Regular Meeting of the Abatement Appeals Board

March 18, 2026

Agenda Item D1

Appellant Statement

APPELLANT STATEMENT TO THE ABATEMENT APPEALS BOARD

4757 19th Street – Request for Removal of Notice of Violation #202424763-A

I. Introduction and Requested Relief

Appellant respectfully requests that the Abatement Appeals Board remove the Notice of Violation ("NOV") issued against 4757 19th Street and rescind the associated administrative costs and penalties assessed to Appellant.

This request is not an attempt to shift civil liability between neighbors. Rather, it addresses whether Appellant is an appropriate and feasible party for code enforcement of the cited condition. The evidence demonstrates that Appellant cannot feasibly abate the retaining wall condition because the wall exists to retain the elevated yard and imported fill of the uphill parcel at 46 Eagle Street and forms part of a multi-parcel retaining system that must be repaired from the uphill side.

Appellant remains willing to cooperate fully with any structural repair undertaken by the uphill property and, as a voluntary good-faith measure, is willing to install a temporary independent protective barrier on Appellant's property if the Board believes such a measure would assist in risk mitigation.

If the Board determines that full removal of the NOV is not appropriate, Appellant requests in the alternative that the NOV be modified or stayed as to 4757 19th Street and that structural correction responsibility be directed solely to the uphill parcel(s), with Appellant permitted—but not required—to install an independent protective barrier.

II. Physical Configuration and Geotechnical Reality

The retaining wall at issue encloses and supports the terraced rear yard of 46 Eagle Street. Geotechnical investigation has confirmed that approximately six feet of fill was placed to create this elevated yard and that the wall functions to retain that fill and the associated yard improvements.

Annotated site plans, sections, and aerial imagery submitted with this statement illustrate:

- the height of the imported fill retained by the wall (Exhibits G, H1 & H2);
- the continuous U-shaped retaining system surrounding the uphill yard (Ex B);
- the relationship between the wall and the natural grade;
- the limited areas where portions of the wall cross the property line onto Appellant's parcel (Ex C).

Without the elevated yard and imported fill of the uphill parcel, a much lower retaining structure— three feet or less—would be needed at the property boundary. The existing eight-foot masonry wall exists because of, and only benefits, the uphill parcel.

A structural engineer (ECR Engineering) has confirmed that the wall was constructed to retain the elevated yard and fill of the uphill parcel, and that structural repair must address all three sides of the wall system, and that replacement of one side puts the others at risk. (Exhibit L).

Historical aerial imagery from 1938 (Exhibit A) further confirms that the wall predates later development of 4741 19th St and 50 Eagle St parcels and was constructed to create and retain the elevated yard now associated with 46 Eagle Street.

III. Structural Infeasibility of Abatement by Appellant

The wall is not an isolated segment but part of a multi-parcel retaining system extending across several properties. Structural repair or replacement requires excavation, drilled foundations, and construction from the uphill side where the retained soil and yard are located. Such work necessarily affects multiple parcels and cannot be undertaken unilaterally by a single downhill owner.

Appellant does not control the retained soil, does not control access to the uphill yard, and cannot reconstruct a retaining system designed to support the uphill parcel's fill, structures, and improvements. Prior permit applications and proposed easement documents prepared by the uphill owner reflect recognition that repair must originate from the uphill parcel and would require access and structural work affecting neighboring properties.

Even if portions of the wall encroach onto Appellant's parcel, structural responsibility does not become feasible for Appellant. The wall alignment predates current ownership and may have shifted over time, resulting in limited encroachment at certain buttresses. Regardless of alignment, the wall's structural function is to retain the elevated yard and fill of the uphill parcel.

The engineer notes that the wall may have crept across the property line over time and that structural reconstruction cannot be feasibly performed on only one side of the U-shaped wall..

IV. Absence of Immediate Life-Safety Risk to Appellant's Residence or Public

There has been no collapse of the wall. Observed conditions consist of leaning and cracking that have developed gradually over time. (Ex. H, I & J) The Department has not issued an "immediate hazard" or unsafe building evacuation order.

Appellant's residence is located approximately thirty-five feet downhill from the wall. Even in the event of wall failure, the residence and its occupants would not be impacted. The potential impact would be limited to garden areas within Appellant's yard. No public sidewalk, street, or right-of-way lies below the wall or within any potential fall zone.

These facts distinguish this situation from cases involving imminent danger to occupied structures or the public. While the wall warrants structural correction by the responsible party, maintaining the NOV against Appellant does not materially improve public safety and does not facilitate repair.

V. Good-Faith Cooperation and Voluntary Mitigation

Prior to the present enforcement posture, the uphill owner at 46 Eagle Street undertook responsibility for evaluating and replacing the retaining wall and obtained engineering studies, plans, and permits for that purpose. Neighbors, including Appellant, cooperated with site access for engineering review and participated in negotiations regarding easement contracts and construction logistics necessary for an uphill-led repair. (Ex M & N)

This history demonstrates that structural correction of the retaining wall is both feasible and appropriately led by the uphill parcel, which contains the retained fill and elevated yard requiring support. Removal of the NOV as to Appellant would not impede correction of the condition but would allow repair efforts to proceed under the direction of the party best positioned to perform the work.

Appellant has consistently acted in good faith to support a structural solution. Appellant has cooperated in discussions with neighbors, reviewed proposed repair plans, and expressed willingness to grant access where appropriate for reconstruction undertaken by the uphill property.

As an additional voluntary measure, Appellant is willing to install a temporary independent barrier on Appellant's property near the base of the wall to provide localized debris containment if the Board believes this would assist in risk mitigation. This barrier would be entirely independent of the retaining wall and would not constitute structural repair or acceptance of responsibility for reconstruction.

The engineer indicates that such a barrier is not required for structural safety of the residence but may be installed voluntarily to contain damage and prevent access, and does not require engineering design.

Appellant offers this measure solely as a demonstration of continued cooperation and concern for maximum safety. Appellant will continue to provide reasonable access for repair undertaken by the uphill property.

VI. Administrative Costs and Equity

Appellant has incurred several thousand dollars in administrative fees and assessments in connection with the NOV. If the Board determines that Appellant is not an appropriate responsible party for abatement of the retaining wall condition, Appellant respectfully requests

rescission of these administrative costs and any associated liens or penalties assessed to Appellant.

Maintaining such costs against a party who cannot feasibly perform the cited abatement would be inequitable and would not advance correction of the underlying condition.

VII. Conclusion

This is not a question of civil liability between neighbors. It is a question of whether Appellant is an appropriate and feasible party for code enforcement of the cited retaining wall condition.

The evidence demonstrates that:

- the wall exists to retain the elevated yard and imported fill of the uphill parcel;
- structural correction or removal of the soil creating the hazard must originate from the uphill side and cannot be performed by Appellant;
- no immediate life-safety risk exists to Appellant's residence or the public; and
- Appellant remains cooperative and willing to implement voluntary mitigation measures.

For these reasons, Appellant respectfully requests that the Board:

1. Remove the Notice of Violation as to 4757 19th Street;

2. Rescind associated administrative costs and penalties assessed to Appellant; and

3. In the alternative, if removal is not granted, modify or stay the NOV as to Appellant and direct structural correction responsibility solely to the uphill parcel(s), with Appellant permitted but not required to install an independent protective barrier.

Respectfully submitted,

Mark Lauden Crosley (Appellant)
4757 19th Street
San Francisco, California

Exhibits

A. **Aerial 1938**

Shows wall enclosing uphill yard historically.

B. **Aerial 2025**

Shows site with wall photos superimposed.

C. **Site survey 2025**

Establishes geometry and encroachment.

D. **Site plan current**

Shows relationship of parcels and wall.

E. **East &**

F. **West sections**

Show fill and original grade. Based on Peters geotechnical analysis.

G. **Geotech core samples (Peters)**

Proof of imported fill.

H. **Annotated wall photos**

Cracking and fill height.

I. **Lean photo**

Movement toward downhill.

J. **Yard distance photo**

Shows 35 ft to house.

K. **Site plan with proposed barrier**

Shows possible barrier to protect 4757 19th yard.

L. **Engineer's Report**

Results of on-site inspection by ECR Engineering.

M. **Easement agreement**

Prior acceptance of responsibility submitted by 46 Eagle & verbally agreed to by Appellant.

N. **Communications with 46 Eagle St owner**

Show that S. Guerin took for responsibility for wall and construction.

Exhibit A: Aerial 1938

Shows wall enclosing uphill yard historically. Two sides of the wall face unimproved/vacant properties.

Exhibit A

1938 Aerial View of Properties

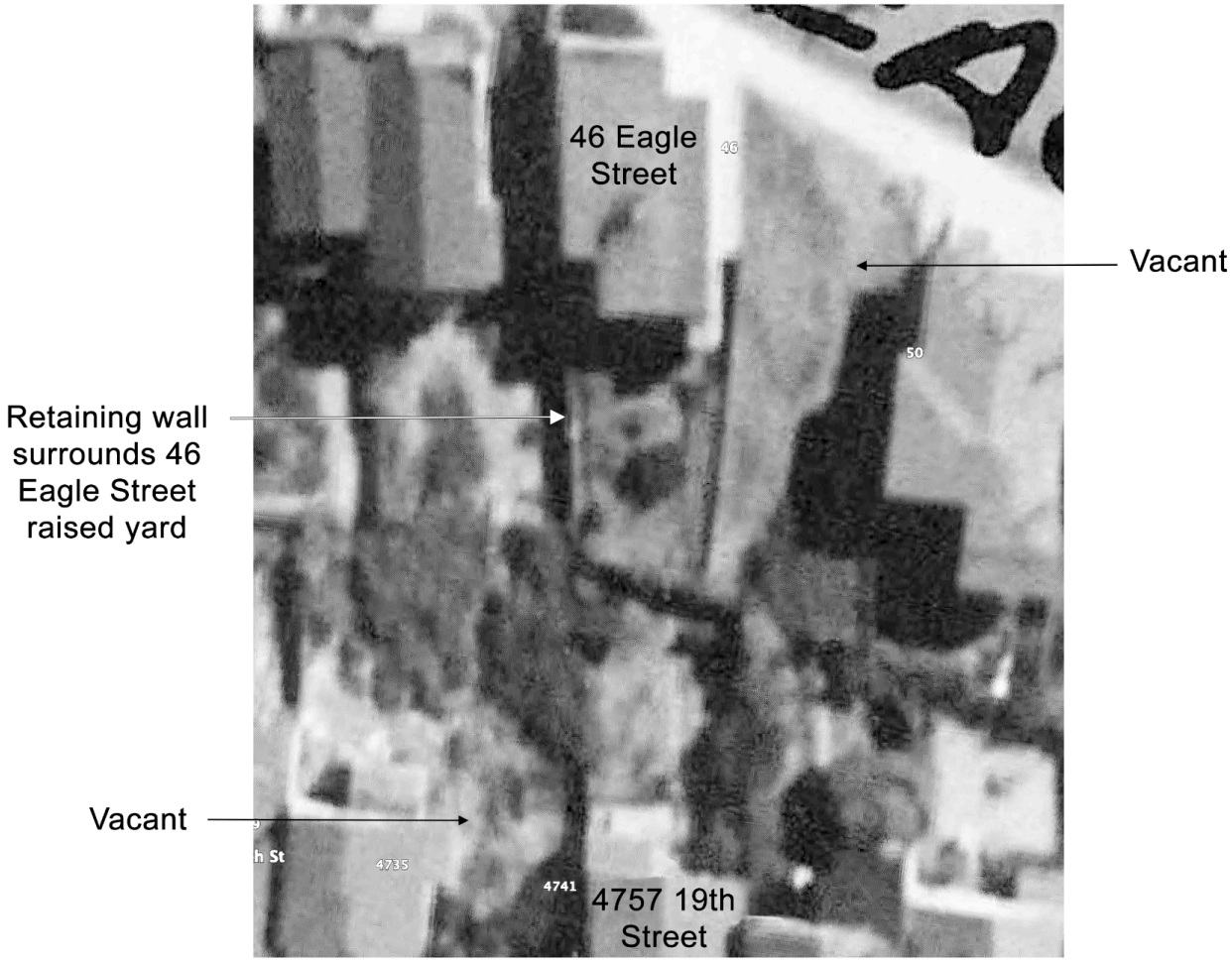


Exhibit B: Aerial 2025

Shows site with wall photos superimposed. The while superimposed line represents the approximate bottom of the fill on the 46 Eagle side.

