRETE

DESIGN CRITERIA	CONCRETE CONDITION	ANCHOR STRENGTH	WSW-AB7/8 ANCHOR BOLT ASD ALLOWABLE TENSION (lb.)	WSW-AB7/8 ANCHOR BOLT W (in.)	WSW-AB7/8 ANCHOR BOLT d_e (in.)	WSW-AB1 ANCHOR BOLT ASD ALLOWABLE TENSION (lb.)	WSW-AB1 ANCHOR BOLT W (in.)	WSW-AB1 ANCHOR BOLT d_e (in.)
SEISMIC	CRACKED	STANDARD	12,300	26	9	16,000	31	11
			13,100	28	10	17,100	33	11
		HIGH STRENGTH	25,200	41	14	32,700	48	16
			27,100	43	15	35,300	51	17
	UNCRACKED	STANDARD	12,000	22	8	16,300	27	9
			13,100	24	8	17,100	28	10
		HIGH STRENGTH	25,300	36	12	32,700	42	14
			27,100	38	13	35,300	44	15
WIND	CRACKED	STANDARD	5,000	13	6	5,600	14	6
			8,800	19	7	10,200	21	7
		HIGH STRENGTH	13,100	25	9	17,100	30	10
			15,700	28	10	20,100	33	11
			19,200	32	11	25,300	38	13
			23,200	36	12	32,300	44	15
			27,100	40	14	35,300	47	16
	UNCRACKED	STANDARD	5,500	12	6	6,200	13	6
			8,500	16	6	12,800	21	7
		HIGH STRENGTH	13,100	22	8	17,100	26	9
			16,600	25	9	21,800	30	10
			19,700	28	10	25,200	33	11
			24,000	32	11	31,700	38	13
			27,100	35	12	35,300	41	14

WSW ANCHORAGE SOLUTIONS FOR 4500 PSI CONCRETE

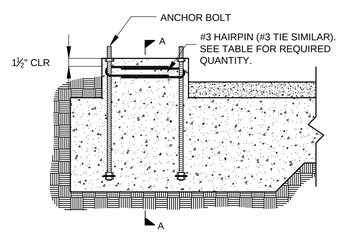
DESIGN CRITERIA	CONCRETE CONDITION	ANCHOR STRENGTH	WSW-AB7/8 ANCHOR BOLT ASD ALLOWABLE TENSION (lb.)	WSW-AB7/8 ANCHOR BOLT W (in.)	WSW-AB7/8 ANCHOR BOLT d_e (in.)	WSW-AB1 ANCHOR BOLT ASD ALLOWABLE TENSION (lb.)	WSW-AB1 ANCHOR BOLT W (in.)	WSW-AB1 ANCHOR BOLT d_e (in.)
SEISMIC	CRACKED	STANDARD	12,600	23	8	16,000	27	9
			13,100	24	8	17,100	29	10
		HIGH STRENGTH	24,800	36	12	32,100	42	14
			27,100	38	13	35,300	45	15
	UNCRACKED	STANDARD	12,700	20	7	15,700	23	8
			13,100	21	7	17,100	25	9
		HIGH STRENGTH	24,600	31	11	32,500	37	13
			27,100	34	12	35,300	39	13
WIND	CRACKED	STANDARD	5,400	12	6	6,800	14	6
			8,300	16	6	11,600	20	7
		HIGH STRENGTH	13,100	22	8	17,100	26	9
			15,300	24	8	21,400	30	10
			19,300	28	10	25,800	34	12
			23,600	32	11	31,000	38	13
			27,100	36	12	35,300	42	14
	UNCRACKED	STANDARD	6,800	12	6	6,800	12	6
			9,400	15	6	12,400	18	6
		HIGH STRENGTH	13,100	19	7	17,100	23	8
			16,800	22	8	21,600	26	9
			20,300	25	9	26,700	30	10
			24,100	28	10	32,200	34	12
			27,100	31	11	35,300	36	12

STRONG-WALL® WOOD SHEARWALL TENSION ANCHORAGE SCHEDULE 2,500, 3,000 AND 4,500 PSI | 2

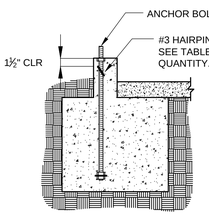


HAIRPIN SHEAR REINFORCEMENT

TIE SHEAR REINFORCEMENT



HAIRPIN INSTALLATION
(GARAGE CURB SHOWN. OTHER FOOTING TYPES SIMILAR.)



SECTION A-A

STRONG-WALL® WOOD SHEARWALL SHEAR ANCHORAGE

MODEL	L_t OR L_h (in.)	SEISMIC [3] SHEAR REINFORCEMENT	SEISMIC [3] MINIMUM CURB/ STEMWALL WIDTH (in.)	WIND [4] SHEAR REINFORCEMENT	WIND [4] MINIMUM CURB/ STEMWALL WIDTH (in.)	ASD ALLOWABLE SHEAR LOAD, V (lb.) [6] UNCRACKED	ASD ALLOWABLE SHEAR LOAD, V (lb.) [6] CRACKED
WSW12	10¼	(1) #3 HAIRPIN	8[5]	SEE NOTE 6	6	1,035	740
WSW18	15	(1) #3 HAIRPIN	8[5]	(1) #3 HAIRPIN	6	HAIRPIN REINFORCEMENT ACHIEVES MAXIMUM ALLOWABLE SHEAR LOAD OF THE WSW	
WSW24	19	(2) #3 HAIRPINS	8[5]	(1) #3 HAIRPIN	6		

NOTES:
1. SHEAR ANCHORAGE DESIGNS CONFORM TO ACI 318-11 AND ACI 318-14 AND ASSUME MINIMUM 2,500 PSI CONCRETE.
2. SHEAR REINFORCEMENT IS NOT REQUIRED FOR INTERIOR FOUNDATION APPLICATIONS (PANEL INSTALLED AWAY FROM EDGE OF CONCRETE), OR BRACED WALL PANEL APPLICATIONS.
3. SEISMIC INDICATES SEISMIC DESIGN CATEGORY C THROUGH F. DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C MAY USE WIND ANCHORAGE SOLUTIONS.
4. WIND INCLUDES SEISMIC DESIGN CATEGORY A AND B AND DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C.
5. WHERE NOTED, MINIMUM CURB/STEMWALL WIDTH IS 6 INCHES WHEN STANDARD STRENGTH ANCHOR BOLT IS USED.
6. USE (1) #3 TIE FOR WSW12 WHEN PANEL DESIGN SHEAR FORCE EXCEEDS TABULATED ANCHORAGE ALLOWABLE SHEAR LOAD.
7. #4 GRADE 40 SHEAR REINFORCEMENT MAY BE SUBSTITUTED FOR WSW SHEAR ANCHORAGE SOLUTIONS.

STRONG-WALL® WSW SHEAR ANCHORAGE SCHEDULE AND DETAILS | 5

ENERTIA DESIGNS
ARCHITECTURAL ENGINEERING & INTERIOR
EMAIL: INFO@ENERTIADESIGNS.NET
OFFICE: 415.826.8300
FAX: 415.701.0212
1167 MISSION STREET, FL 1
SAN FRANCISCO, CA 94103

REGISTERED PROFESSIONAL ENGINEER JASON JIECHEN C057898 05/30/26 CIVIL STATE OF CALIFORNIA

	DATE	REVISIONS
1	05/17/24	PC REV1

STRUCTURAL DETAILS

VOLUNTARY STRENGTHENING

1077 FELL STREET
SAN FRANCISCO, CA

Date: 03/01/2024
Scale: AS SHOWN
Drawn By: DM
Job No: 23059
Sheet W2
Of 7 Sheets

DRAWING NAME: G:\Archive\Targets by wf\1167&1167&1055FELL&MASjet\Dropbox\Wsw\Revit Files\Drawings\Projects 2020\1077 Fell Street\Drawings\Structural\1077 Fell Street - PD 02.29.24.dwg
PLOT DATE: 07-24-24 PLOTTED BY: danguisonm

EXHIBIT 4

ATTACHMENT A

DEPARTMENT OF BUILDING INSPECTION
City & County of San Francisco
49 South Van Ness Ave, 5th Floor, San Francisco, California 94103

REQUEST FOR APPROVAL OF LOCAL EQUIVALENCY FOR MODIFICATION OR ALTERNATE MATERIALS, DESIGN OR METHODS OF CONSTRUCTION

DATE SUBMITTED 8/14/2024 [Note: This form shall be recorded as part of the permanent construction records of the property]

If no permit application has been filed, a Preapplication Review Fee is required for review of a request for local equivalency or modification, per SFBC Table 1A-B, Item 5. Additional fees may be required by Fire Department and other City review agencies.

If a permit application has been filed, no additional fees are required for this review.

Permit Application # 2024-0517-2393

Property Address: 1077 FELL St.

Block and Lot: 0825 / 050 Occupancy Group: R3 Type of Construction: V-B No. of Stories:

Describe Use of Building DUPLEX

RECEIVED
AUG 14 2024
DEPT. OF BUILDING INSPECTION
THIS PLAN SET MEETS THE QUALITY STANDARD FOR IMAGING ACCEPTED

Under the authority of the San Francisco Building Code, Sections 104A.2.7 and 104A.2.8; the San Francisco Mechanical Code, Section 302.2; the San Francisco Electrical Code, Section 89.117; and the San Francisco Plumbing Code, Section 301.3; the undersigned requests modifications of the provisions of these codes and/or approval of alternate materials, designs or methods of construction. Two copies of supporting documents, including plans showing the proposed modifications or alternate materials, design or methods of construction, are attached.

Regular Code Requirement (specify Code and Sections)

CBC 1031 - EERO
THE SFFD CAN PERFORM A RESCUE WITH A 27' STRAIGT LADDER FROM THE PUBLIC WAY THROUGH THE FRONT DOOR ~~OR GARAGE OR SIDE CORRIDOR/WALKWAY/TRADESMAN~~, THROUGH THE FAMILY ROOM, THROUGH THE BEDROOM OUT THE ~~SLIDING~~ DOOR TO THE REAR YARD/~~LIGHTWELL/COURTYARD~~; RAISED TO ALL BEDROOM EERO's WITHOUT OBSTRUCTION

Proposed Modification or Alternate

REPLACE (E) WINDOW BY A (N) DOOR FACING THE REAR YARD.

Case-by-Case Basis of Request - Describe the practical difficulties presented in meeting the specific conditions of the code and how the proposed modification or alternate meets the intent of the code. A separate form should be filled for each requested modification or alternate. Attach copies of any Administrative Bulletin, Code Ruling, reference, test reports, expert opinions, etc., which support this request. The Department may require that an approved consultant be hired by the applicant to perform tests or analysis and to submit an evaluation report to the Department for consideration.

LAND LOCK TO ACCESS REAR YARD.

	PROJECT SPONSOR	ARCHITECT/ENGINEER
Requested by:		
Print Name:	ARIEL LORENZALE	
Signature:		[PROFESSIONAL STAMP HERE]
Telephone:	415-505-5288	

Roger Ly, SFFD
AUG 14 2024

PLAN REVIEWER COMMENTS:

RECOMMENDATIONS: Approve Approve with conditions Disapprove

[signed off/dated by:]

Plan Reviewer: Philip Chan, DBI AUG 14 2024

Division Manager: David Jones, DBI Reviewed & Approved for ESCAPE ONLY

for Director of Bldg. Inspection: AUG 14 2024

for Fire Marshal: Dee Lau, SFFD AUG 14 2024 Fire Access Only

CONDITIONS OF APPROVAL or OTHER COMMENTS

RECEIVED
AUG 14 2024
DEPT. OF BUILDING INSPECTION
THIS PLAN MEETS THE QUALITY STANDARD FOR IMAGING
ACCEPTED

Roger Ly, SFFD
AUG 14 2024

GENERAL CONSTRUCTION NOTES

1. ANY ERRORS, OMISSIONS, OR CONFLICTS FOUND IN THE VARIOUS PARTS OF THE CONSTRUCTION DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR CLARIFICATION BEFORE PROCEEDING WITH THE WORK.
2. THE GENERAL CONTRACTOR AND ANY SUBCONTRACTORS SHALL IMMEDIATELY EXAMINE THE SITE AND PORTIONS THEREOF WHICH WILL AFFECT THIS WORK. CONTRACTORS SHALL COMPARE IT WITH THE DRAWINGS AND SATISFY THEMSELVES AS TO CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED. THE GENERAL CONTRACTOR SHALL VERIFY THAT NO CONFLICTS EXIST IN LOCATIONS OF ANY AND ALL MECHANICAL, TELEPHONE, ELECTRICAL, PLUMBING (TO INCLUDE ALL PIPING, DUCT WORK, AND CONDUIT) AND THAT ALL REQUIRED CLEARANCES FOR INSTALLATION AND MAINTENANCE OF ABOVE EQUIPMENT ARE PROVIDED. EXPOSED OR CONCEALED ELEMENTS SHALL BE DETERMINED AND REVIEWED WITH ARCHITECT PRIOR TO CONSTRUCTION PROCEEDING.
3. WRITTEN DIMENSIONS TAKE PRECEDENCE. DO NOT SCALE DRAWINGS. DETAILS SHALL GOVERN OVER PLANS AND ELEVATIONS
4. ALL DIMENSIONS ARE TO FACE OF STUD, UNLESS OTHERWISE NOTED. DIMENSIONS NOTED AS "CLR" OR "CLEAR" ARE TO BE PRECISELY MAINTAINED. DIMENSIONS ARE NOT ADJUSTABLE WITHOUT ARCHITECT'S APPROVAL UNLESS OTHERWISE NOTED AS "+/-"
5. ALL DIMENSIONS NOTED AS "V.I.F." ARE TO BE CHECKED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. IMMEDIATELY REPORT ANY DISCREPANCIES TO THE ARCHITECT.
6. ALL DIMENSIONS, NOTES, AND DETAILS SHOWN ON ONE PORTION OF THE DRAWING SHALL APPLY TYPICALLY TO ALL OPPOSITE HAND AND/OR SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
7. VERIFY ALL EQUIPMENT SIZES BEFORE BEGINNING WORK.
8. FURNISH AND INSTALL ALL MISCELLANEOUS AND STRUCTURAL ITEMS (STEEL, ALUMINUM, ETC. INCLUDING MATERIALS FOR SEPARATION OF DISSIMILAR MATERIALS) FOR EXTERIOR WALL SYSTEMS, WINDOWS, ARCHITECTURAL GLASS, RAILINGS, PARAPET WALLS, ETC. ASSOCIATED WITH THE BUILDING ENVELOPE AND ROOF.
9. COORDINATE LOCATION- AND PROVIDE BLOCKING, BACKING, AND/OR REINFORCEMENTS IN PARTITIONS FOR ALL CABINETS, COUNTERTOPS, AND ANY WALL-MOUNTED ITEMS. REFER TO ELEVATIONS AND DETAILS FOR LOCATIONS OF WALL STANDARDS AND OTHER SUPPORTS.
10. NEW WALL SURFACES SHALL ALIGN WITH EXISTING, ADJACENT, OR ADJOINING SURFACES, U.O.N. JOINTS SHALL BE TAPED AND SANDED SMOOTH WITH NO VISIBLE JOINTS.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATELY FRAMING, BRACING, AND STRUCTURING ALL WALL, BULKHEAD, AND OTHER DRYWALL CONSTRUCTION IN ACCORDANCE WITH APPLICABLE TYPICAL DETAILS CONTAINED IN THE DRAWINGS WHETHER OR NOT SPECIFICALLY REFERENCED IN THE PLANS.
12. PROVIDE BLOCKING/BACKING AND REINFORCEMENT ABOVE FOR SUPPORT OF LIGHT FIXTURES, EQUIPMENT, OR ANY OTHER CEILING-MOUNTED ITEMS.
13. ALL WORK SHALL CONFORM TO THE CONTRACT DOCUMENTS WHICH SHALL INCLUDE THE OUTLINE SPECIFICATIONS, THE DRAWINGS, AND ALL ADDENDA AND MODIFICATIONS ISSUED BY THE ARCHITECT.
14. GRID LINES AND COLUMN CENTER LINES ARE SHOWN FOR REFERENCE ONLY. VERIFY EXACT LOCATION IN FIELD.
15. IN CASE OF CONFLICT OR DISCREPANCIES IN CONTRACT DOCUMENTS, CONTRACTOR SHALL NOTIFY THE ARCHITECT IMMEDIATELY.
16. FEATURES OF CONSTRUCTION NOT FULLY SHOWN SHALL BE OF THE SAME CHARACTER AS SHOWN FOR SIMILAR CONDITIONS.
17. "TYPICAL" OR "TYP." SHALL MEAN THAT THE CONDITION IS REPRESENTATIVE FOR SIMILAR CONDITIONS THROUGHOUT, UNLESS OTHERWISE NOTED. DETAILS ARE USUALLY KEYED AND NOTED "TYP" ONLY ONCE, WHEN THEY FIRST OCCUR.
18. "SIMILAR" OR "SIM." MEANS COMPARABLE CHARACTERISTICS FOR THE CONDITIONS NOTED. VERIFY DIMENSIONS, ORIENTATION, AND CONDITIONS ON PLANS AND ELEVATIONS
19. WHERE REQUIRED BY INSTALLATION OF NEW CONSTRUCTION, REPLACE AND OR PROVIDE NEW BATT INSULATION AT ALL EXTERIOR ASSEMBLIES AS INDICATED BELOW. SEE T.24 FOR ADDITIONAL REQUIREMENTS.
WALLS/CEILING: R-19
20. IF ANY MATERIALS SUSPECTED OF CONTAINING ASBESTOS ARE ENCOUNTERED, DO NOT DISTURB THE MATERIALS. IMMEDIATELY NOTIFY THE ARCHITECT AND THE OWNER.
21. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR JOBSITE SAFETY AT ALL TIMES, INCLUDING BUT NOT LIMITED TO SAFETY OF PERSONS AND PROPERTY, AND MEANS AND METHODS OF CONSTRUCTION.

APPLICABLE CODES

All construction work shall comply with the 2022 California Code of Regulations Title 24, including:

1. 2022 California Building Code.
2. 2022 California Plumbing Code.
3. 2022 California Mechanical Code.
4. 2022 California Electrical Code.
5. 2022 California Building Energy Code.
6. 2022 California Fire Code.
7. 2022 California Green Building Standards.
8. 2022 Residential Building Code.

PROJECT INFORMATION

Owner: Steven Huang
Address: 1077 Fell St, San Francisco, CA 94117
Phone: 425-876-1946

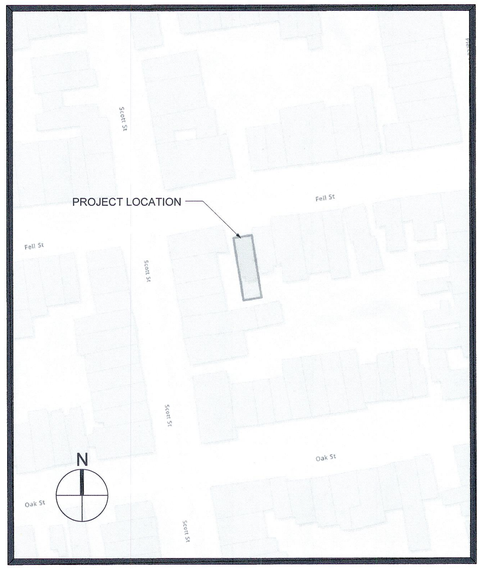
SCOPE OF WORK

REVISION TO PERMIT #2023-0426-6513 / #2023-0609-9711 / #2023-0926-7475

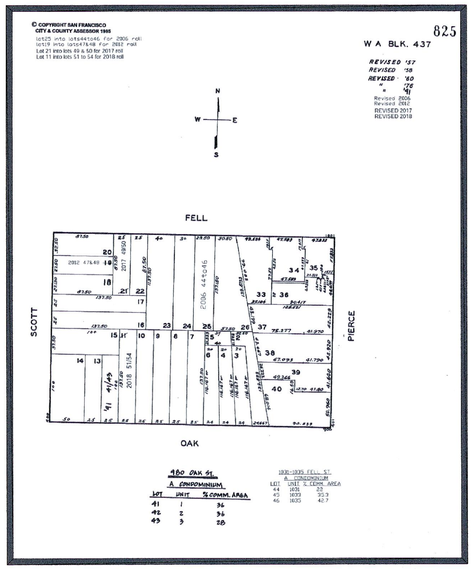
- (E) BATHROOM LAYOUT CHANGE.
- (E) KITCHEN LAYOUT CHANGE AND ADDITION.
- LIGHTING UPGRADE WHOLE UNIT.
- REPLACE 2 WINDOWS. LIKE FOR LIKE. NOT VISIBLE FROM STREET.

1077 FELL ST, SAN FRANCISCO, CA

VICINITY MAP (No scale)

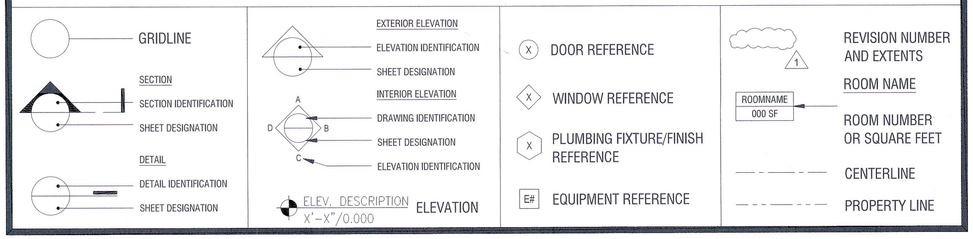


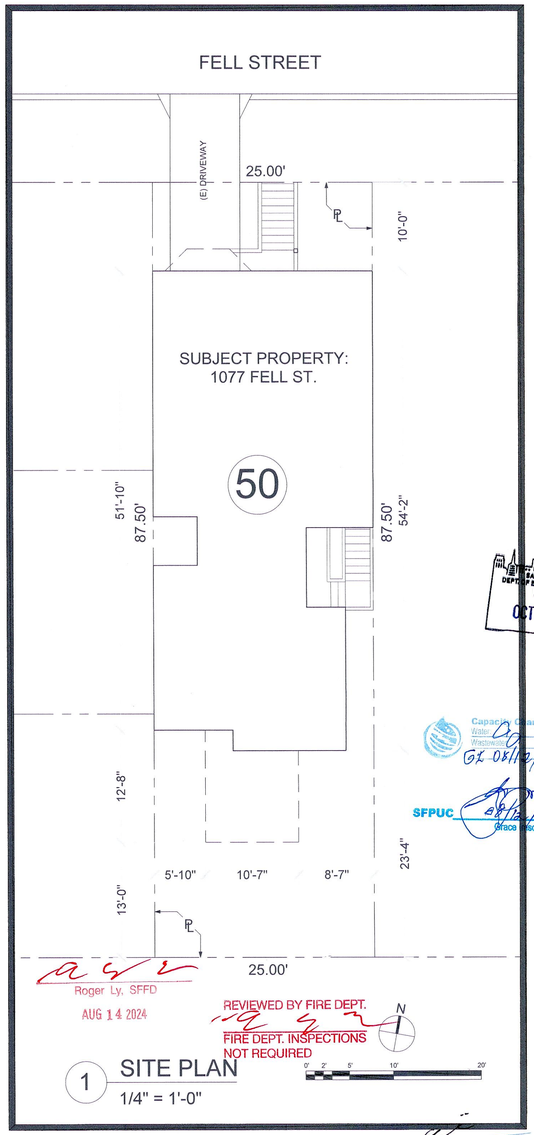
ASSESSOR'S MAP



BUILDING DATA			
Type of Construction	V-B	Ground Floor (E) Conditioned Area	721 sf
Type of Occupancy	R3	Ground Floor (N) Conditioned Area	45 sf
Parcel (Block/Lot)	0825/050	Ground Floor TOTAL Conditioned Area	766 sf
Sprinklers	NO		
Stories	2		
Basements	0		
Units	2		

REFERENCE SYMBOLS





1 SITE PLAN
1/4" = 1'-0"

Roger Ly, SFFD
AUG 14 2024

REVIEWED BY FIRE DEPT.
FIRE DEPT. INSPECTIONS NOT REQUIRED

PLAN REVIEW BY SFFD LIMITED TO:
1. FIRE DEPARTMENT ACCESS
2. FIRE FLOW REQUIREMENTS

Christian Gilmartin, DBI MECH
AUG 12 2024

SHEET INDEX

ARCHITECTURAL

A-0.00	COVER SHEET
A-1.01	FLOOR PLANS - EXISTING AND NEW
A-1.02	ELEVATIONS - EXISTING AND NEW
E-1.01	ELECTRICAL PLANS
EN-1.01	TITLE 24
EN-1.02	TITLE 24
EN-1.03	GS5 FORM

STRUCTURAL

S1.0	GENERAL NOTES
S1.A	TYPICAL WOOD DETAILS
S2	FOUNDATION PLAN
S3	STRUCTURAL DETAILS
S4	STRUCTURAL DETAILS
W1	STRUCTURAL DETAILS
W2	STRUCTURAL DETAILS

Green Halo Tracking Number Required

PROJECT ADDRESS
1077 FELL ST,
SAN FRANCISCO,
CA 94117

ARL|DESIGN
ARIEL R LORENZALE
607 ELMIRA RD, #249,
VACAVILLE, CA 95687
415-505-5288
ariel@arldesigner.com

VELOX
DESIGN + CONSTRUCTION
442 HAIGHT ST.
SAN FRANCISCO, CA 94117
415-416-0177
doug@veloxsf.com

SPECIAL INSPECTION REQUIRED PER SFBC SECTION 1704

Philip Chan, DBI
AUG 12 2024
Philip Chan, DBI
AUG 14 2024

RECEIVED
AUG 12 2024
DEPT. OF BUILDING INSPECTION
THIS PLAN MEETS THE QUALITY STANDARD FOR IMAGING ACCEPTED

SAN FRANCISCO DEPT OF BUILDING INSPECTION ISSUED
OCT 02 2024

Capacity Charges
Water
Wastewater
02 08/12/24
SFPUC 08/12/2024
Grace Hinson

REVISIONS		
	date	by

drawn: A. Lorenzale
checked:
date: 8/2/2024
scale: AS NOTED
project No: 0445
drawing title

COVER SHEET

sheet
A-0.00
1 of 14 sheets.

2024-0517363

CONTRUCTION NOTES

1. CONTRACTOR IS TO VERIFY ALL (E) DIMENSIONS AND CONDITIONS PRIOR TO CONSTRUCTION.
2. CARE SHALL BE TAKEN TO ELIMINATE DAMAGE TO (E) MATERIALS AND SURFACES DURING CONSTRUCTION. ANY DAMAGES TO (E) CONSTRUCTION SHALL BE REPLACED OR REPAIRED AT NO ADDITIONAL COST.
3. CONTRACTOR SHALL REPAIR ANY DAMAGE TO (E) WALLS AND FLOORS CAUSED BY DEMOLITION OF (E) PARTITIONS & CEILING.
4. ALL DIMENSIONS ARE TO FACE OF FINISH OR CENTERLINE, U.N.O.
5. ALL BLOCKING AND FURRING SHALL BE FIRE TREATED AS REQUIRED BY BUILDING CODE.
6. ALL PARTITIONS ABUTTING EXISTING BUILDING CONSTRUCTION SHALL ALIGN FINISH FACE TO FINISH FACE U.N.O.
7. ALL PARTITIONS SHALL BE BRACED PER THE REQUIREMENTS OF CURRENT LOCAL SEISMIC CODE.
8. ALL DOORS TO BE UNDERCUT AS REQUIRED TO CLEAR FINISH FLOOR BY 1/4".
9. ALL WORK TO BE INSTALLED PLUMB, LEVEL, SQUARE, AND TRUE AND IN PROPER ALIGNMENT.
10. CONTRACTOR TO PROTECT FINISHES IN PATH OF TRAVEL TO AREA OF WORK.

PLUMBING NOTES

P1. Gas vent terminations shall meet the requirements of CMC 802.6 & SFMC 802.6.2.

P2. Combustion air shall meet the requirements of CMC Chapter 7.

P3. Environmental air ducts shall terminate 3 feet from the property line and 3 feet from openings into the building per CMC 504.5 and provide with back-draft dampers per CMC Table 504.1.

P4. Clothes dryer exhaust shall be a minimum 4", terminate to the outside of the building, shall be equipped with a back-draft damper and meet the requirements of CMC 504.3. Provide 100 sq. in. minimum make-up air opening for domestic dryers.

P5. 100% of the construction waste generated by this project shall be recycled or salvaged for use.

P6. Plastic Plumbing Pipe shall not be used for domestic water supply or sanitary waste system within the building.

P7. Shower and Tub-Shower combinations shall be pressure balanced or thermostatic mixing type control valves per CPC 418.

P8. Shower shall be 1024 sq. in. Min. Must encompass a 30" circle. Shower door Min. 22" clear opening.

P9. Control valves and Showerheads shall be located on sidewall of shower compartment or otherwise arranged so that the showerhead does not discharge directly at the entrance to the compartment so that the bather can adjust valves prior to stepping into the shower spray.

P10. Minimum 26 gage steel heating supply ducts shall be installed between the garage and new habitable spaces.

P11. Provide insulation on all new domestic hot water piping in new accessory units, rooms down additions and new buildings. The insulation shall be the same thickness of the water piping up to 2" water piping size.

P12. Water Heater shall be raised 18" above the Floor.

P13. Seismically strap the water heater with two straps (one 1/3 down from the top of the tank and one strap 4" above the controls)

P14. R-6.0 duct insulation shall be installed if 40 feet or less of new ducts are installed in unconditioned space.

P15. 1 inch insulation shall be installed on first 5 feet of cold water pipes at the water heater.

P16. All interior spaces intended for human occupancy shall be provided with space heating per CBC 1204.1.

EGRESS WINDOW REQUIREMENTS

A finished sill height above the finished floor of 44" or less.
A minimum opening of 5.7 square feet net clear area.
A minimum net clear opening dimension of 20" in width.
A minimum net clear opening dimension of 24" in height.

WINDOW TYPE ABBREVIATION

DH: DOUBLE HUNG
CS: CASEMENT
FX: FIXED
SL: SLIDDER

WATER CONSERVATION REQUIREMENTS

W1. Water closets shall not exceed 1.28 gallons per effective flush.

W2. Single showerheads shall have a maximum flow rate of not more than 1.8 gallons per minute at 80 psi.

W3. Multiple showerheads serving one shower shall have a combined flow rate of not more than 1.8 gallons per minute at 80 psi.

W4. Bathroom faucets shall have a maximum flow rate of not more than 1.2 gallons per minute at 60 psi.

W5. Maximum water factor equal to or less than 6.0 for clothes washers.

WALLS AND INTERIOR PARTITIONS, WOOD FRAMED

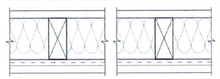
GA FILE NO. WP 3242	GENERIC	1 HOUR FIRE	50 to 54 STC SOUND

GYPSUM WALLBOARD, RESILIENT CHANNELS, MINERAL OR GLASS FIBER INSULATION, WOOD STUDS

Resilient channels 16" o.c. attached at right angles to ONE SIDE of 2 x 4 wood studs 24" o.c. with 1¼" Type S drywall screws. One layer ⅝" type X gypsum wallboard or gypsum veneer base applied at right angles to channels with 1" Type S drywall screws 8" o.c. with vertical joints located midway between studs. 3" mineral or glass fiber insulation in stud space.

OPPOSITE SIDE: One layer ⅝" type X gypsum wallboard or gypsum veneer base applied parallel or at right angles to studs with 6d cement coated nails, 1⅞" long, 0.0915" shank, ¹⁵⁄₆₄" heads, 7" o.c.

Vertical joints staggered 24" on opposite sides. **(LOAD-BEARING)**

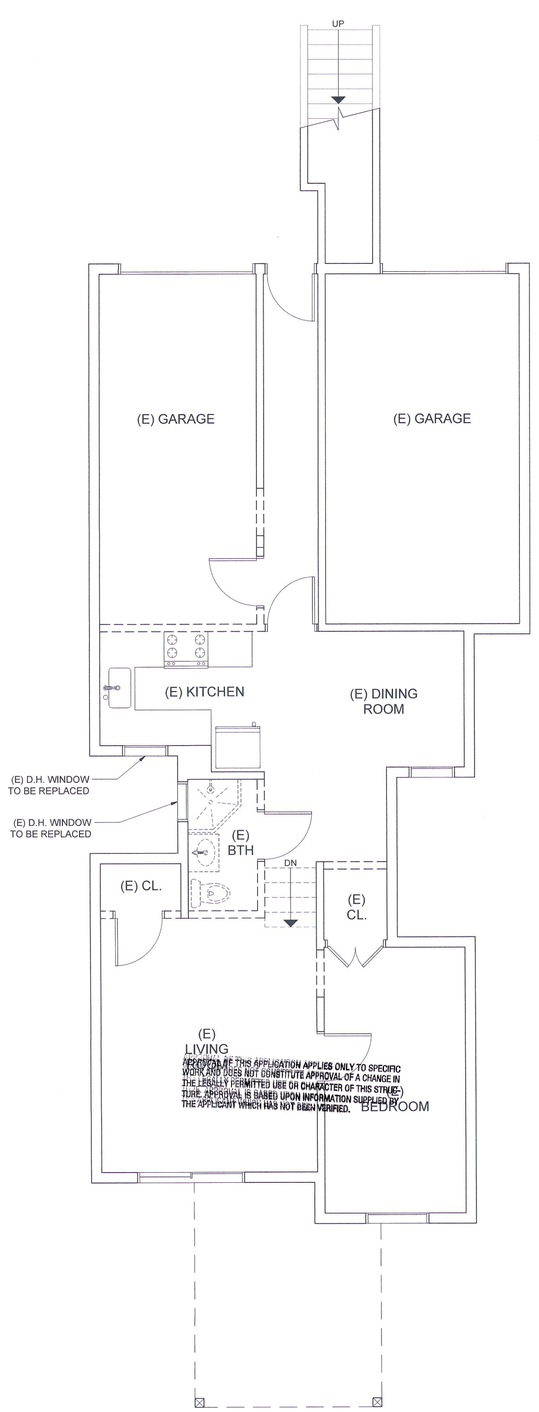


Thickness: 5⅜"
Approx. Weight: 7 psf
Fire Test: Based on UL R14196, 05NK05371, 2-15-05, UL Design U309
Sound Test: NRCC TL 93-098, IRC-IR-761, 3/98

3 FIRE RATED WALL

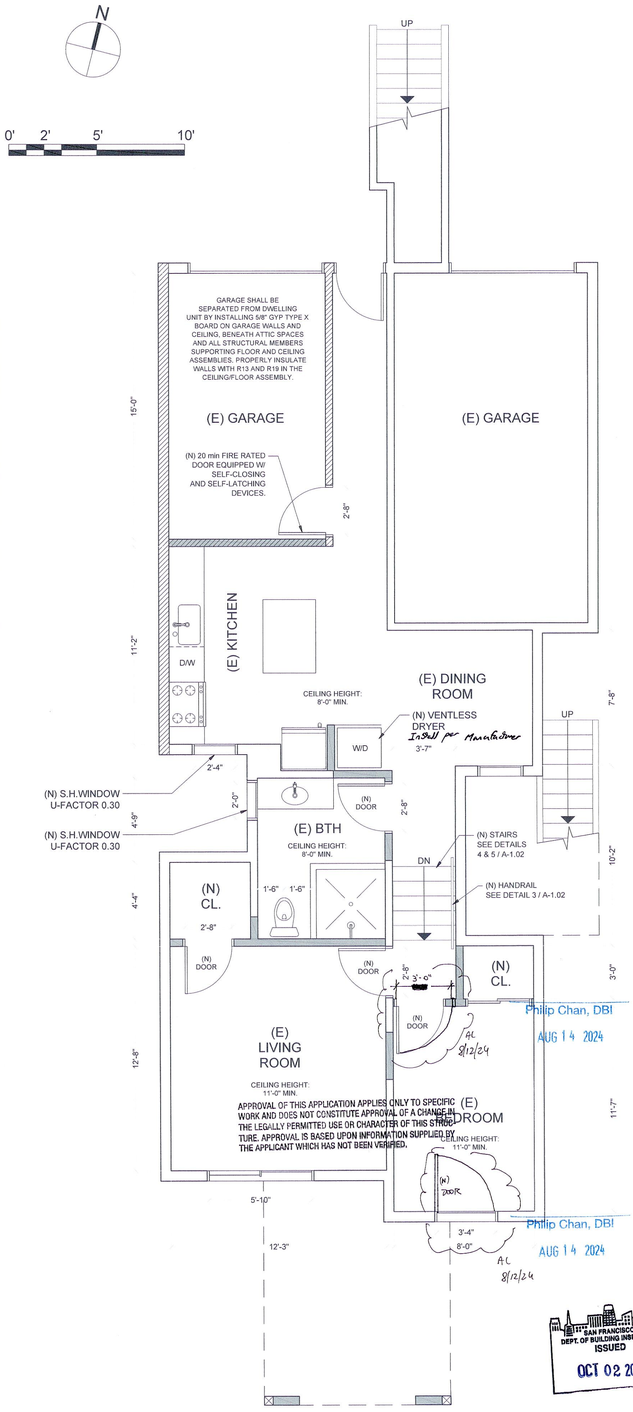
WALL TYPE

- EXISTING WALL
- DEMO WALL
- SOFFIT
- NEW WALL
- 1 HOUR FIRE RATED WALL



1 FIRST FLOOR PLAN - EXISTING
1/4" = 1'-0"

Roger Ly, SFFD
AUG 14 2024



Philip Chan, DBI
AUG 14 2024
8/12/24

2 FIRST FLOOR PLAN - NEW
1/4" = 1'-0"

Christian Gilmartin, DBI Assistant
AUG 12 2024

SAN FRANCISCO DEPT. OF BUILDING INSPECTION ISSUED
OCT 02 2024

PROJECT ADDRESS
1077 FELL ST,
SAN FRANCISCO,
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RECEIVED
AUG 12 2024
DEPT. OF BUILDING INSPECTION
THIS PLAN MEETS THE QUALITY STANDARD FOR IMAGING ACCEPTED

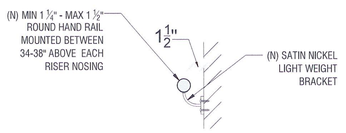
Philip Chan, DBI
AUG 12 2024

REVISIONS		
No	date	by

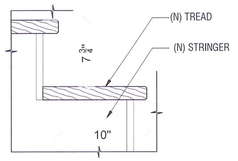
drawn: A. Lorenzale
checked:
date: 8/2/2024
scale: 1/4" = 1'-0"
project No: 0445
drawing title

FLOOR PLANS EXISTING AND NEW

sheet
A-1.01
2 of 14 sheets.



3 TYPICAL HANDRAIL DETAIL



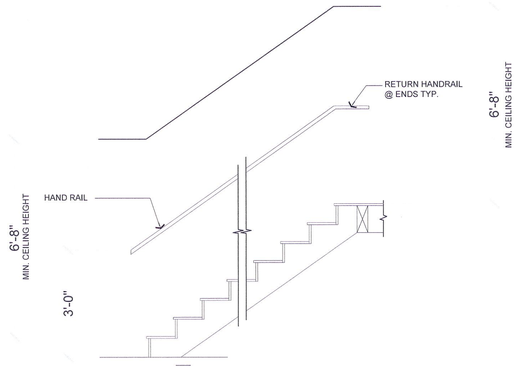
4 TYPICAL RISER/TREAD AT STAIR

NOSING PROJECTION TO BE NOT LESS THAN 3/4" AND NOT MORE THAN 1-1/4" FROM THE SOLID RISER. PER CRC R311.7.5.3.

NOTES:

1. PROVIDE 2x NOMINAL LUMBER IN CONCEALED SPACE BETWEEN STAIR STRINGERS @ TOP & BOT. OF THE RUN & BETWEEN STUDS ALONG AND IN LINE WITH THE RUN OF STAIRS IF THE WALL UNDER STAIRS ARE UNFINISHED.

2. HANDRAIL MUST EXTEND NOT LESS THAN 6 INCHES BEYOND THE TOP AND BOTTOM RISERS. THE END OF HANDRAILS ARE TO BE RETURNED TO THE WALL OR SHALL TERMINATE IN NEWEL POST OR OTHER SIMILAR SAFETY TERMINALS.



5 STAIRS DETAILS



1 SOUTH ELEVATION - EXISTING
1/4" = 1'-0"



2 SOUTH ELEVATION - NEW
1/4" = 1'-0"

RECEIVED
AUG 12 2024
DEPT. OF BUILDING INSPECTION
THIS PLAN MEETS THE QUALITY STANDARD FOR IMAGING ACCEPTED.

Philip Chan, DBI
AUG 12 2024

Philip Chan, DBI
AUG 14 2024

SAN FRANCISCO
DEPT. OF BUILDING INSPECTION
ISSUED
OCT 02 2024

Roger Ly, SFFD
AUG 14 2024

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REVISIONS		
No	date	by

drawn: A. Lorenzale
checked:
date: 8/2/2024
scale: 1/4" = 1'-0"
project No: 0445
drawing title

ELEVATIONS EXISTING AND NEW

sheet
A-1.02

3 of 14 sheets.

ELECTRICAL NOTES

E1. ALL ELECTRICAL CONDUCTOR MATERIAL SHALL BE COPPER.

E2. APPROVED SMOKE ALARMS (HARDWIRED W/BATTERY BACKUP) TO BE LOCATED IN EACH BEDROOM, AND IMMEDIATELY OUTSIDE THE SLEEPING AREAS THROUGHOUT, INCLUDING EACH FLOOR LEVEL. SMOKE ALARMS SHALL BE LISTED AS COMPLYING WITH UL 217 AND BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH NFPA 72 AND THE MANUFACTURER'S INSTRUCTIONS. COMBINATION SMOKE AND CARBON MONOXIDE ALARMS SHALL BE LISTED IN ACCORDANCE WITH UL 217 AND UL 2034. (CRC R314.1) WHERE MORE THAN ONE SMOKE ALARM IS REQUIRED TO BE INSTALLED WITHIN AN INDIVIDUAL DWELLING OR SLEEPING UNIT, THE SMOKE ALARMS SHALL BE INTERCONNECTED IN SUCH A MANNER THAT THE ACTIVATION OF ONE ALARM WILL ACTIVATE ALL OF THE ALARMS IN THE INDIVIDUAL UNIT. PER CRC R317.4

E3. APPROVED CARBON MONOXIDE ALARMS (HARDWIRED W/BATTERY BACKUP) TO BE LOCATED IMMEDIATELY OUTSIDE THE SLEEPING AREAS THROUGHOUT, INCLUDING EACH FLOOR LEVEL. CARBON MONOXIDE ALARMS SHALL BE LISTED IN ACCORDANCE WITH UL 2034 AND BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH NFPA 720 AND THE MANUFACTURER'S INSTRUCTIONS. (CRC R315) WHERE MORE THAN ONE CARBON MONOXIDE ALARM IS REQUIRED TO BE INSTALLED WITHIN A DWELLING UNIT OR WITHIN A SLEEPING UNIT IN GROUP R OCCUPANCIES, THE ALARMS SHALL BE INTERCONNECTED IN A MANNER THAT ACTIVATION OF ONE ALARM SHALL ACTIVATE ALL OF THE ALARMS IN THE INDIVIDUAL UNIT. SEE CRC R315.7 FOR EXCEPTIONS.

E4. APPLIANCES TO BE ACCESSIBLE FOR SERVICE/REPAIR WITHOUT REMOVAL OF ANY PERMANENT CONSTRUCTION.

E5. CONTRACTOR TO VERIFY (E) OUTLETS LOCATIONS MEET REQUIREMENTS.

E6. ELECTRICAL PANELS SHALL NOT BE LOCATED IN CLOSETS USED TO STORE CLOTHES. PER CEC 240.24(D)

E7. THE RATING OF THE SERVICE DISCONNECTING MEANS SHALL BE IN ACCORDANCE WITH CEC 220 ART. 220 WITH A MINIMUM RATING AS FOLLOW: FOR A SINGLE FAMILY DWELLING, THE MINIMUM SERVICE DISCONNECTING MEANS SHALL BE A MINIMUM RATING OF 100 AMP, 3-WIRE. PER CEC 230.79(C).

E8. BATHROOM RECEPTACLE OUTLETS TO BE SUPPLIED BY DEDICATED 20 AMP BRANCH CIRCUIT PER CEC 210.11(C)(3). THIS CIRCUIT CANNOT SUPPLY ANY OTHER RECEPTACLE, LIGHTS, FANS, ETC. (EXCEPTION - WHERE THE CIRCUIT SUPPLIES A SINGLE BATHROOM, OUTLETS FOR OTHER EQUIPMENT WITHIN THE SAME BATHROOM SHALL BE ALLOWED).

E9. ALL 120-VOLT, 15- AND 20- AMP RECEPTACLE OUTLETS SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES PER CEC 406.12.

E10. ALL 15 AND 20 AMPERE RECEPTACLES INSTALLED IN THE BATHROOMS, GARAGE AND ACCESSORY BUILDINGS, CRAWL SPACE, UNFINISHED BASEMENTS, SINKS-OUTLETS INSTALLED WITHIN 6 FEET, BATHTUBS OR SHOWER STALL, AND LAUNDRY AREAS, AND IN EXTERIOR LOCATIONS ON THE BUILDING, SHALL BE PROTECTED BY A GROUND FAULT CIRCUIT INTERRUPTER (GFCI) PER CEC 210.8.

E11. ALL 15 AND 20 AMPERES BRANCH CIRCUITS SUPPLYING ALL OUTLETS OR DEVICES IN NEW HABITABLE AND NON-HABITABLE ROOMS SHALL BE PROTECTED BY AN ARC-FAULT CIRCUIT INTERRUPTER (AFCI) PER CEC 210.12 (A). KITCHEN COUNTERTOP RECEPTACLES NEED TO BE AFCI AND GFCI PROTECTED

E12. ALL LIGHTING (INDOOR AND OUTDOOR) SHALL BE HIGH EFFICACY PER CEnC 150.0 (k) 1A.

E13. OUTDOOR LIGHTING SHALL COMPLY WITH CEnC 150.0 (k) 3.

E14. DEDICATED 20-AMP GFCI PROTECTED BRANCH CIRCUIT SHALL BE PROVIDED FOR THE LAUNDRY AREA PER CEC 210.11 (C) (2).

E15. GROUND-FAULT CIRCUIT INTERRUPTION SHALL BE PROVIDED ON NEWLY INSTALLED RECEPTACLE OUTLETS IF REQUIRED BY THE CALIFORNIA ELECTRICAL CODE, TITLE 24 PART 5. (PMC 20.10.140)

E16. GFCI PROTECTION SHALL BE PROVIDED AT ALL RECEPTACLES OUTLETS INSTALLED IN THE KITCHEN PER CEC 210.8 (A)(6).

E17. SMOKE ALARMS INSTALLED WITHIN 20 FT. OF A KITCHEN, BATHROOM, OR ROOM CONTAINING A FIREPLACE OR WOOD BURNING STOVE SHALL BE OF THE PHOTOELECTRIC TYPE. FOR PLACEMENT OF SMOKE ALARMS AND CARBON MONOXIDE ALARMS IN ROOMS WITH VARIATIONS IN CEILING HEIGHT (SLOPED, PITCHED ETC.), REFER TO THE MANUFACTURERS GUIDELINES FOR PROPER PLACEMENT. IF THE SMOKE ALARMS CURRENTLY INSTALLED IN THE RESIDENCE ARE MORE THAN 10 YEARS OLD (10 YEARS FROM THE DATE OF INSTALLATION) THEY ARE REQUIRED TO BE REPLACED WITH NEW SMOKE ALARMS.

E18. SMOKE ALARMS INSTALLED WITHIN 20 FT. OF A KITCHEN, BATHROOM, OR ROOM CONTAINING A FIREPLACE OR WOOD BURNING STOVE SHALL BE OF THE PHOTOELECTRIC TYPE. FOR PLACEMENT OF SMOKE ALARMS AND CARBON MONOXIDE ALARMS IN ROOMS WITH VARIATIONS IN CEILING HEIGHT (SLOPED, PITCHED ETC.), REFER TO THE MANUFACTURERS GUIDELINES FOR PROPER PLACEMENT. IF THE SMOKE ALARMS CURRENTLY INSTALLED IN THE RESIDENCE ARE MORE THAN 10 YEARS OLD (10 YEARS FROM THE DATE OF INSTALLATION) THEY ARE REQUIRED TO BE REPLACED WITH NEW SMOKE ALARMS.

ENERGY NOTES

EN1. ALL NON-FLUORESCENT LIGHTING AT NEW BATHROOMS TO BE CONTROLLED BY MANUAL-ON OCCUPANT SENSOR THAT DOES NOT TURN ON AUTOMATICALLY OR HAVE AN ALWAYS ON OPTION.

EN2. ALL EXTERIOR LIGHTING FIXTURES SHALL BE HIGH EFFICACY, AND CONTROLLED BY AN AUTO ON/OFF MOTION SENSOR AND ONE OF THE FOLLOWING CONTROLS: A PHOTO-CONTROL, AN ASTRONOMICAL CLOCK OR AN ENERGY MANAGEMENT CONTROL SYSTEM. PER CNC 150 (K) 13.

EN3. ALL GARAGE LIGHTING MUST BE HIGH EFFICACY LIGHTING AND MANUAL-ON OCCUPANCY SENSOR.

EN4. ALL NEW LIGHTING INSTALLED IN BATHROOMS, LAUNDRY ROOMS, CLOSETS GREATER THAN 70 sq. ft., AND UTILITY ROOMS SHALL BE HIGH EFFICACY AND MANUAL-ON OCCUPANCY SENSOR PER CNC 150 (K) 10.

EN5. ALL NEW LIGHTING INSTALLED IN HALLWAYS LIVING ROOMS, BEDROOMS, OFFICES, STUDIES, PLAYROOMS AND DENS SHALL BE HIGH EFFICACY OR MANUAL-ON OCCUPANCY SENSOR OR DIMMERS PER CNC 150 (K) 11.

EN6. BATHROOM FANS SHALL BE SWITCHED SEPARATELY FROM ANY LIGHTING SYSTEM.

EN7. ALL HARDWIRED LIGHTING MUST BE HIGH EFFICACY, OR CONTROLLED BY MANUAL-ON OCCUPANT SENSOR.

EN8. ALL OUTDOOR LIGHTING ATTACHED TO BUILDING MUST BE HIGH EFFICACY, AND CONTROLLED BY A MOTION SENSOR AND A PHOTOCONTROL.

EN9. RECESSED LUMINARIES IN INSULATED CEILINGS MUST BE APPROVED FOR ZERO-CLEARANCE INSULATION COVER (IC) AND MUST BE CERTIFIED AIRTIGHT.

EN10. ANNULAR SPACES AROUND PIPES, ELECTRICAL CABLES, CONDUITS OR OTHER OPENINGS IN PLATES AT EXTERIOR WALL SHALL BE PROTECTED AGAINST OF RODENTS BY CLOSING OPENINGS W/ CEMENT MORTAR CONCRETE MASONRY OR SIMILAR METHODS ACCEPTABLE TO THE ENFORCING AGENCY.

EN11. PROVIDE AN OPERATIONAL MAINTENANCE MANUAL OF ALL NEW EQUIPMENT INSTALLED TO THE BUILDING OCCUPANT OR THE OWNER.

KEY NOTE

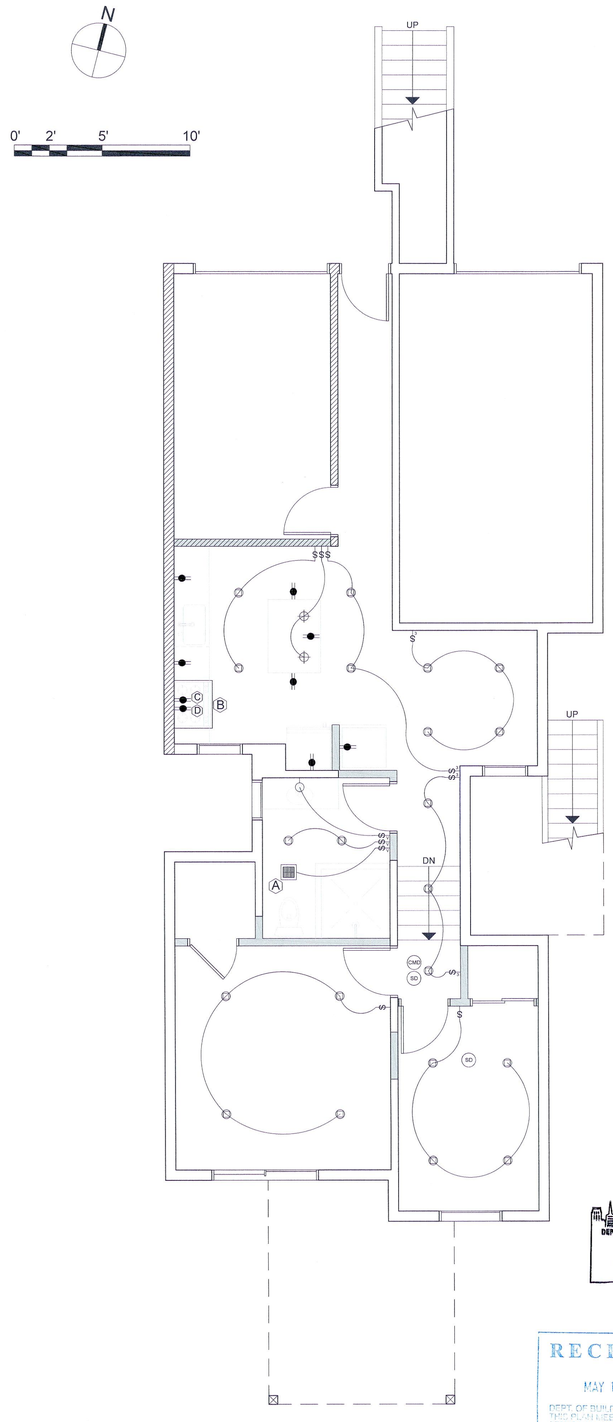
- Ceiling Mounted LED Light
- Pendant LED Light
- 4" Recessed LED Lights
- Wall Spot LED Light
- Outdoor Wall Spot LED Light
- Scone LED Lights
- LED Under Cabinet Tape Light
- $ Single Pole Switch
- $3 Three-Way Switch
- $V Vacancy Sensor Switch
- D Dimmer Switch
- I Intercom Station
- L Launch Port Wall Station
- T Thermostat
- 110 Volt Electrical Outlet
- 220 220 Volt Electrical Outlet
- 110 Volt G.F.C.I. Electrical Outlet
- WP 110 Volt G.F.C.I. w/ Waterproof Box Electrical Outlet
- SD Smoke Detector Alarm
- CMD Carbon Monoxide Detector Alarm
- Main Panel
- Sub Panel

(A) (N) ENERGY STAR COMPLIANT EXHAUST FAN MIN. 50 CFM W/ MAX. 1 SONE SOUND RATING PER ASHRAE 62.2. W/ HUMIDISTAT CAPABLE OF ADJUSTMENT BETWEEN A RELATIVE HUMIDITY RANGE OF 50% AND 80% - VENT TO ROOF. EXHAUST FAN SHALL BE SWITCHED SEPARATELY FROM ANY LIGHTING SYSTEM.

(B) (N) RANGE HOOD - MIN. 100 CFM W/ MAX. 1 SONE SOUND RATING PER ASHRAE 62.2. VENT TO ROOF

(C) (N) G.F.C.I. OUTLET FOR RANGE HOOD

(D) (N) G.F.C.I. OUTLET FOR RANGE



1 FIRST FLOOR PLAN - NEW
1/4" = 1'-0"

Philip Chan, DBI
AUG 12 2024

RECEIVED
MAY 17 2024
DEPT. OF BUILDING INSPECTION
THIS PLAN MEETS THE QUALITY STANDARD FOR DIGITIZING ACCEPTED

SAN FRANCISCO DEPT. OF BUILDING INSPECTION ISSUED OCT 02 2024

Christian Gilmartin, DBI
AUG 12 2024

PROJECT ADDRESS
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RECEIVED
AUG 12 2024
DEPT. OF BUILDING INSPECTION
THIS PLAN MEETS THE QUALITY STANDARD FOR IMAGING ACCEPTED

REVISIONS

No	date	by

drawn: A. Lorenzale
checked:
date: 5/17/2024
scale: 1/4" = 1'-0"
project No: 0445
drawing title

ELECTRICAL PLANS

sheet

E-1.01

3 of 13 sheets.

CALIFORNIA ENERGY COMMISSION

PRESCRIPTIVE ADDITIONS 1000 FT2 OR LESS

CF1R-ADD-01-E

(Page 1 of 5)

CERTIFICATE OF COMPLIANCE

Project Name:	1077 Fell	**Enforcement Agency:**	City of San Francisco
Dwelling Address:	1077 Fell Street	**Permit Number:**	
City and Zip Code	San Francisco, 94117	**Permit Application Date:**	

A. General Information

01	Project Name	1077 Fell	02	Date Prepared	2024-05-17
03	Project Location	1077 Fell Street	04	Building Front Orientation (deg)	340
05	CA City	San Francisco	06	Number of Dwelling Units with Additions	1
07	Zip Code	94117	08	Fuel Type	Electricity
09	Climate Zone	3	10	Total Conditioned Floor Area (ft^2) (Addition)	45
11	Building Type	Single family	12	Slab Area (ft^2)	45
13	Project Scope	Addition 300 ft^2 Kitchen Remodel	14	Fenestration Exceptions	NA (do not allow other entries)

B. Building Insulation Details - Framed Walls/ Framed Floors (Section 150.2(a))

01	02	03	04	05	06		07	08	09	10	11
					Proposed					Required	
Tag/ID	Assembly Type	Frame Type	Frame Depth (inches)	Frame Spacing (inches)	Cavity R-value	Continuous Insulation R-value	U-Factor	Appendix JA4 Reference		U-Factor from Table 150.1-A	Comments
								Table	Cell		
Wall	Wall	Wood	2x4	@ 16 in. O. C.	15	10	0.049	4.3.1	4G	0.049	

CALIFORNIA ENERGY COMMISSION

PRESCRIPTIVE ADDITIONS 1000 FT2 OR LESS

CF1R-ADD-01-E

(Page 2 of 5)

B. Building Insulation Details - Framed Walls/ Framed Floors (Section 150.2(a))

01	02	03	04	05	06		07	08	09	10	11
					Proposed					Required	
Tag/ID	Assembly Type	Frame Type	Frame Depth (inches)	Frame Spacing (inches)	Cavity R-value	Continuous Insulation R-value	U-Factor	Appendix JA4 Reference		U-Factor from Table 150.1-A	Comments
								Table	Cell		

Note:
- Where insulation is installed above the roofing membrane, or above the layer used to seal the roof from water penetration, the insulation shall have a maximum water absorption of 0.3 percent by volume when tested according to American Society for Testing and Materials (ASTM) Standard C272.
- Extensions of existing wood-framed walls may retain the dimensions of the existing walls and shall install cavity insulation of R-15 in a 2x4 framing and R-21 in a 2x6 framing.

C. Building Insulation Details - Non-framed (Section 150.1(c)1)

This section does not apply to this project.

D. Building Insulation Details - Mass Walls (Section 150.1(c)1Bii)

This section does not apply to this project.

E. Slab On Grade/Concrete Raised Floor Insulation (Table 150.1-A)

This section does not apply to this project.

F. Radiant Barrier (Section 150.1(c).2)

01	02
Radiant Barrier installed below the roof deck and on all gable end walls	Comments
n/a	Existing roof

CALIFORNIA ENERGY COMMISSION

PRESCRIPTIVE ADDITIONS 1000 FT2 OR LESS

CF1R-ADD-01-E

(Page 3 of 5)

F. Radiant Barrier (Section 150.1(c).2)

01	02
Radiant Barrier installed below the roof deck and on all gable end walls	Comments

A radiant barrier is required (for Climate Zones 2-15)
- Radiant barriers shall meet specific eligibility and installation criteria to receive energy credit for compliance with the Building Energy Efficiency Standards for low-rise residential buildings. Refer to Reference Appendices, Residential Appendix RA4.2.1.
- The emittance of the radiant barrier shall be less than or equal to 0.05 as tested in accordance with American Society for Testing and Materials (ASTM) C1371 or ASTM E408.
- For Prescriptive Compliance the attic shall be ventilated to provide a minimum free ventilation area of not less than 1 square foot (ft^2 of vent area for each 300 square feet ft^2 of attic floor area with a minimum of 40 percent to no more than 50 percent upper vents. Ridge vents or gable end vents are recommended to achieve the best performance. The material should be cut to allow for full airflow to the venting.

G. Roofing Products (Cool Roof) (Section 150.1(c).11)

01	02	03	04	05	06	07	08	09	10	11	12	13
						Proposed				Required		
Tag/ID	Exception	Roof Pitch	Method of Compliance	Product Type	CRRC Product ID Number	Initial Solar Reflectance	Aged Solar Reflectance	Thermal Emittance	SRI (optional)	Aged Solar Reflectance	Thermal Emittance	SRI (optional)

Notes:
- Exception 1 Any roof area covered by building integrated photovoltaic (PV) panels and solar thermal panels are exempt from the above Cool Roof requirements
- Exception 2: Roof construction with a weight of 25 pounds per square foot (lb/ft^2) are also exempt.
- Liquid field applied coatings must comply with installation criteria from Section 110.8(i)4

H. Fenestration/Glazing Allowed Areas and Efficiencies (Section 150.2(a)1)

This section does not apply to this project.

I. Fenestration Proposed Areas and Efficiencies

This section does not apply to this project.

J. Opaque Swinging Doors to Exterior (Section 150.1(c)5)

This section does not apply to this project.

CALIFORNIA ENERGY COMMISSION

PRESCRIPTIVE ADDITIONS 1000 FT2 OR LESS

CF1R-ADD-01-E

(Page 4 of 5)

K. Space Conditioning (SC) Systems - Heating/ Cooling (Section 150.2(b) or (Section 150.1(c)7)

This section does not apply to this project.

L. Water Heating Systems (Section 150.2(a)1D)

This section does not apply to this project.

M. Indoor Air Quality (IAQ) Fan Information

This section does not apply to this project.

CALIFORNIA ENERGY COMMISSION

PRESCRIPTIVE ADDITIONS 1000 FT2 OR LESS

CF1R-ADD-01-E

(Page 5 of 5)

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Ruben Lorenzale	Documentation Author Signature: Ruben Lorenzale
Company: ARL Design	Signature Date: 2024-05-17 08:19:54
Address: 607 Elmira rd, #249	CEA/ HERS Certification Identification (if applicable): N/A
City/State/Zip: Vacaville CA 95687-000	Phone: 415-505-5288

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:
1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I understand that a registered copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections, and I will take the necessary steps to accomplish this requirement.
6. I understand that a registered copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy, and I will take the necessary steps to accomplish these requirements.

Responsible Designer Name: Ruben Lorenzale	Responsible Designer Signature: Ruben Lorenzale
Company : ARL Design	Date Signed: 2024-05-17 08:19:54
Address: 607 Elmira rd, #249	License: N/A
City/State/Zip: Vacaville CA 95687-000	Phone: 415-505-5288

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REVISIONS

No	date	by

SAN FRANCISCO DEPT. OF BUILDING INSPECTION ISSUED OCT 02 2024

RECEIVED MAY 17 2024 DEPT OF BUILDING INSPECTION PLANS WILL BE TAKEN IN PARTY AT THE COUNTER

Christian Gilmartin, DBI MECH AUG 12 2024

drawn: A. Lorenzale
checked:
date: 5/17/2024
scale: N/A
project No: 0445
drawing title

TITLE 24

sheet

EN-1.01

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2022 Single-Family Residential Mandatory Requirements Summary

NOTE: Single-family residential buildings subject to the Energy Codes must comply with all applicable mandatory measures, regardless of the compliance approach used. Review the respective section for more information.
(04/2022)

Building Envelope:

§ 110.6(a)1:	**Air Leakage.** Manufactured fenestration, exterior doors, and exterior pet doors must limit air leakage to 0.3 CFM per square foot or less when tested per NFRC-400, ASTM E283, or AAMA/WDMA/CSA 101/I.S.2/A440-2011. *
§ 110.6(a)5:	**Labeling.** Fenestration products and exterior doors must have a label meeting the requirements of § 10-111(a).
§ 110.6(b):	**Field fabricated exterior doors and fenestration** products must use U-factors and solar heat gain coefficient (SHGC) values from Tables 110.6-A, 110.6-B, or JA4.5 for exterior doors. They must be caulked and/or weather-stripped.
§ 110.7:	**Air Leakage.** All joints, penetrations, and other openings in the building envelope that are potential sources of air leakage must be caulked, gasketed, or weather stripped.
§ 110.8(a):	**Insulation Certification by Manufacturers.** Insulation must be certified by the Department of Consumer Affairs, Bureau of Household Goods and Services (BHGS).
§ 110.8(g):	**Insulation Requirements for Heated Slab Floors.** Heated slab floors must be insulated per the requirements of § 110.8(g).
§ 110.8(i):	**Roofing Products Solar Reflectance and Thermal Emittance.** The thermal emittance and aged solar reflectance values of the roofing material must meet the requirements of § 110.8(i) and be labeled per §10-113 when the installation of a cool roof is specified on the CF1R.
§ 110.8(j):	**Radiant Barrier.** When required, radiant barriers must have an emittance of 0.05 or less and be certified to the Department of Consumer Affairs.
§ 150.0(a):	**Roof Deck, Ceiling and Rafter Roof Insulation.** Roof decks in newly constructed attics in climate zones 4 and 8-16 area-weighted average U-factor not exceeding U-0.184. Ceiling and rafter roofs minimum R-22 insulation in wood-frame ceiling; or area-weighted average U-factor must not exceed 0.043. Rafter roof alterations minimum R-19 or area-weighted average U-factor of 0.054 or less. Attic access doors must have permanently attached insulation using adhesive or mechanical fasteners. The attic access must be gasketed to prevent air leakage. Insulation must be installed in direct contact with a roof or ceiling which is sealed to limit infiltration and exfiltration, as specified in § 110.7, including but not limited to placing insulation either above or below the roof deck or on top of a drywall ceiling. *
§ 150.0(b):	**Loose-fill Insulation.** Loose fill insulation must meet the manufacturer's required density for the labeled R-value.
§ 150.0(c):	**Wall Insulation.** Minimum R-13 insulation in 2x4 inch wood framing wall or have a U-factor of 0.102 or less, or R-20 in 2x6 inch wood framing or have a U-factor of 0.071 or less. Opaque non-framed assemblies must have an overall assembly U-factor not exceeding 0.102. Masonry walls must meet Tables 150.1-A or B. *
§ 150.0(d):	**Raised-floor Insulation.** Minimum R-19 insulation in raised wood framed floor or 0.037 maximum U-factor. *
§ 150.0(f):	**Slab Edge Insulation.** Slab edge insulation must meet all of the following: have a water absorption rate, for the insulation material alone without facings, no greater than 0.3 percent; have a water vapor permeance no greater than 2.0 perm per inch; be protected from physical damage and UV light deterioration; and, when installed as part of a heated slab floor, meet the requirements of § 110.8(g).
§ 150.0(g)1:	**Vapor Retarder.** In climate zones 1 through 16, the earth floor of unvented crawl space must be covered with a Class I or Class II vapor retarder. This requirement also applies to controlled ventilation crawl space for buildings complying with the exception to §150.0(d).
§ 150.0(g)2:	**Vapor Retarder.** In climate zones 14 and 16, a Class I or Class II vapor retarder must be installed on the conditioned space side of all insulation in all exterior walls, vented attics, and unvented attics with air-permeable insulation.
§ 150.0(q):	**Fenestration Products.** Fenestration, including skylights, separating conditioned space from unconditioned space or outdoors must have a maximum U-factor of 0.45; or area-weighted average U-factor of all fenestration must not exceed 0.45. *

Fireplaces, Decorative Gas Appliances, and Gas Log:

§ 110.5(e)	**Pilot Light.** Continuously burning pilot lights are not allowed for indoor and outdoor fireplaces.
§ 150.0(e)1:	**Closable Doors.** Masonry or factory-built fireplaces must have a closable metal or glass door covering the entire opening of the firebox.
§ 150.0(e)2:	**Combustion Intake.** Masonry or factory-built fireplaces must have a combustion outside air intake, which is at least six square inches in area and is equipped with a readily accessible, operable, and tight-fitting damper or combustion-air control device.
§ 150.0(e)3:	**Flue Damper.** Masonry or factory-built fireplaces must have a flue damper with a readily accessible control. *

Space Conditioning, Water Heating, and Plumbing System:

§ 110.0-§ 110.3:	**Certification.** Heating, ventilation, and air conditioning (HVAC) equipment, water heaters, showerheads, faucets, and all other regulated appliances must be certified by the manufacturer to the California Energy Commission. *
§ 110.2(a):	**HVAC Efficiency.** Equipment must meet the applicable efficiency requirements in Table 110.2-A through Table 110.2-N. *
§ 110.2(b):	**Controls for Heat Pumps with Supplementary Electric Resistance Heaters.** Heat pumps with supplementary electric resistance heaters must have controls that prevent supplementary heater operation when the heating load can be met by the heat pump alone; and in which the cut-on temperature for compression heating is higher than the cut-on temperature for supplementary heating, and the cut-off temperature for compression heating is higher than the cut-off temperature for supplementary heating.
§ 110.2(c):	**Thermostats.** All heating or cooling systems not controlled by a central energy management control system (EMCS) must have a setback thermostat. *
§ 110.3(c)3:	**Insulation.** Unfired service water heater storage tanks and solar water-heating backup tanks must have adequate insulation, or tank surface heat loss rating.
§ 110.3(c)6:	**Isolation Valves.** Instantaneous water heaters with an input rating greater than 6.8 kBtu per hour (2 kW) must have isolation valves with hose bibbs or other fittings on both cold and hot water lines to allow for flushing the water heater when the valves are closed.

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§ 110.5:	**Pilot Lights.** Continuously burning pilot lights are prohibited for natural gas: fan-type central furnaces; household cooking appliances (except appliances without an electrical supply voltage connection with pilot lights that consume less than 150 Btu per hour); and pool and spa heaters. *
§ 150.0(n)1:	**Building Cooling and Heating Loads.** Heating and/or cooling loads are calculated in accordance with the ASHRAE Handbook, Equipment Volume, Applications Volume, and Fundamentals Volume; the SMACNA Residential Comfort System Installation Standards Manual; or the ACCA Manual J using design conditions specified in § 150.0(h)2.
§ 150.0(n)3A:	**Clearances.** Air conditioner and heat pump outdoor condensing units must have a clearance of at least five feet from the outlet of any dryer.
§ 150.0(n)3B:	**Liquid Line Drier.** Air conditioners and heat pump systems must be equipped with liquid line filter driers if required, as specified by the manufacturer's instructions.
§ 150.0(j)1:	**Water Piping, Solar Water-heating System Piping, and Space Conditioning System Line Insulation.** All domestic hot water piping must be insulated as specified in § 609.11 of the California Plumbing Code. *
§ 150.0(j)2:	**Insulation Protection.** Piping insulation must be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind as required by §120.3(b). Insulation exposed to weather must be water retardant and protected from UV light (no adhesive tapes). Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space must include, or be protected by, a Class I or Class II vapor retarder. Pipe insulation buried below grade must be installed in a waterproof and non-crushable casing or sleeve.
§ 150.0(n)1:	**Gas or Propane Water Heating Systems.** Systems using gas or propane water heaters to serve individual dwelling units must designate a space at least 2.5' x 2.5' x 7' suitable for the future installation of a heat pump water heater, and meet electrical and plumbing requirements, based on the distance between this designated space and the water heater location; and a condensate drain no more than 2" higher than the base of the water heater
§ 150.0(n)3:	**Solar Water-heating Systems.** Solar water-heating systems and collectors must be certified and rated by the Solar Rating and Certification Corporation (SRCC), the International Association of Plumbing and Mechanical Officials, Research and Testing (IAPMO R&T), or by a listing agency that is approved by the executive director.

Ducts and Fans:

§ 110.8(d)3:	**Ducts.** Insulation installed on an existing space-conditioning duct must comply with § 604.0 of the California Mechanical Code (CMC). If a contractor installs the insulation, the contractor must certify to the customer, in writing, that the insulation meets this requirement.
§ 150.0(m)1:	**CMC Compliance.** All air-distribution system ducts and plenums must meet CMC §§ 601.0-605.0 and ANSI/SMACNA-006-2006 HVAC Duct Construction Standards Metal and Flexible 3rd Edition. Portions of supply-air and return-air ducts and plenums must be insulated to R-6.0 or higher; ducts located entirely in conditioned space as confirmed through field verification and diagnostic testing (RA3.1.4.3.8) do not require insulation. Connections of metal ducts and inner core of flexible ducts must be mechanically fastened. Openings must be sealed with mastic, tape, or other duct-closure system that meets the applicable UL requirements, or aerosol sealant that meets UL 723. The combination of mastic and either mesh or tape must be used to seal openings greater than ¼", If mastic or tape is used. Building cavities, air handler support platforms, and plenums designed or constructed with materials other than sealed sheet metal, duct board or flexible duct must not be used to convey conditioned air. Building cavities and support platforms may contain ducts; ducts installed in these spaces must not be compressed. *
§ 150.0(m)2:	**Factory-Fabricated Duct Systems.** Factory-fabricated duct systems must comply with applicable requirements for duct construction, connections, and closures; joints and seams of duct systems and their components must not be sealed with cloth back rubber adhesive duct tapes unless such tape is used in combination with mastic and draw bands.
§ 150.0(m)3:	**Field-Fabricated Duct Systems.** Field-fabricated duct systems must comply with applicable requirements for: pressure-sensitive tapes, mastics, sealants, and other requirements specified for duct construction.
§ 150.0(m)7:	**Backdraft Damper.** Fan systems that exchange air between the conditioned space and outdoors must have backdraft or automatic dampers.
§ 150.0(m)8:	**Gravity Ventilation Dampers.** Gravity ventilating systems serving conditioned space must have either automatic or readily accessible, manually operated dampers in all openings to the outside, except combustion inlet and outlet air openings and elevator shaft vents.
§ 150.0(m)9:	**Protection of Insulation.** Insulation must be protected from damage due tosunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather must be suitable for outdoor service (e.g., protected by aluminum, sheet metal, painted canvas, or plastic cover). Cellular foam insulation must be protected as above or painted with a water retardant and solar radiation-resistant coating.
§ 150.0(m)10:	**Porous Inner Core Flex Duct.** Porous inner cores of flex ducts must have a non-porous layer or air barrier between the inner core and outer vapor barrier.
§ 150.0(m)11:	**Duct System Sealing and Leakage Test.** When space conditioning systems use forced air duct systems to supply conditioned air to an occupiable space, the ducts must be sealed and duct leakage tested, as confirmed through field verification and diagnostic testing, in accordance with Reference Residential Appendix RA3.1.
§ 150.0(m)12:	**Air Filtration.** Space conditioning systems with ducts exceeding 10 feet and the supply side of ventilation systems must have MERV 13 or equivalent filters. Filters for space conditioning systems must have a two inch depth or can be one inch if sized per Equation 150.0-A. Clean-filter pressure drop and labeling must meet the requirements in §150.0(m)12. Filters must be accessible for regular service. Filter racks or grilles must use gaskets, sealing, or other means to close gaps around the inserted filters to and prevents air from bypassing the filter. *

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§ 150.0(m)13:	**Space Conditioning System Airflow Rate and Fan Efficacy.** Space conditioning systems that use ducts to supply cooling must have a hole for the placement of a static pressure probe, or a permanently installed static pressure probe in the supply plenum. Airflow must be ≥ 350 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficacy ≤ 0.45 watts per CFM for gas furnace air handlers and ≤ 0.58 watts per CFM for all others. Small duct high velocity systems must provide an airflow ≥ 250 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficacy ≤ 0.62 watts per CFM. Field verification testing is required in accordance with Reference Residential Appendix RA3.3. *

Ventilation and Indoor Air Quality:

§ 150.0(o)1:	**Requirements for Ventilation and Indoor Air Quality.** All dwelling units must meet the requirements of ASHRAE Standard 62.2, Ventilation and Acceptable Indoor Air Quality in Residential Buildings subject to the amendments specified in § 150.0(o)1. *
§ 150.0(o)1B:	**Central Fan Integrated (CFI) Ventilation Systems.** Continuous operation of CFI air handlers is not allowed to provide the whole-dwelling unit ventilation airflow required per §150.0(o)1C. A motorized damper(s) must be installed on the ventilation duct(s) that prevents all airflow through the space conditioning duct system when the damper(s) is closed andcontrolled per §150.0(o)1Biii&iv. CFI ventilation systems must have controls that track outdoor air ventilation run time, and either open or close the motorized damper(s) for compliance with §150.0(o)1C.
§ 150.0(o)1C:	**Whole-Dwelling Unit Mechanical Ventilation for Single-Family Detached and townhouses .** Single-family detached dwelling units, and attached dwelling units not sharing ceilings or floors with other dwelling units, occupiable spaces, public garages, or commercial spaces must have mechanical ventilation airflow specified in § 150.0(o)1Ci-iii.
§ 150.0(o)1G:	**Local Mechanical Exhaust.** Kitchens and bathrooms must have local mechanical exhaust; nonenclosed kitchens must have demand-controlled exhaust system meeting requirements of §150.0(o)1Giii,enclosed kitchens and bathrooms can use demand-controlled or continuous exhaust meeting §150.0(o)1Giii-iv. Airflow must be measured by the installer per §150.0(o)1Gv, and rated for sound per §150.0(o)1Gvi. *
§ 150.0(o)1H&I:	**Airflow Measurement and Sound Ratings of Whole-Dwelling Unit Ventilation Systems.** The airflow required per § 150.0(o)1C must be measured by using a flow hood, flow grid, or other airflow measuring device at the fan's inlet or outlet terminals/grilles per Reference Residential Appendix RA3.7. Whole-Dwelling unit ventilation systems must be rated for sound per ASHRAE 62.2 §7.2 at no less than the minimum airflow rate required by §150.0(o)1C.
§ 150.0(o)2:	**Field Verification and Diagnostic Testing.** Whole-Dwelling Unit ventilation airflow, vented range hood airflow and sound rating, and HRV and ERV fan efficacy must be verified in accordance with Reference Residential Appendix RA3.7. Vented range hoods must be verified per Reference Residential Appendix RA3.7.4.3 to confirm if it is rated by HVI or AHAM to comply with the airflow rates and sound requirements per §150.0(o)1G

Pool and Spa Systems and Equipment:

§ 110.4(a):	**Certification by Manufacturers.** Any pool or spa heating system or equipment must be certified to have all of the following: compliance with the Appliance Efficiency Regulations and listing in MAEDbS; an on-off switch mounted outside of the heater that allows shutting off the heater without adjusting the thermostat setting; a permanent weatherproof plate or card with operating instructions; and must not use electric resistance heating. *
§ 110.4(b)1:	**Piping.** Any pool or spa heating system or equipment must be installed with at least 36 inches of pipe between the filter and the heater, or dedicated suction and return lines, or built-in or built-up connections to allow for future solar heating.
§ 110.4(b)2:	**Covers.** Outdoor pools or spas that have a heat pump or gas heater must have a cover.
§ 110.4(b)3:	**Directional Inlets and Time Switches for Pools.** Pools must have directional inlets that adequately mix the pool water, and a time switch that will allow all pumps to be set or programmed to run only during off-peak electric demand periods.
§ 110.5:	**Pilot Light.** Natural gas pool and spa heaters must not have a continuously burning pilot light.
§ 150.0(p):	**Pool Systems and Equipment Installation.** Residential pool systems or equipment must meet the specified requirements for pump sizing, flow rate, piping, filters, and valves. *

Lighting:

§ 110.9:	**Lighting Controls and Components.** All lighting control devices and systems, ballasts, and luminaires must meet the applicable requirements of § 110.9. *
§ 150.0(k)1A:	**Luminaire Efficacy.** All installed luminaires must meet the requirements in Table 150.0-A, except lighting integral to exhaust fans, kitchen range hoods, bath vanity mirrors, and garage door openers; navigation lighting less than 5 watts; and lighting internal to drawers, cabinets, and linen closets with an efficacy of at least 45 lumens per watt.
§ 150.0(k)1B:	**Screw based luminaires.** Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8. *
§ 150.0(k)1C:	**Recessed Downlight Luminaires in Ceilings.** Luminaires recessed into ceilings must not contain screw based sockets, must be airtight, and must be sealed with a gasket or caulk. California Electrical Code § 410.116 must also be met.
§ 150.0(k)1D:	**Light Sources in Enclosed or Recessed Luminaires.** Lamps and other separable light sources that are not compliant with the JA8 elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
§ 150.0(k)1E:	**Blank Electrical Boxes.** The number of electrical boxes that are more than five feet above the finished floor and do not contain a luminaire or other device shall be no more than the number of bedrooms. These boxes must be served by a dimmer, vacancy sensor control, low voltage wiring, or fan speed control.
§ 150.0(k)1F:	**Lighting Integral to Exhaust Fans.** Lighting integral to exhaust fans (except when installed by the manufacturer in kitchen exhaust hoods) must meet the applicable requirements of § 150.0(k). *

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§ 150.0(k)1G:	**Screw based luminaires.** Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8. *
§ 150.0(k)1H:	**Light Sources in Enclosed or Recessed Luminaires.** Lamps and other separable light sources that are not compliant with the JA8 elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
§ 150.0(k)1I:	**Light Sources in Drawers, Cabinets, and Linen Closets.** Light sources internal to drawers, cabinetry or linen closets are not required to comply with Table 150.0-A or be controlled by vacancy sensors provided that they are rated to consume no more than 5 watts of power, emit no more than 150 lumens, and are equipped with controls that automatically turn the lighting off when the drawer, cabinet or linen closet is closed.
§ 150.0(k)2A:	**Interior Switches and Controls.** All forward phase cut dimmers used with LED light sources must comply with NEMA SSL 7A.
§ 150.0(k)2B:	**Interior Switches and Controls.** Exhaust fans must be controlled separately from lighting systems. *
§ 150.0(k)2A:	**Accessible Controls.** Lighting must have readily accessible wall-mounted controls that allow the lighting to be manually turned on and off. *
§ 150.0(k)2B:	**Multiple Controls.** Controls must not bypass a dimmer, occupant sensor, or vacancy sensor function if the dimmer or sensor is installed to comply with § 150.0(k).
§ 150.0(k)2C:	**Mandatory Requirements.** Lighting controls must comply with the applicable requirements of § 110.9.
§ 150.0(k)2D:	**Energy Management Control Systems.** An energy management control system (EMCS) may be used to comply with dimming, occupancy, and control requirements if it provides the functionality of the specified control per § 110.9 and the physical controls specified in § 150.0(k)2A.
§ 150.0(k)2E:	**Automatic Shutoff Controls.** In bathrooms, garages, laundry rooms, utility rooms and walk-in closets, at least one installed luminaire must be controlled by an occupancy or vacancy sensor providing automatic-off functionality. Lighting inside drawers and cabinets with opaque fronts or doors must have controls that turn the light off when the drawer or door is closed.
§ 150.0(k)2F:	**Dimmers.** Lighting in habitable spaces (e.g., living rooms, dining rooms, kitchens, and bedrooms) must have readily accessible wall-mounted dimming controls that allow the lighting to be manually adjusted up and down. Forward phase cut dimmers controlling LED light sources in these spaces must comply with NEMA SSL 7A.
§ 150.0(k)2K:	**Independent controls.** Integrated lighting of exhaust fans shall be controlled independently from the fans. Lighting under cabinets or shelves, lighting in display cabinets, and switched outlets must be controlled separately from ceiling-installed lighting.
§ 150.0(k)3A:	**Residential Outdoor Lighting.** For single-family residential buildings, outdoor lighting permanently mounted to a residential building, or to other buildings on the same lot, must have a manual on/off switch and either a photocell and motion sensor or automatic time switch control) or an astronomical time clock. An energy management control system that provides the specified control functionality and meets all applicable requirements may be used to meet these requirements.
§ 150.0(k)4:	**Internally illuminated address signs.** Internally illuminated address signs must either comply with § 140.8 or consume no more than 5 watts of power.
§ 150.0(k)5:	**Residential Garages for Eight or More Vehicles.** Lighting for residential parking garages for eight or more vehicles must comply with the applicable requirements for nonresidential garages in §§ 110.9, 130.0, 130.1, 130.4, 140.6, and 141.0.