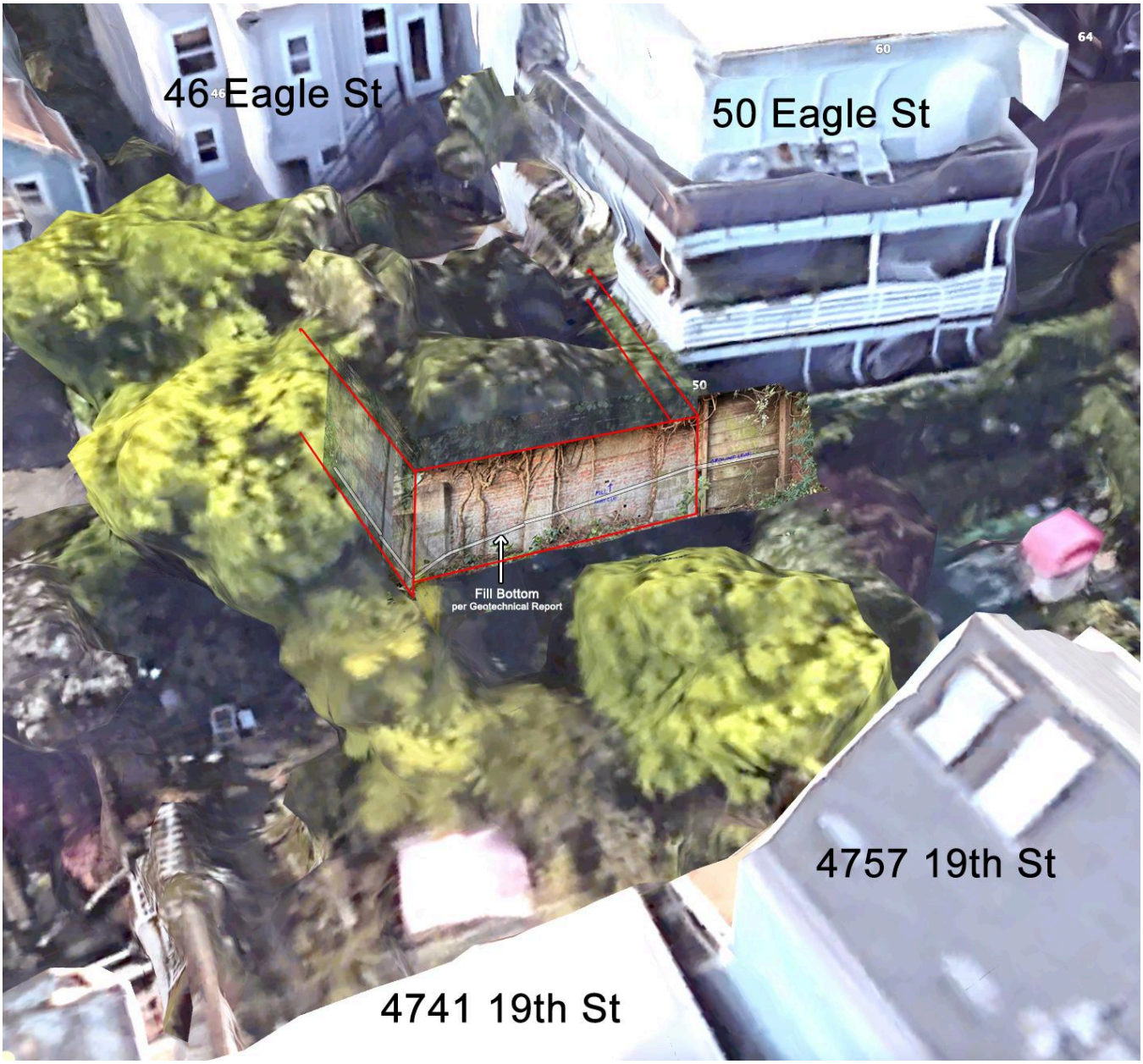


Exhibit C: Site survey 2025

Establishes geometry and encroachment.

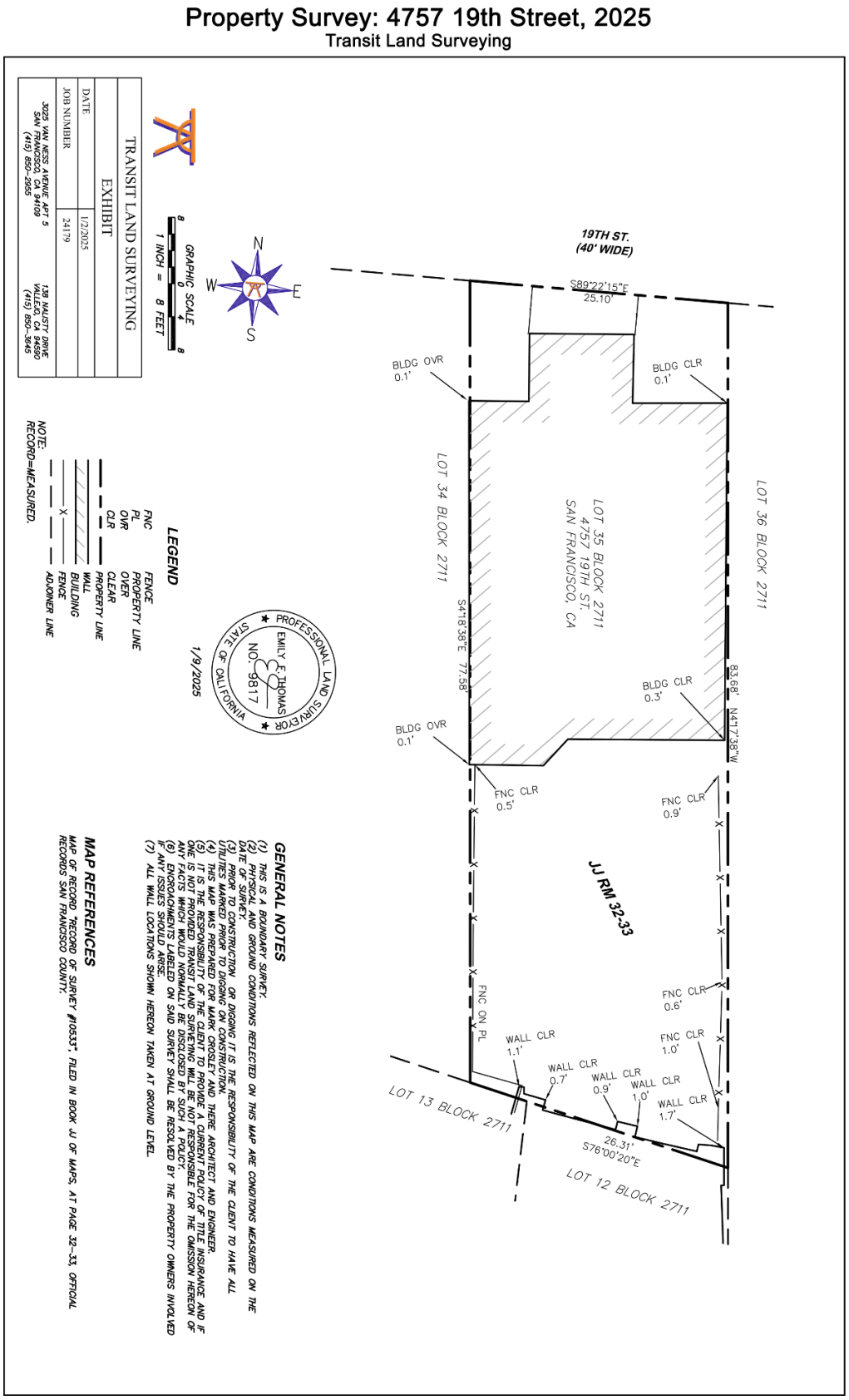


Exhibit D: Site plan - current

Shows relationship of parcels and wall.

Exhibit D

Site Plan

4757 19th Street – Rear Yard
Current State

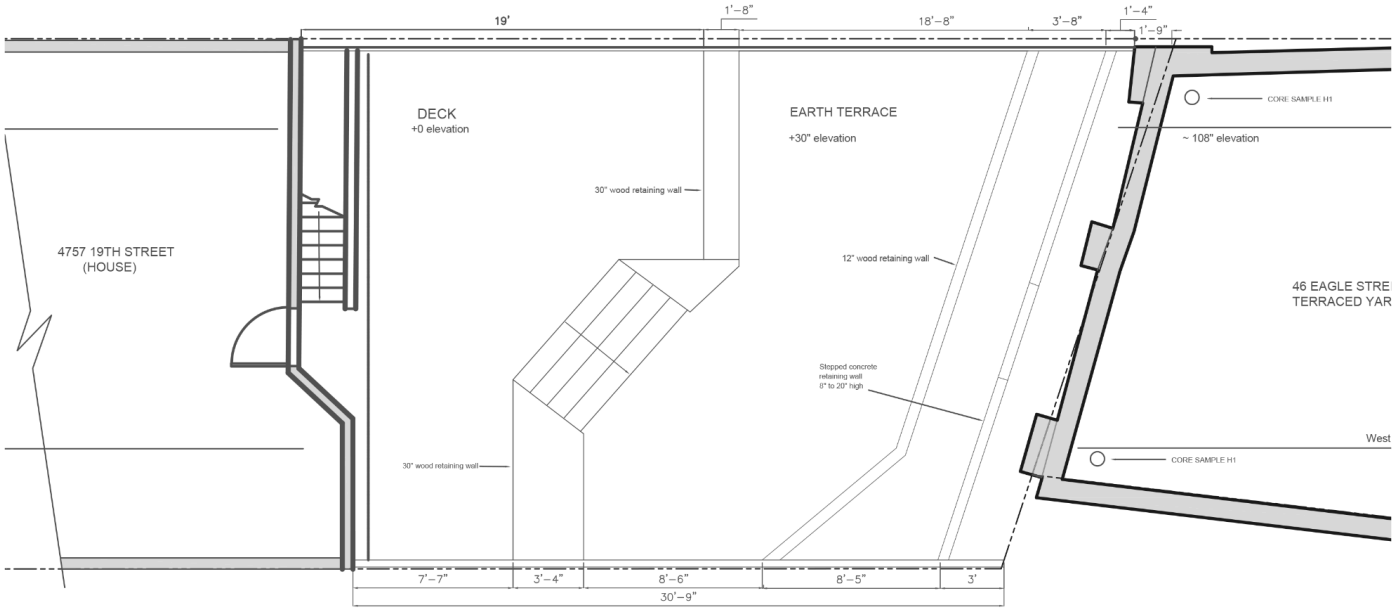


Exhibit E: East Section

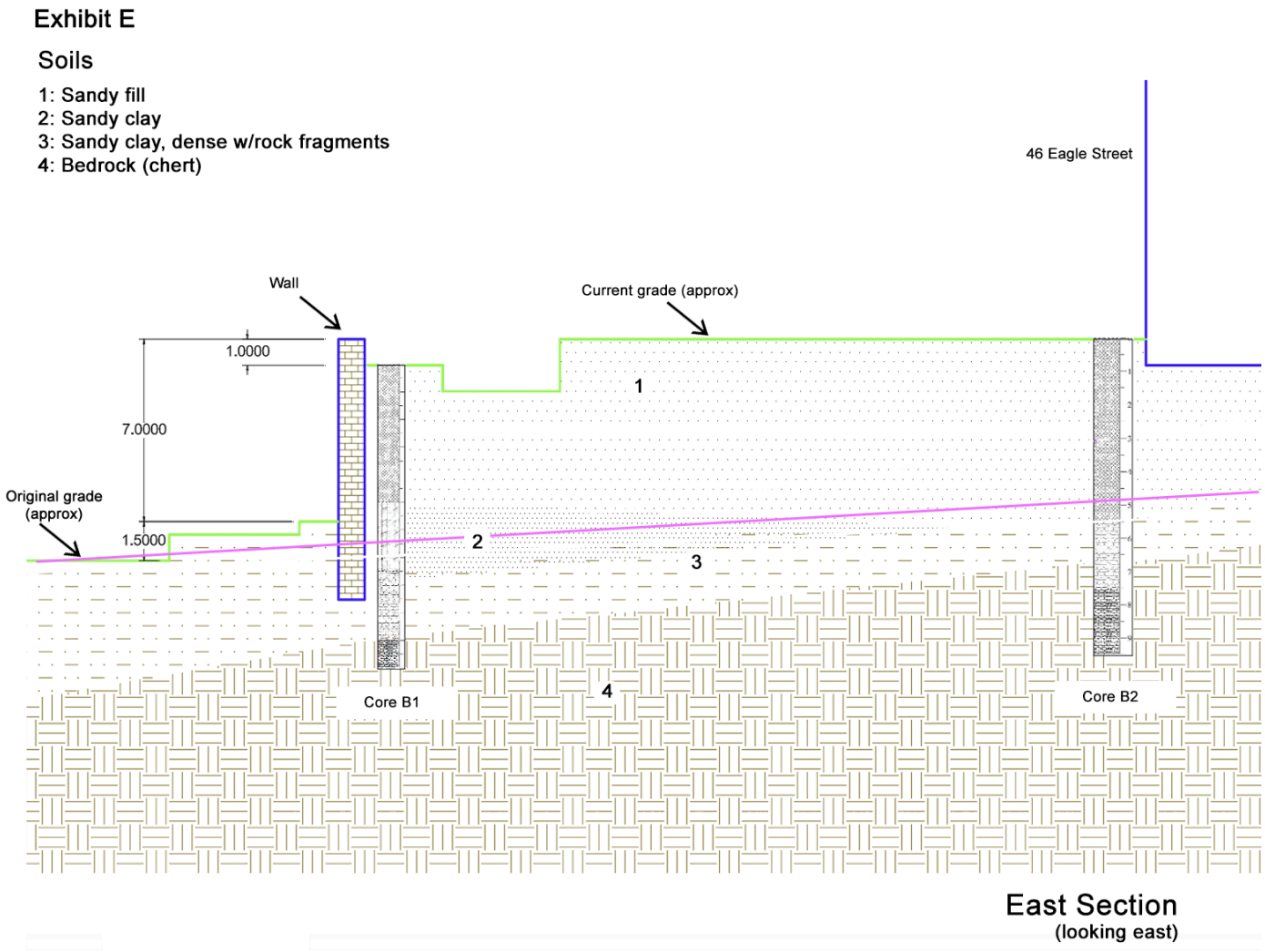


Exhibit F: West Section

Shows fill and original grade.

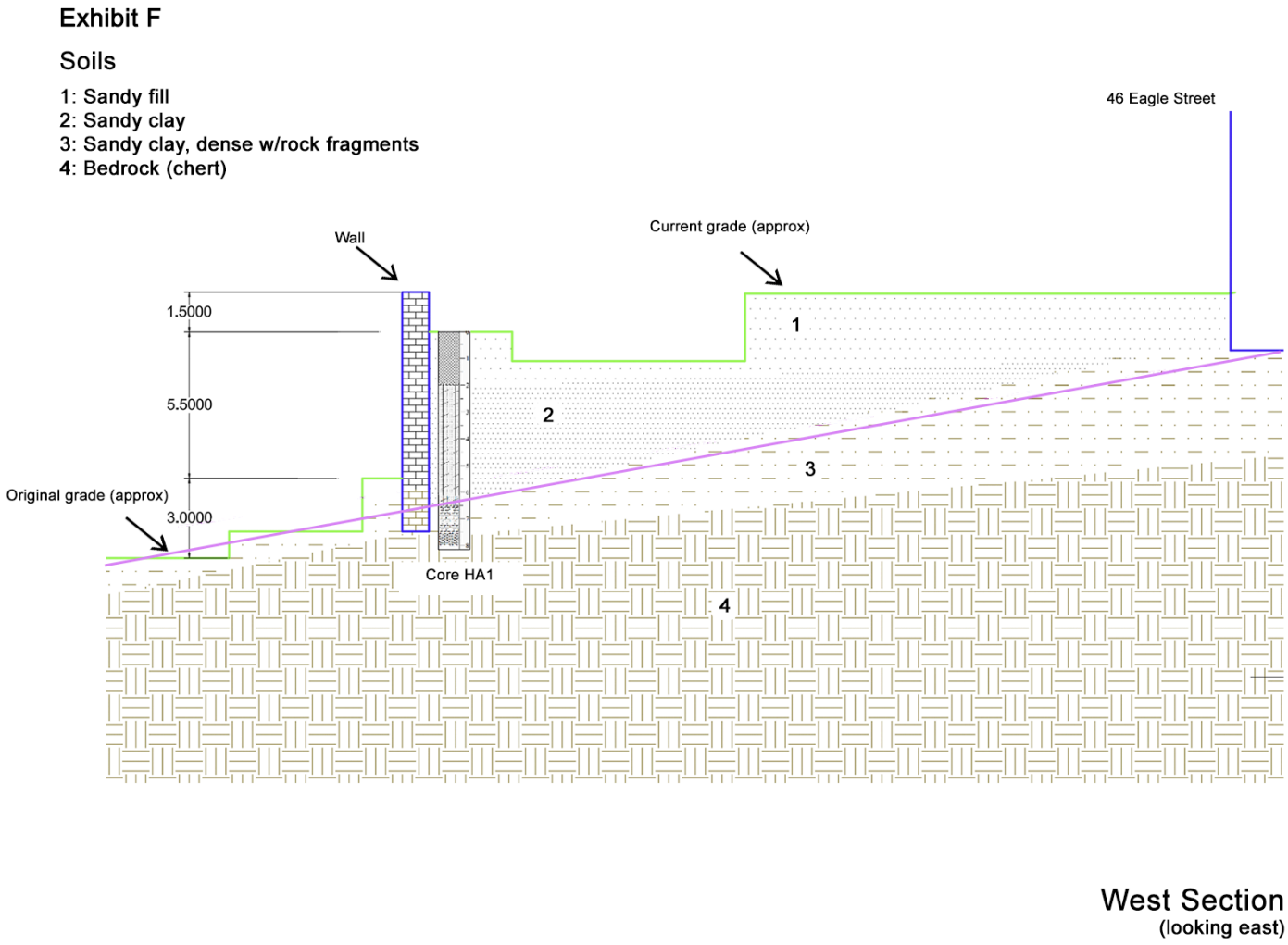


Exhibit G: Geotech core samples

Proof of imported fill.

Exhibit G

Wall Geotechnical Samples

H1: East End

ELEVATION	DESCRIPTION	SYMBOL	DEPTH (ft)
	Ground Surface		0
	Sandy Lean CLAY (CL-FILL) brown, moist to wet, soft, some concrete and masonry debris, roots		1–5
	Sandy Lean CLAY (CL) dark brown, soft to stiff, roots, wet		5–7
	Sandy Lean CLAY (CL) reddish brown, some rock fragments, wet, stiff, (completely weathered chert bedrock)		7–8
	Chert (Bedrock) reddish brown, fractured, weathered, moderate to hard hardness		8–10
	End of Log		11
			12–13
			15

Notes:
1. Penetration resistance values are not standard N values, they are the raw val
2. Stratification lines represent the approximate boundaries between material typ
3. Groundwater was not encountered during drilling and the boring was backfille
4. SS = 2 inch OD Standard Pentration Test sampler without liners.

HA1: West End

ELEVATION	DESCRIPTION	SYMBOL	DEPTH (ft)	SAMPLE TYPE	BLOWS/FT.
	Ground Surface		0		
	Sandy Lean CLAY (CL-FILL) brown, moist to wet, soft, some concrete and masonry debris, roots		1–2		
	Sandy Lean CLAY (CL) dark brown, soft to stiff, roots, wet		2–7		
	Sandy Lean CLAY (CL) reddish brown, some rock fragments, wet, stiff, (completely weathered chert bedrock)		7		
	Chert (Bedrock) reddish brown, fractured, weathered, moderate to hard hardness		8		
	End of Log		9–13		
			15		

Notes:
1. Stratification lines represent the approximate boundaries between material types, the transitions
2. Groundwater was not encountered during drilling and the boring was backfilled with cuttings.

Source: Peters & Ross, April 2022

Exhibit H1: Annotated wall photo, North Wall from Appellent's backyard

Cracking and fill height.

Exhibit H2

Failing Retaining Wall Holding Uphill Fill

Downhill property: 4741 19th Street

4757 19th Street (behind fence)

Exhibit I: Lean photo

Movement toward downhill.

Exhibit J: Yard distance photo Shows 35 ft to house.

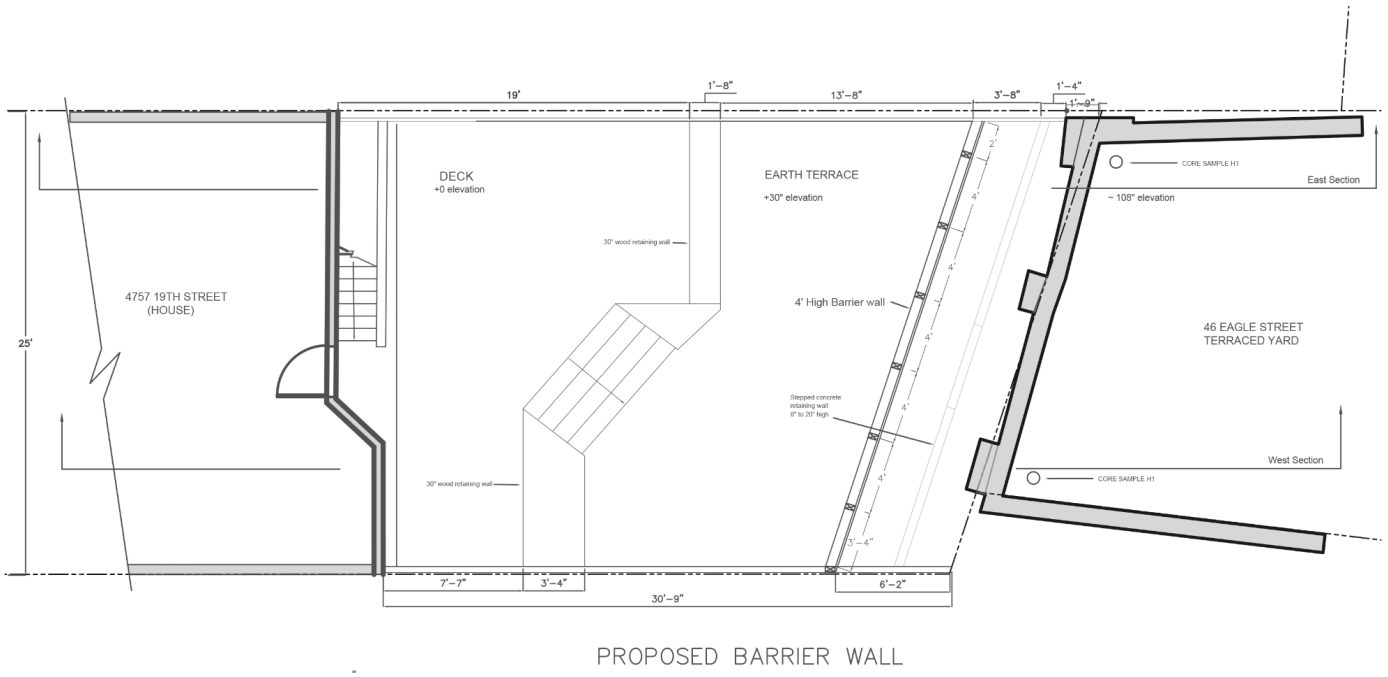
Exhibit K: Site plan with proposed barrier

Shows possible barrier to protect 4757 19th yard.

Exhibit K

Site Plan

4757 19th Street – Rear Yard
Proposed Barrier Wall



PROPOSED BARRIER WALL

Exhibit L: Engineer's Report

This is a summary of the key points of the inspection by ECR Engineering. The complete report is attached as a separate file. This summary is verbatim from the report:

Based on the 1938 aerial, it is more likely that the wall was originally constructed by 46 Eagle Street since the wall lies on three sides, neighboring four properties when two of those properties were not even constructed at that time…The retaining wall was constructed before the development of 4741 19th Street or 50 Eagle Street.

The U-shape retaining wall was presumed to be constructed monolithically since it shares similar construction characteristics on all three sides (brick) and based on the aerial image from 1938.

A larger portion of the [north] brick retaining wall lies at 46 Eagle Street, and the remaining portion (mainly the buttresses) lies at 4757 19th Street.

Based on the field observations, the brick retaining wall between 4757 19th Street and 46 Eagle Street is significantly tilted and there are horizontal cracks along its length. The south-west corner of the wall has a very significant crack, and the wall is almost detached at that corner from the transverse wall. Based on our engineering judgment, the buttresses are mainly holding the subject wall in its place.

[According to the Peters soils report] 2-ft to 5.5-ft deep fill materials were encountered adjacent to the retaining wall on the 46 Eagle Street side…It is our engineering judgment that the original grade was about 2-ft to 4-ft high along the retaining wall, and a 7-ft high retaining wall was constructed to support the additional fill.

Based on the soils report, it is likely that materials were not placed and compacted according to accepted modern standards. Improperly placed fill soils will settle and creep especially if loads are applied directly from them to shallow foundations.

The brick retaining wall is about 35-ft away from the rear exterior wall of the house…No obvious immediate Life Safety was identified in its current resting state of the retaining walls.

The collapse of the retaining wall may cause erosion and soil movement downhill. The top fill material at 46 Eagle Street may slide to the backyard of 4757 19th Street.

From an engineering perspective, all three sides are presumed to provide limited bracing to each other. If one side (such as the north section of the wall between 46 Eagle Street and 4757 19th Street) is removed, it may put the other two sides at risk.

The 7-ft high brick retaining wall can also be replaced with a shorter wall in height if the fill in the backyard of 46 Eagle Street is removed or regraded…The height of the new wall may be reduced to 3-ft to 4-ft above the ground, which will reduce the construction cost of the wall significantly.

The owner of 4757 19th Street proposes building a 4-ft high fence approximately 6-ft away from the brick wall for safety reasons. Any fence less than 6-ft in height does not require engineering plans. It is recommended to keep the height less than 6-ft due to the slope at the site and 4-ft is considered adequate height to build without engineering plans. A fence is still considered to provide limited life safety in the area since it prevents someone getting too close to the wall in the event of a collapse.

Exhibit M: Easement agreement

Prior acceptance of responsibility submitted by 46 Eagle & verbally agreed to by Appellant.

EASEMENT AGREEMENT

This Agreement is entered into on _____, 2023 by and between Mark Crosley and Darcie Lamond, hereafter referred to as "Grantor," and Scott Guerin, an individual having an address at 46 Eagle Street, San Francisco, California 94114, hereafter referred to as "Grantee."

RECITALS

WHEREAS, Grantor is the owner of certain real property situated in the City and County of San Francisco, located at 4757 19th St San Francisco, CA 94114;

WHEREAS, Grantee is the owner of certain real property situated in the City and County of San Francisco, located at 46 Eagle Street, San Francisco, California 94114; and

WHEREAS, Grantee desires to acquire certain rights in the Servient Tenement for the benefit of the Dominant Tenement as further set forth herein.

A. Consideration for Grant of Easement

For good and valuable consideration, the receipt of which is hereby acknowledged, Grantor grants to Grantee an easement, subject to the terms of this Agreement.

B. Description of Construction Access Easement.

1. Parties to Construction Access Easement

Grantor is the owner of certain real property situated in the City and County of San Francisco, located at 4757 19th St San Francisco, CA 94114 (hereafter referred to as "Parcel 1" or "Servient Tenement"), and more particularly described in Exhibit A, which is attached to this Agreement and hereby incorporated by reference.

Grantee is the owner of certain real property situated in 46 Eagle Street, the City and County of San Francisco, California 94114, and more particularly described as stated in Exhibit B, which is attached to this Agreement and hereby incorporated by reference (hereafter referred to as "Parcel 2" or "Dominant Tenement").

2. Servient Tenement

Grantee desires to acquire certain rights in that part of Parcel 1 described as follows: an easement consisting of a construction access easement in order to construct a permanent retaining wall and underground foundation on the Servient Tenement.

3. Construction Access Easement

The easement granted in this Agreement includes the following incidental rights: a temporary construction easement and right to enter upon the Servient Tenement, to store, use, and place construction equipment and materials, including without limitation ladders and

2

temporary fencing, on the Servient Tenement in connection with the performance of construction work on both the Dominant Tenement and the Servient Tenement consisting of the construction of an underground foundation and retaining wall, such easement to consist of approximately fifteen (15) feet of access onto the Servient Tenement, as further described herein. In exercising these rights, Grantee must use reasonable care and may not unreasonably increase the burden on the Servient Tenement or make any material changes to the Servient Tenement.

4. Scope of Construction Work

The construction work referred to in Paragraph B (3) of this Agreement consists of the construction of an underground foundation supporting a retaining wall, pursuant to the plans and specifications that are attached to this Agreement as Exhibit C and hereby incorporated by reference.

5. Nonexclusive Easement

The Construction Access Easement granted in this Agreement is nonexclusive. Grantor retains the right to make any use of the Servient Tenement, including the right to grant concurrent easements in the Servient Tenement to third parties, that does not interfere unreasonably with Grantee's free use and enjoyment of the easement.