Solar Readiness:

§ 110.10(a)1:	**Single-family Residences.** Single-family residences located in subdivisions with 10 or more single-family residences and where the application for a tentative subdivision map for the residences has been deemed complete and approved by the enforcement agency, which do not have a photovoltaic system installed, must comply with the requirements of § 110.10(b)-(e).
§110.10(b)1A:	**Minimum Solar Zone Area.** The solar zone must have a minimum total area as described below. The solar zone must comply with access, pathway, smoke ventilation, and spacing requirements as specified in Title 24, Part 9 or other parts of Title 24 or in any requirements adopted by a local jurisdiction. The solar zone total area must be comprised of areas that have no dimension less than 5 feet and are no less than 80 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas greater than 10,000 square feet. For single-family residences, the solar zone must be located on the roof or overhang of the building and have a total area no less than 250 square feet. *
§ 110.10(b)2:	**Azimuth.** All sections of the solar zone located on steep-sloped roofs must have an azimuth between 90-300° of true north.
§ 110.10(b)3A:	**Shading.** The solar zone must not contain any obstructions, including but not limited to: vents, chimneys, architectural features, and roof mounted equipment. *
§ 110.10(b)3B:	**Shading.** Any obstruction located on the roof or any other part of the building that projects above a solar zone must be located at least twice the horizontal distance of the height difference between the highest point of the obstruction and the horizontal projection of the nearest point of the solar zone, measured in the vertical plane. *
§ 110.10(b)4:	**Structural Design Loads on Construction Documents.** For areas of the roof designated as a solar zone, the structural design loads for roof dead load and roof live load must be clearly indicated on the construction documents.
§ 110.10(c):	**Interconnection Pathways.** The construction documents must indicate: a location reserved for inverters and metering equipment and a pathway reserved for routing of conduit from the solar zone to the point of interconnection with the electrical service; and for single-family residences and central water-heating systems, a pathway reserved for routing plumbing from the solar zone to the water-heating system.
§ 110.10(d):	**Documentation.** A copy of the construction documents or a comparable document indicating the information from § 110.10(b)-(c) must be provided to the occupant.
§ 110.10(e)1:	**Main Electrical Service Panel.** The main electrical service panel must have a minimum busbar rating of 200 amps.
§ 110.10(e)2:	**Main Electrical Service Panel.** The main electrical service panel must have a reserved space to allow for the installation of a double pole circuit breaker for a future solar electric installation. The reserved space must be permanently marked as "For Future Solar Electric."

Electric and Energy Storage Ready:

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§ 150.0(s)	**Energy Storage System (ESS) Ready.** All single-family residences must meet all of the following: Either ESS-ready interconnection equipment with backed up capacity of 60 amps or more and four or more ESS supplied branch circuits, or a dedicated raceway from the main service to a subpanel that supplies the branch circuits in § 150.0(s); at least four branch circuits must be identified and have their source collocated at a single panelboard suitable to be supplied by the ESS, with one circuit supplying the refrigerator, one lighting circuit near the primary exit, and one circuit supplying a sleeping room receptacle outlet; main panelboard must have a minimum busbar rating of 225 amps; sufficient space must be reserved to allow future installation of a system isolation equipment/transfer switch within 3' of the main panelboard, with raceways installed between the panelboard and the switch location to allow the connection of backup power source.
§ 150.0(t)	**Heat Pump Space Heater Ready.** Systems using gas or propane furnaces to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the furnace with circuit conductors rated at least 30 amps with the blank cover identified as "240V ready;" and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."
§ 150.0(u)	**Electric Cooktop Ready.** Systems using gas or propane cooktop to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the cooktop with circuit conductors rated at least 50 amps with the blank cover identified as "240V ready;" and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."
§ 150.0(v)	**Electric Clothes Dryer Ready.** Clothes dryer locations with gas or propane plumbing to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the dryer location with circuit conductors rated at least 30 amps with the blank cover identified as "240V ready," and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."

*Exceptions may apply.

5/6/22

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REVISIONS

No	date	by

SAN FRANCISCO
DEPT. OF BUILDING INSPECTION
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MAY 1 2024
DEPT. OF BUILDING INSPECTION
SAN FRANCISCO, CA
PLANNING DEPARTMENT
CASE NUMBER

drawn: A. Lorenzale
checked:
date: 5/17/2024
scale: N/A
project No: 0445
drawing title

TITLE 24

sheet

EN-1.02

5 of 13 sheets.

Form version: December 13, 2023 (For permit applications October 3, 2023 - December 2025)

GS5: San Francisco Green Building Submittal Form for Residential Alteration, Addition, and Accessory Dwelling Unit Projects

INSTRUCTIONS:
Fill out the project information in the Verification box at the right.
Submittal must be a minimum of 11" x 17".

	TITLE	SOURCE OF REQUIREMENT	DESCRIPTION OF REQUIREMENT	OTHER RESIDENTIAL ALTERATIONS, ADDITIONS AND ACCESSORY DWELLING UNITS: adds any amount of conditioned area, volume, or size, OR a single freestanding unit accessory to an existing dwelling
RESIDENTIAL	GRADING & PAVING	CALGreen 4.106.3	Show how surface drainage (grading, swales, drains, retention areas) will keep surface water from entering the building.	if applicable
	RODENT PROOFING	CALGreen 4.406.1	Seal around pipe, cable, conduit, and other openings in exterior walls with cement mortar or DBI-approved similar method.	•
	FIREPLACES & WOODSTOVES	CALGreen 4.503.1	Install only direct-vent or sealed-combustion, EPA Phase II-compliant appliances.	•
	CAPILLARY BREAK, SLAB ON GRADE	CALGreen 4.505.2	Slab on grade foundation requiring vapor retarder also requires a capillary break such as: 4 inches of base 1/2-inch aggregate under retarder; slab design specified by licensed professional.	•
	MOISTURE CONTENT	CALGreen 4.505.3	Wall + floor <19% moisture content before enclosure.	•
	BATHROOM EXHAUST	CALGreen 4.506.1	Must be ENERGY STAR compliant, ducted to building exterior, and its humidistat shall be capable of adjusting between <50% to >80% (humidistat may be separate component).	•
MATERIAL EMISSIONS	LOW-EMITTING MATERIALS	CALGreen 4.504.2.1-5, SFGBC 4.103.3.2	Use products that comply with the emission limit requirements of 4.504.2.1-5, 5.504.4.1-6 for adhesives, sealants, paints, coatings, carpet systems including cushions and adhesives, resilient flooring (80% of area), and composite wood products.	•
WATER	INDOOR WATER USE REDUCTION	CALGreen 4.303.1, SF Housing Code sec.12A10	Meet flush/flow requirements for: toilets (1.28 gpf); urinals (0.125 gpf wall, 0.5 gpf floor); showerheads (1.8 gpm); lavatories (1.2 gpm private, 0.5 gpm public/common); kitchen faucets (1.8 gpm); wash fountains (1.8 gpm); metering faucets (0.2 gpc); food waste disposers (1 gpm/8 gpm). Residential major improvement projects must upgrade all non-compliant fixtures per SF Housing Code sec.12A10.	•
	WATER-EFFICIENT IRRIGATION	Administrative Code ch.63	If modified landscape area is ≥1,000 sq.ft., use low water use plants or climate appropriate plants, restrict turf areas and comply with Model Water Efficient Landscape Ordinance restrictions by calculated ETAF of ≤.55 or by prescriptive compliance for projects with ≤2,500 sq.ft. of landscape area.	•
ENERGY	ENERGY EFFICIENCY	CA Energy Code	Comply with all provisions of the CA Energy Code. Freestanding ADU only: All-Electric is required by SF Building Code 106A.1.17.	•
PARKING	WIRING FOR EV CHARGERS	CalGreen 4.106.4.3	For alterations to multifamily, install raceway for future Level 2 EVSE (min 40A 208/240VAC) terminating at 10% of parking spaces in areas where parking is added, or electrical systems (including lighting) are altered in existing parking facilities.	Applies to alterations where: Off-street parking is added, OR Electrical systems are altered in existing parking facilities
	BICYCLE PARKING	Planning Code sec.155.1-2	Provide short- and long-term bike parking to meet requirements of SF Planning Code sec.155.1-2.	if applicable
RESOURCE RECOVERY	RECYCLING BY OCCUPANTS	SF Building Code 106A.3.3, CalGreen 5.410.1, AB-088	Provide adequate space and equal access for storage, collection, and loading of compostable, recyclable and landfill materials. For help estimating adequate space for collection by hauler, see supporting materials including a design guide and calculator at: www.sfenvironment.org/refusecalculator.	•
	CONSTRUCTION & DEMOLITION (C&D) DISCARDS MANAGEMENT	Environment Code ch. 14 SFGBC 4.103.2.3 CalGreen 4.408.2, 4.408.5	100% of mixed debris must be taken by a Permitted Transporter to a Registered Facility for recycling and recovery. Complete Material Reduction and Recovery Plan and demonstrate minimum 65% recovery rate. For more information, see DBI Information Sheet GB-02 or contact: debrisrecovery@sfgov.org or 415-355-3799.	•
HVAC	HVAC INSTALLER QUALS	CALGreen 4.702.1	Installers must be trained in best practices.	•
	HVAC DESIGN	CALGreen 4.507.2	HVAC shall be designed to ACCA Manual J, D, and S.	•
GOOD NEIGHBOR	BIRD-SAFE BUILDINGS	Planning Code sec.139	Glass facades and bird hazards facing and/or near Urban Bird Refuges may need to treat their glass for opacity.	•
	TOBACCO SMOKE CONTROL	Health Code art.19F	Prohibit smoking within 10 feet of building entries, air intakes, and operable windows and enclosed common areas.	•
POLLUTION PREVENTION	STORMWATER CONTROL PLAN	Public Works Code art.4.2 sec.147	Projects disturbing ≥5,000 sq.ft. in combined or separate sewer areas, or replacing ≥2,500 impervious sq.ft. in separate sewer area, must implement a Stormwater Control Plan meeting SFPUC Stormwater Management Requirements.	if project extends outside envelope
	CONSTRUCTION SITE RUNOFF	Public Works Code art.4.2 sec.146	Provide a construction site Stormwater Pollution Prevention Plan and implement SFPUC Best Management Practices.	if project extends outside envelope
INDOOR AIR QUALITY	AIR FILTRATION (CONSTRUCTION)	CALGreen 4.504.1	Seal permanent HVAC ducts/equipment stored onsite before installation.	•

FOR YOUR INFORMATION: INDOOR WATER EFFICIENCY

Each fixture must not exceed CALGreen 4.303 maximum flow rates:

FIXTURE TYPE	MAXIMUM FIXTURE FLOW RATE
Showerheads[2]	1.8 gpm @ 80 psi
Lavatory Faucets: residential	1.2 gpm @ 60 psi
Kitchen Faucets	1.8 gpm @ 60 psi default
Wash Fountains	1.8 gpm / 20 [rim space (inches) @ 60 psi]
Metering Faucets	.20 gallons per cycle
Tank-type water closets	1.28 gallons / flush[1] and EPA WaterSense Certified
Flushometer valve water closets	1.28 gallons / flush[1]
Urinals	Wall mount: 0.125 gallons / flush Floor mount: 0.5 gallons / flush

NOTES:
1. For dual flush toilets, effective flush volume is defined as the composite, average flush volume of two reduced flushes and one full flush. The referenced standard is ASME A112.19.14 and USEPA WaterSense Tank-Type High Efficiency Toilet Specification – 1.28 gal (4.8L)
2. The combined flow rate of all showerheads in one shower stall shall not exceed the maximum flow rate for one showerhead, or the shower shall be designed to allow only one showerhead to be in operation at a time (CALGreen 5.303.2.1)

Water Efficiency of Existing Non-Compliant Fixtures

All fixtures that are not compliant with the San Francisco Residential Water Conservation Ordinance that serve or are located within the project area must be replaced with fixtures or fittings meeting the maximum flow rates and standards referenced above. For more information, see "Comply with water conservation requirements" available at SF.GOV.

NON-COMPLIANT PLUMBING FIXTURES INCLUDE:
1. Any toilet manufactured to use more than 1.6 gallons/flush
2. Any urinal manufactured to use more than 1 gallon/flush
3. Any showerhead manufactured to have a flow capacity of more than 2.5 gpm
4. Any interior faucet that emits more than 2.2 gpm

Exceptions to this requirement are limited to situations where replacement of fixture(s) would detract from the historic integrity of the building, as determined by the Department of Building Inspection pursuant to San Francisco Building Code Chapter 13A.

VERIFICATION

Indicate below who is responsible for ensuring green building requirements are met. Projects that increase total conditioned floor area by ≥1,000 sq. ft. are required to have a Green Building Compliance Professional of Record as described in Administrative Bulletin 93. For projects that increase total conditioned floor area by <1,000 sq. ft., the applicant or design professional may sign below, and no license or special qualifications are required. FINAL COMPLIANCE VERIFICATION form will be required prior to Certificate of Completion

1077 FELL ST
PROJECT NAME
0777/059
BLOCK/LOT
1077 FELL ST, SAN FRANCISCO
ADDRESS
DUPLEX
PRIMARY OCCUPANCY
721 sf
GROSS BUILDING AREA
45 sf
INCREASE IN CONDITIONED FLOOR AREA

I have been retained by the project sponsor to verify that approved construction documents and construction fulfill the requirements of San Francisco Green Building Code. It is my professional opinion that the requirements of the San Francisco Green Building Code will be met. I will notify the Department of Building Inspection if the project will, for any reason, not substantially comply with these requirements, if I am no longer the Green Building Compliance Professional of Record for the project, or if I am otherwise no longer responsible for assuring the compliance of the project with the San Francisco Green Building Code.

5/17/24
LICENSED PROFESSIONAL *(sign & date)*
May be signed by applicant when <1,000 sq. ft. is added.

AFFIX STAMP BELOW:

Projects that increase total conditioned floor area by ≥1,000 sq.ft.: *Green Building Compliance Professional of Record will verify compliance.*

GREEN BUILDING COMPLIANCE PROFESSIONAL
(name & contact phone #)

FIRM

☐ I am a LEED Accredited Professional

☐ I am a GreenPoint Rater

☐ I am an ICC Certified CALGreen Inspector

GREEN BUILDING COMPLIANCE PROFESSIONAL
(sign & date)

Signature by a professional holding at least one of the above certifications is required. If the Licensed Professional does not hold a certification for green design and/or inspection, this section may be completed by another party who will verify applicable green building requirements are met.

SAN FRANCISCO DEPT. OF BUILDING INSPECTION ISSUED OCT 02 2023

Christian Gilmartin, DBI MECH
OCT 12 2024

PROJECT ADDRESS
1077 FELL ST,
SAN FRANCISCO,
CA 94117

ARL|DESIGN
ARIEL R LORENZALE
607 ELMIRA RD, #249,
VACAVILLE, CA 95687
415-505-5288
ariel@arldesigner.com

VELOX
DESIGN & CONSTRUCTION
442 HAIGHT ST.
SAN FRANCISCO, CA 94117
415-416-0177
doug@veloxsf.com

RECEIVED
MAY 17 2024
DEPT. OF BUILDING INSPECTION
THIS PLAN MEETS THE QUALITY STANDARD FOR DIGITIZING ACCEPTED

REVISIONS

No	date	by

drawn: A. Lorenzale
checked:
date: 5/17/2024
scale: N/A
project No: 0445
drawing title
GS5 FORM
sheet
EN-1.03
6 of 13 sheets.

GENERAL STRUCTURAL NOTES

I GENERAL

A. ALL CONSTRUCTION SHALL CONFORM TO THE CALIFORNIA BUILDING CODE 2019 EDITION w/ AMENDMENTS BY LOCAL JURISDICTIONS.
B. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AT JOB SITE BEFORE COMMENCING WORK AND SHALL REPORT ANY DISCREPANCIES TO THE ARCHITECT OR ENGINEER.
C. OMISSIONS OR CONFLICT BETWEEN VARIOUS ELEMENTS OF THE DRAWINGS, NOTES, AND DETAILS SHALL BE BROUGHT TO THE ATTENTION OF ARCHITECT AND RESOLVED BEFORE PROCEEDING WITH THE WORK.
D. DO NOT USE SCALED DIMENSIONS; USE WRITTEN DIMENSIONS OR WHERE NO DIMENSION IS PROVIDED, CONSULT THE ARCHITECT FOR CLARIFICATION BEFORE PROCEEDING WITH THE WORK.
E. DETAILS SHOWN SHALL BE INCORPORATED INTO THE PROJECT AT ALL APPROPRIATE LOCATIONS WHETHER SPECIFICALLY CALLED OUT OR NOT.
F. FOR WATERPROOFING, FIREPROOFING, ETC. REFER TO DRAWINGS OTHER THAN STRUCTURAL.
G. SEE DRAWINGS OTHER THAN STRUCTURAL FOR: KINDS OF FLOOR FINISH AND THEIR LOCATION, FOR DEPRESSIONS IN FLOOR SLABS, FOR OPENINGS IN WALLS AND FLOORS REQUIRED BY ARCHITECTURAL AND MECHANICAL FEATURES, FOR ROADWAY PAVING, WALKS, RAMPS, STAIRS, CURBS, ETC.
H. HOLES AND OPENINGS THROUGH WALLS AND FLOORS FOR DUCTS, PIPING AND VENTILATION SHALL BE CHECKED BY THE CONTRACTOR, WHO SHALL VERIFY SIZES AND LOCATION OF SUCH HOLES OR OPENINGS WITH THE PLUMBING HEATING, VENTILATING AND ELECTRICAL DRAWINGS AND THESE SUB-CONTRACTORS.
I. NO PIPES AND DUCTS SHALL BE PLACED IN SLABS OR WALLS UNLESS SPECIFICALLY DETAILED OR APPROVED BY THE ARCHITECT.
J. DRAWINGS AND SPECIFICATIONS REPRESENT FINISHED STRUCTURE. SUBCONTRACTOR SHALL BE RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION INCLUDING BUT NOT LIMITED TO SHORING AND TEMPORARY BRACING. THE SUBCONTRACTOR SHALL UNDERTAKE ALL NECESSARY MEASURES TO INSURE SAFETY OF ALL PERSONS AND STRUCTURES AT THE SITE AND ADJACENT TO THE SITE. OBSERVATION VISITS TO THE SITE BY THE ARCHITECT, ENGINEER SHALL NOT RELIEVE THE SUBCONTRACTOR OF SUCH RESPONSIBILITY.
K. NOTE THAT SHEET S1 IS A STANDARD COVER SHEET AND AS SUCH, NOT ALL TYP. DETAILS AND OR NOTES APPLY TO EVERY PROJECT.

II DESIGN CRITERIA

A. APPLICABLE CODE: CALIFORNIA BUILDING CODE 2019 & SFBC 2019.
B. VERTICAL LIVE LOADS: (REDUCIBLE). ROOF: 20 PSF. FLOOR: 40 PSF. HALLWAYS & CORRIDORS: 100 PSF.
C. LATERAL LOADS:
1. WIND: 110 MPH. BASIC WIND SPEED, EXPOSURE: "B"
2. SEISMIC: SITE CLASS 'D'
MAPPED SPECTRAL ACCELERATIONS: S_S= S_1=
Fa=1.0 Fv=1.5 S_{MS}= .xxx S_{M1}= .xxx
BASE SHEAR 'V' = .xx W (ASD)
SEISMIC DESIGN CATEGORY: D
RESPONSE MODIFICATION FACTOR, R=6.5
ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE
IMPORTANCE FACTOR=1 OCCUPANCY CATEGORY=II

III MATERIALS

A. CONCRETE:
1. REINFORCING STEEL: ASTM A615, GRADE 60, #4 AND SMALLER, GRADE 40.
2. CONCRETE: NORMAL WEIGHT U.O.N. WITH COMPRESSIVE STRENGTH OF THE FOLLOWING AT 28 DAYS:
FOOTINGS, ~~MAT SLAB~~ & DRILLED PIERS 2500 psi
~~WALLS, COLUMNS 5000 psi~~
~~STRUCTURAL SLAB (L.W. P.T. SEE S3.2) 5000 psi~~
3. MINIMUM CONCRETE COVER FOR REINFORCING STEEL:
a. SURFACE POURED AGAINST GROUND 3"
b. FORMED SURFACES BELOW GRADE 2"
c. SURFACES EXPOSED TO WEATHER 2"
d. BEAM BARS (INCLUDING STIRRUPS) 1-1/2"
e. ALL OTHER 1"
4. ANCHOR BOLT EPOXY*: HILTI HIT-RE 500-SD. (ICC ESR-2322) OR SIMPSON SET-XP (ICC ESR-2508)
5. SCREW ANCHORS*: SIMPSON TITEN HD (ICC ESR-2713)
* USE COMPRESSED AIR TO BLOW THE DUST OUT OF ANCHOR BOLT HOLES.
6. PNEUMATICALLY PLACED CONCRETE (SHOTCRETE) NOTES
a. ALL CONCRETE WALLS MAY BE SHOTCRETED AT CONTRACTOR'S OPTION. VERIFY COMPATIBILITY OF SHOTCRETE WITH WATE PROOFINGCONTRACTOR.
b. ALL SHOTCRETE SHALL CONFORM TO THE REQUIREMENTS OF ACI 506.2 AND CBC SECTION 1924.
c. ALL SHOTCRETE SHALL TEST NOT LESS THAN 4000 PSI AT 28 DAYS.
d. MAXIMUM AGGREGATE SIZE SHALL BE 3/8 INCH.
e. LAP ALL REINFORCING BARS 40 DIAMETERS AT SPLICES. SPLICE BARS BY THE NON-CONTACT LAP SPLICE METHOD WITH 2 INCHES CLEAR BETWEEN BARS.
f. ANY REBOUND SHALL BE REMOVED PRIOR TO PLACING OF CONCRETE.
g. IN-PLACE SHOTCRETE WHICH SHOW SAGS OR SLOUGHS, SEGREGATION, HONEY COMBING, SAND POCKETS OR OTHER OBVIOUS DEFECTS SHALL BE REMOVED AND REPLACED.
h. CURE SHOTCRETE BY KEEPING CONTINUOUSLY MOIST FOR A MINIMUM OF 7 DAYS UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE STRUCTURAL ENGINEER.
i. TEST PANELS: SHOOT ONE TEST PANEL, 18 INCHES SQUARE ,FOR EACH 50 CUBIC YARDS OF SHOTCRETE PLACED, BUT NOT LESS THAN ONE PANEL PER SHIFT. CURE PANELS UNDER SAME CONDITIONS AS THE WORK. TESTING AGENCY SHALL TAKE A MINIMUM OF THREE 2" DIAMETER CORES FROM EACH PANEL. WATER SOAK SPECIMENS 24 HOURS BEFORE TESTING. TEST IN ACCORDANCE WITH UNIFORM BUILDING CODE STANDARD NO. 26-10.
j. A MINIMUM OF THREE 3" DIAMETER CORES SHALL BE TAKEN FROM THE WORK AT LOCATIONS SPECIFIED BY THE STRUCTURAL ENGINEER. THE SPECIAL INSPECTOR SHALL VISUALLY EXAMINE CORES FOR STRUCTURAL SOUNDNESS AND SUBMIT A REPORT TO THE STRUCTURAL ENGINEER AND THE BUILDING INSPECTION DEPARTMENT.
k. INSPECTION: PROVIDE CONTINUOUS SPECIAL INSPECTION OF SHOTCRETING OPERATION.

B. CMU: UNITS 1500 PSI, MORTAR (TYPE 'S'), GROUT 2000 PSI

C. STEEL
1. SHAPES AND PLATES: ASTM A36; TUBES: ASTM A500, GRADE B.
2. MOMENT FRAMES (BEAMS, COLUMNS): ASTM A992 OR A913 (50 ksi)
MOMENT FRAMES (PLATES): A572, GRADE 50.
3. METAL STUDS, SEE S1.4, NOTES
4. METAL JOISTS, 50 ksi
5. BOLTS: ASTM A307, U.O.N.
6. WELDING ELECTRODES: E-70 FOR FULL PEN WELDS USE CHARPY V-NOTCH WIRE, MIN. 20 ft # @ 0°F
7. METAL DECKING, SEE S1.5

D. WOOD
1. FRAMING LUMBER - DOUGLAS FIR LARCH
a. HEADERS, PLATES, JOISTS: NO.1
b. STUDS, BLOCKING: NO.2
c. ALL LUMBER IN CONTACT WITH CONCRETE:
PRESERVATIVE TREATED DOUGLAS FIR. (NOT CCA-C)
d. POSTS AND BEAMS: NO.1
2. PLYWOOD SHEATHING
a. SHEARWALL PLYWOOD : 1/2 INCH STRUCTURAL I, C-D EXTERIOR, APA RATED 32/16.
b. ROOF SHEATHING: 5/8 INCH STRUCTURAL II, C-D EXTERIOR APA RATED 32/16
c. FLOOR SHEATHING: 3/4 INCH STRUCTURAL II, C-D EXTERIOR APA RATED 48/24
3. FRAMING HARDWARE AND JOIST HANGERS: AS MANUFACTURED BY SIMPSON STRONGTIE CO. OR APPROVED EQUAL. SIMPSON DESIGNATIONS USED. USE NAILS PER I.C.C. APPROVAL FOR EACH DEVICE.
4. COMMON NAILS, UNLESS OTHERWISE NOTED. SHORT NAILS MAY BE USED PROVIDED THEY HAVE COMMON CODE SPECIFIED MINIMUM EMBEDMENT. ALL NAILING TO BE PER IBC TABLE NO. 2304.9.1 UNLESS NOTED OTHERWISE.
5. GLU-LAM BEAMS: 24F-V4 (Fb=2400 PSI)
6. PARALLAM & MICROLLAM BEAMS AND TJI's TO BE FABRICATED BY TRUS JOIST:
PARALLAM BEAMS: 2.2E (Fb=2900PSI)
MICROLLAM BEAMS: 2.0E (Fb=2600PSI)
7. FOR MICROLLAMS SEE CODE EVALUATION: ICC-ES ESR-1387
8. FOR TJI JOISTS SEE CODE EVALUATION: ICC-ES ESR-1153

IV EXPOSURE TO WEATHER:

A. STEEL:
1. ALL EXPOSED MEMBERS SHALL BE COATED WITH A ZINC RICH PRIMER.
2. BOLTS, NUTS AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED.

B. WOOD:
1. ALL EXTERIOR TIMBER AND GLU-LAM BEAMS SHALL BE PRESSURE TREATED (BUT NOT CHROMATED COPPER ARSENATE) OR WOOD OF NATURAL RESISTANCE TO DECAY.
2. ALL EXTERIOR HANGERS AND OTHER SIMPSON TYPE PRODUCTS SHALL BE GALVANIZED.
3. ALL PLYWOOD SHALL BE OF AN EXTERIOR GRADE.
4. METAL CONNECTORS IN CONTACT w/ PRESSURE TREATED WOOD SHALL BE HOT-DIPPED GALVANIZED w/ MIN. ZINC COATING OF G185.
5. ALL NAILS & ANCHOR BOLTS IN CONTACT w/ PRESSURE TREATED WOOD SHALL BE HOT DIPPED GALVANIZED.

V ABBREVIATIONS

B.N. — BOUNDARY NAILING
DIA. — DIAMETER
E.N. — EDGE NAILING
H.P. — HIGH POINT
L.P. — LOW POINT
LVL — LAMINATED VENEER LUMBER
L.W. — LIGHT WEIGHT
M.L. — MICROLLAM
PLWD — PLYWOOD SHEATHING
PSL — PARALLEL STRAND LUMBER
P.T. — PRESSURE TREATED OR POST-TENSIONED
S.A.D. — SEE ARCHITECTURAL DRAWINGS
S.O.G. — SLAB-ON-GRADE
S.S. — STAINLESS STEEL
T.O. — TOP OF
TYP. — TYPICAL
U.O.N. — UNLESS OTHERWISE NOTED
V.I.F. — VERIFY IN FIELD
W.W.F. — WELDED WIRE FABRIC

SYMBOLS

(E) WALL BELOW
(E) WALL ABOVE
(N) CONC. WALL ABOVE
BRICK OR CMU WALL ABOVE
WOOD SHEARWALL (BELOW)
WOOD JOIST HANGER (HUS TYPE, U.O.N.)
WOOD POST BELOW
WOOD POST ABOVE (OR ABOVE & BELOW)
HOLDOWN @ WOOD POST
STEEL COLUMN ABOVE
STEEL COLUMN BELOW
MOMENT CONNECTION
CONCRETE TOPPING OVER PLYWOOD
CONCRETE TOPPING OVER CORRUGATED METAL DECK
CONCRETE COLUMN ABOVE
CONCRETE COLUMN BELOW w/ DROPCAP
DRILLED CONCRETE PIER
PRECAST, PRESTRESSED CONCRETE PILE
DIAGONAL ABOVE
DIAGONAL BELOW

PROJECT NAME: VOLUNTARY STRENGTHENING
ADDRESS: 1077 FELL STREET
BLOCK/LOT: ----
CITY: SAN FRANCISCO, CA

DRAWING INDEX:

S1.0 — TITLE SHEET
S1.1A — TYPICAL WOOD DETAILS
S2 — FOUNDATION PLAN/ 1ST, 2ND AND ROOF FLOOR FRAMING
S3-S4 — STRUCTURAL DETAILS
W1-W2 — STRONG SIMPSOM WALL

City and County of San Francisco
Department of Building Inspection

London Breed, Mayor
Patrick O'Riordan, Interim Director

Attachment A

SLOPE AND SEISMIC HAZARD ZONE PROTECTION CHECKLIST

A COPY OF THIS DOCUMENT SHALL BE SUBMITTED WITH THE PERMIT APPLICATION

JOB ADDRESS 1077 FELL STREET APPLICATION NO. _____ ADDENDUM NO. ____
OWNER NAME _____ OWNER PHONE NO. (____) _____

1: PROPERTY LOCATION		
EARTHQUAKE INDUCED LANDSLIDE AREA ON THE STATE OF CALIFORNIA DEPARTMENT OF CONSERVATION DIVISION OF MINES AND GEOLOGY (CDMG) SEISMIC HAZARD ZONES MAP FOR SAN FRANCISCO, RELEASED NOVEMBER 17, 2000.	YES ☐	NO ☑
2: AVERAGE SLOPE OF PROPERTY		
PROPERTY EXCEEDING AN AVERAGE SLOPE OF 4H:1V (25%) GRADE *(APPLICANT WILL NEED TO INCLUDE PLANS ILLUSTRATING SLOPE OF THE PROPERTY AND/OR INCLUDE A SURVEY VERIFYING THE SLOPE OF THE PROPERTY)*	YES ☐	NO ☑

3: PROPOSED CONSTRUCTION		
CONSTRUCTION OF NEW BUILDING OR STRUCTURE HAVING OVER 1000 SQFT OF NEW PROJECTED ROOF AREA	YES ☐	NO ☑
HORIZONTAL OR VERTICAL ADDITIONS HAVING OVER 500 SQFT OF NEW PROJECTED ROOF AREA	YES ☐	NO ☑
SHORING	YES ☐	NO ☑
UNDERPINNING	YES ☐	NO ☑
GRADING, INCLUDING EXCAVATION OR FILL, OF OVER 50 CUBIC YARDS OF EARTH MATERIAL	YES ☐	NO ☑
CONSTRUCTION ACTIVITY LISTED BELOW DETERMINED BY THE BUILDING OFFICIAL THAT MAY HAVE A SUBSTANTIAL IMPACT ON THE SLOPE STABILITY:		
RETAINING WALL:	YES ☐	NO ☑
OTHERS: _____	YES ☐	NO ☑

SECTION 4: LICENSED DESIGN PROFESSIONAL VERIFICATION AND SIGNATURES

Under penalty of perjury, I certify that the information provided on this form is based on my personal review of the building and its records, or review by others acting under my direct supervision, and is correct to the best of my knowledge.

Prepared by: JEFFERSON CHEN, P.E.
Engineer/Architect of Record

(415) 626 - 8300 Telephone
jefferson@enertiadesigns.net Email
Signature
Date

REGISTERED PROFESSIONAL ENGINEER JEFFERSON W-K CHEN C057898 Exp. 06/30/24 CIVIL STATE OF CALIFORNIA

Permit Services Division
49 South Van Ness Avenue, Suite 500 - San Francisco CA 94103
Phone (628) 652-3600 – www.sfdbi.org

INFORMATION SHEET S-19 ATTACHMENT A — Slope Protection Checklist

FOR DBI USE ONLY

ASSIGNMENT OF REVIEW TIER

EXEMPTED: Reports per Section E and Third Party Peer Review Not Required

☑ If the box in Section 1 "Property Location" **AND** the box in Section 2 "Average Slope of Property" are marked "No" **OR** if all the boxes in Section 3 "Proposed Construction" are marked "No", reports per Section E and Third Party Peer Review are exempted by the SSPA.

TIER I: Reports per Section E Required but Third Party Peer Review Not Required

☐ If the box in Section 2 "Average Slope of Property" **AND** any boxes in Section 3 "Proposed Construction" are marked "Yes" **AND** the property does not lie within any areas of potential landslide hazard, DBI shall require mandatory submittal of reports per Section E only.

TIER II: Reports per Section E and Third Party Peer Review Required

☐ If the box in Section 2 "Average Slope of Property" **AND** any boxes in Section 3 "Proposed Construction" are marked "Yes" **AND** the property lies in the vicinity of mapped landslides, DBI shall require mandatory submittal of reports per Section E and require the permit application be subject to a third party peer review. At the discretion of the SSPA Review Committee, the peer review may be followed by the establishment of a Structural Advisory Committee (SAC) with the project reassigned to Tier III.

If the DBI Plan Review Engineer (or the SSPA Review Committee, if established), in their discretion, determines from the submitted documents that the project has a substantial impact on the slope stability of the site or creates a potential for earthquake induced landslide hazards, DBI may require that the third party peer review be followed by the establishment of a Structural Advisory Committee (SAC) and re-assigned the project to Tier III.

TIER III: Structural Advisory Committee (SAC) Review

☐ If the box in Section 1 "Property Location" **AND** any boxes in Section 3 "Proposed Construction" are marked "Yes", DBI shall require mandatory submittal of reports per Section E and require the permit application be subject to review by a Structural Advisory Committee (SAC), as defined by SFBC Section 105A.6. Philip Chan, DBI

Tier assigned by: AUG 12 2024 Phone: (628)
DBI Plan Review Engineer

Comment:

Philip Chan, DBI
AUG 12 2024

City and County of San Francisco
Department of Building Inspection

London N. Breed, Mayor
Patrick O'Riordan, Interim Director

NOTICE

SPECIAL INSPECTION REQUIREMENTS

Please note that the Special Inspections shown on the approved plans and checked on the Special Inspections form issued with the permit are required for this project. The employment of special inspectors is the direct responsibility of the owner or the engineer/architect of record acting as the owner's representative.

These special inspections are required *in addition to* the called inspections performed by the Department of Building Inspection. The name of the special inspector shall be furnished to the district building inspector prior to start of work for which special inspection is required.

For questions regarding the details or extent of required inspection or tests, please call the Plan Checker assigned to this project or **628-652-3407**. If there are any field problems regarding special inspection, please call your District Building Inspector or 628-652-3400 Ext 1.

Before final building inspection is scheduled, documentation of special inspection compliance must be submitted to and approved by the Special Inspection Services staff. To avoid delays in this process, the project owner should request final compliance reports from the architect or engineer of record and/or special inspection agency soon after the conclusion of work requiring special inspection. ***The permit will not be finalized without compliance with the special inspection requirements.***

STRUCTURAL OBSERVATION REQUIREMENTS

Structural observation shall be provided as required per Section 1704.6. **The building permit will not be finalized without compliance with the structural observation requirements.**

Special Inspection Services Contact Information

1. **Telephone: (628) 652-3407**
2. **Email: dbi.specialinspections@sfgov.org**
3. **In person: 49 South Van Ness Ave – Suite 400**

Note: We are moving towards a "paperless" mode of operation. All special inspection submittals, including final letters, may be emailed (preferred) or faxed. We will also be shifting to a paperless fax receipt mode.

Special Inspection Services
49 South Van Ness Ave – Suite 400 – San Francisco CA 94103
Office (628) 652-3407 – www.sfdbi.org

Updated 10/05/2020

AUG 12 2024

SPECIAL INSPECTION AND STRUCTURAL OBSERVATION

A COPY OF THIS DOCUMENT SHALL BE KEPT WITH THE APPROVED STRUCTURAL DRAWING SET

JOB ADDRESS 1077 FELL STREET APPLICATION NO._____ ADDENDUM NO.____
OWNER NAME_____OWNER PHONE NO. (_____)_____

Employment of Special Inspection is the direct responsibility of the OWNER, or the engineer/architect of record acting as the owner's representative. Special inspector shall be one of those as prescribed in Sec. 1704. Name of special inspector shall be furnished to DBI District Inspector prior to start of the work for which the Special Inspection is required. Structural observation shall be performed as provided by Section 1704.6. A preconstruction conference is recommended for owner/builder or designer/builder projects, complex and high-rise projects, and for projects utilizing new processes or materials.

In accordance with Chapter 17 (SFBC), Special Inspection and/or testing is required for the following work:

1. [✓] Concrete (Placement & sampling)
2. [ ] Bolts installed in concrete
3. [ ] Special moment - Resisting concrete frame
4. [✓] Reinforcing steel ~~and prestressing tendons~~
5. **Structural welding:**
A. Periodic visual inspection
[ ] Single-pass fillet welds 5/16" or smaller
[ ] Steel deck
[ ] Welded studs
[ ] Cold formed studs and joists
[ ] Stair and railing systems
[ ] Reinforcing steel
B. Continuous visual inspection and NDT (Section 1704)
[ ] All other welding (NDT exception: Fillet weld)
[ ] Reinforcing steel; and [ ] NDT required
[ ] Moment-resisting frames
[ ] Others_____
6. [ ] High-strength bolting
7. [ ] Structural masonry
8. [ ] Reinforced gypsum concrete
9. [ ] Insulating concrete fill
10. [ ] Sprayed-on fireproofing
11. [ ] Piling, drilled piers and caissons
12. [ ] Shotcrete
13. [ ] Special grading, excavation and filling (Geo. Engineered)
14. [ ] Smoke-control system
15. [ ] Demolition
16. [ ] Exterior Facing
17. **Retrofit of unreinforced masonry buildings:**
[ ] Testing of mortar quality and shear tests
[ ] Inspection of repointing operations
[ ] Installation inspection of new shear bolts
[ ] Pre-installation inspection for embedded
[ ] Pull/torque tests per SFBC Sec.1607C & 1615C
18. **Bolts Installed in existing concrete or masonry:**
[ ] Concrete [ ] Masonry
[ ] Pull/torque tests per SFEBC Sec. 507C & 515C
19. [ ] Shear walls and floor systems used as shear diaphragms
20. [ ] Holdowns
21. **Special cases:**
[ ] Shoring
[ ] Underpinning [ ] Not affecting adjacent property
[ ] Affecting adjacent property: PA_____
[ ] Others
22. [ ] Crane safety (Apply to the operation of tower cranes on high-rise building) (Section 1705.22)
23. [ ] Others: "As recommended by professional of record"_____
24. **Structural observation per Sec. 1704.6 (SFBC) for the following:** [ ] Foundations [ ] Steel framing
[ ] Concrete construction [ ] Masonry construction [✓] Wood framing
[ ] Other:_____
25. Certification is required for: [ ] Glu-lam components
26. [ ] Firestops in high-rise building

Prepared by: JEFFERSON CHEN, P.E. Phone: (415) 626 - 3800
Engineer/Architect of Record
Required information:
FAX: (415) 701 -0212 Email jefferson@enertiadesigns.net

Review by: Philip Chan, DBI Phone: (628) 652-
DBI Engineer or Plan Checker
AUG 12 2024

****

APPROVAL (Based on submitted reports.)

DATE DBI Engineer or Plan Checker / Special Inspection Services Staff

QUESTIONS ABOUT SPECIAL INSPECTION AND STRUCTURAL OBSERVATION SHOULD BE DIRECTED TO: Special Inspection Services (628) 652-3407; or, dbi.specialinspections@sfgov.org

Updated 10/05/2020

CITY AND COUNTY OF SAN FRANCISCO DEPT. OF BUILDING INSPECTION ISSUED AUG 02 2024

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REGISTERED PROFESSIONAL ENGINEER JEFFERSON W-K CHEN C057898 CIVIL STATE OF CALIFORNIA

	DATE	REVISIONS
1		
2		
3		
4		

TITLE SHEET
GENERAL NOTES

VOLUNTARY STRENGTHENING
1077 FELL STREET
SAN FRANCISCO, CA

Date: 03-01-2024
Scale: AS SHOWN
Drawn By: DM
Job No: 23059
Sheet S1.0
Of 7 Sheets

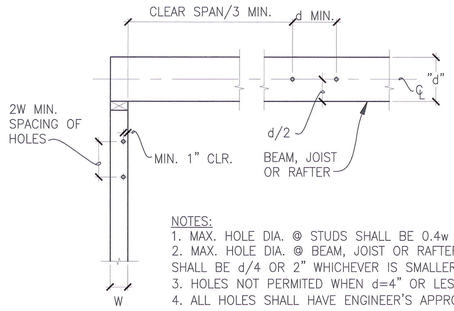
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NAILING SCHEDULE (PER CBC 2016, TABLE NO. 2304.10.1)

CONNECTION	NAILING [1]
1. JOIST TO SILL OR GIRDER, TOENAIL	3–8d
2. BRIDGING TO JOIST, TOENAIL EACH END	2–8d
3. 1"X6" SUBFLOOR OR LESS TO EACH JOIST, FACE NAIL	2–8d
4. WIDER THAN 1" X 6" SUBFLOOR TO EACH JOIST, FACE NAIL	3–8d
5. 2" SUBFLOOR TO JOIST OR GIRDER, BLIND AND FACE NAIL	2–16d
6. SOLE PLATE TO JOIST OR BLOCKING, TYPICAL FACE NAIL	16d AT 16" O.C.
SOLE PLATE TO JOIST OR BLOCKING, AT BRACED WALL PANELS	3–16d PER 16"
7. TOP PLATE TO STUD, END NAIL	2–16d
8. STUD TO SOLE PLATE	4–8d, TOENAIL OR 2–16d, END NAIL
9. DOUBLE STUDS, FACE NAIL	16d AT 24" O.C.
10. DOUBLED TOP PLATES, TYPICAL FACE NAIL	16d AT 16" O.C.
DOUBLE TOP PLATES, LAP SPLICE	8–16d
11. BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE, TOENAIL	3–8d
12. RIM JOIST TO TOP PLATE, TOINAIL	8d AT 6" O.C.
13. TOP PLATES, LAPS AND INTERSECTIONS, FACE NAIL	2–16d
14. CONTINUOUS HEADER, TWO PIECES	16d AT 16" O.C. ALONG EACH EDGE
15. CEILING JOISTS TO PLATE, TOENAIL	3–8d
16. CONTINUOUS HEADER TO STUD, TOINAIL	4–8d
17. CEILING JOISTS, LAPS OVER PARTITIONS, FACE NAIL	3–16d
18. CEILING JOISTS TO PARALLEL RAFTERS, FACE NAIL	3–16d
19. RAFTER TO PLATE, TOENAIL	3–8d
20. 1" BRACE TO EACH STUD AND PLATE, FACE NAIL	2–8d
21. 1" X 8" SHEATHING OR LESS TO EACH BEARING, FACE NAIL	2–8d
22. WIDER THAN 1" X 8" SHEATHING TO EACH BEARING, FACE NAIL	3–8d
23. BUILT–UP CORNER STUDS	16d AT 24" O.C.
24. BUILT–UP GIRDER AND BEAMS	20d AT 32" O.C. AT TOP AND BOTTOM AND STAGGERED 2–20d AT ENDS AND AT EACH SPLICE
25. 2" PLANKS	2–16d AT EACH BEARING
26. COLLAR TIE TO RAFTER	3–10d AT FACE NAIL
27. JACK RAFTER TO HIP	2–10d AT TOENAIL AND 2–16d AT FACE NAIL
28. ROOF RAFTER TO 2–BY RIDGE BEAM	2–16d AT TOENAIL AND 2–16d AT FACE NAIL
29. JOIST TO BAND JOIST	3–16d AT FACE NAIL
30. LEDGER STRIP	3–16d AT FACE NAIL AT EACH JOIST
31. WOOD STRUCTURAL PANELS AND PARTICLEBOARD [B] SUBFLOOR, ROOF AND WALL SHEATHING (TO FRAMING)	
1/2" AND LESS	6d[C,L]
19/32"–3/4"	8d[D] or 6d[E]
7/8"–1"	10d[D] or 8d[E]
1 1/8"–1 1/4"	10d[D] or 8d[E]
COMBINATION SUBFLOOR–UNDERLAYMENT (TO FRAMING): 3/4" AND LESS	6d[E]
7/8"–1"	8d[E]
1 1/8"–1 1/4"	10d[D] or 8d[E]
32. PANEL SIDING (TO FRAMING): 1/2" OR LESS	6d[F]
5/8"	8d[F]
33. FIBERBOARD SHEATHING: [G] 1/2"	6d[D]
25/32"	8d[D]
34. INTERIOR PANELING 1/4"	4d[J]
3/8"	6d[K]

CBC TABLE 2304.10.1 FASTENING SCHEDULE NOTES

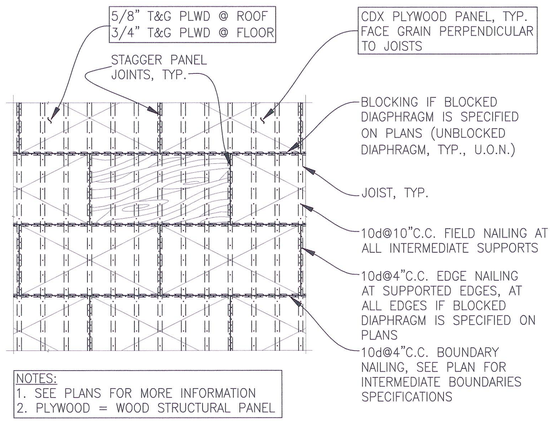
A. COMMON OR BOX NAILS ARE PERMITTED TO BE USED EXCEPT WHERE OTHERWISE STATED.
B. NAILS SPACED AT 6 INCHES ON CENTER AT EDGES, 12 INCHES AT INTERMEDIATE SUPPORTS EXCEPT 6 INCHES AT SUPPORTS WHERE SPANS ARE 48 INCHES OR MORE. FOR NAILING OF WOOD STRUCTURAL PANEL AND PARTICLE BOARD DIAPHRAGMS AND SHEAR WALLS, REFER TO SECTION 2305. NAILS FOR WALL SHEATHING ARE PERMITTED TO BE COMMON, BOX OR CASING.
C. COMMON OR DEFORMED SHANK (6D – 2" X 0.113"; 8D – 2½" X 0.131"; 10D – 3" X 0.148").
D. COMMON (6D – 2" X 0.113"; 8D – 2½" X 0.131"; 10D – 3" X 0.148").
E. DEFORMED SHANK (6D – 2" X 0.113"; 8D – 2½" X 0.131"; 10D – 3" X 0.148").
F. CORROSION–RESISTANT SIDING (6D – 1⅞" X 0.106"; 8D – 2⅜" X 0.128") OR CASING (6D – 2" X 0.099"; 8D – 2½" X 0.113") NAIL.
G. FASTENERS SPACED 3 INCHES ON CENTER AT EXTERIOR EDGES AND 6 INCHES ON CENTER AT INTERMEDIATE SUPPORTS, WHEN USED AS STRUCTURAL SHEATHING. SPACING SHALL BE 6 INCHES ON CENTER ON THE EDGES AND 12 INCHES ON CENTER AT INTERMEDIATE SUPPORTS FOR NONSTRUCTURAL APPLICATIONS.
H. CORROSION–RESISTANT ROOFING NAILS WITH 7/16–INCH–DIAMETER HEAD AND 1½–INCH LENGTH FOR ½–INCH SHEATHING AND 1¾–INCH LENGTH FOR 25/32–INCH SHEATHING.
I. CORROSION–RESISTANT STAPLES WITH NOMINAL 7/16–INCH CROWN AND 1⅛–INCH LENGTH FOR ½–INCH SHEATHING AND 1½–INCH LENGTH FOR 25/32–INCH SHEATHING. PANEL SUPPORTS AT 16 INCHES (20 INCHES IF STRENGTH AXIS IN THE LONG DIRECTION OF THE PANEL, UNLESS OTHERWISE MARKED).
J. CASING (1½" X 0.080") OR FINISH (1½" X 0.072") NAILS SPACED 6 INCHES ON PANEL EDGES, 12 INCHES AT INTERMEDIATE SUPPORTS.
K. PANEL SUPPORTS AT 24 INCHES. CASING OR FINISH NAILS SPACED 6 INCHES ON PANEL EDGES, 12 INCHES AT INTERMEDIATE SUPPORTS.
L. FOR ROOF SHEATHING APPLICATIONS, 8D NAILS (2½" X 0.113") ARE THE MINIMUM REQUIRED FOR WOOD STRUCTURAL PANELS.
M. STAPLES SHALL HAVE A MINIMUM CROWN WIDTH OF 7/16 INCH.
N. FOR ROOF SHEATHING APPLICATIONS, FASTENERS SPACED 4 INCHES ON CENTER AT EDGES, 8 INCHES AT INTERMEDIATE SUPPORTS.
O. FASTENERS SPACED 4 INCHES ON CENTER AT EDGES, 8 INCHES AT INTERMEDIATE SUPPORTS SUB FLOOR AND WALL SHEATHING AND 3 INCHES ON CENTER AT EDGES, 6 INCHES AT INTERMEDIATE SUPPORTS FOR ROOF SHEATHING.
P. FASTENERS SPACED 4 INCHES ON CENTER AT EDGES, 8 INCHES AT INTERMEDIATE SUPPORTS.



NOTES:
1. MAX. HOLE DIA. @ STUDS SHALL BE 0.4w
2. MAX. HOLE DIA. @ BEAM, JOIST OR RAFTER SHALL BE d/4 OR 2" WHICHEVER IS SMALLER.
3. HOLES NOT PERMITED WHEN d=4" OR LESS.
4. ALL HOLES SHALL HAVE ENGINEER'S APPROVAL.

1 TYPICAL HOLES IN BEAMS, JOISTS, RAFTERS AND STUDS

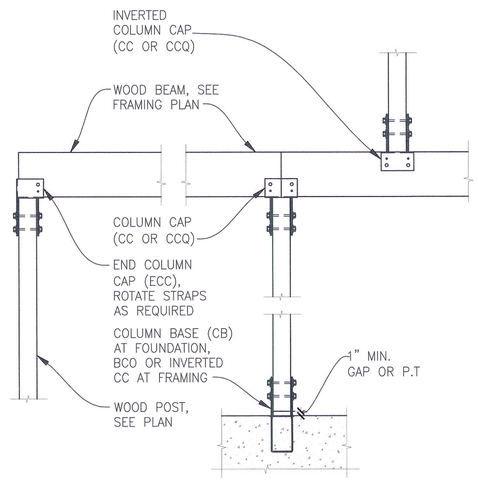
SCALE: 3/4" = 1'–0"



NOTES:
1. SEE PLANS FOR MORE INFORMATION
2. PLYWOOD = WOOD STRUCTURAL PANEL

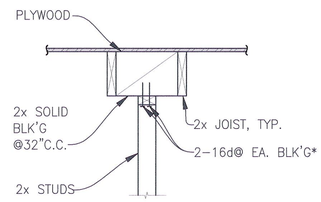
2 TYPICAL PLYWOOD DIAPHRAGM SHEATHING (PLAN VIEW)

SCALE: 3/4" = 1'–0"

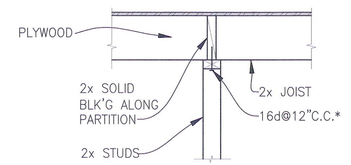


3 TYPICAL BEAM TO POST CONNECTION

SCALE: 3/4" = 1'–0"



PARTITION PARALLEL TO FLOOR JOISTS

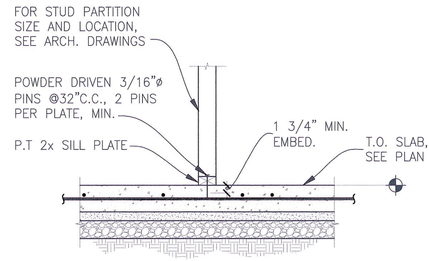


PARTITION PERPENDICULAR TO FLOOR JOISTS

*OPTION: PROVIDE STC CLIP TO ROOF TRUSS OR BEAM

4 TYPICAL NON–BEARING / NON–SHEARWALL SUPPORT @ ROOF

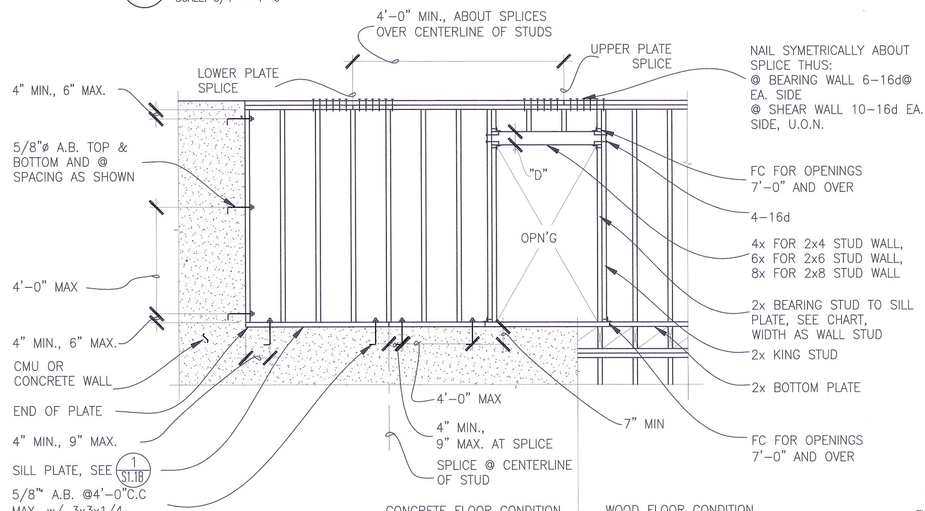
SCALE: 3/4" = 1'–0"



NOTES:
1. FOR SLAB THICKNESS, REINFORCEMENT AND BASE MATERIALS SEE PLAN.
2. AT P.T. SLAB PROVIDE MAX. 3/4" EMBEDMENT.

5 TYPICAL NON–BEARING / NON–SHEARWALL CONNECTION AT CONCRETE SLAB

SCALE: 3/4" = 1'–0"



HEADER SPANS "S"	"D" MIN.	ADDN'L BEARING STUDS
S ≤ 4'–0"	5 1/2"	0
4'–0" < S ≤ 8'–0"	7 1/4"	1
8'–0" < S ≤ 10'–0"	9 1/4"	2
S > 10'–0"	SEE PLAN	3

NOTE: THIS DETAIL IS NOT FOR SHEARWALLS, SEE 1 S1.1B

6 TYPICAL FRAMING @ OPENINGS, TOP PLATE SPLICES, ETC.

SCALE: 3/4" = 1'–0"

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AUG 12 2024

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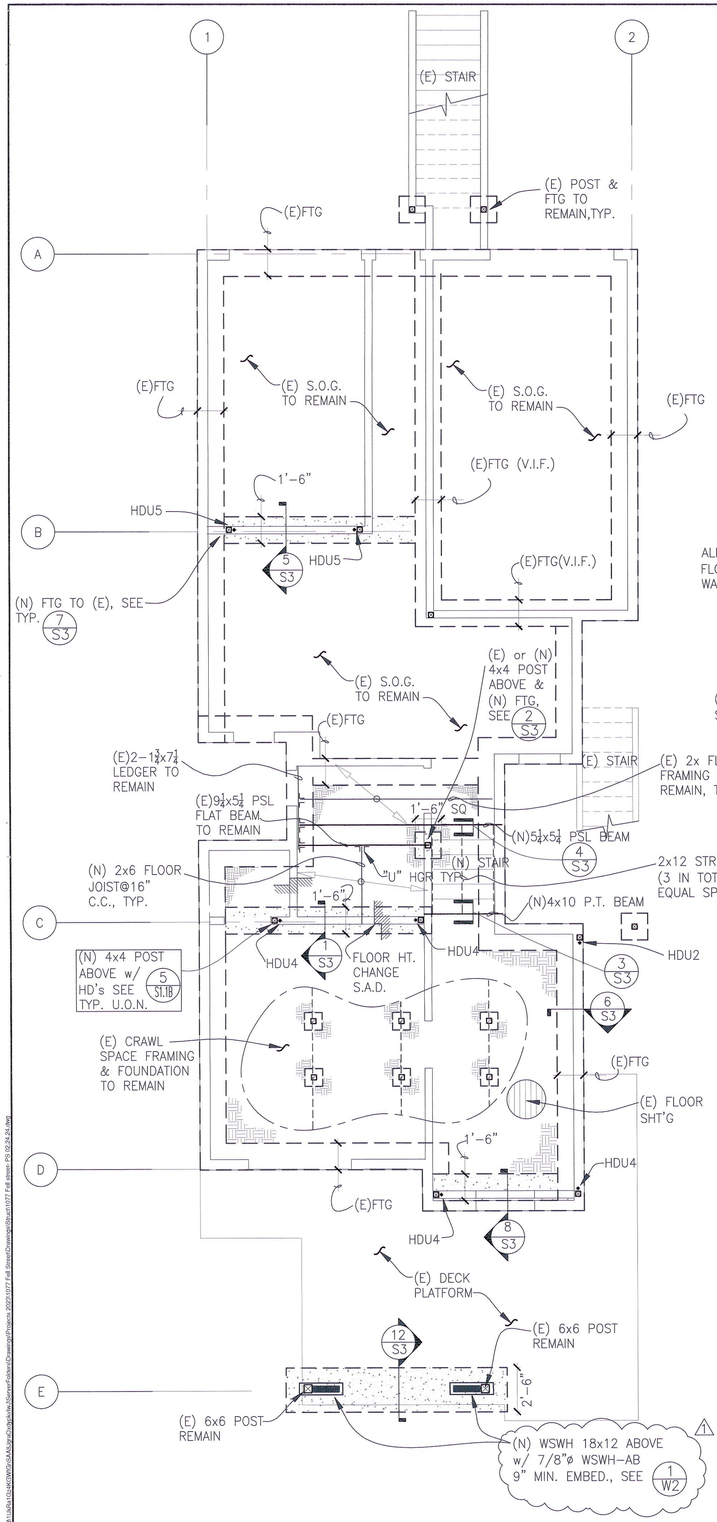
TYPICAL WOOD DETAILS

VOLUNTARY STRENGTHENING

1077 FELL STREET
SAN FRANCISCO, CA

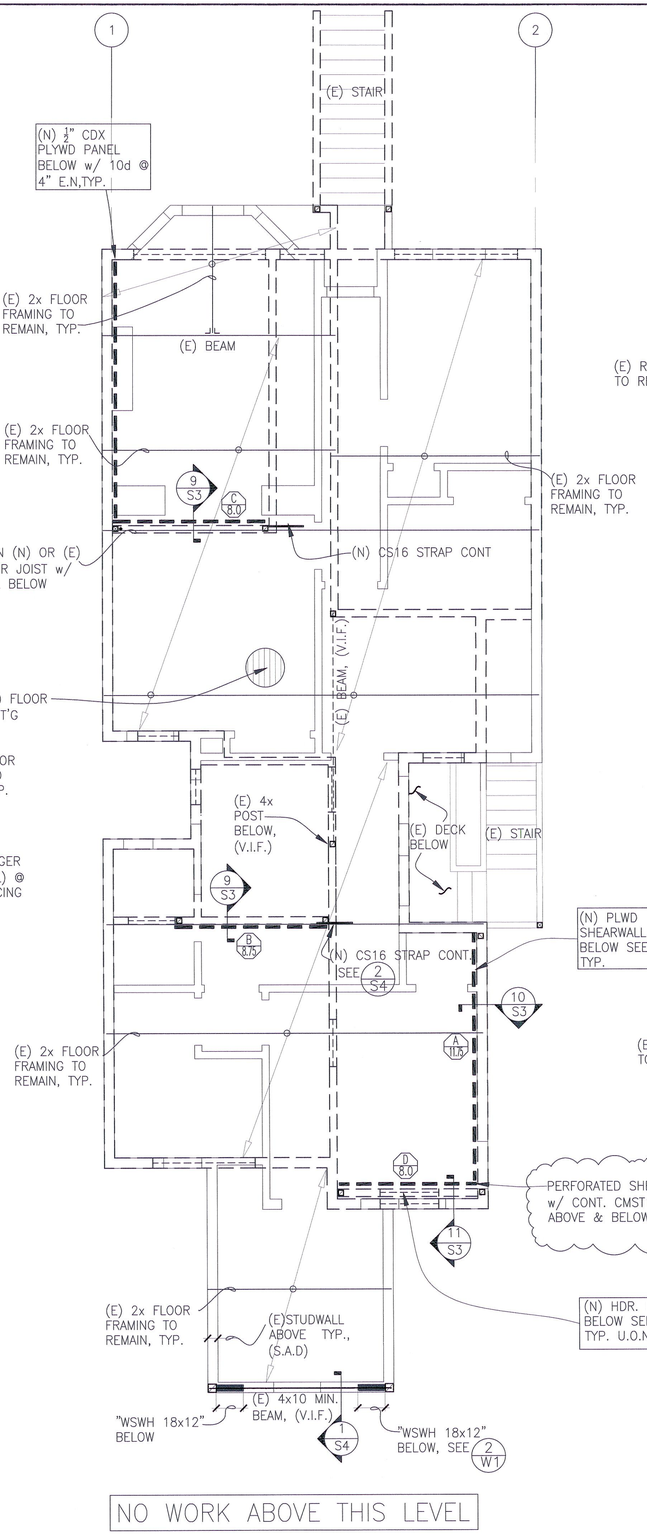
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FIRST FLOOR / FOUNDATION PLAN

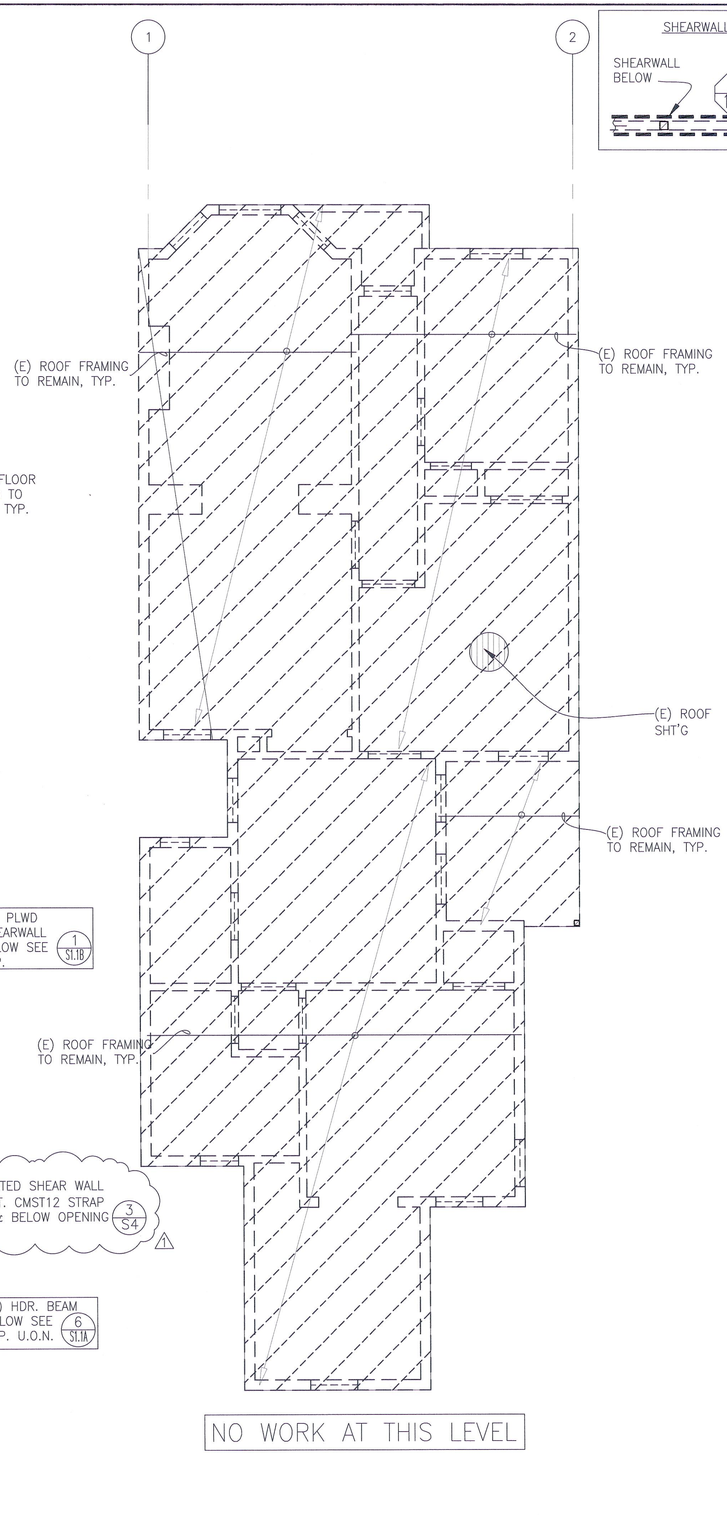
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SECOND FLOOR FRAMING PLAN

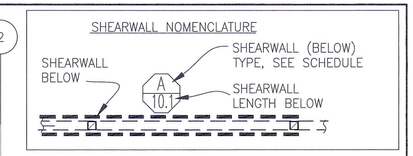
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ROOF FRAMING PLAN

SCALE: 1/4"=1'-0"



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VOLUNTARY STRENGTHENING

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FIRST FLOOR FOUNDATION PLAN
SECOND FLOOR FRAMING PLAN
ROOF FRAMING PLAN

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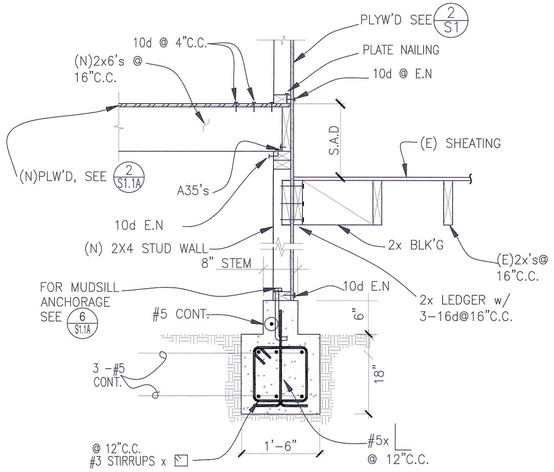
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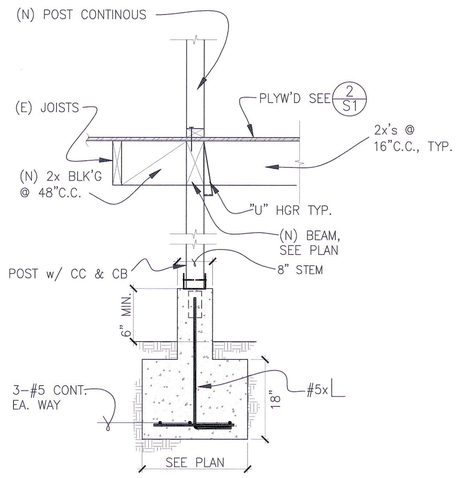
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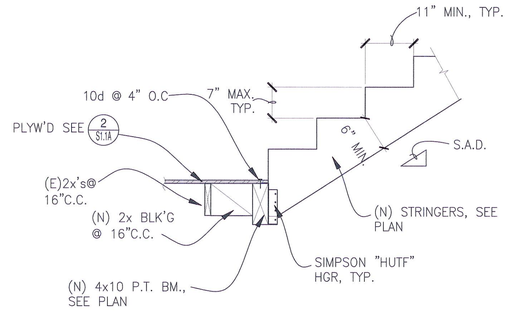
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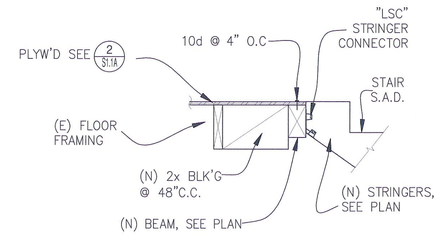
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9 — SCALE: 3/4" = 1'-0"

10 — SCALE: 3/4" = 1'-0"

11 — SCALE: 3/4" = 1'-0"

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AUG 12 2024

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12 — SCALE: 3/4" = 1'-0"

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REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA — DAVID YEN CHEN — No. 25572 — CIVIL

	DATE	REVISIONS
1	05/17/24	PC REV1

STRUCTURAL DETAILS

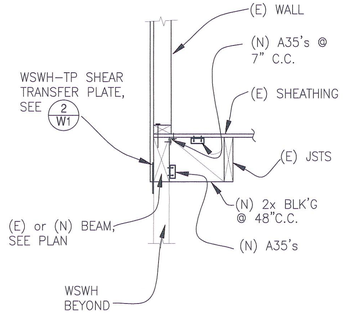
VOLUNTARY STRENGTHENING

1077 FELL STREET
SAN FRANCISCO, CA

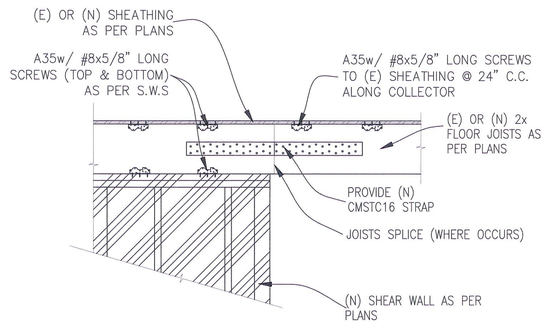
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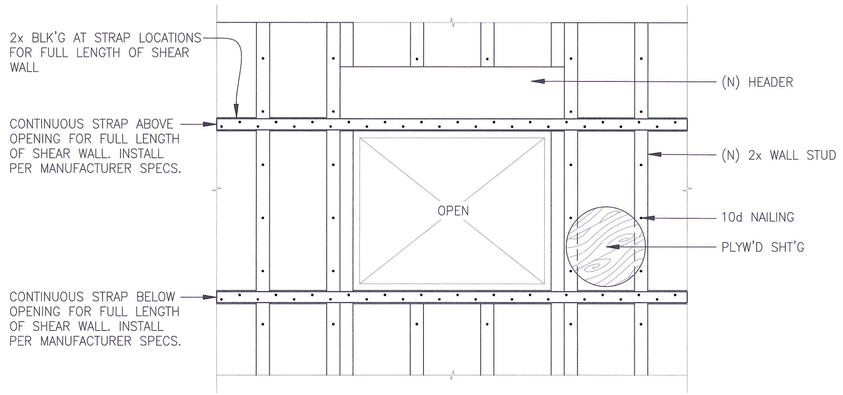
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PLOT DATE: 07-24-24 PLOTTED BY: darquisorm



1 — SCALE: 3/4" = 1'-0"



2 — SCALE: 3/4" = 1'-0"



3 — SCALE: 3/4" = 1'-0"

ENERTIA DESIGNS
ARCHITECTURAL ENGINEERING & INTERIOR
EMAIL: INFO@ENERTIADESIGNS.NET
OFFICE: 415.626.8300
FAX: 415.701.0212
1187 MISSION STREET FL 1
SAN FRANCISCO, CA 94103

	DATE	REVISIONS
1	05/17/24	PC REV1

STRUCTURAL DETAILS

RECEIVED
AUG 12 2024
DEPT. OF BUILDING INSPECTION
THIS PLAN MEETS THE QUALITY STANDARD FOR IMAGING ACCEPTED

Philip Chan, DBI
AUG 12 2024

SAN FRANCISCO DEPT. OF BUILDING INSPECTION ISSUED
OCT 02 2024

VOLUNTARY STRENGTHENING

1077 FELL STREET
SAN FRANCISCO, CA

Date:	03/01/2024
Scale:	AS SHOWN
Drawn By:	DM
Job No:	23059
Sheet	S4
Of	7 Sheets

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PLOT DATE: 07-24-24 PLOTTED BY: darquisonm

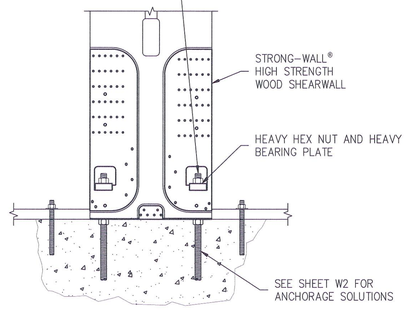
STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL MODELS

MODEL NO.	W (in.)	H (in.)	ANCHOR BOLTS		TOTAL WALL WEIGHT (lb.)
			QUANTITY	DIA. (in.)	
WSWH12x7	12	84	2	1	105
WSWH18x7	18	84	2	1	155
WSWH12x8	12	96	2	1	120
WSWH18x8	18	96	2	1	175
WSWH24x8	24	96	2	1	225
WSWH12x9	12	108	2	1	130
WSWH18x9	18	108	2	1	195
WSWH24x9	24	108	2	1	250
WSWH12x10	12	120	2	1	145
WSWH18x10	18	120	2	1	210
WSWH24x10	24	120	2	1	275
WSWH12x12	12	144	2	1	165
WSWH18x12	18	144	2	1	245
WSWH24x12	24	144	2	1	325
WSWH18x14	18	168	2	1	285
WSWH24x14	24	168	2	1	370
WSWH24x16	24	192	2	1	420
WSWH18x20	18	240	2	1	390
WSWH24x20	24	240	2	1	520

NOTES :
1. FOR HEIGHTS NOT LISTED, ORDER THE NEXT TALLEST PANEL AND TRIM TO FIT. MINIMUM TRIMMED HEIGHT FOR ALL PANELS IS 74⅛".
2. ALL PANELS COME WITH PRE-ATTACHED HOLDOWNS, TWO HEAVY HEX NUTS, TWO HEAVY BEARING PLATES, ONE WSWH-TP TOP CONNECTION PLATE WITH REQUIRED FASTENERS AND INSTALLATION INSTRUCTIONS.
3. ALL PANELS ARE 3½" THICK.

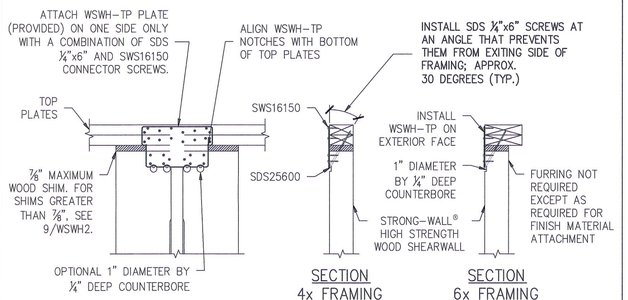
PLACE STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL OVER THE ANCHOR BOLTS AND SECURE WITH HEAVY BEARING PLATES AND HEAVY HEX NUTS (PROVIDED). DO NOT USE AN IMPACT WRENCH. USE 1⅛" WRENCH FOR 1" NUT. TIGHTEN ANCHOR NUTS FINGER TIGHT + ½" TURN.

DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.



WSWH-TP CONNECTION		
MODEL NO.	FASTENER QUANTITY	
	SWS16150	SDS25600
WSWH-TP12	14	2
WSWH-TP18	26	4
WSWH-TP24	46	8

DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

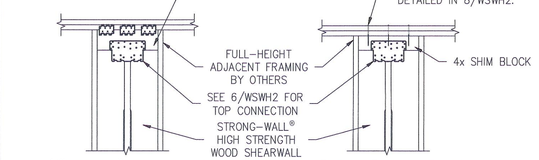


LTP4 SPACING BY OTHERS

4x SHIM BLOCK

DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

INSTALL SDS ¼"x6" SCREWS (MIN.) FROM THE TOP SIDE OF THE PLATES PER QTY. AND SPACING REQUIREMENTS DETAILED IN 8/WSWH2.



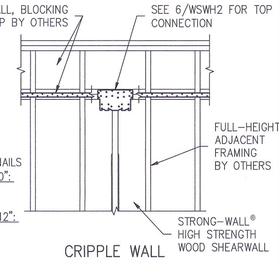
4⅛" TO 12" SHIM BLOCK

1" TO 4" SHIM BLOCK

DESIGNER SHALL DESIGN AND DETAIL FOR:
1. SHEAR TRANSFER
2. OUT-OF-PLANE LOADING EFFECT
3. INCREASED OVERTURNING AND DRIFT DUE TO ADDITIONAL HEIGHT

CRIPPLE SHEARWALL, BLOCKING AND STRAP BY OTHERS

SEE 6/WSWH2 FOR TOP CONNECTION



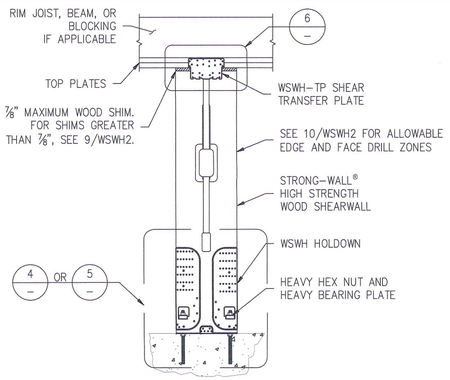
CRIPPLE WALL

FOR 8" TO 12" BLOCK DEPTHS:
ATTACH SIMPSON STRONG-TIE® CS16 STRAPS AT EDGE OF WSWH PANEL (EACH SIDE) USING 10dx1½" NAILS

SHIM BLOCK HEIGHTS GREATER THAN 8" AND UP TO 10":
- 8 NAILS INTO BLOCK
- 8 NAILS INTO WSWH PANEL

SHIM BLOCK HEIGHTS GREATER THAN 10" AND UP TO 12":
- 10 NAILS INTO BLOCK
- 10 NAILS INTO WSWH PANEL

STRONG-WALL® WSWH MODELS | 1

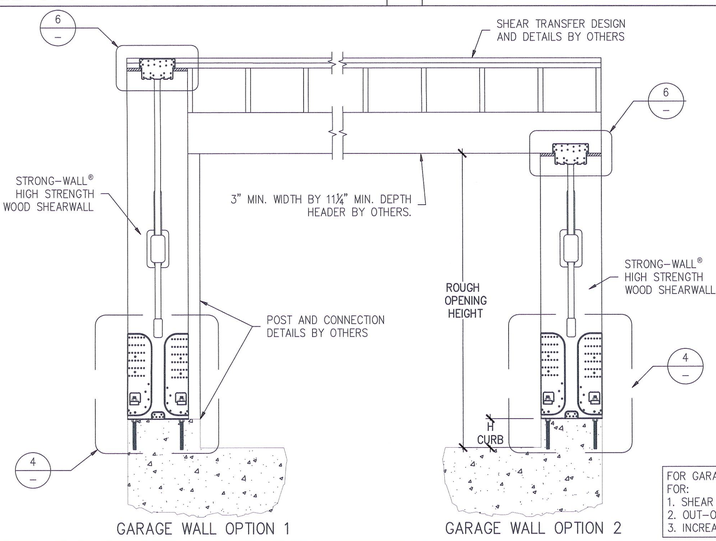


DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

ENSURE CONCRETE IS LEVEL AND SMOOTH BENEATH PANEL. GRIND OR FILL AS NECESSARY.

SINGLE STORY WSWH ON CONCRETE | 2

ALTERNATE WSWH GARAGE FRONT OPTIONS | 3



DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

WHEN WSWH-PS STRAPS OMITTED, ALLOWABLE SHEAR VALUES FOR STANDARD PANEL APPLY.

GARAGE HEADER ROUGH OPENING HEIGHT

MODEL NO.	TRIMMED PANEL HEIGHT	H CURB	ROUGH OPENING HEIGHT
WSWH12x7 WSWH18x7 WSWH24x7	78"	5½"	6'-11½"
		6"	7'-0"
WSWH12x8 WSWH18x8 WSWH24x8	85½"	0"	7'-1½"
	93¼"	5½"	8'-2¾"
		6"	8'-3¾"

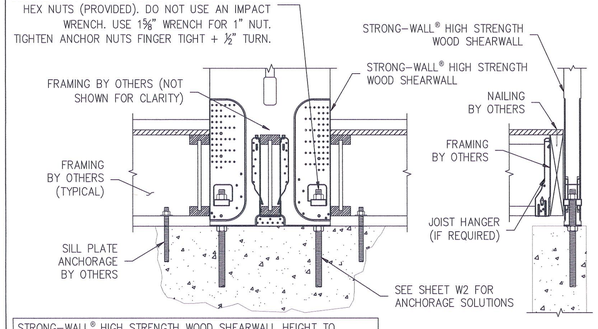
NOTES :
1. IF REQUIRED ROUGH OPENING HEIGHT EXCEEDS TABLE VALUE, SPECIFY NEXT TALLER PANEL AND TRIM AS NECESSARY. THE STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL MAY BE TRIMMED TO A MINIMUM HEIGHT OF 74⅛".
2. FURRING DOWN GARAGE HEADER MAY BE REQUIRED FOR CORRECT ROUGH OPENING HEIGHT.

FOR GARAGE WALL OPTION 2, DESIGNER SHALL DESIGN AND DETAIL FOR:
1. SHEAR TRANSFER
2. OUT-OF-PLANE LOADING EFFECT
3. INCREASED OVERTURNING AND DRIFT DUE TO ADDITIONAL HEIGHT

STANDARD INSTALLATION BASE CONNECTION | 4

PLACE STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL OVER THE ANCHOR BOLTS AND SECURE WITH HEAVY BEARING PLATES AND HEAVY HEX NUTS (PROVIDED). DO NOT USE AN IMPACT WRENCH. USE 1⅛" WRENCH FOR 1" NUT. TIGHTEN ANCHOR NUTS FINGER TIGHT + ½" TURN.

DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.



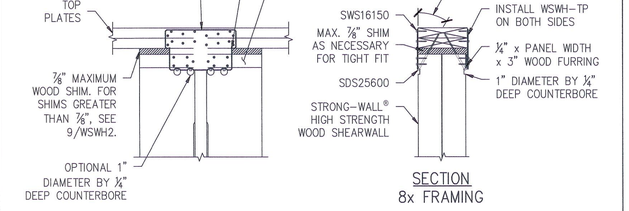
STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL HEIGHT TO INCLUDE THE DEPTH OF THE FLOOR SYSTEM AND SHALL BE INSTALLED DIRECTLY ON THE FOUNDATION. SPECIFY PANEL HEIGHT FROM TOP OF FOUNDATION TO UNDERSIDE OF TOP PLATES OR BEAM.

WOOD FLOOR SYSTEM BASE CONNECTION | 5

TOP CONNECTION | 6

WSWH-TP CONNECTION		
MODEL NO.	FASTENER QUANTITY	
	SWS16150	SDS25600
WSWH-TP12	28	4
WSWH-TP18	52	8
WSWH-TP24	92	16

DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

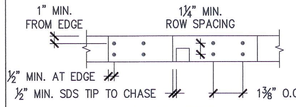


BACK-TO-BACK TOP CONNECTION | 7

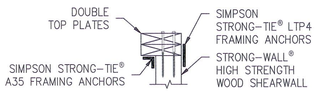
QTY. OF SDS¼"x6" SCREWS REQ'D.	
WSWH12	4
WSWH18	8
WSWH24	16

EDGE DISTANCE FOR SCREWS		
SLOPE	A (in.)	B (in.)
0:12-4:12	2	3
5:12-8:12	1½	4½
9:12-12:12	1½	5½

NOTES :
1. MAINTAIN END DISTANCES TO PREVENT SCREWS FROM PENETRATING THROUGH THE OUTER EDGES.
2. INSTALL SCREWS PERPENDICULAR TO THE TOP PLATE.
3. EDGE DISTANCES ASSUME DOUBLE TOP PLATE.

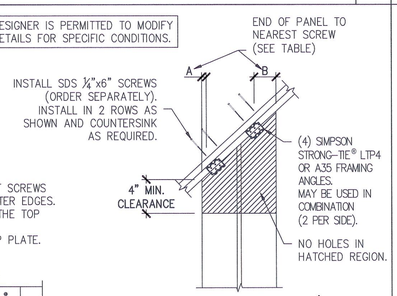


PLAN VIEW
SDS SCREW SPACING



SECTION VIEW
2X6 OR WIDER FRAMING

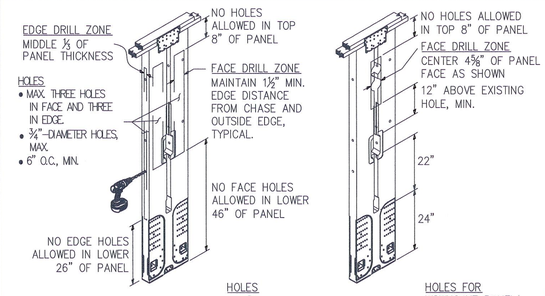
DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.



INSTALLATION NOTES :
1. ACTUAL CUT LENGTH (L) MUST BE GREATER THAN OR EQUAL TO PANEL WIDTH (W).
2. THIS DETAIL APPLICABLE FOR SLOPES UP TO 12:12.
3. PANELS TALLER THAN 12' MUST BE DESIGNED FOR THE APPLICATION.

RAKE WALL | 8

TOP OF WALL HEIGHT ADJUSTMENTS | 9



HOLES
- ⅝"-DIA. HOLES, MAX.
- MAX. OF TWO ⅝"-DIA. HOLES OR ONE 4½"x12" HOLE.
- NO MINIMUM ON-CENTER SPACING REQUIRED.

HOLES FOR WSWH24X7 PANEL ONLY
- MAX. OF ONE ⅝"x6" HOLE
- 8" FROM TOP OF PANEL, MIN.

ALLOWABLE SMALL HOLES
FACE AND EDGE DRILL ZONES

ALLOWABLE LARGE HOLES
IN ADDITION TO ALLOWABLE SMALL HOLES

TRIM ZONE AND ALLOWABLE HOLES | 10

NOTES | 11

1. STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL IS MANUFACTURED AND TRADEMARKED BY "SIMPSON STRONG-TIE COMPANY INC." HOME OFFICE: 5956 W. LAS POSITAS BLVD., PLEASANTON, CA 94588 TEL: (800) 999-5099, FAX: (925) 847-1597. "SIMPSON STRONG-TIE COMPANY INC." IS AN ISO 9001-2008 REGISTERED COMPANY.
2. USE OF THIS PRODUCT IS SUBJECT TO THE APPROVAL OF THE LOCAL BUILDING DEPARTMENT.
3. THIS PRODUCT IS PART OF THE OVERALL LATERAL FORCE RESISTING SYSTEM OF THE STRUCTURE. DESIGN OF THE BUILDING'S LATERAL FORCE RESISTING SYSTEM, INCLUDING THE LOAD PATH TO TRANSFER LATERAL FORCES FROM THE STRUCTURE TO THE GROUND, IS THE RESPONSIBILITY OF THE DESIGNER.
4. ENGINEER OF RECORD IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.
5. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, CONDITIONS, ELEVATIONS, ETC. PRIOR TO INSTALLATION OF ANY COMPONENTS FOR THE STRONG-WALL SB SYSTEM. IF ANY DISCREPANCIES ARE FOUND, THEY SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGNER FOR CLARIFICATION PRIOR TO CONSTRUCTION.
6. INSTALLATION OF PRODUCT SHALL BE DONE IN CONFORMANCE TO THESE DRAWINGS. THE PERFORMANCE OF MODIFIED PRODUCTS OR ALTERED INSTALLATION PROCEDURES ARE THE SOLE RESPONSIBILITY OF THE DESIGNER.
7. SIMPSON STRONG-TIE COMPANY INC. RESERVES THE RIGHT TO CHANGE SPECIFICATIONS, DESIGNS, AND MODELS WITHOUT NOTICE OR LIABILITY FOR SUCH CHANGES.
8. ALL HARDWARE CALLED OUT IS SIMPSON STRONG-TIE.
9. SEE ICC-ES ESR-2652 OR CITY OF LOS ANGELES RR25730 AS APPLICABLE FOR ADDITIONAL INFORMATION.

Philip Chan, DBI
AUG 12 2024

SAN FRANCISCO DEPT. OF BUILDING INSPECTION ISSUED OCT 02 2024

RECEIVED AUG 12 2024 DEPT. OF BUILDING INSPECTION SAN FRANCISCO PLAN REVIEW STAMP BUILDING CODE QUALITY CONTROL ACCEPTED

ENERTIA DESIGNS
ARCHITECTURAL ENGINEERING & INTERIOR
EMAIL: INFO@ENERTIADESIGNS.NET
OFFICE: 415.626.8300
FAX: 415.701.0212
1167 MISSION STREET FL-1
SAN FRANCISCO, CA 94103

	DATE	REVISIONS
1		
2		
3		
4		

STRUCTURAL DETAILS

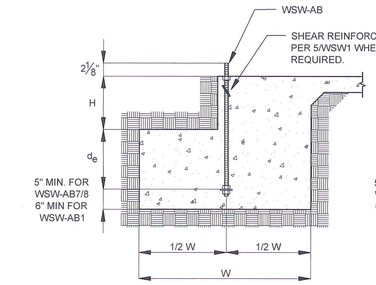
VOLUNTARY STRENGTHENING

1077 FELL STREET
SAN FRANCISCO, CA

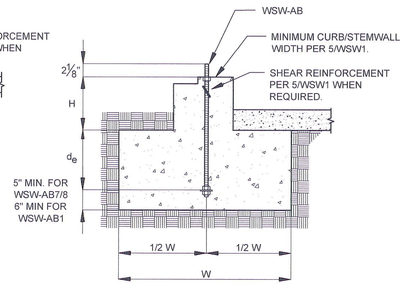
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Sheet	W1
Of	7 Sheets

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PLOT DATE: 07-24-24 PLOTTED BY: darquisonm



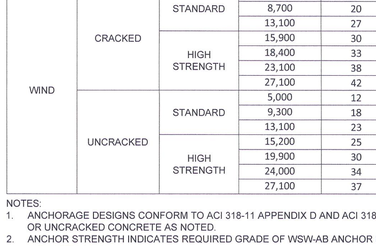
SLAB ON GRADE FOUNDATION



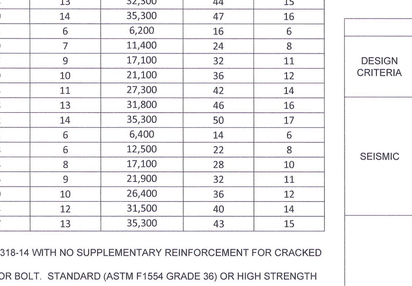
BRICK LEDGE FOUNDATION

NOTES:
1. SEE 2/WSW1 FOR DIMENSIONS AND ADDITIONAL NOTES.
2. SEE 5/WSW1 FOR SHEAR REINFORCEMENT WHEN REQUIRED.
3. MAXIMUM H = l_e - d_e. SEE 3/WSW1 AND 4/WSW1 FOR l_e.

REGISTERED DESIGN PROFESSIONAL IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

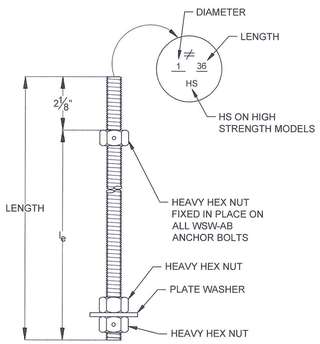


INTERIOR FOUNDATION



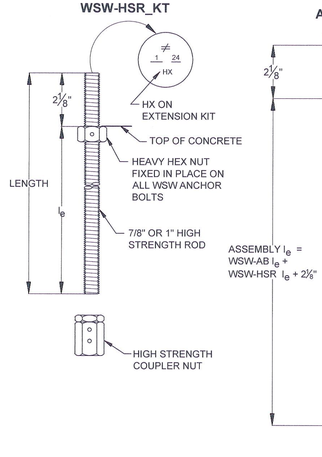
CURB OR STEMWALL FOUNDATION

STRONG-WALL® WSW ANCHORAGE - TYPICAL SECTIONS | 1



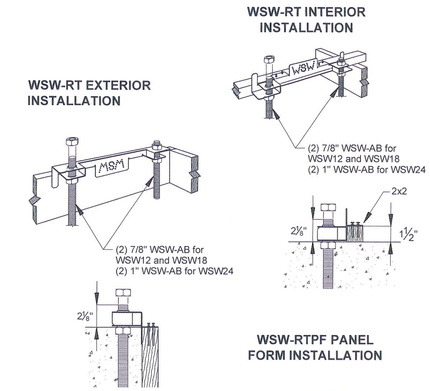
WSW ANCHOR BOLTS | 3

WSW PANEL MODEL	MODEL NO.	DIAMETER	LENGTH	l_e
WSW12 AND WSW18	WSW-AB7/8x24	7/8"	24"	20"
	WSW-AB7/8x24HS	7/8"	24"	20"
	WSW-AB7/8x30	7/8"	30"	26"
	WSW-AB7/8x30HS	7/8"	30"	26"
	WSW-AB7/8x36HS	7/8"	36"	32"
WSW24	WSW-AB1x24	1"	24"	20"
	WSW-AB1x24HS	1"	24"	20"
	WSW-AB1x30	1"	30"	26"
	WSW-AB1x30HS	1"	30"	26"
	WSW-AB1x36HS	1"	36"	32"

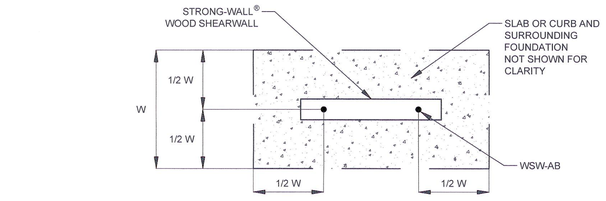


WSW ANCHOR BOLT EXTENSION | 4

WSW PANEL MODEL	MODEL NO.	DIAMETER	LENGTH	l_e
WSW12 AND WSW18	WSW-HSR7/8x24KT	7/8"	24"	22"
	WSW-HSR7/8x36KT	7/8"	36"	34"
WSW24	WSW-HSR1x24KT	1"	24"	22"
	WSW-HSR1x36KT	1"	36"	34"



WSW ANCHOR BOLT TEMPLATES | 6



FOUNDATION PLAN VIEW

WSW ANCHORAGE SOLUTIONS FOR 2500 PSI CONCRETE

DESIGN CRITERIA	CONCRETE CONDITION	ANCHOR STRENGTH	WSW-AB7/8 ANCHOR BOLT ASD ALLOWABLE TENSION (lb.)	WSW-AB7/8 ANCHOR BOLT W (in.)	WSW-AB7/8 ANCHOR BOLT d_e (in.)	WSW-AB1 ANCHOR BOLT ASD ALLOWABLE TENSION (lb.)	WSW-AB1 ANCHOR BOLT W (in.)	WSW-AB1 ANCHOR BOLT d_e (in.)
1 SEISMIC	CRACKED	STANDARD	11,900	27	9	16,100	33	11
			13,100	29	10	17,100	35	12
		HIGH STRENGTH	24,900	43	15	33,000	51	17
			27,100	46	16	35,300	54	18
	UNCRACKED	STANDARD	12,500	24	8	15,700	28	10
			13,100	25	9	17,100	30	10
		HIGH STRENGTH	25,300	38	13	32,300	44	15
			27,100	40	14	35,300	47	16
WIND	CRACKED	STANDARD	5,100	14	6	6,200	16	6
			8,700	20	7	11,400	24	8
		HIGH STRENGTH	13,100	27	9	17,100	32	11
			15,900	30	10	21,100	36	12
			18,400	33	11	27,300	42	14
			23,100	38	13	31,800	46	16
			27,100	42	14	35,300	50	17
	UNCRACKED	STANDARD	5,000	12	6	6,400	14	6
			9,300	18	6	12,500	22	8
		HIGH STRENGTH	13,100	23	8	17,100	28	10
			15,200	25	9	21,900	32	11
			19,900	30	10	26,400	36	12
			24,000	34	12	31,500	40	14
			27,100	37	13	35,300	43	15

NOTES:
1. ANCHORAGE DESIGNS CONFORM TO ACI 318-11 APPENDIX D AND ACI 318-14 WITH NO SUPPLEMENTARY REINFORCEMENT FOR CRACKED OR UNCRACKED CONCRETE AS NOTED.
2. ANCHOR STRENGTH INDICATES REQUIRED GRADE OF WSW-AB ANCHOR BOLT. STANDARD (ASTM F1554 GRADE 36) OR HIGH STRENGTH (HS) (ASTM A449).
3. SEISMIC INDICATES SEISMIC DESIGN CATEGORY C - F. DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C MAY USE WIND ANCHORAGE SOLUTIONS. SEISMIC ANCHORAGE DESIGNS CONFORM TO ACI 318-11 SECTION D.3.3.4.3 AND ACI 318-14 SECTION 17.2.3.4.3.
4. WIND INCLUDES SEISMIC DESIGN CATEGORY A AND B AND DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C.
5. FOUNDATION DIMENSIONS ARE FOR ANCHORAGE ONLY. FOUNDATION DESIGN (SIZE AND REINFORCEMENT) BY OTHERS. THE REGISTERED DESIGN PROFESSIONAL MAY SPECIFY ALTERNATE EMBEDMENT, FOOTING SIZE OR ANCHOR BOLT.
6. REFER TO 1/WSW1 FOR d_e.

STRONG-WALL® WOOD SHEARWALL TENSION ANCHORAGE SCHEDULE 2,500, 3,000 AND 4,500 PSI | 2

WSW ANCHORAGE SOLUTIONS FOR 3000 PSI CONCRETE

DESIGN CRITERIA	CONCRETE CONDITION	ANCHOR STRENGTH	WSW-AB7/8 ANCHOR BOLT ASD ALLOWABLE TENSION (lb.)	WSW-AB7/8 ANCHOR BOLT W (in.)	WSW-AB7/8 ANCHOR BOLT d_e (in.)	WSW-AB1 ANCHOR BOLT ASD ALLOWABLE TENSION (lb.)	WSW-AB1 ANCHOR BOLT W (in.)	WSW-AB1 ANCHOR BOLT d_e (in.)
SEISMIC	CRACKED	STANDARD	12,300	26	9	16,000	31	11
			13,100	28	10	17,100	33	11
		HIGH STRENGTH	25,200	41	14	32,700	48	16
			27,100	43	15	35,300	51	17
	UNCRACKED	STANDARD	12,000	22	8	16,300	27	9
			13,100	24	8	17,100	28	10
		HIGH STRENGTH	25,300	36	12	32,700	42	14
			27,100	38	13	35,300	44	15
WIND	CRACKED	STANDARD	5,000	13	6	5,600	14	6
			8,800	19	7	10,200	21	7
		HIGH STRENGTH	13,100	25	9	17,100	30	10
			15,700	28	10	20,100	33	11
			19,200	32	11	25,300	38	13
			23,200	36	12	32,300	44	15
			27,100	40	14	35,300	47	16
	UNCRACKED	STANDARD	5,500	12	6	6,200	13	6
			8,500	16	6	12,800	21	7
		HIGH STRENGTH	13,100	22	8	17,100	26	9
			16,600	25	9	21,800	30	10
			19,700	28	10	25,200	33	11
			24,000	32	11	31,700	38	13
			27,100	35	12	35,300	41	14

WSW ANCHORAGE SOLUTIONS FOR 4500 PSI CONCRETE

DESIGN CRITERIA	CONCRETE CONDITION	ANCHOR STRENGTH	WSW-AB7/8 ANCHOR BOLT ASD ALLOWABLE TENSION (lb.)	WSW-AB7/8 ANCHOR BOLT W (in.)	WSW-AB7/8 ANCHOR BOLT d_e (in.)	WSW-AB1 ANCHOR BOLT ASD ALLOWABLE TENSION (lb.)	WSW-AB1 ANCHOR BOLT W (in.)	WSW-AB1 ANCHOR BOLT d_e (in.)
SEISMIC	CRACKED	STANDARD	12,600	23	8	16,000	27	9
			13,100	24	8	17,100	29	10
		HIGH STRENGTH	24,800	36	12	32,100	42	14
			27,100	38	13	35,300	45	15
	UNCRACKED	STANDARD	12,700	20	7	15,700	23	8
			13,100	21	7	17,100	25	9
		HIGH STRENGTH	24,600	31	11	32,500	37	13
			27,100	34	12	35,300	39	13
WIND	CRACKED	STANDARD	5,400	12	6	6,800	14	6
			8,300	16	6	11,600	20	7
		HIGH STRENGTH	13,100	22	8	17,100	26	9
			15,300	24	8	21,400	30	10
			19,300	28	10	25,800	34	12
			23,600	32	11	31,000	38	13
			27,100	36	12	35,300	42	14
	UNCRACKED	STANDARD	6,800	12	6	6,800	12	6
			9,400	15	6	12,400	18	6
		HIGH STRENGTH	13,100	19	7	17,100	23	8
			16,800	22	8	21,600	26	9
			20,300	25	9	26,700	30	10
			24,100	28	10	32,200	34	12
			27,100	31	11	35,300	36	12

STRONG-WALL® WSW SHEAR ANCHORAGE SCHEDULE AND DETAILS | 5

STRONG-WALL® WOOD SHEARWALL SHEAR ANCHORAGE

MODEL	L_t OR L_h (in.)	SEISMIC [3] SHEAR REINFORCEMENT	SEISMIC [3] MINIMUM CURB/ STEMWALL WIDTH (in.)	WIND [4] SHEAR REINFORCEMENT	WIND [4] MINIMUM CURB/ STEMWALL WIDTH (in.)	WIND [4] ASD ALLOWABLE SHEAR LOAD, V (lb.) [6] UNCRACKED	WIND [4] ASD ALLOWABLE SHEAR LOAD, V (lb.) [6] CRACKED
WSW12	10¼	(1) #3 HAIRPIN	8[5]	SEE NOTE 6	6	1,035	740
WSW18	15	(1) #3 HAIRPIN	8[5]	(1) #3 HAIRPIN	6	HAIRPIN REINFORCEMENT ACHIEVES MAXIMUM ALLOWABLE SHEAR LOAD OF THE WSW	
WSW24	19	(2) #3 HAIRPINS	8[5]	(1) #3 HAIRPIN	6		

NOTES:
1. SHEAR ANCHORAGE DESIGNS CONFORM TO ACI 318-11 AND ACI 318-14 AND ASSUME MINIMUM 2,500 PSI CONCRETE.
2. SHEAR REINFORCEMENT IS NOT REQUIRED FOR INTERIOR FOUNDATION APPLICATIONS (PANEL INSTALLED AWAY FROM EDGE OF CONCRETE), OR BRACED WALL PANEL APPLICATIONS.
3. SEISMIC INDICATES SEISMIC DESIGN CATEGORY C THROUGH F. DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C MAY USE WIND ANCHORAGE SOLUTIONS.
4. WIND INCLUDES SEISMIC DESIGN CATEGORY A AND B AND DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C.
5. WHERE NOTED, MINIMUM CURB/STEMWALL WIDTH IS 6 INCHES WHEN STANDARD STRENGTH ANCHOR BOLT IS USED.
6. USE (1) #3 TIE FOR WSW12 WHEN PANEL DESIGN SHEAR FORCE EXCEEDS TABULATED ANCHORAGE ALLOWABLE SHEAR LOAD.
7. #4 GRADE 40 SHEAR REINFORCEMENT MAY BE SUBSTITUTED FOR WSW SHEAR ANCHORAGE SOLUTIONS.

ENERTIA DESIGNS
ARCHITECTURAL ENGINEERING & INTERIOR
EMAIL: INFO@ENERTIADESIGNS.NET
OFFICE: 415.626.8300
FAX: 415.701.0212
1167 MISSION STREET, FL 1
SAN FRANCISCO, CA 94103

	DATE	REVISIONS
1	05/17/24	PC REV1

VOLUNTARY STRENGTHENING — STRUCTURAL DETAILS

1077 FELL STREET
SAN FRANCISCO, CA

RECEIVED
AUG 12 2024
DEPT. OF BUILDING INSPECTION
THIS PLAN MEETS THE QUALITY STANDARDS FOR ACCEPTED PLAN CHECKING

Philip Chan, DBI
AUG 12 2024

REGISTERED DESIGN PROFESSIONAL IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

AUG 12 2024

SAN FRANCISCO DEPT. OF BUILDING INSPECTION ISSUED
OCT 02 2024

Date: 03/01/2024
Scale: AS SHOWN
Drawn By: DM
Job No: 23059
Sheet W2
Of 7 Sheets

DRAWING NAME: C:\Users\dmgen\dc\1\3\A\1TSJWWSV\SAA3\P2\Desktop\Ha_\Server\Active\Drawings\Projects 2023\1077 Fell Street\Drawings\Sheets\1077 Fell Sheet - DS 02.26.24.dwg
PLOT DATE: 07-24-24 PLOTTED BY: darquisnorm

EXHIBIT 5

STRUCTURAL CALCULATIONS FOR:

REMODEL
(FIELD REVISION)

1077 FELL STREET
SAN FRANCISCO, CA

REPORT PREPARED BY:

ENERTIA DESIGNS
1167 MISSION STREET, FL.1
SAN FRANCISCO, CA 94103
P: (415) 626-8300
F: (415) 701-0212



ED PROJECT #23059

DATE: May 27, 2025

ENERTIA DESIGNS

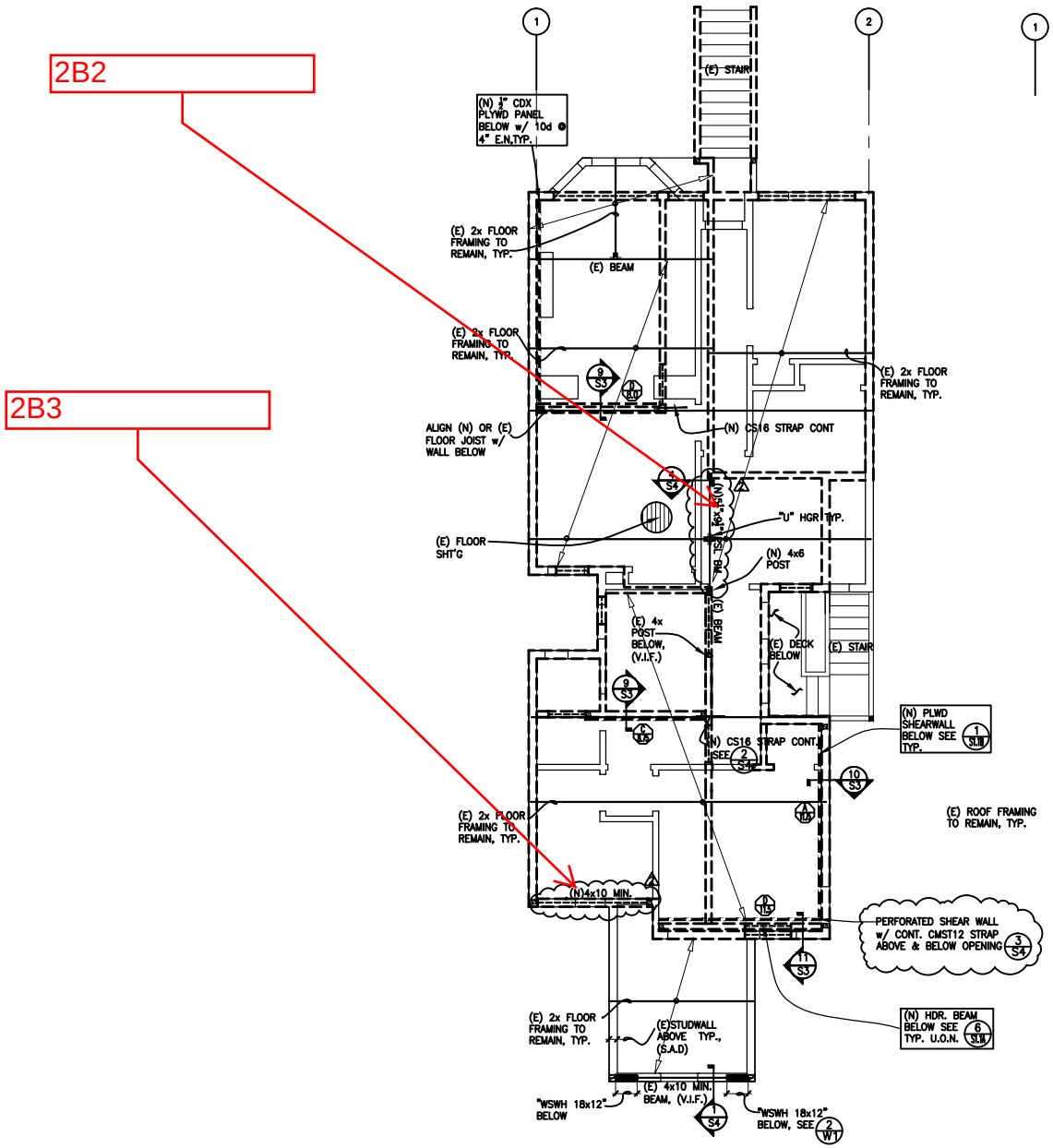
1077 FELL STREET
ED PROJECT #23059

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Shear Wall and Holdowns	12 –13
Legend	14
Perforated Shear Wall	15
GRAVITY:	
Beams	16 – 19

2B2

2B3

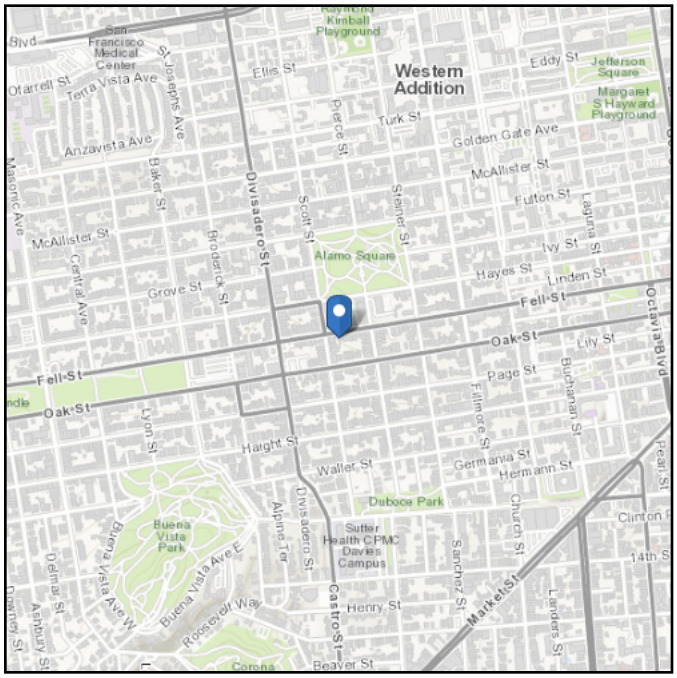


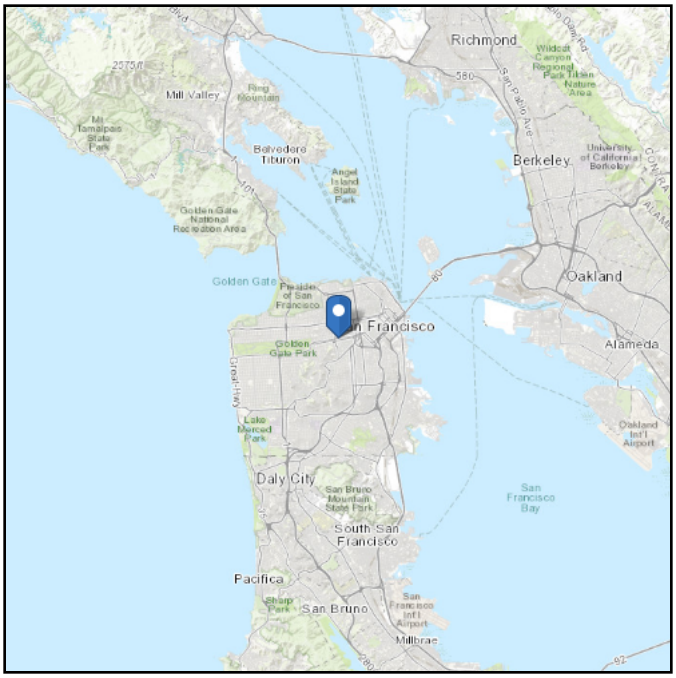
SECOND FLOOR FRAMING PLAN

ASCE Hazards Report

Address:
1077 Fell St
San Francisco, California
94117

Standard:	ASCE/SEI 7-22	**Latitude:**	37.774145
Risk Category:	II	**Longitude:**	-122.435446
Soil Class:	Default	**Elevation:**	195.3952831817827 ft (NAVD 88)





Seismic

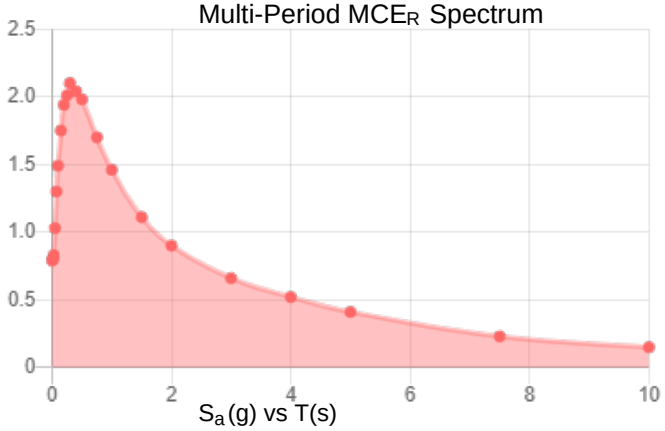
Site Soil Class: Default

Results:

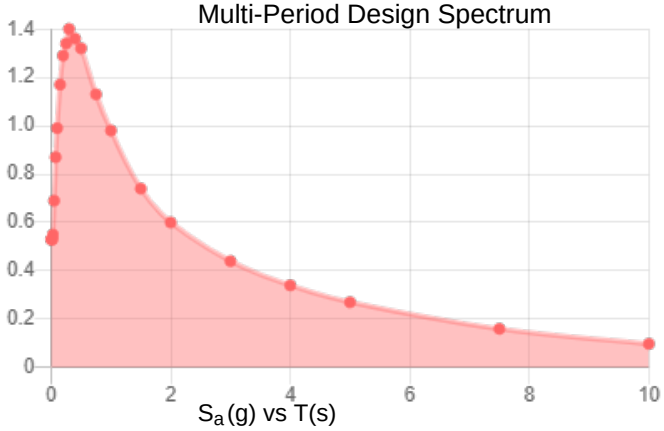
PGA_M :	0.66	T_L :	12
S_{MS} :	1.89	S_S :	1.66
S_{M1} :	1.85	S_1 :	0.62
S_{DS} :	1.26	V_{S30} :	260
S_{D1} :	1.24		

Seismic Design Category: D

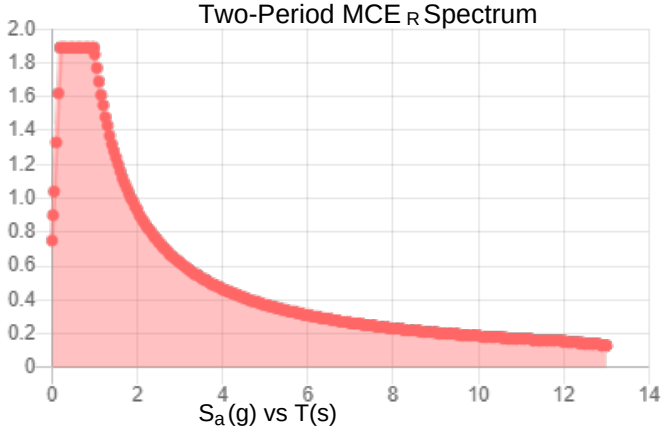
Multi-Period MCE_R Spectrum



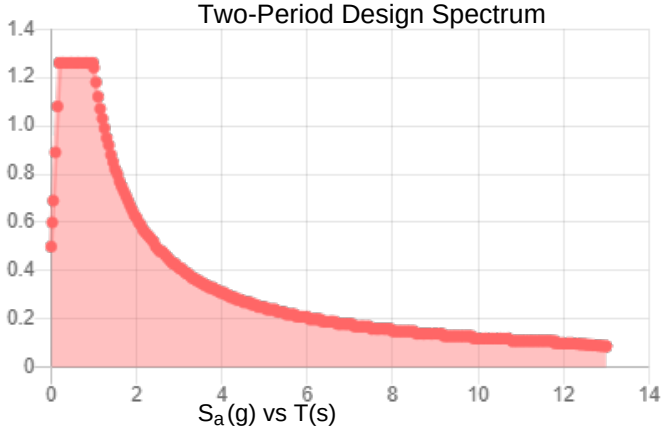
Multi-Period Design Spectrum



Two-Period MCE_R Spectrum



Two-Period Design Spectrum



MCE_R Vertical Response Spectrum

Vertical ground motion data has not yet been made available by USGS.

Design Vertical Response Spectrum

Vertical ground motion data has not yet been made available by USGS.

Data Accessed: Tue Feb 27 2024

Date Source:
USGS Seismic Design Maps based on ASCE/SEI 7-22 and ASCE/SEI 7-22 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-22 Ch. 21 are available from USGS.

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PROJECT:	SHEET NO	
VOLUNTARY STRENGTHENING	JOB No.	0
1077 FELL STREET	REV. NO.	DATE
94117	02	05/27/25

Design Criteria **2022 California Building Code based on 2021 IBC**

1. MATERIAL SPECIFICATIONS

1.1 Concrete f'c = 2500 psi (28 day compressive strength)

1.2 Concrete Block f'm = 1500 psi (Type N or S)

1.3 Reinforcing Steel
Grade 40 : #4 and smaller
Grade 60 : #5 and larger

1.4 Lumber

2" to 4" thick		DF No.2	Fb= 900 psi	
2" to 4" wide		DF No.1	Fb= 1000 psi	
Roof/ Ceiling Joist		DF No.2	Fb= 900 psi	
Beam/ Post	4x	DF No.2	Fb= 875 psi	Fc= 600 psi
	6x	DF No.1	Fb= 1350 psi	Fc= 925 psi
Mudsill		DF Pressure Treated		
Glu-Lam Beam		DF/ DF Simple Span		24F-V4
		DF/ DF Cantilever		24F-V8
Parallam (PSL)		2.2 E Truss Joist MacMillan		
Micro-Lam (ML)		2.0 E Truss Joist MacMillan		
Floor I-Joist (TJI)		Manufactured by Trus Joist Corporation		

1.5 Plywood Diaphragm Roof 1/2" CDX APA(32/16)
Floor 3/4" T&G CDX APA(48/24)

1.6 Structural Steel ASTM A-992 or per latest AISC provision

1.7 Manufactured Shear Panels Simpson Strongwall: Manufactured by Simpson Strong-Tie
Hardy Frame Panels: Manufactured by Mitek Company

2. FOUNDATION PARAMETERS

2.1 Minimum Building Code Requirements **USED**

2.2

Geotechnical Engineer:	N.A.
Project Reference No.:	N.A.
Date:	N.A.
Telephone No.	N.A.

Allowable Soil Bearing Capacity	1500	psf
Allowable Pier Skin Friction	N.A.	psf

PROJECT:	SHEET NO	
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1077 FELL STREET	REV. NO.	DATE
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3. GRAVITY LOADS

3.1 Live Load / Snow Load

LLr =	20	psf	(Roof Live Load)	Roof Slope	0.0	: 12
LL =	40	psf	(Floor Live Load)	Slope Factor	1.00	
S =	0	psf	(Snow Load)			

3.2 Dead Load

3.21 Roof

Five-ply felt and gravel	10.0	psf	
5/8" Plywood Sheathing	2.0	psf	
2x8 @ 16" Framing	2.2	psf	
Insulation	1.0	psf	
Ceiling/ 1 Layers of G.B.	2.7	psf	
Miscellaneous	1.0	psf	
Total =	19.0	x 1	
	19.0	psf	

3.22 Lower Roof/ Roof Deck

5.0	psf	
2.0	psf	
2.2	psf	
1.0	psf	
2.7	psf	
1.0	psf	
14.0	psf	

3.23 Floors

Hard Wood Flooring	4.0	psf	
3/4" Plywood Sheathing	2.5	psf	
2x10 @ 16" Framing	2.9	psf	
Insulation	1.0	psf	
Ceiling 1 Layes of G.B.	2.7	psf	
Miscellaneous	1.5	psf	
Total =	**14.6**	psf	

3.24 Deck/Balcony

4.0	psf	
2.5	psf	
2.9	psf	
1.0	psf	
2.7	psf	
1.5	psf	
14.6	psf	

3.25 Exterior Walls

Stucco	9.0	psf	
1/2" thk Plywd sht'g	2.0	psf	
2x Studs	2.5	psf	
Gypboard	2.0	psf	
Miscellaneous	1.5	psf	
Total =	**17.0**	psf	

3.26 Interior Walls

	-	-	
→	2	psf	
→	2.0	psf	
→	4.0	psf	
→	2.0	psf	
	10.0	psf	

PROJECT:	SHEET NO	
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4. LATERAL LOADS ASD

4.1 Seismic Parameters

Site Class (Use deafult 'D1' if no Soil Report)		D1
Occupancy Category		II
Seismic Design Category **(SDC)**		D
Response Modification Coefficient **(R)**	R=	6.50
Importance Factor **(I)**	I=	1.00
Site Coordinates	37.774 ° N	-122.435 ° W
Short Period Response **(S_S)**	S_S=	1.66
One Second Period Response **(S_1)**	S_1=	0.62

15. Light frame (wood) walls sheathed with wo

Location

4.2 Wind Parameters

Exposure Type		B
Basic Wind Speed		95 mph

5.1 Wind Forces

Exposure Type =	B	**Kd =**	0.85	**Cp =** 0.80
Basic Wind Speed =	95 mph	**K_{ZT} =**	1.00	**GCpi =** 0.18
Occupancy Category =	II	**G =**	0.85	

Z	**15'-0"**	**20'-0"**	**25'-0"**	**30'-0"**	**40'-0"**	**60'-0"**
Z_{min}	30	30	30	30	40	60
Zg	1200	1200	1200	1200	1200	1200
α	7.00	7.00	7.00	7.00	7.00	7.00
Kz	0.70	0.70	0.70	0.70	0.76	0.85
qz	8.26	8.26	8.26	8.26	8.96	10.06
P (psf)	**7.10**	**7.10**	**7.10**	**7.10**	**7.71**	**8.65**

$Kz = 2.01\ (Z/Zg)^{(2/\alpha)}$

$qz = 0.00256\ K_Z K_{ZT} K_d V^2$

$P = qz\ (GCp + GCpi)$

5.2 Seismic Forces

5.21 Site Coefficients

Site Coefficient (Fa)

SITE CLASS	Ss < 0.25	0.50	0.75	1.00	1.25	>1.5
A	0.8	0.8	0.8	0.8	0.8	0.8
B	0.9	0.9	0.9	0.9	0.9	0.9
C	1.3	1.3	1.2	1.2	1.2	1.2
D	1.6	1.4	1.2	1.1	1.0	1.0
E	2.4	1.7	1.3	SEE SEC 11.4.8		

Table 1613.5.3 (1)

Site Coefficient (Fv)

SITE CLASS	S1 < 0.1	0.2	0.3	0.4	0.5	0.6
A	0.8	0.8	0.8	0.8	0.8	0.8
B	0.8	0.8	0.8	0.8	0.8	0.8
C	1.5	1.5	1.5	1.5	1.5	1.4
D	2.4	2.2	2.0	1.9	1.8	1.7
E	4.2	SEE SECTION 11.4.8				

Table 1613.5.3 (2)

Tabulated Result

Site Class =	**D1**
S_S=	**1.66**
S_1=	**0.62**
By Interpolation:	
Fa =	**1.20**
Fv =	**3.00**

PROJECT:	SHEET NO	
VOLUNTARY STRENGTHENING 1077 FELL STREET 94117	JOB No.	0
	REV. NO.	DATE
	02	05/27/25

5.22 Spectral Response Acceleration

S_{MS}=	Fa S_S =	1.20 x 1.66=	1.89	S_{DS}=	2/3 (S_{MS}) =	**1.26**
S_{M1}=	Fv S_1 =	3.00 x 0.62=	1.85	S_{D1}=	2/3 (S_{M1}) =	**1.24**

5.23 Horizontal Sismic Load Effect w/ Overstrength Load Combinations (ASCE 12.4.3.1)

Ωo = **2.50**

LC 5: (1.0 + 0.14 S_{DS})D + 0.7 Ωo Qe = **1.18D+2.5Qe**

LC 6: (1.0 + 0.15 S_{DS})D + 0.525 Ωo Qe +0.75L +0.75 LLr = **1.19D+1.88Qe+0.75(LL+LLr)**

LC 8: (0.6 - 0.14 S_{DS})D - 0.7 Ωo Qe = **0.43D+2.5Qe**

5.24 Design Base Shear

R =	6.50		**C_r =**	**0.020**	All other structural system
I =	1.00		**x =**	0.75	
TL =	8.00	sec	**h_n =**	23.0	ft
Redundancy Factor **ρ =**	**1.30**		**T =**	$C_r (h_n)^x$ =	0.210

ASCE (12.8-2)	*ASCE (12.8-3)*	*ASCE (12.8-4)*	*ASCE (12.8-6)*	*ASCE (12.8-5)*
	($T \le$ TL)	($T >$ TL)	$S_1 \ge$ 0.60	
$Cs = \frac{S_{DS}}{(R/I)}$	$Cs_{max} = \frac{S_{D1}}{T\,(R/I)}$	$Cs_{max} = \frac{S_{D1}\,T_L}{T^2\,(R/I)}$	Cs_{min}= 0.5 S_1 / (R/I)	Cs_{min}= 0.01
Cs = 0.194	**Cs =** 0.908	**Cs =** 0.000	**Cs =** 0.048	**Cs =** 0.01
		NOT USED		

Use **Cs** = **0.194**

V = Cs W **Apply 0.7 Reduction for ASD*

GOVERNING DESIGN BASE SHEAR **V = 0.136W ASD**

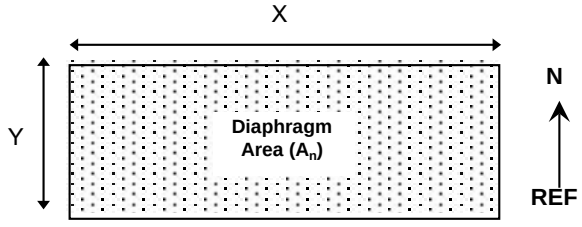
6. BUILDING PARAMETERS

6.1 Building Dimensions

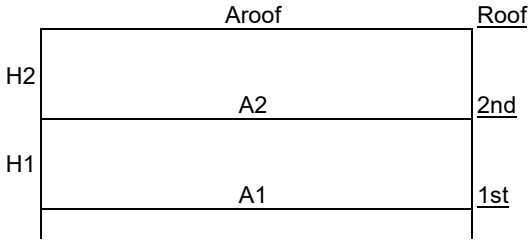
No. of Floor/s Levels **2**

Total building height 25.0 ft

Basement/Crawl Space 3.00 ft



PLAN



SECTION

Nomenclature:

n	Subscript for floor levels
Xn	Building width
Yn	Building length
An	Diaphragm area
Hn	Floor height between levels

PROJECT:	SHEET NO	
VOLUNTARY STRENGTHENING	JOB No.	0
1077 FELL STREET	REV. NO.	DATE
94117	02	05/27/25

6.2 Roof /Floor Areas

Floor Level	Area A_n (ft^2)	Low Roof Area A_n (ft^2)	Deck Area A_n (ft^2)	Bldg Length X_n (ft)	Bldg Width Y_n (ft)
Roof	1406	~~0~~	~~0~~	56	25
2nd floor	1212		193	48	25

6.3 Wall Heights

Floor Level	Floor Height H_n (ft)	Exterior Wall Length (ft)	Interior Wall Length (ft)	Tributary Ext. Wall (ft^2)	Tributary Int. Wall (ft^2)	Height of Diaphragm
Roof	~~0~~	~~0~~	~~0~~	996	942	23.0
2nd floor	11.0	181	171	1664	1420	11.0
1st floor	8.0	167	120	668	478	3.0
				0	0	0.0
				0	0	

6.3 Building Weights

6.3a Roof weight

Floor Level	Area A_n (ft^2)	Unit weight (psf)	Material Weight (lbs)
Roof	1406	19.0	26714
Ext Walls	996	17.0	16924
Int Walls	942	10.0	9416
Misc			0

Level Weight = **53,054** lbs

NOT USED

Floor Level	Area A_n (ft^2)	Unit weight (psf)	Material Weight (lbs)
Floor	0	14.6	0
Low Roof	0	14.0	0
Deck	0	14.6	0
Ext Walls	0	17.0	0
Int Walls	0	10.0	0
Misc			0

Level Weight = **0** lbs

6.3b 2nd floor

Floor Level	Area A_n (ft^2)	Unit weight (psf)	Material Weight (lbs)
Floor	1212	14.6	17695
Low Roof	0	14.0	0
Deck	193	14.6	2821
Ext Walls	1664	17.0	28280
Int Walls	1420	10.0	14196
Misc			0

Level Weight = **62,992** lbs

NOT USED

Floor Level	Area A_n (ft^2)	Unit weight (psf)	Material Weight (lbs)
Floor			
Low Roof			
Deck			
Ext Walls			
Int Walls			
Misc			

Level Weight = **0** lbs

6. 4 Building Weight Summary

Floor Level	Level Weights (lbs)	S Weights (lbs)
Roof	53,054	53,054
2nd floor	62,992	116,046
	-	-
	-	-
S	**116,046**	

6. 5 Base Shear

Vu = 0.136 x 116,046

V = 15,747 lbs
V x ρ = 20.470 kips
ASD

PROJECT:	SHEET NO	
VOLUNTARY STRENGTHENING	JOB No.	0
1077 FELL STREET	REV. NO.	DATE
94117	02	05/27/25

7. LATERAL FORCES

T= 0.210

k= 1.00

7.1 Seismic Forces

7.1a Lateral Force Distribution

C_{vx} $F_x = C_{vx} V$

Floor Level (x)	h_x (ft)	h^k_x (ft)	Wx (kips)	$h^k x$ Wx (kip-ft)	$\frac{h^k x \text{ Wx}}{S\, h^k x \text{ Wx}}$	Fx (kips)	Diaphragm Area (ft^2)	Fx / Area (lbs/ ft^2)
Roof	23.0	23.0	53.05	1220.23	0.64	13.06	1406	**9.29**
2nd floor	11.0	11.0	62.99	692.91	0.36	7.41	1405	**5.28**
0	0.0	0.0	0.0	0.0	0.00	0.00	0	**0.00**
0	0.0	0.0	0.0	0.0	0.00	0.00	0	**0.00**
		SUM	116.0	1913.1	1.00	**20.47**		

7.1b Lateral Diaphragm Force Distribution

$Fpx\ max = 0.4 S_{DS}\ I\ wpx$ = 0.50 wpx (%)

$Fpx\ min = 0.2 S_{DS}\ I\ wpx$ = 0.25 wpx (%)

S_{DS}= 1.26

I= 1.00

Floor Level	Fx (kips)	S Forces (kips)	S Weights (kips)	$\frac{\text{S Forces}}{\text{S Weights}}$ (% Level)	% Level Fpx min Fpx max	Level Weight (kips)	Level Diaphragm Force (kips)	Fx / Area (lbs/ ft^2)
Roof	13.06	13.06	53.05	0.25	0.25	53.05	13.37	**9.51**
2nd floor	7.41	20.47	116.05	0.18	0.25	62.99	15.87	**11.30**
0	0.00	0.0	0.0	0.0	0.00	0.00	0.00	**0.00**
0	0.00	0.0	0.0	0.0	0.00	0.00	0.00	**0.00**

7.2 Wind Load

	North -South Direction			East West Direction	
Floor Level	Wind Height Projection (ft)	Building Length X_n (ft)	Projected Wind Area (ft^2)	Building Length Y_n (ft)	Projected Wind Area (ft^2)
Roof	8.5	56.2	478.0	25.0	212.5
2nd floor	9.5	48.5	460.6	25.0	237.5
0	0.0	0.0	0.0	0.0	0.0
0	0.0	0.0	0.0	0.0	0.0

*** (See 5.1 for wind pressures)*

	North -South Direction				East West Direction		
Floor Level	Floor Level Height (ft)	Projected Wind Area (ft^2)	Wind Pressure** (psf)	**Wind Force (kip)**	Projected Wind Area (ft^2)	Wind Pressure** (psf)	**Wind Force (kip)**
Roof	23.0	478.0	7.10	**3.39**	212.5	7.10	**1.51**
2nd floor	11.0	460.6	7.10	**3.27**	237.5	7.10	**1.69**
0	0.0	0.0	0.00	**0.00**	0.0	0.00	**0.00**
0	0.0	0.0	0.00	**0.00**	0.0	0.00	**0.00**
			S	**6.66**		**S**	**3.19**

SEISMIC LOAD GOVERNS

PROJECT:	SHEET NO		
VOLUNTARY STRENGTHENING	JOB No.		0
1077 FELL STREET	BY	REV	DATE
94117	DM	02	05/27/25

SEISMIC LOAD DISTRIBUTION TO SHEARWALL & FRAMES

Distribution of Seismic Forces per Tributary Area (**for Story Levels from Roof to 1st Floor**) ** With Wood Diaphragm

Total Seismic Base Shear, **V =** **20.47** kips

Lateral Force F_{roof} = **13.06** kips

$V3r_d$ = **13.06** kips

A_{roof} = **1,406** ft^2

Allowable Aspect Ratio = 3.5 : 1

(See AF & PA ADPWS Table 4.3.4 Note '1' on blocked Shearwall panel aspect ratio greater than 2)

Reduction on Allowable Shear Value = $\frac{2w}{h}$ (V_{allow})

DL reduction per 1605.3 of CBC 2010 and ASCE 7 12.4 (0.6 -0.14Sds)DL= **0.42**

Seismic Load Distribution to Shear Walls & Frames in N-S direction

Line	System	Tributary Area (ft^2)	Wall properties: Length (ft)	Height	Aspect Ratio	$V_{allowable}$ (plf)	V_{all} > V_{demand}	Portion of Area (%)	Wall loading and capacity:		Σv_x (lbs)	v_{total} (lbs)	v_{demand} (plf)	Wall Type	For Hold Down use Simpson PHD/MST: Wall wt. (psf)	Tri. Width for DL (ft)	DL (lbs)		OTM(V_i) (kip-ft)	OTM(DL) (kip-ft)	T (kip)	H.D.
A	PW	399	3	11	**3.7**	**363**	**870**	**14%**			**1853**	**1853**	**618**	***D***	17	**1.30**	**627**		**20.38**	**0.85**	**6.51**	***HDU8***
A	PW		3	11	**3.7**	**363**	**870**	**14%**			**1853**	**1853**	**618**	***D***	17	**1.30**	**627**		**20.38**	**0.85**	**6.51**	***HDU8***
B	PW	302	6.5	11	**1.7**	**510**	**OK**	**21%**			**2804**	**2804**	**431**	***B***	17	**1.30**	**1359**		**30.85**	**3.98**	**4.13**	***HDU4***
C	PW	226	4.5	11	**2.4**	**510**	**OK**	**16%**			**2099**	**2099**	**466**	***D***	17	**1.30**	**941**		**23.09**	**1.91**	**4.71**	***HDU5***
D	PW	216	3	11	**3.7**	**278**	**665**	**8%**			**1075**	**1075**	**358**	***C***	17	**1.30**	**627**		**11.82**	**0.85**	**3.66**	***HDU4***
	PW		2.6	11	**4.2**	**241**	**665**	**7%**			**931**	**931**	**358**	***C***	17	**1.30**	**544**		**10.24**	**0.64**	**3.70**	***HDU4***
E	PW	263	3.5	11	**3.1**	**340**	**OK**	**9%**			**1140**	**1140**	**326**	***A***	17	**1.30**	**732**		**12.54**	**1.15**	**3.25**	***HDU4***
	PW		4	11	**2.8**	**340**	**OK**	**10%**			**1303**	**1303**	**326**	***A***	17	**1.30**	**836**		**14.33**	**1.51**	**3.21**	***HDU4***
		1406						100%			13056	13056										

FOR REFERENCE ONLY

PROJECT:	SHEET NO		
VOLUNTARY STRENGTHENING	JOB No.		0
1077 FELL STREET	BY	REV	DATE
94117	DM	02	05/27/25

SEISMIC LOAD DISTRIBUTION TO SHEARWALL & FRAMES

Lateral Force **F3rd =** **7.41** kips
V2nd = **20.47** kips
A3rd = **1,405** ft^2

Seismic Load Distribution to Shear Walls & Frames in N-S direction

Line	System	Tributary Area (ft^2)	Wall properties: Length (ft)	Height	Aspect Ratio	$V_{allowable}$ (plf)	$V_{all} > V_{demand}$	Portion of partial area (%)	Wall loading and capacity: Σv_{Above} roof		Σv_x (lbs)	v_{total} (lbs)	v_{demand} (plf)	Wall Type	For Hold Down use Simpson PHD/MST: Wall wt. (psf)	Tri. Width for DL (ft)	DL (lbs)	$DL_{(above)}$	$OTM(V_i)$ (kip-ft)	OTM(DL) (kip-ft)	T (kip)	H.D.
A	PW	399	4	8	**2.0**	**1740**	**OK**	**28%**	3705		**2105**	**5810**	**1453**	***F***	17	**8.00**	**1024**	**1255**	**50.19**	**2.47**	**11.93**	***HDU14***
															FOR REFERENCE ONLY							
B	PW	302	8	8	**1.0**	**665**	**OK**	**21%**	2804		**1593**	**4398**	**550**	***C***	17	**8.00**	**2048**	**1359**	**52.01**	**8.05**	**5.49**	***HDU5***
C	PW	226	8.75	8	**0.9**	**510**	**OK**	**16%**	2099		**1192**	**3291**	**376**	***B***	17	**8.00**	**2240**	**941**	**45.22**	**9.29**	**4.11**	***HDU4***
D	PW	216	11.5	8	**0.7**	**340**	**OK**	**15%**	2006		**1140**	**3145**	**274**	***A***	17	**8.00**	**2944**	**1171**	**43.22**	**15.82**	**2.38**	***HDU2***
E	**WSWH**	263	1.5	8	**N.A.**	**N.A.**	**N.A.**	**9%**	1140		**694**	**1834**	**1222**		17	**8.00**	**384**	**732**	**24.93**	**0.63**	**16.20**	
	WSWH		1.5	8	**N.A.**	**N.A.**	**N.A.**	**9%**	1303		**694**	**1996**	**1331**		17	**8.00**	**384**	**836**	**27.69**	**0.68**	**18.01**	
		1406						100%	13056		7418.1	20474.4										

See perforated Shear Wall (page 15)

PROJECT:	SHEET NO	
VOLUNTARY STRENGTHENING 1077 FELL STREET 94117	JOB No.	0
	BY DM	DATE 05/27/25

LEGEND

HF	HARDY FRAME
TS	TUBE STEEL (CANTILEVER COLUMN)
PW	PLYWOOD SHEARWALL
MF	STEEL MOMENT FRAME
SW	STRONGWALL
SSW	STL. STRONGWALL
CMU	CONRETE MASONRY
CON.	CONCRETE WALL
L	LENGTH OF WALL
BETA (β)	FACTOR TO ACCOUNT TO ANGLE VARIATION OF LATERAL
OTM (V_i)	OVERTURNING MOMENT DUE TO TOTAL SHEAR FORCE ON SHEARWALL
OTM (DL)	RESISTING MOMENT DUE TO TOTAL DEADWEIGHT OF WALL

NOTE :

1. PLYWOOD SHEARWALLS WITH CAPACITY OF 300LBS/FT SHALL BE INSPECTED BY A DEPUTY INSPECTOR
2. PLYWOOD SHALL BE AT LEAST 4-PLY 3-PLY SHALL ONLY HAVE A MAX CAP OF 200LBS/FT
3. USE ONLY COMMON NAILS FOR PLYWOOD SHEARWALLS AND DIAPRAGHM

SHEARWALL SCHEDULE

MARK	TYPE	MATERIALS	NAILING	ALLOW. SHEAR PLF
1	A	1/2" STRUC 1	10d @6 oc	340
2	B	1/2" STRUC 1	10d @4 oc	510
3	C	1/2" STRUC 1	10d @3 oc	665
4	D	1/2" STRUC 1	10d @2 oc	870
5	E	1/2", PLY STRUC 1 BOTH SIDES	10d @4 oc ea side	1330
6	F	1/2", PLY STRUC 1 BOTH SIDES	10d @3 oc ea side	1740

HOLDOWN CAPACITIES

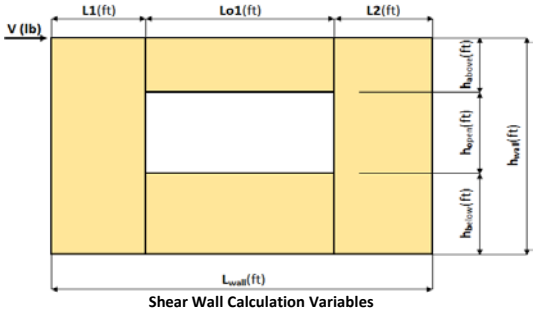
FOUNDATION		UPPER FLOOR	
(SIMPSON) (ICC ESR 2330	4x4 POST kips	(SIMPSON)	4x4 POST kips
HDU2	3.080	MST37	5.080
HDU4	4.560	MST48	5.310
HDU5	5.645	MST60	6.730
HDU8	6.97	2-MST48	10.620
HDU11	9.54	2-MST60	13.46
HDU14	14.37		
HD12	15.51		
HD19	19.07		

Note : For HDU14, HD12, HD19 : Capacity is based on 6x6 wood post

Expire

Project Information

Code:	**Date:** 5/27/2025
Designer:	DM
Client:	
Project:	1077 Fell Street, San Francisco
Wall Line:	Grid line D- 1st floor



Shear Wall Calculation Variables

V	3145 lbf	Opening 1	
L1	4.42 ft	h_a	2.00 ft
L2	4.42 ft	h_o	8.00 ft
h_{wall}	11.58 ft	h_b	1.58 ft
L_{wall}	11.84 ft	Lo1	3.00 ft

Adj. Factor Method =	1.25-0.125h/bs	
Wall Pier Aspect Ratio		Adj. Factor
P1=h_o/L1=	1.81	N/A
P2=h_o/L2=	1.81	N/A

1. Hold-down forces: H = Vh_{wall}/L_{wall} 3076 lbf

2. Unit shear above + below opening

First opening: va1 = vb1 = H/(h_a+h_b) = 859 plf

3. Total boundary force above + below openings

First opening: O1 = va1 x (Lo1) = 2578 lbf

4. Corner forces

F1 = O1(L1)/(L1+L2) = 1289 lbf

F2 = O1(L2)/(L1+L2) = 1289 lbf

5. Tributary length of openings

T1 = (L1*Lo1)/(L1+L2) = 1.50 ft

T2 = (L2*Lo1)/(L1+L2) = 1.50 ft

6. Unit shear beside opening

v1 = (V/L)(L1+T1)/L1 = 356 plf

v2 = (V/L)(T2+L2)/L2 = 356 plf

Check v1*L1+v2*L2=V? 3145 lbf **OK**

7. Resistance to corner forces

R1 = v1*L1 = 1573 lbf

R2 = v2*L2 = 1573 lbf

8. Difference corner force + resistance

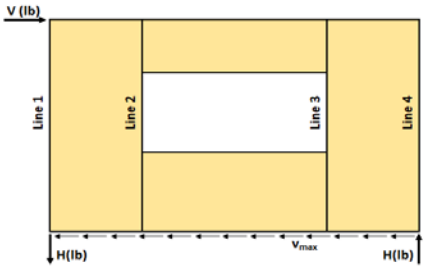
R1-F1 = 284 lbf

R2-F2 = 284 lbf

9. Unit shear in corner zones

vc1 = (R1-F1)/L1 = 64 plf

vc2 = (R2-F2)/L2 = 64 plf



Check Summary of Shear Values for One Opening

Line 1: vc1(h_a+h_b)+v1(h_o)=H?		230	2846	3076 lbf
Line 2: va1(h_a+h_b)-vc1(h_a+h_b)-v1(h_o)=0?	3076	230	2846	0
Line 3: va1(h_a+h_b)-vc2(h_a+h_b)-v1(h_o)=0?	3076	230	2846	0
Line 4: vc2(h_a+h_b)+v2(h_o)=H?		230	2846	3076 lbf

Design Summary*

Req. Sheathing Capacity	859 plf	**4-Term Deflection**		**3-Term Deflection**	
Req. Strap Force	1289 lbf	**4-Term Story Drift %**		**3-Term Story Drift %**	
Req. HD Force (H)	3076 lbf				
Req. Shear Wall Anchorage Force (v_{max})	266 plf				

***The Design Summary assumes that the shear wall is designed as blocked.**

Wood Beam

Project File: 1077 Fell street- 02.28.24.ec6

LIC# : KW-06019663, Build:20.24.10.30 Enertia Designs Inc. (c) ENERCALC, LLC 1982-2025

DESCRIPTION: 2B3

CODE REFERENCES

Calculations per NDS 2018, IBC 2018, CBC 2019, SDPWS 2015
Load Combination Set : ASCE 7-16

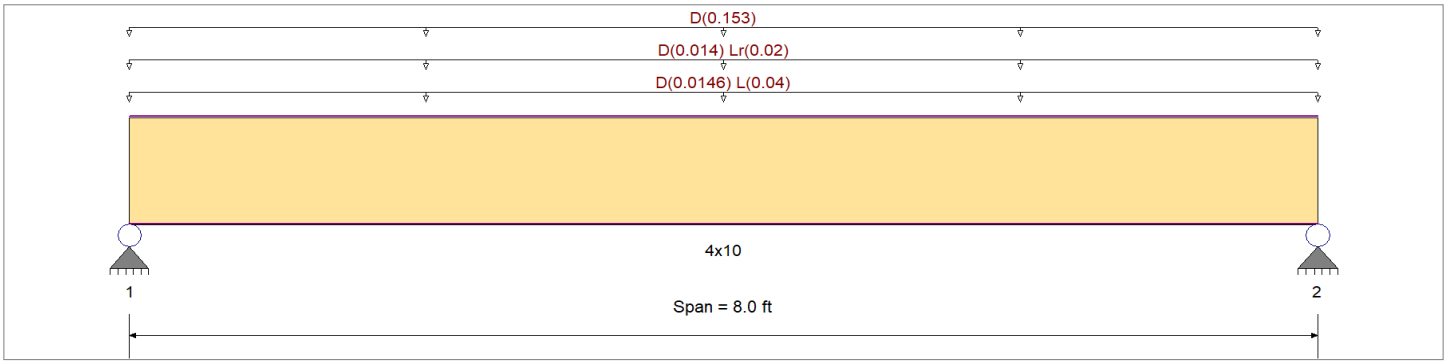
Material Properties

Analysis Method :	Allowable Stress Design
Load Combination :	ASCE 7-16
Wood Species :	Douglas Fir-Larch
Wood Grade :	No.2
Beam Bracing :	Beam is Fully Braced against lateral-torsional buckling

Fb +	900.0 psi
Fb -	900.0 psi
Fc - Prll	1,350.0 psi
Fc - Perp	625.0 psi
Fv	180.0 psi
Ft	575.0 psi

E : Modulus of Elasticity

Ebend- xx	1,600.0 ksi
Eminbend - xx	580.0 ksi
Density	31.210 pcf



Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loading
Uniform Load : D = 0.01460, L = 0.040 ksf, Tributary Width = 1.0 ft, (FLOOR LOAD)
Uniform Load : D = 0.0140, Lr = 0.020 ksf, Tributary Width = 1.0 ft, (ROOF LOAD)
Uniform Load : D = 0.0170 ksf, Tributary Width = 9.0 ft, (WALL)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio	=	0.509 : 1	Maximum Shear Stress Ratio	=	0.238 : 1
Section used for this span		4x10	Section used for this span		4x10
fb: Actual	=	439.72 psi	fv: Actual	=	34.33 psi
F'b	=	864.00 psi	F'v	=	144.00 psi
Load Combination		+D+L	Load Combination		+D+L
Location of maximum on span	=	4.000 ft	Location of maximum on span	=	7.241 ft
Span # where maximum occurs	=	Span # 1	Span # where maximum occurs	=	Span # 1

Maximum Deflection

Max Downward Transient Deflection	0.011 in	Ratio =	9084 >=300	Span: 1 : L Only
Max Upward Transient Deflection	0 in	Ratio =	0 <300	n/a
Max Downward Total Deflection	0.062 in	Ratio =	1555 >=400	Span: 1 : +D+0.750Lr+0.750L
Max Upward Total Deflection	0 in	Ratio =	0 <400	n/a

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Max Stress Ratios M	V	CD	CM	C_t	CLx	C_F	Cfu	C_i	C_r	Moment Values M	fb	F'b	Shear Values V	fv	F'v
D Only														0.0	0.00	0.0	0.0
Length = 8.0 ft	1	0.467	0.219	0.90	1.00	1.00	1.00	1.200	1.00	0.80	1.00	1.51	362.8	777.6	0.61	28.3	129.6
+D+L					1.00	1.00	1.00	1.200	1.00	0.80	1.00			0.0	0.00	0.0	0.0
Length = 8.0 ft	1	0.509	0.238	1.00	1.00	1.00	1.00	1.200	1.00	0.80	1.00	1.83	439.7	864.0	0.74	34.3	144.0
+D+Lr					1.00	1.00	1.00	1.200	1.00	0.80	1.00			0.0	0.00	0.0	0.0
Length = 8.0 ft	1	0.372	0.174	1.25	1.00	1.00	1.00	1.200	1.00	0.80	1.00	1.67	401.3	1,080.0	0.68	31.3	180.0
+D+0.750Lr+0.750L					1.00	1.00	1.00	1.200	1.00	0.80	1.00			0.0	0.00	0.0	0.0

Wood Beam

Project File: 1077 Fell street- 02.28.24.ec6

LIC# : KW-06019663, Build:20.24.10.30 Enertia Designs Inc. (c) ENERCALC, LLC 1982-2025

DESCRIPTION: 2B3

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Max Stress Ratios M	V	CD	CM	C_t	CLx	C_F	Cfu	C_i	C_r	Moment Values M	fb	F'b	Shear Values V	fv	F'v
Length = 8.0 ft	**1**	0.416	0.195	1.25	1.00	1.00	1.00	1.200	1.00	0.80	1.00	1.87	449.3	1,080.0	0.76	35.1	180.0
+D+0.750L					1.00	1.00	1.00	1.200	1.00	0.80	1.00			0.0	0.00	0.0	0.0
Length = 8.0 ft	**1**	0.423	0.198	1.15	1.00	1.00	1.00	1.200	1.00	0.80	1.00	1.75	420.5	993.6	0.71	32.8	165.6
+0.60D					1.00	1.00	1.00	1.200	1.00	0.80	1.00			0.0	0.00	0.0	0.0
Length = 8.0 ft	**1**	0.157	0.074	1.60	1.00	1.00	1.00	1.200	1.00	0.80	1.00	0.91	217.7	1,382.4	0.37	17.0	230.4

Overall Maximum Deflections

Span	Load Combination	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
1	+D+0.750Lr+0.750L	0.0617	4.029		0.0000	0.000

Vertical Reactions

Support notation : Far left is #1 Values in KIPS

Load Combination	Support 1	Support 2
Max Upward from all Load Conditions	0.934	0.934
Max Upward from Load Combinations	0.934	0.934
Max Upward from Load Cases	0.754	0.754
D Only	0.754	0.754
+D+L	0.914	0.914
+D+Lr	0.834	0.834
+D+0.750Lr+0.750L	0.934	0.934
+D+0.750L	0.874	0.874
+0.60D	0.453	0.453
Lr Only	0.080	0.080
L Only	0.160	0.160

Wood Beam

Project File: 1077 Fell street- 02.28.24.ec6

LIC# : KW-06019663, Build:20.24.10.30 Enertia Designs Inc. (c) ENERCALC, LLC 1982-2025

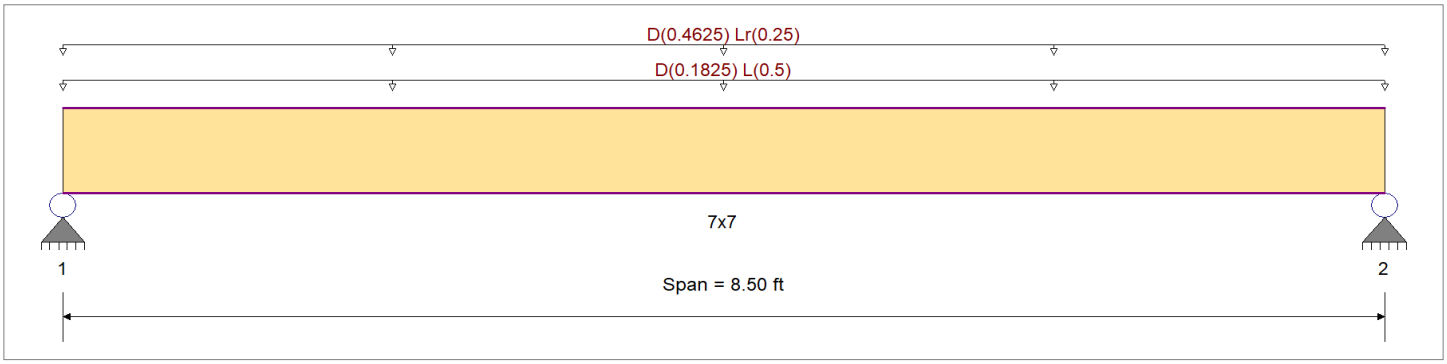
DESCRIPTION: 2B2

CODE REFERENCES

Calculations per NDS 2018, IBC 2018, CBC 2019, SDPWS 2015
Load Combination Set : ASCE 7-16

Material Properties

Analysis Method :	Allowable Stress Design	Fb +	2,900.0 psi	*E : Modulus of Elasticity*	
Load Combination :	ASCE 7-16	Fb -	2,900.0 psi	Ebend- xx	2,000.0 ksi
		Fc - Prll	2,900.0 psi	Eminbend - xx	1,016.54 ksi
Wood Species :	iLevel Truss Joist	Fc - Perp	750.0 psi		
Wood Grade :	Parallam PSL 2.0E	Fv	290.0 psi		
		Ft	2,025.0 psi	Density	45.070 pcf
Beam Bracing :	Beam is Fully Braced against lateral-torsional buckling				



Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Beam self weight calculated and added to loading
Uniform Load : D = 0.01460, L = 0.040 ksf, Tributary Width = 12.50 ft, (FLOOR LOAD)
Uniform Load : D = 0.0370, Lr = 0.020 ksf, Tributary Width = 12.50 ft, (ROOF LOAD)

DESIGN SUMMARY

Design OK

Maximum Bending Stress Ratio	=	0.714 : 1	Maximum Shear Stress Ratio	=	0.452 : 1
Section used for this span		7x7	Section used for this span		7x7
fb: Actual	=	2,199.73 psi	fv: Actual	=	131.13 psi
F'b	=	3,078.80 psi	F'v	=	290.00 psi
Load Combination		+D+L	Load Combination		+D+L
Location of maximum on span	=	4.250 ft	Location of maximum on span	=	0.000 ft
Span # where maximum occurs	=	Span # 1	Span # where maximum occurs	=	Span # 1

Maximum Deflection

Max Downward Transient Deflection	0.155 in	Ratio =	656	>=360	Span: 1 : L Only
Max Upward Transient Deflection	0 in	Ratio =	0	<360	n/a
Max Downward Total Deflection	0.380 in	Ratio =	268	>=240	Span: 1 : +D+0.750Lr+0.750L
Max Upward Total Deflection	0 in	Ratio =	0	<240	n/a

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Max Stress Ratios M	V	CD	CM	C_t	CLx	C_F	Cfu	C_i	C_r	Moment Values M	fb	F'b	Shear Values V	fv	F'v
D Only														0.0	0.00	0.0	0.0
Length = 8.50 ft	1	0.452	0.286	0.90	1.00	1.00	1.00	1.062	1.00	1.00	1.00	5.96	1,251.8	2,770.9	2.44	74.6	261.0
+D+L					1.00	1.00	1.00	1.062	1.00	1.00	1.00			0.0	0.00	0.0	0.0
Length = 8.50 ft	1	0.714	0.452	1.00	1.00	1.00	1.00	1.062	1.00	1.00	1.00	10.48	2,199.7	3,078.8	4.28	131.1	290.0
+D+Lr					1.00	1.00	1.00	1.062	1.00	1.00	1.00			0.0	0.00	0.0	0.0
Length = 8.50 ft	1	0.448	0.284	1.25	1.00	1.00	1.00	1.062	1.00	1.00	1.00	8.22	1,725.8	3,848.5	3.36	102.9	362.5
+D+0.750Lr+0.750L					1.00	1.00	1.00	1.062	1.00	1.00	1.00			0.0	0.00	0.0	0.0
Length = 8.50 ft	1	0.602	0.381	1.25	1.00	1.00	1.00	1.062	1.00	1.00	1.00	11.04	2,318.2	3,848.5	4.51	138.2	362.5

Wood Beam

Project File: 1077 Fell street- 02.28.24.ec6

LIC# : KW-06019663, Build:20.24.10.30 Enertia Designs Inc. (c) ENERCALC, LLC 1982-2025

DESCRIPTION: 2B2

Maximum Forces & Stresses for Load Combinations

Load Combination / Segment Length	Span #	Max Stress Ratios M	V	CD	CM	C_t	CLx	C_F	Cfu	C_i	C_r	Moment Values M	fb	F'b	Shear Values V	fv	F'v
+D+0.750L					1.00	1.00	1.00	1.062	1.00	1.00	1.00			0.0	0.00	0.0	0.0
Length = 8.50 ft	**1**	0.554	0.351	1.15	1.00	1.00	1.00	1.062	1.00	1.00	1.00	9.35	1,962.8	3,540.6	3.82	117.0	333.5
+0.60D					1.00	1.00	1.00	1.062	1.00	1.00	1.00			0.0	0.00	0.0	0.0
Length = 8.50 ft	**1**	0.152	0.096	1.60	1.00	1.00	1.00	1.062	1.00	1.00	1.00	3.58	751.1	4,926.1	1.46	44.8	464.0

Overall Maximum Deflections

Span	Load Combination	Max. "-" Defl	Location in Span	Load Combination	Max. "+" Defl	Location in Span
1	+D+0.750Lr+0.750L	0.3800	4.281		0.0000	0.000

Vertical Reactions

Support notation : Far left is #1 Values in KIPS

Load Combination	Support 1	Support 2
Max Upward from all Load Conditions	5.197	5.197
Max Upward from Load Combinations	5.197	5.197
Max Upward from Load Cases	2.806	2.806
D Only	2.806	2.806
+D+L	4.931	4.931
+D+Lr	3.869	3.869
+D+0.750Lr+0.750L	5.197	5.197
+D+0.750L	4.400	4.400
+0.60D	1.684	1.684
Lr Only	1.063	1.063
L Only	2.125	2.125

EXHIBIT 6

GENERAL STRUCTURAL NOTES

I GENERAL

A. ALL CONSTRUCTION SHALL CONFORM TO THE CALIFORNIA BUILDING CODE 2019 EDITION w/ AMENDMENTS BY LOCAL JURISDICTIONS.
B. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AT JOB SITE BEFORE COMMENCING WORK AND SHALL REPORT ANY DISCREPANCIES TO THE ARCHITECT OR ENGINEER.
C. OMISSIONS OR CONFLICT BETWEEN VARIOUS ELEMENTS OF THE DRAWINGS, NOTES, AND DETAILS SHALL BE BROUGHT TO THE ATTENTION OF ARCHITECT AND RESOLVED BEFORE PROCEEDING WITH THE WORK.
D. DO NOT USE SCALED DIMENSIONS; USE WRITTEN DIMENSIONS OR WHERE NO DIMENSION IS PROVIDED, CONSULT THE ARCHITECT FOR CLARIFICATION BEFORE PROCEEDING WITH THE WORK.
E. DETAILS SHOWN SHALL BE INCORPORATED INTO THE PROJECT AT ALL APPROPRIATE LOCATIONS WHETHER SPECIFICALLY CALLED OUT OR NOT.
F. FOR WATERPROOFING, FIREPROOFING, ETC. REFER TO DRAWINGS OTHER THAN STRUCTURAL.
G. SEE DRAWINGS OTHER THAN STRUCTURAL FOR: KINDS OF FLOOR FINISH AND THEIR LOCATION, FOR DEPRESSIONS IN FLOOR SLABS, FOR OPENINGS IN WALLS AND FLOORS REQUIRED BY ARCHITECTURAL AND MECHANICAL FEATURES, FOR ROADWAY PAVING, WALKS, RAMPS, STAIRS, CURBS, ETC.
H. HOLES AND OPENINGS THROUGH WALLS AND FLOORS FOR DUCTS, PIPING AND VENTILATION SHALL BE CHECKED BY THE CONTRACTOR, WHO SHALL VERIFY SIZES AND LOCATION OF SUCH HOLES OR OPENINGS WITH THE PLUMBING HEATING, VENTILATING AND ELECTRICAL DRAWINGS AND THESE SUB-CONTRACTORS.
I. NO PIPES AND DUCTS SHALL BE PLACED IN SLABS OR WALLS UNLESS SPECIFICALLY DETAILED OR APPROVED BY THE ARCHITECT.
J. DRAWINGS AND SPECIFICATIONS REPRESENT FINISHED STRUCTURE. SUBCONTRACTOR SHALL BE RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION INCLUDING BUT NOT LIMITED TO SHORING AND TEMPORARY BRACING. THE SUBCONTRACTOR SHALL UNDERTAKE ALL NECESSARY MEASURES TO INSURE SAFETY OF ALL PERSONS AND STRUCTURES AT THE SITE AND ADJACENT TO THE SITE. OBSERVATION VISITS TO THE SITE BY THE ARCHITECT, ENGINEER SHALL NOT RELIEVE THE SUBCONTRACTOR OF SUCH RESPONSIBILITY.
K. NOTE THAT SHEET S1 IS A STANDARD COVER SHEET AND AS SUCH, NOT ALL TYP. DETAILS AND OR NOTES APPLY TO EVERY PROJECT.