6. Term of Construction Easement

The temporary construction easement granted in this Agreement as part of the Construction Access Easement shall terminate on completion of the construction work.

7. Duty to Remove Construction Equipment and Materials

Grantee shall remove Grantee's construction equipment and materials from the Servient Tenement within a reasonable time following completion of the construction work.

8. Additional Duties

In addition to any repair, replacement or restoration work that will be performed on the Servient Tenement at the expense of Grantee, Grantee shall:

1. Prohibit steel cutting in the yard of Servient Tenement.

2. Ensure that plywood is placed on the Servient Tenement as needed to reduce the noise attendant with drilling and jackhammer activities.

3. Ensure that Grantee's contractor will patch portions of the low retaining walls and fence that are in the excavation area and therefore must be removed during excavation.

4. Provide compensation to Grantor for landscaping renovation in the amount of $5,800.

C. Description of Retaining Wall Underground Foundation Easement

1. Parties to Retaining Wall Permanent Underground Foundation Easement

Grantor is the owner of certain real property situated in the City and County of San Francisco, located at 4757 19th St San Francisco, CA 94114 (hereafter referred to as "Parcel 1" or "Servient Tenement"), and more particularly described in Exhibit A, which is attached to this Agreement and hereby incorporated by reference.

Grantee is the owner of certain real property situated in 46 Eagle Street, the City and County of San Francisco, California 94114, and more particularly described as stated in Exhibit B, which is attached to this Agreement and hereby incorporated by reference (hereafter referred to as "Parcel 2" or "Dominant Tenement").

Grantor and Grantee shall be parties to an easement agreement for a permanent underground foundation, extending approximately three (3) feet out from the current location of the wall ("Permanent Easement"). Grantee shall own the Permanent Easement, and such Easement shall be attached to and shall pass with title to the Dominant Tenement. Grantee shall own the entire retaining wall, including the underground foundation, and shall be responsible for maintenance of the retaining wall and underground foundation.

2. Servient Tenement

Grantee desires to acquire certain rights in that part of Parcel 1 described as follows: an easement consisting of a permanent retaining wall and underground foundation on the Servient Tenement.

3. Character of Retaining Wall Underground Foundation Easement

The Permanent Easement granted in this Agreement is appurtenant to the Dominant Tenement.

4. Description of Retaining Wall Underground Foundation Easement

The Permanent Easement and the Construction Access Easement granted in this Agreement are easements for the purposes of placing the underground foundation of a retaining wall, and the construction work related thereto, all on the Servient Tenement as constructed and described, pursuant to the plans and specifications that are attached to this Agreement as Exhibit C and hereby incorporated by reference.

5. Term

The Permanent Easement granted in this Agreement shall be indefinite and perpetual.

6. Nonexclusive Easement

The Permanent Easement granted in this Agreement is nonexclusive. Grantor retains the right to make any use of the Servient Tenement, including the right to grant concurrent easements in the Servient Tenement to third parties, that does not interfere unreasonably with Grantee's free use and enjoyment of the Permanent Easement. Furthermore, the parties hereto agree that Grantor shall have the right to place metal brackets on the retaining wall for the purpose of hanging plants.

D. Periodic Maintenance Easement

1. Parties to Periodic Maintenance Easement

Grantor is the owner of certain real property situated in the City and County of San Francisco, located at 4757 19th St San Francisco, CA 94114 (hereafter referred to as "Parcel 1" or "Servient Tenement"), and more particularly described in Exhibit A, which is attached to this Agreement and hereby incorporated by reference.

Grantee is the owner of certain real property situated in 46 Eagle Street, the City and County of San Francisco, California 94114, and more particularly described as stated in Exhibit B, which is attached to this Agreement and hereby incorporated by reference (hereafter referred to as "Parcel 2" or "Dominant Tenement").

2. Servient Tenement

Grantee desires to acquire certain rights in that part of Parcel 1 described as follows: an easement consisting of a periodic maintenance easement to conduct periodic maintenance and repair of the permanent retaining wall and underground foundation on the Servient Tenement ("Maintenance Easement").

3. Character of Easement

The Maintenance Easement granted in this Agreement is appurtenant to the Dominant Tenement.

4. Description of Easement

The Maintenance Easement granted in this Agreement is an easement to periodically enter the Servient Tenement to make necessary repairs to maintain the Permanent Easement.

5. Extent of Easement

The periodic Maintenance Easement granted in this Agreement includes incidental rights of ingress and egress over and across a portion of Parcel 1 to the extent necessary to use the easement for maintenance and repair purposes. These rights of ingress and egress shall exist only over the portion or portions of Parcel 1 reasonably necessary to perform said maintenance and repair. This right of ingress and egress to conduct maintenance and repairs will be invoked only upon reasonable notice to the owners of Parcel 1 on an as-needed basis.

Exhibit N: Communications with 46 Eagle St owner

Retaining Wall History - Guerin Messages 8/2021- 2/2023

Scott Guerin to neighbors Aug 16 2021

Dear Neighbors,
I am writing regarding the retaining wall that adjoins our properties. As you know, the wall is starting to fail and requires repair. This affects the structural stability and safety of all of our homes and needs to be addressed.
I have had a couple structural engineers take a look at the wall. They are both in agreement that the wall needs to be rebuilt and have proposed similar solutions. The most viable solution is to build a shotcrete steel-reinforced concrete wall, approximately 6 inches deep, on the outside of the current wall. The new wall will be supported by a steel-reinforced concrete foundation, buried at the base of the current wall, which will extend approximately 4-5 feet out from the current wall and run approximately 3-4 feet deep underground (we won't have exact dimensions until the engineer has finalized drawings). Because the new foundation will be buried, the land on top of the new foundation will still be functional.
An initial approximate estimate puts the costs of this job at $140,000 to $160,000. I am willing to take financial responsibility for these repairs but only for this proposed solution. In order to complete this work, construction crews will need access to your backyard during the construction and will need to excavate approximately 4-5 feet out from the current wall to lay the new foundation.
In order for me to proceed with hiring a firm, all of us must agree on this plan. Please send me an email or letter letting me know if you are in agreement or if you have any questions.
Suzanne: I don't have an email for the person who owns the other unit in your building. If you have that, would you mind forwarding this email to them or sharing their email?

Scott Guerin August 17, 2021

Hello everyone,

Thank you for your questions. Hopefully we can address everyone's concerns and come up with a plan to finally get the wall fixed. I'll do my best to answer each of your questions below.

- Although we will have to wait for engineer drawings to have the exact dimensions, the new shotcrete wall will be approximately 6 inches deep. This means that the new wall will extend approximately 6 inches out from the current wall's position once construction is complete.
- Unfortunately all sides of the wall require repair. The portion of the wall that is failing most severely is the north portion of the wall which runs along Mark's back yard, particularly in the north east corner where there is a large fracture between the north and east segments. This is the large crack that is visible from Tom's backyard and that he has raised concerns about. I have had two structural engineers and two contractors look at the wall and they all agree that the entire wall requires repair, including the north segment. It is my understanding that the north wall is not exclusively on my property. Nonetheless, I would like to see the wall repaired in a timely fashion which is why I have put forward this proposal.
- The excavation area to lay the new foundation at the base of the wall will extend approximately 4-5 feet out from the current wall. This means that any plantings in that area will have to be temporarily removed or replaced. After the work is complete, the foundation

will be buried so you will not lose access to this land. The only access that you lose is the 6 inch depth of the new wall. I understand that relocating or replacing plantings will produce additional costs. However, I am already maxed out by the core construction costs even after taking the maximum allowed loan from my 401k.

- I spoke with two structural engineers and both offered similar proposals for a shotcrete wall. This is the only viable option to repair the wall. Any other option would be so complex and costly that it will never be possible for me to undertake it.

I hope this answers your questions. Please let me know if you are in agreement with this plan or if you have any further questions.

Thanks,

-Scott (46 Eagle)

Scott Guerin <scott.a.guerin@gmail.com>
Aug 23, 2021, 12:45 PM
to James, Mom, William, Susan, Abbie, Suzanne, me, Tom

Hi Everyone,I have not yet heard from all of the neighbors. If you could respond indicating whether you are in agreement with the proposed construction plan, I'd appreciate it. If you have any additional questions, please let me know. I recognize that this is a complex project that impacts everyone and raises several issues. I will do my best to answer all of your questions and come up with a plan that addresses everyone's concerns. This issue impacts the safety and structural integrity of all of our homes.

I've received some additional questions from Mark. I've included everyone else on the email since other neighbors are likely to have similar questions. Having a single email thread with all neighbors will help keep everyone affected by the project fully informed.

I've had a chance to speak with the engineer and asked him about the specific issues that were raised. I'll do my best to answer the questions below.

The engineer reiterated the need to repair the north segment of the wall. The wall will eventually fail. It is in everyone's best interest to see all sides of the wall repaired in a timely fashion.

The construction process should not destabilize the existing wall. Once construction begins, the construction company would be liable in the highly unlikely event of a collapse and they are fully insured up to $10 million. They would also be liable if the new wall fails within the first 5 years (it will have a lifespan of at least 50 years).

The new wall will be vertical once completed. Of course, the fact that the wall is leaning underscores the need for timely repairs.

Mark: I'm not familiar with the low wall and fences you are referring to. If you are able to send pictures or drawings that may help clarify things.

I specifically asked the engineer about the wall anchor approach and he advised against it for our situation.

Constructing the wall out of 3000 psi concrete with steel reinforcement is required by the construction codes. Although the old mossy brick is charming, it's not structurally sound. Adding an additional fasade such as wood siding is beyond the scope of the costs I am able to cover. I am offering to cover core construction costs to make the wall structurally sound even though it is my understanding that I am not exclusively responsible for the cost of these repairs. Nonetheless, in the interests of seeing the wall

repaired in a timely fashion, I have made as generous of an offer as I can. If all neighbors do not agree to the proposed construction, it will not be possible to repair the wall. It is in everyone's interest for the wall to be repaired in a timely fashion.
I am not planning on pursuing any legal action against the previous owner. Although I'm skeptical of the forthrightness of the previous owner's disclosures, the basic fact that the wall requires repair was disclosed prior to the purchase (as was the fact that the wall does not fall exclusively on my property, including the most damaged portions). Nonetheless, the cost and complexity of the repairs has far exceeded my worst expectations. I have worked hard to come up with the funds for these repairs and I have already made the most generous offer that I can.
I'm currently at the stage of hiring a firm to complete this work. Before I can finalize the contract with that firm, I will need all neighbors to agree in principle to the construction process as outlined above. Once I hire that company, it will draw up detailed plans and associated documents for your review. My understanding is that then during the actual permitting process, a formal legal document by which you would grant access to your property to the construction company would be drawn up for your review and signature.
My goal is to move this project along to completion to everyone's satisfaction. But before I can go any further, I need all affected neighbors to agree in principle to the proposal.
If anyone has more questions or concerns, please let me know and I will do my best to answer them as quickly as possible.
At the same time, I need for each of you to let me know as quickly as possible whether or not you agree in principle to the proposal.
Thanks,
-Scott

Scott Guerin Oct 15, 2021

Dear Neighbors,

We have not yet been able to come to an agreement on how to resolve the critically hazardous situation with the failing retaining wall that adjoins our properties. Although two neighbors have agreed to the initial proposal I put forward, the remaining neighbors have not.

I understand that this is a large and complex construction project that will impact all of us. I also understand that each of us as property owners has rights and each of us value and care for our homes. I am doing my best to address each of the concerns you have raised. My only objective is to get the wall fixed as quickly as possible to address a dangerous situation. In order for that to be possible, the construction must be within a budget that I can afford. To that end, I have taken the approach of being as generous as I possibly can in hopes that we can get all neighbors on board with a plan that works for everyone.

I understand that there were serious reservations about the original proposal to excavate and build a foundation on your properties and I have made every effort to address these concerns. I now have a new proposal to share with you that I hope we will all be able to agree on. In order to secure this contract, the construction company has now offered to build the new wall entirely within my property line within my original budget. Under this new plan, the existing wall will be removed and a totally new wall will be built in its place. The new wall will be built entirely within my lot as determined by an updated survey. There will be no permanent structure on your land.

All scenarios require access to your land in order to repair this critically hazardous situation. Nonetheless, we are making every effort to mitigate the impact on you. In particular, we will place temporary fencing within your yard to provide privacy. We will also access the construction area through

46 Eagle Street using ladders. You will not need to provide access through your homes, garages, or walkways. The construction company has requested 10 feet of access to work. That means that the temporary fencing will be placed 10 feet away from the current wall. The construction is estimated to last three months.

I recognize that a construction project of this nature is a huge inconvenience for us all. But it is also important to keep in mind that there is simply no logical alternative. This work must be completed and we need to begin construction as soon as possible. Although a construction project like this is inconvenient, imagine how problematic it will be if the wall collapses entirely.

I understand the desire to see completed engineering drawings and geotechnical studies. But we are not yet at that stage. I am attempting to negotiate in good faith on a plan to repair a critically hazardous situation. Until it is clear that these negotiations are productive and moving towards a resolution, it does not make sense to undertake extensive engineering work (and every contractor I have interacted with has indicated that they will not undertake engineering work under those circumstances). As part of the permitting and planning process prescribed by the city, you will have an opportunity to review the final engineering plans and geotechnical studies before granting formal access to the construction company. Our negotiations at this stage, although critically important, do not yet constitute a formal approval for access. Nonetheless, I understand the desire to have more details or have specific questions answered at this stage. The president of the construction company has offered to meet with each neighbor, walk through the site, explain how the construction will proceed, and answer any questions you have.

I cannot overstate the urgency of undertaking these repairs, especially since they are saying that we can expect some especially heavy rains this season, which will only further weaken the existing retaining wall. I am making every effort to negotiate in good faith and address each neighbor's concerns. I continue to believe that it is in the best interest of every neighbor for the wall to be repaired immediately, that it should be possible to reach a reasonable and amicable solution to these issues, and that an amicable agreement is the best path forward for us all. However, this is a critically hazardous situation that must be addressed immediately. The negotiations to date have been unproductive. If the current situation persists, I will be left with no choice but to use every tool at my disposal to ensure that the wall is repaired immediately.