II DESIGN CRITERIA

A. APPLICABLE CODE: CALIFORNIA BUILDING CODE 2019 & SFBC 2019.
B. VERTICAL LIVE LOADS: (REDUCIBLE). ROOF: 20 PSF. FLOOR: 40 PSF. HALLWAYS & CORRIDORS: 100 PSF.
C. LATERAL LOADS:
   1. WIND: 110 MPH. BASIC WIND SPEED, EXPOSURE: "B"
   2. SEISMIC: SITE CLASS 'D'
      MAPPED SPECTRAL ACCELERATIONS: S_S= S_1=
      Fa=1.0 Fv=1.5 S_{ds}= .xxx S_{d1}= .xxx
      BASE SHEAR 'V' = .xx W (ASD)
      SEISMIC DESIGN CATEGORY: D
      RESPONSE MODIFICATION FACTOR, R=6.5
      ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE
      IMPORTANCE FACTOR=1 OCCUPANCY CATEGORY=II

III MATERIALS

A. CONCRETE:
   1. REINFORCING STEEL: ASTM A615, GRADE 60, #4 AND SMALLER, GRADE 40.
   2. CONCRETE: NORMAL WEIGHT U.O.N. WITH COMPRESSIVE STRENGTH OF THE FOLLOWING AT 28 DAYS:

FOOTINGS, ~~MAT SLAB~~ & DRILLED PIERS	2500 psi
~~WALLS, COLUMNS~~	~~5000 psi~~
~~STRUCTURAL SLAB (L.W. P.T. SEE S3.2)~~	~~5000 psi~~

   3. MINIMUM CONCRETE COVER FOR REINFORCING STEEL:
      a. SURFACE POURED AGAINST GROUND 3"
      b. FORMED SURFACES BELOW GRADE 2"
      c. SURFACES EXPOSED TO WEATHER 2"
      d. BEAM BARS (INCLUDING STIRRUPS) 1-1/2"
      e. ALL OTHER 1"
   4. ANCHOR BOLT EPOXY*: HILTI HIT-RE 500-SD. (ICC ESR-2322) OR SIMPSON SET-XP (ICC ESR-2508)
   5. SCREW ANCHORS*: SIMPSON TITEN HD (ICC ESR-2713)
      * USE COMPRESSED AIR TO BLOW THE DUST OUT OF ANCHOR BOLT HOLES.
   6. PNEUMATICALLY PLACED CONCRETE (SHOTCRETE) NOTES
      a. ALL CONCRETE WALLS MAY BE SHOTCRETED AT CONTRACTOR'S OPTION. VERIFY COMPATIBILITY OF SHOTCRETE WITH WATE PROOFINGCONTRACTOR.
      b. ALL SHOTCRETE SHALL CONFORM TO THE REQUIREMENTS OF ACI 506.2 AND CBC SECTION 1924.
      c. ALL SHOTCRETE SHALL TEST NOT LESS THAN 4000 PSI AT 28 DAYS.
      d. MAXIMUM AGGREGATE SIZE SHALL BE 3/8 INCH.
      e. LAP ALL REINFORCING BARS 40 DIAMETERS AT SPLICES. SPLICE BARS BY THE NON-CONTACT LAP SPLICE METHOD WITH 2 INCHES CLEAR BETWEEN BARS.
      f. ANY REBOUND SHALL BE REMOVED PRIOR TO PLACING OF CONCRETE.
      g. IN-PLACE SHOTCRETE WHICH SHOW SAGS OR SLOUGHS, SEGREGATION, HONEY COMBING, SAND POCKETS OR OTHER OBVIOUS DEFECTS SHALL BE REMOVED AND REPLACED.
      h. CURE SHOTCRETE BY KEEPING CONTINUOUSLY MOIST FOR A MINIMUM OF 7 DAYS UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE STRUCTURAL ENGINEER.
      i. TEST PANELS: SHOOT ONE TEST PANEL, 18 INCHES SQUARE ,FOR EACH 50 CUBIC YARDS OF SHOTCRETE PLACED, BUT NOT LESS THAN ONE PANEL PER SHIFT. CURE PANELS UNDER SAME CONDITIONS AS THE WORK. TESTING AGENCY SHALL TAKE A MINIMUM OF THREE 2" DIAMETER CORES FROM EACH PANEL. WATER SOAK SPECIMENS 24 HOURS BEFORE TESTING. TEST IN ACCORDANCE WITH UNIFORM BUILDING CODE STANDARD NO. 26-10.
      j. A MINIMUM OF THREE 3" DIAMETER CORES SHALL BE TAKEN FROM THE WORK AT LOCATIONS SPECIFIED BY THE STRUCTURAL ENGINEER. THE SPECIAL INSPECTOR SHALL VISUALLY EXAMINE CORES FOR STRUCTURAL SOUNDNESS AND SUBMIT A REPORT TO THE STRUCTURAL ENGINEER AND THE BUILDING INSPECTION DEPARTMENT.
      k. INSPECTION: PROVIDE CONTINUOUS SPECIAL INSPECTION OF SHOTCRETING OPERATION.

B. CMU: UNITS 1500 PSI, MORTAR (TYPE 'S'), GROUT 2000 PSI

C. STEEL
   1. SHAPES AND PLATES: ASTM A36; TUBES: ASTM A500, GRADE B.
   2. MOMENT FRAMES (BEAMS, COLUMNS): ASTM A992 OR A913 (50 ksi) MOMENT FRAMES (PLATES): A572, GRADE 50.
   3. METAL STUDS, SEE S1.4, NOTES
   4. METAL JOISTS, 50 ksi
   5. BOLTS: ASTM A307, U.O.N.
   6. WELDING ELECTRODES: E-70 FOR FULL PEN WELDS USE CHARPY V-NOTCH WIRE, MIN. 20 ft # @ 0°F
   7. METAL DECKING, SEE S1.5

D. WOOD
   1. FRAMING LUMBER – DOUGLAS FIR LARCH
      a. HEADERS, PLATES, JOISTS: NO.1
      b. STUDS, BLOCKING: NO.2
      c. ALL LUMBER IN CONTACT WITH CONCRETE: PRESERVATIVE TREATED DOUGLAS FIR, (NOT CCA-C)
      d. POSTS AND BEAMS: NO.1
   2. PLYWOOD SHEATHING
      a. SHEARWALL PLYWOOD : 1/2 INCH STRUCTURAL I, C-D EXTERIOR, APA RATED 32/16.
      b. ROOF SHEATHING: 5/8 INCH STRUCTURAL II, C-D EXTERIOR APA RATED 32/16
      c. FLOOR SHEATHING: 3/4 INCH STRUCTURAL II, C-D EXTERIOR APA RATED 48/24
   3. FRAMING HARDWARE AND JOIST HANGERS: AS MANUFACTURED BY SIMPSON STRONGTIE CO. OR APPROVED EQUAL. SIMPSON DESIGNATIONS USED. USE NAILS PER I.C.C. APPROVAL FOR EACH DEVICE.
   4. COMMON NAILS, UNLESS OTHERWISE NOTED. SHORT NAILS MAY BE USED PROVIDED THEY HAVE COMMON CODE SPECIFIED MINIMUM EMBEDMENT. ALL NAILING TO BE PER IBC TABLE NO. 2304.9.1 UNLESS NOTED OTHERWISE.
   5. GLU-LAM BEAMS: 24F-V4 (Fb=2400 PSI)
   6. PARALLAM & MICROLLAM BEAMS AND TJI's TO BE FABRICATED BY TRUS JOIST:
      PARALLAM BEAMS: 2.2E (Fb=2900PSI)
      MICROLLAM BEAMS: 2.0E (Fb=2600PSI)
   7. FOR MICROLLAMS SEE CODE EVALUATION: ICC-ES ESR-1387
   8. FOR TJI JOISTS SEE CODE EVALUATION: ICC-ES ESR-1153

IV EXPOSURE TO WEATHER:

A. STEEL:
   1. ALL EXPOSED MEMBERS SHALL BE COATED WITH A ZINC RICH PRIMER.
   2. BOLTS, NUTS AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED.

B. WOOD:
   1. ALL EXTERIOR TIMBER AND GLU-LAM BEAMS SHALL BE PRESSURE TREATED (BUT NOT CHROMATED COPPER ARSENATE) OR WOOD OF NATURAL RESISTANCE TO DECAY.
   2. ALL EXTERIOR HANGERS AND OTHER SIMPSON TYPE PRODUCTS SHALL BE GALVANIZED.
   3. ALL PLYWOOD SHALL BE OF AN EXTERIOR GRADE.
   4. METAL CONNECTORS IN CONTACT w/ PRESSURE TREATED WOOD SHALL BE HOT-DIPPED GALVANIZED w/ MIN. ZINC COATING OF G185.
   5. ALL NAILS & ANCHOR BOLTS IN CONTACT w/ PRESSURE TREATED WOOD SHALL BE HOT DIPPED GALVANIZED.

V ABBREVIATIONS

B.N. — BOUNDARY NAILING
DIA. — DIAMETER
E.N. — EDGE NAILING
H.P. — HIGH POINT
L.P. — LOW POINT
LVL — LAMINATED VENEER LUMBER
L.W. — LIGHT WEIGHT
M.L. — MICROLLAM
PLWD — PLYWOOD SHEATHING
PSL — PARALLEL STRAND LUMBER
P.T. — PRESSURE TREATED OR POST-TENSIONED
S.A.D. — SEE ARCHITECTURAL DRAWINGS
S.O.G. — SLAB-ON-GRADE
S.S. — STAINLESS STEEL
T.O. — TOP OF
TYP. — TYPICAL
U.O.N. — UNLESS OTHERWISE NOTED
V.I.F. — VERIFY IN FIELD
W.W.F. — WELDED WIRE FABRIC

SYMBOLS

(E) WALL BELOW
(E) WALL ABOVE
(N) CONC. WALL ABOVE
BRICK OR CMU WALL ABOVE
WOOD SHEARWALL (BELOW)
WOOD JOIST HANGER (HUS TYPE, U.O.N.)
WOOD POST BELOW
WOOD POST ABOVE (OR ABOVE & BELOW)
HOLDOWN @ WOOD POST
STEEL COLUMN ABOVE
STEEL COLUMN BELOW
MOMENT CONNECTION
CONCRETE TOPPING OVER PLYWOOD
CONCRETE TOPPING OVER CORRUGATED METAL DECK
CONCRETE COLUMN ABOVE
CONCRETE COLUMN BELOW w/ DROPCAP
DRILLED CONCRETE PIER
PRECAST, PRESTRESSED CONCRETE PILE
DIAGONAL ABOVE
DIAGONAL BELOW

PROJECT NAME: VOLUNTARY STRENGTHENING
ADDRESS: 1077 FELL STREET
BLOCK/LOT: ----
CITY: SAN FRANCISCO, CA

DRAWING INDEX:

S1.0 ——— TITLE SHEET
S1.1A ——— TYPICAL WOOD DETAILS
S2 ——— FOUNDATION PLAN/ 1ST, 2ND AND ROOF FLOOR FRAMING
S3-S4 ——— STRUCTURAL DETAILS
W1-W2 ——— STRONG SIMPSOM WALL

City and County of San Francisco
Department of Building Inspection

London Breed, Mayor
Patrick O'Riordan, Interim Director

Attachment A

SLOPE AND SEISMIC HAZARD ZONE PROTECTION CHECKLIST

A COPY OF THIS DOCUMENT SHALL BE SUBMITTED WITH THE PERMIT APPLICATION

JOB ADDRESS 1077 FELL STREET APPLICATION NO. _____ ADDENDUM NO. ____
OWNER NAME _____ OWNER PHONE NO. (___) _____

1: PROPERTY LOCATION	YES	NO
EARTHQUAKE INDUCED LANDSLIDE AREA ON THE STATE OF CALIFORNIA DEPARTMENT OF CONSERVATION DIVISION OF MINES AND GEOLOGY (CDMG) SEISMIC HAZARD ZONES MAP FOR SAN FRANCISCO, RELEASED NOVEMBER 17, 2000.	☐	☑

2: AVERAGE SLOPE OF PROPERTY	YES	NO
PROPERTY EXCEEDING AN AVERAGE SLOPE OF 4H:1V (25%) GRADE *(APPLICANT WILL NEED TO INCLUDE PLANS ILLUSTRATING SLOPE OF THE PROPERTY AND/OR INCLUDE A SURVEY VERIFYING THE SLOPE OF THE PROPERTY)*	☐	☑

3: PROPOSED CONSTRUCTION	YES	NO
CONSTRUCTION OF NEW BUILDING OR STRUCTURE HAVING OVER 1000 SQFT OF NEW PROJECTED ROOF AREA	☐	☑
HORIZONTAL OR VERTICAL ADDITIONS HAVING OVER 500 SQFT OF NEW PROJECTED ROOF AREA	☐	☑
SHORING	☐	☑
UNDERPINNING	☐	☑
GRADING, INCLUDING EXCAVATION OR FILL, OF OVER 50 CUBIC YARDS OF EARTH MATERIAL	☐	☑
CONSTRUCTION ACTIVITY LISTED BELOW DETERMINED BY THE BUILDING OFFICIAL THAT MAY HAVE A SUBSTANTIAL IMPACT ON THE SLOPE STABILITY:		
RETAINING WALL:	☐	☑
OTHERS: _____	☐	☑

SECTION 4: LICENSED DESIGN PROFESSIONAL VERIFICATION AND SIGNATURES

Under penalty of perjury, I certify that the information provided on this form is based on my personal review of the building and its records, or review by others acting under my direct supervision, and is correct to the best of my knowledge.

Prepared by: JEFFERSON CHEN, P.E.
Engineer/Architect of Record

(415) 626 - 8300 Telephone
jefferson@enertiadesigns.net Email
Signature
Date

REGISTERED PROFESSIONAL ENGINEER JEFFERSON MING YEN C057898 Exp. 06/30/24 CIVIL STATE OF CALIFORNIA

Permit Services Division
49 South Van Ness Avenue, Suite 500 - San Francisco CA 94103
Phone (628) 652-3600 – www.sfdbi.org

INFORMATION SHEET S-19 ATTACHMENT A — Slope Protection Checklist

FOR DBI USE ONLY

ASSIGNMENT OF REVIEW TIER

EXEMPTED: Reports per Section E and Third Party Peer Review Not Required

☐ If the box in Section 1 "Property Location" **AND** the box in Section 2 "Average Slope of Property" are marked "No" **OR** if all the boxes in Section 3 "Proposed Construction" are marked "No", reports per Section E and Third Party Peer Review are exempted by the SSPA.

TIER I: Reports per Section E Required but Third Party Peer Review Not Required

☐ If the box in Section 2 "Average Slope of Property" **AND** any boxes in Section 3 "Proposed Construction" are marked "Yes" **AND** the property does not lie within any areas of potential landslide hazard, DBI shall require mandatory submittal of reports per Section E only.

TIER II: Reports per Section E and Third Party Peer Review Required

☐ If the box in Section 2 "Average Slope of Property" **AND** any boxes in Section 3 "Proposed Construction" are marked "Yes" **AND** the property lies in the vicinity of mapped landslides, DBI shall require mandatory submittal of reports per Section E and require the permit application be subject to a third party peer review. At the discretion of the SSPA Review Committee, the peer review may be followed by the establishment of a Structural Advisory Committee (SAC) with the project reassigned to Tier III.

If the DBI Plan Review Engineer (or the SSPA Review Committee, if established), in their discretion, determines from the submitted documents that the project has a substantial impact on the slope stability of the site or creates a potential for earthquake induced landslide hazards, DBI may require that the third party peer review be followed by the establishment of a Structural Advisory Committee (SAC) and re-assigned the project to Tier III.

TIER III: Structural Advisory Committee (SAC) Review

☐ If the box in Section 1 "Property Location" **AND** any boxes in Section 3 "Proposed Construction" are marked "Yes", DBI shall require mandatory submittal of reports per Section E and require the permit application be subject to review by a Structural Advisory Committee (SAC), as defined by SFBC Section 105A.6.

Tier assigned by: _____ Phone: (628) _____
DBI Plan Review Engineer

Comment:

City and County of San Francisco
Department of Building Inspection

London N. Breed, Mayor
Patrick O'Riordan, Interim Director

NOTICE

SPECIAL INSPECTION REQUIREMENTS

Please note that the Special Inspections shown on the approved plans and checked on the Special Inspections form issued with the permit are required for this project. The employment of special inspectors is the direct responsibility of the owner or the engineer/architect of record acting as the owner's representative.

These special inspections are required *in addition to* the called inspections performed by the Department of Building Inspection. The name of the special inspector shall be furnished to the district building inspector prior to start of work for which special inspection is required.

For questions regarding the details or extent of required inspection or tests, please call the Plan Checker assigned to this project or **628-652-3407**. If there are any field problems regarding special inspection, please call your District Building Inspector or 628-652-3400 Ext 1.

Before final building inspection is scheduled, documentation of special inspection compliance must be submitted to and approved by the Special Inspection Services staff. To avoid delays in this process, the project owner should request final compliance reports from the architect or engineer of record and/or special inspection agency soon after the conclusion of work requiring special inspection. ***The permit will not be finalized without compliance with the special inspection requirements.***

STRUCTURAL OBSERVATION REQUIREMENTS

Structural observation shall be provided as required per Section 1704.6. **The building permit will not be finalized without compliance with the structural observation requirements.**

Special Inspection Services Contact Information

1. **Telephone: (628) 652-3407**
2. **Email: dbi.specialinspections@sfgov.org**
3. **In person: 49 South Van Ness Ave – Suite 400**

Note: We are moving towards a "paperless" mode of operation. All special inspection submittals, including final letters, may be emailed (preferred) or faxed. We will also be shifting to a paperless fax receipt mode.

Special Inspection Services
49 South Van Ness Ave – Suite 400 – San Francisco CA 94103
Office (628) 652-3407 – www.sfdbi.org

Updated 10/05/2020

SPECIAL INSPECTION AND STRUCTURAL OBSERVATION

A COPY OF THIS DOCUMENT SHALL BE KEPT WITH THE APPROVED STRUCTURAL DRAWING SET

JOB ADDRESS 1077 FELL STREET APPLICATION NO._____ ADDENDUM NO.____

OWNER NAME_____OWNER PHONE NO. (_____)_____

Employment of Special Inspection is the direct responsibility of the OWNER, or the engineer/architect of record acting as the owner's representative. Special inspector shall be one of those as prescribed in Sec. 1704. Name of special inspector shall be furnished to DBI District Inspector prior to start of the work for which the Special Inspection is required. Structural observation shall be performed as provided by Section 1704.6. A preconstruction conference is recommended for owner/builder or designer/builder projects, complex and high-rise projects, and for projects utilizing new processes or materials.

In accordance with Chapter 17 (SFBC), Special Inspection and/or testing is required for the following work:

1. [✓] Concrete (Placement & sampling)
2. [ ] Bolts installed in concrete
3. [ ] Special moment - Resisting concrete frame
4. [✓] Reinforcing steel ~~and prestressing tendons~~
5. **Structural welding:**
   A. Periodic visual inspection
   [ ] Single pass fillet welds 5/16" or smaller
   [ ] Steel deck
   [ ] Welded studs
   [ ] Cold formed studs and joists
   [ ] Stair and railing systems
   [ ] Reinforcing steel
   B. Continuous visual inspection and NDT (Section 1704)
   [ ] All other welding (NDT exception: Fillet weld)
   [ ] Reinforcing steel; and [ ] NDT required
   [ ] Moment-resisting frames
   [ ] Others _____
6. [ ] High-strength bolting
7. [ ] Structural masonry
8. [ ] Reinforced gypsum concrete
9. [ ] Insulating concrete fill
10. [ ] Sprayed-on fireproofing
11. [ ] Piling, drilled piers and caissons
12. [ ] Shotcrete
13. [ ] Special grading, excavation and filling (Geo. Engineered)
14. [ ] Smoke-control system
15. [ ] Demolition
16. [ ] Exterior Facing
17. **Retrofit of unreinforced masonry buildings:**
    [ ] Testing of mortar quality and shear tests
    [ ] Inspection of repointing operations
    [ ] Installation inspection of new shear bolts
    [ ] Pre-installation inspection for embedded
    [ ] Pull/torque tests per SFBC Sec.1607C & 1615C
18. **Bolts Installed in existing concrete or masonry:**
    [ ] Concrete [ ] Masonry
    [ ] Pull/torque tests per SFEBC Sec. 507C & 515C
19. [ ] Shear walls and floor systems used as shear diaphragms
20. [ ] Holdowns
21. **Special cases:**
    [ ] Shoring
    [ ] Underpinning; [ ] Not affecting adjacent property
    [ ] Affecting adjacent property: PA_____
    [ ] Others
22. [ ] Crane safety (Apply to the operation of tower cranes on high-rise building) (Section 1705.22)
23. [ ] Others: "As recommended by professional of record"_____
24. **Structural observation per Sec. 1704.6 (SFBC) for the following:** [ ] Foundations [ ] Steel framing
    [ ] Concrete construction [ ] Masonry construction [✓] Wood framing
    [ ] Other:_____
25. Certification is required for: [ ] Glu-lam components
26. [ ] Firestops in high-rise building

Prepared by: JEFFERSON CHEN, P.E. Phone: (415) 626 - 3800
Engineer/Architect of Record

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FAX: (415) 701 -0212 Email jefferson@enertiadesigns.net

Review by: _____ Phone: (628) 652-_____
DBI Engineer or Plan Checker

****

APPROVAL (Based on submitted reports.)

_____
DATE DBI Engineer or Plan Checker / Special Inspection Services Staff

QUESTIONS ABOUT SPECIAL INSPECTION AND STRUCTURAL OBSERVATION SHOULD BE DIRECTED TO:
Special Inspection Services (628) 652-3407; or, dbi.specialinspections@sfgov.org

Updated 10/05/2020

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REGISTERED PROFESSIONAL ENGINEER JEFFERSON MING YEN C057898 Exp. 06/30/24 CIVIL STATE OF CALIFORNIA

	DATE	REVISIONS
1		
2		
3		
4		

TITLE SHEET
GENERAL NOTES

VOLUNTARY STRENGTHENING
1077 FELL STREET
SAN FRANCISCO, CA

Date: 03-01-2024
Scale: AS SHOWN
Drawn By: DM
Job No: 23059
Sheet S1.0
Of 7 Sheets

DRAWING NAME: G:\enertia\projects\by-all\1stFL\2nd\WORKING\MEP\CAD\Revit Files\Drawings\Revised Plans\2023\1077 Fell Street\Drawings\Sheet\1077 Fell Street_S1.0_02.29.24.dwg

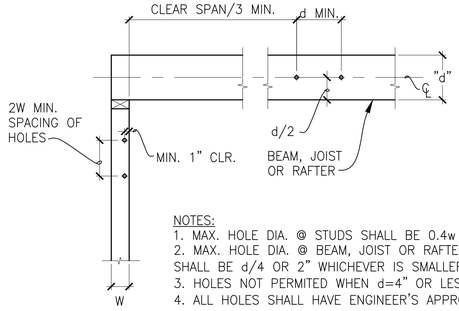
PLOT DATE: 03-01-24 PLOTTED BY: dangulsorn

NAILING SCHEDULE (PER CBC 2016, TABLE NO. 2304.10.1)

CONNECTION	NAILING [1]
1. JOIST TO SILL OR GIRDER, TOENAIL	3–8d
2. BRIDGING TO JOIST, TOENAIL EACH END	2–8d
3. 1"X6" SUBFLOOR OR LESS TO EACH JOIST, FACE NAIL	2–8d
4. WIDER THAN 1" X 6" SUBFLOOR TO EACH JOIST, FACE NAIL	3–8d
5. 2" SUBFLOOR TO JOIST OR GIRDER, BLIND AND FACE NAIL	2–16d
6. SOLE PLATE TO JOIST OR BLOCKING, TYPICAL FACE NAIL	16d AT 16" O.C.
SOLE PLATE TO JOIST OR BLOCKING, AT BRACED WALL PANELS	3–16d PER 16"
7. TOP PLATE TO STUD, END NAIL	2–16d
8. STUD TO SOLE PLATE	4–8d, TOENAIL OR 2–16d, END NAIL
9. DOUBLE STUDS, FACE NAIL	16d AT 24" O.C.
10. DOUBLED TOP PLATES, TYPICAL FACE NAIL	16d AT 16" O.C.
DOUBLE TOP PLATES, LAP SPLICE	8–16d
11. BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE, TOENAIL	3–8d
12. RIM JOIST TO TOP PLATE, TOINAIL	8d AT 6" O.C.
13. TOP PLATES, LAPS AND INTERSECTIONS, FACE NAIL	2–16d
14. CONTINUOUS HEADER, TWO PIECES	16d AT 16" O.C. ALONG EACH EDGE
15. CEILING JOISTS TO PLATE, TOENAIL	3–8d
16. CONTINUOUS HEADER TO STUD, TOINAIL	4–8d
17. CEILING JOISTS, LAPS OVER PARTITIONS, FACE NAIL	3–16d
18. CEILING JOISTS TO PARALLEL RAFTERS, FACE NAIL	3–16d
19. RAFTER TO PLATE, TOENAIL	3–8d
20. 1" BRACE TO EACH STUD AND PLATE, FACE NAIL	2–8d
21. 1" X 8" SHEATHING OR LESS TO EACH BEARING, FACE NAIL	2–8d
22. WIDER THAN 1" X 8" SHEATHING TO EACH BEARING, FACE NAIL	3–8d
23. BUILT–UP CORNER STUDS	16d AT 24" O.C.
24. BUILT–UP GIRDER AND BEAMS	20d AT 32" O.C. AT TOP AND BOTTOM AND STAGGERED 2–20d AT ENDS AND AT EACH SPLICE
25. 2" PLANKS	2–16d AT EACH BEARING
26. COLLAR TIE TO RAFTER	3–10d AT FACE NAIL
27. JACK RAFTER TO HIP	2–10d AT TOENAIL AND 2–16d AT FACE NAIL
28. ROOF RAFTER TO 2–BY RIDGE BEAM	2–16d AT TOENAIL AND 2–16d AT FACE NAIL
29. JOIST TO BAND JOIST	3–16d AT FACE NAIL
30. LEDGER STRIP	3–16d AT FACE NAIL AT EACH JOIST
31. WOOD STRUCTURAL PANELS AND PARTICLEBOARD [B] SUBFLOOR, ROOF AND WALL SHEATHING (TO FRAMING)	
1/2" AND LESS	6d[C,L]
19/32"–3/4"	8d[D] or 6d[E]
7/8"–1"	10d[D] or 8d[E]
1 1/8"–1 1/4"	10d[D] or 8d[E]
COMBINATION SUBFLOOR–UNDERLAYMENT (TO FRAMING):	
3/4" AND LESS	6d[E]
7/8"–1"	8d[E]
1 1/8"–1 1/4"	10d[D] or 8d[E]
32. PANEL SIDING (TO FRAMING):	
1/2" OR LESS	6d[F]
5/8"	8d[F]
33. FIBERBOARD SHEATHING: [G]	
1/2"	6d[D]
25/32"	8d[D]
34. INTERIOR PANELING	
1/4"	4d[J]
3/8"	6d[K]

CBC TABLE 2304.10.1 FASTENING SCHEDULE NOTES

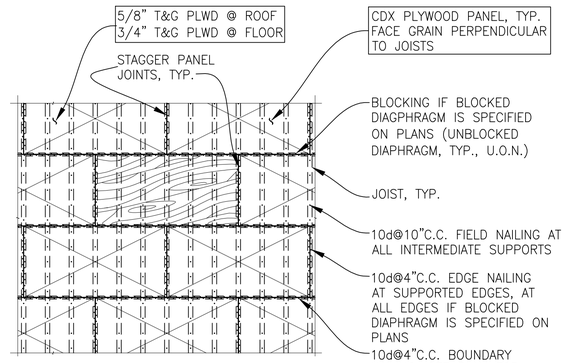
A. COMMON OR BOX NAILS ARE PERMITTED TO BE USED EXCEPT WHERE OTHERWISE STATED.
B. NAILS SPACED AT 6 INCHES ON CENTER AT EDGES, 12 INCHES AT INTERMEDIATE SUPPORTS EXCEPT 6 INCHES AT SUPPORTS WHERE SPANS ARE 48 INCHES OR MORE. FOR NAILING OF WOOD STRUCTURAL PANEL AND PARTICLE BOARD DIAPHRAGMS AND SHEAR WALLS, REFER TO SECTION 2305. NAILS FOR WALL SHEATHING ARE PERMITTED TO BE COMMON, BOX OR CASING.
C. COMMON OR DEFORMED SHANK (6D – 2" X 0.113"; 8D – 2½" X 0.131"; 10D – 3" X 0.148").
D. COMMON (6D – 2" X 0.113"; 8D – 2½" X 0.131"; 10D – 3" X 0.148").
E. DEFORMED SHANK (6D – 2" X 0.113"; 8D – 2½" X 0.131"; 10D – 3" X 0.148").
F. CORROSION–RESISTANT SIDING (6D – 1⅞" X 0.106"; 8D – 2⅜" X 0.128") OR CASING (6D – 2" X 0.099"; 8D – 2½" X 0.113") NAIL.
G. FASTENERS SPACED 3 INCHES ON CENTER AT EXTERIOR EDGES AND 6 INCHES ON CENTER AT INTERMEDIATE SUPPORTS, WHEN USED AS STRUCTURAL SHEATHING. SPACING SHALL BE 6 INCHES ON CENTER ON THE EDGES AND 12 INCHES ON CENTER AT INTERMEDIATE SUPPORTS FOR NONSTRUCTURAL APPLICATIONS.
H. CORROSION–RESISTANT ROOFING NAILS WITH 7/16–INCH–DIAMETER HEAD AND 1½–INCH LENGTH FOR ½–INCH SHEATHING AND 1¾–INCH LENGTH FOR 25/32–INCH SHEATHING.
I. CORROSION–RESISTANT STAPLES WITH NOMINAL 7/16–INCH CROWN AND 1⅛–INCH LENGTH FOR ½–INCH SHEATHING AND 1½–INCH LENGTH FOR 25/32–INCH SHEATHING. PANEL SUPPORTS AT 16 INCHES (20 INCHES IF STRENGTH AXIS IN THE LONG DIRECTION OF THE PANEL, UNLESS OTHERWISE MARKED).
J. CASING (1½" X 0.080") OR FINISH (1½" X 0.072") NAILS SPACED 6 INCHES ON PANEL EDGES, 12 INCHES AT INTERMEDIATE SUPPORTS.
K. PANEL SUPPORTS AT 24 INCHES. CASING OR FINISH NAILS SPACED 6 INCHES ON PANEL EDGES, 12 INCHES AT INTERMEDIATE SUPPORTS.
L. FOR ROOF SHEATHING APPLICATIONS, 8D NAILS (2½" X 0.113") ARE THE MINIMUM REQUIRED FOR WOOD STRUCTURAL PANELS.
M. STAPLES SHALL HAVE A MINIMUM CROWN WIDTH OF 7/16 INCH.
N. FOR ROOF SHEATHING APPLICATIONS, FASTENERS SPACED 4 INCHES ON CENTER AT EDGES, 8 INCHES AT INTERMEDIATE SUPPORTS.
O. FASTENERS SPACED 4 INCHES ON CENTER AT EDGES, 8 INCHES AT INTERMEDIATE SUPPORTS SUB FLOOR AND WALL SHEATHING AND 3 INCHES ON CENTER AT EDGES, 6 INCHES AT INTERMEDIATE SUPPORTS FOR ROOF SHEATHING.
P. FASTENERS SPACED 4 INCHES ON CENTER AT EDGES, 8 INCHES AT INTERMEDIATE SUPPORTS.



NOTES:
1. MAX. HOLE DIA. @ STUDS SHALL BE 0.4w
2. MAX. HOLE DIA. @ BEAM, JOIST OR RAFTER SHALL BE d/4 OR 2" WHICHEVER IS SMALLER.
3. HOLES NOT PERMITTED WHEN d=4" OR LESS.
4. ALL HOLES SHALL HAVE ENGINEER'S APPROVAL.

1 TYPICAL HOLES IN BEAMS, JOISTS, RAFTERS AND STUDS

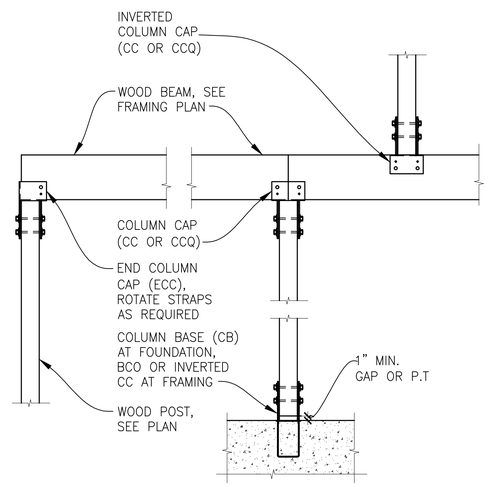
SCALE: 3/4" = 1'–0"



NOTES:
1. SEE PLANS FOR MORE INFORMATION
2. PLYWOOD = WOOD STRUCTURAL PANEL

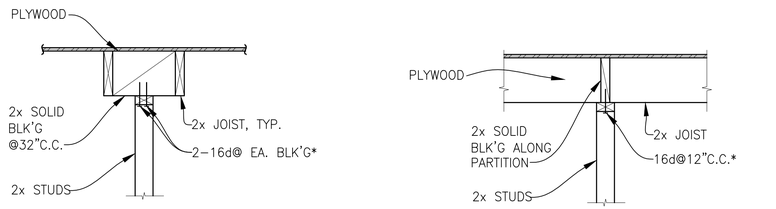
2 TYPICAL PLYWOOD DIAPHRAGM SHEATHING (PLAN VIEW)

SCALE: 3/4" = 1'–0"



3 TYPICAL BEAM TO POST CONNECTION

SCALE: 3/4" = 1'–0"



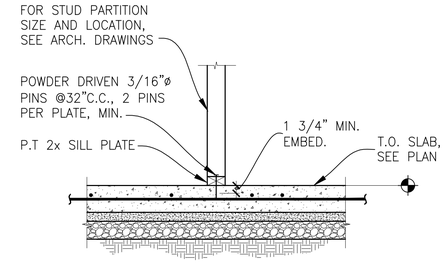
PARTITION PARALLEL TO FLOOR JOISTS

PARTITION PERPENDICULAR TO FLOOR JOISTS

*OPTION: PROVIDE STC CLIP TO ROOF TRUSS OR BEAM

4 TYPICAL NON–BEARING / NON–SHEARWALL SUPPORT @ ROOF

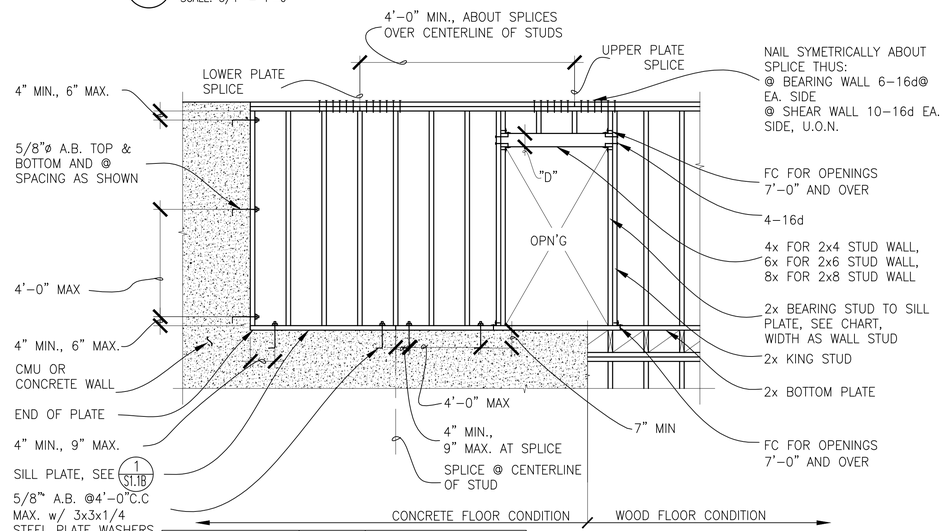
SCALE: 3/4" = 1'–0"



NOTES:
1. FOR SLAB THICKNESS, REINFORCEMENT AND BASE MATERIALS SEE PLAN.
2. AT P.T. SLAB PROVIDE MAX. 3/4" EMBEDMENT.

5 TYPICAL NON–BEARING / NON–SHEARWALL CONNECTION AT CONCRETE SLAB

SCALE: 3/4" = 1'–0"



HEADER SPANS "S"	"D" MIN.	ADDN'L BEARING STUDS
S ⩽ 4'–0"	5 1/2"	0
4'–0" < S ⩽ 8'–0"	7 1/4"	1
8'–0" < S ⩽ 10'–0"	9 1/4"	2
S > 10'–0"	SEE PLAN	3

NOTE:
THIS DETAIL IS NOT FOR SHEARWALLS, SEE 1 S1.1B

6 TYPICAL FRAMING @ OPENINGS, TOP PLATE SPLICES, ETC.

SCALE: 3/4" = 1'–0"

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PROFESSIONAL ENGINEER – REGISTERED – JASON JIECHEN – C057898 – REG. 05/2024 – CIVIL – STATE OF CALIFORNIA

	DATE	REVISIONS
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2		
3		
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TYPICAL WOOD DETAILS

VOLUNTARY STRENGTHENING

1077 FELL STREET
SAN FRANCISCO, CA

Date: 03-01-2024
Scale: AS SHOWN
Drawn By: DM
Job No: 23059
Sheet S1.1A
Of 7 Sheets

DRAWING NAME: G:\Archive\Projects by ref\1UNFA\1STARTERS\SAMUrgh\Dropbox\Archive\Structural Folder\Drawings\Projects\2023\1077 Fell Street\Drawings\Struct\1077 Fell Street - S1.1A 24.dwg
PLOT DATE: 03-01-24 PLOTTED BY: darquisonm

CLASS "B" LAP SPLICES					
Fy	BAR SIZE	SPECIFIED CONCRETE STRENGTH, f'c			
		2500	3000	4000	5000
40	#3	1'-4"	1'-3"	1'-1"	11"
40	#4	1'-9"	1'-7"	1'-5"	1'-3"
60	#5	3'-3"	3'-0"	2'-7"	2'-4"
60	#6	3'-11"	3'-7"	3'-1"	2'-9"
60	#7	5'-9"	5'-3"	4'-6"	4'-1"
60	#8	6'-6"	6'-0"	5'-2"	4'-8"
60	#9	7'-4"	6'-9"	5'-10"	5'-3"
60	#10	8'-3"	7'-7"	6'-7"	5'-10"
60	#11	9'-2"	8'-5"	7'-3"	6'-6"
60	#14	11'-1"	10'-1"	8'-9"	7'-10"

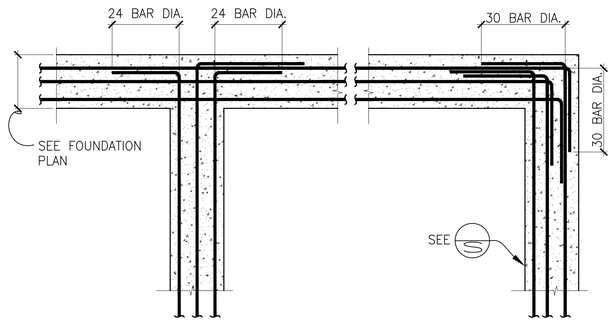
THE ABOVE REQUIREMENTS APPLY TO CONFIGURATIONS WHERE:
1. THE BARS IN QUESTION ARE TOP BARS OR BARS IN LIGHTWEIGHT CONCRETE.
2. BARS ARE UNCOATED
3. CONCRETE IS NORMAL WEIGHT
4. CLEAR SPACING > 2db
   AND CLEAR COVER > db
   OR CLEAR SPACING > db
   AND CLEAR COVER > db
   AND MIN. STIRRUPS OR TIES ARE PROVIDED

FOR OTHER CONFIGURATIONS CONTACT ENGINEER.

DIAMETER OF BENDS	
"D1"	1 1/2" FOR #3 BARS
	2" FOR #4 BARS
	2 1/2" FOR #5 BARS
"D2"	6d FOR #3 THRU #8 BARS
	8d FOR #9 THRU #11 BARS
	10d FOR #4 AND #10 BARS

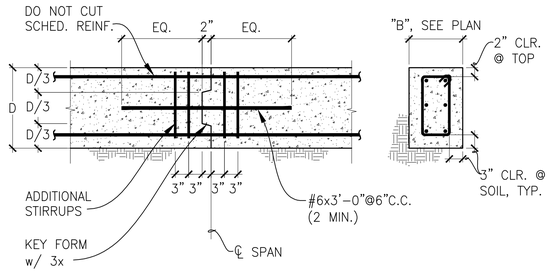
STANDARD HOOK LENGTH				
BAR SIZE	MAIN REINFORCEMENT		STIRRUPS AND TIE HOOKS	
	90°	180°	90°	180°
#3	6"	4"	3	4 1/2"
#4	8"	4"	4"	6"
#5	9 1/2"	4 1/2"	5"	7 1/2"
#6	11 1/2"	5 1/2"	11 1/2"	10"
#7	13 1/2"	6 1/2"	13 1/2"	11 1/2"
#8	15"	7"	15"	13"
#9	18"	9"	–	–
#10	20"	10"	–	–
#11	22"	11"	–	–

NOTES:
"D1" TO BE USED FOR STIRRUPS, TIES & WALLS REINFOCING AT OPENINGS.
"D2" FOR ALL OTHERS

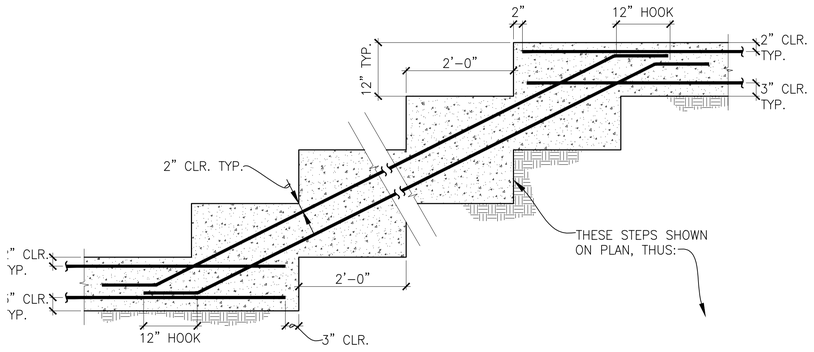


PLAN VIEW

NOTE: STIRRUPS NOT SHOWN

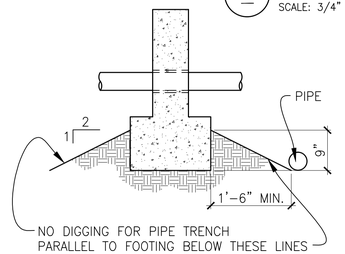


1 TYPICAL OFFSET AND TYPICAL LAP SPLICE
SCALE: 1 1/2" = 1'-0"

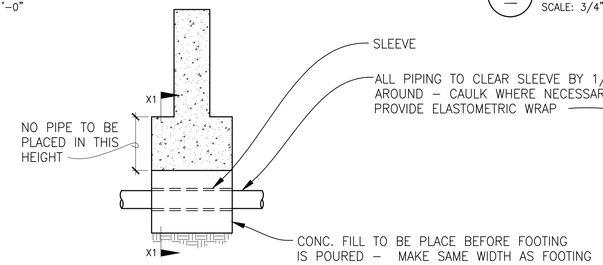


NOTES:
1. DO NOT SLOPE GRADE BEAMS > 1 VERT TO 10 HORIZ.
2. DIMENSIONS AS SHOWN UNLESS OTHERWISE SHOWN ON DRAWINGS

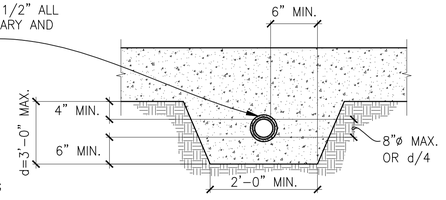
2 STANDARD HOOKS
SCALE: 1 1/2" = 1'-0"



3 TYPICAL GRADE BEAM INTERSECTIONS
SCALE: 3/4" = 1'-0"

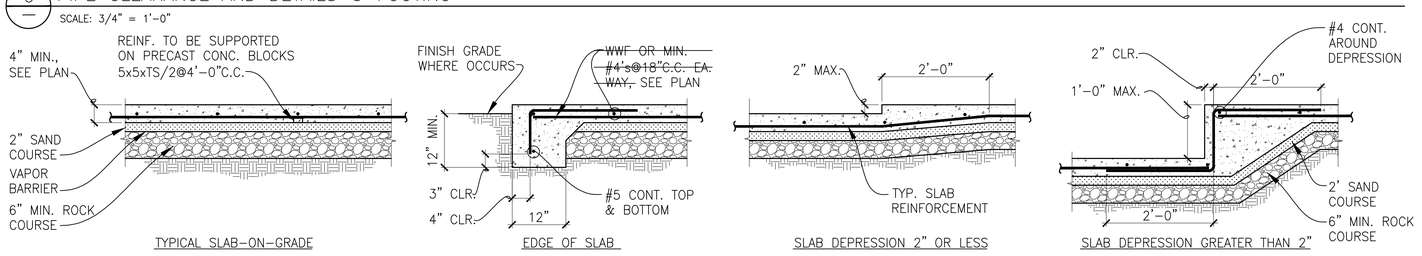


4 TYPICAL GRADE BEAM CONSTRUCTION JOINT
SCALE: 3/4" = 1'-0"



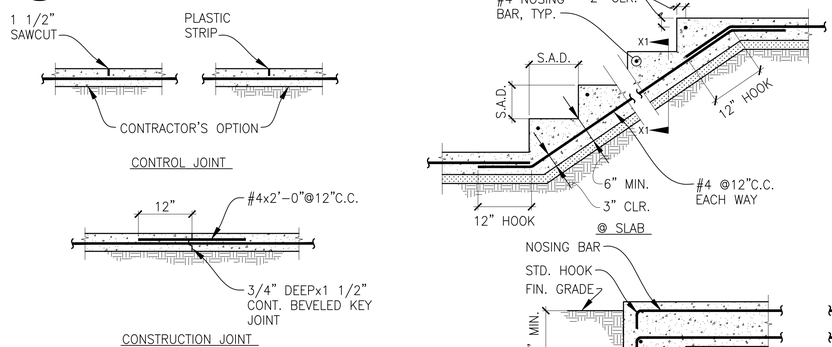
SECTION X1–X1

6 PIPE CLEARANCE AND DETAILS @ FOOTING
SCALE: 3/4" = 1'-0"



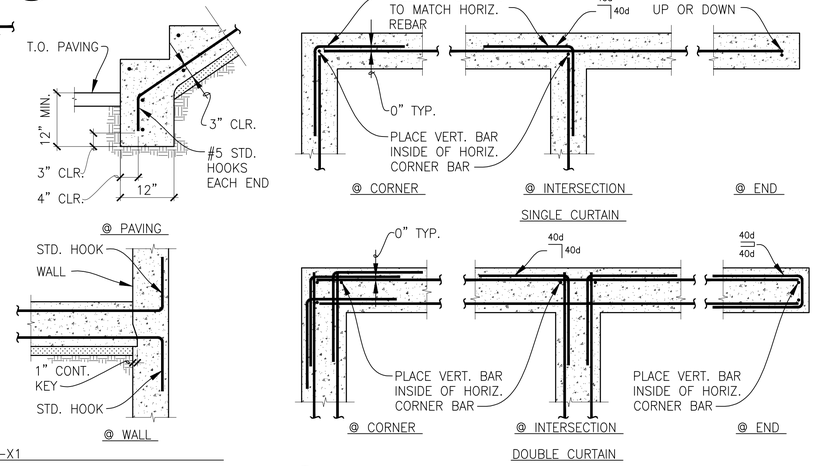
TYPICAL SLAB–ON–GRADE | EDGE OF SLAB | SLAB DEPRESSION 2" OR LESS | SLAB DEPRESSION GREATER THAN 2"

5 TYPICAL STEPS IN GRADE BEAMS AND WALL FOOTING
SCALE: 3/4" = 1'-0"



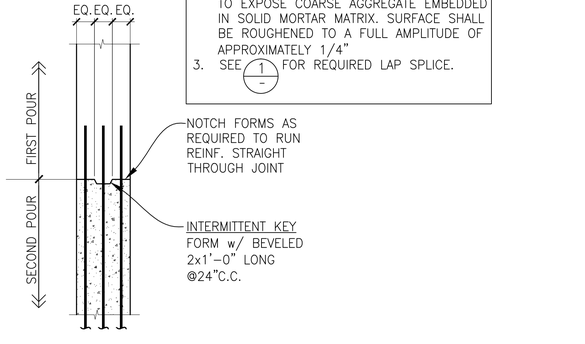
NOTE:
1. LOCATE TO ENCLOSE APPROX. SQUARE AREAS NOT EXCEEDING 400 Q. FT. SUNMIT LAYOUT FOR APPROVAL. LOCATE JOINT UNDER PARTITIONS WHENEVER POSSIBLE

7 TYPICAL SLAB–ON–GRADE DETAILS
SCALE: 3/4" = 1'-0"



SECTION X1–X1

NOTES:
1. PROVIDE LEVEL AND NEAT CONSTRUCTION JOINT.
2. ROUGHEN ALL CONSTRUCTION JOINTS TO EXPOSE COARSE AGGREGATE EMBEDDED IN SOLID MORTAR MATRIX. SURFACE SHALL BE ROUGHENED TO A FULL AMPLITUDE OF APPROXIMATELY 1/4"
3. SEE 1 — FOR REQUIRED LAP SPLICE.



8 TYPICAL CONSTRUCTION JOINT DETAILS @ SLAB–ON–GRADE
SCALE: 3/4" = 1'-0"

9 TYPICAL CONCRETE STAIRS ON GRADE
SCALE: 3/4" = 1'-0"

10 TYPICAL CONCRETE WALL INTERSECTION
SCALE: 3/4" = 1'-0"

11 TYPICAL CONCRETE WALL CONSTRUCTION JOINT
SCALE: 3/4" = 1'-0"

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PROFESSIONAL ENGINEER REGISTERED CIVIL ENGINEER JIECHEN C057898 06/30/24 STATE OF CALIFORNIA

	DATE	REVISIONS
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TYPICAL WOOD DETAILS

VOLUNTARY STRENGTHENING

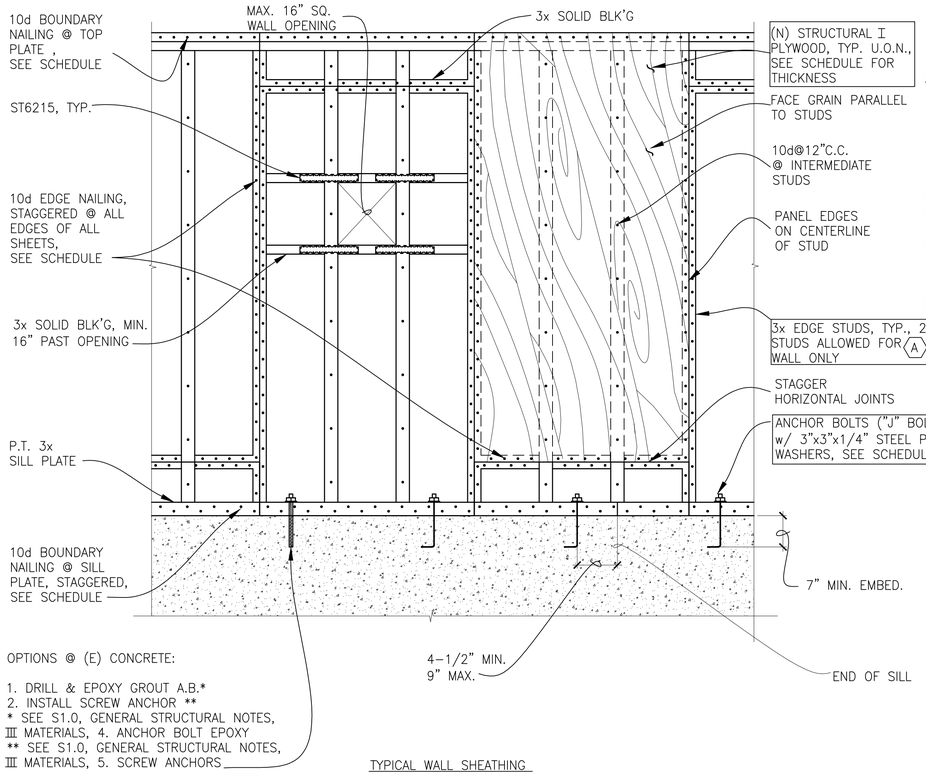
1077 FELL STREET
SAN FRANCISCO, CA

Date:	03-01-2024
Scale:	AS SHOWN
Drawn By:	DM
Job No:	23059
Sheet	S1.2A
Of	7 Sheets

DRAWING NAME: S1.2 structural targeting all 11 details (CreNCW0MDvKAA3Jg).dwg Date/Time: Fri Mar 01 2024 - 10:47:27 File Name: C:\Users\Dan\Desktop\Projects\2023\1077 Fell Street\Drawings\Revit\1077 Fell Street_S1 - S2.rvt
PLOT DATE: 09-13-24 PLOTTED BY: dangulsonm

SHEARWALL SCHEDULE

SYMBOL	PLWD GRADE	PLWD THICKNESS	PLWD ONE SIDE	PLWD TWO SIDES	PLWD EDGE & BOUNDARY NAILING	CONT. JOIST OR SOLID BLK'G	CLIP SPACING	PLATE NAIL SPACING	SDS 1/4x4 1/2" WOOD SCREW SPACING	A.B. SPACING	CAPACITY (PLF)
A	STRUC I	15/32"	X		10d @ 6"C.C.	2x OR 1 3/4" LVL	A35 OR LTP4 @ 16"C.C.	16d @ 4"C.C.	–	5/8"ø @ 32"C.C.	340
B	STRUC I	15/32"	X		10d @ 4"C.C.	2x OR 1 3/4" LVL	A35 OR LTP4 @ 12"C.C.	16d @ 3"C.C.	–	5/8"ø @ 24"C.C.	510
C	STRUC I	15/32"	X		10d @ 3"C.C.	2x OR 1 3/4" LVL	A35 OR LTP4 @ 9"C.C.	–	6"C.C.	5/8"ø @ 16"C.C.	665
D	STRUC I	15/32"	X		10d @ 2"C.C.	2x OR 1 3/4" LVL	A35 OR LTP4 @ 7"C.C.	–	4"C.C.	5/8"ø @ 16"C.C.	870
E	STRUC I	15/32"		X	10d @ 3"C.C.	2–2x's OR 4x OR 3 1/2" PSL	A35 OR LTP4 @ 8"C.C. + (LTP4 @ 8"C.C. OR CONTINUE WALL PLWD UP)	–	3"C.C. STAGGERED	7/8"ø @ 16"C.C.	1330
F	STRUC I	15/32"		X	10d @ 2"C.C.	2–2x's OR 4x OR 3 1/2" PSL	A35 OR LTP4 @ 8"C.C. + (LTP4 @ 8"C.C. OR CONTINUE WALL PLWD UP)	–	2"C.C. STAGGERED	7/8"ø @ 16"C.C.	1740



OPTIONS @ (E) CONCRETE:

1. DRILL & EPOXY GROUT A.B.*
2. INSTALL SCREW ANCHOR **

* SEE S1.0, GENERAL STRUCTURAL NOTES, III MATERIALS, 4. ANCHOR BOLT EPOXY
** SEE S1.0, GENERAL STRUCTURAL NOTES, III MATERIALS, 5. SCREW ANCHORS

TYPICAL WALL SHEATHING

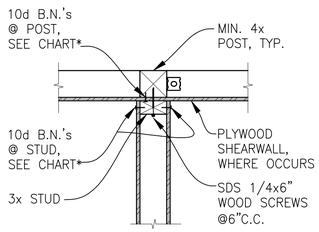
1 — TYPICAL PLYWOOD SHEARWALL
SCALE: 3/4" = 1'–0"

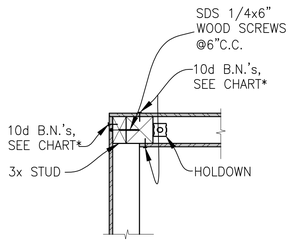
NOTES:
1. PLYWOOD SHALL BE NAILED DIRECTLY TO FRAMING.
2. WHEN PLYWOOD APPLIED TO BOTH FACES, STAGGER SHEETS SO THAT EDGES OCCUR AT DIFFERENT STUDS.
3. DO NOT OVER SHOOT NAILS THROUGH OUTER LAYER OF SHEARWALL PLYWOOD.
4. PLYWOOD = WOOD STRUCTURAL PANEL.
5. ORIENTED STRAND BOARD (OSB) MAY BE USED IN LIEU OF PLYWOOD AT CONTRACTOR'S OPTION.
6. FOR TYPICAL PLYWOOD SHEARWALL INTERSECTION, SEE 3/—
7. USE 3" LONG 10d NAILS.
8. CDX PLYWOOD EXPOSED TO EXTERIOR SHALL BE PRESSURE TREATED.
9. FOR STEEL PLATES, BOLTS, NAILS, SCREWS, ETC. IN CONTACT WITH P.T WOOD, SEE SHEET S1.0, GENERAL STRUCTURAL NOTES, IV EXPOSURE TO WEATHER, B. WOOD

PULL OUT TEST ON HDU HOLDOWNS	
HOLDOWN	PULL OUT VALUE
HDU2	7688 LBS
HDU4	11413 LBS
HDU5	14113 LBS
HDU8	19675 LBS
HDU11	23338 LBS
HDU14	36113 LBS
HD12	28440 LBS
HD19	38140 LBS

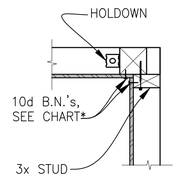
STRAP OPTION	
HOLDOWN	EQUIVALENT STRAP
HDU2	MST60
HDU4	MST60 OR 2–MST37's
HDU5, PHD5 OR HD5A	MST60 OR 2–MST48's
~~PHD6~~ OR ~~HD6A~~	2–MST48's
HDU8, HDQ8	2–MST60's

POST SIZE	LARGEST HOLDDOWN FOR A SINGLE HOLDOWN APPLICATION
4X4 OR (2)2X4	HDU2 TO HDU4
4x6	HDU5 TO HDU8 – HDQ8
6x6	HDU11 TO HDU14 HHDQ11 TO HHDQ14



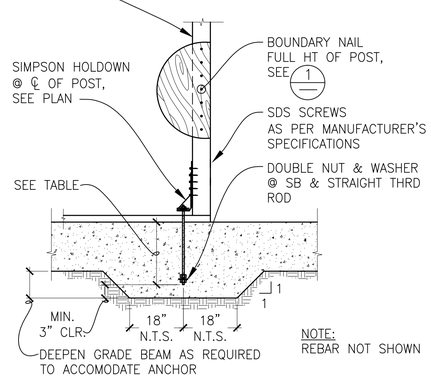


EXTERIOR PLYWOOD (PLAN)



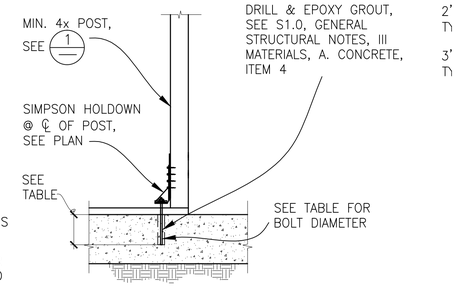
INTERIOR PLYWOOD (PLAN)

3 — TYPICAL PLYWOOD SHEARWALL INTERSECTION DETAILS
SCALE: 3/4" = 1'–0"

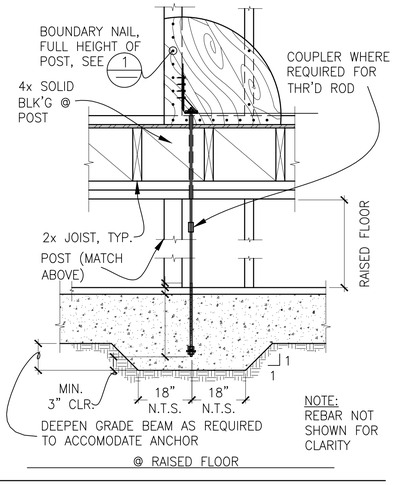


NOTE:
REBAR NOT SHOWN

@ NEW CONCRETE GRADE BEAM



@ EXISTING CONCRETE



NOTE:
REBAR NOT SHOWN FOR CLARITY

@ RAISED FLOOR

HOLDOWN	ANCHOR DIAMETER	ANCHOR INTO (N) CONC.	MIN. EMBED. INTO (E) CONC.	PLATE @ P.T. SLAB
HDU2 OR HD3B	5/8"	SSTB16	10"	2"x2"x3/8"
HDU4	5/8"	SSTB20	12"	2"x2"x1/2"
HDU5 OR HD5B	5/8"	SSTB24	14"	2"x2"x1/2"
HD7	7/8"	SB 7/8x24	16"	3"x3"x5/8"
HDU8, HDQ8	7/8"	SB 7/8x24	18"	3"x3"x5/8"
HD9B	7/8"	SB 7/8x24	20"	4"x4"x3/4"
HDU11, HHDQ11 OR HD12	1"	SB 1x30	22"	4"x4"x3/4"
HDU14, HHDQ14	1"*	SB 1x30	24"	4"x4"x3/4"
HD19	1 1/4"*	1 1/4"dx30"**	26"	4"x4"x3/4"

* PROVIDE HEAVY HEX ANCHOR NUT
** STRAIGHT THREADED ROD w/ DOUBLE NUT AND WASHER

5 — TYPICAL HOLDOWN DETAIL @ CONCRETE FOUNDATION
SCALE: 3/4" = 1'–0"

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SAN FRANCISCO, CA 94103

PROFESSIONAL ENGINEER — REGISTERED — JASON JIECHEN — C057898 — REN: 05/31/24 — STATE OF CALIFORNIA — CIVIL

	DATE	REVISIONS

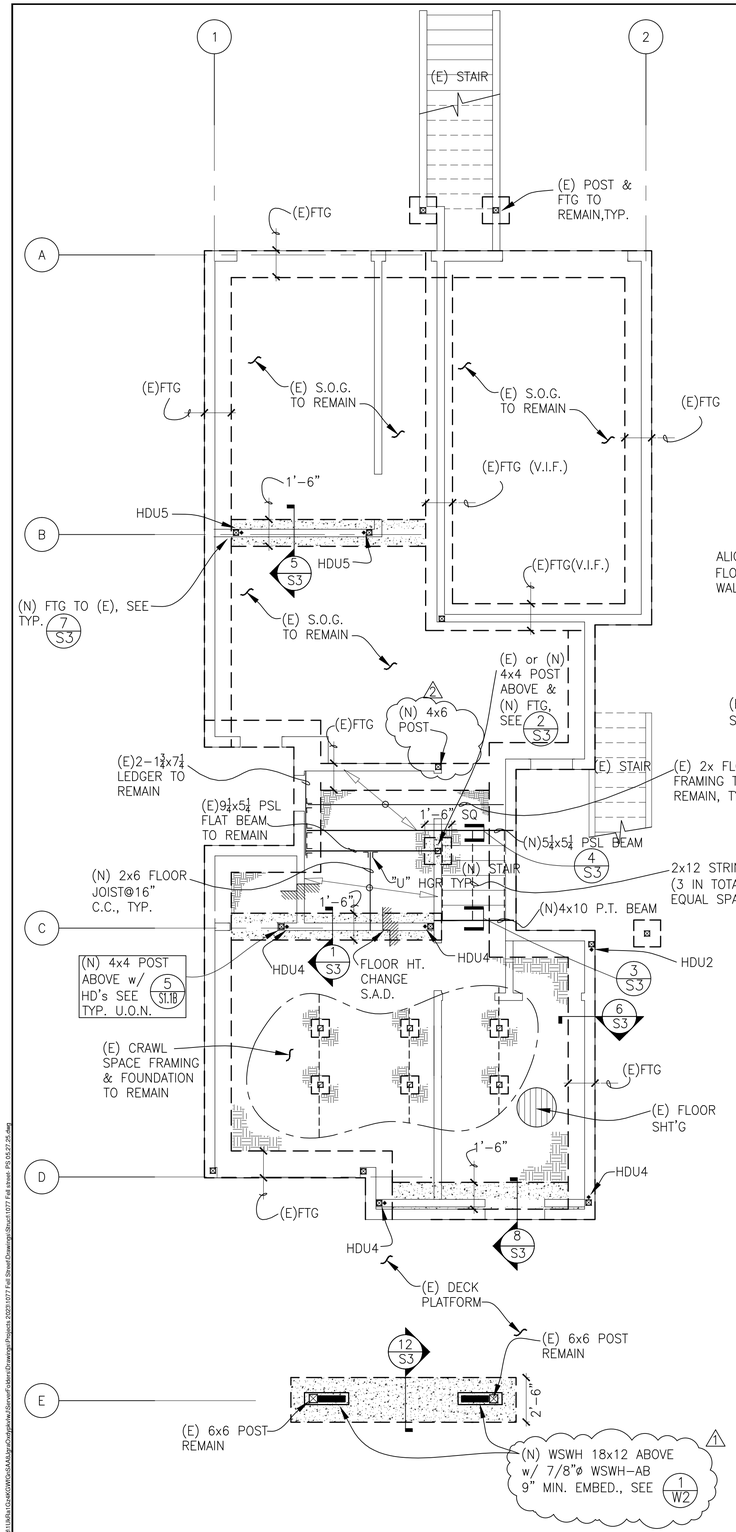
TYPICAL WOOD DETAILS

VOLUNTARY STRENGTHENING

1077 FELL STREET
SAN FRANCISCO, CA

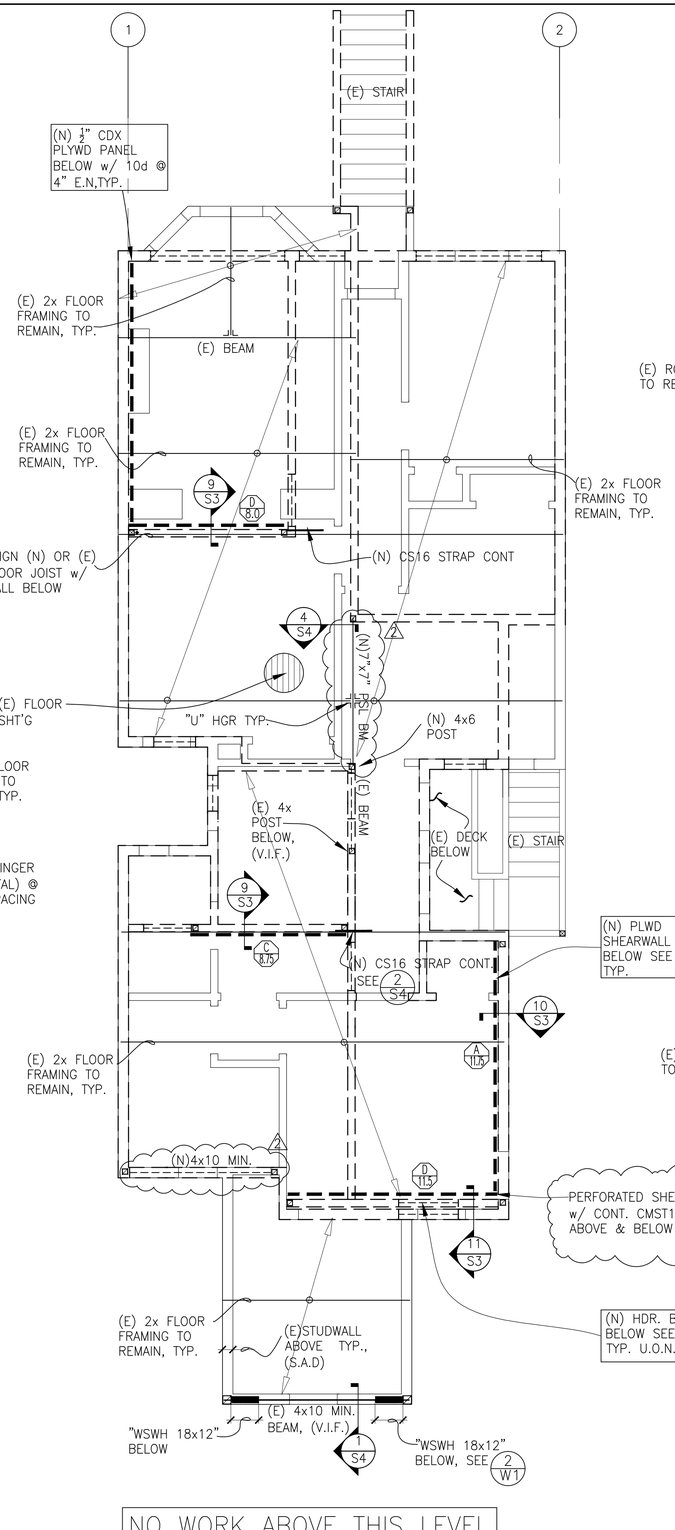
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Sheet S1.1B
Of 7 Sheets

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PLOT DATE: 09-13-24 PLOTTED BY: dangulsonm



FIRST FLOOR / FOUNDATION PLAN

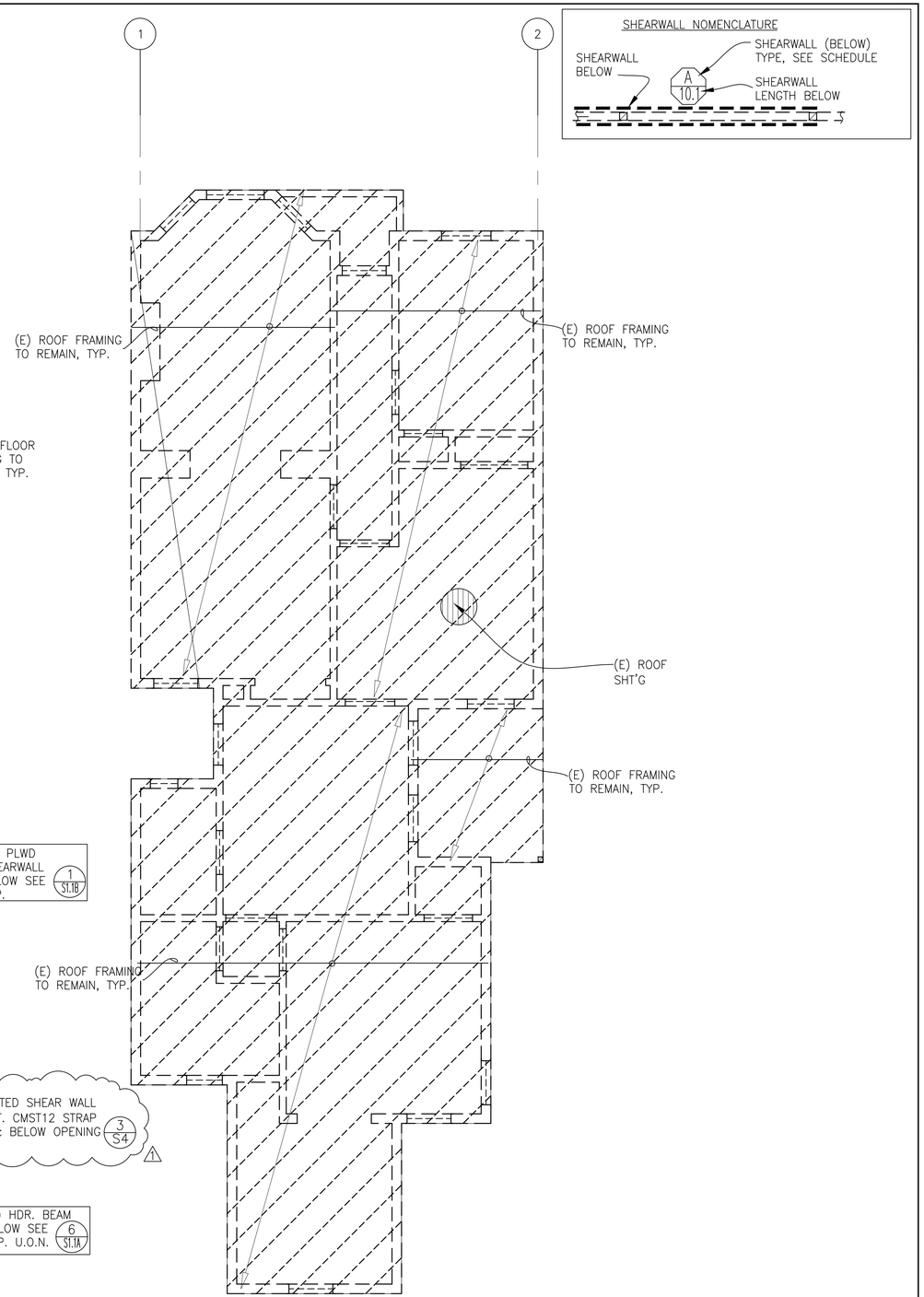
SCALE: 1/4"=1'-0"



NO WORK ABOVE THIS LEVEL

SECOND FLOOR FRAMING PLAN

SCALE: 1/4"=1'-0"



NO WORK AT THIS LEVEL

ROOF FRAMING PLAN

SCALE: 1/4"=1'-0"

NORTH

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REGISTERED PROFESSIONAL ENGINEER JIE CHEN C057998 Exp 6/30/25 CIVIL STATE OF CALIFORNIA

	DATE	REVISIONS
1	05/17/24	PC REV1
2	05/27/25	FIELD REV

VOLUNTARY STRENGTHENING

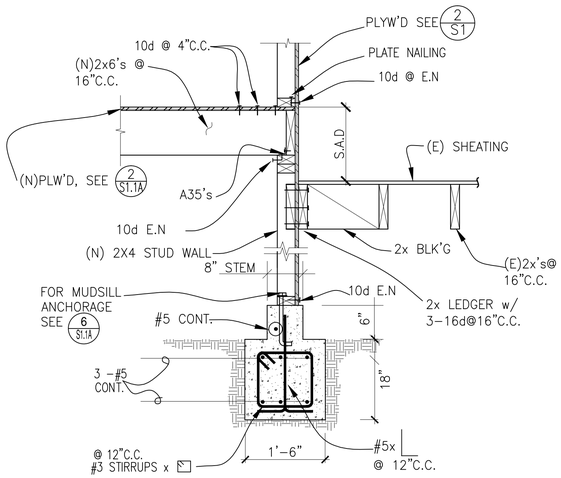
1077 FELL STREET
SAN FRANCISCO, CA

FIRST FLOOR
FOUNDATION PLAN

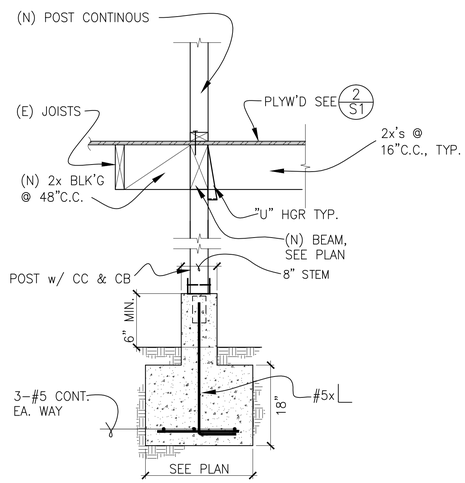
SECOND FLOOR FRAMING PLAN
ROOF FRAMING PLAN

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Job No:	23059
Sheet	S2
Of	7 Sheets

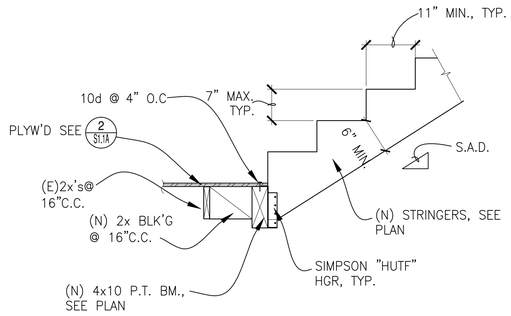
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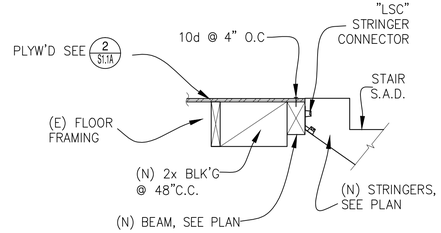
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2 SCALE: 3/4" = 1'-0"



3 SCALE: 3/4" = 1'-0"



4 SCALE: 3/4" = 1'-0"

5 SCALE: 3/4" = 1'-0"

6 SCALE: 3/4" = 1'-0"

7 SCALE: 3/4" = 1'-0"

8 SCALE: 3/4" = 1'-0"

9 SCALE: 3/4" = 1'-0"

10 SCALE: 3/4" = 1'-0"

11 SCALE: 3/4" = 1'-0"

12 SCALE: 3/4" = 1'-0"

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PROFESSIONAL ENGINEER — JIECHEN — C057898 — 05/30/26 — CIVIL — STATE OF CALIFORNIA

	DATE	REVISIONS
1	05/17/24	PC REV1

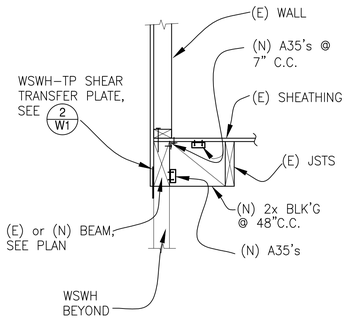
STRUCTURAL DETAILS

VOLUNTARY STRENGTHENING

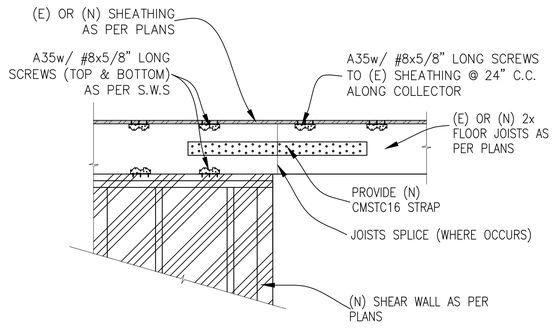
1077 FELL STREET
SAN FRANCISCO, CA

Date:	03/01/2024
Scale:	AS SHOWN
Drawn By:	DM
Job No:	23059
Sheet	S3
Of	7 Sheets

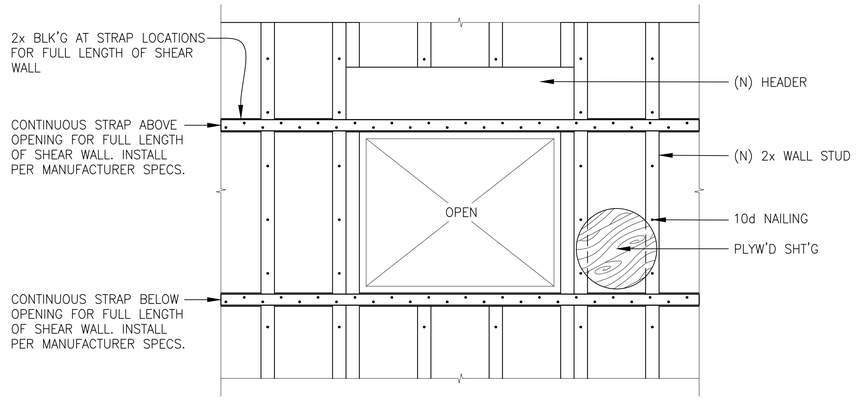
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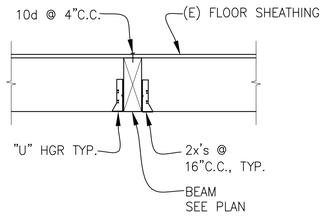


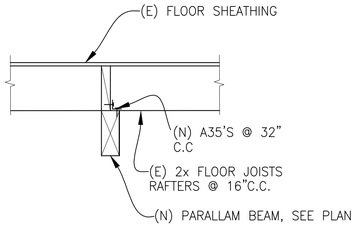
2 — SCALE: 3/4" = 1'–0"



3 — SCALE: 3/4" = 1'–0"

1





(N) PARALLAM BEAM, SEE PLAN

4 — SCALE: 3/4" = 1'–0"

2

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	DATE	REVISIONS
1	05/17/24	PC REV1
2	05/27/25	FIELD REV

STRUCTURAL DETAILS

VOLUNTARY STRENGTHENING

1077 FELL STREET
SAN FRANCISCO, CA

Date:	03/01/2024
Scale:	AS SHOWN
Drawn By:	DM
Job No:	23059
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Of	7 Sheets

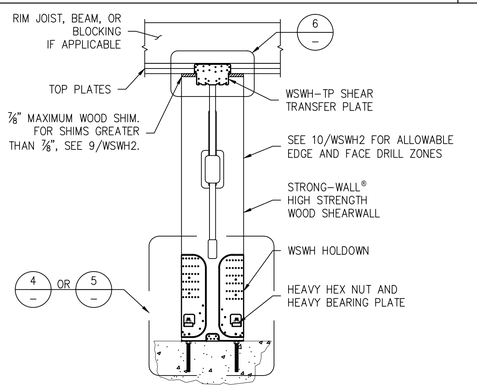
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PLOT DATE: 06-17-25 PLOTTED BY: dargulisonm

STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL MODELS

MODEL NO.	W (in.)	H (in.)	ANCHOR BOLTS		TOTAL WALL WEIGHT (lb.)
			QUANTITY	DIA. (in.)	
WSWH12x7	12	84	2	1	105
WSWH18x7	18	84	2	1	155
WSWH12x8	12	96	2	1	120
WSWH18x8	18	96	2	1	175
WSWH24x8	24	96	2	1	225
WSWH12x9	12	108	2	1	130
WSWH18x9	18	108	2	1	195
WSWH24x9	24	108	2	1	250
WSWH12x10	12	120	2	1	145
WSWH18x10	18	120	2	1	210
WSWH24x10	24	120	2	1	275
WSWH12x12	12	144	2	1	165
WSWH18x12	18	144	2	1	245
WSWH24x12	24	144	2	1	325
WSWH18x14	18	168	2	1	285
WSWH24x14	24	168	2	1	370
WSWH24x16	24	192	2	1	420
WSWH18x20	18	240	2	1	390
WSWH24x20	24	240	2	1	520

NOTES :
1. FOR HEIGHTS NOT LISTED, ORDER THE NEXT TALLEST PANEL AND TRIM TO FIT. MINIMUM TRIMMED HEIGHT FOR ALL PANELS IS 74¾".
2. ALL PANELS COME WITH PRE-ATTACHED HOLDOWNS, TWO HEAVY HEX NUTS, TWO HEAVY BEARING PLATES, ONE WSWH-TP TOP CONNECTION PLATE WITH REQUIRED FASTENERS AND INSTALLATION INSTRUCTIONS.
3. ALL PANELS ARE 3½" THICK.

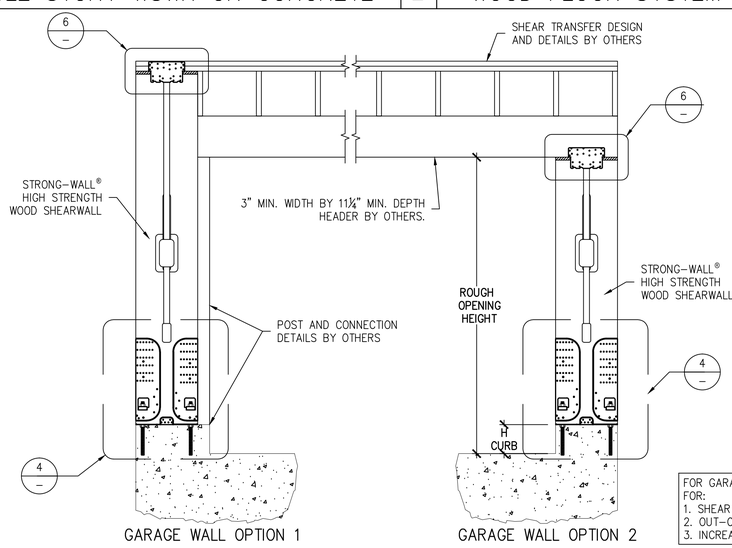
STRONG-WALL® WSWH MODELS | 1



DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

ENSURE CONCRETE IS LEVEL AND SMOOTH BENEATH PANEL. GRIND OR FILL AS NECESSARY.

SINGLE STORY WSWH ON CONCRETE | 2



DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

WHEN WSWH-PS STRAPS OMITTED, ALLOWABLE SHEAR VALUES FOR STANDARD PANEL APPLY.

GARAGE HEADER ROUGH OPENING HEIGHT			
MODEL NO.	TRIMMED PANEL HEIGHT	H CURB	ROUGH OPENING HEIGHT
WSWH12x7 WSWH18x7 WSWH24x7	78"	5½"	6'-11½"
		6"	7'-0"
WSWH12x8 WSWH18x8 WSWH24x8	85½"	0"	7'-1½"
	93¼"	5½"	8'-2¾"
		6"	8'-3¼"

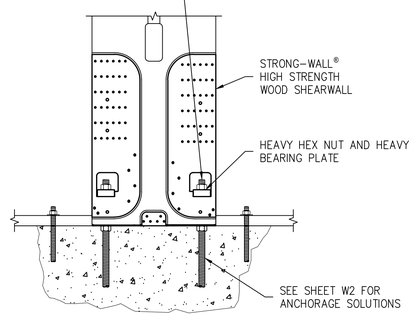
NOTES :
1. IF REQUIRED ROUGH OPENING HEIGHT EXCEEDS TABLE VALUE, SPECIFY NEXT TALLER PANEL AND TRIM AS NECESSARY. THE STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL MAY BE TRIMMED TO A MINIMUM HEIGHT OF 74¾".
2. FURRING DOWN GARAGE HEADER MAY BE REQUIRED FOR CORRECT ROUGH OPENING HEIGHT.

FOR GARAGE WALL OPTION 2, DESIGNER SHALL DESIGN AND DETAIL FOR:
1. SHEAR TRANSFER
2. OUT-OF-PLANE LOADING EFFECT
3. INCREASED OVERTURNING AND DRIFT DUE TO ADDITIONAL HEIGHT

ALTERNATE WSWH GARAGE FRONT OPTIONS | 3

STANDARD INSTALLATION BASE CONNECTION | 4

PLACE STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL OVER THE ANCHOR BOLTS AND SECURE WITH HEAVY BEARING PLATES AND HEAVY HEX NUTS (PROVIDED). DO NOT USE AN IMPACT WRENCH. USE 1⅝" WRENCH FOR 1" NUT. TIGHTEN ANCHOR NUTS FINGER TIGHT + ½" TURN.

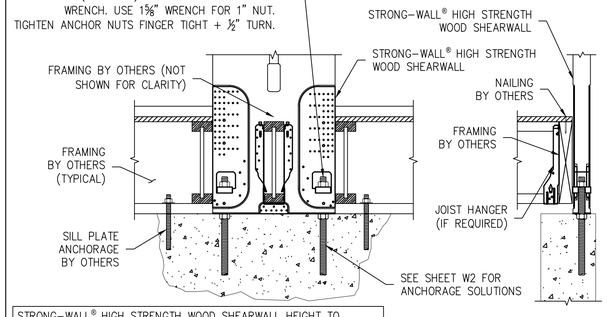


DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL HEIGHT TO INCLUDE THE DEPTH OF THE FLOOR SYSTEM AND SHALL BE INSTALLED DIRECTLY ON THE FOUNDATION. SPECIFY PANEL HEIGHT FROM TOP OF FOUNDATION TO UNDERSIDE OF TOP PLATES OR BEAM.

WOOD FLOOR SYSTEM BASE CONNECTION | 5

PLACE STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL OVER THE ANCHOR BOLTS AND SECURE WITH HEAVY BEARING PLATES AND HEAVY HEX NUTS (PROVIDED). DO NOT USE AN IMPACT WRENCH. USE 1⅝" WRENCH FOR 1" NUT. TIGHTEN ANCHOR NUTS FINGER TIGHT + ½" TURN.



DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

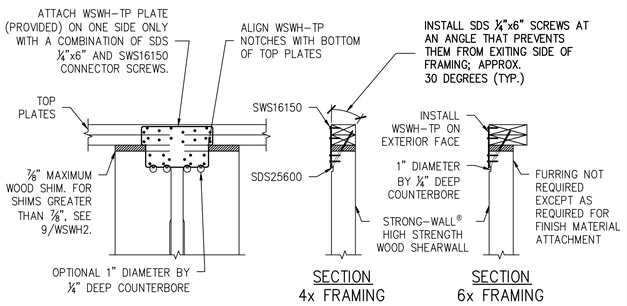
STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL HEIGHT TO INCLUDE THE DEPTH OF THE FLOOR SYSTEM AND SHALL BE INSTALLED DIRECTLY ON THE FOUNDATION. SPECIFY PANEL HEIGHT FROM TOP OF FOUNDATION TO UNDERSIDE OF TOP PLATES OR BEAM.

WOOD FLOOR SYSTEM BASE CONNECTION | 5

TOP CONNECTION | 6

WSWH-TP CONNECTION		
MODEL NO.	FASTENER QUANTITY	
	SWS16150	SDS25600
WSWH-TP12	14	2
WSWH-TP18	26	4
WSWH-TP24	46	8

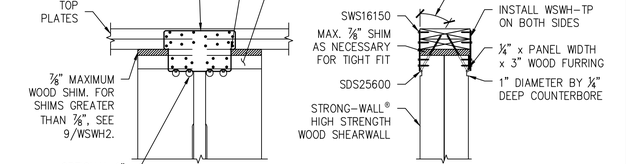
DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.



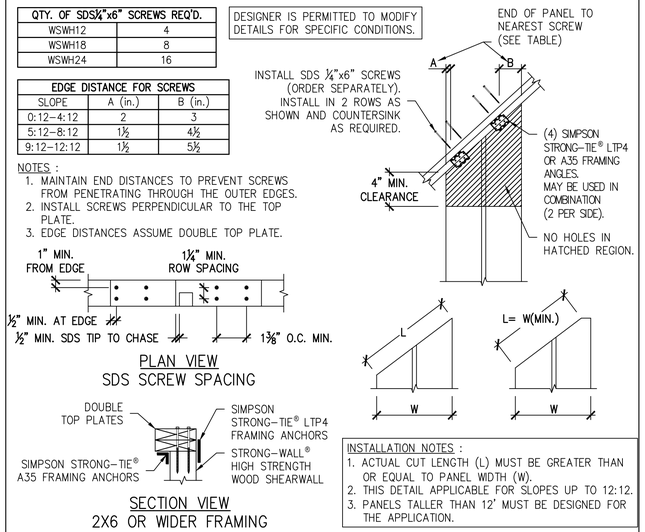
BACK-TO-BACK TOP CONNECTION | 7

WSWH-TP CONNECTION		
MODEL NO.	FASTENER QUANTITY	
	SWS16150	SDS25600
WSWH-TP12	28	4
WSWH-TP18	52	8
WSWH-TP24	92	16

DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.



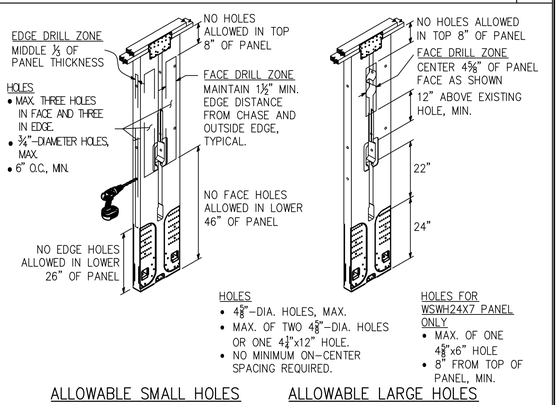
RAKE WALL | 8



DESIGNER IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

INSTALLATION NOTES :
1. ACTUAL CUT LENGTH (L) MUST BE GREATER THAN OR EQUAL TO PANEL WIDTH (W).
2. THIS DETAIL APPLICABLE FOR SLOPES UP TO 12:12.
3. PANELS TALLER THAN 12' MUST BE DESIGNED FOR THE APPLICATION.

TOP OF WALL HEIGHT ADJUSTMENTS | 9

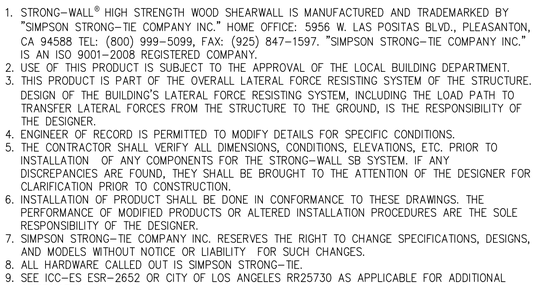


DESIGNER SHALL DESIGN AND DETAIL FOR:
1. SHEAR TRANSFER
2. OUT-OF-PLANE LOADING EFFECT
3. INCREASED OVERTURNING AND DRIFT DUE TO ADDITIONAL HEIGHT

FOR 8" TO 12" BLOCK DEPTHS:
ATTACH SIMPSON STRONG-TIE® CS16 STRAPS AT EDGE OF WSWH PANEL (EACH SIDE) USING 10dx1½" NAILS

SHIM BLOCK HEIGHTS GREATER THAN 8" AND UP TO 10":
- 8 NAILS INTO BLOCK
- 8 NAILS INTO WSWH PANEL

SHIM BLOCK HEIGHTS GREATER THAN 10" AND UP TO 12":
- 10 NAILS INTO BLOCK
- 10 NAILS INTO WSWH PANEL



TRIM ZONE AND ALLOWABLE HOLES | 10

1. STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL IS MANUFACTURED AND TRADEMARKED BY "SIMPSON STRONG-TIE COMPANY INC." HOME OFFICE: 5956 W. LAS POSITAS BLVD., PLEASANTON, CA 94588 TEL: (800) 999-5099, FAX: (925) 847-1597. "SIMPSON STRONG-TIE COMPANY INC." IS AN ISO 9001-2008 REGISTERED COMPANY.
2. USE OF THIS PRODUCT IS SUBJECT TO THE APPROVAL OF THE LOCAL BUILDING DEPARTMENT.
3. THIS PRODUCT IS PART OF THE OVERALL LATERAL FORCE RESISTING SYSTEM OF THE STRUCTURE. DESIGN OF THE BUILDING'S LATERAL FORCE RESISTING SYSTEM, INCLUDING THE LOAD PATH TO TRANSFER LATERAL FORCES FROM THE STRUCTURE TO THE GROUND, IS THE RESPONSIBILITY OF THE DESIGNER.
4. ENGINEER OF RECORD IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.
5. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, CONDITIONS, ELEVATIONS, ETC. PRIOR TO INSTALLATION OF ANY COMPONENTS FOR THE STRONG-WALL SB SYSTEM. IF ANY DISCREPANCIES ARE FOUND, THEY SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGNER FOR CLARIFICATION PRIOR TO CONSTRUCTION.
6. INSTALLATION OF PRODUCT SHALL BE DONE IN CONFORMANCE TO THESE DRAWINGS. THE PERFORMANCE OF MODIFIED PRODUCTS OR ALTERED INSTALLATION PROCEDURES ARE THE SOLE RESPONSIBILITY OF THE DESIGNER.
7. SIMPSON STRONG-TIE COMPANY INC. RESERVES THE RIGHT TO CHANGE SPECIFICATIONS, DESIGNS, AND MODELS WITHOUT NOTICE OR LIABILITY FOR SUCH CHANGES.
8. ALL HARDWARE CALLED OUT IS SIMPSON STRONG-TIE.
9. SEE ICC-ES ESR-2652 OR CITY OF LOS ANGELES RR25730 AS APPLICABLE FOR ADDITIONAL INFORMATION.

NOTES | 11

ENERTIA DESIGNS
ARCHITECTURAL ENGINEERING & INTERIOR
1167 MISSION STREET, FL 1
SAN FRANCISCO, CA 94103
PHONE: 415.701.0212
FAX: 415.701.8300
EMAIL: INFO@ENERTIADESIGNS.NET

PROFESSIONAL ENGINEER — KIRSTEN JIECHEN — C057898 — 06/30/26 — CIVIL — STATE OF CALIFORNIA

	DATE	REVISIONS

STRUCTURAL DETAILS

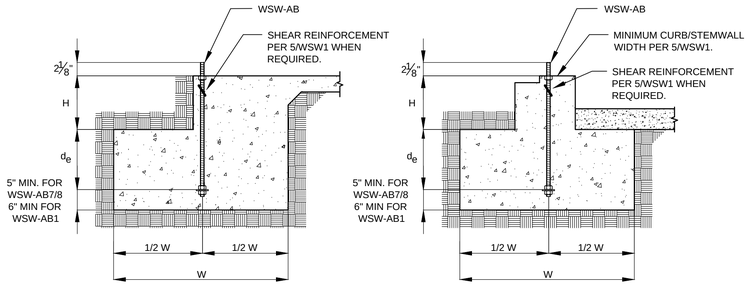
VOLUNTARY STRENGTHENING

1077 FELL STREET
SAN FRANCISCO, CA

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Scale:	AS SHOWN
Drawn By:	DM
Job No:	23059
Sheet	W1
Of	7 Sheets

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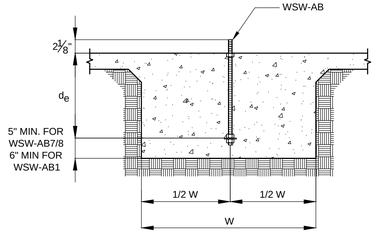


SLAB ON GRADE FOUNDATION

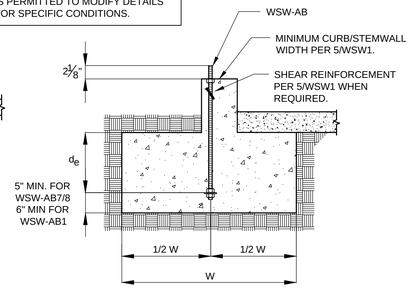
BRICK LEDGE FOUNDATION

NOTES:
1. SEE 2/WSW1 FOR DIMENSIONS AND ADDITIONAL NOTES.
2. SEE 5/WSW1 FOR SHEAR REINFORCEMENT WHEN REQUIRED.
3. MAXIMUM H = l_e - d_e. SEE 3/WSW1 AND 4/WSW1 FOR l_e.

REGISTERED DESIGN PROFESSIONAL IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

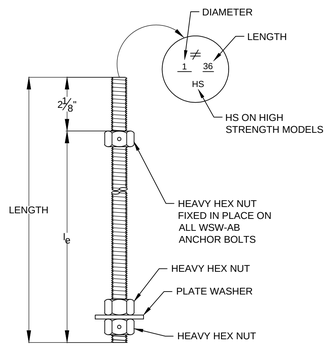


INTERIOR FOUNDATION



CURB OR STEMWALL FOUNDATION

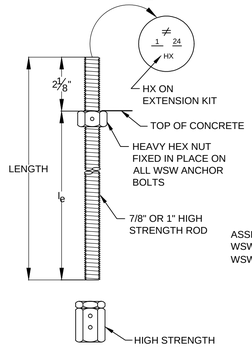
STRONG-WALL® WSW ANCHORAGE - TYPICAL SECTIONS | 1



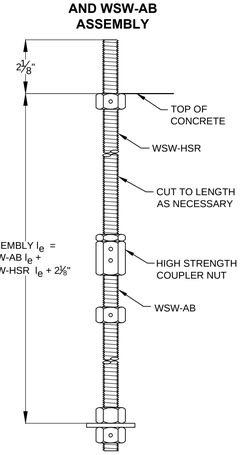
WSW PANEL MODEL	MODEL NO.	DIAMETER	LENGTH	l_e
WSW12 AND WSW18	WSW-AB7/8x24	7/8"	24"	20"
	WSW-AB7/8x24HS	7/8"	24"	20"
	WSW-AB7/8x30	7/8"	30"	26"
	WSW-AB7/8x30HS	7/8"	30"	26"
	WSW-AB7/8x36HS	7/8"	36"	32"
WSW24	WSW-AB1x24	1"	24"	20"
	WSW-AB1x24HS	1"	24"	20"
	WSW-AB1x30	1"	30"	26"
	WSW-AB1x30HS	1"	30"	26"
	WSW-AB1x36HS	1"	36"	32"

WSW ANCHOR BOLTS | 3

WSW-HSR_KT



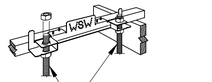
WSW-HSR AND WSW-AB ASSEMBLY



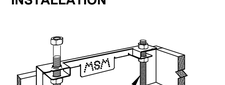
WSW PANEL MODEL	MODEL NO.	DIAMETER	LENGTH	l_e
WSW12 AND WSW18	WSW-HSR7/8x24KT	7/8"	24"	22"
	WSW-HSR7/8x36KT	7/8"	36"	34"
WSW24	WSW-HSR1x24KT	1"	24"	22"
	WSW-HSR1x36KT	1"	36"	34"

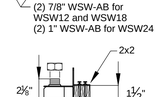
WSW ANCHOR BOLT EXTENSION | 4

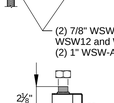
WSW-RT INTERIOR INSTALLATION



WSW-RT EXTERIOR INSTALLATION







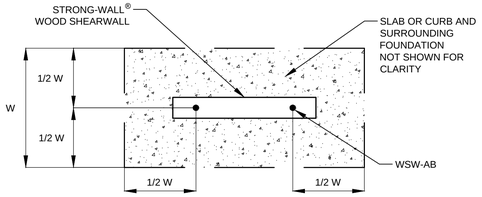
WSW-RTPF PANEL FORM INSTALLATION



WSW-RTBL BRICK LEDGE INSTALLATION



WSW ANCHOR BOLT TEMPLATES | 6



FOUNDATION PLAN VIEW

WSW ANCHORAGE SOLUTIONS FOR 2500 PSI CONCRETE

DESIGN CRITERIA	CONCRETE CONDITION	ANCHOR STRENGTH	WSW-AB7/8 ANCHOR BOLT ASD ALLOWABLE TENSION (lb.)	WSW-AB7/8 ANCHOR BOLT W (in.)	WSW-AB7/8 ANCHOR BOLT d_e (in.)	WSW-AB1 ANCHOR BOLT ASD ALLOWABLE TENSION (lb.)	WSW-AB1 ANCHOR BOLT W (in.)	WSW-AB1 ANCHOR BOLT d_e (in.)
1 SEISMIC	CRACKED	STANDARD	11,900	27	9	16,100	33	11
			13,100	29	10	17,100	35	12
		HIGH STRENGTH	24,900	43	15	33,000	51	17
			27,100	46	16	35,300	54	18
	UNCRACKED	STANDARD	12,500	24	8	15,700	28	10
			13,100	25	9	17,100	30	10
		HIGH STRENGTH	25,300	38	13	32,300	44	15
			27,100	40	14	35,300	47	16
WIND	CRACKED	STANDARD	5,100	14	6	6,200	16	6
			8,700	20	7	11,400	24	8
		HIGH STRENGTH	13,100	27	9	17,100	32	11
			15,900	30	10	21,100	36	12
			18,400	33	11	27,300	42	14
			23,100	38	13	31,800	46	16
			27,100	42	14	35,300 [3]	50	17
	UNCRACKED	STANDARD	5,000	12	6	6,400	14	6
			9,300	18	6	12,500	22	8
		HIGH STRENGTH	13,100	23	8	17,100	28	10
			15,200	25	9	21,900	32	11
			19,900	30	10	26,400	36	12
			24,000	34	12	31,500	40	14
			27,100	37	13	35,300	43	15

NOTES:
1. ANCHORAGE DESIGNS CONFORM TO ACI 318-11 APPENDIX D AND ACI 318-14 WITH NO SUPPLEMENTARY REINFORCEMENT FOR CRACKED OR UNCRACKED CONCRETE AS NOTED.
2. ANCHOR STRENGTH INDICATES REQUIRED GRADE OF WSW-AB ANCHOR BOLT. STANDARD (ASTM F1554 GRADE 36) OR HIGH STRENGTH (HS) (ASTM A449).
3. SEISMIC INDICATES SEISMIC DESIGN CATEGORY C - F. DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C MAY USE WIND ANCHORAGE SOLUTIONS. SEISMIC ANCHORAGE DESIGNS CONFORM TO ACI 318-11 SECTION D.3.3.4.3 AND ACI 318-14 SECTION 17.2.3.4.3.
4. WIND INCLUDES SEISMIC DESIGN CATEGORY A AND B AND DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C.
5. FOUNDATION DIMENSIONS ARE FOR ANCHORAGE ONLY. FOUNDATION DESIGN (SIZE AND REINFORCEMENT) BY OTHERS. THE REGISTERED DESIGN PROFESSIONAL MAY SPECIFY ALTERNATE EMBEDMENT, FOOTING SIZE OR ANCHOR BOLT.
6. REFER TO 1/WSW1 FOR d_e.

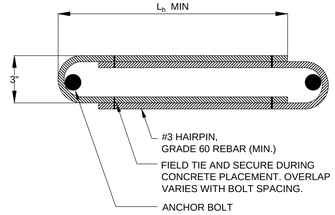
WSW ANCHORAGE SOLUTIONS FOR 3000 PSI CONCRETE

DESIGN CRITERIA	CONCRETE CONDITION	ANCHOR STRENGTH	WSW-AB7/8 ANCHOR BOLT ASD ALLOWABLE TENSION (lb.)	WSW-AB7/8 ANCHOR BOLT W (in.)	WSW-AB7/8 ANCHOR BOLT d_e (in.)	WSW-AB1 ANCHOR BOLT ASD ALLOWABLE TENSION (lb.)	WSW-AB1 ANCHOR BOLT W (in.)	WSW-AB1 ANCHOR BOLT d_e (in.)
SEISMIC	CRACKED	STANDARD	12,300	26	9	16,000	31	11
			13,100	28	10	17,100	33	11
		HIGH STRENGTH	25,200	41	14	32,700	48	16
			27,100	43	15	35,300	51	17
	UNCRACKED	STANDARD	12,000	22	8	16,300	27	9
			13,100	24	8	17,100	28	10
		HIGH STRENGTH	25,300	36	12	32,700	42	14
			27,100	38	13	35,300	44	15
WIND	CRACKED	STANDARD	5,000	13	6	5,600	14	6
			8,800	19	7	10,200	21	7
		HIGH STRENGTH	13,100	25	9	17,100	30	10
			15,700	28	10	20,100	33	11
			19,200	32	11	25,300	38	13
			23,200	36	12	32,300	44	15
			27,100	40	14	35,300	47	16
	UNCRACKED	STANDARD	5,500	12	6	6,200	13	6
			8,500	16	6	12,800	21	7
		HIGH STRENGTH	13,100	22	8	17,100	26	9
			16,600	25	9	21,800	30	10
			19,700	28	10	25,200	33	11
			24,000	32	11	31,700	38	13
			27,100	35	12	35,300	41	14

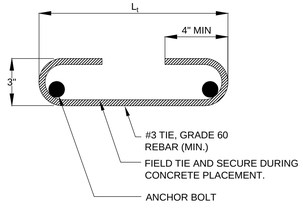
WSW ANCHORAGE SOLUTIONS FOR 4500 PSI CONCRETE

DESIGN CRITERIA	CONCRETE CONDITION	ANCHOR STRENGTH	WSW-AB7/8 ANCHOR BOLT ASD ALLOWABLE TENSION (lb.)	WSW-AB7/8 ANCHOR BOLT W (in.)	WSW-AB7/8 ANCHOR BOLT d_e (in.)	WSW-AB1 ANCHOR BOLT ASD ALLOWABLE TENSION (lb.)	WSW-AB1 ANCHOR BOLT W (in.)	WSW-AB1 ANCHOR BOLT d_e (in.)
SEISMIC	CRACKED	STANDARD	12,600	23	8	16,000	27	9
			13,100	24	8	17,100	29	10
		HIGH STRENGTH	24,800	36	12	32,100	42	14
			27,100	38	13	35,300	45	15
	UNCRACKED	STANDARD	12,700	20	7	15,700	23	8
			13,100	21	7	17,100	25	9
		HIGH STRENGTH	24,600	31	11	32,500	37	13
			27,100	34	12	35,300	39	13
WIND	CRACKED	STANDARD	5,400	12	6	6,800	14	6
			8,300	16	6	11,600	20	7
		HIGH STRENGTH	13,100	22	8	17,100	26	9
			15,300	24	8	21,400	30	10
			19,300	28	10	25,800	34	12
			23,600	32	11	31,000	38	13
			27,100	36	12	35,300	42	14
	UNCRACKED	STANDARD	6,800	12	6	6,800	12	6
			9,400	15	6	12,400	18	6
		HIGH STRENGTH	13,100	19	7	17,100	23	8
			16,800	22	8	21,600	26	9
			20,300	25	9	26,700	30	10
			24,100	28	10	32,200	34	12
			27,100	31	11	35,300	36	12

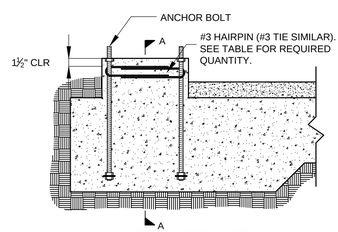
STRONG-WALL® WOOD SHEARWALL TENSION ANCHORAGE SCHEDULE 2,500, 3,000 AND 4,500 PSI | 2



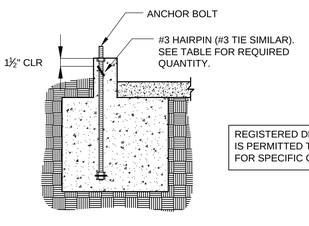
HAIRPIN SHEAR REINFORCEMENT



TIE SHEAR REINFORCEMENT



HAIRPIN INSTALLATION
(GARAGE CURB SHOWN. OTHER FOOTING TYPES SIMILAR.)



SECTION A-A

STRONG-WALL® WOOD SHEARWALL SHEAR ANCHORAGE

MODEL	L_t OR L_h (in.)	SEISMIC [3] SHEAR REINFORCEMENT	SEISMIC [3] MINIMUM CURB/ STEMWALL WIDTH (in.)	WIND [4] SHEAR REINFORCEMENT	WIND [4] MINIMUM CURB/ STEMWALL WIDTH (in.)	ASD ALLOWABLE SHEAR LOAD, V (lb.) [6] UNCRACKED	ASD ALLOWABLE SHEAR LOAD, V (lb.) [6] CRACKED
WSW12	10¼	(1) #3 HAIRPIN	8 [5]	SEE NOTE 6	6	1,035	740
WSW18	15	(1) #3 HAIRPIN	8 [5]	(1) #3 HAIRPIN	6	HAIRPIN REINFORCEMENT ACHIEVES MAXIMUM ALLOWABLE SHEAR LOAD OF THE WSW	
WSW24	19	(2) #3 HAIRPINS	8 [5]	(1) #3 HAIRPIN	6		

NOTES:
1. SHEAR ANCHORAGE DESIGNS CONFORM TO ACI 318-11 AND ACI 318-14 AND ASSUME MINIMUM 2,500 PSI CONCRETE.
2. SHEAR REINFORCEMENT IS NOT REQUIRED FOR INTERIOR FOUNDATION APPLICATIONS (PANEL INSTALLED AWAY FROM EDGE OF CONCRETE), OR BRACED WALL PANEL APPLICATIONS.
3. SEISMIC INDICATES SEISMIC DESIGN CATEGORY C THROUGH F. DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C MAY USE WIND ANCHORAGE SOLUTIONS.
4. WIND INCLUDES SEISMIC DESIGN CATEGORY A AND B AND DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C.
5. WHERE NOTED, MINIMUM CURB/STEMWALL WIDTH IS 6 INCHES WHEN STANDARD STRENGTH ANCHOR BOLT IS USED.
6. USE (1) #3 TIE FOR WSW12 WHEN PANEL DESIGN SHEAR FORCE EXCEEDS TABULATED ANCHORAGE ALLOWABLE SHEAR LOAD.
7. #4 GRADE 40 SHEAR REINFORCEMENT MAY BE SUBSTITUTED FOR WSW SHEAR ANCHORAGE SOLUTIONS.

STRONG-WALL® WSW SHEAR ANCHORAGE SCHEDULE AND DETAILS | 5

ENERTIA DESIGNS
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1167 MISSION STREET, FL 1
SAN FRANCISCO, CA 94103

PROFESSIONAL ENGINEER — JEFFREY JIECHEN — C057898 — 06/30/26 — CIVIL — STATE OF CALIFORNIA

	DATE	REVISIONS
1	05/17/24	PC REV1

STRUCTURAL DETAILS

VOLUNTARY STRENGTHENING

1077 FELL STREET
SAN FRANCISCO, CA

REGISTERED DESIGN PROFESSIONAL IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

Date: 03/01/2024
Scale: AS SHOWN
Drawn By: DM
Job No: 23059
Sheet W2
Of 7 Sheets

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PLOT DATE: 06-17-25 PLOTTED BY: dangulsonm

EXHIBIT 7

DETLEV DORING, S.E., INC.
STRUCTURAL ENGINEER
216 CLEVELAND COURT
MILL VALLEY, CALIFORNIA 94941
PHONE (415) 381-5662 • FAX (415) 389-1578

STRUCTURAL CALCULATIONS FOR

Residence at
1077 Fell Street
San Francisco, CA

Engineering check

AP # 0825-50
September 16, 2025

JOB # 18D.25



INDEX

FOOTING FTG1 CHECK

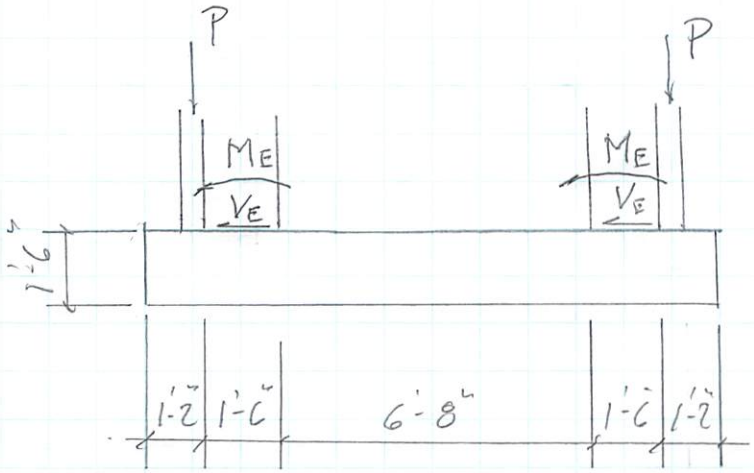
FOOTING LOADS	**Fn1–Fn5**
FOOTING CALCULATION	**Fn6-Fn15 (FAILS)**
FOOTING ANCHORAGE	**Fn15-Fn20 (PASS)**

SEISMIC UPGRADE CODE ISSUES

CODE SECTIONS	**L1-L3**
IRREGULARITY	**L4, L5 (FAIL)**
SHEAR WALL AND DIAPHRAGM CHECK	**L5, L6 (FAIL)**
PERFORATED SHEAR WALL	**P1 – P4 (Missing HDU)**

18D.25 1077 Fell St. check FTG1

Line E Foundation check - FTG1



Loads permit 2024-0517-2393 (10/02/2024)

Calc. March 12, 2024

$P_D = 1880^{\#}$ $P_{L_r} = 690^{\#}$ $P_L = 1380^{\#}$ pg. 27

$E = 596^{\#}$ each WSWH18×12 pg. 15

Loads permit 2025-0626-9586 (07/25/2025)

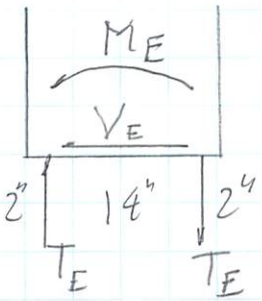
Calcs May 27, 2025

$E_{①} = 1834^{\#}$ $E_{②} = 1996^{\#}$ pg. 13

Per ESR-2652 (Exp. 4/26)

WSWH18×12 $V_{all} = 1705^{\#}$

$T = 19665^{\#}$



Fnl

TABLE 2—ALLOWABLE ASD IN-PLANE SHEAR FOR STANDARD APPLICATION
STRONG-WALL HIGH STRENGTH WOOD SHEARWALL (WSWH) ON CONCRETE FOUNDATION

Strong-Wall High Strength Wood Shearwall Model	Panel Evaluation Height, H_e (in.)	Allow. Vertical Load, P (lb.)	2,500 psi Concrete						3,000 psi Concrete					
			Seismic			Wind			Seismic			Wind		
			Allow. ASD Shear Load, V (lb.)	Drift at Allow. Shear, Δ (in.)	Anchor Tension at Allow. Shear, T (lb.)	Allow. ASD Shear Load, V (lb.)	Drift at Allow. Shear, Δ (in.)	Anchor Tension at Allow. Shear, T (lb.)	Allow. ASD Shear Load, V (lb.)	Drift at Allow. Shear, Δ (in.)	Anchor Tension at Allow. Shear, T (lb.)	Allow. ASD Shear Load, V (lb.)	Drift at Allow. Shear, Δ (in.)	Anchor Tension at Allow. Shear, T (lb.)
WSWH12x7	78	1,000	1,300	0.32	13,295	1,670	0.43	17,075	1,300	0.32	13,295	1,670	0.43	17,075
		4,000	1,300	0.32	13,295	1,670	0.43	17,075	1,300	0.32	13,295	1,670	0.43	17,075
		7,500	1,300	0.32	13,295	1,670	0.43	17,075	1,300	0.32	13,295	1,670	0.43	17,075
WSWH18x7	78	1,000	3,795	0.32	23,680	4,470	0.39	27,890	3,795	0.32	23,680	4,470	0.39	27,890
		4,000	3,795	0.32	23,680	4,365	0.38	27,245	3,795	0.32	23,680	4,470	0.39	27,890
		7,500	3,795	0.32	23,680	4,050	0.36	25,285	3,795	0.32	23,680	4,470	0.39	27,890
WSWH24x7	78	1,000	7,450	0.30	33,210	7,795	0.34	34,755	7,450	0.30	33,210	7,795	0.34	34,755
		4,000	7,450	0.30	33,210	7,565	0.33	33,715	7,450	0.30	33,210	7,795	0.34	34,755
		7,500	7,115	0.28	31,715	7,115	0.31	31,715	7,450	0.30	33,210	7,795	0.34	34,755
WSWH12x8	93¼	1,000	1,030	0.40	12,580	1,325	0.53	16,195	1,030	0.40	12,580	1,325	0.53	16,195
		4,000	1,030	0.40	12,580	1,325	0.53	16,195	1,030	0.40	12,580	1,325	0.53	16,195
		7,500	1,030	0.40	12,580	1,325	0.53	16,195	1,030	0.40	12,580	1,325	0.53	16,195
WSWH18x8	93¼	1,000	3,060	0.39	22,835	3,880	0.52	28,925	3,060	0.39	22,835	3,955	0.53	29,490
		4,000	3,060	0.39	22,835	3,650	0.49	27,245	3,060	0.39	22,835	3,955	0.53	29,490
		7,500	3,060	0.39	22,835	3,390	0.46	25,285	3,060	0.39	22,835	3,955	0.53	29,490
WSWH24x8	93¼	1,000	6,240	0.37	33,240	6,650	0.43	35,430	6,240	0.37	33,240	6,910	0.45	36,815
		4,000	6,240	0.37	33,240	6,330	0.41	33,715	6,240	0.37	33,240	6,910	0.45	36,815
		7,500	5,950	0.35	31,715	5,950	0.38	31,715	6,240	0.37	33,240	6,910	0.45	36,815
WSWH12x9	105¼	1,000	850	0.45	11,750	1,095	0.60	15,145	850	0.45	11,750	1,095	0.60	15,145
		4,000	850	0.45	11,750	1,095	0.60	15,145	850	0.45	11,750	1,095	0.60	15,145
		7,500	850	0.45	11,750	1,095	0.60	15,145	850	0.45	11,750	1,095	0.60	15,145
WSWH18x9	105¼	1,000	2,575	0.45	21,680	3,325	0.60	27,975	2,575	0.45	21,680	3,325	0.60	27,975
		4,000	2,575	0.45	21,680	3,235	0.58	27,245	2,575	0.45	21,680	3,325	0.60	27,975
		7,500	2,575	0.45	21,680	3,005	0.54	25,285	2,575	0.45	21,680	3,325	0.60	27,975
WSWH24x9	105¼	1,000	5,150	0.43	30,975	5,890	0.52	35,430	5,150	0.43	30,975	6,120	0.54	36,815
		4,000	5,150	0.43	30,975	5,605	0.50	33,715	5,150	0.43	30,975	6,120	0.54	36,815
		7,500	5,150	0.43	30,975	5,275	0.47	31,715	5,150	0.43	30,975	6,120	0.54	36,815
WSWH12x10	117¼	1,000	700	0.50	10,750	900	0.67	13,855	700	0.50	10,750	900	0.67	13,855
		4,000	700	0.50	10,750	900	0.67	13,855	700	0.50	10,750	900	0.67	13,855
		7,500	700	0.50	10,750	900	0.67	13,855	700	0.50	10,750	900	0.67	13,855
WSWH18x10	117¼	1,000	2,140	0.50	20,055	2,755	0.67	25,840	2,140	0.50	20,055	2,755	0.67	25,840
		4,000	2,140	0.50	20,055	2,755	0.67	25,840	2,140	0.50	20,055	2,755	0.67	25,840
		7,500	2,140	0.50	20,055	2,695	0.65	25,285	2,140	0.50	20,055	2,755	0.67	25,840
WSWH24x10	117¼	1,000	4,010	0.48	26,860	5,215	0.67	34,935	4,010	0.48	26,860	5,215	0.67	34,935
		4,000	4,010	0.48	26,860	5,030	0.64	33,715	4,010	0.48	26,860	5,215	0.67	34,935
		7,500	4,010	0.48	26,860	4,735	0.61	31,715	4,010	0.48	26,860	5,215	0.67	34,935
WSWH12x11	129¼	1,000	595	0.56	10,055	765	0.73	12,930	595	0.56	10,055	765	0.73	12,930
		4,000	595	0.56	10,055	765	0.73	12,930	595	0.56	10,055	765	0.73	12,930
		7,500	595	0.56	10,055	765	0.73	12,930	595	0.56	10,055	765	0.73	12,930
WSWH18x11	129¼	1,000	1,960	0.55	20,240	2,520	0.73	26,060	1,960	0.55	20,240	2,520	0.73	26,060
		4,000	1,960	0.55	20,240	2,520	0.73	26,060	1,960	0.55	20,240	2,520	0.73	26,060
		7,500	1,960	0.55	20,240	2,445	0.71	25,285	1,960	0.55	20,240	2,520	0.73	26,060
WSWH24x11	129¼	1,000	4,000	0.54	29,550	4,795	0.68	35,430	4,000	0.54	29,550	4,985	0.70	36,815
		4,000	4,000	0.54	29,550	4,565	0.64	33,715	4,000	0.54	29,550	4,985	0.70	36,815
		7,500	4,000	0.54	29,550	4,295	0.60	31,715	4,000	0.54	29,550	4,985	0.70	36,815
WSWH12x12	144	1,000	505	0.61	9,495	645	0.80	12,150	505	0.61	9,495	645	0.80	12,150
		4,000	505	0.61	9,495	645	0.80	12,150	505	0.61	9,495	645	0.80	12,150
		7,500	505	0.61	9,495	645	0.80	12,150	505	0.61	9,495	645	0.80	12,150
WSWH18x12	144	1,000	1,705	0.61	19,665	2,195	0.80	25,285	1,705	0.61	19,665	2,195	0.80	25,285
		4,000	1,705	0.61	19,665	2,195	0.80	25,285	1,705	0.61	19,665	2,195	0.80	25,285
		7,500	1,705	0.61	19,665	2,195	0.80	25,285	1,705	0.61	19,665	2,195	0.80	25,285
WSWH24x12	144	1,000	3,525	0.60	29,015	4,305	0.75	35,430	3,525	0.60	29,015	4,475	0.78	36,815
		4,000	3,525	0.60	29,015	4,100	0.72	33,715	3,525	0.60	29,015	4,475	0.78	36,815
		7,500	3,525	0.60	29,015	3,855	0.67	31,715	3,525	0.60	29,015	4,475	0.78	36,815

Fn 2

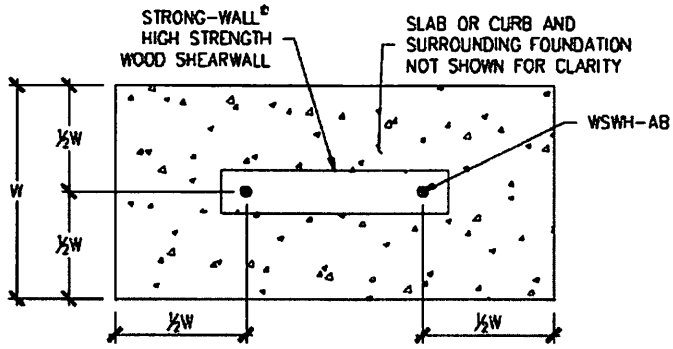
TABLE 1—STRONG-WALL HIGH STRENGTH WOOD SHEARWALL (WSWH) PANEL DESCRIPTION

Strong-Wall High Strength Wood Shearwall Model	Panel Information			Anchor Bolts	
	Nominal Width, W (in.)	Height, H (in.)	Weight (lb.)	Qty.	Dia. (in.)
WSWH12x7	12	84	105	2	1
WSWH18x7	18	84	155	2	1
WSWH12x8	12	96	120	2	1
WSWH18x8	18	96	175	2	1
WSWH24x8	24	96	225	2	1
WSWH12x9	12	108	130	2	1
WSWH18x9	18	108	195	2	1
WSWH24x9	24	108	250	2	1
WSWH12x10	12	120	145	2	1
WSWH18x10	18	120	210	2	1
WSWH24x10	24	120	275	2	1
WSWH12x12	12	144	165	2	1
WSWH18x12	18	144	245	2	1
WSWH24x12	24	144	325	2	1
WSWH18x14	18	168	285	2	1
WSWH24x14	24	168	370	2	1
WSWH24x16	24	192	420	2	1
WSWH18x20	18	240	390	2	1
WSWH24x20	24	240	520	2	1

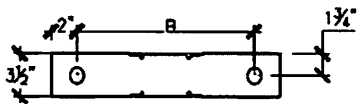
For **SI**: 1 inch = 25.4 mm, 1 lb. = 4.45 N.

1. To achieve evaluated panel heights listed in the allowable load table (Tables 2, 3, 4 and 5), or for those not listed, order the next tallest panel and trim to fit. Minimum trimmed height for all panels is $74^1/_2$".
2. All panels are supplied with pre-attached holdowns, two heavy hex nuts, two heavy bearing plates, one WSWH-TP top connection plate (width based on panel model), required fasteners and installation instructions.
3. All panels are $3^1/_2$" thick.

Fn 3



FOUNDATION PLAN VIEW



WSWH PLAN VIEW
ANCHORAGE LAYOUT

ANCHOR BOLT LAYOUT	
STRONG-WALL® HIGH STRENGTH WOOD SHEARWALL MODEL NO.	DISTANCE FROM CENTER-TO-CENTER OF WSWH-AB, B (in)
WSWH12	8⅛
WSWH18	14
WSWH24	20

WSWH ANCHORAGE SOLUTIONS FOR 2500 PSI CONCRETE					
DESIGN CRITERIA	CONCRETE CONDITION	ANCHOR STRENGTH	WSWH-AB1 ANCHOR BOLT		
			ASD ALLOWABLE UPLIFT (lbs)	W (in)	d_e (in)
SEISMIC	CRACKED	STANDARD	16,000	33	11
			17,100	35	12
		HIGH STRENGTH	34,100	52	18
			36,800	55	19
	UNCRACKED	STANDARD	15,700	28	10
			17,100	30	10
		HIGH STRENGTH	33,500	45	15
			36,800	48	16
WIND	CRACKED	STANDARD	6,200	16	6
			11,400	24	8
			17,100	32	11
		HIGH STRENGTH	21,100	36	12
			27,300	42	14
			34,100	48	16
			36,800	51	17
	UNCRACKED	STANDARD	6,400	14	6
			12,500	22	8
			17,100	28	10
		HIGH STRENGTH	22,900	33	11
			26,400	36	12
			34,200	42	14
			36,800	44	15

NOTES :
1. ANCHORAGE DESIGNS CONFORM TO ACI 318-11 APPENDIX D, ACI 318-14 CHAPTER 17 AND ACI 318-19 CHAPTER 17 WITH NO SUPPLEMENTARY REINFORCEMENT FOR CRACKED OR UNCRACKED CONCRETE AS NOTED.
2. ANCHOR STRENGTH INDICATES REQUIRED GRADE OF WSWH-AB ANCHOR BOLT. STANDARD (ASTM F1554 GRADE 36) OR HIGH STRENGTH (HS) (ASTM A193 GRADE B7).
3. SEISMIC INDICATES SEISMIC DESIGN CATEGORY C-F. DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C MAY USE WIND ANCHORAGE SOLUTIONS. SEISMIC ANCHORAGE DESIGNS CONFORM TO ACI 318-11 SECTION D.3.3.4.3, ACI 318-14 SECTION 17.2.3.4.3 AND ACI 318-19 SECTION 17.10.5.3.
4. WIND INCLUDES SEISMIC DESIGN CATEGORY A AND B AND DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C.
5. FOUNDATION DIMENSIONS ARE FOR ANCHORAGE ONLY. FOUNDATION DESIGN (SIZE AND REINFORCEMENT) BY OTHERS. THE DESIGNER MAY SPECIFY ALTERNATE EMBEDMENT, FOOTING SIZE OR ANCHOR BOLT.
6. REFER TO 1/WSWH1 FOR d_e.

2/WSWH1 – STRONG-WALL HIGH STRENGTH WOOD SHEARWALL TENSION ANCHORAGE SCHEDULE

FIGURE 6 – STRONG-WALL HIGH STRENGTH WOOD SHEARWALL ANCHORAGE DETAILS (Continued) (2/WSWH1)

Fn 4

Line E Foundation check - FTG1 cont.

Per CEBC Section 304.3.2 Reduced seismic forces may be used i.e. 75%

Verify permit 2025-0626-9586 (07/25/2025) is valid

ASD $E'_{①} = 0.75(1834)0.7 = 963^{\#} < 1705^{\#}$ OK

ASD $E'_{②} = 0.75(1996)0.7 = 1048^{\#} < 1705^{\#}$ OK

$T_{①} = 19665\left(\frac{963}{1705}\right) = 11107^{\#}$

$T_{②} = 19665\left(\frac{1048}{1705}\right) = 12087^{\#}$

7/8" ø rod $T_{all} = 13500^{\#} < T_{req}$ ∴ OK

↳ Dwg. Sh. S2 First Floor/ Fnd Plan

$M_E^{①} = \frac{963(12)}{0.7} = 16509$ ft-lb

$M_E^{②} = \frac{1048(12)}{0.7} = 17966$ ft-lb

$V_E^{①} = \frac{963}{0.7} = 1376^{\#}$ $V_E^{②} = \frac{1048}{0.7} = 1497^{\#}$

DN

Fn 5

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Cell (415) 847-4814

Project Title: 1077 Fell Street Engineering check
Engineer: Detlev Doring
Project ID: 18D.25
Project Descr: Check calcualtions at 1077 Fell Street

Printed: 16 SEP 2025, 2:32PM

Combined Footing

Project File: 1077 Fell Street - Check.ec6

LIC# : KW-06016264, Build:20.25.09.04 DETLEV P. DORING, SE INC (c) ENERCALC, LLC 1982-2025

DESCRIPTION: Footing FTG1 check

Code References

Governing Code : IBC 2021
Referenced Design Standard(s) : ACI 318-19
Load Combinations Used : ASCE 7-16 (1)

General Information

Material Properties

f'c : Concrete 28 day strength	2.50	ksi
fy : Rebar Yield	60.0	ksi
Ec : Concrete Elastic Modulus	3,122.0	ksi
Concrete Density	145.0	pcf
ϕ : Phi Values Flexure :	0.90	
Shear :	0.750	

Analysis/Design Settings

Calculate footing weight as dead load ?	Yes
Calculate Pedestal weight as dead load ?	No
Min Steel Ratio per ACI 7.6.1.1 (ratio=Steel Area/Concrete Area)	0.0018
Min. Overturning Safety Factor	1.0: 1
Min. Sliding Safety Factor	1.0: 1

Soil Information

Allowable Soil Bearing	1.50	ksf
Increase Bearing By Footing Weight	No	
Soil Passive Sliding Resistance	250.0	pcf
(Uses entry for "Footing base depth below soil surface" for force)		
Coefficient of Soil/Concrete Friction	0.30	

Soil Bearing Increase

Footing base depth below soil surface	ft
Increases based on footing Depth	
Allowable pressure increase per foot	ksf
when base of footing is below	ft
Increases based on footing Width . . .	
Allowable pressure increase per foot	ksf
when maximum length or width is greater tha	ft
Maximum Allowed Bearing Pressure	10.0 ksf
(A value of zero implies no limit)	
Adjusted Allowable Soil Bearing	1.50 ksf
(Allowable Soil Bearing adjusted for footing weight and depth & width increases as specified by user.)	

Dimensions & Reinforcing

Distance Left of Column #1	=	1.0 ft
Between Columns	=	10.0 ft
Distance Right of Column #2	=	1.0 ft
Total Footing Length	=	12.0 ft
Footing Width	=	2.50 ft
Footing Thickness	=	18.0 in
Rebar Center to Concrete Edge @ Top	=	3.0 in
Rebar Center to Concrete Edge @ Bottom	=	3.0 in

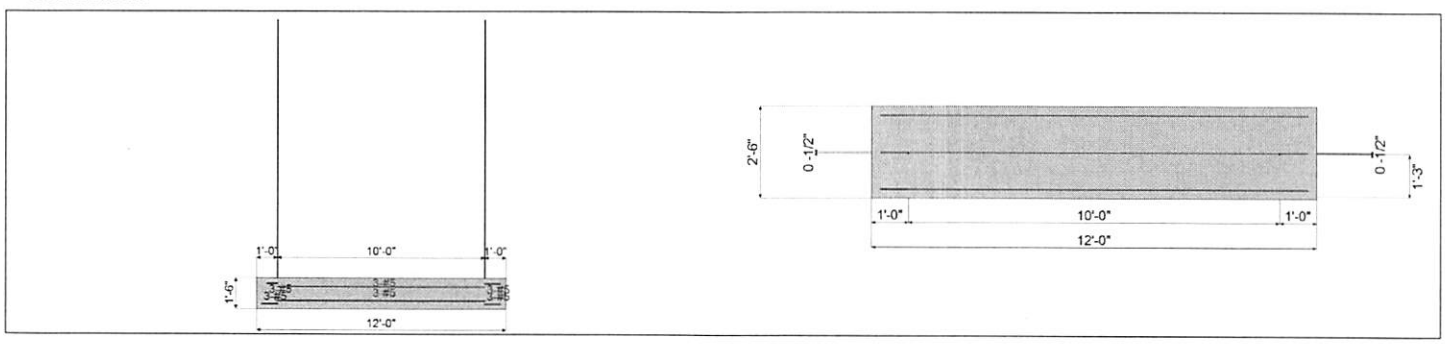
Pedestal dimensions...

		Col #1	Col #2
Sq. Dim.	=	0.50	0.50 in
Height	=	150.0	150.0 in

	Count	Size #	As Provided	As Req'd
Bars left of Col #1				
Bottom Bars	3.0	5	0.930	0.9720 in^2
Top Bars	3.0	5	0.930	0.9720 in^2
Bars Btwn Cols				
Bottom Bars	3.0	5	0.930	0.9720 in^2
Top Bars	3.0	5	0.930	0.9720 in^2
Bars Right of Col #2				
Bottom Bars	3.0	5	0.930	0.9720 in^2
Top Bars	3.0	5	0.930	0.0 in^2

Applied Loads

Applied @ Left Column		D	Lr	L	S	W	E	H	
Axial Load Downward	=	1.880	0.690	1.380					k
Moment (+CW)	=						16.509		k-ft
Shear (+X)	=						1.376		k
Applied @ Right Column									
Axial Load Downward	=	1.880	0.690	1.380					k
Moment (+CW)	=						17.966		k-ft
Shear (+X)	=						1.497		k
Overburden	=								



FnG

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Project Title: 1077 Fell Street Engineering check
Engineer: Detlev Doring
Project ID: 18D.25
Project Descr: Check calcualtions at 1077 Fell Street

Printed: 16 SEP 2025, 2:32PM

Combined Footing

Project File: 1077 Fell Street - Check.ec6

LIC# : KW-06016264, Build:20.25.09.04 DETLEV P. DORING, SE INC (c) ENERCALC, LLC 1982-2025

DESCRIPTION: Footing FTG1 check

DESIGN SUMMARY

Design N.G.

Factor of Safety		Item	Applied	Capacity	Governing Load Combination
FAIL	0.7081	Overturning	52.288 k-ft	37.026 k-ft	+0.60D+0.70E
FAIL	0.9205	Sliding	2.011 k	1.851 k	+0.60D+0.70E
PASS	No Uplift	Uplift	0.0 k	0.0 k	No Uplift

Utilization Ratio		Item	Applied	Capacity	Governing Load Combination
FAIL	999.0	Soil Bearing	999.0 ksf	1.50 ksf	Ecc>L/2! : +0.60D+0.70E
PASS	0.2976	1-way Shear - Col #1	11.373 psi	38.213 psi	+1.20D+L+E
PASS	0.5123	1-way Shear - Col #2	19.578 psi	38.213 psi	+1.20D+L+E
PASS	0.03058	2-way Punching - Col #1	4.588 psi	150.0 psi	+1.20D+0.50Lr+1.60L
PASS	0.03058	2-way Punching - Col #2	4.588 psi	150.0 psi	+1.20D+0.50Lr+1.60L
PASS	0.02885	Flexure - Left of Col #1 - Top	-1.758 k-ft	60.943 k-ft	+0.90D+E
PASS	0.006059	Flexure - Left of Col #1 - Bottom	0.3693 k-ft	60.943 k-ft	+1.20D+0.50Lr+1.60L
PASS	0.5707	Flexure - Between Cols - Top	-34.782 k-ft	60.943 k-ft	+1.20D+L+E
PASS	0.5781	Flexure - Between Cols - Bottom	35.232 k-ft	60.943 k-ft	+1.20D+L+E
PASS	No Tension	Flexure - Right of Col #2 - Top	0.0 k-ft	0.0 k-ft	N/A
PASS	0.1673	Flexure - Right of Col #2 - Bottom	10.193 k-ft	60.943 k-ft	+0.90D+E

Soil Bearing

Load Combination...	Total Bearing	Eccentricity from Ftg CL	Actual Soil Bearing Stress @ Left Edge	@ Right Edge	Allowable	Actual / Allow Ratio
D Only	10.29 k	0.000 ft	0.34 ksf	0.34 ksf	1.50 ksf	0.229
+D+L	13.05 k	0.000 ft	0.43 ksf	0.43 ksf	1.50 ksf	0.290
+D+Lr	11.67 k	0.000 ft	0.39 ksf	0.39 ksf	1.50 ksf	0.259
+D+0.750Lr+0.750L	13.39 k	0.000 ft	0.45 ksf	0.45 ksf	1.50 ksf	0.298
+D+0.750L	12.36 k	0.000 ft	0.41 ksf	0.41 ksf	1.50 ksf	0.275
+0.60D	6.17 k	0.000 ft	0.21 ksf	0.21 ksf	1.50 ksf	0.137
+D+0.70E	10.29 k	5.084 ft	0.00 ksf	2.98 ksf	1.50 ksf	1.985
+D+0.750L+0.5250E	12.36 k	3.174 ft	0.00 ksf	1.16 ksf	1.50 ksf	0.776
Ecc>L/2! : +0.60D+0.70E	6.17 k	8.473 ft	999.00 ksf	999.00 ksf	1.50 ksf	999.000

Overturning Stability

Load Combination...	Moments about Left Edge k-ft Overturning	Resisting	Ratio	Moments about Right Edg k-ft Overturning	Resisting	Ratio
D Only	0.00	0.00	999.000	0.00	0.00	999.000
+D+L	0.00	0.00	999.000	0.00	0.00	999.000
+D+Lr	0.00	0.00	999.000	0.00	0.00	999.000
+D+0.750Lr+0.750L	0.00	0.00	999.000	0.00	0.00	999.000
+D+0.750L	0.00	0.00	999.000	0.00	0.00	999.000
+0.60D	0.00	0.00	999.000	0.00	0.00	999.000
+D+0.70E	0.00	0.00	999.000	52.29	61.71	1.180
+D+0.750L+0.5250E	0.00	0.00	999.000	39.22	74.13	1.890
+0.60D+0.70E	0.00	0.00	999.000	52.29	37.03	0.708

Sliding Stability

Load Combination...	Sliding Force	Resisting Force	Sliding SafetyRatio
D Only	0.00 k	3.09 k	999
+D+L	0.00 k	3.91 k	999
+D+Lr	0.00 k	3.50 k	999
+D+0.750Lr+0.750L	0.00 k	4.02 k	999
+D+0.750L	0.00 k	3.71 k	999
+0.60D	0.00 k	1.85 k	999
+D+0.70E	2.01 k	3.09 k	1.534
+D+0.750L+0.5250E	1.51 k	3.71 k	2.457
+0.60D+0.70E	2.01 k	1.85 k	0.9205

Fn 7

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Project Title: 1077 Fell Street Engineering check
Engineer: Detlev Doring
Project ID: 18D.25
Project Descr: Check calcualtions at 1077 Fell Street

Printed: 16 SEP 2025, 2:32PM

Combined Footing

Project File: 1077 Fell Street - Check.ec6

LIC# : KW-06016264, Build:20.25.09.04 DETLEV P. DORING, SE INC (c) ENERCALC, LLC 1982-2025

DESCRIPTION: Footing FTG1 check

Z-Axis Footing Flexure - Maximum Values for Load Combination

Load Combination...	Mu (ft-k)	Distance from left (ft)	Tension Side	As Req'd (in^2)	Governed by	Actual As (in^2)	Phi*Mn (ft-k)	Mu / PhiMn
+0.60D+0.70E	0.000	0.000	0	0.000	0	0.000	0.000	0.000
+0.90D+E	-0.048	0.030	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.001
+0.90D+E	-0.097	0.060	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.002
+0.90D+E	-0.146	0.090	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.002
+0.90D+E	-0.195	0.120	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.003
+0.90D+E	-0.245	0.150	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.004
+0.90D+E	-0.295	0.180	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.005
+0.90D+E	-0.346	0.210	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.006
+0.90D+E	-0.397	0.240	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.007
+0.90D+E	-0.449	0.270	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.007
+0.90D+E	-0.501	0.300	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.008
+0.90D+E	-0.553	0.330	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.009
+0.90D+E	-0.606	0.360	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.010
+0.90D+E	-0.660	0.390	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.011
+0.90D+E	-0.714	0.420	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.012
+0.90D+E	-0.768	0.450	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.013
+0.90D+E	-0.823	0.480	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.013
+0.90D+E	-0.878	0.510	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.014
+0.90D+E	-0.933	0.540	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.015
+0.90D+E	-0.990	0.570	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.016
+0.90D+E	-1.046	0.600	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.017
+0.90D+E	-1.103	0.630	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.018
+0.90D+E	-1.160	0.660	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.019
+0.90D+E	-1.218	0.690	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.020
+0.90D+E	-1.276	0.720	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.021
+0.90D+E	-1.335	0.750	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.022
+0.90D+E	-1.394	0.780	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.023
+0.90D+E	-1.454	0.810	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.024
+0.90D+E	-1.514	0.840	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.025
+0.90D+E	-1.574	0.870	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.026
+0.90D+E	-1.635	0.900	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.027
+0.90D+E	-1.696	0.930	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.028
+0.90D+E	-1.758	0.960	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.029
+0.90D+E	-1.831	0.990	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.030
+1.20D+L+E	35.351	1.020	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.580
+1.20D+L+E	35.232	1.050	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.578
+1.20D+L+E	35.102	1.080	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.576
+1.20D+L+E	34.971	1.110	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.574
+1.20D+L+E	34.840	1.140	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.572
+1.20D+L+E	34.708	1.170	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.570
+1.20D+L+E	34.576	1.200	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.567
+1.20D+L+E	34.443	1.230	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.565
+1.20D+L+E	34.310	1.260	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.563
+1.20D+L+E	34.176	1.290	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.561
+1.20D+L+E	34.041	1.320	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.559
+1.20D+L+E	33.906	1.350	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.556
+1.20D+L+E	33.770	1.380	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.554
+1.20D+L+E	33.634	1.410	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.552
+1.20D+L+E	33.497	1.440	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.550
+1.20D+L+E	33.359	1.470	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.547
+1.20D+L+E	33.221	1.500	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.545
+1.20D+L+E	33.082	1.530	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.543
+1.20D+L+E	32.943	1.560	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.541
+1.20D+L+E	32.803	1.590	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.538
+1.20D+L+E	32.662	1.620	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.536
+1.20D+L+E	32.521	1.650	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.534
+1.20D+L+E	32.380	1.680	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.531
+1.20D+L+E	32.237	1.710	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.529
+1.20D+L+E	32.095	1.740	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.527
+1.20D+L+E	31.951	1.770	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.524
+1.20D+L+E	31.807	1.800	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.522
+1.20D+L+E	31.663	1.830	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.520
+1.20D+L+E	31.517	1.860	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.517

Fh 8

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Project Title: 1077 Fell Street Engineering check
Engineer: Detlev Doring
Project ID: 18D.25
Project Descr: Check calcualtions at 1077 Fell Street

Printed: 16 SEP 2025, 2:32PM

Combined Footing

Project File: 1077 Fell Street - Check.ec6

LIC# : KW-06016264, Build:20.25.09.04 DETLEV P. DORING, SE INC (c) ENERCALC, LLC 1982-2025

DESCRIPTION: Footing FTG1 check

Z-Axis Footing Flexure - Maximum Values for Load Combination

Load Combination...	Mu (ft-k)	Distance from left (ft)	Tension Side	As Req'd (in^2)	Governed by	Actual As (in^2)	Phi*Mn (ft-k)	Mu / PhiMn
+1.20D+L+E	31.372	1.890	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.515
+1.20D+L+E	31.225	1.920	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.512
+1.20D+L+E	31.078	1.950	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.510
+1.20D+L+E	30.931	1.980	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.508
+1.20D+L+E	30.783	2.010	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.505
+1.20D+L+E	30.634	2.040	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.503
+1.20D+L+E	30.485	2.070	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.500
+1.20D+L+E	30.335	2.100	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.498
+1.20D+L+E	30.184	2.130	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.495
+1.20D+L+E	30.033	2.160	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.493
+1.20D+L+E	29.881	2.190	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.490
+1.20D+L+E	29.729	2.220	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.488
+1.20D+L+E	29.576	2.250	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.485
+1.20D+L+E	29.423	2.280	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.483
+1.20D+L+E	29.269	2.310	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.480
+1.20D+L+E	29.114	2.340	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.478
+1.20D+L+E	28.959	2.370	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.475
+1.20D+L+E	28.803	2.400	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.473
+1.20D+L+E	28.647	2.430	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.470
+1.20D+L+E	28.490	2.460	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.467
+1.20D+L+E	28.333	2.490	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.465
+1.20D+L+E	28.174	2.520	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.462
+1.20D+L+E	28.016	2.550	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.460
+1.20D+L+E	27.856	2.580	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.457
+1.20D+L+E	27.697	2.610	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.454
+1.20D+L+E	27.536	2.640	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.452
+1.20D+L+E	27.375	2.670	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.449
+1.20D+L+E	27.213	2.700	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.447
+1.20D+L+E	27.051	2.730	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.444
+1.20D+L+E	26.888	2.760	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.441
+1.20D+L+E	26.725	2.790	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.439
+1.20D+L+E	26.561	2.820	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.436
+1.20D+L+E	26.396	2.850	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.433
+1.20D+L+E	26.231	2.880	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.430
+1.20D+L+E	26.066	2.910	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.428
+1.20D+L+E	25.899	2.940	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.425
+1.20D+L+E	25.732	2.970	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.422
+1.20D+L+E	25.565	3.000	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.419
+1.20D+L+E	25.397	3.030	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.417
+1.20D+L+E	25.228	3.060	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.414
+1.20D+L+E	25.059	3.090	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.411
+1.20D+L+E	24.889	3.120	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.408
+1.20D+L+E	24.718	3.150	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.406
+1.20D+L+E	24.547	3.180	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.403
+0.90D+E	24.388	3.210	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.400
+0.90D+E	24.242	3.240	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.398
+0.90D+E	24.095	3.270	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.395
+0.90D+E	23.948	3.300	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.393
+0.90D+E	23.801	3.330	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.391
+0.90D+E	23.653	3.360	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.388
+0.90D+E	23.505	3.390	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.386
+0.90D+E	23.356	3.420	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.383
+0.90D+E	23.207	3.450	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.381
+0.90D+E	23.058	3.480	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.378
+0.90D+E	22.908	3.510	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.376
+0.90D+E	22.757	3.540	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.373
+0.90D+E	22.607	3.570	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.371
+0.90D+E	22.455	3.600	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.368
+0.90D+E	22.304	3.630	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.366
+0.90D+E	22.151	3.660	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.363
+0.90D+E	21.999	3.690	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.361
+0.90D+E	21.846	3.720	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.358
+0.90D+E	21.692	3.750	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.356

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Project Title: 1077 Fell Street Engineering check
Engineer: Detlev Doring
Project ID: 18D.25
Project Descr: Check calcualtions at 1077 Fell Street

Printed: 16 SEP 2025, 2:32PM

Combined Footing

Project File: 1077 Fell Street - Check.ec6

LIC# : KW-06016264, Build:20.25.09.04 DETLEV P. DORING, SE INC (c) ENERCALC, LLC 1982-2025

DESCRIPTION: Footing FTG1 check

Z-Axis Footing Flexure - Maximum Values for Load Combination

Load Combination...	Mu (ft-k)	Distance from left (ft)	Tension Side	As Req'd (in^2)	Governed by	Actual As (in^2)	Phi*Mn (ft-k)	Mu / PhiMn
+0.90D+E	21.538	3.780	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.353
+0.90D+E	21.384	3.810	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.351
+0.90D+E	21.229	3.840	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.348
+0.90D+E	21.074	3.870	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.346
+0.90D+E	20.918	3.900	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.343
+0.90D+E	20.762	3.930	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.341
+0.90D+E	20.605	3.960	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.338
+0.90D+E	20.448	3.990	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.336
+0.90D+E	20.291	4.020	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.333
+0.90D+E	20.133	4.050	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.330
+0.90D+E	19.975	4.080	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.328
+0.90D+E	19.816	4.110	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.325
+0.90D+E	19.657	4.140	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.323
+0.90D+E	19.497	4.170	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.320
+0.90D+E	19.337	4.200	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.317
+0.90D+E	19.176	4.230	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.315
+0.90D+E	19.015	4.260	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.312
+0.90D+E	18.854	4.290	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.309
+0.90D+E	18.692	4.320	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.307
+0.90D+E	18.530	4.350	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.304
+0.90D+E	18.367	4.380	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.301
+0.90D+E	18.204	4.410	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.299
+0.90D+E	18.040	4.440	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.296
+0.90D+E	17.876	4.470	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.293
+0.90D+E	17.712	4.500	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.291
+0.90D+E	17.547	4.530	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.288
+0.90D+E	17.382	4.560	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.285
+0.90D+E	17.216	4.590	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.282
+0.90D+E	17.049	4.620	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.280
+0.90D+E	16.883	4.650	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.277
+0.90D+E	16.716	4.680	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.274
+0.90D+E	16.548	4.710	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.272
+0.90D+E	16.380	4.740	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.269
+0.90D+E	16.212	4.770	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.266
+0.90D+E	16.043	4.800	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.263
+0.90D+E	15.873	4.830	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.260
+0.90D+E	15.703	4.860	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.258
+0.90D+E	15.533	4.890	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.255
+0.90D+E	15.363	4.920	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.252
+0.90D+E	15.191	4.950	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.249
+0.90D+E	15.020	4.980	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.246
+0.90D+E	14.848	5.010	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.244
+0.90D+E	14.676	5.040	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.241
+0.90D+E	14.503	5.070	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.238
+0.90D+E	14.329	5.100	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.235
+0.90D+E	14.156	5.130	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.232
+0.90D+E	13.981	5.160	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.229
+0.90D+E	13.807	5.190	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.227
+0.90D+E	13.632	5.220	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.224
+0.90D+E	13.456	5.250	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.221
+0.90D+E	13.280	5.280	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.218
+0.90D+E	13.104	5.310	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.215
+0.90D+E	12.927	5.340	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.212
+0.90D+E	12.750	5.370	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.209
+0.90D+E	12.572	5.400	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.206
+0.90D+E	12.394	5.430	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.203
+0.90D+E	12.215	5.460	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.200
+0.90D+E	12.036	5.490	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.197
+0.90D+E	11.857	5.520	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.195
+0.90D+E	11.677	5.550	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.192
+0.90D+E	11.496	5.580	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.189
+0.90D+E	11.316	5.610	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.186
+0.90D+E	11.134	5.640	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.183

Fn lo

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Project Title: 1077 Fell Street Engineering check
Engineer: Detlev Doring
Project ID: 18D.25
Project Descr: Check calcualtions at 1077 Fell Street