Given the urgency of these repairs, please respond to this email within 7 days (Friday October 22nd). I will interpret a failure to respond within that timeframe as a rejection of this offer and a failure to negotiate in good faith.

Thank you,

-Scott Guerin (46 Eagle Street)

Mark Crosley Oct 23, 2021

Hi Scott

Sorry to not get back to you promptly. We're out of town.

I agree that it's a good idea for you to do the design and engineering for your project. My approval to provide access would depend on the final design and proposed construction process, as well as assurances that the job can be completed in the event of unforeseen overruns.

Part of the design/engineering process is always the evaluation of alternative approaches. What you described, in general terms, is one approach that sounds like it might be feasible. If there are others that you have reason to consider, I would hope to have a chance to discuss them with you.

Regarding your suggestion that the engineer and I walk through this, that's a good idea. He can't possibly design the project without inspecting the walls from all sides. (For that reason, it's equally

critical that he inspect the wall from Tom's yard if the plan is to be credible.) And I would like to discuss the footing design and wall height.

I would like to discuss the design of the wall facing my property, including overall height, the treatment of a concrete wall, and the detailing of any wood fence. As I mentioned, I believe that the height of the concrete wall does not have to be the same height as the current wall, if you excavate your yard. While this is, of course, up to you, but I would hope that the overall height will provide perfect both of us it's privacy.

Let me know if you are going to move ahead with this, and we can discuss further.

Thanks. Mark

Oct 25, 2021, 10:20 AM
Hi Mark,
Thanks for your email.
I'll reach out to the construction company to schedule a walk through. Let me know if there are any specific days/times that are good on your end. I agree that it would be helpful to do the same walkthrough in Tom's and Suzzane's yard. However, Tom has not responded to any of my emails and Suzzane has not responded since Aug 16.
Our default plan right now is to rebuild the wall and fence to match the current height. The footing will be placed on my side of the wall. I'm happy to discuss options for finishing of the concrete and the fence. The fence will besimilar to the current style. Because the heights will be the same, there shouldn't be impact on the privacy of our yards. I'm also happy to discuss alternative designs as they're presented to me.
I understand that you can't provide formal approval for access until seeing a completed design and construction plan, but if there is anything obvious that would block you from granting access based on what we have discussed so far, please let me know now so that I can work to address those issues.
Please don't hesitate to reach out if you have any more questions or concerns. I'll get back to you shortly with potential times for the walkthrough.
Thanks,
-Scott

Scott Guerin <scott.a.guerin@gmail.com>
Jan 25, 2023, 5:48 PM
Hi Mark
I wanted to send some updates on the wall project. I spoke with the contractor today and we are expecting the permits to be approved by the city in about 3 weeks. It's hard to know exactly when the city will finish reviewing the permits.
I confirmed with the contractor that there are no issues with placing a flower bed on top of the new wall's foundation.
However, we can't drill bolts into the wall because of concerns about water intrusion and damage to the steel. I'm hoping that we can find another option for you to have plants along the wall that doesn't involve directly drilling into the wall. Two possibilities that come to mind are (1) have brackets that hang over the wall, below the fence, from which you could hang a trellis, chain, rope, or wire; (2) bolt something like a trellis to the fence posts rather than the wall. For the second option, the weight would have to be reasonable so that the fence doesn't get pulled down. Let me know your thoughts.

Regarding the timeline for drilling, because of the logistics of a construction project like this it's hard to nail down an exact timeline for drilling in advance. However, we will be able to give you a minimum of 1 weeks advance notice when drilling will be occurring.
Please let me know if you have any questions or need anything else from me.
Thanks,
-Scott

Mark Crosley Wed, Feb 22, 2023

Hi Scott
I was pleased to hear that your fence contractor would take care of repairing the walls that connect to the retaining wall. If this covers all costs and the construction is the same as what's there, that should be fine.
That leaves the landscaping and wall treatment to be addressed. I have done a scope of work and gotten a preliminary estimate on the work. It is a rough estimate, since the final plan for the work is impossible to pin down with the uncertainty around the depth of the wall (determined by the level of your yard) and any changes that are made during construction,
The scope includes:

- Hanging trellises from the top of the wall (as we discussed). These would be basic Home Depot trellises, hung with cables.
- Earthwork to stabilize a raised terrace, estimated at 1'-2' above the current yard level. This includes bringing in some plant-sustaining soil (on top of the footing) and placing pressure-treated wood to retain the terrace.
- A basic drip irrigation line, since plants won't have access to ground water (again, Home Depot)
- Climbing vines, bamboo, and replacements for our hydrangea and azalea.

The estimate for labor and materials is $5800. Seems reasonable to me.
I'm guessing that you'll be doing similar work for your yard, so you understand the drill.We would like to agree that the fence work and the cost of the work above would be covered as part of the project cost. Does that work for you?
While we're not looking forward to the construction, and possibly having to move out for several weeks or more, I'll be glad when this is done. Especially after seeing Jim's photo. I know you'll be relieved too. Let me know if this all seems reasonable.

Scott Guerin Feb 23, 2023

Hi Mark,

Thanks for your email. I think we are agreed on a plan! Thanks, I know this has been a long and painful process and we are both looking forward to getting the wall fixed. I will finalize the plans with the contractor and have my lawyer draft an agreement letter to formalize things.

Thanks, Scott

February 24th, 2026
ECR ENGINEERING
1592 Union Street #489
San Francisco, CA 94123

To: Mr. Mark Lauden Crosley
(The Client)

Re: **Limited Structural Evaluation – 4757 19th Street**
San Francisco, California 94114

Mr. Mark:

ECR Engineering (here-in "ECR") is pleased to submit this letter report regarding the subject properties listed above.

OBJECTIVES

The focus of this limited structural evaluation and review of the subject properties is as follows:

1. Review and evaluate the existing brick retaining wall at the upper hill (south) side of the subject single-family home and review the notice of violation # 202424763.

DOCUMENT REVIEW

- A geotechnical investigation Guerin Residence Wall at 46 Eagles Street, prepared by Peter & Ross Geotechnical & Geoenvironmental Consultants, dated April 2022.
- A site survey prepared by Transit Land Surveying, dated January 2025.
- An aerial image of the site from 1938.

SITE INVESTIGATION

A site investigation of the subject properties was performed by Mr. Engin Yagmur, P.E. of ECR Engineering on Tuesday, February 17th, 2026. The site visit included a walk through the properties. No destructive investigation was performed. The report is based on visual observations and review of safely accessible areas at the buildings, and no calculations or analyses have been made to verify the capability of any member to resist prescribed lateral or vertical loadings. The subject retaining wall was inspected from the backyard of the 4757 19th Street and 4741 19th Street buildings.

USER RELIANCE

ECR was engaged by "Mr. Mark Lauden Crosley" (The Client) to perform this assessment. The objectives specifically state the scope and purpose of the assessment, as well as the contractual obligations and limitations of both parties. This report and the information therein are for the exclusive use of the Client. This report has no other purpose and may not be relied upon, or used, by any other person or entity without the written consent of ECR. Third parties that obtain this report, or the information therein, shall have no rights of recourse or recovery against ECR, its officers, employees, vendors, successors or assigns. Any such

unauthorized user shall be responsible to protect, indemnify and hold ECR, the Client and their respective officers, employees, vendors, successors and assigns harmless from any and all claims, damages, losses, liabilities, expenses (including reasonable attorneys' fees) and costs attributable to such use. Unauthorized use of this report shall constitute acceptance of, and commitment to, these responsibilities, which shall be irrevocable and shall apply regardless of the cause of action or legal theory piled or asserted.

BUILDING DESCRIPTION

The subject property consists of a two-story single-family home, constructed in the era 1910 (refer to photo 1). Located on 19th Street between Caselli Avenue and Yukon Street, the building sits on an irregular 2,106 sf parcel, with block/lot numbers 2711/035.

There is one active violation on the building in the DBI records. The violation # is 202424763 and it is for failing retaining wall between 4757 19th Street and 46 Eagle Street. A building permit was filed in 2022 to address the notice of violation. However, ECR was informed that the permit was filed by others without the owner's consent. The permit application was cancelled.

The building is founded on a moderate sloped site on a shallow foundation system with concrete foundations. The footings are continuous underneath perimeter load bearing walls and isolated underneath load concentrations (posts). The ground floor has concrete slab on grade. Due to the slope at the site, there are retaining walls between the subject property and the adjacent properties in the backyard. See the observations and recommendations sections for more information on the retaining walls.

OBSERVATIONS/DOCUMENTATION

- 4757 19th Street has two retaining walls with adjacent properties in the back. There is a 2ft-3ft high retaining wall at the east side adjacent to 4741 19th Street. This retaining wall is in serviceable condition. There is a fence on the west side adjacent to 4763 19th Street. And there is an approximately 7-ft high brick retaining wall in the rear adjacent to 46 Eagle Street (refer to photo 2). The brick retaining wall is about 35-ft away from the rear exterior wall of the house.
- The rear brick retaining wall has two additional arms and it is a U-shape retaining wall wrapping around the 46 Eagle Street backyard on three sides. Overall, the retaining wall neighbors four adjacent properties.

  An aerial image from 1938 was provided for our review. Based on the aerial image, the retaining wall was constructed before the development of 4741 19th Street or 50 Eagle Street. 4741 19th Street and 50 Eagle Street were constructed in 1947 era and 1940 era respectively based on the San Francisco DBI records which is consistent with the aerial image. The exact history of the retaining wall is unknown since the east portion of the retaining wall shows a brick wall at the bottom with a concrete wall on top supporting the fill of 46 Eagle Street. It is unknown if the concrete portion was added at an unknown date later.

  Based on the site survey provided by the client, a larger portion of the brick retaining wall lies at 46 Eagle Street, and the remaining portion (mainly the buttresses) lies at 4757 19th Street.
- Based on the field observations, the brick retaining wall between 4757 19th Street and 46 Eagle Street is significantly tilted and there are horizontal cracks along its length (refer to photos 3 and 4). The south-west corner of the wall has a very significant crack, and the wall is almost detached at that corner from the transverse wall. Based on our engineering judgment, the buttresses are mainly

holding the subject wall in its place in its current condition and prevent it from potentially collapsing.

- Based on the review of the soil report, 2-ft to 5.5-ft deep fill materials were encountered adjacent to the retaining wall on the 46 Eagles Street side. This matches the site observations since the retaining walls between the other properties are typically 2-ft to 4-ft high. However, the height of this retaining wall is 7-ft above the grade. It is our engineering judgment that the original grade was about 2-ft to 4-ft high along the retaining wall, and a 7-ft high retaining wall was constructed to support the additional fill.

  The soil report states that little to no information was found about the 1920s grading operations associated with the backyard of 46 Eagle Street. Based on the soil report, it is likely that fill materials were not placed and compacted according to accepted modern standards. Improperly placed fill soils will settle and creep especially if loads are applied directly from them to shallow foundations. Therefore, they recommend that the replacement wall be supported on drilled pier foundations that extend through the fill and are embedded into the underlying chert bedrock.
- Based on DBI's website and the association of Bay Area Governments Resilience Program maps, the sites do not have any liquefaction or landslide susceptibility. It is located on a slope larger than 25% on average.

RECOMENDATIONS AND CONCLUSIONS

- Based on our professional opinion, no obvious immediate Life Safety was identified in its current resting state of the retaining walls. However a building stability hazard was identified to the brick retaining wall during the course of this assignment, and a potential safety issue may arise with the further collapse of the wall into the 4757 19th Street backyard. Therefore, some immediate maintenance work is recommended for the retaining wall.
- ECR recommends the following for the brick retaining wall at 46 Eagle Street side in the rear:

  - The wall shall be monitored periodically before and after rainy seasons.

  - The wall shall be replaced in the near future due to the failure of the existing retaining wall before it deteriorates and tilts further. The collapse of the retaining wall may cause erosion and soil movement downhill. The top fill material at 46 Eagle Street may slide to the backyard of 4757 19th Street. Based on our engineering judgment, the retaining wall will behave poorly under a seismic event, and the collapse will be sudden since brick is a brittle material.

  - The U-shape retaining wall was presumed to be constructed monolithically since it shares similar construction characteristics on all three sides (brick) and based on the aerial image from 1938. From an engineering perspective, all three sides are presumed to provide limited bracing to each other. If one side (such as the north section of the wall between 46 Eagle Street and 4757 19th Street) is removed, it may put the other two sides at risk. The engineer on record shall study more on this and discuss the risks with the owners if only one portion of the wall is replaced. It is recommended to replace the U-shape retaining wall entirely.

  - A construction cost estimate to replace the retaining wall is not provided for the purposes of this report. The construction cost may vary greatly due to the uncertainties in limited access during construction.

  The 7-ft high brick retaining wall can also be replaced with a shorter wall in height if the fill in the backyard of 46 Eagle Street is removed or regraded based on the soil report. The height of the new

wall may be reduced to 3-ft to 4-ft above the ground, which will reduce the construction cost of the wall significantly.

- The retaining wall between 46 Eagle Street and 4757 19th Street lies on both properties based on the survey map. Based on the 1938 aerial map, it is more likely that the wall was originally constructed by 46 Eagle Street since the wall lies on three sides, neighboring four properties when two of those properties were not even constructed at that time. The legal responsibility of replacing the retaining wall between the neighbors is beyond the purposes of this report.

Additional recommendations related to the building structure:

- The owner of 4757 19th Street proposes building a 4-ft high fence approximately 5-ft away from the brick wall for safety reasons. Any fence less than 6-ft in height does not require engineering plans. It is recommended to keep the height less than 6-ft due to the slope at the site and 4-ft is considered adequate height to build without engineering plans.