Printed: 16 SEP 2025, 2:32PM

Combined Footing

Project File: 1077 Fell Street - Check.ec6

LIC# : KW-06016264, Build:20.25.09.04 DETLEV P. DORING, SE INC (c) ENERCALC, LLC 1982-2025

DESCRIPTION: Footing FTG1 check

Z-Axis Footing Flexure - Maximum Values for Load Combination

Load Combination...	Mu (ft-k)	Distance from left (ft)	Tension Side	As Req'd (in^2)	Governed by	Actual As (in^2)	Phi*Mn (ft-k)	Mu / PhiMn
+0.90D+E	10.953	5.670	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.180
+0.90D+E	10.771	5.700	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.177
+0.90D+E	10.588	5.730	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.174
+0.90D+E	10.405	5.760	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.171
+0.90D+E	10.222	5.790	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.168
+0.90D+E	10.038	5.820	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.165
+0.90D+E	9.853	5.850	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.162
+0.90D+E	9.669	5.880	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.159
+1.20D+0.50Lr+1.60L	-9.615	5.910	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.158
+1.20D+0.50Lr+1.60L	-9.617	5.940	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.158
+1.20D+0.50Lr+1.60L	-9.618	5.970	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.158
+1.20D+0.50Lr+1.60L	-9.618	6.000	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.158
+1.20D+0.50Lr+1.60L	-9.618	6.030	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.158
+1.20D+0.50Lr+1.60L	-9.617	6.060	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.158
+1.20D+0.50Lr+1.60L	-9.615	6.090	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.158
+1.20D+0.50Lr+1.60L	-9.612	6.120	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.158
+1.20D+0.50Lr+1.60L	-9.609	6.150	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.158
+1.20D+0.50Lr+1.60L	-9.605	6.180	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.158
+1.20D+0.50Lr+1.60L	-9.600	6.210	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.158
+1.20D+0.50Lr+1.60L	-9.595	6.240	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.157
+1.20D+0.50Lr+1.60L	-9.589	6.270	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.157
+1.20D+0.50Lr+1.60L	-9.582	6.300	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.157
+1.20D+0.50Lr+1.60L	-9.574	6.330	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.157
+1.20D+0.50Lr+1.60L	-9.566	6.360	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.157
+1.20D+0.50Lr+1.60L	-9.557	6.390	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.157
+1.20D+0.50Lr+1.60L	-9.547	6.420	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.157
+1.20D+0.50Lr+1.60L	-9.537	6.450	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.156
+1.20D+0.50Lr+1.60L	-9.526	6.480	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.156
+1.20D+0.50Lr+1.60L	-9.514	6.510	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.156
+1.20D+0.50Lr+1.60L	-9.501	6.540	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.156
+1.20D+0.50Lr+1.60L	-9.488	6.570	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.156
+1.20D+0.50Lr+1.60L	-9.474	6.600	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.155
+1.20D+0.50Lr+1.60L	-9.459	6.630	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.155
+1.20D+0.50Lr+1.60L	-9.443	6.660	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.155
+1.20D+0.50Lr+1.60L	-9.427	6.690	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.155
+1.20D+0.50Lr+1.60L	-9.410	6.720	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.154
+1.20D+0.50Lr+1.60L	-9.393	6.750	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.154
+1.20D+0.50Lr+1.60L	-9.374	6.780	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.154
+1.20D+0.50Lr+1.60L	-9.355	6.810	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.154
+1.20D+0.50Lr+1.60L	-9.335	6.840	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.153
+1.20D+0.50Lr+1.60L	-9.315	6.870	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.153
+1.20D+0.50Lr+1.60L	-9.293	6.900	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.152
+1.20D+0.50Lr+1.60L	-9.271	6.930	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.152
+1.20D+0.50Lr+1.60L	-9.249	6.960	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.152
+1.20D+0.50Lr+1.60L	-9.225	6.990	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.151
+1.20D+0.50Lr+1.60L	-9.201	7.020	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.151
+1.20D+0.50Lr+1.60L	-9.176	7.050	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.151
+1.20D+0.50Lr+1.60L	-9.151	7.080	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.150
+1.20D+0.50Lr+1.60L	-9.124	7.110	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.150
+1.20D+0.50Lr+1.60L	-9.097	7.140	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.149
+1.20D+0.50Lr+1.60L	-9.069	7.170	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.149
+1.20D+0.50Lr+1.60L	-9.041	7.200	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.148
+1.20D+0.50Lr+1.60L	-9.012	7.230	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.148
+1.20D+0.50Lr+1.60L	-8.982	7.260	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.147
+1.20D+0.50Lr+1.60L	-8.951	7.290	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.147
+1.20D+0.50Lr+1.60L	-8.920	7.320	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.146
+1.20D+0.50Lr+1.60L	-8.888	7.350	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.146
+1.20D+0.50Lr+1.60L	-8.855	7.380	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.145
+1.20D+0.50Lr+1.60L	-8.821	7.410	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.145
+1.20D+0.50Lr+1.60L	-8.787	7.440	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.144
+1.20D+0.50Lr+1.60L	-8.752	7.470	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.144
+1.20D+0.50Lr+1.60L	-8.716	7.500	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.143
+1.20D+0.50Lr+1.60L	-8.680	7.530	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.142

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Project Title: 1077 Fell Street Engineering check
Engineer: Detlev Doring
Project ID: 18D.25
Project Descr: Check calcualtions at 1077 Fell Street

Printed: 16 SEP 2025, 2:32PM

Combined Footing

Project File: 1077 Fell Street - Check.ec6

LIC# : KW-06016264, Build:20.25.09.04 DETLEV P. DORING, SE INC (c) ENERCALC, LLC 1982-2025

DESCRIPTION: Footing FTG1 check

Z-Axis Footing Flexure - Maximum Values for Load Combination

Load Combination...	Mu (ft-k)	Distance from left (ft)	Tension Side	As Req'd (in^2)	Governed by	Actual As (in^2)	Phi*Mn (ft-k)	Mu / PhiMn
+1.20D+0.50Lr+1.60L	-8.643	7.560	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.142
+1.20D+0.50Lr+1.60L	-8.605	7.590	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.141
+1.20D+0.50Lr+1.60L	-8.566	7.620	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.141
+1.20D+0.50Lr+1.60L	-8.527	7.650	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.140
+1.20D+0.50Lr+1.60L	-8.487	7.680	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.139
+1.20D+0.50Lr+1.60L	-8.446	7.710	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.139
+1.20D+0.50Lr+1.60L	-8.405	7.740	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.138
+1.20D+L+E	-8.539	7.770	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.140
+1.20D+L+E	-8.801	7.800	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.144
+1.20D+L+E	-9.063	7.830	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.149
+1.20D+L+E	-9.326	7.860	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.153
+1.20D+L+E	-9.589	7.890	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.157
+1.20D+L+E	-9.853	7.920	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.162
+1.20D+L+E	-10.117	7.950	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.166
+1.20D+L+E	-10.382	7.980	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.170
+1.20D+L+E	-10.648	8.010	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.175
+1.20D+L+E	-10.914	8.040	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.179
+1.20D+L+E	-11.181	8.070	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.183
+1.20D+L+E	-11.448	8.100	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.188
+1.20D+L+E	-11.716	8.130	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.192
+1.20D+L+E	-11.984	8.160	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.197
+1.20D+L+E	-12.253	8.190	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.201
+1.20D+L+E	-12.523	8.220	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.205
+1.20D+L+E	-12.793	8.250	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.210
+1.20D+L+E	-13.064	8.280	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.214
+1.20D+L+E	-13.336	8.310	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.219
+1.20D+L+E	-13.608	8.340	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.223
+1.20D+L+E	-13.880	8.370	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.228
+1.20D+L+E	-14.154	8.400	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.232
+1.20D+L+E	-14.427	8.430	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.237
+1.20D+L+E	-14.702	8.460	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.241
+1.20D+L+E	-14.977	8.490	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.246
+1.20D+L+E	-15.252	8.520	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.250
+1.20D+L+E	-15.529	8.550	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.255
+1.20D+L+E	-15.805	8.580	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.259
+1.20D+L+E	-16.083	8.610	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.264
+1.20D+L+E	-16.361	8.640	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.268
+1.20D+L+E	-16.639	8.670	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.273
+1.20D+L+E	-16.918	8.700	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.278
+1.20D+L+E	-17.198	8.730	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.282
+1.20D+L+E	-17.478	8.760	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.287
+1.20D+L+E	-17.759	8.790	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.291
+1.20D+L+E	-18.040	8.820	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.296
+1.20D+L+E	-18.322	8.850	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.301
+1.20D+L+E	-18.605	8.880	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.305
+1.20D+L+E	-18.888	8.910	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.310
+1.20D+L+E	-19.171	8.940	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.315
+1.20D+L+E	-19.455	8.970	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.319
+1.20D+L+E	-19.739	9.000	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.324
+1.20D+L+E	-20.023	9.030	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.329
+1.20D+L+E	-20.308	9.060	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.333
+1.20D+L+E	-20.592	9.090	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.338
+1.20D+L+E	-20.876	9.120	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.343
+1.20D+L+E	-21.160	9.150	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.347
+1.20D+L+E	-21.443	9.180	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.352
+1.20D+L+E	-21.727	9.210	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.357
+1.20D+L+E	-22.010	9.240	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.361
+1.20D+L+E	-22.292	9.270	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.366
+1.20D+L+E	-22.574	9.300	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.370
+1.20D+L+E	-22.855	9.330	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.375
+1.20D+L+E	-23.135	9.360	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.380
+1.20D+L+E	-23.415	9.390	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.384
+1.20D+L+E	-23.693	9.420	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.389

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Project Title: 1077 Fell Street Engineering check
Engineer: Detlev Doring
Project ID: 18D.25
Project Descr: Check calcualtions at 1077 Fell Street

Printed: 16 SEP 2025, 2:32PM

Combined Footing

Project File: 1077 Fell Street - Check.ec6

LIC# : KW-06016264, Build:20.25.09.04 DETLEV P. DORING, SE INC (c) ENERCALC, LLC 1982-2025

DESCRIPTION: Footing FTG1 check

Z-Axis Footing Flexure - Maximum Values for Load Combination

Load Combination...	Mu (ft-k)	Distance from left (ft)	Tension Side	As Req'd (in^2)	Governed by	Actual As (in^2)	Phi*Mn (ft-k)	Mu / PhiMn
+1.20D+L+E	-23.971	9.450	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.393
+1.20D+L+E	-24.248	9.480	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.398
+1.20D+L+E	-24.523	9.510	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.402
+1.20D+L+E	-24.797	9.540	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.407
+1.20D+L+E	-25.070	9.570	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.411
+1.20D+L+E	-25.341	9.600	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.416
+1.20D+L+E	-25.611	9.630	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.420
+1.20D+L+E	-25.880	9.660	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.425
+1.20D+L+E	-26.147	9.690	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.429
+1.20D+L+E	-26.412	9.720	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.433
+1.20D+L+E	-26.675	9.750	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.438
+1.20D+L+E	-26.936	9.780	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.442
+1.20D+L+E	-27.195	9.810	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.446
+1.20D+L+E	-27.453	9.840	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.450
+1.20D+L+E	-27.708	9.870	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.455
+1.20D+L+E	-27.961	9.900	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.459
+1.20D+L+E	-28.211	9.930	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.463
+1.20D+L+E	-28.460	9.960	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.467
+1.20D+L+E	-28.705	9.990	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.471
+1.20D+L+E	-28.949	10.020	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.475
+1.20D+L+E	-29.189	10.050	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.479
+1.20D+L+E	-29.427	10.080	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.483
+1.20D+L+E	-29.662	10.110	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.487
+1.20D+L+E	-29.895	10.140	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.491
+1.20D+L+E	-30.124	10.170	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.494
+1.20D+L+E	-30.350	10.200	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.498
+1.20D+L+E	-30.573	10.230	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.502
+1.20D+L+E	-30.793	10.260	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.505
+1.20D+L+E	-31.010	10.290	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.509
+1.20D+L+E	-31.223	10.320	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.512
+1.20D+L+E	-31.433	10.350	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.516
+1.20D+L+E	-31.639	10.380	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.519
+1.20D+L+E	-31.842	10.410	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.522
+1.20D+L+E	-32.041	10.440	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.526
+1.20D+L+E	-32.237	10.470	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.529
+1.20D+L+E	-32.428	10.500	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.532
+1.20D+L+E	-32.616	10.530	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.535
+1.20D+L+E	-32.799	10.560	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.538
+1.20D+L+E	-32.978	10.590	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.541
+1.20D+L+E	-33.154	10.620	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.544
+1.20D+L+E	-33.325	10.650	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.547
+1.20D+L+E	-33.491	10.680	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.550
+1.20D+L+E	-33.653	10.710	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.552
+1.20D+L+E	-33.811	10.740	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.555
+1.20D+L+E	-33.964	10.770	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.557
+1.20D+L+E	-34.113	10.800	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.560
+1.20D+L+E	-34.256	10.830	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.562
+1.20D+L+E	-34.395	10.860	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.564
+1.20D+L+E	-34.529	10.890	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.567
+1.20D+L+E	-34.658	10.920	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.569
+1.20D+L+E	-34.782	10.950	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.571
+1.20D+L+E	-34.911	10.980	Top	0.972	ACI 7.6.1.1	0.930	60.943	0.573
+0.90D+E	10.494	11.010	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.172
+0.90D+E	10.193	11.040	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.167
+0.90D+E	9.882	11.070	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.162
+0.90D+E	9.570	11.100	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.157
+0.90D+E	9.257	11.130	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.152
+0.90D+E	8.944	11.160	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.147
+0.90D+E	8.630	11.190	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.142
+0.90D+E	8.316	11.220	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.136
+0.90D+E	8.002	11.250	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.131
+0.90D+E	7.687	11.280	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.126
+0.90D+E	7.372	11.310	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.121

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Project Title: 1077 Fell Street Engineering check
Engineer: Detlev Doring
Project ID: 18D.25
Project Descr: Check calcualtions at 1077 Fell Street

Printed: 16 SEP 2025, 2:32PM

Combined Footing

Project File: 1077 Fell Street - Check.ec6

LIC# : KW-06016264, Build:20.25.09.04 DETLEV P. DORING, SE INC (c) ENERCALC, LLC 1982-2025

DESCRIPTION: Footing FTG1 check

Z-Axis Footing Flexure - Maximum Values for Load Combination

Load Combination...	Mu (ft-k)	Distance from left (ft)	Tension Side	As Req'd (in^2)	Governed by	Actual As (in^2)	Phi*Mn (ft-k)	Mu / PhiMn
+0.90D+E	7.056	11.340	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.116
+0.90D+E	6.740	11.370	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.111
+0.90D+E	6.424	11.400	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.105
+0.90D+E	6.107	11.430	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.100
+0.90D+E	5.789	11.460	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.095
+0.90D+E	5.471	11.490	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.090
+0.90D+E	5.153	11.520	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.085
+0.90D+E	4.834	11.550	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.079
+0.90D+E	4.515	11.580	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.074
+0.90D+E	4.195	11.610	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.069
+0.90D+E	3.875	11.640	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.064
+0.90D+E	3.555	11.670	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.058
+0.90D+E	3.234	11.700	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.053
+0.90D+E	2.912	11.730	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.048
+0.90D+E	2.591	11.760	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.043
+0.90D+E	2.268	11.790	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.037
+0.90D+E	1.946	11.820	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.032
+0.90D+E	1.622	11.850	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.027
+0.90D+E	1.299	11.880	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.021
+0.90D+E	0.975	11.910	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.016
+0.90D+E	0.650	11.940	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.011
+0.90D+E	0.325	11.970	Bottom	0.972	ACI 7.6.1.1	0.930	60.943	0.005
+0.90D+E	0.000	12.000	0	0.000	0	0.000	0.000	0.000

One Way Shear	Left of Column #1			Right of Column #1			Left of Column #2			Right of Column #2		
Load Combination...	vu (psi)	Φ vn (psi)	vu / Φ vn	vu (psi)	Φ vn (psi)	vu / Φ vn	vu (psi)	Φ vn (psi)	vu / Φ vn	vu (psi)	Φ vn (psi)	vu / Φ vn
+1.40D	0.0	38.2	0.000	3.6	38.2	0.094	0.0	38.2	0.000	3.6	38.2	0.094
+1.20D+0.50Lr+1.60L	0.0	38.2	0.000	6.6	38.2	0.173	0.0	38.2	0.000	6.6	38.2	0.173
+1.20D+1.60L	0.0	38.2	0.000	6.1	38.2	0.161	0.0	38.2	0.000	6.1	38.2	0.161
+1.20D+1.60Lr+L	0.0	38.2	0.000	6.5	38.2	0.171	0.0	38.2	0.000	6.5	38.2	0.171
+1.20D+1.60Lr	0.0	38.2	0.000	4.6	38.2	0.121	0.0	38.2	0.000	4.6	38.2	0.121
+1.20D+L	0.0	38.2	0.000	5.0	38.2	0.131	0.0	38.2	0.000	5.0	38.2	0.131
+1.20D	0.0	38.2	0.000	3.1	38.2	0.081	0.0	38.2	0.000	3.1	38.2	0.081
+1.20D+0.50Lr+L	0.0	38.2	0.000	5.5	38.2	0.143	0.0	38.2	0.000	5.5	38.2	0.143
+0.90D	0.0	38.2	0.000	2.3	38.2	0.061	0.0	38.2	0.000	2.3	38.2	0.061
+1.20D+L+E	0.0	38.2	0.000	11.4	38.2	0.298	0.0	38.2	0.000	19.6	38.2	0.512
+0.90D+E	0.0	38.2	0.000	6.2	38.2	0.163	0.0	38.2	0.000	6.2	38.2	0.163

Two Way Shear	Column #1			Column #2		
Load Combination...	vu (psi)	Φ vn (psi)	vu / Φ vn	vu (psi)	Φ vn (psi)	vu / Φ vn
+1.40D	2.5	150.0	0.017	2.5	150.0	0.017
+1.20D+0.50Lr+1.60L	4.6	150.0	0.031	4.6	150.0	0.031
+1.20D+1.60L	4.3	150.0	0.028	4.3	150.0	0.028
+1.20D+1.60Lr+L	4.5	150.0	0.030	4.5	150.0	0.030
+1.20D+1.60Lr	3.2	150.0	0.021	3.2	150.0	0.021
+1.20D+L	3.5	150.0	0.023	3.5	150.0	0.023
+1.20D	2.2	150.0	0.014	2.2	150.0	0.014
+1.20D+0.50Lr+L	3.8	150.0	0.025	3.8	150.0	0.025
+0.90D	1.6	150.0	0.011	1.6	150.0	0.011
+1.20D+L+E	4.4	150.0	0.029	0.3	150.0	0.002
+0.90D+E	2.2	150.0	0.014	2.2	150.0	0.014

Fn 14

Results

Per Enercalc output overturning & sliding failed

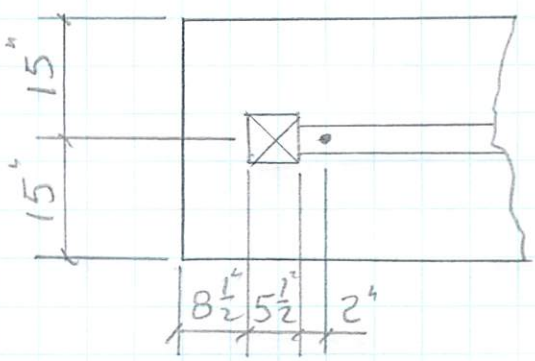
Soil bearing is not calculated because Eccentricity > L/2

∴ Ftg. fails

Anchor Bolt conn.

Dwg. Sh. S-2 shows 7/8"ϕ rod w/ a coupler nut connecting to WSWH strongwalls which requires 1"ϕ rods.

Dwg Sh. W-2 is based on ACI 318-11 & ACI 318-14. Current code ACI 318-19 Chapter 17 applies.



7/8"ϕ rod embeded 9"

$T_{E_{req}} = \frac{12087}{0.7} = 17267\#$

Rod is OK

Fn 15

SIMPSON Strong-Tie®

Anchor Designer™ for Concrete Software
Version 3.3.2404.1

Company:		Date:	9/19/2025
Engineer:	Detlev Doring	Page:	1/5
Project:	1077 Fell Street		
Address:	216 Cleveland Ct., Mill Valley CA 94941		
Phone:	415 847-4841		
E-mail:	det@dpdoringse.com		

1.Project information

Project description: 7/8" diameter rod
Location: 7/8" diameter rod
Fastening description:

Comment: 7/8" diameter rod

2. Input Data & Anchor Parameters

General
Design method:ACI 318-19
Units: Imperial units

Anchor Information:
Anchor type: Cast-in-place
Material: AB
Diameter (inch): 0.875
Effective Embedment depth, h_{ef} (inch): 9.000
Anchor category: -
Anchor ductility: Yes
h_{min} (inch): 11.38
C_{min} (inch): 5.25
S_{min} (inch): 5.25

Base Material
Concrete: Normal-weight
Concrete thickness, h (inch): 18.00
State: Cracked
Compressive strength, f'_c (psi): 2500
$\Psi_{c,V}$: 1.0
Reinforcement condition: Supplementary reinforcement not present
Supplemental edge reinforcement: Not applicable
Reinforcement provided at corners: Yes
Ignore concrete breakout in tension: No
Ignore concrete breakout in shear: No
Ignore 6do requirement: No
Build-up grout pad: No

Recommended Anchor
Anchor Name: PAB Pre-Assembled Anchor Bolt - PAB7 (7/8"Ø)



Fn 16

SIMPSON Strong-Tie

Anchor Designer™ for Concrete Software
Version 3.3.2404.1

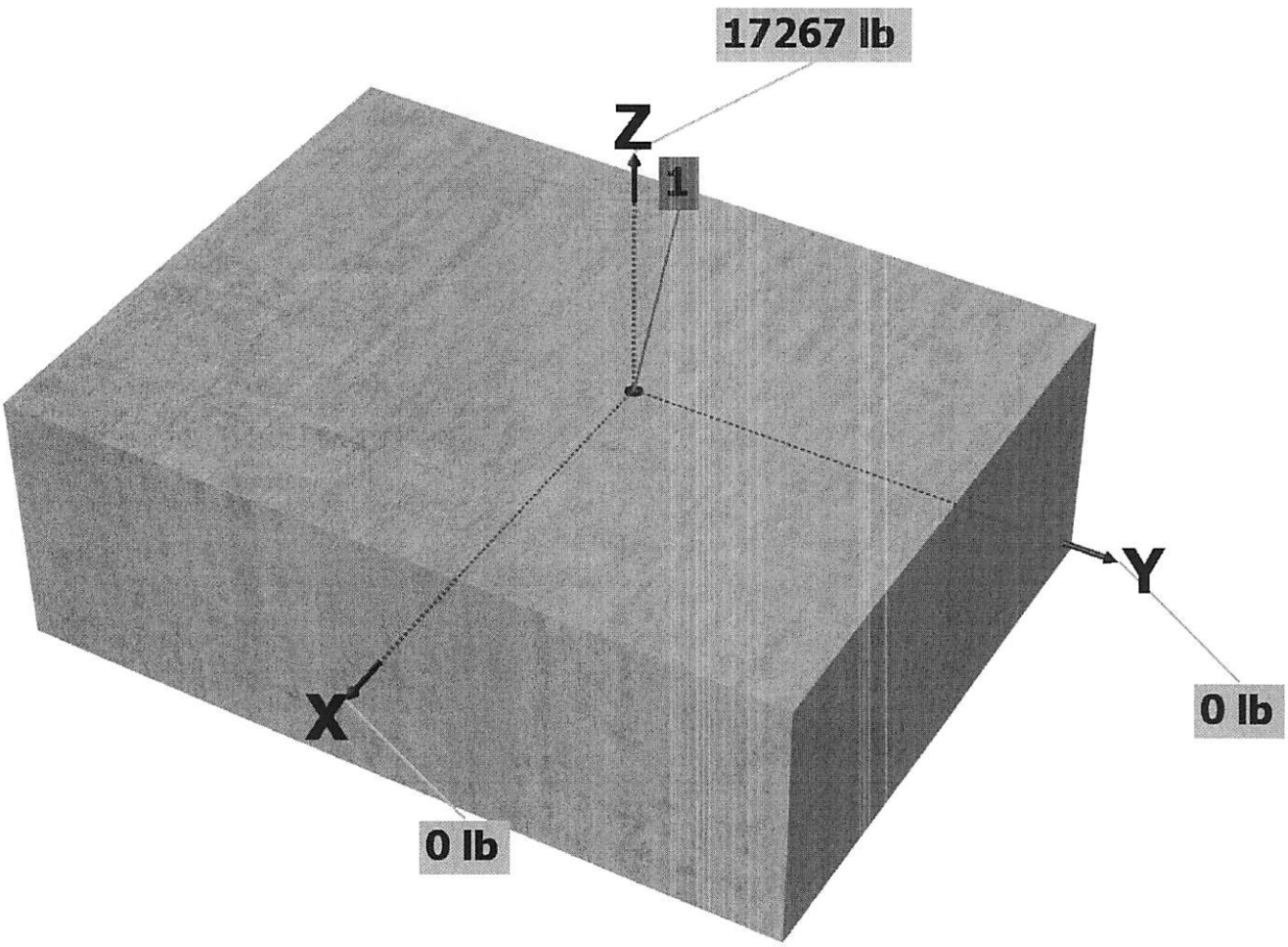
Company:		Date:	9/19/2025
Engineer:	Detlev Doring	Page:	2/5
Project:	1077 Fell Street		
Address:	216 Cleveland Ct., Mill Valley CA 94941		
Phone:	415 847-4841		
E-mail:	det@dpdoringse.com		

Load and Geometry
Load factor source: ACI 318 Section 5.3
Load combination: U = 0.9D + 1.0E
Seismic design: Yes
Anchors subjected to sustained tension: Not applicable
Ductility section for tension: 17.10.5.2 not applicable
Ductility section for shear: 17.10.6.2 not applicable
Ω_0 factor: not set
Apply entire shear load at front row: No
Anchors only resisting wind and/or seismic loads: Yes

Service level loads:

	D	E	*Strength level loads*
N_a [lb]:	0	17267	*17267*
V_{ax} [lb]:	0	0	*0*
V_{ay} [lb]:	0	0	*0*

<Figure 1>



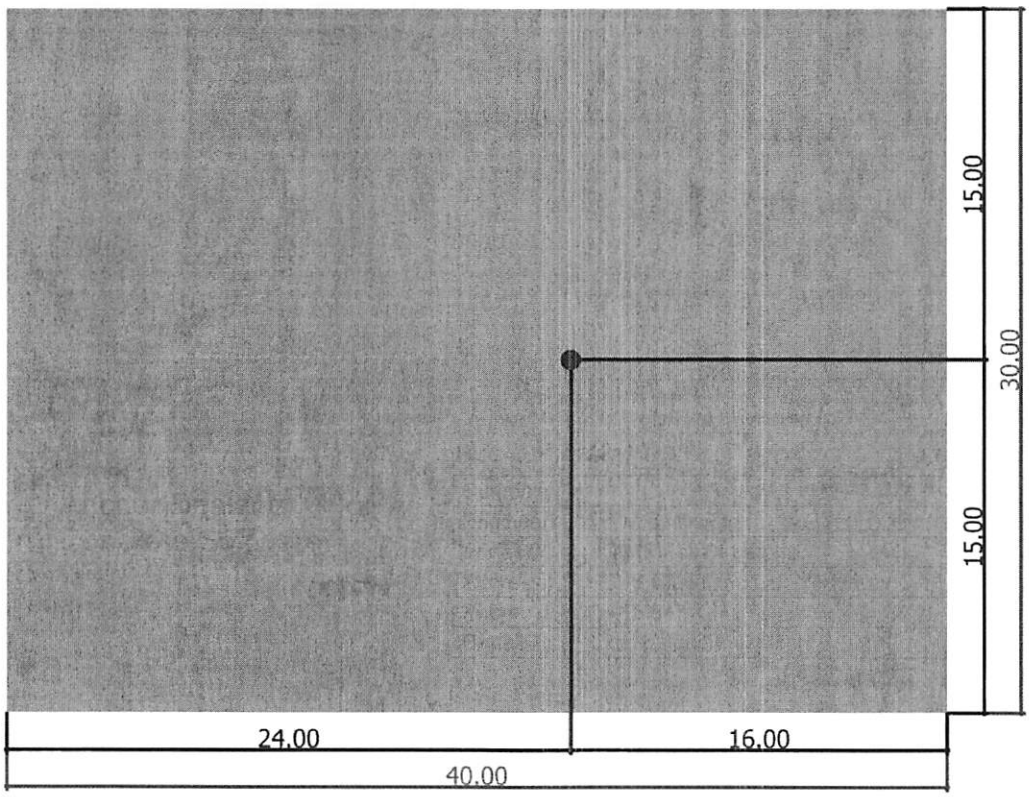
Fn 17

SIMPSON Strong-Tie®

Anchor Designer™ for Concrete Software
Version 3.3.2404.1

Company:		Date:	9/19/2025
Engineer:	Detlev Doring	Page:	3/5
Project:	1077 Fell Street		
Address:	216 Cleveland Ct., Mill Valley CA 94941		
Phone:	415 847-4841		
E-mail:	det@dpdoringse.com		

<Figure 2>



3. Resulting Anchor Forces

Anchor	Tension load, N_{ua} (lb)	Shear load x, V_{uax} (lb)	Shear load y, V_{uay} (lb)	Shear load combined, $\sqrt{(V_{uax})^2+(V_{uay})^2}$ (lb)
1	17267.0	0.0	0.0	0.0
Sum	17267.0	0.0	0.0	0.0

Maximum concrete compression strain (‰): 0.00
Maximum concrete compression stress (psi): 0
Resultant tension force (lb): 17267
Resultant compression force (lb): 0
Eccentricity of resultant tension forces in x-axis, e'_{Nx} (inch): 0.00
Eccentricity of resultant tension forces in y-axis, e'_{Ny} (inch): 0.00

Fn 18

SIMPSON Strong-Tie® Anchor Designer™ for Concrete Software
Version 3.3.2404.1

Company:		Date:	9/19/2025
Engineer:	Detlev Doring	Page:	4/5
Project:	1077 Fell Street		
Address:	216 Cleveland Ct., Mill Valley CA 94941		
Phone:	415 847-4841		
E-mail:	det@dpdoringse.com		

4. Steel Strength of Anchor in Tension (Sec. 17.6.1)

N_{sa} (lb)	ϕ	ϕN_{sa} (lb)
26795	0.75	20096

5. Concrete Breakout Strength of Anchor in Tension (Sec. 17.6.2)

$N_b = k_c \lambda_a \sqrt{f'_c} h_{ef}^{1.5}$ (Eq. 17.6.2.2.1)

k_c	λ_a	f'_c (psi)	h_{ef} (in)	N_b (lb)
24.0	1.00	2500	9.000	32400

$0.75\phi N_{cb} = 0.75\phi \, (A_{Nc} / A_{Nco}) \Psi_{ed,N} \Psi_{c,N} \Psi_{cp,N} N_b$ (Sec. 17.5.1.2 & Eq. 17.6.2.1a)

A_{Nc} (in^2)	A_{Nco} (in^2	$c_{a,min}$ (in)	$\Psi_{ed,N}$	$\Psi_{c,N}$	$\Psi_{cp,N}$	N_b (lb)	ϕ	$0.75\phi N_{cb}$ (lb)
866.57	729.00	15.00	1.000	1.00	1.000	32400	0.70	20220

6. Pullout Strength of Anchor in Tension (Sec. 17.6.3)

$0.75\phi N_{pn} = 0.75\phi \Psi_{c,P} N_p = 0.75\phi \Psi_{c,P} 8 A_{brg} f'_c$ (Sec. 17.5.1.2, Eq. 17.6.3.1 & 17.6.3.2.2a)

$\Psi_{c,P}$	A_{brg} (in^2)	f'_c (psi)	ϕ	$0.75\phi N_{pn}$ (lb)
1.0	4.07	2500	0.70	42683

Fn 19

SIMPSON Strong-Tie® Anchor Designer™ for Concrete Software
Version 3.3.2404.1

Company:		Date:	9/19/2025
Engineer:	Detlev Doring	Page:	5/5
Project:	1077 Fell Street		
Address:	216 Cleveland Ct., Mill Valley CA 94941		
Phone:	415 847-4841		
E-mail:	det@dpdoringse.com		

11. Results

Interaction of Tensile and Shear Forces (Sec. 17.8)

Tension	Factored Load, N_{ua} (lb)	Design Strength, ϕN_n (lb)	Ratio	Status
Steel	**17267**	**20096**	**0.86**	**Pass (Governs)**
Concrete breakout	17267	20220	0.85	Pass
Pullout	17267	42683	0.40	Pass

PAB7 (7/8"Ø) with hef = 9.000 inch meets the selected design criteria.

12. Warnings

- Per designer input, the tensile component of the strength-level earthquake force applied to anchors does not exceed 20 percent of the total factored anchor tensile force associated with the same load combination. Therefore the ductility requirements of ACI 318 17.10.5.2 for tension need not be satisfied – designer to verify.

- Per designer input, the shear component of the strength-level earthquake force applied to anchors does not exceed 20 percent of the total factored anchor shear force associated with the same load combination. Therefore the ductility requirements of ACI 318 17.10.6.2 for shear need not be satisfied – designer to verify.

- Designer must exercise own judgement to determine if this design is suitable.

Fn 20

18D.25 1077 Fell St. Check LFRS (Lateral Force Resisting System)

Voluntary seismic upgrade

CEBC 319.12 Definition -

Voluntary seismic improvements are are allowed provided 3. & 5. are met.

CEBC 503 - Alterations

Alterations are allowed if it does not result in an irregularity per ASCE7 Reduced seismic forces may be used.

CEBC 503.13 - Voluntary lateral force-resisting system alterations

Only OK if intended exclusively to improve the LFRS and need to meet 2. and 4.

The bldg. was sfengthened along Lines B, C, D & E, but not A which is in violation of Sections 319.12 (5.) & 503.4 & 503.13.

DD

L1

CEBC Section 318 - Definitions

319.12 Voluntary modifications to the lateral-force resisting system. Where modifications of existing structural components and additions of new structural components are initiated for the purpose of improving the lateral-force resisting strength or stiffness of an existing structure and they are not required by other sections of this code, then they are permitted to be designed to meet an approved seismic performance criteria provided that an engineering analysis is submitted that follows:

1. The capacity of existing structural components required to resist forces is not reduced, unless it can be demonstrated that reduced capacity meets the requirements of Section 319.8.

2. The lateral loading to or strength requirement of existing structural components is not increased beyond their capacity.

3. New structural components are detailed and connected to the existing structural components as required by the California Building Code.

4. New or relocated nonstructural components are detailed and connected to existing or new structural components as required by the California Building Code.

5. A dangerous condition is not created.

CEBC Section 503 – Alterations

[BS] 503.4 Existing structural elements carrying lateral load. Except as permitted by Section 503.13, where the alteration increases design lateral loads, results in a prohibited structural irregularity as defined in ASCE 7, or decreases the capacity of any existing lateral load-carrying structural element, the structure of the altered building or structure shall meet the requirements of Sections 1609 and 1613 of the California Building Code. Reduced seismic forces shall be permitted.

Exceptions: 1. Any existing lateral load-carrying structural element whose demand-capacity ratio with the alteration considered is not more than 10 percent greater than its demand-capacity ratio with the alteration ignored shall be permitted to remain unaltered. For purposes of calculating demand-capacity ratios, the demand shall consider applicable load combinations with design lateral loads or forces in accordance with Sections 1609 and 1613 of the California Building Code. Reduced seismic forces shall be permitted. For purposes of this exception, comparisons of demand-capacity ratios and calculation of design lateral loads, forces and capacities shall account for the cumulative effects of additions and alterations since original construction.

2. Buildings in which the increase in the demand-capacity ratio is due entirely to the addition of roof-top-supported mechanical equipment individually having an operating weight less than 400 pounds (181.4 kg) and where the total additional weight of all

rooftop equipment placed after initial construction of the building is less than 10 percent of the roof dead load. For purposes of this exception, "roof" shall mean the roof level above a particular story.

[BS] 503.13 Voluntary lateral force-resisting system alterations. Structural alterations that are intended exclusively to improve the lateral force-resisting system and are not required by other sections of this code shall not be required to meet the requirements of Section 1609 or 1613 of the California Building Code, provided that all of the following apply:

1. The capacity of existing structural systems to resist forces is not reduced.

2. New structural elements are detailed and connected to existing or new structural elements as required by the California Building Code for new construction.

3. New or relocated nonstructural elements are detailed and connected to existing or new structural elements as required by the California Building Code for new construction.

4, The alterations do not create a structural irregularity as defined in ASCE 7 or make an existing structural irregularity more severe.

L3

Irregularity

ASCE 7 Table 12.3-2 Item 4

In-plane discontinuity in vertical LFR element irregularity exists @ Line A

Structural calculations March 12, 2024 & May 27, 2025 rely on resistance along these lines.

Field investigation shows that the Conventional X-braces were cut to install Garage Doors some time in the past.

CBC Section 2308.2.1 does not allow this section to even be used in Zone D & limits bldgs. to one story.

However, assuming this bldg. is grand fathered in Table 2308.6.1 indicates let-in-braces LIB's are not permitted

DD

LF

Irregularity cont

in Zone D. Therefore stiffness at Line A is zero.
According to ASCE Section 12.3.3.3 forces from above need to be shown to be transfered to the ground. No calculations exist.

SW Line B Calcs pg. 13 May 27, 2025

$V_{(B)} = 4398^{\#}$ plus $V_{(A)} = 5810^{\#}$

$V_T = 10208^{\#}$

Reduced forces $V_{T_{req}} = 0.75(10208) = 7656^{\#}$

SW provided on S2 ⚠2 5/27/2025 8'-0" Type D

Type B $v_{all} = 510^{\#}(8') = 4080^{\#} < 7656^{\#}$ No Good

(Shear wall schedule S2 calls for 2x or 1 3/4 LVL blocking. Min 3x req'd for < 4" p.e.n.) No good.

DD

Irregularity cont.

Anchorage $T_{req} = \frac{7656^{\#}(8')}{8-.5'_{\text{moment arm}}} - 0.42(2048^{\#})$ pg. 13?

$= 7306^{\#}$

Calc. pg. 13 calls for HDU5 $T_{all} = 5695^{\#}$

HDU5 is no good

Anchorage to ftg also no good

Horizontal diaphragm shear transfer

$v_{req} = \frac{7656}{25} = 306\ ^{\#}/_{'}$

SFEBC Table 5C-D Floor has straight sheathing w/ wood floor $v_{all} = 500$ plf

Diaphragm is OK

Connection top of wall

A35 or LTP4 @ 7" ctr. Sh. S1.1B

$v_{all} = 650\ ^{\#}/_{A35}$ governs $\frac{8\times12}{7} = 14$

$v_T = 14(650) = 9100^{\#} > 7656^{\#}$ OK

DD

L6

18D.25 1077 Fell street Check Perf. SW

Perforated SW calculation

$L_1 = 4.19'$,
$L_2 = 3.85'$,
$L_{01} = 3.5'$

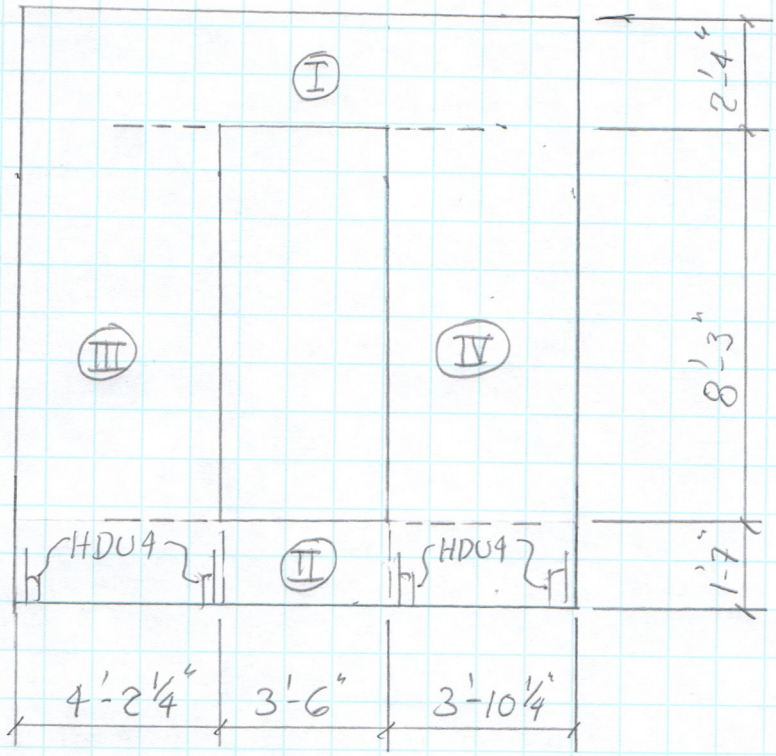
$h_a = 2.03'$,
$h_o = 8.25'$,
$h_b = 1.58'$

$h_{wall} = 12.17'$

$L_{wall} = 11.54'$

Field measured

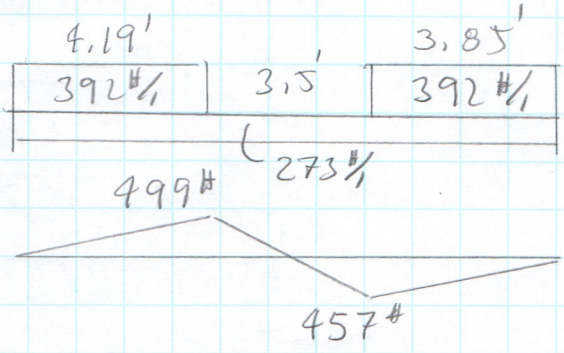
(Do not match calc's pg. 15 May 27, 2025)



$v_{I \& II} = \frac{3145}{11.54} = 273\ \#/'$

$v_{III \& IV} = \frac{3145}{4.19+3.85} = 392\ \#/'$

Type C



Straps OK

Overturning Piers $T = C = \frac{v(\ell)(8.25)}{(\ell)} = 392(8.25) = 3234\#$

DD

P1

18D.25 1077 Fell Street Check Perf. SW

Perf. SW calc cont

Transfer shear above & below opening

$$v = \frac{3234}{2.33+1.58} = 827\ \#/_{1}$$ No Good

∴ Provide HDU4 @ edge of door

(Not on drawings)

Overall wall OT

$$T \cdot C = \frac{3195(12.17)}{11.54-.5} - 0.42\left(10\ \#/_{ft} \times 12.17 \times \frac{11.54}{2}\right) = 3172\ \#$$

∴ Provide HDU4 each end of wall

DD

P2

Wood Shear Wall

Project File: 1077 Fell Street - Check.ec6

LIC# : KW-06016264, Build:20.25.09.04 DETLEV P. DORING, SE INC (c) ENERCALC, LLC 1982-2025

DESCRIPTION: Perforated SW

Code References

Governing Code : IBC 2024
Referenced Design Standard(s) : SDPWS 2021 , NDS 2024
Load Combinations Used : ASCE 7-16 (1)

General Information

Total Wall Length	11.540 ft
Number of Stories	1
Story #1 Height	12.170 ft

Framing & Chord Material :

Wood Species :	Douglas Fir-Larch		
Wood Grade :	No.2		
Fc - Prll =	1350 psi	Ft - Tension	575 psi
Fc - Perp =	625 psi	E	1600 ksi
Specific Gravity =	.5002		
SDC : Seismic Design Category :	D		

Sheathing

Main Sheathing

SDPWS 2021 Construction Table : 4.3A
Wood Structural Panels, Struct I, 15/32" Thk, 1-1/2" Min Pen, 10d

Sheathing is Blocked

Nominal Shear Capacities (plf) :

6" Spac.	950	3" Spac.	1860
4" Spac.	1430	2" Spac.	2435

Chord Data

Chord Member Size for each level :

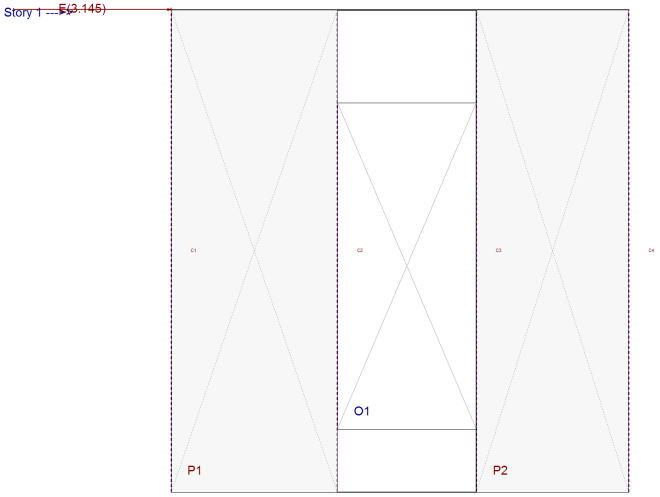
See Chord Summary Tables for number of Chords required at each panel end.

Level 1 Chord Size : 2x4 Chord Cf: Comp: 1.0 Tens: 1.0 Max. Allow Stress Ratio : 1.0 : 1

Chord Area = 5.250 in^2

All chords treated as unbraced out-of-plane of wall for story

Opening ID	Dist to Left Edge	Opening Width	Dist to Bottom	Opening Height
O1	4.190	3.50	1.580	8.250 ft
				ft
				ft
				ft
				ft
				ft
				ft
				ft
				ft
				ft
				ft



Wood Shear Wall

Project File: 1077 Fell Street - Check.ec6

LIC# : KW-06016264, Build:20.25.09.04 DETLEV P. DORING, SE INC (c) ENERCALC, LLC 1982-2025

DESCRIPTION: Perforated SW

Applied Concentrated Lateral Loads

Load "Y" Location (ft)	Load Magnitude (kips) Dead	Roof Live	Live	Snow	Wind	Seismic
12.170	0.0	0.0	0.0	0.0	0.0	3.145

Shear Panel Summary

Panel ID	Level #	Max Shear (kips)	Load Comb	# Sides Used	Actual (plf)	Shear Summary & Attachment Allow	Status	Attachment	Height/Width Ratio Actual	Allow	Notes
P1	1	1.208	+1.176D+0.70E	1	288.4	771.3	OK	Use 2" at panel edges, 12" in field	2.90	3.50	Side h/b>2, Vs Adj
P2	1	1.110	+1.176D+0.70E	1	288.4	743.4	OK	Use 2" at panel edges, 12" in field	3.16	3.50	Side h/b>2, Vs Adj

Chord Summary

Chord ID	Level #	Dist from Left (ft)	CHORD DESIGN SUMMARY # Req"d @ Location	Member Size	Stress Ratio	Governs	Status
C1	1	0.00	**3**	**2x4**	**0.90**	**Comp**	**OK**

Max Compression in chord : 3.70 k Load Comb : +1.176D-0.70E Max fc = 235 psi Allow F'c = 261 psi
Max Tension in chord : -3.51 k Load Comb : +1.176D+0.70E Max ft = 223 psi Allow F't = 575 psi
Hold Down force at anchorage : -3.40 k Load Comb : +0.4236D+0.70E
User-specified anchorage device : _____

Chord ID	Level #	Dist from Left (ft)	# Req"d @ Location	Member Size	Stress Ratio	Governs	Status
C2	1	4.19	**3**	**2x4**	**0.90**	**Comp**	**OK**

Max Compression in chord : 3.70 k Load Comb : +1.176D+0.70E Max fc = 235 psi Allow F'c = 261 psi
Max Tension in chord : -3.51 k Load Comb : +1.176D-0.70E Max ft = 223 psi Allow F't = 575 psi
Hold Down force at anchorage : -3.40 k Load Comb : +0.4236D-0.70E
User-specified anchorage device : _____

Chord ID	Level #	Dist from Left (ft)	# Req"d @ Location	Member Size	Stress Ratio	Governs	Status
C3	1	7.69	**3**	**2x4**	**0.91**	**Comp**	**OK**

Max Compression in chord : 3.76 k Load Comb : +1.176D-0.70E Max fc = 239 psi Allow F'c = 261 psi
Max Tension in chord : -3.51 k Load Comb : +1.176D+0.70E Max ft = 223 psi Allow F't = 575 psi
Hold Down force at anchorage : -3.38 k Load Comb : +0.4236D+0.70E
User-specified anchorage device : _____

Chord ID	Level #	Dist from Left (ft)	# Req"d @ Location	Member Size	Stress Ratio	Governs	Status
C4	1	11.54	**3**	**2x4**	**0.91**	**Comp**	**OK**

Max Compression in chord : 3.76 k Load Comb : +1.176D+0.70E Max fc = 239 psi Allow F'c = 261 psi
Max Tension in chord : -3.51 k Load Comb : +1.176D-0.70E Max ft = 223 psi Allow F't = 575 psi
Hold Down force at anchorage : -3.38 k Load Comb : +0.4236D-0.70E
User-specified anchorage device : _____

Chord Naming Informatio C : Item is a Chord L : Followed by level numbe # : Followed by chord number from left to r
WL : Indicates Chord is on left edge of wall WR : Indicates Chord is on right edge of wall

EXHIBIT 8

Gmail soumya sastry <soumya.sastry@gmail.com>

1077 Fell - south wall/ door.

Darquison Martins <darquison@enertiadesigns.net> Mon, May 5, 2025 at 10:08 AM
To: Steven Huang <thestevenhuang@gmail.com>
Cc: mark@quakeprep.com, soumya sastry <soumya.sastry@gmail.com>, Doug Burrows <Doug@veloxsf.com>, "Eng. Jefferson Chen" <jefferson@enertiadesigns.net>, haraprasad sastry <haraprasadsastry@yahoo.com>, Ariel Lorenzale <ariel@veloxsf.com>, "lorenzaleariel@gmail.com" <lorenzaleariel@gmail.com>

Hi Steven,
Thank you!
Yes, you can start a new email thread. Just to clarify, our scope at this point is limited to reviewing the updated condition at the rear wall. Due to the new rough opening, some reinforcement will be required, including adjustments to holdowns and the nailing pattern for the shear wall.

Let me know if you need anything else.

My best,
Darquison
415-866-6418

On Mon, May 5, 2025 at 8:08 AM Steven Huang <thestevenhuang@gmail.com> wrote:
> Hi Mark, I hope you had a nice weekend and thanks for checking in. We're not ready for nailing and inspection quite yet. Doug's team has completed electrical but neither electrical nor insulation inspections have been scheduled.
>
> Additionally, we made a correction on the weight of the building (to 116 kips) because of the roof type and building height. Since their existing SOW is complete, I am working with Doug + the Enertia team on a new SOW to adjust the framing questions, as you suggested . (Doug/Darquison/Jefferson - can I start a separate thread with you to see if this can be completed this week?)
>
> Mark - thank you for your patience. We'd all like this to move along expediently so Soumya and I will continue to keep everybody abreast of updates.
>
> Steven
>
> On Sun, May 4, 2025 at 10:58 AM Mark B <barbcon1@gmail.com> wrote:
> > Hopefully we have gotten past the framing dilemma and can proceed with the completion of the structural work.
> >
> > I will send a team in upon your approval to complete the shear wall and obtain the shear wall inspection per our contract terms.
> >
> > I am willing to install the stairs at no extra cost if we can agree to a drama free ending to our work.
> >
> > On Tue, Apr 29, 2025 at 5:34 PM Steven Huang <thestevenhuang@gmail.com> wrote:
> > > Thank you for your clear analysis, Darquison - much appreciated! I saw on a separate thread that our existing scope is wrapped up so I wanted to take a moment to thank you for your dedication to this project. I have felt so much support from the Enertia team through the ups and downs of the project and I am so grateful for the care you have put into my home. Soumya and I are putting our heads together for next steps.
> > >
> > > Steven
> > >
> > > On Tue, Apr 29, 2025 at 9:11 AM soumya sastry <soumya.sastry@gmail.com> wrote:
> > > > Thank you Darquison.
> > > >
> > > > When we meet, can we discuss 2 options:
> > > > 1. A smaller rough opening to 6’8” That is the width of a standard door.
> > > > 2. What would be needed to maintain the rough opening of this size
> > > >
> > > > Given that the door Rough opening was not on the plan, Both are still options.
> > > >
> > > > Thanks!!!

On Tue, Apr 29, 2025 at 9:06 AM Darquison Martins <darquison@enertiadesigns.net> wrote:

Hi Soumya,
Following up on your questions, please find my responses below:

- **Building weight and height:**
  With the gravel roof adjustment and corrected wall height, the total building weight has been updated to a conservative value of approximately **116 kips**.
- **Roof Material:**
  Confirmed — the roof has gravel ballast, not shingles. This adjustment has already been incorporated into the dead load calculations.
- **Additional Framing Under Roof:**
  The additional roof framing weight has been included in the calculations under the ceiling and miscellaneous load categories.
- **Building Height Correction:**
  The corrected building levels — first floor (8 ft), interstitial space (2–3 ft), second floor (11 ft), and attic space (2–3 ft) — have been reflected in the updated structural calculations.
- **Shear Wall at Line "A":**
  It was assumed in the original analysis for simplicity. However, since no new openings or structural changes were made at that wall, its absence does not affect the lateral load path critically. Adjustments have been made accordingly.
- **Wall "D" and Perforated Shear Wall Calculations:**
  The original calculation provided for Wall "D" followed the FTAO (Force Transfer Around Openings) method.
  I can also prepare and provide a perforated shear wall calculation for your records, if preferred.
- **Rear Wall Door Dimensions (Steven/Soumya's dimensions):**
  Based on the updated dimensions, the nailing pattern remains the same for Wall "D." and continuous CMST12 straps above and below the opening. However, the holdown size will require an upgrade, both at Wall "D" and at Wall along Grid Line B.
  If the holdown is already installed, we can add another holdown on the opposite side of the post using drill and epoxy anchoring, to meet the uplift requirements.

My best,
Darquison

On Thu, Apr 24, 2025 at 12:27 PM soumya sastry <soumya.sastry@gmail.com> wrote:

Hi all. I'm following up on a couple things To keep a record in the email in addition to Text message.

1. There was no 3 x 8 door included in any plans. Nor was there any rough opening of 42 x 100".

2. The picture that mark took on page A-1.01 Showed the dimension of the original window and the interior room with. It did not show the dimensions of the door.

3. Neither Doug nor Ariel followed up with Inertia about the door. The seismic and structural calculations used the window.

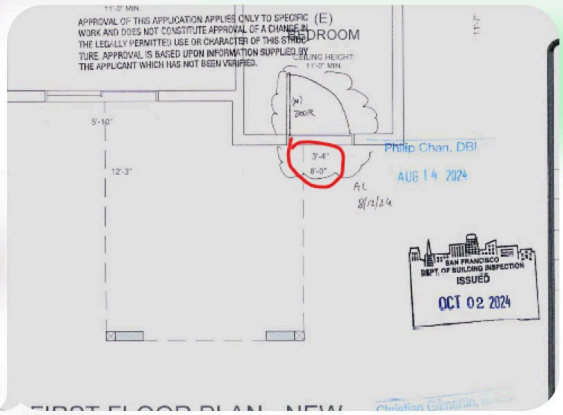
4. I don't see continuous straps above and below the opening on the wall. Can someone point that out to me? Doug, is that something your team would have removed for the electrical and insulation?

12:07

M
DV
3 People

Mon, Mar 17 at 12:19 PM

Mark

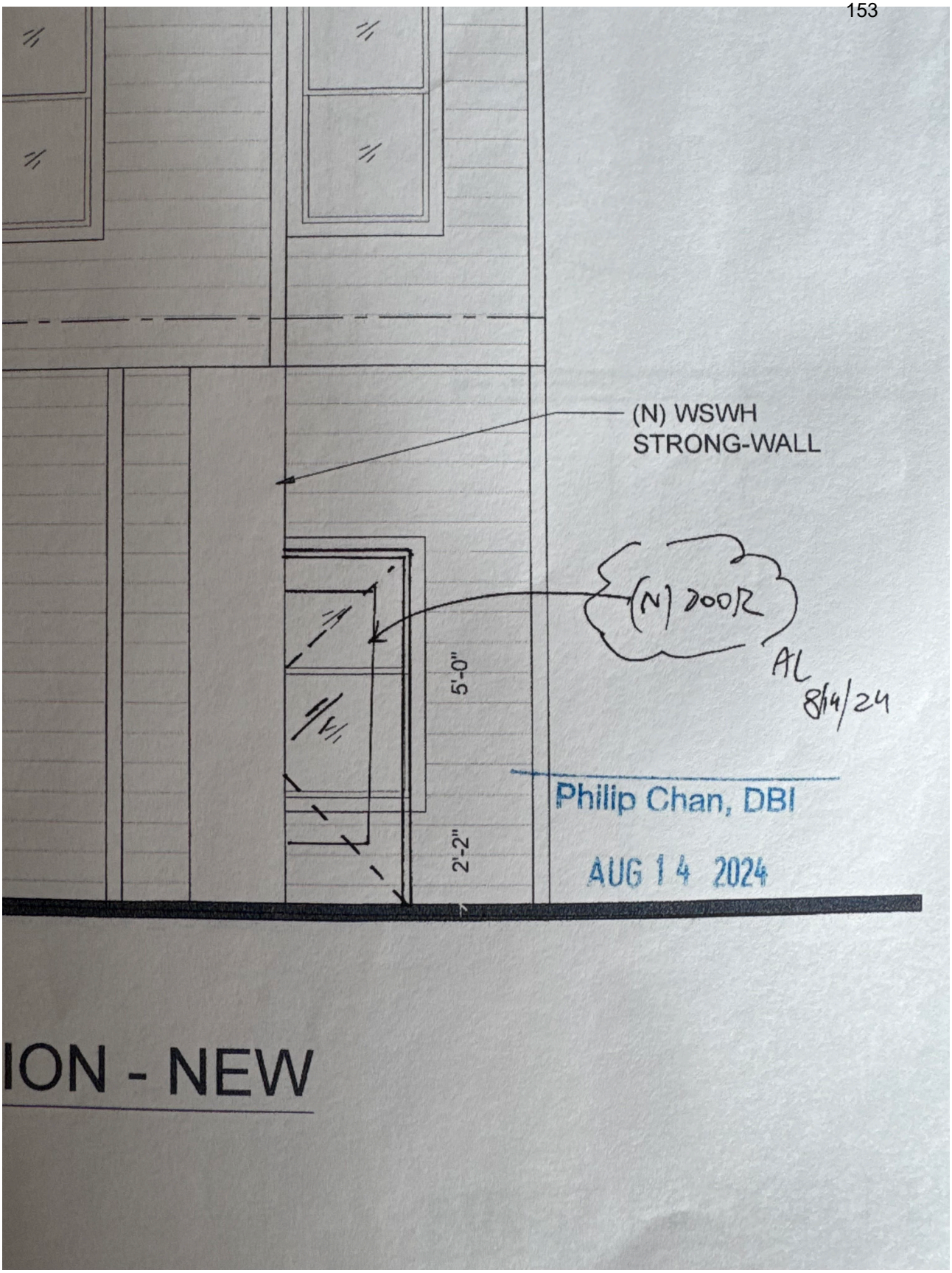


M

Today 11:42 AM

This call out did not mean a 3-4 by 8 door. It meant that the old window was 3′4″ and the width of the room was 8 feet.

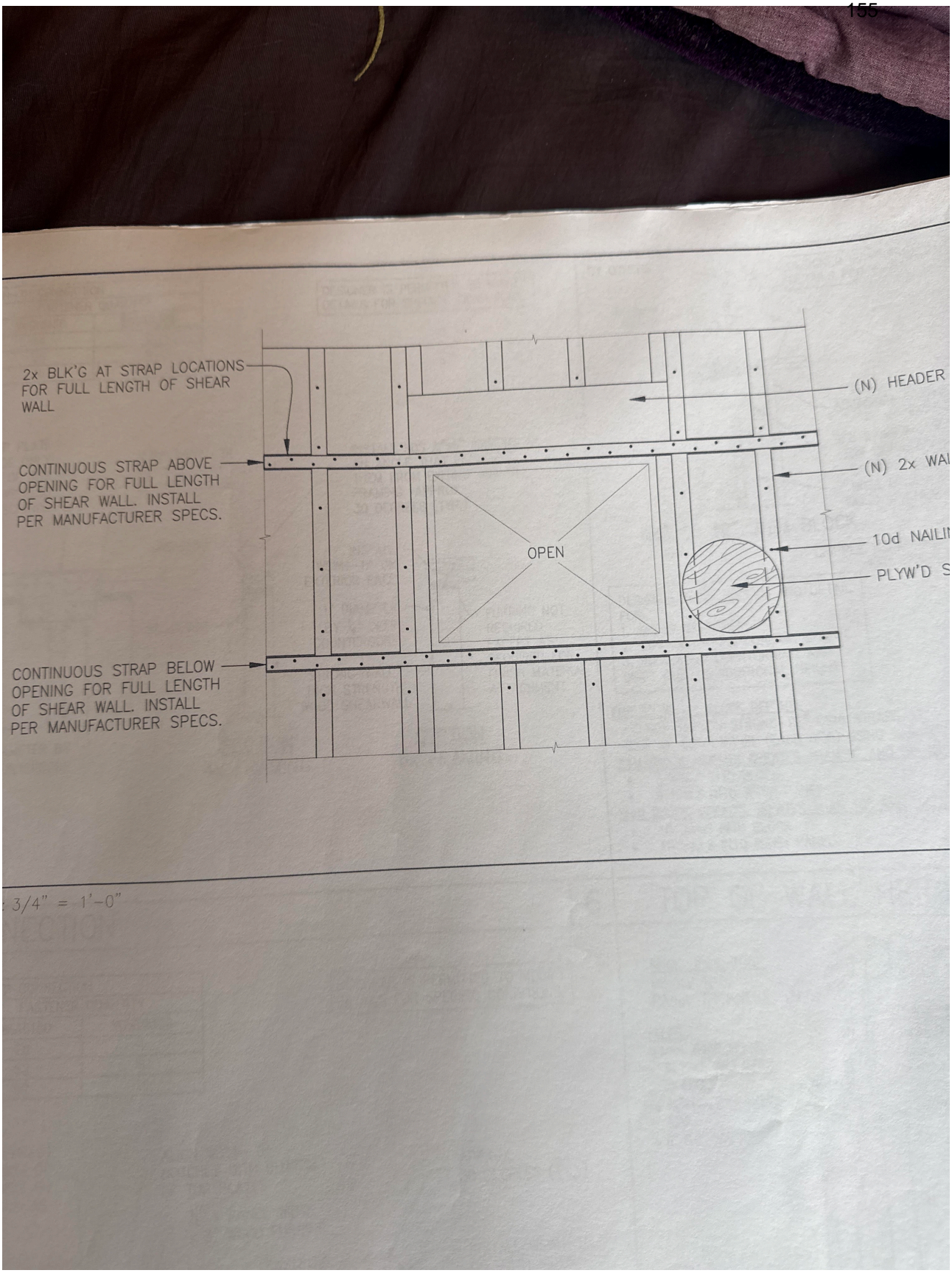
Reply


(N) WSWH
STRONG-WALL
(N) DOOR
AL
8/14/24
5'-0"
2'-2"
Philip Chan, DBI
AUG 14 2024

ION - NEW




SIMPSON
Strong-Tie



On Thu, Apr 24, 2025 at 11:58 AM soumya sastry <soumya.sastry@gmail.com> wrote:

> Hi all, The architect did not include a 3 x 8 door in the plans. Certainly not 100" x 42" rough opening. I think we need a meeting where everyone is available. We will need a permit revision, Mark might need to do some of his work, and I didn't approve a 3 x 8 door.
>
> On Wed, Apr 23, 2025 at 9:32 PM soumya sastry <soumya.sastry@gmail.com> wrote:

Hi all- the rough opening is 42 inches by 100 inches, per the photos I sent around a month ago. That's 23% of the wall area and 78% of its height. Since you need to re-do the calculations, I really appreciate if you could correct the building info.

On Wed, Apr 23, 2025 at 6:44 PM soumya sastry <soumya.sastry@gmail.com> wrote:

> Hi all. I had asked Steven to communicate a couple things, so I have to follow up here. There are only 28.5 inches from the top of the door to the top of the shear wall. There's only 19 inches below. I would like to confirm that having only such a short margin on either side, meets the intent of this shear wall. My, albeit casual, research indicates that there needs to be 45 inches on top and 24 inches below. I'd like to understand any Delta. I understand it's possible to have a larger space, but you need to have other reinforcement, like a strong wall, for example.
>
> If it's possible, since you have to re-do the calculations anyway, we would really appreciate if you could take a quick look at the peer review to see if anything needs to be addressed. Also, specifically, we would like you to address:
>
> 1. The weight and height of the building:
> 2. The roof is gravel, not "shingle"
> 3. There is additional framing under the roof framing.
> 4. The height of the building and levels are not correct in the document. The building is probably 25 feet high. First floor- 8 ft, interstitial space: 2-3 ft, second floor; 11 feet, attic: 2-3 feet.
> 5. The calculations assumed a wall at "A". There is no shear wall there because of its constructability.
> 6. Wall "D" did not have the perforated shear wall calculation. (I interpret that as being the door, though I could be wrong, of course.)
>
> This would really give me some comfort also. I didn't summarize all of the other details, but these are the ones that jumped out and as important. there were some others like confirming "connectors" and verifying that a wall could take a certain weight.
>
> Doug and Steven- other than the electrical work tomorrow, I would like the matters resolved before any further work happens.

On Wed, Apr 23, 2025 at 4:35 PM Steven Huang <thestevenhuang@gmail.com> wrote:

> Hi Darquison + team,
>
> Thank you so much for your continued support and diligence on the project! I'm super grateful. I stopped by to take some measurements today:
>
> - The shear wall height from the floor is 128". Soumya also noticed that there's only 19 inches from the footing to the rough opening of the door.
> - If the width of the wall matters, it's 142" wide with the door opening almost in the center (off by a few inches)
> - Do you need to know anything else about the building for your calculations? Like the overall height of the building or anything like that? Please let us know what you need!
>
> Ultimately, I'm trying to maximize the size of the door for more light, so I was hoping for a door 96 inches high. But if it's not up to code, then c'est la vie; it's just a door.
>
> Thanks so much!
>
> Steven
>
> On Tue, Apr 22, 2025 at 12:19 PM Darquison Martins <darquison@enertiadesigns.net> wrote:
>
> > Hi Steven,
> > Thanks for your message.
> > Regarding the door at the back of the building (3' x 8'), it may compromise the structural intent of the shear wall Could you please confirm the floor-to-ceiling height ? I'll need that information to recalculate the FTAO (Force Transfer Around Openings) analysis and verify compliance.
> >
> > As for the peer review comments from the third-party engineer, please note that our current scope of work only includes responding to comments issued by the City's plan checker as part of the permit review.
> > Any additional review or feedback outside of that process—such as this peer review—would fall outside our original agreement and would need to be handled as a separate service.
> >
> > Look forward to hearing from you.
> >
> > Best,
> > Darquison
> > 415-866-6418

On Mon, Apr 21, 2025 at 2:50 PM Steven Huang <thestevenhuang@gmail.com> wrote:

Hi Darquison, Soumya would like written confirmation that the size of the door in the back of the building (3x8 feet) does not impact the structural intent of the shear wall. She's also curious if anything in the peer review was meaningful to note. Can you let us know? We're looking to order our doors soon.

Thank you!

Steven

On Mon, Mar 17, 2025 at 8:30 PM Doug Burrows <doug@veloxsf.com> wrote:

Let's connect tomorrow, I'm not sure we're talking about the same door, If it's the rear window that was required by sf-fire to be a door? If so, it's required to be the size shown in the plans.

Taller is better for potential fire ladder access,

Thank you,

On Mon, Mar 17, 2025 at 11:33 AM soumya sastry <soumya.sastry@gmail.com> wrote:

Thank you for your prompt reply Kathleen.
Doug, please respond to this chain. 8 feet is very tall for a door and does not make sense to me. I don't sign off on that exterior change.

On Mon, Mar 17, 2025 at 11:27 AM Kathleen Gevertz <kathleen@kagdesigns.com> wrote:

Hi, unfortunately, this is not a question for me. The size is based on the site conditions and how it's drawn on the plans. I'm not involved in the construction aspect of the project just the aesthetics. This would be more of a question for Doug to weigh in on. please let me know if you have any other questions. Thank you.

Cheers,

Kathleen A Gevertz
KAG Designs and Construction LLC
Lic# 1103702
415 271 5243
Please reply to all when responding to emails. My phone is on M-F 7:30-6:00 PST



On Mar 17, 2025, at 9:03 AM, soumya sastry <soumya.sastry@gmail.com> wrote:

Hi all,

I'm adding Kathleen here because Steven said she would know the answer to the question on the door.

Can I get a schedule for when all of the framing will be done and when the framing inspection will be?

Thanks, soumya

On Thu, Mar 13, 2025 at 9:45 PM soumya sastry <soumya.sastry@gmail.com> wrote:

Mark, when we met, I thought there was a concern that 99 inches would not leave 45 inches above And that there may not have been 20 inches below. Is that Different now? Would It be better to wait for confirmation before creating the rough opening?

On Thu, Mar 13, 2025 at 9:42 PM Mark B <barbcon1@gmail.com> wrote:

Hello All,

According to the text from Doug the door size is 3 x 8.

We will create a 3'2" X 8'3" rough opening unless we hear otherwise. This work will be completed by tomorrow afternoon.

Mark

Seismic Retrofitters Inc.
415-822-4200
SeismicRetrofitters.com

On Thu, Mar 13, 2025, 5:14 PM soumya sastry <soumya.sastry@gmail.com> wrote:
> Hello, I'm still looking for a response to this question. Thank you.
>
> On Wed, Mar 12, 2025 at 8:45 AM soumya sastry <soumya.sastry@gmail.com> wrote:
> > We need the rough opening size.
> >
> > On Wed, Mar 12, 2025 at 8:44 AM soumya sastry <soumya.sastry@gmail.com> wrote:
> > > I've ccd mark because he cannot find the door dimensions and Think that there may not be 20 inches below and 45 inches above. Can you send the door dimensions Via this email thread, please?
> > >
> > > On Wed, Mar 12, 2025 at 7:51 AM Darquison Martins <darquison@enertiadesigns.net> wrote:
> > > > Hi Doug,
> > > > Based on the calculations, the new **dimensions** for the enlarged window do not affect the current **shear wall** and **holdown** design at gridline D.
> > > >
> > > > Best,
> > > > Darquison
> > > >
> > > > On Tue, Mar 11, 2025 at 3:05 PM Doug Burrows <doug@veloxsf.com> wrote:
> > > > > Their is 45 inches above the door and 20 inches below the door for plywood sheeting,
> > > > >
> > > > > Thank you,
> > > > >
> > > > > On Thu, Mar 6, 2025 at 11:12 AM Darquison Martins <darquison@enertiadesigns.net> wrote:
> > > > > > Hi Doug,
> > > > > > Please send me the measurement from the sill plate to the bottom of the door, the door size, and the distance from the top plate to the top of the opening.
> > > > > > I'll review and confirm if any upgrades to the nailing or holdown size are needed based on calculations.
> > > > > > Regarding the beam, we cannot remove it since the wall below is not load-bearing.
> > > > > >
> > > > > > Best,
> > > > > > Darquison
> > > > > >
> > > > > > On Wed, Mar 5, 2025 at 3:52 PM Doug Burrows <doug@veloxsf.com> wrote:
> > > > > > > Plans attached
> > > > > > >
> > > > > > > 24246937 (3).zip

On Wed, Mar 5, 2025 at 3:45 PM Doug Burrows <doug@veloxsf.com> wrote:

> The structural work is underway, however during the permit approval process we were forced to replace the window in the back with the door. Fire code. However the door is elevated like a large window. It does not touch the bottom plate; there will be shear wall underneath and above. The contractor was wondering if we needed to install a hold down side or if any calculations to be performed?
>
> I also wanted to confirm we can remove the beam as it's not shown on the plans, Photo attached
>
> Please see my photos below and the attached approved plans,





Thank you,
--

Douglas J Burrows
Velox Design & Construction
442 Haight St San Francisco,
CA 94117
CSLB lic #1059825
Ph: (415) 416-0177
Web: www.veloxsf.com/projects

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1648 Sweetwood Dr., Daly city

363 Scott St San Francisco

Thank you,

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EXHIBIT 9

Summary Outline of Response Brief

0. Introductory Statement for Appeal 25-029, Sastry vs. DBI
1. Allegation 1: “Serious structural and life safety concerns remain unaddressed.”
    a. Response: Inspector David Lara Azaira completed a Site Verification inspection on August 22, 2025. No Notice of Violation was issued and no structural or life safety concerns were found. DBI found the work compliant with existing permits and building code.
2. Allegation 2.1: “Representations by Applicant, Velox, and Enertia Designs that the work constituted a full seismic/soft story upgrade.” Allegation 2.2: “The Permit should not have been issued since it is not compliant with applicable provisions of the San Francisco Building Code.” Allegation 2.3: The permit “‘arguably’ meets the definition of a substantial structural alteration pursuant to SFEBC Sections 403.13.2.”
    a. Response to 2.1: The Appellant was provided physical and digital plans always labeled “Voluntary Strengthening.” She interviewed 8 contractors, chose the contractor, and signed the contract; fully aware that this scope has always been voluntary strengthening.
    b. Response to 2.2: Permits have passed through full permitting review and have been structurally engineered to meet safety and code compliance. The appellant holds an incorrect assertion that DBI was negligent in issuing the permit and in enforcing their own building codes.
    c. Response to 2.3: The approved plans do not qualify as a substantial structural alteration. Even if a threshold was met, the plans would be exempted per Building Code 503.11 Exception 1 that the approved plans do not qualify as a “substantial

structural alteration." The Appellant does not provide real evidence and cited unapplicable, outdated building codes.

3. Allegation 3.1: "Applicant and his contractors have failed to adequately address any of Appellant's concerns." Allegation 3.2: "Seismic Retrofitters work introduced issues potentially conflicting with the previous engineering design and dry rot solutions."
    a. Response to 3.1: A stamped letter from the licensed structural engineer of record was provided, stating approved plans will not impair the structural integrity or mechanical systems of the property. Appellant's concerns come from a misunderstanding of building codes, an unlicensed contractor, engineers who had not visited the property, and AI-generated inspection reports. Nevertheless, each member of the construction team has adequately responded. All concerns in the Appellant's brief are addressed in this response brief.
    b. Response to 3.2 from Seismic Retrofitters**:** "What was cut was cladding covering the structural element that offers zero structural integrity. Your claims are incorrect, derogatory and completely without merit. The EOR or the building inspector can request structure corrections directly with me if needed."
4. Allegation 4: "Applicant filed for the Permit against Appellant's objections."
    a. Response: Appellant's objections were an unreasonable 50-point list of demands labeled "Needs to be resolved before any work starts/Plan approval." These are procedural allegations beyond DBI's scope of review.
5. Conclusion: Request of Board to uphold the permit with no new conditions.

Introductory Statement

In Appeal No. 25-029, Sastry vs. DBI, the Appellant alleges that DBI, Enertia Designs, Seismic Retrofitters and Velox Construction have each acted negligently to create unsafe structural conditions. She also alleges that procedural errors were committed by KAG Designs and Construction in their capacity as owner's representation.

This united construction team of 1077 Fell Street (Enertia Designs, Seismic Retrofitters, Velox Construction, KAG Designs & Construction) has addressed these defamatory allegations to protect their reputation; each has a decades-long career working in San Francisco. They have designed, submitted, and completed over a thousand similar projects (e.g. remodels, voluntary strengthening) with San Francisco's DBI and want only to complete work that has been fully approved and permitted. They have adhered to all laws, complied with all applicable codes, and followed DBI's normal processes. As a result, all inspections confirm that no serious structural concerns exist.

The Appellant erroneously believes that DBI was negligent in approving the plans and that inspectors have been negligent in enforcing them. Her fears are driven by an unlicensed contractor (Pedro Alfonso Paez Jimenez), an engineer who has reviewed prior plans and has inexplicably not visited the Property (Chiaweng Yeh), and through AI-generated inspections. Ironically, it is the Appellant that has instructed her own unlicensed contractor to do structural work in the building, which will be subject to a civil suit in short order.

These allegations will be countered with technical evidence and process documentation during our September 3rd Board of Appeals hearing with San Francisco's firm, fair, and level-headed DBI representatives.

Allegation 1: The basis for this appeal is that “serious structural and life safety concerns remain unaddressed.”

1. The Appellant has filed a complaint to the city based on these concerns. On August 22, 2025, Inspector David Lara Azaira visited the property, listened to her concerns, and completed a site inspection [Exhibit 1]. He is familiar with the property, having visited for past inspections (Simpson Strong Wall, Shear Wall, Reinforcing Steel- all passed). This confirms the work completed to date complies with existing plans and permits. No Notice of Violation has ever been issued.
2. The Appellant distrusts DBI inspectors and stated that she would not approve plans or allow work to continue until she chose her own “process for QC- the city is not sufficient” for Appellant. [2]
    a. The Appellant interrupted a city inspection on July 21, 2025; trespassing into 1077 Fell Street and portraying herself as the homeowner (she was not), to dismiss city inspector Matthew Sum.[3]
3. The Appellant has expressed distrust and contempt towards licensed professionals: 1077 Fell’s contractor, 1077 Fell’s owner’s representative, our EOR, our seismic contractor, *her own* plumber, *her own* electrician, and *her own* (unlicensed) contractor, while describing herself as an “unlicensed GC / structural truffle pig” that “will die on the hill of S1.1B if necessary.”[4]

Allegation 2.1: “Representations by Applicant, Velox, and Enertia Designs that the work constituted a full seismic/soft story upgrade.”

1. The Appellant was the primary driver of this voluntary strengthening effort; chose and interviewed 8 potential contractors [5], ultimately selected Seismic Retrofitters [6], was the

sole signatory of the contract [7], and had physical and digital copies of the plans clearly labeled *Voluntary Strengthening* [8]. The claim that she was intentionally deceived and/or plans were misrepresented are an utter fabrication by an unstable individual.

2. 1077 Fell Street is not on SF's public "Soft Stories Property List" [9]
3. Plans and calculations were approved [8, 10], correctly permitted and labeled *Voluntary Strengthening*. No additional work is being proposed beyond what has been submitted. The Board should therefore consider this scope in its proper context: a voluntary strengthening layered onto a remodel project, not a mandatory seismic upgrade.

Allegation 2.2: "The Permit should not have been issued since it is not compliant with applicable provisions of the San Francisco Building Code."

1. Per DBI policy, every building permit is fully reviewed for life safety and building code compliance; including structural plans and calculations. If any serious structural error had been noted in Enertia Design's work (i.e. a "structural irregularity", or a trigger for mandatory seismic upgrade), DBI would have withheld approval (Cf. SFDBI guidance that unpermitted or unsafe conditions are enforced through formal NOVs.)[11]
2. The following DBI representatives have seen and approved plans from their respective stations[12]: David Szeto, Janae Brown, Richard, Soenksen, Ed Masck, Jia Jian (Peter) Tan, Cheng Chan, James Lo, Elizabeth Mau, Edgar Oropeza, Philip Chan, Christian Gilmartin, Grace Imson, Roger Ly, Maggie Laush, David Jones, and Stephen Liu.
    a. The Appellant unfathomably asserts that, collectively, these 17 DBI representatives were all individually negligent in enforcing proper building codes, while Appellant, with no construction background whatsoever, is righteous in her plight.

   b. The Appellant believes that inspector David Lara Azaira acted negligently by not identifying deviations or omissions in the field, and did not enforce compliance with the permitted scope of work.
3. My team attests that they have been thoroughly engaged and truthful with the planning department. [19]

Allegation 2.3: “The permit ‘arguably’ meets the definition of a substantial structural alteration pursuant to SFEBC Sections 403.13.2. and 202.” [Appellant cites an outdated 2016 Building Code; this brief will address SFEBC Section §503.11.]

1. Enertia Designs, the engineer of record, states:
   a. “This scope involved no removal or replacement of existing bearing walls. The vertical load paths remained unchanged throughout construction. In accordance with SFEBC §503.11, voluntary strengthening does not trigger the full compliance requirements of Chapter 2. Therefore, the newly added shear walls should be reviewed strictly for their intended lateral strengthening role, without being considered a change to gravity load–bearing systems.”
   b. In response to appellant’s concern that the plans created an irregularity: “The front wall was not touched and was never in the scope of work, it is an existing condition. The remaining system is still a compliant configuration because calculations and detailing for this voluntary strengthening followed used a seismic redundancy factor (ρ) of 1.3 ensuring that the shear wall at Line B could accommodate the forces from Line A when connected by a diaphragm in the field; located 14 feet apart.
2. Tom Biggs, an independent licensed architect who has never worked with Enertia Designs, was brought on to review the project.

a. He agreed that DBI made the correct determination of voluntary strengthening, due to Exception 1 of the code: “Since this building is a wood frame building, type VB construction, two stories, two parcels, and two dwellings, it is exempt under Exception 1.”[13] The exceptions afforded by voluntary strengthening exist specifically to encourage this type of work without facing new-building standards, otherwise no would attempt them.
b. He states that the work has not weakened the structure: “From my site visit on Friday, 8/23/25, I viewed the current state of the project with rough framing at or near completion. I viewed plywood sheathed shear walls at reasonable intervals, within the work scope area. Further, I have worked on enough of these types of renovations, to know a well-conceived project, and this is one of them. The engineering documents are comprehensive, and include all measures of accommodation for lateral forces, which would exceed code minimums, and that are appropriate for the work. As a result of the work, the building is left in a much stronger structural state.”[13]

3. DBI specifically evaluated the question of voluntary strengthening vs. substantial structural alteration during permit review of this design. They approved this *Voluntary Strengthening* design, confirming compliance with applicable code provisions.

Allegation 3.1: “Applicant and his contractors have failed to adequately address any of Appellant’s concerns.”

1. The Appellant started erroneously questioning Seismic Retrofitters in January 2025 [14]. The Appellant ran the work through an AI program, and decided that said AI program should override California State licensed engineers, and took this a step further by

sending defamatory AI-generated inspection reports about Seismic Retrofitter's work to other partners [15]. In both cases, the timely, complete responses were provided.[14-15]

2. Concerns surfaced by Chiaweng Yeh's peer review [16-17] are from old calculations (March 2025) that have since been revised and are not the calculations used in this permit. They ask to verify site conditions and clarify measurements because he never visited the property and thus is not qualified to make claims about life safety. He never reached out to any member of the 1077 Fell team and tellingly made no statement in support of Appellant for this utterly baseless appeal.
3. Detlev Doring's admitted "opinion" in his letter to DBI (Page 8 Line 1 of Appellant's Brief) was generated based on Chiaweng Yeh's peer review, although Mr. Doring had not yet visited the property nor had he spoken to Mr. Yeh. He advocates for a "full lower story seismic strengthening which [he] believes is required by code." (Exhibit 22 of Appellant's Brief). As proven earlier in this brief, the Appellant team's comprehension of building code is at best, poor. Without visiting the site, his concerns are extraneous:
   a. "No calculations are provided for the anchorage of the perforated shear wall into the existing concrete." - The shear wall is anchored into a *new* concrete footing, not the existing *brick* foundation.
   b. "No calculations or details verifying the [dry rot] repair method have been provided." - The city did not require a calculation for a standard framing repair.
   c. "The foundation for the Simpson Strong-walls at Line E has not been designed for seismic forces." - This was not required by DBI because of the design of the concrete footing and that the Simpson Strong-walls only reinforce a small building extension. For good measure, the grade beam had already been calculated for overturning.

d. “Concerns as to whether this new (PSL) beam” is sufficient in “replacing two original load bearing beams.” - Provided on Page 20-21 of approved calculations. [10]

e. “Actual conditions (of Perforated Shear Wall) placed closer to 13.5 ft +/- tall.” - The Appellant presents no evidence this is true (likely because it is not); unsurprising given no measurements were taken during his 30-minute visit.

f. “Second Floor Framing Plan show[s] an additional wall being built inside the exterior wall with plywood on the inside.” - The dashed line represents the wall below, as there is no work on the 2nd floor. Walls are accurately represented on Sh.S2. [10]

g. “No calculations or details were provided to show that the existing overhang diaphragm for a two story building will work.” - It should be self-evident that Simpson Strong Walls and new footings enhanced the lateral system beyond the original construction, which only supports a small building extension.

h. “Perforated SW resting on the floor does not allow the installation of the CW straps above and below opening as called for on the plan.” - Because the shear wall is a continuous wall, the collector below the opening is accomplished through clips and nailing. This would have been reviewed by Matthew Sum if the appellant did not interrupt the inspection. [3]

i. “Drag struts tying the upper floor between Line D and E into the building are missing. Drag struts in N/S and E/W direction are missing.” - Drag struts were not included or required in this voluntary strengthening scope. CMST12 and clips/nailing on the continuous shear wall accomplishes this purpose.

4. A stamped letter from the licensed structural engineer of record was provided, stating that all work in the past and in the latest city approved plans will not impair the structural integrity or mechanical systems of the property.[18]

5. KAG Designs and Construction was hired as an owner's representative to answer the Appellant's questions and address her concerns; this is still an option for the Appellant today. The appellant chooses not to engage with KAG Designs and Construction.[19]

Allegation 3.2: "Seismic Retrofitter's work introduced issues potentially conflicting with the previous engineering design and dry rot solutions."

1. The Appellant claims the rough opening constructed by Seismic Retrofitters "by mistake," "does not appear on the stamped plans," and "remains a hazard". The opening is on city-approved plans. [8, 10] As a rough opening, it was cut 4 inches taller and wider than the door it is approved for, which the Appellant cites as one of "many inconsistencies between site conditions, the structural calculations, and the Permit." It is not uncommon for inconsequential drafting or calculation discrepancies to exist as field adjustments. DBI inspector David Lara Azaira was made aware of this discrepancy and since the safety of the structure is not impacted; no fundamental code violation exists.
2. Seismic Retrofitters has previously responded to a past allegation that "framing elements that had been repaired to address the dry rot were cut" with a statement [20]: "The 2x6 in question is cladding over the structural beam and offers zero structural integrity. Your claims are incorrect, derogatory and completely without merit. Please refrain from further contact with Seismic Retrofitters. The EOR or the building inspector can request structure corrections directly with me if needed." The appellant filed an arbitration case against Seismic Retrofitters [21] (and subsequently withdrew, as her claims against Seismic Retrofitters had no merit.)

Seismic Retrofitters wrote to Appellant that : "**Several individuals have observed behavior from you that raises concerns about your ability to engage in these matters**

constructively and responsibly. If you're experiencing difficulties, I sincerely encourage you to seek appropriate support. I strongly urge you to take a more measured and safety-focused approach. This includes allowing licensed professionals to carry out their work in accordance with approved plans, codes, and engineering best practices." [21.]

Allegation 4: Appellant acknowledges that she "received the permit revision calculations and drawings" but declares "Applicant filed for the Permit against Appellant's objections."

1. Her objections stem from an unreasonable 50-point list of demands with the label "Needs to be resolved before any work starts/Plan approval"[2]. These extend beyond DBI's scope of review, but give underlying context into the launch of this appeal. Among the demands:
    a. A process for quality control because "city inspections are not sufficient."[2]
    b. An executed CC&R Amendment [22] that creates common space in a "vertical zone extending below the bottom of the floor joists of 1075 Fell *(into 1077 Fell St)* to a depth equal to the greater of (a) sixteen (16) inches, or (b) the depth of the floor joist plus six (6) inches [2 x 10 joists]," an easement into my unit, and undetermined monetary fines."
    c. That she would be provided a key to my unit. [2]
    d. That the team paint a garage door and remove existing gas lines from her garage. [2]
    e. That she would have access to private emails between my engineer and contractor.[2]
2. Unfortunately, this appeal stems from an ongoing HOA dispute that pre-date this construction project. Ironically, Appellant continues to use her unlicensed contractor, Pedro Alfonso Paez Jimenez, for actual structural work, despite repeated warnings. [23]

Conclusion

The construction team looks forward to the hearing on September 3rd to help the Board of Appeals understand whether DBI erred in issuing Permit No. 2025-0626-9586. We hope to affirm DBI followed all required procedures, the work is code-compliant, and multiple licensed professionals confirm that conditions are safe and match permitted plans.

Our engineering team would not risk their licensure by submitting unsafe plans. San Francisco's DBI would not violate their own procedures and codes by approving an unsafe plan. Our seismic team would not risk their reputation by completing shoddy work. The appellant's claims are based on speculation, outdated or inapplicable code references, and inconsistent statements.

We apologize that the Board has to waste their valuable time based upon the unsupported and readily baseless musings of an unstable Appellant.

No extraordinary errors occurred that would justify revoking the permit. We request the board to deny this appeal and uphold the approved permit with no new conditions.

Respectfully submitted,

- Steven Huang, applicant of permit in Appeal 25-029 with input and review from Jefferson Chen, M.S, P.E. Principal, Enertia Designs Inc., EOR of permit in Appeal 025-29

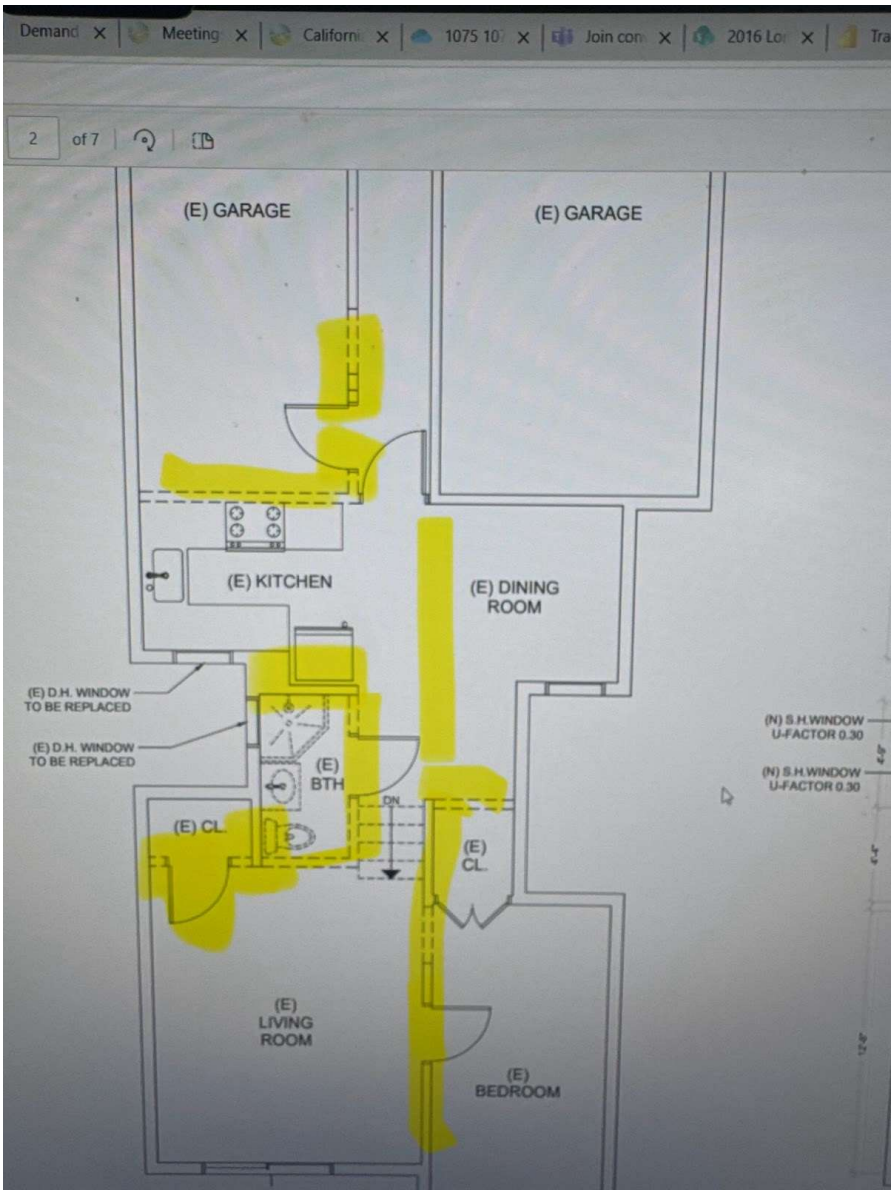
EXHIBIT 10

Exhibit 10: 1077 Fell total gutting (by Dec 2023) and Work that constituting Substantial Structural Alteration

1. **Cut X-Brace at Line A shows historic addition of garages without consideration of seismic impact.**



2. **Walls that were removed and left removed for over one year as part of 1077 remodel. Highlight between kitchen and dining room shows the structural beam changed. Photos of these highlighted areas are below.**



3. **Down to the studs gutting- Walls in house interior removed, including walls not shown as being altered. Photo from December 2023.**



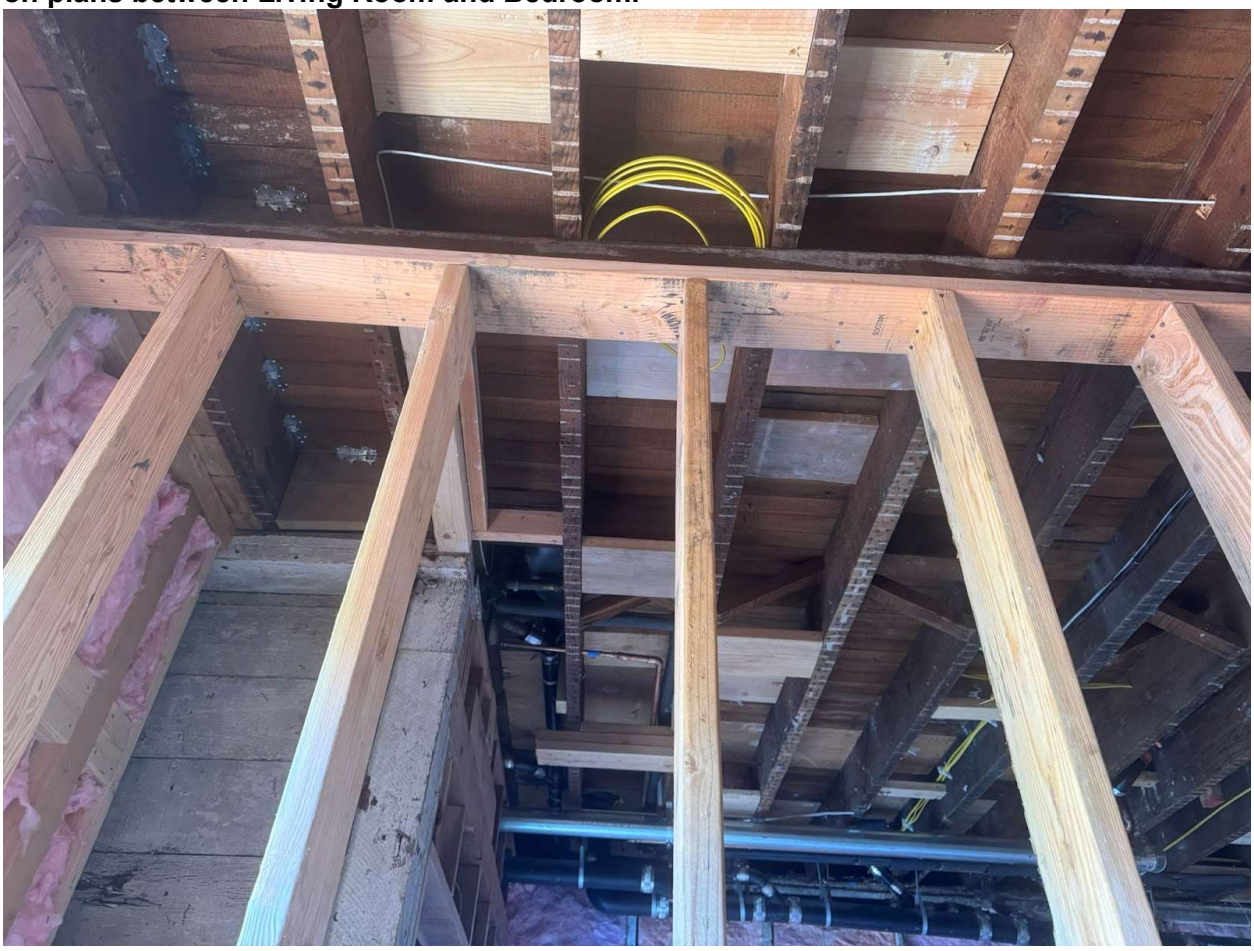
4. **Photo taken January 2025- During Structural Work, Can see all internal walls removed. Seismic Retrofitters added bracing during their construction.**



5. Photos taken November 6 2024- Pictures Show Dry Rot framing fix (which is the support for the cantilever floor) and no wall between Living room/ Bedroom



6. Photo taken 2025 shows newly reconstructed wall that was not indicated to be altered on plans between Living Room and Bedroom.



7 Photos taken May 2025 shows areas under 1077 Fell subfloor with new work or work that needs to be addressed







8. Photo taken July 2025- Shows additional Framing Done (in addition to dry rot fix) before Permit was Pulled



9. Additional Work on Vertical Support Element- Plan for Beam in 2025 permit- Red squiggles by Velox. Alteration to 1075 Fell floor joists also visible.



10. Velox Alteration to Floor Joists for 1075 Fell



11. Example Field Condition not in Drawing- Chimney interrupting Shear wall



EXHIBIT 11

3708 LINWOOD AVENUE
OAKLAND, CA. 94602
PHONE: 510-757-6131
biggs-group.com

Biggs Group Architecture

8/23/25

Subject: Requiring A Full Seismic Upgrade for a Renovation in a Two-Dwelling Property
Project Address: 1077 Fell Street
Project Application # : 2023-0426-6513

The work for this project involves remodeling the first level of a two level building, with each level serving as a separate condominium. The neighbor in the upper unit has hired a consultant who is a Licensed Engineer, that has stated that the project is beyond a 30% threshold, and that the plans created by a separate Licensed Structural Engineer, and that have been reviewed by City engineers, must increase the scope to include additional seismic improvements.

The San Francisco building code "30% rule" for seismic upgrades refers to the thresholds in the California Existing Building Code (CEBC), which is adopted by the city. It requires a seismic retrofit when structural alterations exceed 30% of the building's floor or roof areas.

Code reference:

The specific code reference can be found in the **California Existing Building Code (CEBC)**. San Francisco uses and amends this state code. In general, the key triggering provisions are related to substantial structural alterations.

The CEBC states:

- **CEBC Section 503.11:** This section is where the triggers for mandatory seismic upgrades are typically found.
- **CEBC Section 202:** This defines what constitutes "Substantial Structural Alterations" that would mandate a retrofit, which includes the following two type of substantial alterations listed below.

How the 30% rule works

Under the CEBC, a full seismic upgrade to the current San Francisco Building Code (SFBC) is typically required if a project includes any of the following triggers:

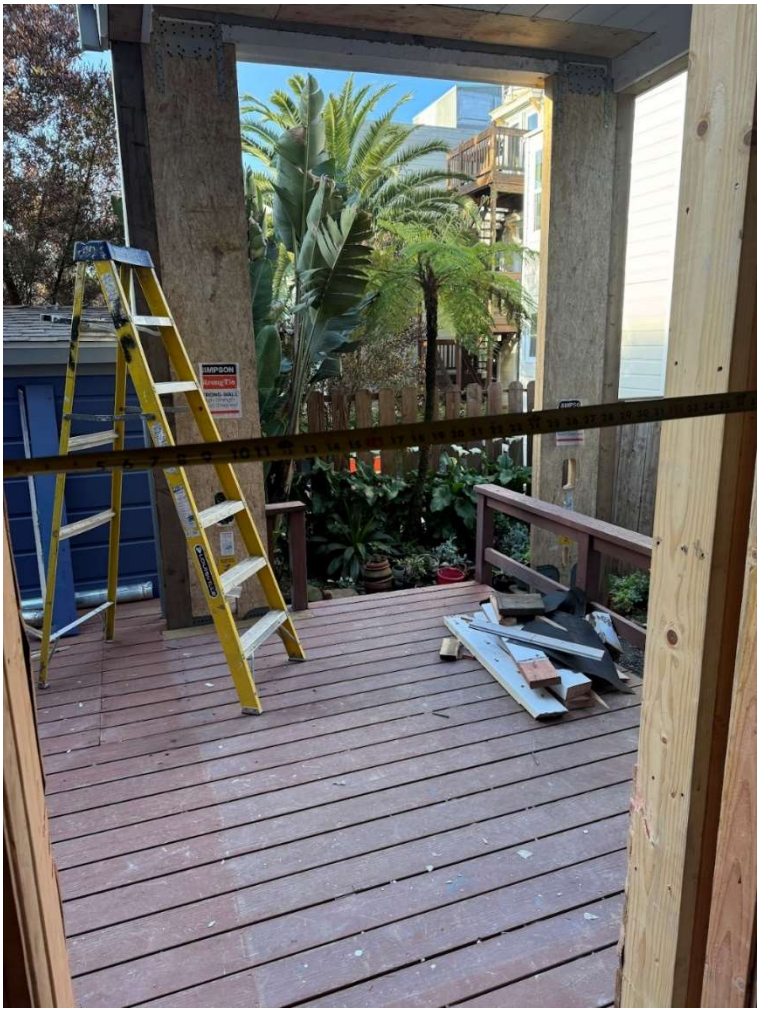
- **Alterations to more than 30% of the building's floor and roof areas** or their structural support. This is cumulative, meaning it factors in all such work done since May 21, 1973.
- **A horizontal addition** that increases the building's square footage by more than 30%.

This 30% rule does not apply to all alteration projects!
Under 503.11, Exception 1, “Buildings of Group R occupancy with not more than five dwelling or sleeping units used solely for residential purposes that are altered based on the conventional light-frame construction methods of the San Francisco Building Code.
Since this building is a wood frame building, type VB construction, two stories, two parcels , and two Dwellings, it is exempt under Exception 1.

EXHIBIT 12

Exhibit 12: Pictures of Rough Opening

1. **42 inch width**

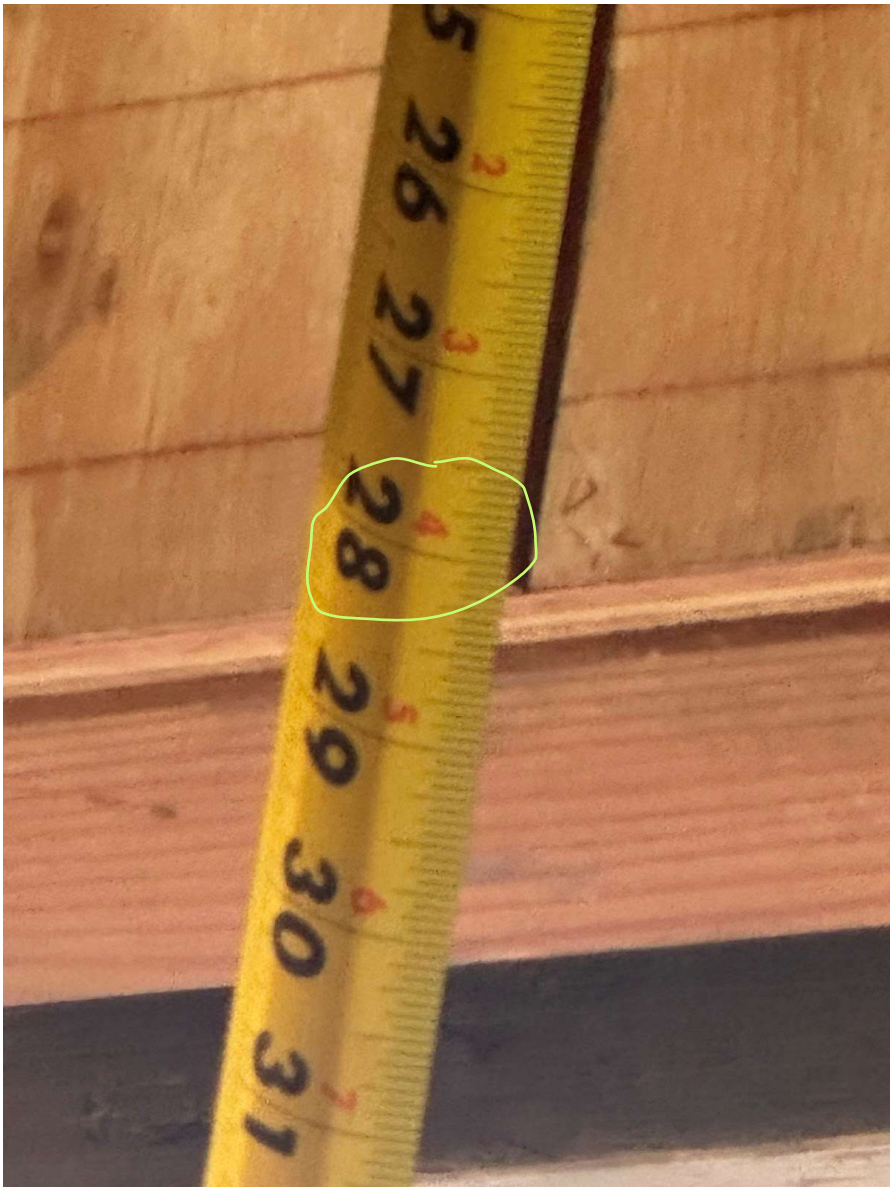



38 39 40 41 42 43

2. 100 Inch Height



3. Shear wall height left above rough opening.



4. Shear wall extends below floor.



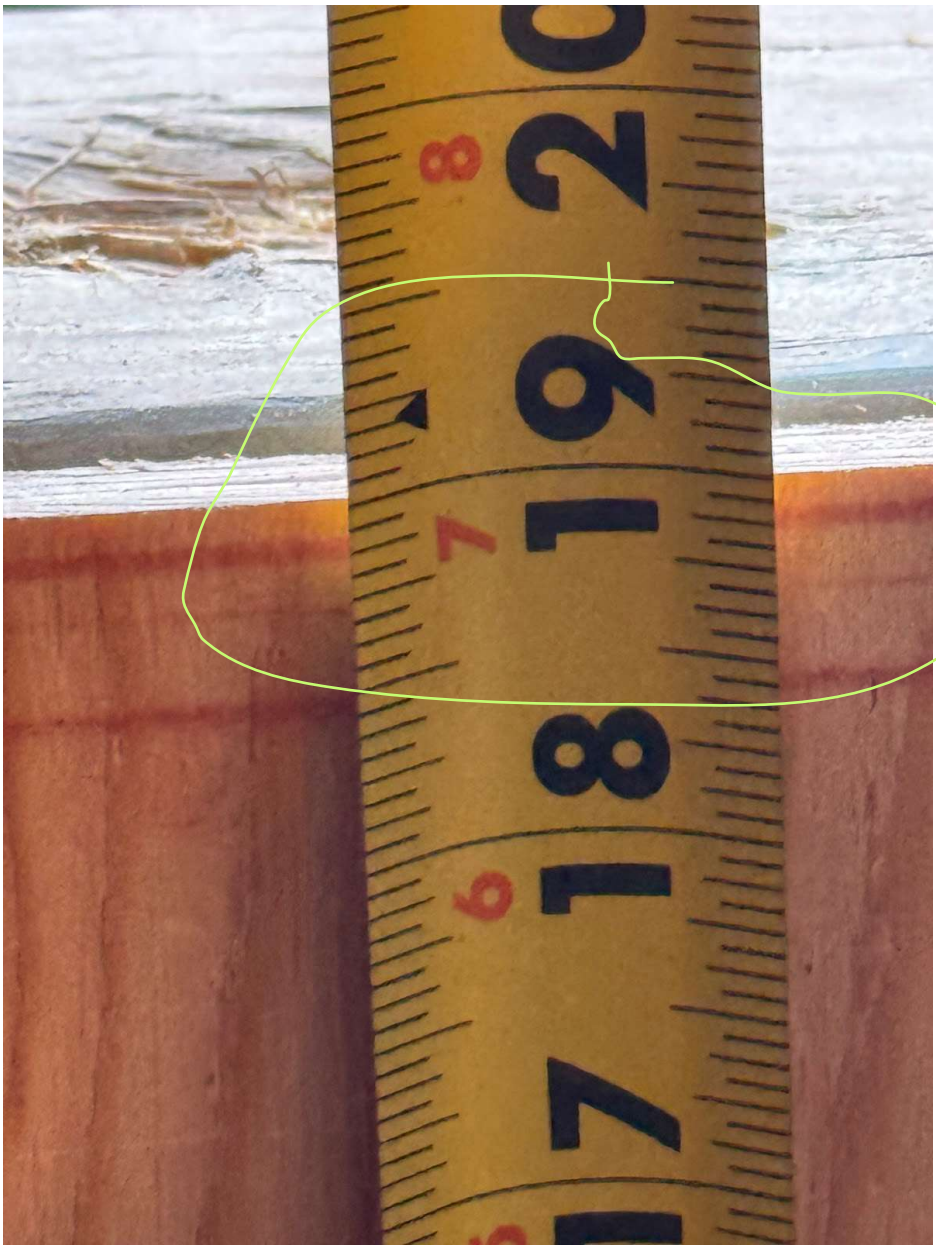

20
19
18
17

EXHIBIT 13

Exhibit 13: Dryrot repair and Cantilever Floor

1. Photo taken February 2024 Picture of Cantilevered/ Overhung Floor. The wood connecting the overhang to the main building had dry rot on both sides.



2. Dry Rot Photos (May-June 2024)







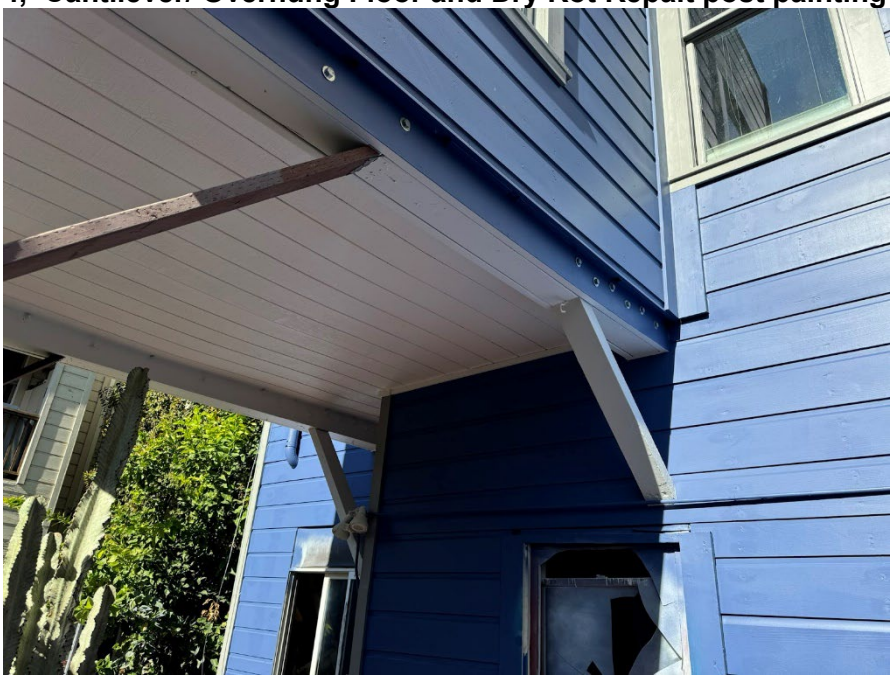




3. One side of Dry Rot Repair, Seen from the end, September 2024.



4, Cantilever/ Overhung Floor and Dry Rot Repait post painting



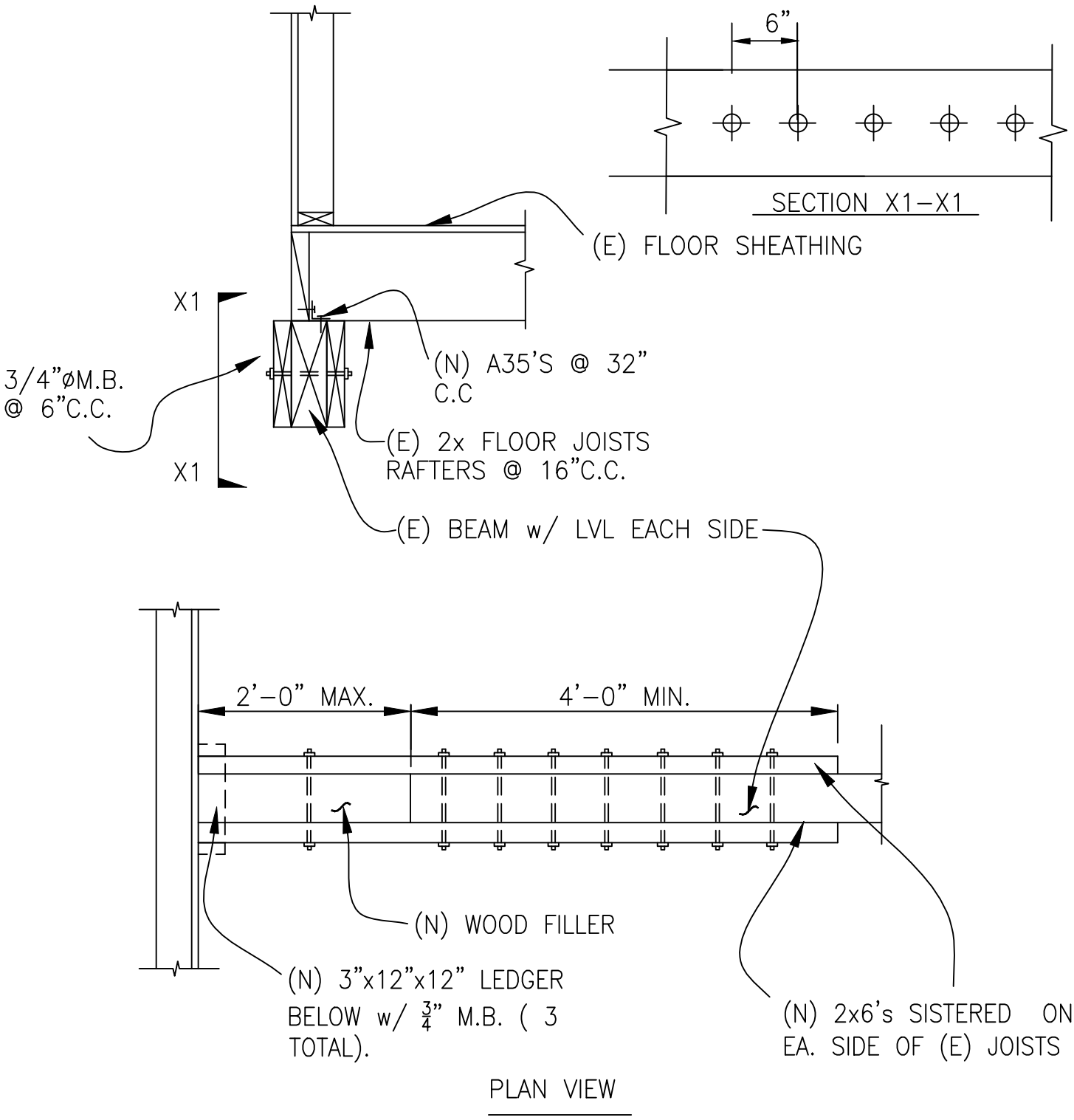
5. 2 by 6 cut during Construction- Enertia said was structural during onsite visit



6. 2 by 6 no longer enters building (Number 4 above) after Seismic Retrofitters cut 2 by 6. (Photo Summer 2025):



EXHIBIT 14



PLAN VIEW

Sheet: SK1	Title: FLOOR FRAMING RENOVATION	
Job #: ---	Address: 1077 FELL STRET SAN FRANCISCO, CA	
Date: 06/14/2024		

EMAIL: INFO@ENERTIADESIGNS.NET
OFFICE: 415.626.8300
FAX: 415.701.0212
1167 MISSION STREET FL 1,
SAN FRANCISCO, CA 94103

ENERTIA DESIGNS
ARCHITECTURAL ENGINEERING & INTERIOR

Attachment B

BOARD OF APPEALS

CITY & COUNTY OF SAN FRANCISCO

MEETING MINUTES – WEDNESDAY, OCTOBER 8, 2025

REGULAR MEETING (IN-PERSON AND REMOTE ACCESS VIA ZOOM)

5:00 P.M., CITY HALL, ROOM 416, ONE DR. CARLTON B. GOODLETT PLACE

PRESENT: President John Trasviña, Commissioner Rick Swig and Commissioner Rebecca Saroyan.

Jesse Mainardi, Deputy City Attorney, Office of the City Attorney (CAT); Corey Teague, Zoning Administrator, Planning Department (PD); Joseph Ospital, Senior Building Inspector, Department of Building Inspection (DBI); Philip Chan, Plan Review Engineer, DBI; Chris Buck, Urban Forester, San Francisco Public Works, Bureau of Urban Forestry (SFPW-BUF); Dan Mauer, Project Manager, Capital Improvement Division, San Francisco Recreation and Parks Department (REC); Julie Lamarre, Executive Director; Alec Longaway, Legal Assistant.

ABSENT: Vice President Jose Lopez.

(1) PUBLIC COMMENT

At this time, members of the public may address the Board on items of interest to the public that are within the subject matter jurisdiction of the Board except agenda items. With respect to agenda items, your opportunity to address the Board will be afforded when the item is reached in the meeting with one exception. When the agenda item has already been reviewed in a public hearing at which members of the public were allowed to testify and the Board has closed the public hearing, your opportunity to address the Board must be exercised during the Public Comment portion of the calendar. Each member of the public may address the Board for up to three minutes. At the discretion of the Board President, public comment and remote public participation may be limited to two minutes per person. If it is demonstrated that public comment and remote public participation will cumulatively exceed 15 minutes, the President may continue Public Comment and/or remote public participation to another time during the meeting.

SPEAKERS: None.

(2) COMMISSIONER COMMENTS & QUESTIONS

SPEAKERS: President Trasviña welcomed everyone to the hearing and thanked staff, the departments and colleagues for their time, expertise and dedication to the items on the agenda. He stated that the Board members were prepared to hear from the parties and public. President Trasviña gave a brief update on the Commission Streamlining Taskforce and noted that the Commission may be recommending to the Board of Supervisors that the Board of Appeals absorb appeals from other commissions.

Commissioner Saroyan thanked President Trasviña for his summary.

PUBLIC COMMENT: None.

(3) ADOPTION OF MINUTES

Discussion and possible adoption of September 24, 2025 minutes.

ACTION: Upon motion by President Trasviña, the Board vote 3-0-1 (Vice President Lopez absent) to adopt the September 24, 2025 minutes.

PUBLIC COMMENT: None.

(4) **REHEARING REQUEST FOR APPEAL NO. 25-029**

Subject property at 1077 Fell Street. Soumya Sastry, Appellant, is requesting a rehearing of Appeal No. 25-029, SOUMYA SASTRY vs. DEPT. OF BUILDING INSPECTION decided September 3, 2025. At that time, upon motion by Vice President Lopez, the Board voted 4-0 to deny the appeal and uphold the permit on the basis it was properly issued. **Permit Holder:** Steven Huang. **Permit Description:** Revisions for approved permit application 2024/0517/2393; structural work-approved plan set inaccurately showed the rear wall dimensions; new architectural/structural plans show correct dimensions; minor structural revision. **Permit No.:** 2025/0626/9586.

ACTION: Upon motion by Commissioner Swig, the Board voted 3-0-1 (Vice President Lopez absent) to deny the request on the basis that there was neither new evidence nor manifest injustice. The Board further encouraged the parties and DBI to review the calculations provided by the appellant's structural engineer when it comes time to revise the permit.

SPEAKERS: Soumya Sastry, requestor; Detlev Doring, agent for requestor; Steven Huang, permit holder; Joseph Ospital, DBI; Philip Chan, DBI.

PUBLIC COMMENT: None.

(5) **APPEAL NO. 25-028**

PACIFIC TOWNHOUSE ASSOCIATION, Appellant(s) vs. DEPT. OF BUILDING INSPECTION, Respondent PLANNING DEPT. APPROVAL	2518 Buchanan Street. Appealing the ISSUANCE on July 10, 2025, to Hestia Trust 2001, of an Alteration Permit (To comply with NOV No. 202538518 repair in kind existing fence and existing roof deck). PERMIT NO. 2025/0710/0533. FOR HEARING TODAY. **Note: On September 3, 2025, upon motion by President Trasviña, the Board voted 4-0 to continue this Item to October 8, 2025 at the request of the parties.**

ACTION: Upon motion by President Trasviña, the Board voted 3-0-1 (Vice President Lopez absent) to deny the appeal and uphold the permit on the basis that it is code compliant.

SPEAKERS: Marina Pitts, attorney for appellant; Luke Garvey, attorney for permit holder; Garrett O'Donoghue, agent for permit holder; Corey Teague, PD; Joseph Ospital, DBI.

PUBLIC COMMENT: None.

Attachment C

Gmail soumya sastry <soumya.sastry@gmail.com>

Re: 1077 Fell Revision Permit after Board of Appeals hearing on 10/8/25.

soumya sastry <soumya.sastry@gmail.com> Thu, Oct 16, 2025 at 8:36 AM
To: "Eng. Jefferson Chen" <jefferson@enertiadesigns.net>, Darquison Martins <darquison@enertiadesigns.net>, Detlev Doring <det@dpdoringse.com>, haraprasad sastry <haraprasadsastry@yahoo.com>, Kathleen Gevertz <kathleen@kagdesigns.com>, Steven Huang <thestevenhuang@gmail.com>, Mark Barbagelata <mark@quakeprep.com>, Doug Burrows <Doug@veloxsf.com>, Mark B <barbcon1@gmail.com>, Jacob Dobson <jacob@seismicretrofitters.com>, Alex Gevertz <alex@kagdesigns.com>

Hello all,

Per my previous email and the email below from the DBI, I would like us to be on the same page for the new permit before it goes into the DBI. Please let me know what the status is so we can map out a coordinated plan forward.

Soumya

---------- Forwarded message ---------
From: **Cheung, Jimmy (DBI)** <jimmy.cheung@sfgov.org>
Date: Wed, Oct 15, 2025 at 4:47 PM
Subject: Re: 1077 Fell Revision Permit after Board of Appeals hearing on 10/8/25.
To: soumya.sastry@gmail.com <soumya.sastry@gmail.com>
Cc: Kane, David (DBI) <david.kane@sfgov.org>, Jones, David (DBI) <david.m.jones@sfgov.org>, Ospital, Joseph (DBI) <joseph.ospital@sfgov.org>, Chan, Philip (DBI) <philip.chan@sfgov.org>

Hi Sonya,

I watched the Board of Appeals meeting on October 8, 2025. While the Board denied the request to rehear the project, they strongly encouraged all parties and DBI to review the structural calculations submitted by the appellant's engineer when the permit revision is submitted.

Please coordinate with the project sponsor and their engineer regarding the timing of the revision permit to address the field conditions. Either David Jones or I will serve as your point of contact and will work with both parties to review the projects permitted scopes of work holistically.

I've only BCC'd the engineer of record under PA#202506269586, as I don't have the project sponsor's contact information.

Thank you for your time. David and I look forward to hearing from both parties soon.

JIMMY CHEUNG, P.E.
Structural Review Manager
Permit Services - Department of Building Inspection
(628) 652-4838
SFDBI.org
Sign up for our customer email list

From: soumya sastry <soumya.sastry@gmail.com>
Sent: Monday, October 13, 2025 2:01 PM
To: Chan, Philip (DBI) <philip.chan@sfgov.org>
Subject: Fwd: 1077 Fell Permits

This message is from outside the City email system. Do not open links or attachments from untrusted sources.

Hi Philip,

Thank you for coming to the hearing last week. I had sent this package to you prior to the hearing and would like to find a time to review it with my engineer.

I really appreciate your help. I wish I could work directly with the engineer of record, but they've declined to engage with me, even though several of the issues I've raised have now been flagged for correction. I'm concerned that they may not fully address these items, so I think it would still be productive for us to discuss them.

For example, we haven't yet talked about the impact of the cut X-brace at Line A, the dry rot at Line D, and Det's finding that the footing at Line E is not sufficient.

Please let me know how we could proceed.

Best regards,
Soumya

Gmail soumya sastry <soumya.sastry@gmail.com>

Re: 1077 Fell Revision Permit after Board of Appeals hearing on 10/8/25.

Cheung, Jimmy (DBI) <jimmy.cheung@sfgov.org> Mon, Nov 3, 2025 at 10:18 AM
To: soumya sastry <soumya.sastry@gmail.com>
Cc: "Jones, David (DBI)" <david.m.jones@sfgov.org>, Detlev Doring <det@dpdoringse.com>, haraprasad sastry <haraprasadsastry@yahoo.com>

Hi Soumya,

If your neighbor has a valid building permit to perform work then they can continue working under that permit. From my recollection, they will eventually need to file a new building permit to correct some wall length discrepancies. When they are ready to submit for this revision permit, they were instructed by the Board of Appeals to coordinate with you and DBI on the holistic review of the project. Part of the review will determine the level or lateral strengthening or seismic upgrade required based on area of work.

If you feel your neighbor **does not** have a valid building permit, then please reach out to Kevin Birmingham of Building Inspection Division (BID). His email is kevin.birmingham@sfgov.org. He will send a Building Inspector to investigate whether or not your neighbor is performing work under a valid issued permit.

Please let me know if you have further questions.

Thank you,

JIMMY CHEUNG, P.E.
Structural Review Manager
Permit Services - Department of Building Inspection
(628) 652-4838
SFDBI.org
Sign up for our customer email list

From: soumya sastry <soumya.sastry@gmail.com>
Sent: Monday, October 27, 2025 1:57 PM
To: Cheung, Jimmy (DBI) <jimmy.cheung@sfgov.org>
Cc: Jones, David (DBI) <david.m.jones@sfgov.org>; Detlev Doring <det@dpdoringse.com>; haraprasad sastry <haraprasadsastry@yahoo.com>
Subject: Re: 1077 Fell Revision Permit after Board of Appeals hearing on 10/8/25.

[Quoted text hidden]

Attachment D

Department of Building Inspection

City & County of San Francisco
49 South Van Ness Ave, Suite 400 San Francisco, CA 94103-1226

Building Inspection History

Printed On: 11/24/2025 10:59:06 AM

OFFICIAL COPY

Application Number **202405172393** Block/Lot **0825 / 050** Address **1077 FELL ST**

Description **REV TO 202304266513; (E) BATHROOM LAYOUT CHANGED; (E) KITCHEN LAYOUT CHANGED; ADDITION - LIGHTING UPGRADE WHOLE UNIT; REPLACE 2-WINDOWS - LIKE TO LIKE, NOT VISIBLE FROM STREET. REF TO PA# 202306099711 & 202309267475**

Owner Name	Form #	Job Cost	Disposition	Disposition Date
HUANG STEVEN C	8	$45,000.00	ISSUED	10/02/2024

Owner Phone	# of Plans	# of Units	# of Stories	Occupancy	Bldg Use	Expiration Date	Penalty
	2	2	2	R-3	28	10/02/2025	0

Inspector Name	Activity Date	Status Code	Status Description	
Lara Araiza, David	09/23/2025	148	OTHER	Additional permit required to show additional w ork being performed at interior and exterior repairs of building
Lara Araiza, David	08/22/2025	111	SITE VERIFICATION	Q & A w ith project sponsor to review approved draw ings.
Sum, Matthew	07/21/2025	700	CANCELLATION FOR INSPECTION SCHEDULE	Cancellation requested by building ow ner. Also no job card on site.
Lara Araiza, David	05/14/2025	125	ROUGH FRAME, PARTIAL	HD's, blocking, clips and hardw are along East PL bedroom w all and insulation verified, okay to shear this w all section. Insulation along West PL w all in living room completed, okay to pre-rock for MEP soffit.**GC w ill review w ith EOR possible revision to be required for reframing at slider door opening on GL D/1.5 and also for door opening elevation change at GL D/1.5-2 and shearw all modification.
Lara Araiza, David	05/06/2025	154	OK TO COVER, PARTIAL	Simpson strong-w alls @ rear deck completed. Hardw are/insulation underneath cantilevered floor completed at rear deck above strong-w alls, ok to cover strong w alls and this section under cantilevered. ** Revision w ill be required for reframing at slider door opening on GL D/1.5 and for door opening elevation change at GL D/1.5-2 (If height of door opening is increased).
Lara Araiza, David	01/10/2025	122	REINFORCING STEEL	Reinforcing steel for underpinning on foundation plan S2.2 GL D-E/6.5 per S4.1/4. EOR observation recorded (12/20/24). Ok to pour.

Department of Building Inspection

City & County of San Francisco
49 South Van Ness Ave, Suite 400 San Francisco, CA 94103-1226

Building Inspection History

Printed On: 12/08/2025 09:49:59 AM

OFFICIAL COPY

Application Number **202506269586** Block/Lot **0825 / 050** Address **1077 FELL ST**

Description **REVISIONS FOR APPROVED PA 202405172393: structural work - this approved plan set inaccurately showed rear wall dimensions. New arch/structural plan show correct dimensions. Minor structural revision.**

Owner Name	Form #	Job Cost	Disposition	Disposition Date
HUANG STEVEN C	8	$8,500.00	REINSTATED	10/09/2025

Owner Phone	# of Plans	# of Units	# of Stories	Occupancy	Bldg Use	Expiration Date	Penalty
	2	2	2	R-3	28	04/09/2026	0

Inspector Name	Activity Date	Status Code	Status Description	
Lara Araiza, David	12/02/2025	114	CORRECTION REQUIRED	Q & A to discuss obtaining a new revision permit to reflect work not captured under previous revision permit #202506269586.
Lara Araiza, David	11/19/2025	114	CORRECTION REQUIRED	Shear wall nailing on GL D/1.5-2 per plan. Framing for new 4X10 header on GL D/1-1.5 per plan. Framing for (4) new windows between GL's B-C/1-2 per plan. New PSI beam on GL 1.5/B-B.5 per plan. NOTE:———- Directed project sponsor to obtain a new revision permit to reflect work not captured under previous revision permit #202506269586.

Attachment E

City and County of San Francisco

DEPARTMENT OF BUILDING INSPECTION

JOB CARD

OFFICE HOURS: THE BUILDING INSPECTION IS OPEN DAILY, MONDAY THRU FRIDAY,
FROM 8:00 a.m. TO 5:00 p.m.

REQUESTS FOR INSPECTIONS ARE TAKEN 24 HOURS A DAY/7DAYS A WEEK
BY CALLING (628) 652-3401

APPLICATION NO. 202405172393 **ISSUED** 10/02/2024

JOB ADDRESS: 1077 FELL ST. **BLOCK:** 0825 **LOT:** 050

NATURE OF WORK: REV TO 202304266513; (E) BATHROOM LAYOUT CHANGED; (E) KITCHEN LA CHANGED; ADDITION - LIGHTING UPGRADE WHOLE UNIT; REPLACE 2-WINDOWS - LIKE TO L TO LIKE, NOT VISIBLE FROM STREET.

WORK PERMITTED UNDER AUTHORITY OF THIS BUILDING PERMIT NUMBER MUST BE COMPLETED PRIOR TO EXPIRATION DATE OF **09/27/2025**.

EXTENSION OF TIME TO COMPLETE WORK UNDER THIS BUILDING PERMIT NUMBER MAY BE GRANTED UPON WRITTEN REQUEST PRIOR TO THE DATES NOTED ABOVE.

For informations on the Permit Process, Building Plans Review, Access Issues, etc., please see page 4 of this JOB CARD for useful and appropriate telephone numbers.

**** ELECTRICAL & PLUMBING WORK MUST HAVE PERMITS SEPARATE FROM A BUILDING PERMIT. ****

KEEP THIS CARD POSTED IN A CONSPICUOUS PLACE ON THE JOB SITE AT ALL TIMES.
PLANS AND PERMIT DOCUMENTS SHALL BE ON THE JOB SITE
AT ALL TIMES WHEN WORK IS IN PROGRESS.
AFTER COMPLETION OF WORK, RETAIN THIS CARD FOR YOUR RECORDS.

BRIEF SUBMITTED BY THE PERMIT HOLDER(S)

Respondent's Brief for Case 25-049 and Case 25-050

1) This Response Brief defends the issuance of Permit 2025/1114/9676 and Permit 2025/1114/9677. They are both administrative "recommencement" permits that introduce no new work and the underlying scopes of these permits have already been adjudicated on September 3, 2025 and reheard on October 9, 2025; when DBI testified that the building permits were properly issued and the Board of Appeals agreed both times.
2) As part of this response brief, I have included declarations from Burrows (GC of record), Chen (EOR), Barbagelata (seismic contractor), and Gevertz (owner representative).

Permit Scope History for Permit 2025/1114/9676

3) Permit 2025/1114/9676 was reviewed and approved by Jonathan Chiu of DBI (See Exhibit A – Permit 2025/1114/9676, with Mr. Chiu's approval). Accordingly, the Appellant's allegation that DBI issued this permit without the code-compliant review required by SFBC §106A.3.3 is factually inaccurate on its face. The scope of this permit is: "Recommencement and completion of work approved under PA# 202304266513 and 202306099711." Permit 2023/0426/6513 was a simple kitchen and bathroom remodel. It was reviewed and approved by David Szeto of DBI. A month later, I decided that I wanted to change the layout of the kitchen and bathroom. Permit 2023/0609/9711 was reviewed and approved by Richard Soenksen of DBI.

Permit Scope History for Permit 2025/1114/9677

4) Permit 2025/1114/9677 was issued following DBI review and approval in accordance with SFBC §106A.3.3, including approval by Mr. Chiu, who is the DBI member assigned to this project. (See Exhibit B – Permit 2025/1114/9677, with Mr. Chiu's approval). Accordingly, the

Appellant's allegation that DBI issued this permit without the review required by SFBC §106A.3.3 is, in light most favorable to Appellant, is factually inaccurate. The scope of this permit is: "Recommencement and completion of work approved under PA# 202309267475 and 202405172393." Combined, they were issued as Voluntary Strengthening; reviewed and approved by James Lo, Philip Chan, David Jones, and Stephen Liu of DBI.

The Direct Actions of Appellant Led to the Expiration of all Issued Permits

5) While my kitchen and bathroom remodel was occurring in 2023, Appellant desired to do voluntary strengthening work while my walls were open. I initially declined this work due to cost and time being displaced from my home, but Appellant convinced me to move forward with her plan for voluntary strengthening (Exhibit 1). Appellant led this voluntary strengthening project from inception (e.g. had Voluntary Strengthening plans drafted, interviewed all contractors, selected the contractor, signed the contract, made initial and progress payments, supervised the work, etc). Her direct actions led these permits to expire by advocating for voluntary strengthening work.

6) While the permit was active, Appellant instructed Pedro Jimenez, an unlicensed, non-English speaking painter (not a licensed contractor) to enter my unit and complete unpermitted structural work above my sliding door and throughout the building. (*Declaration – Burrows, ¶ 6).* My owner representative confirmed that Mr. Jimenez's work "was done improperly and not to code." (*Declaration – Gevertz ¶ 10*). Mr. Jimenez's shoddy work is visible in *Appellant's Brief Exhibit 10, Page 179; and Exhibit 13, Page 203, 205*. Accordingly, a revision permit is required to "address and correct Ms. Sastry's unpermitted work." (*Declaration – Gevertz ¶ 10*). Exhibit 2 contains true and correct screenshots of the Appellant's payments

to Mr. Jimenez labeled “Pedro Structural.” That is, the Appellant caused the need for a revision permit in the first place. Because revision permits would need to take place and the Appellant’s insistence to lead a voluntary strengthening project, these permits expired.

DBI Requested Us to File for the Recommencement Permits Under Appeal. We Complied.

7) Around November 13, 2025, our DBI contact (David Lara Araiza) called my owner representative and instructed my team to file for recommencement permits. We immediately complied. His direction was that the process for as-built/plan review does not overlap with his direction to seek a recommencement permit of already-approved scopes.
8) Appellant argues that because DBI requested a revision permit under SFBC §106A.4.7, DBI therefore should not have asked for a separate recommencement permit under SFBC §106A.4.4.2. That is not correct. A revision permit is the normal DBI mechanism to capture field conditions in the record; it does not imply the existing permitted work is unsafe or invalid. Here, the need to document as-built conditions was driven by unpermitted alterations performed as described in the declarations of my professionals and detailed in Appellant’s Brief, Attachment D, Page 217-218. There are no NOVs or unsafe conditions that would require permit revocation per SFBC §106A.4.5.
9) The Board previously encouraged DBI to consider the Appellant’s concerns during the normal revision process. DBI has done exactly what the Board contemplated: it has required a revision permit to note specific field conditions and has continued active inspection oversight. Appellant is mistaken, nothing in that prior encouragement created a prerequisite that DBI must halt recommencement of already-approved scopes absent a DBI finding of an unsafe condition or NOV.

My Team is in Consistent, Near-Weekly Contact with DBI; Following Their Explicit Instruction

10) On November 19, 2025, my construction team called for an inspection to review the progress made on active Permit 2025/0626/9586 (the one we adjudicated and reheard last year). Mr. Lara Araiza spent 90 minutes at this inspection. His notes: "Shear wall nailing on GL D/1 .5-2 per plan. Framing for new 4X10 header on GL D/1-1 .5 per plan. Framing for (4) new windows between GL's B-C/1-2 per plan. New PSI beam on GL 1.5/B-B.5 per plan." (See *Exhibit 3*). During this 90-minute inspection between my team and DBI, we pointed out the unpermitted alterations performed at Appellant's direction.
11) On December 2, 2025, DBI Inspector David Lara Araiza returned for yet another requested inspection that was also 90-minutes in length. My team called for this inspection to ensure that we captured every condition, correction or as-built detail that DBI would like to see reflected in a revision permit (e.g. the work completed by Mr. Jimenez, the unlicensed worker that Appellant instructed to complete structural work throughout the property.)
12) My owner representative has been in near-weekly contact with DBI inspectors and plan checkers: "Every area and all structural and architectural plans have been thoroughly examined and inspected with a fine-tooth comb. We have welcomed this scrutiny and have documented that the project has passed inspections and that we have complied with all directives issued by the Department." (*Declaration - Gevertz ¶ 4*).

There is Still No Evidence of a Code Safety Violation or Life Safety Issue

13) Of all the plan checkers and inspectors at DBI that have reviewed my project – not one person believes these plans are unsafe or uncompliant. This brief contains four signed

declarations from licensed experts with hundreds to thousands of projects completed with SF DBI approval.

14) The engineer of record, whose "firm has completed thousands of San Francisco projects, many involving partial upgrades during major renovations," declared: "I have read Det Doring's declaration in its entirety and it contains misguided opinions that are not shared by any of the aforementioned experts at DBI, which is the authority and appropriate arbiter of safety and code compliance. At the Board of Appeals hearings, where this was adjudicated twice, they heard from Mr. Doring and reviewed the claims in his declaration. Mr. Doring was voted against unanimously both times. The building, which has stood for over a century and weathered major earthquakes, has not shown structural safety issues under its current configuration. The voluntary work already performed has improved its seismic resilience in selected areas—it has not reduced safety in any way. **There is no basis to claim that the building is now more deficient after these upgrades than it was prior to construction**." (*Declaration Chen ¶ 5-6*)

15) The Appellant's chosen seismic contractor who completed the structural work has "three decades of experience in construction and real estate," declared: "**Seismic Retrofitters was contacted by Ms. Sastry for this voluntary strengthening project, was provided wet-stamped plans, executed the work, and passed inspections.** If a detail was ever in dispute, it would be handled with DBI in the normal course." (*Declaration - Barbagelata ¶ 3*).

16) The general contractor of record has "been doing construction projects for more than 18 years in the city of San Francisco… on approximately 800 projects" declared: "This project is completely safe, there is no potential harm or danger to Ms. Sastry. **Throughout each stage**

of this project, DBI has not issued a single notice of violation because there has never been a life-safety issue whatsoever. There is nothing particularly extraordinary about this project from a structural or construction point of view – it is an otherwise standard remodel of a 700 sq. ft condo in a 2 story building." (*Declaration - Burrows ¶ 4-5*)

17) My owner representative is a "licensed general contractor in California (License #1103702) and [has] worked in construction and related fields for over 30 years" declared: "It would defy common sense to suggest that the licensed, bonded, and insured professionals involved would perform work that could harm residents or compromise the building's structural integrity. **The Department of Building Inspection has closely overseen this project and has allowed work to continue after each inspection with no life-safety violations identified. That is, the entire basis of her complaint – that there is danger or harm – has not been substantiated by any person working on the project**. (*Declaration - Gevertz ¶ 17).*

18) The allegations outlined in all bold in the very first page of Appellant's Brief, citing to a statement made by engineer Doring, along with all of the arguments forwarded by Doring, have previously been forwarded, heard, and readily rejected by the Board of Appeals. There is no reason whatsoever to now lend credence to the same statements which were previously rejected by the Board of Appeals, after a hearing and formal adjudication.

We Have Answered Appellant's Unfounded Concerns of Code Violations and Life Safety

19) It is of import for the Board of Appeals to recognize when and how Appellant's concerns originated. Her concerns came from a non-English speaking housepainter, not a licensed general contractor or engineer. On October 1, 2024, she sent an email: "One thing I'd like to

discuss (though my neighbor will not like it) is that my painter, who was a contractor in Spain and really knows what he is doing, swears up and down and till the cows come home the work proposed isn't sufficient." (See Exhibit 4 – Page 2).

20) The Appellant unilaterally spent HOA funds to commission a "peer report" by Chiaweng Yeh, who never visited the property. This is the engineer that Appellant cites in her brief and exhibits. Noticeably absent in any of her briefs which she has filed, is any declaration from Mr. Yeh. Mr. Yeh never provided a contract or invoice; has never contacted me or the Engineer of Record; has never made a statement (e.g. an email or declaration) about his views on the building. Mr. Yeh provided feedback on plans that had already been approved by DBI weeks earlier. Even after receiving Mr. Yeh's peer report, Appellant led the voluntary strengthening project and subsequently interviewed 8 different seismic contractors, shared the "Voluntary Strengthening"-labeled wet-stamped plans, chose Seismic Retrofitters, was the sole signatory of the contract, coordinated payments, and supervised the work.
21) In January 2025: Appellant claimed she found a construction defect – it was promptly answered. (See Exhibit 5)
22) In April 2025: Appellant claimed she found more construction defects, though admitted it was from AI generated reports. Still, she was promptly answered. (See Exhibit 6)
23) In May 2025: Despite all structural inspections being passed and being given the "Ready to cover" designation, Appellant claimed more construction defects – and was promptly answered. (See Exhibit 7)

24) In September 2025: Appellant filed multiple complaints to DBI with false statements: that we cut a structural brace in her garage (despite having no access to her garage) and that the **building is now 3 stories tall**, potentially triggering a different building code. (See Exhibit 8)

25) In November 2025: In the Appellant's Brief to Case 25-050, she wrote "Velox expressed concern that installing hold-downs at Line D would be difficult because the shearwall nailing had already been completed, and that plumbing would obstruct additional holddowns at Line B." This conversation never happened. In reality, she claims to have overheard this during a private conversation. Exhibit 9 is a declaration she signed under penalty of perjury where on Page 11, Line 24 she alleges: "I was within hearing distance of their discussions. I heard Velox express concern that installing hold-downs at Line D would be more difficult because the shearwall nailing had already been completed, and that new plumbing and electrical runs (installed Q2-Q4 2025) would obstruct additional hold-downs at Line B."

The Board of Appeals Encouraged us to Work Together. I've Been Trying.

26) When these facts were previously adjudicated, Commissioner Saroyan encouraged us to work together. However, I wish to provide follow-up context as to why my legal and construction team is advising me to prioritize the instruction of DBI plan checkers and inspectors. I am not expecting (or asking) the Board of Appeals to "play referee" throughout this HOA dispute, but during my years of attempted coordination with the Appellant, she:

a. "harasses my workers; even calling subcontractors to tell them they cannot work on this project. She has left notes on my worker's cars telling them they cannot work. She calls, texts and emails constantly with irrational demands about what Mr. Huang's ceiling heights can be and which ways his doors can swing." (*Declaration - Burrows ¶ 5*)

b. “attempted to block access to my client’s home physically or to force City inspectors to allow her to attend private meetings or inspections on her terms even when those meetings concerned only permitted work in the lower unit.” (*Declaration - Gevertz ¶ 9*)

c. “took possession of the on-site job card for 1077 Fell Street. (*Declaration - Burrows ¶ 10*)

d. Trespassed into 1077 Fell Street, interrupted the shear wall inspection, and sent the city inspector away. (Exhibit 10*)*

e. Filed California State Licensing Board Complaints against Velox Construction and Seismic Retrofitters. (*Declaration - Burrows ¶ 5; Declaration - Barbagelata ¶ 4*)

f. “has made unreasonable and unsafe suggestions to tear-out the installed shear wall. [Seismic Retrofitters] declined to do so, as that would harm the building.” (*Declaration - Barbagelata ¶ 5*).

I Ask the Board of Appeals to Deny This Appeal on the aforementioned grounds:

27) I request that the Board of Appeals deny the appeal and uphold DBI’s issuance of Permit 2025/1114/9676 and Permit 2025/1114/9677, which is in essence seeking a second and third rehearing of Case 25-029. The plans were appropriately reviewed and approved by multiple DBI members. DBI instructed us to seek these recommencement permits (that do not add new work), reviewed the recommencement permit application, and issued the permit.

28) DBI has not issued a Notice of Violation asserting an unsafe condition requiring permit revocation. *“*If life-safety issues had ever been present, the City would have issued a Notice of Violation. No such notice exists. There is no official finding that the work is unsafe or should be stopped.” (*Declaration – Gevertz ¶ 16).*

29) Appellant's claim that we have been doing work without an active permit is another patently false allegation with no support whatsoever. We have been working and calling inspections on active Permit 2025/0626/9586; which is the one we already adjudicated and reheard last year. "We have duly permitted plans and have only done construction work that was approved and permitted." (*Declaration - Burrows ¶ 3).*

30) Appellant argues that because DBI requested a revision permit under SFBC §106A.4.7, DBI therefore should not have issued a separate recommencement permit under SFBC §106A.4.4.2. That is not correct. A revision permit is the proper DBI mechanism to capture field conditions in the record; it does not imply the existing permitted work is unsafe or invalid. There are no NOVs or unsafe conditions that would require permit revocation per SFBC §106A.4.5.

31) Additionally, I request that the Board of Appeals to saction the Appellant for continuing to bring frivolous appeals, by denying her ability to ask for a rehearing and from making future appeals related to 1077 Fell Street. **The Appellant's repeated complaints relating to the same scopes of work triggers procedural suspensions and contributes to delay – allowing her to continue creating conditions where permits expire – leading to a cycle of further appeals and rehearing. If there is no precedent for this type of sanction, then I request a statement on the record discouraging repetitive appeals absent actual new facts. Her continued harassment has caused and continues to cause significant harm.**

32) I acknowledge, appreciate, and am encouraged by the reasonableness I have witnessed from the Board of Appeals and look forward to continuing to defend myself through active JAMS arbitration – where this conflict now belongs.

I, Douglas Burrows, declare as follows:

1. I am an individual and am over the age of 18 years old. I am competent to testify, and if called upon to testify herein, I could and would testify as follows from my personal, first-hand knowledge.
2. I am a licensed general contractor (LIC 1059825) and have been doing construction projects for more than 18 years in the city of San Francisco and have worked on approximately 800 projects. In my 18 years of doing construction, I have never witnessed an individual act in a manner as intrusive and unreasonable as Ms. Sastry.
3. As Mr. Huang's general contractor for the project at 1077 Fell Street, both Mr. Huang and my company, Velox Construction, have been thoroughly engaged and truthful with DBI and the planning department. We have duly permitted plans and have only done construction work that was approved and permitted. We have brought DBI inspectors in throughout the project, as required. Every aspect of this project has been thoroughly vetted from the Engineer of Record, DBI plan checkers and inspectors, the Board of Appeals, and the seismic construction company that Ms. Sastry chose to do seismic work (Seismic Retrofitters).
4. This project is completely safe, there is no potential harm or danger to Ms. Sastry. Throughout each stage of this project, DBI has not issued a single notice of violation because there has never been a life-safety issue whatsoever.
5. There is nothing particularly extraordinary about this project from a structural or construction point of view – it is an otherwise standard remodel of a 700 sq. ft condo in a 2 story building. What has delayed and complicated this project is the unstable conduct of Ms. Sastry. She has filed 3 city complaints with false statements. She has filed a California State Licensing Board complaint against me – which was promptly dismissed. She harasses my workers; even calling subcontractors to tell them they cannot work on this project. She has left notes on my worker's cars telling them they cannot work. She calls, texts and emails constantly with irrational

demands about what Mr. Huang's ceiling heights can be and which ways his doors can swing. She claims that I would let her attend all inspections – this is untrue. She claims to have overheard a conversation through her floor that I would install a "dumbed down" door in my client's unit; which is absurd. For the first 2 years of this construction project – Velox Construction made good faith efforts to work with Ms. Sastry. However, because of the irrational behavior and constant harassment, my workers feel uncomfortable working in the space and we have to keep all windows and doors closed. It became untenable to work with Ms. Sastry.

6. Without permission, she has been trespassing into Mr. Huang's unit since the beginning of the project. In approximately May 2024, Ms. Sastry had an unlicensed handyman trespass into Mr. Huang's unit for structural work. My employee was very concerned when he saw this work and flagged it. In 2025, she moved a water heater into Mr. Huang's level of the building and her plumbing team placed plumbing throughout Mr. Huang's unit without coordination with Mr. Huang or my team, despite this coordination being requested. This disrupted our original plans and caused significant costs, delays and plan changes.
7. She trespassed into the unit, claimed to be the homeowner, and disrupted a DBI inspection on July 21, 2025 – it became clear to me that due to her irrational, unreasonable conduct; we would need to bar her entry into the unit from that point onward. The entire 1077 Fell Street construction team was in agreement.
8. Ms. Sastry alleges that Velox Construction pursued "hidden" work or tried to "cover the scope of work." I can attest that is untrue. Having worked extensively in century-old buildings in San Francisco, it is not uncommon to uncover existing conditions that could benefit from remediation that are not fully captured in drawings. DBI expects contractors and engineers to adjust in the field. Any field adjustments that have occurred have been reviewed by DBI;

ongoing DBI inspections acknowledge that adjustments are structurally consistent with permitted plans.

9. Ms. Sastry has reached out to professional partners of mine, who I have many years of collaboration with, to improperly defame my company's reputation.
10. Ms. Sastry took possession of the on-site job card for 1077 Fell Street. I've had to set up a camera to dissuade her from continuously trespassing onto the job site.
11. While only doing construction work as duly permitted and with DBI inspection and guidance, the current status of this project is that we are nearing completion. Structural work on permits to date is complete and has been inspected. Rough plumbing and electrical are ready for inspection. My team is ready for the next stage of construction, which is interior finishing work contained within Mr. Huang's unit.
12. Unfortunately, I have had to pass on significant demobilization and remobilization fees onto Mr. Huang. Constant delays have harmed progress; including a recent storm surge that brought moisture into Mr. Huang's unit. While the work to date has not harmed or damaged Ms. Sastry in any way, her conduct has impeded progress and caused harm to the project and Mr. Huang.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed December 11, 2025, at San Francisco, California.

Douglas Burrows

Douglas Burrows

I, Jefferson Chen, declare as follows:

1) I am an individual and am over the age of 18 years old. I have personal knowledge of the following facts, and I would testify truthfully thereto if called to do so.
2) I am a licensed engineer in the State of California. Over the past 35 years, my firm has completed thousands of San Francisco projects, many involving partial upgrades during major renovations or additions. As the engineer of record at 1077 Fell Street, I am very familiar with this Voluntary Strengthening project.
3) At the beginning of this project, I assessed the existing structure to determine seismic vulnerabilities and designed SFDBI-approved plans that reflect this voluntary strengthening approach. All parties understood from the outset that this would be a targeted strengthening effort. The project is considered voluntary seismic strengthening under SFEBC §503.13, which permits targeted improvements selectively in areas of concern without requiring a full building upgrade. These plans have been reviewed, approved and vetted by San Francisco DBI plan check and inspections, as well as the SF Board of Appeals. Due to Ms. Sastry's concerns, I also wrote a compliance letter that this project is code compliant and does not contain life safety issues. Since 2023, myself and members of my team have made nearly a dozen site visits throughout the stages of the project, including with Mr. Doring on August 8, 2025.
4) All DBI-approved and permitted plans to date are code compliant and contain no life safety issues. This has been confirmed through not only my team of engineers, but nearly a dozen members of DBI whose professional responsibility it is to ensure these plans are compliant.
    a) Public records show these plans have been reviewed and approved by members of DBI for life safety and code compliance: James Lo (9/2023), Philip Chan (8/2024), David Jones (7/2025), and Stephen Liu (7/2025).
    b) Many DBI inspections have taken place to review this work in 2025: January 10, May 6, May 14, August 22, September 23, November 19, and December 2, by DBI Inspector David Lara Araiza and reviewed with his superior, Jonathan Chiu. I trust DBI inspectors to highlight any life safety issues or field adjustments that need a revision. If any issues exist, I

expect them to issue a Notice of Violation. It is my understanding a Notice of Violation has never been issued.

c) The Board of Appeals heard from Joseph Ospital and Philip Chan of DBI, as well as Mr. Doring, on September 3 and October 9, 2025. In both hearings, the Board of Appeals unanimously agreed with DBI's assessment that the permit was issued properly, the plans are code compliant, and no life safety issues exist.

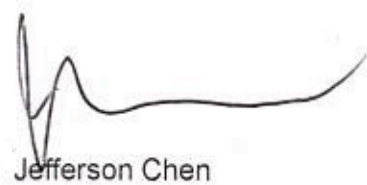
d) Mark Barbagelata (of Seismic Retrofitters) did not raise any issues with me while his team executed the permitted work. He is reputable in the city of San Francisco for this type of work.

e) Specifically, Mr. Doring's concerns about a structural irregularity, the perforated shear wall, and alleged "missing calculations" are not shared by DBI or the Board of Appeals.

5) I have read Det Doring's declaration in its entirety and it contains misguided opinions that are not shared by any of the aforementioned experts at DBI, which is the authority and appropriate arbiter of safety and code compliance. At the Board of Appeals hearings, where this was adjudicated twice, they heard from Mr. Doring and reviewed the claims in his declaration. Mr. Doring was voted against unanimously both times.

6) The building, which has stood for over a century and weathered major earthquakes, has not shown structural safety issues under its current configuration. The voluntary work already performed has improved its seismic resilience in selected areas—it has not reduced safety in any way. There is no basis to claim that the building is now more deficient after these upgrades than it was prior to construction.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct. Executed on December 12, 2025, at San Francisco, California



Jefferson Chen

Declaration - Barbagelata

I, Mark Barbagelata, declare as follows:

1. I am an individual and am over the age of 18 years old. I am competent to testify, and if called upon to testify herein, I could and would testify as follows from my personal, first-hand knowledge.
2. I am the owner of Seismic Retrofitters and have three decades of experience in construction and real estate, where my focus is bringing the latest seismic technology and solutions to property owners. In particular, to soft-story buildings, although 1077 Fell Street is not included in the soft story retrofit program -- the project is properly described as Voluntary Strengthening.
3. I was contacted by Ms. Sastry for this Voluntary Strengthening project, was provided wet-stamped plans, executed the work, and passed inspections. If a detail was ever in dispute, it would be handled with DBI in the normal course.
4. Ms. Sastry has filed for arbitration against me and withdrew it. She made a complaint to the California State Licensing Board. Attached hereto is a true and correct copy of my CSLB Dispute Response letter, where I detailed Ms. Sastry's hostile behavior toward our team and her interruption of a DBI inspection. Her complaint to the CSLB was promptly dismissed.
5. Ms. Sastry has made unreasonable and unsafe suggestions to tear-out the installed shear wall. We declined to do so, as that would harm the building.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct. Executed December 12 2025, at San Francisco, California.

12/12/25

Mark Barbagelata

I, Kathleen A. Gevertz, declare as follows:

1. I am over 18 years old and, if called as a witness, I would be able to testify confidently, of my own personal knowledge, to the truth of the matters contained in this declaration.

2. I am a licensed general contractor in California (License #1103702) and have worked in construction and related fields for over 30 years, including roles as general contractor, project manager, owner's representative, designer, specifier, and other construction-related capacities.

3. I am the owner's representative for the renovation of 1077 Fell Street, the lower residential unit in a two-unit building owned by my client, Steven Huang. I have been working closely with the general contractor of record, Douglas Burrows of Velox Construction, Mark Barbagelata of Seismic Retrofitters, and the engineering team at Enertia Designs. The project involves a complete remodel of a small one-bedroom apartment in the lower unit, begun in 2023 under duly issued building permits from the San Francisco Department of Building Inspection, and it has passed all required inspections to date.

4. Because of repeated complaints and attempts by the upstairs owner, Ms. Sastry, to involve City staff, the Department of Building Inspection has scrutinized this project far more closely than is typical for a small residential renovation. In my three-plus decades in the industry, I have rarely seen inspections conducted with this level of detail or duration. Every area and all structural and architectural plans have been thoroughly examined and inspected "with a fine-tooth comb." We have welcomed this scrutiny

and have documented that the project has passed inspections and that we have complied with all directives issued by the Department.

5. For example, we have had multiple inspections of approximately 1.5 hours each with inspector David Lara Araiza from the Department of Building Inspection, during which he thoroughly reviewed the work throughout the unit. Recent inspections occurred on August 22, September 23, November 19, and December 2, with additional inspections on January 10, May 6, and May 14 of 2025. Ms. Sastry led the structural work, approving the plans and awarding the work to her chosen seismic contractor.

6. No inspector or anyone working in an official capacity has identified any life-safety violation, and no stop-work order has been issued; other procedural stops automatically triggered by Ms. Sastry's complaints and appeals to forums such as the Board of Appeals. Her appeal to the Board of Appeals was denied, her request for rehearing was rejected, and her later application for a temporary restraining order to halt work was also denied.

7. Since construction began in 2023, no Notice of Violation has been issued. A Notice of Violation is standard practice; if a building or its occupants were in imminent danger, or if a serious life-safety issue existed, the Department would issue a Notice of Violation identifying the condition and required correction; no such notice exists here.

8. I was involved in this project during the period when Ms. Sastry approved this voluntary strengthening scope in September 2024. Starting in October 2024, she selected eight seismic Contractors, interviewed each one of them, and personally awarded the work to Seismic Retrofitters. She scheduled their start date, ensured they had the DBI- and HOA-approved plans, and issued the initial progress payments. She

had unfettered access to the construction work until it was complete. Miss Sastry completely and explicitly approved this structural work from its very inception.

9. Throughout that time, the upstairs owner has repeatedly attempted to stop or interfere with construction, including contacting the Building Department, multiple City officials, and harassing and threatening workers. On several occasions, she has attempted to block access to my client's home physically or to force City inspectors to allow her to attend private meetings or inspections on her terms, even when those meetings concerned only the permitted work in the lower unit.

10. Without permission from me, my client, or the general contractor of record, she directed an unlicensed handyman who does not speak English and paid him with HOA funds, to perform structural work inside my client's unit above the sliding door. In her own declaration, she admitted to instructing her unlicensed house painter, not a licensed general contractor, to perform an "emergency repair" that was done improperly and not to code. Upon discovery, we knew we had to file a revision permit to address and correct Ms. Sastry's unpermitted work and negligent actions.

11. Ms. Sastry has entered the lower unit without permission during active construction, including while I was meeting with the owner, contractor, or city officials. We have repeatedly and respectfully asked her not to enter due to safety and liability concerns; nonetheless, she has persisted and trespassed numerous times.

12. She has also tried to compel City inspectors to allow her to attend and "inspect" the interior of the lower unit during official inspections, even though those inspections are strictly for the permitted work in my client's unit, not her residence or common areas. Because of these repeated intrusions and disruptions, my client and I ultimately

barred her from entering the lower unit and from attending inspections or contractor meetings inside his home. Ms. Sastry refuses to speak with me, even though I am his designated and contracted owner representative.

13. Her behavior has raised serious concerns among all parties involved. She has also claimed to have “overheard” conversations, which is hearsay and not a reliable basis for any finding. She also claims that we ‘finished a great deal of framing’ on November 6; however, we have only done minor work at the property on a fully active permit.

14. She has asserted that work was done without permits, even while referencing our own permit (202309267475) as purported evidence that no demolition permit existed, which is inaccurate. She has also mischaracterized structural work around a wood beam, for which she paid her unlicensed painter approximately $13,300 to perform work in common areas, placing my client’s property at risk.

15. She has further insisted that her preferred interpretation of the CC&Rs and her hired “expert” should override the conclusions of the project architect and structural engineer, as well as the Department of Building Inspection's determinations. The project’s architectural and structural plans were fully vetted through the City’s permit review process, and all work has been inspected at the required stages. The project’s architect, structural engineer, and relevant fire/life-safety personnel are all bound by professional and legal obligations to protect public health and safety and have approved and inspected this project in that capacity. The standard protocol is that if any element of the work posed a life-safety concern, the Department would issue a Notice of Violation identifying the specific deficiency and the required remedy. No such notice has ever been issued.