  It is unknown how much a fence can limit the damage in the event of a collapse of the wall due to potential risk of landsliding of the top fill materials. However, a fence is still considered to provide limited life safety in the area since it prevents someone getting too close to the wall in the event of a collapse. Since the retaining wall is made of brick, which is a brittle material, the collapse of the wall is expected to be sudden.

CLOSING

The findings and recommendations are based on our best engineering judgment. We appreciate the opportunity to work with you on this project and look forward to future opportunities. If you have any questions about the content of this document, please do not hesitate to call us at (415) 205-3804 or send an e-mail to ecrengineering@gmail.com.

Sincerely Yours,

Exp: 6/30/2026

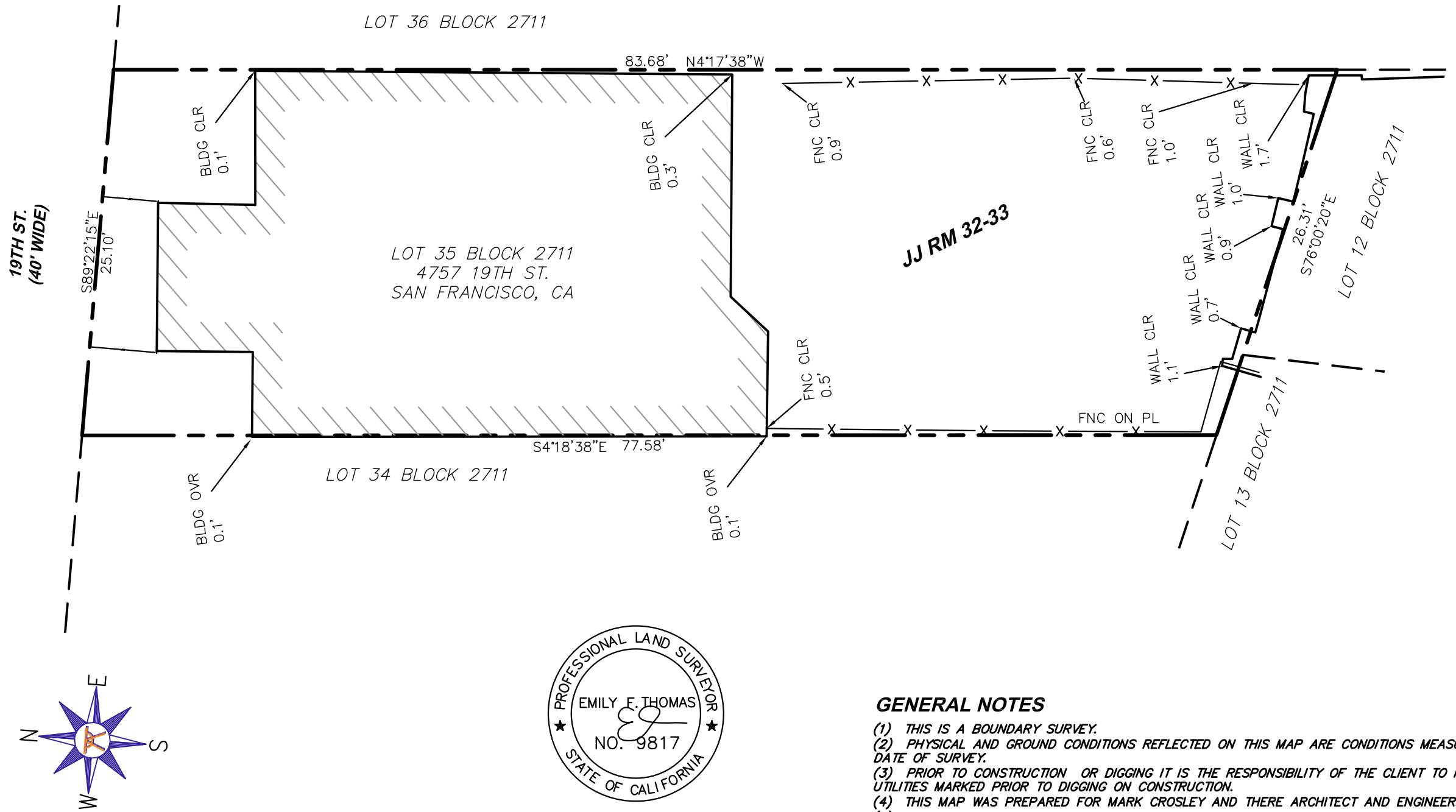
Engin Yagmur, P.E. (CA) C76016

1. The front (north) elevation of the subject building

2. The existing brick retaining wall at the rear (south) side of the building

3. Tilting of the subject retaining wall

4. The horizontal and diagonal crack along the length of the existing brick retaining wall



GRAPHIC SCALE

8 0 4 8

1 INCH = 8 FEET

TRANSIT LAND SURVEYING	
EXHIBIT	
DATE	1/2/2025
JOB NUMBER	24179

3025 VAN NESS AVENUE APT 5
SAN FRANCISCO, CA 94109
(415) 850-2955

138 NALISTY DRIVE
VALLEJO, CA 94590
(415) 850-3645

1/9/2025

LEGEND

FNC	FENCE
PL	PROPERTY LINE
OVR	OVER
CLR	CLEAR
— — —	PROPERTY LINE
———	WALL
//////	BUILDING
——— X ———	FENCE
— — — —	ADJOINER LINE

NOTE:
RECORD=MEASURED.

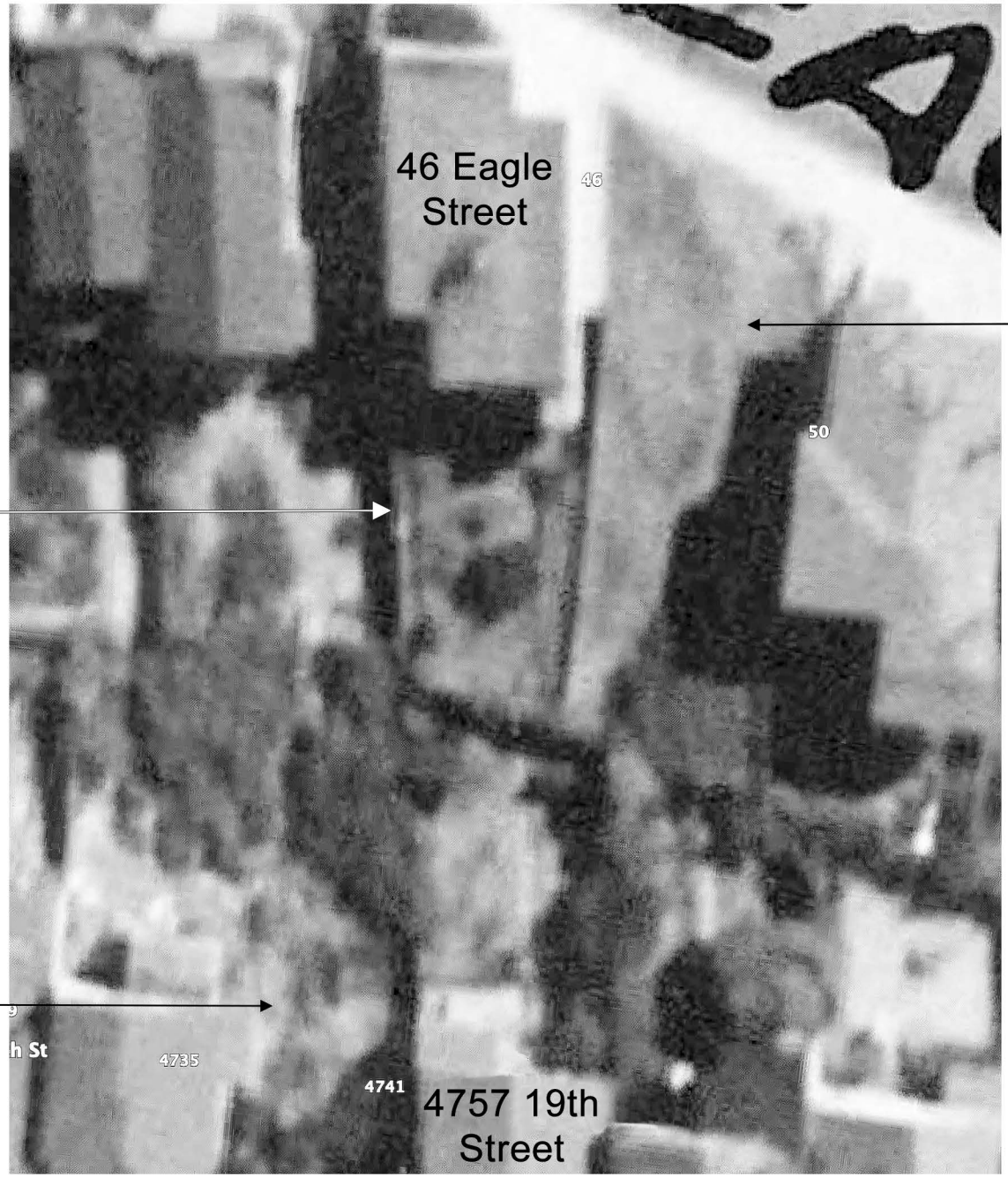
GENERAL NOTES

(1) THIS IS A BOUNDARY SURVEY.
(2) PHYSICAL AND GROUND CONDITIONS REFLECTED ON THIS MAP ARE CONDITIONS MEASURED ON THE DATE OF SURVEY.
(3) PRIOR TO CONSTRUCTION OR DIGGING IT IS THE RESPONSIBILITY OF THE CLIENT TO HAVE ALL UTILITIES MARKED PRIOR TO DIGGING ON CONSTRUCTION.
(4) THIS MAP WAS PREPARED FOR MARK CROSLEY AND THERE ARCHITECT AND ENGINEER.
(5) IT IS THE RESPONSIBILITY OF THE CLIENT TO PROVIDE A CURRENT POLICY OF TITLE INSURANCE AND IF ONE IS NOT PROVIDED TRANSIT LAND SURVEYING WILL BE NOT RESPONSIBLE FOR THE OMISSION HEREON OF ANY FACTS WHICH WOULD NORMALLY BE DISCLOSED BY SUCH A POLICY.
(6) ENCROACHMENTS LABELED ON SAID SURVEY SHALL BE RESOLVED BY THE PROPERTY OWNERS INVOLVED IF ANY ISSUES SHOULD ARISE.
(7) ALL WALL LOCATIONS SHOWN HEREON TAKEN AT GROUND LEVEL.

MAP REFERENCES

MAP OF RECORD "RECORD OF SURVEY #10533", FILED IN BOOK JJ OF MAPS, AT PAGE 32-33, OFFICIAL RECORDS SAN FRANCISCO COUNTY.

1938 Aerial View of Properties



Peters & Ross

Geotechnical & Geoenvironmental Consultants

Geotechnical Investigation
Guerin Residence Wall

46 Eagle Street, San Francisco, California

Project No. 22111.001

April 2022

Peters & Ross

Geotechnical & Geoenvironmental

Consultants

April 6, 2022
Project No. 22111.001

Mr. Farzad Torabian
SFT Construction
322 6th Street, Suite 4
San Francisco, CA 94103

RE: Geotechnical Investigation – 46 Eagle Street, San Francisco, CA

Dear Mr. Torabian:

In accordance with your authorization, Peters & Ross has completed a geotechnical investigation for the above referenced project. The accompanying report presents the results of our field investigation and engineering analyses. Based on this information, it is Peters & Ross' opinion that the site is suitable for the planned back replacement retaining wall and future house addition.

Peters & Ross should be retained:

- to review geotechnical aspects of project plans and specifications,
- to provide supplemental recommendations should significant changes in the planned replacement retaining wall and addition be made, and
- to provide geotechnical engineering observation and testing services during construction, in order to check that the recommendations presented in this report are properly implemented into the completed project.

We appreciate the opportunity to provide geotechnical engineering services to you. If you have any questions, please call.

Very truly yours,
PETERS & ROSS

Peter K. Mundy, P.E., G.E.
Geotechnical Engineer 2217

114 Hopeco Road, Pleasant Hill, CA 94523 Phone: (925) 942-3629 Fax: (925) 665-1700 Email: PetersRoss@aol.com

INTRODUCTION

This report presents the results of a geotechnical investigation performed by Peters & Ross for the proposed replacement rear retaining wall and future back addition at 46 Eagle Street in San Francisco, California. The location of the site is shown on the Site Vicinity Map (Figure 1). The ground surface topography near the site is shown on Figure 2.

Project Description

The site consists of a developed downslope 0.043-acre lot, located on the north side of Eagle Street. A two-story wood-frame house built in 1926 occupies the central portion of the lot. Current plans are to replace the back retaining wall. Future plans may include building a back addition.

Scope of Services

Peters & Ross scope of services for the project was presented in our proposal dated January 31, 2022. Our services on the project were limited to the following:

- Drilling three exploratory test borings
- Logging and obtaining samples of the materials encountered in the test borings
- Performing laboratory tests on selected samples
- Performing engineering analyses sufficient to develop conclusions and recommendations regarding:

    1. Site geology and seismicity
    2. Soil and groundwater conditions
    3. Site preparation, excavation, and grading
    4. The most appropriate foundation type(s) for the replacement retaining wall and possible addition
    5. Geotechnical design parameters for the recommended foundation type(s)
    6. Lateral earth pressures for retaining wall design
    7. Subgrade preparation for concrete slabs-on-grade
    8. Geotechnical aspects of site drainage
    9. Construction considerations

- Preparing this report.

FIELD EXPLORATION AND LABORATORY TESTING

Subsurface conditions were explored by drilling two exploratory test borings and one hand auger to a maximum depth of 11 feet using a portable hydraulic auger operated by DeNovo Drilling of Richmond, California on February 22, 2022. The locations of the test borings and hand auger are shown on the Site Plan (Figure 3). Samples of the materials

encountered in the borings were obtained at frequent depth intervals, for field classification and laboratory testing. A description of the drilling and sampling equipment used and other details of the subsurface exploration, as well as a log of the test borings, are presented in Appendix A. The laboratory tests performed are discussed in Appendix B.