16. The Department of Building Inspection has repeatedly reviewed the structural and architectural plans and associated calculations. It has allowed work to proceed with only minor corrections—precisely what is expected on any residential remodel. If life-safety issues had ever been present, the City would have issued a Notice of Violation. No such notice exists. There is no official finding that the work is unsafe or should be stopped.

17. It would defy common sense to suggest that the licensed, bonded, and insured professionals involved would perform work that could harm residents or compromise the building's structural integrity. The Department of Building Inspection has closely overseen this project and has allowed work to continue after each inspection with no life-safety violations identified. That is, the entire basis of her complaint – that there is danger or harm – has not been substantiated by any person working on the project. There is no evidence in her utterly improper and malicious campaign to block construction.

I declare under penalty of perjury under the laws of the state of California that the foregoing is true and correct. Executed on January 5, 2026, in San Francisco, California.



Kathleen A Gevertz

Exhibit A

Permit Details Report

Report Date:	**1/2/2026 6:32:43 PM**
Application Number:	202511149676
Form Number:	8
Address(es):	0825 / 050 / 0 1077 FELL ST
Description:	Recommencement and completion of work approved under PA# 202304266513 and 202306099711.
Cost:	$31,000.00
Occupancy Code:	R-3
Building Use:	28 - 2 FAMILY DWELLING

Disposition / Stage:

Action Date	Stage	Comments
11/14/2025	TRIAGE	
11/14/2025	FILING	
11/14/2025	FILED	
11/14/2025	APPROVED	
11/14/2025	ISSUED	
11/17/2025	SUSPEND	Per BOA Appeal No.25-049

Contact Details:

Contractor Details:

License Number:	1059825
Name:	DOUGLASS BURROWS
Company Name:	VELOX CONSTRUCTION INC/VELOX DES & CONST
Address:	442 HAIGHT ST * SAN FRANCISCO CA 94117-0000
Phone:	

Addenda Details:

Description:

Station	Rev#	Arrive	Start	In Hold	Out Hold	Finish	Checked By	Review Result	Hold Description
BID-INSP		11/13/25	11/13/25			11/13/25	CHIU JONATHAN	Approved	
INTAKE		11/14/25	11/14/25			11/14/25	RAGASA MARIA	Administrative	
CPB		11/14/25	11/14/25			11/14/25	RAGASA MARIA	Administrative	

This permit has been issued. For information pertaining to this permit, please call 628-652-3450.

Appointments:

Appointment Date	Appointment AM/PM	Appointment Code	Appointment Type	Description	Time Slots

Inspections:

Activity Date	Inspector	Inspection Description	Inspection Status

Special Inspections:

Addenda No.	Completed Date	Inspected By	Inspection Code	Description	Remarks

For information, or to schedule an inspection, call 628-652-3400 between 8:30 am and 3:00 pm.

Station Code Descriptions and Phone Numbers

Online Permit and Complaint Tracking home page.

Technical Support for Online Services

If you need help or have a question about this service, please visit our FAQ area.

City and County of San Francisco © 2026

Exhibit B

Permit Details Report

Report Date:	**12/28/2025 5:59:52 PM**
Application Number:	202511149677
Form Number:	8
Address(es):	0825 / 050 / 0 1077 FELL ST
Description:	Recommencement and completion of work approved under PA# 202309267475 and 202405172393.
Cost:	$32,000.00
Occupancy Code:	R-3
Building Use:	28 - 2 FAMILY DWELLING

Disposition / Stage:

Action Date	Stage	Comments
11/14/2025	TRIAGE	
11/14/2025	FILING	
11/14/2025	FILED	
11/14/2025	APPROVED	
11/14/2025	ISSUED	
11/17/2025	SUSPEND	Per BOA Appeal No. 25-050

Contact Details:

Contractor Details:

License Number:	1059825
Name:	DOUGLASS BURROWS
Company Name:	VELOX CONSTRUCTION INC/VELOX DES & CONST
Address:	442 HAIGHT ST * SAN FRANCISCO CA 94117-0000
Phone:	

Addenda Details:

Description:

Station	Rev#	Arrive	Start	In Hold	Out Hold	Finish	Checked By	Review Result	Hold Description
BID-INSP		11/13/25	11/13/25			11/13/25	CHIU JONATHAN	Approved	
INTAKE		11/14/25	11/14/25			11/14/25	RAGASA MARIA	Administrative	
CPB		11/14/25	11/14/25			11/14/25	RAGASA MARIA	Administrative	

This permit has been issued. For information pertaining to this permit, please call 628-652-3450.

Appointments:

Appointment Date	Appointment AM/PM	Appointment Code	Appointment Type	Description	Time Slots

Inspections:

Activity Date	Inspector	Inspection Description	Inspection Status

Special Inspections:

Addenda No.	Completed Date	Inspected By	Inspection Code	Description	Remarks

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City and County of San Francisco © 2025

Exhibit 1

Gmail

Steven Huang <thestevenhuang@gmail.com>

Pausing the Voluntary Structural Upgrade

Steven Huang <thestevenhuang@gmail.com> Fri, Jan 19, 2024 at 3:32 PM
To: soumya sastry <soumya.sastry@gmail.com>
Cc: haraprasad sastry <haraprasadsastry@yahoo.com>, Rathna sastry <rathnasas@yahoo.com>, Scot Peterson <scot@veloxsf.com>, Doug Burrows <doug@veloxsf.com>, Wendy Christensen <wendy@veloxsf.com>

Hi Soumya,

I asked Velox to hit “pause” on the voluntary structural upgrade process before Ariel started drawing next week. I have some difficult news to share with you… I’d hinted at this before, but I cannot afford the voluntary structural upgrade.

We are all in alignment that this is the right time to do this voluntary upgrade, it would be good for resale value and safety of our building. That’s why it really pains me that I cannot move forward. In the past 2 days, I have consulted with my financial advisor because the voluntary upgrade wasn't in my original budget. My stock portfolio is lower than when I started planning in 2022. I asked my parents to see if they could support me - they cannot. The extra months that it has taken and would take to complete would drain me - to the point that I wouldn’t be able to pay for any extra adjustments related to our roof or paint job. I feel that I’m out of options, and I’m experiencing anxiety and shame having to tell you this.

I am, however, feeling proud about the work that Velox and I have done / will complete that will leave the building stronger and safer than before this project started:

- The concrete footing in the middle of the building will be completed
- There will be shear wall in the back of the building (attached to current foundation)
- My electrical wiring has been updated; your plumbing has been fully updated
- We’ll have a strong moisture seal in the light well
- We’ll have top-tier sound-proofing between our units

Without a doubt, these improvements will increase the resale value of your unit. In particular, the concrete footing in the middle of the building. About $5k was billed to the HOA for the plumbing and moisture seal, I am covering the remainder of the costs out of my own pocket. My own savings that I have been diligently building up since 2016; that will be entirely spent on this project. I have also taken out a loan to cover costs. And I work at a non-profit, and plan to for much longer. I will hold some funds to cover costs of the new roof and painting.

If you are really motivated to do the voluntary seismic upgrade work, let’s chat ASAP. I know we spoke about this being the best/only time to practically do it. If you do not like working with the Velox team, I would allow Mark to come in and bid the work if you wanted to work with him, but unfortunately, I wouldn’t be able to support financially. I would be able to cover 1 month of extra rent, but that’s it. I don’t expect you to want to do this; it’s a lopsided burden but I’m just presenting it as an option. Even without the voluntary upgrades, the building is stronger than it was before.

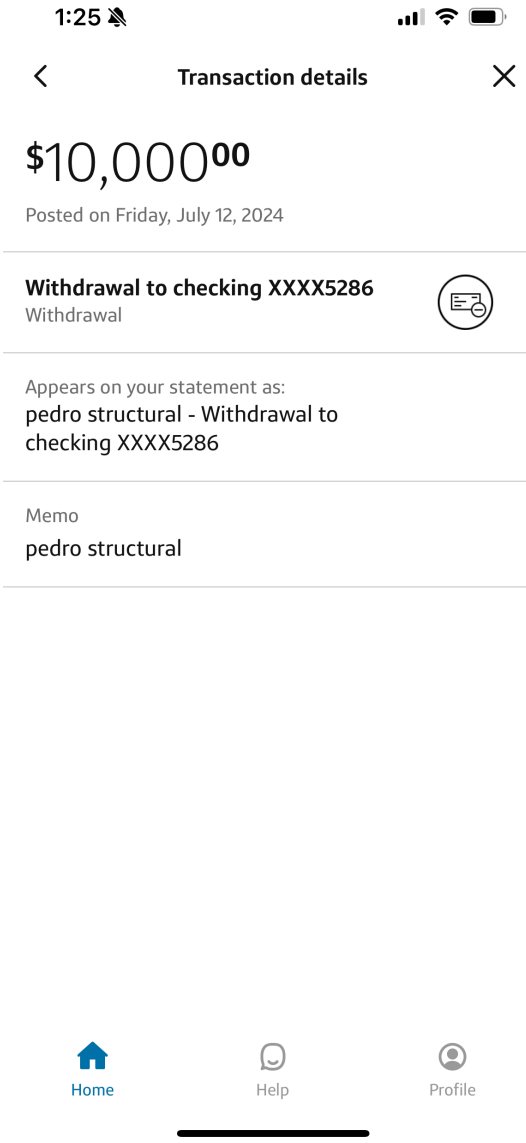
I can’t afford to take any extraneous delays due to rental costs to be out of my house. At this point, I humbly ask for your understanding in allowing me to move forward with the above projects. I’m sorry to change the plans, I know we all put a lot of time into this. But, before any more money was spent, I felt compelled to make this difficult decision.

Do you have any questions? I will instruct Velox to present the permits and plans for your review early next week.

I hope this doesn't come as a complete surprise and throw you for a loop. I'm really sorry about the situation,

Steven

Exhibit 2


1:25
Transaction details
$10,000.00
Posted on Friday, July 12, 2024
Withdrawal to checking XXXX5286
Withdrawal
Appears on your statement as:
pedro structural - Withdrawal to checking XXXX5286
Memo
pedro structural
Home
Help
Profile

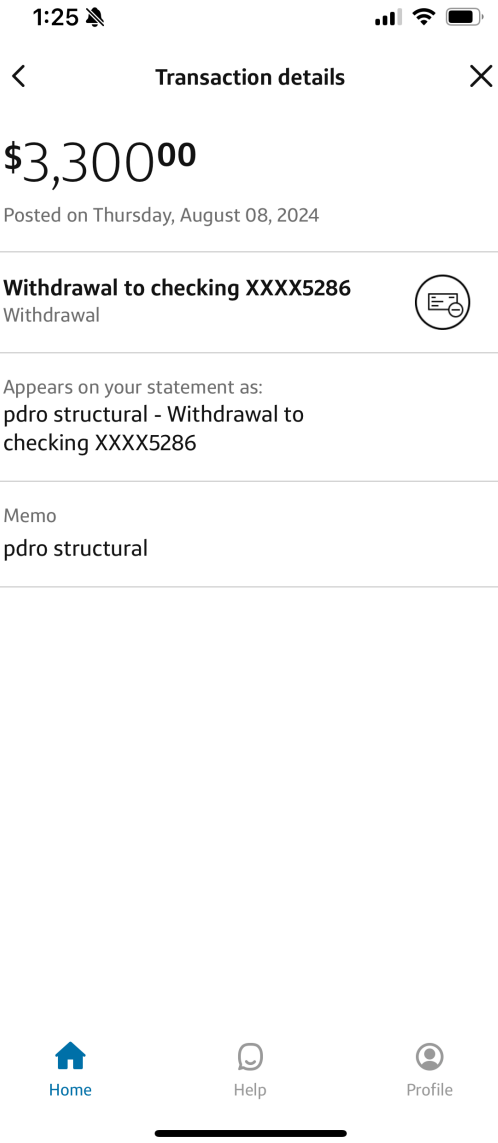
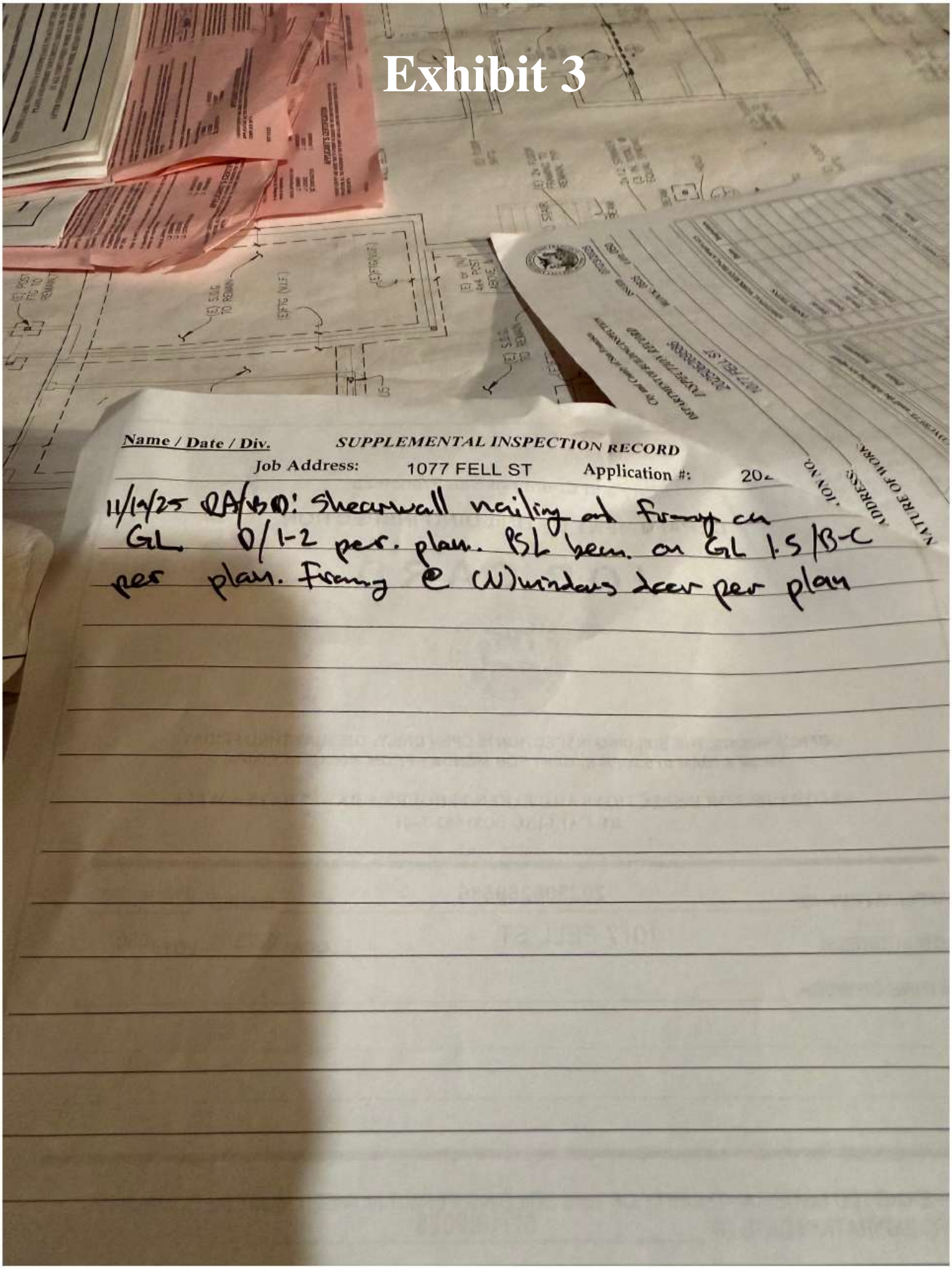

1:25
Transaction details
$3,300.00
Posted on Thursday, August 08, 2024
Withdrawal to checking XXXX5286
Withdrawal
Appears on your statement as:
pdro structural - Withdrawal to checking XXXX5286
Memo
pdro structural
Home
Help
Profile

Exhibit 3



Name / Date / Div. SUPPLEMENTAL INSPECTION RECORD

Job Address: 1077 FELL ST Application #: 20

11/19/25 RA/BO: Shearwall nailing at framing on GL D/1-2 per. plan. PSL hem. on GL 1.5/B-C per plan. Framing @ (N) windows clear per plan

Exhibit 4

Gmail

Design basis for structural work -- What were the engineers asked to do?

5 messages

Peter McDowell <peter@abei.net> Wed, Oct 2, 2024 at 7:46 AM
To: soumya sastry <soumya.sastry@gmail.com>
Cc: Christopher Chung <chris@abei.net>, Babak Mortazavi <admin@abei.net>

Hello Soumya,

If you were hiring a structural engineer to upgrade the building now,
typically the point of departure would be the brief that you give the engineer.

For a single family structure, one could request one of the following as design basis:

1) Structural Strengthening - the work proposed will improve the structure.
   By state law, all local jurisdictions are required to permit "Voluntary Structural
   Strengthening," and the work improves the structure. This can be a low bar.
2) Soft Story Seismic Retrofit - typically, any brick foundation will be replaced,
   and shear walls, and steel moment frames will be used to secure the lower
   level to the foundation. Work ends at the underside of the subfloor of the
   first level above the basement or ground floor.
3) Seismic Retrofit - This is the most complete work, and work extends
   to the top floor, often requiring removal of interior finishes for framing and shear
   walls UP TO THE ROOF LEVEL.

It is widely accepted to use the "Soft Story Seismic Retrofit" criteria as design basis
even for single family structures that are not "soft story" buildings - the main
advantage being that work does not require gutting out interior finishes to the
top floor -- i.e. displacing all building residents to install shear walls up to
top of walls at the highest floor, basically to the roof sheathing.

When bolting into brick footings, we are told that a strong earthquake may rip
the steel / reinforcing steel or Holdown anchors / out of the footings, and the
structure may be an economic loss.

It is likely that your painter is highlighting the difference between design criteria
for "Structural Strengthening" versus "SSSR" and he is correct to do so.

You may wish to engage your own structural engineer to review Enertia designs
and give you feedback on the suitability of the approach chosen.

It is entirely possible that the designs by Enertia are reasonable and sufficient
to upgrade the building structurally - the (N) Moment resisting frame at the South side
is more characteristic of Seismic Retrofit work, and does a lot more for the building
than the underpinning / footing reinforcement under the main part of the structure.

One goal is to satisfy yourself that the building improvement work has sufficient
design basis that it is worth the investment; the other goal is to fill in any missing information
in order to complete the project as designed / ideally without further revisions.

Please let me know if this makes sense or if other questions arise,

Best,

Peter McDowell
Associated Builders
(415) 285 6200 office
(415) 726 8744 cell

On Tue, Oct 1, 2024 at 3:20 PM soumya sastry <soumya.sastry@gmail.com> wrote:

> One thing I'd like to discuss (though my neighbor will not like it) is that my painter, who was a contractor in Spain and really knows what he is doing, swears up and down and till the cows come home the the work proposed isn't sufficient, especially for sandy conditions like ours. I understand thatEnertia Has a good reputation. But Pedro believes that they were given a limited scope of what to do.
>
> On Tue, Oct 1, 2024 at 2:08 PM Peter McDowell <peter@abei.net> wrote:
>
> > Hi Soumya,
> >
> > Would 2.30 PM on Monday, 10/07 work for you?
> >
> > I think we should need about 30 minutes
> > to review the site conditions.
> >
> > I have a few inspections on Thursday and Friday, so next week
> > will work better if Monday afternoon is still good for you.
> >
> > Kind regards,
> >
> > Peter McDowell
> > Associated Builders
> > (415) 285 6200 office
> > (415) 726 8744 cell
> >
> > On Tue, Oct 1, 2024 at 12:39 PM soumya sastry <soumya.sastry@gmail.com> wrote:
> >
> > > What time in the morning? Any chance this Thursday or Friday would work? Or Monday afternoon?
> > >
> > > On Tue, Oct 1, 2024 at 9:24 AM Peter McDowell <peter@abei.net> wrote:
> > >
> > > > Hello Soumya,
> > > >
> > > > Arch. drawings received in good order, thank you -
> > > > I printed them and will see how they illuminate the structural work.
> > > >
> > > > A site visit would be helpful to bid - do you have any availability
> > > > in the morning next week? Tuesday through Thursday probably
> > > > easier for me if one of those days will work - just let me know,
> > > >
> > > > Best,
> > > >
> > > > Peter McDowell
> > > > Associated Builders
> > > > (415) 285 6200 office
> > > > (415) 726 8744 cell
> > > >
> > > > On Tue, Oct 1, 2024 at 9:10 AM soumya sastry <soumya.sastry@gmail.com> wrote:
> > > >
> > > > > Peter, can you confirm that you got the architectural drawings? Do you need to do a site visit?
> > > > >
> > > > > On Thu, Sep 26, 2024 at 3:04 PM Peter McDowell <peter@abei.net> wrote:
> > > > >
> > > > > > Hi Soumya,
> > > > > >
> > > > > > I will also need to review the Architectural drawings for this project -
> > > > > > please send those along if you can.
> > > > > >
> > > > > > Please call my cell phone when opportune - I should be able to answer
> > > > > > this afternoon.
> > > > > >
> > > > > > Best,
> > > > > >
> > > > > > Peter McDowell
> > > > > > Associated Builders
> > > > > > (415) 285 6200 office
> > > > > > (415) 726 8744 cell
> > > > > >
> > > > > > On Thu, Sep 26, 2024 at 2:58 PM soumya sastry <soumya.sastry@gmail.com> wrote:

I actually cannot do 3 but could call at 4.

On Thu, Sep 26, 2024 at 1:11 PM soumya sastry <soumya.sastry@gmail.com> wrote:
> 3 pm is good! 7134471248.
>
> On Thu, Sep 26, 2024 at 1:09 PM Peter McDowell <peter@abei.net> wrote:
> > Hello Soumya,
> >
> > Let's talk on the phone when you have time.
> >
> > I am in the office until after 3 PM today. If this is not a good time for you,
> > send me your contact number and when would be a good time to call.
> >
> > - Plans appear to be for Voluntary Structural Strengthening
> > - Associated Builders does do this type of work (Foundation replacements, SSSR, etc.)
> > - I am happy to bid the project
> >
> > Please let me know when we can talk,
> >
> > Kind regards,
> >
> > Peter McDowell
> > Associated Builders
> > (415) 285 6200 office
> > (415) 726 8744 cell
> >
> > On Thu, Sep 26, 2024 at 12:04 PM soumya sastry <soumya.sastry@gmail.com> wrote:
> > > Hi Peter, I just got off the phone with your colleague. Anyway, my HOA is doing a voluntary Seismic upgrade. The plans are attached. We have had some challenges with the Contractor, who is increased the price and is therefore giving us an opportunity to shop it around for quotes. Is this something that your company would be interested in, could do soon, and could provide a quote for?
> > >
> > > ---------- Forwarded message ---------
> > > From: **Darquison Martins** <darquison@enertiadesigns.net>
> > > Date: Fri, Sep 13, 2024 at 3:53 PM
> > > Subject: 1077 Fell Street (AP# 202405172393)
> > > To: <soumya.sastry@gmail.com>
> > > CC: Doug Burrows <doug@veloxsf.com>, Eng. Jefferson Chen <jefferson@enertiadesigns.net>, Ariel Lorenzale <ariel@veloxsf.com>
> > >
> > >
> > > Hi Soumya,
> > > From our discussion earlier today and by engineering analyses the new strengthening work for this permit (referenced above) will be sufficient.
> > > In order to replace the brick foundation with concrete, it will prevent any settlement in the future. But for this work won't be necessary.
> > >
> > > PLease find the latest engineering set submitted in attachment.
> > >
> > > My best regards,
> > > Darquison
> > > 415-866-6418

---

soumya sastry <soumya.sastry@gmail.com> Wed, Oct 2, 2024 at 7:58 AM
To: Peter McDowell <peter@abei.net>
Cc: Christopher Chung <chris@abei.net>, Babak Mortazavi <admin@abei.net>

Thank you so much for this response. Lots to chew on. Look forward to seeing you Monday.
[Quoted text hidden]

---

soumya sastry <soumya.sastry@gmail.com> Wed, Oct 2, 2024 at 9:42 AM
To: Peter McDowell <peter@abei.net>

Gmail

Exhibit 5

Steven Huang <thestevenhuang@gmail.com>

Question about level of Simpson strong wall

Mark B <barbcon1@gmail.com> Sun, Jan 12, 2025 at 1:11 PM
Reply-To: mark@quakeprep.com
To: soumya sastry <soumya.sastry@gmail.com>
Cc: Darquison Martins <darquison@enertiadesigns.net>, Mark Barbagelata <mark@quakeprep.com>, Steven Huang <thestevenhuang@gmail.com>

Sonya,

Rebar often followes the slope of the grade hence it is a non issue.

I don't think you're friend is qualified to inspect our work.

Mark

On Sun, Jan 12, 2025, 12:10 PM soumya sastry <soumya.sastry@gmail.com> wrote:

> Hi all,
>
> Question before the concrete gets poured. My friend has highlighted a concern that the iron/ footing is not level. See the attached picture. What do you think?



Gmail

Exhibit 6

Steven Huang <thestevenhuang@gmail.com>

Serious concerns about installation of Simpson strong wall

2 messages

soumya sastry <soumya.sastry@gmail.com> Sat, Apr 26, 2025 at 4:13 PM
To: Darquison Martins <darquison@enertiadesigns.net>, "Eng. Jefferson Chen" <jefferson@enertiadesigns.net>, Steven Huang <thestevenhuang@gmail.com>, haraprasad sastry <haraprasadsastry@yahoo.com>

Hi Darquison and Jefferson,

I believe that we are meeting this week, but I want to raise some other concerns even outside of the rough opening.

(I have used AI to help me summarize this.)

Simpson Strong-Wall WSWH18x12 Installation – Final Engineering Summary

---

1. Project and Product Information

- Strong-Wall Model: WSWH18x12 (Wood Strong-Wall, High Capacity)
- Location: Perimeter wall, anchored to foundation concrete at grade
- Exposure Condition: Exterior condition, subject to soil vapor and moisture
- Contractor's scope does not include exterior waterproofing or siding installation.

2. Corrosion Protection Requirements

- Project Structural Notes (Section V.A.2): "All bolts, nuts and miscellaneous hardware shall be galvanized."
- Simpson Strong-Tie WSWH Installation Manual: "Hardware installed in environments subject to elevated moisture levels must be corrosion-resistant."
- Moisture exposure includes foundation concrete at grade — corrosion protection is required even if siding or finishes are installed later.

3. Identified Installation Defects

- Rusted, Non-Galvanized Anchor Bolts:
  Bolts installed are plain steel and already rusting, indicating violation of corrosion protection requirements.

- Missing or Poor Grout Under Baseplate:
  Strong-Wall base is not fully supported with non-shrink grout. Visible gaps and sloppy fill indicate inadequate load transfer into the foundation.

- Insufficient Thread Engagement:
  Nuts installed without at least one full thread protruding beyond the nut, violating basic structural bolting standards.

- Missing Washers Under Nuts:
  Heavy hex nuts clamping directly against hardware block openings without washers, severely weakening clamping force.

- Nuts Bearing on Hole Edges:
  Nuts are bearing directly on the edges of the hardware block openings instead of on a solid plate surface. Critical structural flaw.

- Bolt Skew / Misalignment:

Anchor bolts are not perfectly vertical, which can reduce proper load transfer and introduce bending stresses.

- Bolt Hole Clearance:
Bolts are positioned close to the edges of access holes, preventing proper washer seating and weakening the connection.

4. Additional Observations Indicating Poor Workmanship

- Incomplete Concrete Perimeter:
A perimeter curb was formed on one side only; the footing lacks a complete and proper perimeter curb where required.

- Rough Concrete Finish:
Concrete surfaces are rough, dirty, chipped, and unfinished, indicating poor placement and finishing.

- Inadequate Fascia/Trim Installation:
Scrap plywood was installed instead of a proper exterior fascia or trim board, exposing wood elements directly to weather.

- General Site Sloppiness:
Construction debris, mortar spills, and poor cleanup practices reflect careless work standards.

5. Related Structural Concern – Rough Opening and Missing Straps

A large 42" x 100" rough opening was cut into the same structural shear wall without proper seismic strapping or reinforcement, significantly reducing the intended lateral and shear strength of the assembly. This structural change further undermines the effectiveness of the Strong-Wall installation in resisting earthquake and wind loads. The rough opening was NOT in the plans and the contractor cut it despite being asked to wait for clarification.

6. Pattern of Poor Workmanship and Judgment

The cumulative deficiencies observed — including the improper Strong-Wall installation, missing grout, non-galvanized anchors, improper bolt connections, incomplete concrete perimeter work, and the inappropriate use of scrap plywood instead of weatherproof trim — suggest a widespread lack of construction quality and structural understanding. The additional cutting of a large unreinforced rough opening in the shear wall further raises concerns about the contractor's overall competence, attention to plans and codes, and commitment to structural safety.

7. Conclusion

The installation currently deviates from both the project's structural requirements and Simpson Strong-Tie's published installation standards. Anchor bolts are exposed to moisture and must be corrosion-protected. The base connection must provide full bearing support. Structural fasteners and anchorages must meet specified configurations to achieve rated strength. The pattern of defects identified suggests that a broader review of the contractor's work is warranted. Immediate correction and repair are strongly recommended to ensure the Strong-Wall performs as designed in seismic or high-wind events.

Darquison Martins <darquison@enertiadesigns.net> Tue, Apr 29, 2025 at 9:48 AM
To: soumya sastry <soumya.sastry@gmail.com>
Cc: "Eng. Jefferson Chen" <jefferson@enertiadesigns.net>, Steven Huang <thestevenhuang@gmail.com>, haraprasad sastry <haraprasadsastry@yahoo.com>

Hi Soumya,
Thank you for sharing the detailed summary regarding the Strong-Wall installations. I appreciate your close attention to these structural elements.
Please find my comments below:

1. **Exposure of Simpson Strong-Walls:**
   The Simpson Strong-Walls are structural elements that must be protected from weather exposure. Exterior finishes such as siding or waterproof enclosures are typically coordinated by the architectural team.
   I recommend that enclosure or protective detailing be addressed in the architectural scope to ensure long-term durability.

2. **Corrosion Protection (Anchor Bolts and Hardware):**
   As specified in the structural general notes and Simpson Strong-Tie installation guidelines, all hardware exposed to moisture must be galvanized.
   The use of non-galvanized anchor bolts and missing washers should be corrected in the field to meet those requirements.

3. **Rough Opening at Shear Wall:**
   This item has already been addressed in a separate email.

4. **Site Conditions and Workmanship:**
   I understand there are concerns regarding the installation details. At this point, I recommend we focus on addressing any specific items that may affect the structural performance, such as hardware, grout, and connection corrections.
   Let's continue coordinating closely with the contractor and design team to ensure the system is installed in compliance with structural standards and manufacturer requirements.

Best,
Darquison

On Sat, Apr 26, 2025 at 4:13 PM soumya sastry <soumya.sastry@gmail.com> wrote:

> Hi Darquison and Jefferson,
>
> I believe that we are meeting this week, but I want to raise some other concerns even outside of the rough opening.
>
> (I have used AI to help me summarize this.)
>
> # Simpson Strong-Wall WSWH18x12 Installation – Final Engineering Summary
>
> ---
>
> ## 1. Project and Product Information
> - Strong-Wall Model: WSWH18x12 (Wood Strong-Wall, High Capacity)
> - Location: Perimeter wall, anchored to foundation concrete at grade
> - Exposure Condition: Exterior condition, subject to soil vapor and moisture
> - Contractor's scope does not include exterior waterproofing or siding installation.
>
> ## 2. Corrosion Protection Requirements
> - Project Structural Notes (Section V.A.2): "All bolts, nuts and miscellaneous hardware shall be galvanized."
> - Simpson Strong-Tie WSWH Installation Manual: "Hardware installed in environments subject to elevated moisture levels must be corrosion-resistant."
> - Moisture exposure includes foundation concrete at grade — corrosion protection is required even if siding or finishes are installed later.
>
> ## 3. Identified Installation Defects
> - Rusted, Non-Galvanized Anchor Bolts:
> Bolts installed are plain steel and already rusting, indicating violation of corrosion protection requirements.
>
> - Missing or Poor Grout Under Baseplate:
> Strong-Wall base is not fully supported with non-shrink grout. Visible gaps and sloppy fill indicate inadequate load transfer into the foundation.
>
> - Insufficient Thread Engagement:

Gmail

Exhibit 7

Steven Huang <thestevenhuang@gmail.com>

1077 Fell - south wall/ door.

Mark B <barbcon1@gmail.com> Fri, May 9, 2025 at 5:30 PM
Reply-To: mark@quakeprep.com
To: soumya sastry <soumya.sastry@gmail.com>
Cc: Mark Barbagelata <mark@quakeprep.com>, Darquison Martins <darquison@enertiadesigns.net>, Steven Huang <thestevenhuang@gmail.com>, Doug Burrows <Doug@veloxsf.com>, "Eng. Jefferson Chen" <jefferson@enertiadesigns.net>, haraprasad sastry <haraprasadsastry@yahoo.com>, Ariel Lorenzale <ariel@veloxsf.com>, lorenzaleariel@gmail.com

Soumya,

Your claims are incorrect, derogatory and completely without merit.

The 2x6 in question is cladding over the structural beam and offers zero structural integrity.

We can replace the entire lengths of 2x6 if it will make you feel better.



Please refrain from further contact with Seismic Retrofitters.
The EOR or the building inspector can request structure corrections directly with me if needed.

Mark

Seismic Retrofitters Inc.
415-822-4200

Exhibit 8

COMPLAINT DATA SHEET

Complaint Number:	**202542876**		
Owner/Agent:	OWNER DATA SUPPRESSED	Date Filed:	
Owner's Phone:		Location:	1077 FELL ST
Contact Name:		Block:	0825
Contact Phone:		Lot:	050
Complainant:	COMPLAINANT DATA SUPPRESSED	Site:	
		Rating:	
		Occupancy Code:	
		Received By:	JTRAN
Complainant's Phone:		Division:	BID
Complaint Source:	WEB FORM		
Assigned to Division:	BID		
Description:	date last observed: 04-SEP-25; time last observed: 11 AM; identity of person performing the work: Velox, Seismic Retrofitters, E; floor: 1; exact location: Main Bldg; building type: Residence/Dwelling WORK W/O PERMIT; WORK BEYOND SCOPE OF PERMIT; STRUCTURAL PROBLEMS; ; additional information: Work w/o Permit: - cut x brace in the front of the building not on plans. Lower unit and garages were added illegally at some point without structural plans. Work done beyond Scope of Permit: - Significant dry rot repair at Line D on both sides supporting cantilever floor to main building. Engineer said solution needs diaphragm ties and drag struts. - Floor joists under 1075 Fell were altered. - More walls were removed than indicated on plans. - Brick chimney at N-S shearwall not on the plan. Plan shows one continuous shearwall. - Plans call for beams under cantilevered floor to be verified in the field. They were not verified and corrected on the plans. - Heights of		
Instructions:			

INSPECTOR CURRENTLY ASSIGNED

DIVISION	INSPECTOR	ID	DISTRICT	PRIORITY
BID	LARA ARAIZA	6385	10	

REFFERAL INFORMATION

COMPLAINT STATUS AND COMMENTS

DATE	TYPE	INSPECTOR	STATUS	COMMENT	UPDATED BY	DIV
09/05/25	CASE OPENED	Lara Araiza	CASE RECEIVED		Jackie Tran 05-SEP-25	INS
09/05/25	OTHER BLDG/HOUSING VIOLATION	Lara Araiza	CASE UPDATE	Case reviewed and assigned to district inspector per JG -jt	Jackie Tran 05-SEP-25	INS

COMPLAINT ACTION BY DIVISION

NOV (HIS): **NOV (BID):**

Inspector Contact Information

Online Permit and Complaint Tracking home page.

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COMPLAINT DATA SHEET

Complaint Number:	**202543828**		
Owner/Agent:	OWNER DATA SUPPRESSED	Date Filed:	
Owner's Phone:		Location:	1077 FELL ST
Contact Name:		Block:	0825
Contact Phone:		Lot:	050
Complainant:	COMPLAINANT DATA SUPPRESSED	Site:	
		Rating:	
		Occupancy Code:	
		Received By:	JTRAN
Complainant's Phone:		Division:	BID
Complaint Source:	WEB FORM		
Assigned to Division:	BID		
Description:	date last observed: 23-SEP-25; time last observed: 11; identity of person performing the work: Velox, Seismic Retrofitters; exact location: Main Bldg; building type: Residence/Dwelling WORK BEYOND SCOPE OF PERMIT; ; additional information: At 1077 request, Complaint clarifies that observation is ongoing but construction activities 12/23-7/25 so far. Complaint also adds what got truncated in previous complaint: Project needs one correct plan set with new structural calculations that are complete. Structural Problems Code violations: CEBC 2022 503.13. Building needs to be evaluated per SFEBC 2022 Section 202; considered 3 story at the back per CBC 2022 Section 2308 because of the cripple wall. Corrections: Plans call for beams under cantilevered floor to be verified in the field. They were not verified and corrected on the plans.// Heights of shearwalls do not match what was in the calculations. Lines C, D, and E are calculated at 8 feet, not 11- 13.5 feet.//Details aro		
Instructions:			

INSPECTOR CURRENTLY ASSIGNED

DIVISION	INSPECTOR	ID	DISTRICT	PRIORITY
BID	LARA ARAIZA	6385	10	

REFFERAL INFORMATION

COMPLAINT STATUS AND COMMENTS

DATE	TYPE	INSPECTOR	STATUS	COMMENT	UPDATED BY	DIV
09/24/25	CASE OPENED	Lara Araiza	CASE RECEIVED		Jackie Tran 24-SEP-25	INS
09/24/25	OTHER BLDG/HOUSING VIOLATION	Lara Araiza	CASE UPDATE	Case reviewed and assigned to district inspector per JG -jt	Jackie Tran 24-SEP-25	INS
09/26/25	OTHER BLDG/HOUSING VIOLATION	Lara Araiza	CASE UPDATE	Spoke with complainant in regard to continued complaint. DLA	David Lara Araiza 26-SEP-25	BID
11/19/25	OTHER BLDG/HOUSING VIOLATION	Lara Araiza	CASE UPDATE	Completed site visit/inspection for revision permit #202506269586, scheduled 11/19/2025 Wednesday. Directed project sponsor to obtain a new revision permit to reflect work not captured under previous revision permit #202506269586. DLA	David Lara Araiza 21-NOV-25	BID

COMPLAINT ACTION BY DIVISION

NOV (HIS): **NOV (BID):**

Inspector Contact Information

Online Permit and Complaint Tracking home page.

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Exhibit 9

ANDREW R. CATTERALL (SBN 221089)
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acatterall@zfplaw.com

Attorneys for Claimant,
SOUMYA SASTRY

JAMS

SOUMYA SASTRY, Claimant, vs. STEVEN HUANG, and Does 1-10, inclusive Respondents.	JAMS Case No.: **DECLARATION OF SOUMYA SASTRY IN SUPPORT OF MOTION FOR APPOINTMENT OF AN EMERGENCY ARBITRATOR AND FOR INTERIM RELIEF**

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I, Soumya Sastry, declare as follows:

1. I am competent to make this declaration and have personal knowledge of the facts stated herein. If called upon to testify, I could and would testify competently to the matters stated herein.

2. I own 1075 Fell Street, San Francisco, California 94117–which is located in a two-unit condominium development project (the "Property"). The Property is governed by the Covenants, Conditions and Rules (the "CC&Rs") for 1075-1077 Fell Street. A true and correct copy of the CC&Rs are attached hereto as "**Exhibit A**" to the Arbitration Demand and is incorporated herein by this reference. As documented in the CC&Rs, I hold a 60% ownership interest in the Property.

3. Steven Huang ("Respondent") owns 1077 Fell Street and holds a 40% ownership interest. We both purchased our units in 2016. 1075 Fell comprises the second story of the two-unit building.

4. I am also the President of the 1075–1077 Fell Street Homeowners Association ("Association"). Under CC&R § 5.3, the presidency alternates annually unless an owner is unfit to serve. Because Respondent has not participated in Association duties, I have continued to serve as President under that provision.

BACKGROUND

3. In 2023, Mr. Huang started a down-to-the-studs remodel of his Unit, using Velox Design and Construction ("Velox") as the contractors. In 2024, the Association entered into an agreement with Velox for a "Seismic Upgrade." In September 2024, Engineer of Record Enertia (Jefferson Chen) told me that Enertia designed a full seismic upgrade of the ground level to current code, with complete seismic calculations. He told me that it was called voluntary because it was not part of the mandatory soft story retrofit program. The Association paid for the engineering, architectural plans, and the 1077 Fell permit. (True and correct copies of: an email from Velox describing the work is at "**Exhibit 15**;" the Velox quote for the seismic engineering and architecture is at "**Exhibit 16**;" Proof of payment is at "**Exhibit 17**;" the Velox quote for the seismic upgrade is in "**Exhibit 32**.")

4. In June 2024, the Association housepainter, Pedro Jimenez, found extreme dry rot on main structural beams that support a cantilever extension of my unit (See **Exhibit 13**). In the structural plans, the locations of the dry rot work are at Line D (See **Exhibit 3**, S-2). Enertia, Velox, and the painter collaborated on an emergency repair (See **Exhibit 14**). In May 2025, A DBI Inspector (David Lara Araiza) issued a corrections notice based on the fact that dry rot framing needed to be included in the permit. I told Respondent immediately. (A true and correct copy of corrections notice is in "**Exhibit 18**.")

5. In late September 2024, I learned from another contractor (ABEI) that "Voluntary Strengthening" is not the same as a voluntary Seismic Upgrade, and that the DBI plan check standard of review could be a low bar (a true and correct copy of the email from ABEI is provided in "**Exhibit 19.**") In subsequent research with the DBI, I learned that this meant that the standard of code review was less and that they simply were checking to make sure the plans did not make the building worse off than before. (See **Exhibits 3** and **6**, S-1, where the plans are marked "Voluntary Strengthening.")

6. Because ABEI raised the possibility that our plans were not a Seismic Upgrade but a Voluntary Strengthening, and because Doug Burrows of Velox described the work so differently than Scot Peterson of Velox had, I became concerned about the design intent of our plans. ABEI suggested getting a peer review. In October 2024, I retained Chiawang Yeh, S.E., to conduct an independent peer review of Enertia's structural plans and calculations for the seismic upgrade work. In Mr. Yeh's

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comments on the calculations, he identified several missing structural details and told me by telephone the plan was only 80% complete. (True and correct copies of Mr. Yeh's comments on the calculations and plans are attached hereto as "**Exhibit 2**" and "**Exhibit 3**") He identified a critical failure: the lack of a shear wall at Line A, which was reflected in the calculations but not in the drawings (See Id.). Mr. Yeh explained to me by telephone that the drawings should reflect the calculations. Mr. Yeh also identified other key deficiencies including no overturning force calculation at the Simpson Strong wall, lack of drag ties, lack of diaphragm connection at Line D for the cantilevered floor, no calculation for the N-S walls, and inconsistent inputs, among other flaws. (*Id.*)

7. I provided Mr. Yeh's "peer review" conclusions immediately to Enertia upon receipt, but Enertia (Jefferson Chen) said that their job with Velox was completed when the DBI approved the plans, and thus could not act on Mr. Yeh's comments. We proceeded with hiring a contractor despite the peer review, because we understood the building was in a compromised state according to Doug Burrows of Velox, and because of Respondent's time pressure. However, I provided that contractor, Seismic Retrofitters, a copy of the peer review so they could address the important findings, as they are self proclaimed experts in seismic retrofits. (A true and correct copy of the Seismic Retrofitters contract is provided in "**Exhibit 33**"). Between the Velox and Seismic Retrofitters' payments, I personally contributed over $60,000 to the seismic upgrade.

8. In March 2025, Seismic Retrofitters cut a 100-inch by 42-inch rough opening for a new fire door in the Line D shear wall based on Respondent's and Velox's informal direction and their incorrect reading of the plans. On March 12, 2025, I happened to catch Seismic Retrofitters (Mark Barbagelata) on-site. I recall that he said that he could not find the dimensions of the door at line D, complaining about Doug sending details via text and Doug's unprofessionalism, and concerned that there would not be the required 45 inches above and 20 inches below the door. On March 17, I told Respondent and the contractors that I do not approve of this size of rough opening, which I later learned was not on the approved plans. See a true and correct copy of an email from Respondent discussing how to respond to Seismic Retrofitters in "**Exhibit 20**" where he says that Respondent and Velox directed the rough opening, which was not on the plans. See a true and correct copy of emails with a true and correct copy of the screenshot where I told Seismic Retrofitters they misread the plans in "**Exhibit 8**"

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on 4/24/25 at pg 3. Enertia confirmed that this rough opening required engineering analysis and additional hold downs. (See **Exhibit 8**, pg. 1) I consistently told Respondent and this team that I did not approve this size rough opening (See **Exhibit 8**, pg. 8). True and correct copies of photographs of the rough opening are in "**Exhibit 12**."

9. Since the unauthorized rough opening required new engineering analysis anyway, I considered it a responsibility to address the peer review comments. Between various meetings and emails, I asked Respondent and his team for the peer review comments to be addressed at least twenty times from March through June, when I hired Detlev Doring, SE. I hired Doring because the 2025 Enertia Calculations and Plans I received were far less detailed than what I was expecting and did not address the peer review comments from Chiawang Yeh.

10. On June 4, 2025, Velox sent me a new scope of work from Enertia covering: "the two rear openings, changing to a recessed steel beam on the second-floor framing for a 10'-6" ceiling heights, and updating the engineering background per the latest architectural floor plans." (A true and correct copy of the 2025 Enertia Scope is attached in "**Exhibit 21**." I immediately responded that this scope was less than what Respondent and I had agreed on in our Owner's Meetings. Items missing included: Structural support for the cantilevered floor, including diaphragm tie to the main structure; updated calculations; hourly work to address life-safety and structural integrity issues from peer review; clear definition of special inspection scope and process; and availability for construction administration and questions. (A true and correct copy of my immediate email response is attached in "**Exhibit 22**.")

2025 WORK AFTER MARCH VIOLATES CC&Rs

11. On June 18, 2025, Respondent's team sent me two documents: the Enertia 2025 plans and calculations, saying that the emails substituted as an Owner's Meeting. Within 15 minutes, I responded and said that the email does not substitute for an Owner's meeting and as such the 10 day timeline does not apply. To be safe, I said that nothing is approved without affirmative approval. I reiterated the previous documentation request I sent, which I consider reasonable documentation to evaluate the plans and construction project. A true and correct copy of email communications is attached in "**Exhibit 23**," and the Enertia 2025 plans and calculations are in **Exhibit 5** and **Exhibit 6**.

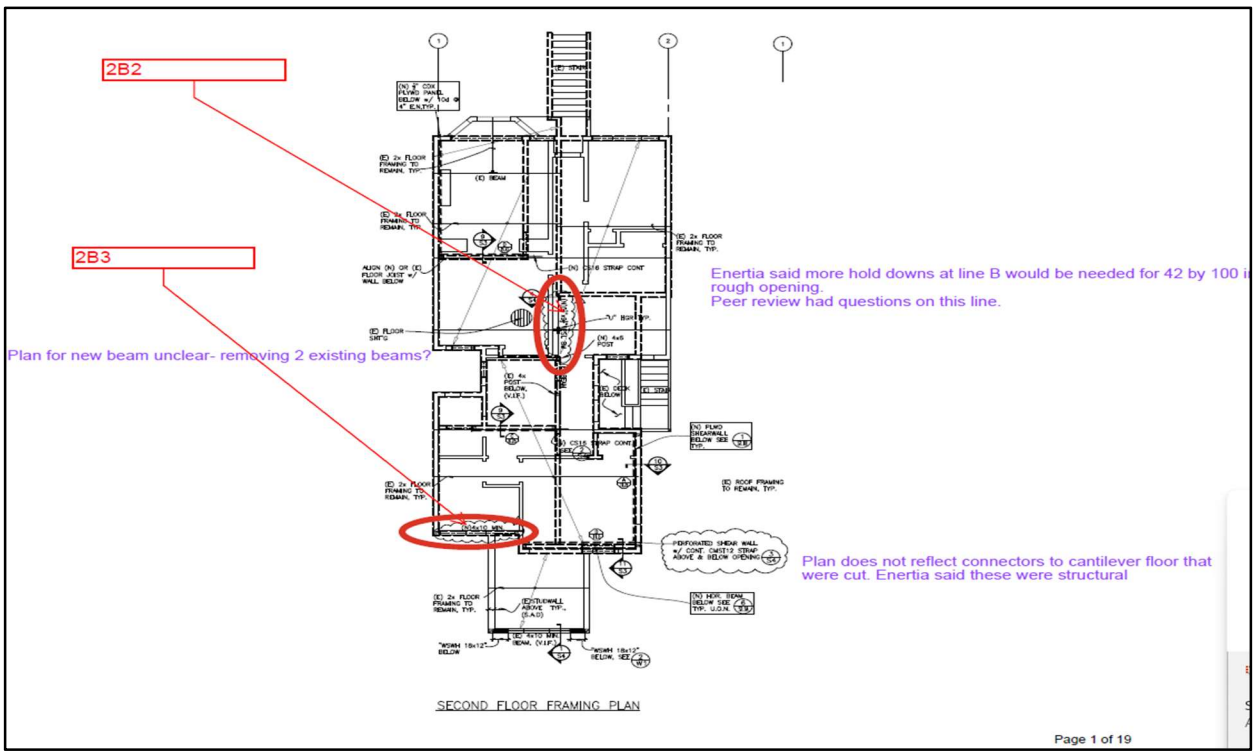
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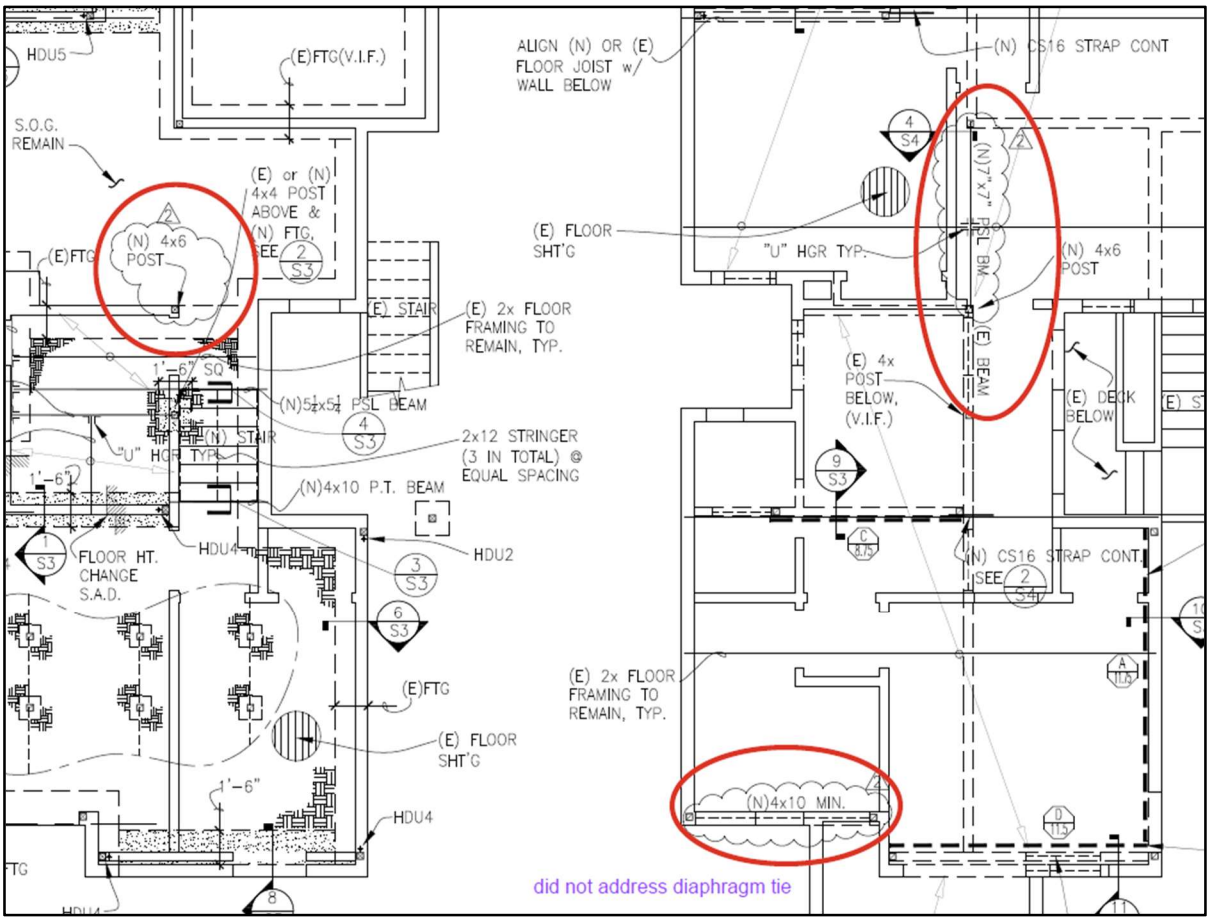
12. On June 20, I followed up to this email with some of the documents I reasonably required, including a formal owners meeting with a physical full size copy of the updated structural and architectural plans, correspondence with Enertia to understand the errors Doug had found, updated and original Enertia scopes of work, inclusion on communications with Enertia, understanding design intent, and more. (See **Exhibit 23**.)

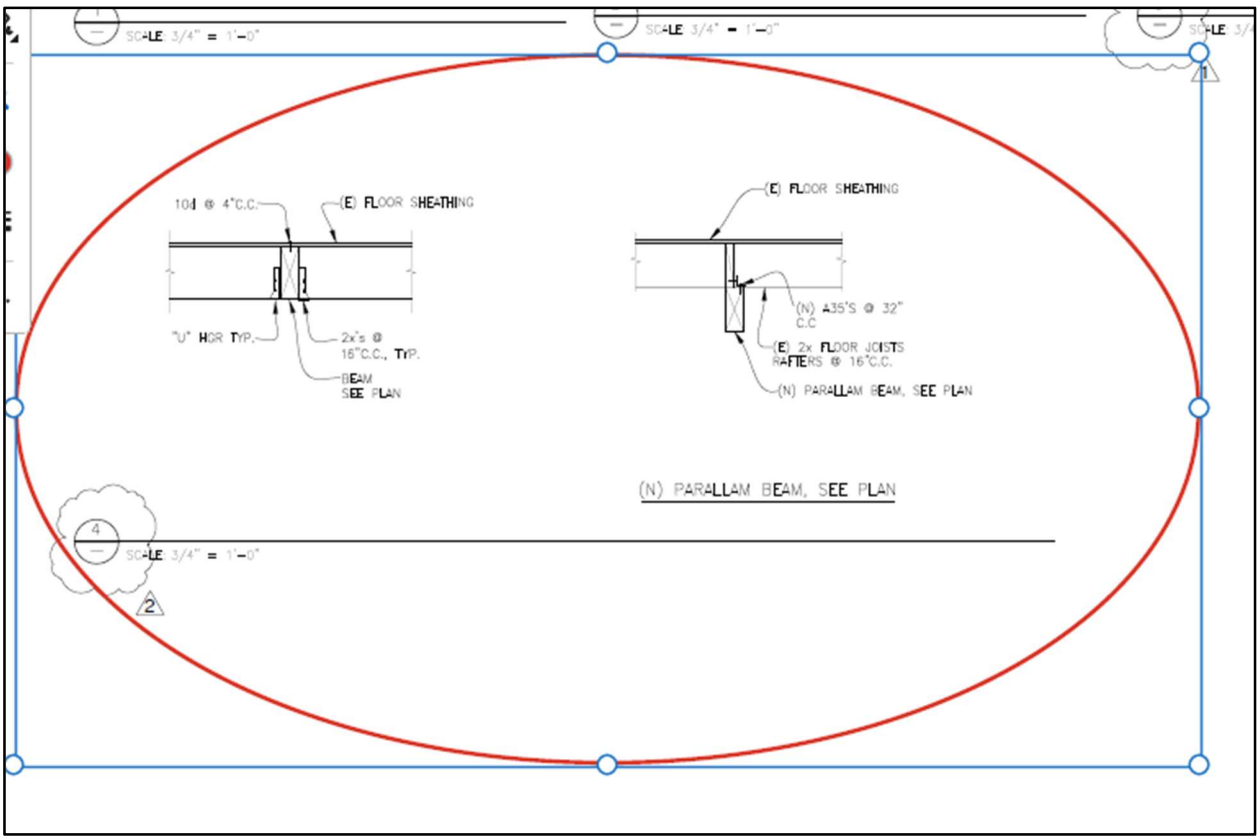
13. On June 23, Respondent used a previously scheduled short half-hour zoom meeting to touch base on our to-do list to present the Enertia plans and calculations to me. I immediately stated that this is not a formal Owner's meeting on the plans. However, I noted that the new plans– which covered the rough opening and a new post, header, and structural beam– were inconsistent with the previously provided Enertia scope of work, comments on the scope of work, and other points. Despite the fact that the Enertia scope said that they would address the dry rot framing at both sides at Line D, they only added a header above Respondent's new sliding door. I also made it clear at the meeting and in follow up emails that the Structural plans were not approved (a true and correct copy of the email is attached in "**Exhibit 24"**). Screenshots of the Enertia calculation and plans dated May 27, 2025 but provided to me on June 18th are below with the changes from the 2024 plans circled in red. The rough opening is not shown. The comments in purple are mine.

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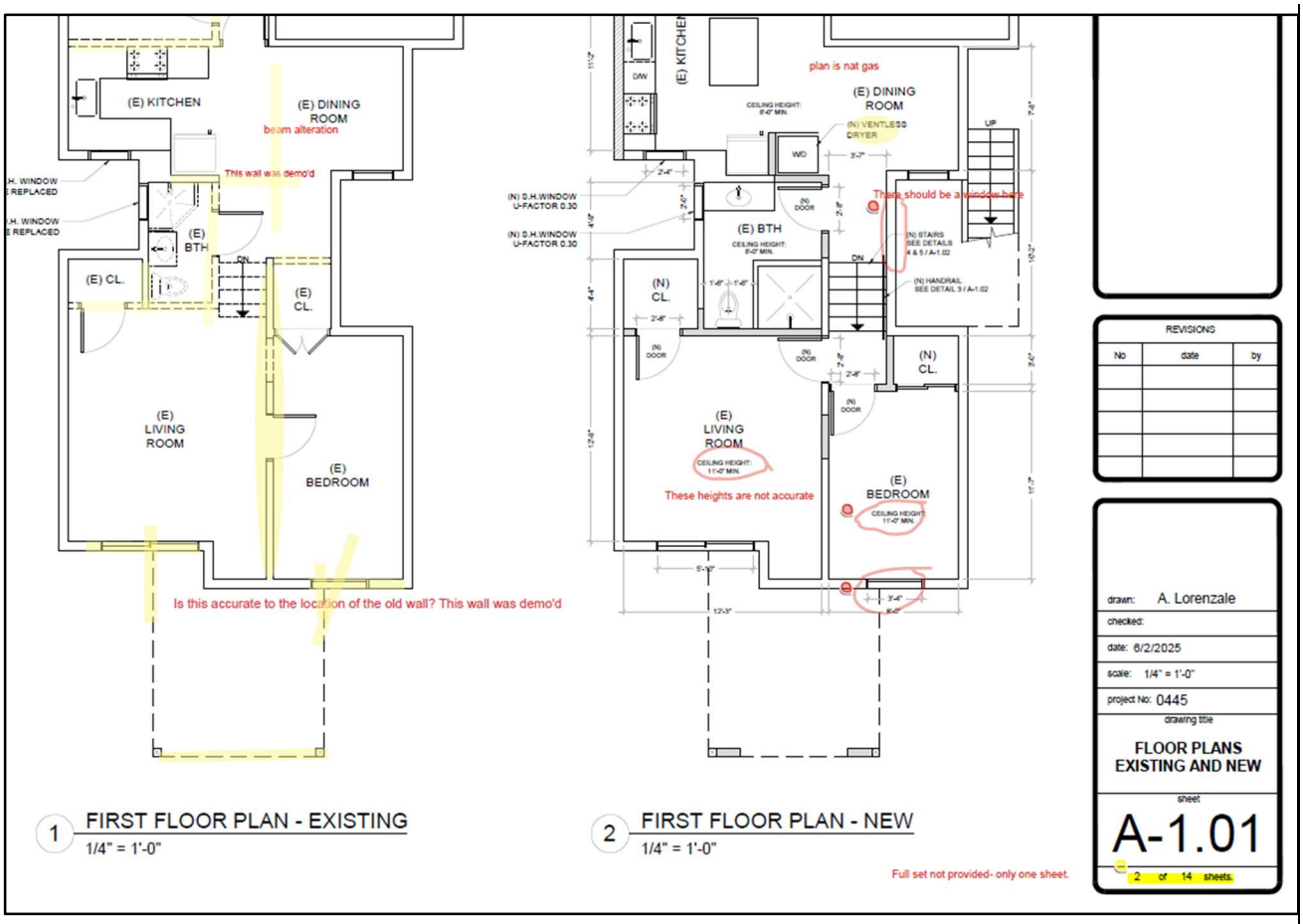


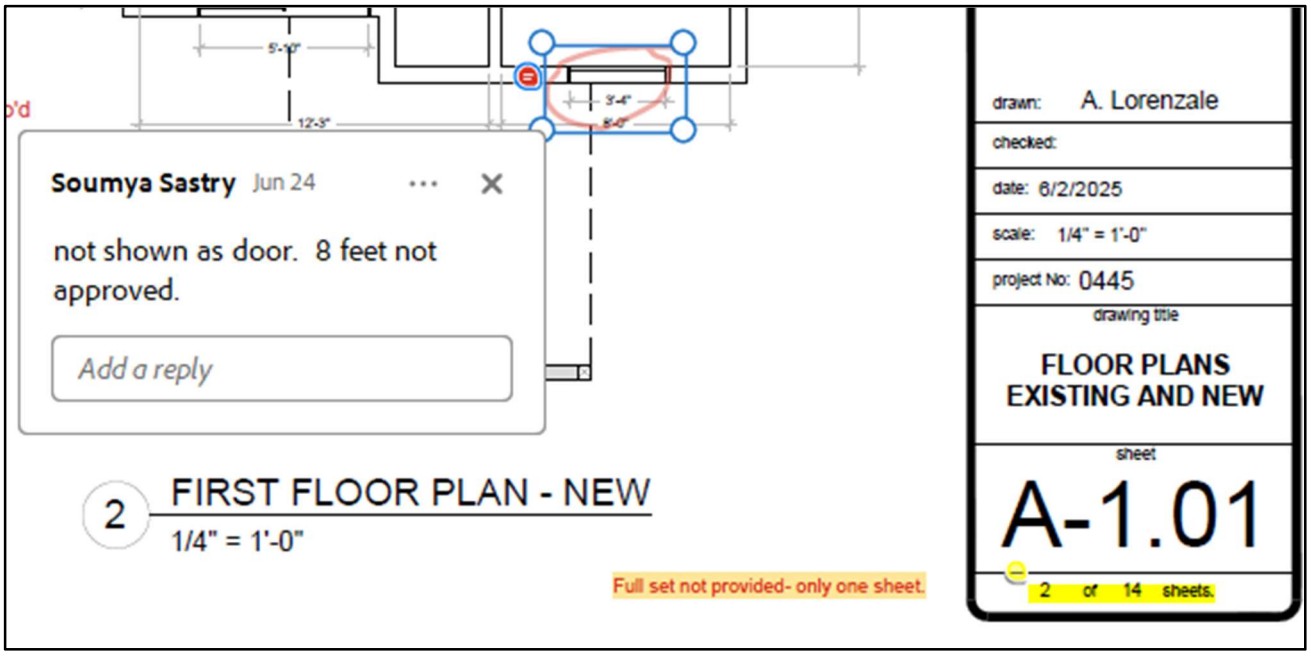


14. On June 24, Respondent provided me one PDF page extracted from an architectural package dated 6/2/2025. I know that the package had more than this one page because I could see the page count, and I later reviewed the whole packet at the DBI. I immediately responded, pointing out that this page was not updated from the 2024 package and provided comments in PDF. The page did not show the Line D rough opening dimensions in dispute. Screenshots of what I received, with my comments in red and highlights, are below. (A true and correct copy of the page I received is attached in "**Exhibit 25**." A true and correct copy of my email response is in "**Exhibit 26**.") Because of the errors, I rejected the architectural plans, as also shown in the comment below.

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15. On June 26, 2025, despite having only given me the plans a few days prior, my not approving of the plans, and still claiming he was getting responses to my questions, Respondent unilaterally filed

the 2025 revision permit (No. 2025-0626-9586). I realized this on July 1, and immediately emailed Respondent's team that no works or permits were to be submitted without my permission. When I brought up the permit to Respondent in a zoom meeting, he told me that the purpose was for detailed DBI review and not to undermine the Association review process. (A true and correct copy of my email response is in "**Exhibit 27**.")

16. On June 26, 2025, I told Respondent that the Association would need another independent structural engineer review. As Mr. Yeh was unavailable, I retained Detlev Doring, S.E. to continue the structural review. On July 3, I told Respondent and his team to expect an initial review on the Enertia plan from Mr. Doring the following week.

17. On July 9, I emailed Respondent and his team that I would be out of town, off-grid, the week of July 14 and reiterated that there was no permission to proceed (See **Exhibit 27**).When I came back from my trip, I immediately realized that Association-related structural work had taken place in my absence and against my explicit instructions. At this point, the updated 2025 permit had not been pulled, so the work was done without permit. (A true and correct copy of my email communications is in "**Exhibit 28**.")

18. On July 23, Respondent's team pulled the permit, which I saw on July 24th. I immediately told them this was blatantly in violation of the CC&Rs. (A true and correct copy of my email communications is in "**Exhibit 29**.") A copy of the permit, which I obtained from Respondent's Board of Appeals Briefing and not directly from Respondent's team, is in "**Exhibit 34**."

THERE IS A DANGEROUS CONDITION AT THE PROPERTY

19. The review by Detlev Doring, S.E. (License S 3634) identified life safety issues, including foundation failures, seismic code violations, structural irregularities, missing diaphragm ties, shear wall capacity shortfalls, missing calculations, and inaccurate site representation. Mr. Doring told me that by stiffening the center of the building, the weak story condition at the front has been worsened (See Doring Declaration at 5).

20. Between the end of June through October, I relayed Mr. Doring's findings to Respondents and his team many times and through many channels, never receiving a single response. Mr. Doring and I met with Enertia, Seismic Retrofitters, Velox, Kathleen Gevertz, and Respondent onsite at the August

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8, 2025 site visit, and explained the errors. We expected a response based on that meeting. There was no follow up, other than an email from Seismic Retrofitters' Mark Barbagelata stating he agreed with Mr. Doring's conclusion. (A true and correct copy of the email forwarded to me by Detlev Doring is Attached in "**Exhibit 30**.")

21. I also took several actions to get this information to the DBI, which culminated in the DBI requesting that we work together before filing the next revision permit (A true and correct copy of this email is in "**Exhibit 31"**). The DBI repeatedly told me that they assume that permit applicants to provide the DBI with accurate information. Their plan checkers do not verify site conditions. However, their inspectors told me that they only check to see if the work matches the permit. Thus, it appears to me that there is a gap if the permit applicants do not represent the site correctly. I believe that is what happened here. As such, simply having the project pass inspection does not mean that it will meet the Association's original intent of a seismic upgrade.

22. It has taken me many months, countless emails, three DBI complaints, two Board of Appeals permit appeals, and at least three corrections notices to force Respondent's team to take any action, but I have no confidence that they will address all of the life-safety issues, especially because Respondent has told me that they benefit me, with the upper, larger unit, more than they benefit him. Respondent's team ignored the life-safety concerns presented to them in Mr. Yeh's findings in October 2024 and the many communications from Mr. Doring in 2025. In his briefing for the rehearing, Respondent indicated that he would be filing an "as-built" permit, signaling that he did not plan to take any action to address the code violations and life safety problems. (A true and correct copy of Respondent's Rehearing Briefing is attached as "**Exhibit 35**.") On 11/3/2025, I overheard Velox (Burrows) saying that they will install a "dumbed down door," making me concerned that they will do a cosmetic, not structural fix.

23. Despite not having a valid building permit in place, Respondent's team re-started construction the week of October 20th, without any coordination or communication with me. During the week of October 20th, electricians were here. My father spoke with them, and said that they were drilling into my floor joists for Respondent's electrical work. On October 27th, framing work started. I met a contractor outside the home who said he was hired to replace the structural beam under my home, for

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which Respondent does not have Association permission. Respondent's team altered the main structural beam under my kitchen the week of November 3rd, 2025.

24. Based on Doring's findings (See Doring Declaration), the building may be structurally unsafe despite over $100,000 in seismic upgrades. The Association faces significant liability exposure and potential future remediation costs, which disproportionately impact me, both from a safety and cost perspective.

IT IS EASIER TO FIX PROBLEMS NOW BEFORE CONSTRUCTION ADVANCE FURTHER

25. Respondent has refused and ignored repeated requests for mediation and problem-solving required under CC&Rs Section 7.3(A). Between June and November, I requested dispute resolution meetings or third party mediation over 20 documented times. Respondent had not engaged. (See "**Exhibit 36**" for true and correct copies of emails between Respondent and me). I directed my attorney to send letters requesting some mediation on 10/21/25 and again 11/5/25 (true and correct copies are attached as "**Exhibit 37**" and "**Exhibit 38**"). Respondent blocked my phone number in July 2025, while I was out of town and during the unauthorized construction. Respondent appears to have blocked my email on November 6, 2025.

26. Respondent's unit is still in a down to the studs condition, though I understand that because Respondent's team directed Seismic Retrofitters to nail down the line D shearwall and other new construction, some necessary solutions will become much more difficult, expensive or even logistically impossible. On November 6, I saw that Respondent's team has finished a great deal of framing that is covered in an expired permit.

27. On October 28 and November 3, 2025, while Respondent's construction team was working at the property. Construction activities were so intense that the whole house shook and my gas got repeatedly disconnected. I was within hearing distance of their discussions. I heard Velox express concern that installing hold-downs at Line D would be more difficult because the shearwall nailing had already been completed, and that new plumbing and electrical runs (installed Q2-Q4 2025) would obstruct additional hold-downs at Line B. I also heard discussion suggesting the door at Line D would be 'dumbed down,' which I understood to mean cosmetically covered rather than structurally

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corrected. These statements heightened my concern that structural code deficiencies previously identified by engineers might be hindered by advancing construction or concealed by finish work. Because Respondent has denied me site access, I have not been able to verify these conditions or obtain independent contractor feedback. On November 6, I saw from outside that Respondent's team has completed a large amount of structural work in the Common Area.

28. On September 23, 2025, Respondent told me that he was amenable to waiting until after mediation to start construction and did not want to engage in mediation in parallel with the Board of Appeals Process. (A true and correct copy of my meeting notes included in an email is included in "**Exhibit 39**.") However, the subsequent start of construction and threatening letters from Respondent's attorney bely that promise. (A true and correct copy of the letter from Respondent's attorney is included in "**Exhibit 40**.") On October 28, I also overheard Respondent's team saying something about how to approach the DBI, and my fear is that they intend to continue to bypass me.

29. While I do not have official standing with the DBI because the permit is on 1077 Fell, the BOA did direct the DBI to take the Association's engineering concerns into account. On 10/16/25, the DBI emailed me that they would like us to work together prior to the revision permit being submitted (**Exhibit 31**). I had already emailed Mr. Doring's stamped findings to Respondent's team, but I then forwarded this email from the DBI. I have never received any responses to emails from October 2025.

30. Respondent's team has a track record of doing work before it is permitted. They did a full demolition of 1077 Fell in December 2023 when the permit was not approved until August 2024. They have done plumbing and electrical work on 1075 Fell but not pulled a permit for 1075 Fell. They did the above-described work in July 2025 before the permit was pulled. I do not know what actions they will take without DBI or my permission because of this track record and since they are not talking to me.

31. The October 2024 permit expired on 9/27/25, so my understanding is that further work not on the 2025 Revision Permit's limited scope is not under an active permit. (A true and correct copy of the 2024 job card with expiration date on page 1 is attached in "**Exhibit 41**.") This was confirmed on a November 6, 2025 phone call with David Lara Araiza, who said that (1) he emailed Respondent's team that day telling them that they need new permits and (2) that Respondent is not allowed to do

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work outside of the 2025 permit. However, they have a history of doing advance work, some of which is now inhibiting good solutions. Most of the October- November 2025 construction activity is not under an active permit. In addition to another revision permit, Respondent needs 2 renewal permits.

32. I believe the only way I can get these life-safety issues resolved and my Association rights met - in a way that will protect my family in an earthquake and will not result in more costs to me- is for construction to be paused and I have site access. Ideally, Respondent's team would work with me in an open and collaborative fashion as one team. My preference is to stop being treated like the enemy and be part of the team. However, based on Respondent's and his team's extreme action and ad hominem attacks, I fear we cannot work together and that the Association will have to spend money redundantly, unless I can recover these as an assessment from Respondent, to right the wrongs. At least with site access and a pause to construction, I can bring other contractors in to properly evaluate the site before Respondent does work that cannot be undone.

33. While I am not opposed in principle to interior finish work within Respondent's unit boundaries, I do not believe such work can proceed until the underlying structural and engineering issues affecting shared building systems are resolved with restored site access. The core project elements—seismic upgrade, shear walls, structural beams, and foundation work—are building-wide improvements that require coordinated Association governance and verified engineering compliance.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct. Executed on November 7, 2025, at San Francisco, California.

Soumya Sastry

Soumya Sastry
President, 1075-1077 Fell Street Homeowners Association

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Exhibit 10

Gmail

Steven Huang <thestevenhuang@gmail.com>

1077 Fell St. Shearwall Inspection (07/21)

Jacob Dobson <jacob@seismicretrofitters.com> Mon, Jul 21, 2025 at 1:27 PM
To: Doug Burrows <doug@veloxsf.com>
Cc: Mark Barbagelata <mark@quakeprep.com>, Steven Huang <thestevenhuang@gmail.com>, kathleen gevertz <kagevertz@gmail.com>

Hello Doug,

The following is a summary of the building inspection that took place July 21st 2025 at 1077 Fell St.

I met with inspector Matthew Sum around 12:55pm for the shearwall nailing inspection. While we were looking at the plans in what is going to be the dining room area Soumya came into the garage asking who was there and what was going on.

After learning that an inspection was taking place Soumya stated that that there should not be any inspections without her approval, and that since she hadn't approved of this inspection we would have to stop immediately. After clarifying that she was a homeowner inspector Matthew complied with her request and cancelled the inspection.

Thank you,
-Jacob, Seismic Retrofitters
415-509-0552

BRIEF SUBMITTED BY THE PLANNING DEPARTMENT

San Francisco Planning

49 South Van Ness Avenue, Suite 1400
San Francisco, CA 94103
628.652.7600
www.sfplanning.org

BOARD OF APPEALS BRIEF

HEARING DATE: January 14, 2026

January 8, 2026

Appeal Nos.:	25-049 and 25-050
Project Address:	1077 Fell Street
Block/Lot:	0825/050
Zoning District:	RM-1 (Residential-Mixed, Low Density) Family and Senior Housing Opportunity SUD
Height District:	40-X
Staff Contact:	Corey Teague, Zoning Administrator – (628) 652-7328 corey.teague@sfgov.org

Background & Analysis

The two building permits subject to this appeal were not required to be reviewed or approved by the Planning Department. Additionally, the previous building permits, in which the subject permits reference, were also not required to be reviewed or approved by the Planning Department. Therefore, the Planning Department has no position on these appeals.

cc: Soumya Sastry (Appellant)
Joe Ospital (Department of Building Inspection)

BRIEF SUBMITTED BY DBI APPEAL NO. 25-049

Board of Appeals Brief

Hearing Date: January 14, 2026

January 14, 2026

Appeal #: 25-049
Permit: Alteration Permit # 2025-1114-9677
Project Address: 1077 Fell Street
Block/Lot: 0825/
DBI contact: Joseph Ospital, Senior Building Inspector. 628-652-3546
Joseph.ospital@sfgov.org

Permit description:

The Permit Application before the Board this evening is for the Recommencement and completion of work approved under Permit Application Numbers #2023-0926-7475 and 2024-0517-2393. Per the Section provided below, Recommencement permits were issued.

Per SFBC Sec.
106A.4.4 Permit expiration. Every permit issued by the Building Official under the provisions of this code, unless an extension of time has been specifically approved by the Building Official, shall expire by limitation and become null and void when the time allowed in Table B is reached, or when any of the following circumstances is applicable:

1. For Building Official-initiated code compliance permits, the work shall start within 30 days from the date of such permit.
2. If the building or work authorized is suspended or abandoned at any time after the work has started, for a period as follows:
   2.1. Thirty days for Building Official-initiated code compliance permits.
   2.2. One-hundred-eighty days for all other permits.
3. An extension of time from the stated periods may be permitted for good reason, provided such requests for an extension are submitted to the Building Official in writing prior to the end of the time period accompanied by payment of a fee. Unless approved by the Building Official, no more than one extension of time may be granted.
   3.1. For all other permits, see Table B – Maximum Time Allowed to Complete All Work Authorized by Building Permit. The maximum time allowed for Building Official-initiated code compliance permits shall be 12 months for all permits exceeding $25,000 total valuation.
4. A demolition permit shall expire 180 days after issuance. Only one extension of time of 180 days shall be granted upon written request to the Building Official, accompanied by payment of a fee. If there is a permit for a replacement structure, the demolition permit shall expire concurrently with the permit for that replacement structure.

5. The Building Official may administratively authorize the processing of applications involving compliance actions initiated by the Department, in a manner other than set forth in this code, so as to effect said compliance most expeditiously; provided, however, that due process is assured all applicants. In this regard, the Building Official may reduce the time periods set forth in this section as they apply to a second application and permit required by the Building Official to effect full compliance with this code and other applicable laws and regulations if by doing so code compliance would be more expeditiously accomplished.

EXCEPTION: In order to avoid repetitive filings and processing of applications to effect code compliance, the Building Official is hereby authorized to establish alternate procedures and extensions of time from cancellation pursuant to Section 106A .4.1 and from expiration pursuant to this section; provided, however, that the Building Official, in establishing alternate procedures and extension of time, shall proceed as expeditiously as possible toward abatement of the violations.

When a permit is issued but delayed due to actions before the Board of Appeals or other City agencies, or cases in any court of competent jurisdiction, or is under review by a State or regional regulatory body, the time allowable shall be computed from the date of the final action of the agency or court of jurisdiction.

TABLE B – MAXIMUM TIME ALLOWED TO COMPLETE ALL WORK AUTHORIZED BY BUILDING PERMIT

Valuation	Time Allowed (1)	Extension Limitation
$1.00 to $100,000	360 days	360 days
$100,001 to $2,499,999	1,080 days	720 days
$2,500,000 and above	1,440 days	720 days

Conclusion: Conclusion: The permits suspended were for the recommencement of already approved permits, with no change to the scopes of work. Any communications re/changes or upgrades have not been applied for. For these reasons, the Department of Building Inspection believes that this project complies with all applicable Building Code requirements, and therefore the appeal denied.

Joseph Ospital, Senior Building Inspector.

BRIEF SUBMITTED BY DBI APPEAL NO. 25-050

Board of Appeals Brief

Hearing Date: January 14, 2026

January 14, 2026

Appeal #: 25-050
Permit: Alteration Permit # 2025-1114-9676
Project Address: 1077 Fell Street
Block/Lot: 0825/
DBI contact: Joseph Ospital, Senior Building Inspector. 628-652-3546
Joseph.ospital@sfgov.org

Permit description:

The Permit Application before the Board this evening is for the Recommencement and completion of work approved under Permit Application Numbers #2023-0426-7475 and 2023-0609-9711. Per the Section provided below, Recommencement permits were issued.

Per SFBC Sec.
106A.4.4 Permit expiration. Every permit issued by the Building Official under the provisions of this code, unless an extension of time has been specifically approved by the Building Official, shall expire by limitation and become null and void when the time allowed in Table B is reached, or when any of the following circumstances is applicable:

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Joseph Ospital, Senior Building Inspector.