SITE CONDITIONS

Site Geology and Seismicity

The site is located within the California Coast Ranges geomorphic province, which is dominated by northwest-trending faults and folds. Geologic mapping by the U.S. Geological Survey (Schlocker 1974) shows that the site is underlain by Quaternary age undivided surficial deposits consisting of poorly graded sand, clayey sand, and silty sand. Preliminary photointerpretive landslide maps by Schlocker (1974) and the State of California SHZR 43 (2000) show no landslides on the property.

Seismologists and geologists recognize the San Francisco Bay Area as an area of high seismic activity. Several major active fault systems are located near the site. These include the San Andreas Fault about 9 km to the southwest and the Hayward Fault about 21 km to the northeast. It is reasonable to assume that the site will be subjected to at least one moderate to severe earthquake that will cause strong groundshaking. Strong ground shaking from a major earthquake is a hazard that cannot be eliminated but the effects can be reduced by the observation of sound construction practices using the current seismic design codes.

Subsurface Conditions

Generally, 2 to 5.5 feet of clayey sand with concrete and masonry debris fill materials were encountered. In Borings B-1 and HA-1, 2.5 to 4.5 feet of dark brown sandy lean clay were encountered underneath the fill materials. A washed sieve test in Boring B-1 at a depth of 7.5 feet showed that the sandy lean clay had 59 percent passing the number 200 sieve. In Boring B-2 the dark brown sandy lean clay was not encountered. In both borings and the hand auger, 1 to 2.5 feet of reddish brown sandy lean clay (completely weathered bedrock) was encountered. Atterberg limits tests indicate that the reddish brown sandy lean clay in Boring B-2 at a depth of 7.5 feet has a liquid limit of 32 percent and a plasticity index of 15 percent with 67 percent passing the number 200 sieve which indicate a low expansion potential (expansive soils shrink and swell in response to moisture changes). The reddish brown sandy lean clay was underlain by chert bedrock which extended to the depths explored.

Groundwater

Groundwater was not encountered in any of the borings. The boreholes were backfilled with cuttings. It should be noted that fluctuations in the groundwater level may occur due

to variations in rainfall, temperature, and other factors not evident at the time the measurements were made.

CONCLUSIONS AND RECOMMENDATIONS

Based on the results of the field investigation, laboratory testing, and engineering analyses, it is Peters & Ross' opinion that the site is suitable for the replacement site retaining wall and proposed addition from a geotechnical perspective. The primary geotechnical concern that needs to be addressed is the presence of existing fill. Specific recommendations for foundation design are presented below.

1. Presence of Existing Fill

Peters & Ross found little to no information about the 1920s grading operations associated with the subject property. Based on our observations it is likely that fill materials were not placed and compacted according to accepted modern standards. Improperly placed fill soils will settle and creep especially if loads are applied directly to them from shallow foundations (such as footings or slabs). Therefore, we recommend that the planned replacement wall be supported on drilled pier foundations that extend through the fill and are embedded into the underlying chert bedrock.

2. Seismic Concerns

In accordance with Section 1613 of the 2019 California Building Code, Peters & Ross classifies the site as a C Site Class and a Seismic Design Category of D, with a latitude of 37.758 degrees and a longitude of -122.443 degrees. The CBC parameters presented in the following table should be used for seismic design.

SITE CLASS B - PERIOD (sec)	0.2	1.0
SPECTRAL RESPONSE S_S, S_1	1.500	0.605
SITE COEFFICIENT F_a, F_v (SITE CLASS C)	1.2	1.4
MAXIMUM SPECTRAL RESPONSE S_{MS}, S_{M1}	1.800	0.847
DESIGN SPECTRAL RESPONSE S_{DS}, S_{Dl}	1.200	0.565
RISK COEFFICIENT C_{RS}, C_{R1}	0.912	0.894

The site is not within an Alquist-Priolo Earthquake Fault Zone, and therefore the risk of fault rupture at the site is remote. No loose, clean sands were observed in the exploratory test borings. Therefore, the risk of significant foundation settlement due to liquefaction or densification during a large magnitude earthquake is low.

3. Site Preparation, Excavation, and Grading

3.1 Clearing and Site Preparation

All structures, flatwork, foundations, and any trees or shrubs identified for demolition should be demolished and removed from the site. Holes resulting from the removal of

any obstructions that extend below the proposed finished grade should be cleared and backfilled with suitable material compacted to the requirements given below under Compaction. We recommend that the excavations to remove deleterious material be carried out under the observation of the soil engineer, so that these excavations will be properly backfilled.

3.2 Subgrade Preparation

After the site has been properly cleared and stripped and any necessary excavations made, the exposed soils which will receive structural fill or slabs-on-grade should be scarified to a depth of 6 inches, moisture conditioned to slightly above optimum water content and compacted to the requirements for structural fill.

3.3 Material for Fill

All on-site soils below the stripped layer having an organic content of less than 3 percent by volume are suitable for use as fill. Fill placed at the site, should not contain rocks or lumps larger than 6 inches in greatest dimension with not more than 15% larger than 2.5 inches. Import fill should be predominantly granular with a plasticity index of 12 or less.

3.4 Compaction

All structural fill less than 5 feet thick should be compacted to at least 90% relative compaction as determined by ASTM Test Designation D 1557-latest edition. Structural fill or wall backfill greater than 5 feet high should be compacted to at least 95% relative compaction. Fill material should be first moisture conditioned to 3 percent above optimum moisture, then spread and compacted in lifts not exceeding 8 inches in uncompacted thickness. We should note that if construction proceeds during or immediately after the wet winter months, it may require time to dry the on-site soils to be used as fill, since their moisture content will probably be appreciably above optimum.

3.5 Trench Backfill

Pipeline trenches should be backfilled with fill placed in lifts not exceeding 8 inches in uncompacted thickness. Backfill should be compacted to 90% relative compaction. If imported granular soil is used, sufficient water should be added during the trench backfilling operations to prevent the soil from "bulking" during compaction. All compaction operations should be performed by mechanical means only. We recommend against jetting unless the backfill material is granular (sand or gravel) and the water used in jetting is able to rapidly flow out of the trench.

3.6 Drainage

Positive surface drainage should be provided adjacent to the residence/addition, and site wall so as to direct surface water away from the foundations into closed pipes that discharge to an approved drainage facility. Flexible drainpipe (flexline), 2000-pound

crush pipe, leach field, and ASTM F810 pipe are not recommended for use in the surface water drainage system because of the likelihood of damage to the pipe during installation due to the weak strength of these pipes. In addition, these drainpipes are sometimes difficult to clean with mechanical equipment without damaging the pipe. We recommend the use of Schedule 40 PVC, SDR 35 PVC or ABS, Contech A-2000 PVC drainpipe, or equivalent for the drain system. Ponding of surface water should not be allowed in any areas adjacent to the residence/addition or site wall. Concentrated flows of water should not be allowed across any slopes as erosion or weakening of surface soils could occur.

We also recommend that rainwater collected on the roofs of the residence/addition and in landscaped areas be transported through gutters, downspouts, and closed pipes that connect to suitable discharge facilities. We should note that suitable discharge facilities do not include so called "dry wells" and these should be avoided.

Some nominal maintenance of the drainage facilities should be expected after the initial construction has been completed. Should ownership of this property change hands, the new owner should be informed of the existence of this report, not adversely change the grading or drainage facilities, and understand the importance of maintaining proper surface drainage.

4. Foundations

4.1 Drilled Pier and Grade Beam Foundation System

Peters & Ross recommends that the replacement rear wall and proposed addition be supported on drilled, cast-in-place, straight-shaft piers. Drilled piers should be designed to develop their load carrying capacity through friction between the sides of the piers and the surrounding subsurface materials. Friction piers should have a minimum diameter of 16 inches, and there should be a minimum center-to-center spacing of at least 3 pier diameters between adjacent piers.

The piers should generally extend to a minimum depth of 10 feet below the bottom of the grade beam with at least 8 feet of embedment into the chert bedrock. Since chert bedrock was encountered at depths of 7.5 to 10.0 feet, the piers should generally extend to a minimum depth of about 15.5 to 18.0 feet below the bottom of the grade beam. Peters & Ross should observe the drilling of the piers to ensure that minimum embedment is achieved in the field.

To determine whether these depths are adequate to carry the structural loads of the residence, the following allowable skin friction values should be used. Starting at a depth of 3 feet use an allowable friction value of 500 pounds per square foot for dead plus live loads and 650 pounds per square foot for all loads, including wind or seismic. In bedrock use an allowable friction value of 800 pounds per square foot for dead plus live loads and 1100 pounds per square foot for all loads, including wind or seismic. Up to 2/3 of the allowable dead plus live load capacity can be used to resist uplift forces.

Lateral loads on the piers may be resisted by passive pressures acting against the sides of the piers. We recommend an allowable passive pressure equal to an equivalent fluid weighing 400 pounds per square foot per foot of depth to a maximum value of 4000 pounds per square foot. This value can be assumed to be acting against 2.0 times the diameter of the individual pier shafts starting at a depth of 3 feet.

The bottom of pier excavations should be reasonably free of loose cuttings and soil fall-in prior to installing reinforcing steel and placing concrete. It is our recommendation that the contractor be made aware of the subsurface conditions outlined in this report and that he obtain construction equipment appropriately sized to perform the recommended work. In particular, the piers must extend a minimum of 15.5 to 18.0 feet below the existing ground surface into hard chert bedrock. Where hard layers of bedrock are encountered, the contractor should use appropriate drilling techniques such as a core barrel to achieve the required depths. Any accumulated water in pier excavations should be removed prior to placing reinforcing steel and concrete, or the concrete should be tremied from the bottom of the hole.

4.2 Future Performance of Possible Addition

Even well designed and constructed foundations typically experience small post-construction settlements. In a new structure, these small settlements usually do not cause noticeable building distress, such as sheetrock cracks, because adjacent portions of a new structure tend to settle relatively uniformly. When a new foundation is constructed adjacent to an older foundation, small settlements of the new foundation may cause some noticeable distress near the transition between the new and old foundations, since the older foundation does not experience significant new settlement. In some situations where the older foundations are experiencing ongoing movements due to expansive soils, fill settlement, and/or hillside creep and the new foundations are designed to resist these movements, building distress can occur at the transition between the older and newer portions of the structure due to ongoing movements of the older portion. The homeowner should anticipate some post-construction distress, particularly near these transition areas.

5. Replacement Retaining Wall

Retaining wall foundations should be designed in accordance with the recommendations of the previous subsections. Retaining walls should be designed using soil pressures corresponding to an equivalent fluid weight of 35 pcf for level backfill, 45 pcf for backfill sloped at 3:1, and 60 pcf for backfill sloped at 2:1. These fluid weights should be increased by 20 pcf for restrained walls. For surcharge loads increase design pressures behind the wall by an additional uniform pressure equivalent to one-half (for restrained condition) or one-third (for unrestrained condition) of the maximum anticipated surcharge load applied to the surface behind the wall. For walls exceeding 6 feet use a seismic force of $12H^2$ in pounds applied at 0.5H.

The above pressures assume that sufficient drainage will be provided behind the walls to prevent the build-up of hydrostatic pressures from surface and subsurface water

infiltration. Adequate drainage may be provided by a subdrain system consisting of a 4-inch, rigid, perforated pipe, bedded in ¾ inch, clean, open graded rock. The recommended location of the subdrain pipe is behind the heel of the footing. Although we have observed that the subdrain pipe is often placed on top of the heel of the footing, it has been our experience that this may lead to moisture seeping through the wall resulting in dampness and staining on the opposite wall face despite the application of waterproofing. However, if such seepage or dampness is acceptable (in front of landscape walls, for example), then the subdrain pipe may be placed on top of the heel of the footing. To prevent ponding of water on top of the heel of the footing, we recommend that the top of the heel be sloped to drain away from the wall with a minimum positive gradient of 5 percent. The perforated drainpipe should slope to drain with a minimum positive gradient of 2 percent.

The entire rock/pipe unit should be wrapped in an approved, non-woven, polyester geotextile such as Mirafi 140N or 140NL, or a 4-ounce equivalent. The rock and fabric placed behind the wall should be at least one foot in width and should extend to within one foot of finished grade. The upper one foot of backfill (6 inches for walls less than 5 feet in height) should consist of on site, compacted, relatively impervious soils (an impermeable plug). Alternatively, the wrapped rock could be replaced with a MiraDrain system with appropriately selected waterproofing. The subdrain pipe should be connected to a system of closed pipes that lead to suitable discharge facilities.

We should note that flexible, perforated pipe (flexline), 2000 Pound Crush, Leachfield, and ASTM F810 pipe are not acceptable for use in the subdrain because of the likelihood of damage to the pipe during installation and the difficulty of future cleaning with mechanical equipment without damaging the pipe. We recommend the use of Schedule 40 PVC, SDR 35 PVC or ABS, Contech A-2000 PVC drainpipe, or equivalent for the drain system. The subdrain pipe should be connected to a system of closed pipes (non-perforated) that lead to suitable discharge facilities. At the location where the perforated subdrain pipe connects with the solid discharge drainpipe, drainrock backfill should be discontinued. A "clay plug" should be constructed out of relatively impervious soils to direct collected water into the perforated pipe and minimize the potential for water collecting around the solid drainpipe and saturating the adjacent soils. We recommend that waterproofing be applied to any proposed retaining walls where applicable. The specification of the type of waterproofing and the observation of its installation should be performed by the architect and/or structural engineer.

In addition, the "high" end and all 90 degree bends of the subdrain pipe should be connected to a riser which extends to the surface and acts as a cleanout. The number of cleanouts can be reduced by installing "sweep" 90-degree bends or pairs of 45-degree bends in succession instead of using "tight" 90-degree bends. "Sweep" 90-degree bends are similar to those used in sanitary sewer pipe connections.

6. Exterior Concrete Slabs-on-Grade

We recommend that any slabs-on-grade be supported on a minimum of 9 inches of imported, compacted, non-expansive fill. The subgrade should be recompacted to at least 90 percent relative compaction at a moisture content of 3 percent above optimum. The subgrade should be kept moist until the slab is poured. In any slab area where minor floor wetness would be undesirable, at least 4 inches of ¾ inch gravel should be placed over the prepared subgrade, to provide a capillary moisture break. A 10-mil thick vapor barrier blanketed with 2 inches of clean sand should be placed over the gravel. This can be used in lieu of the upper 6 inches of the non-expansive fill.

The slab should have a minimum thickness of 4-inches and should be reinforced with steel reinforcing bars rather than welded wire mesh. At a minimum, slab reinforcement should consist of No. 4 bars on 16-inch centers in both directions, placed at the center of the slab thickness. Spacers should be placed beneath the mesh of reinforcing bars, to maintain their positioning near the center of the slab during the concrete pour. Score joints should be provided at a maximum spacing of 10 feet in both directions. The slabs should be appropriately reinforced according to structural requirements; concentrated loads may require additional reinforcing.

Exterior slabs should be structurally independent from the perimeter grade beams or footings and be free floating. The use of free floating slabs for interior floors may result in damage to the proposed architectural finishes. Peters & Ross should be contacted if interior slabs are proposed.

7. Plan Review and Geotechnical Engineering Services during Construction

Peters & Ross should review project plans, to check that the geotechnical engineering recommendations contained in this report are properly incorporated. Peters & Ross should provide geotechnical observation and testing services during construction, to check that geotechnical aspects of the work are completed in accordance with the plans. These services should include observing site excavations and grading, testing the compaction of fill, observing pier drilling and measuring pier depths, observing drainage, and checking retaining wall back drains. In addition, Peters & Ross should provide consultation regarding geotechnical concerns that arise during construction. Peters & Ross cannot accept responsibility for geotechnical aspects of construction that are not observed by its staff.

We will make every reasonable effort to accommodate the contractor's work schedule during construction, so that necessary observations and tests can be performed in a timely manner to avoid construction delays. However, since our field services are often required on several projects concurrently, we request that 48 hours advance notice be given for site visits, in order to minimize scheduling conflicts.

LIMITATIONS

Peters & Ross services consist of professional opinions and recommendations that are made in accordance with generally accepted geotechnical engineering principles and practices. The opinions and recommendations presented in this report are based on a site reconnaissance, review of published and unpublished geologic maps, two exploratory test borings and one hand auger, laboratory testing, engineering analyses, and a preliminary layout of the replacement retaining wall and proposed addition provided by Mr. Scott Guerin, owner. This warranty is in lieu of all other warranties either expressed or implied.

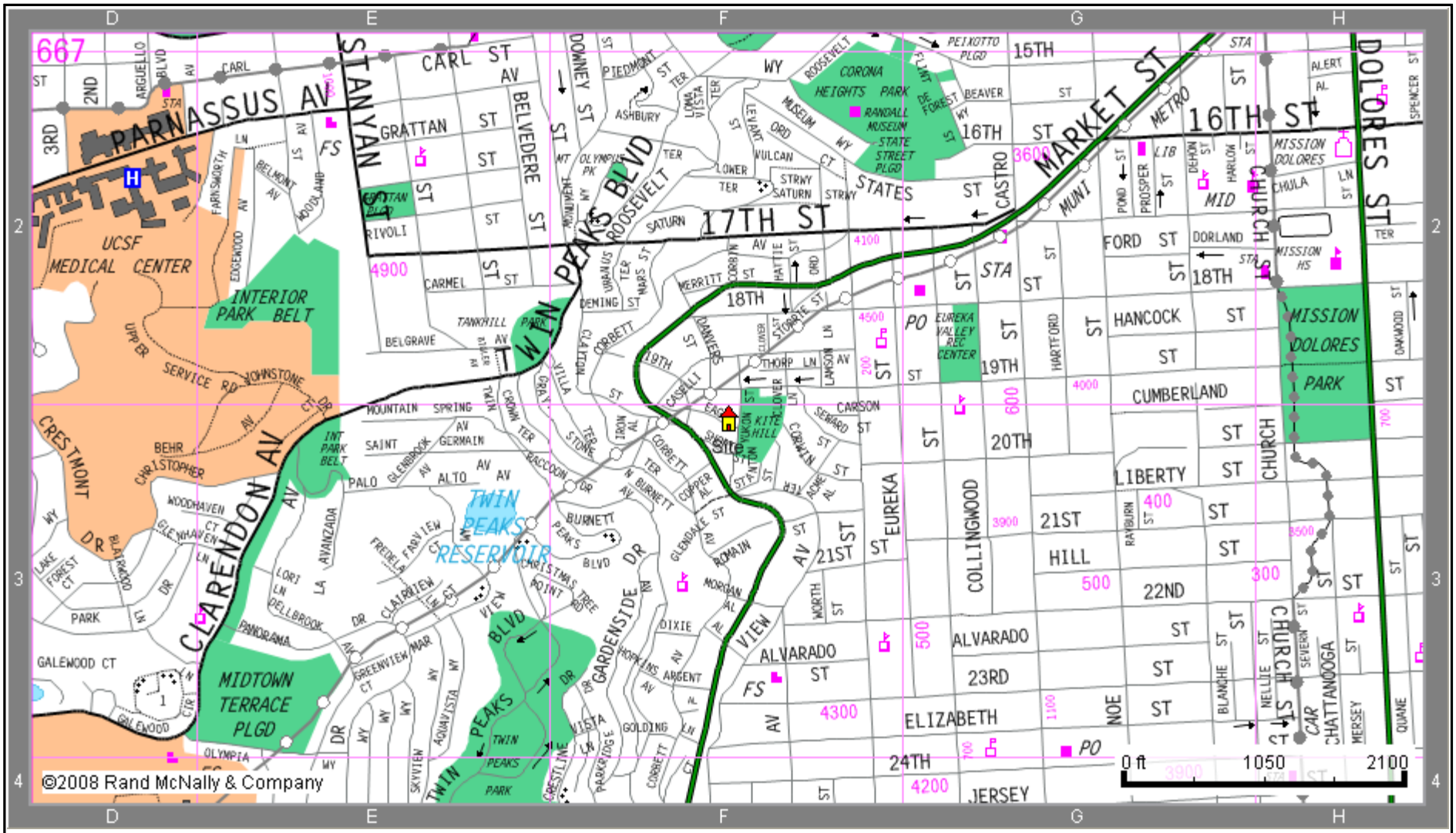
Subsurface conditions commonly vary significantly from those encountered at the test boring locations. Unanticipated, adverse soil conditions encountered during construction often require additional expenditures to achieve a properly constructed project. It is advised that a contingency fund be established to accommodate possible consulting and construction cost increases due to unanticipated conditions.

LIST OF FIGURES

APPENDICES

DISTRIBUTION

5 copies: Mr. Farzad Torabian
SFT Construction
322 6th Street, Suite 4
San Francisco, CA 94103



Peters & Ross

Geotechnical and
Geoenvironmental Consultants

114 Hopeco Road
Pleasant Hill, CA 94523
tel. (925) 942-3629
fax. (925) 665-1700
PetersRoss@aol.com

Figure 1 - Site Vicinity Map

PROJECT No.
22111.001
DATE
April 2022

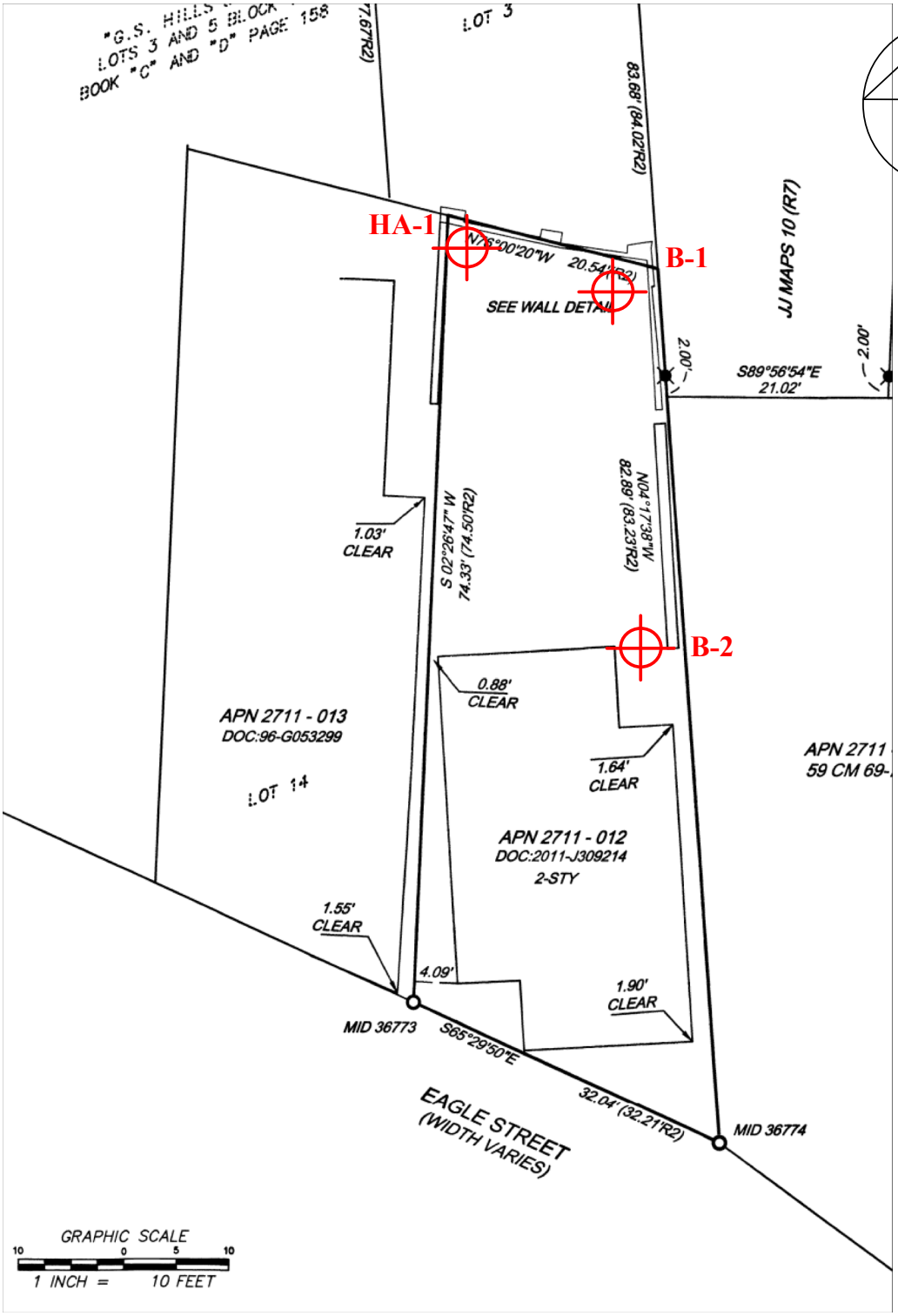
Guerin Residence Wall
46 Eagle Street
San Francisco, California

Figure 2 - Site Topography

Peters & Ross
Geotechnical and Geoenvironmental Consultants

114 Hopeco Road
Pleasant Hill, CA 94523
tel. (925) 942-3629
fax. (925) 665-1700
PetersRoss@aol.com

PROJECT No.	Guerin Res. Wall 46 Eagle Street San Francisco, CA
22111.001	
DATE	
April 2022	



EXPLANATION: B-1 Approximate Location of Exploratory Test Borings

Peters & Ross
Geotechnical and Geoenvironmental Consultants

114 Hopeco Road
Pleasant Hill, CA 94523
tel. (925) 942-3629
fax. (925) 665-1700
PetersRoss@aol.com

Figure 3 - Site Plan

PROJECT No.	Guerin Res. Wall 46 Eagle Street San Francisco, CA
22111.001	
DATE	
April 2022	

APPENDIX A – FIELD INVESTIGATION

Peters & Ross explored subsurface conditions at the site by drilling two exploratory test borings and one hand auger to a maximum depth of 11 feet. The locations of the exploratory test borings are shown on the Site Plan.

The borings were drilled using a 3.5-inch-diameter portable hydraulic auger operated by DeNovo Drilling of Richmond, California. Our field engineer continuously logged the materials encountered. The boring logs show the materials encountered and are included in this Appendix. Soils are classified in accordance with the Unified Soil Classification System.

The boring logs indicates Peters & Ross interpretation of subsurface conditions encountered at the locations and times the borings were drilled and may not be representative of subsurface conditions at other locations and times. Stratification lines represent the approximate boundaries between soil and rock types. The transitions between soil and rock layers are often gradual.

Samples of the materials encountered were obtained at frequent depth intervals, for visual classification and laboratory testing. Samples were obtained using a Modified California sampler (outer diameter of 3.0 inches, inner diameter of 2.5 inches) with thin-wall brass sampler liners, and a Standard Penetration Test sampler (outer diameter of 2.0 inches, inner diameter of 1.375 inches). The samplers were driven using a 140-pound safety hammer lifted and dropped 30 inches using a rope and cathead system.

BOREHOLE B-1

Peters & Ross Geotechnical Services
114 Hopeco Road, Pleasant Hill, CA 94523
925-942-3629 PetersRoss@aol.com

Project Name: Guerin Residence Wall
Project No.: 22111.001
Location: 46 Eagle St., San Francisco, CA
Client: SFT Construction
Drilling Method: Portable Hydraulic Auger w/ 3.5" SFA
Date Drilled: 2/22/2022
Elevation: 0
Water Level: Not Encountered
Remarks: Samplers driven with 140 lb. safety hammer lifted and dropped 30 inches using a rope and cathead system.

ELEVATION	DESCRIPTION	SYMBOL	DEPTH (ft)	SAMPLE TYPE	BLOWS/FT.	MOISTURE (%)	DRY DENSITY (pcf)	UNCONFINED STRENGTH (tsf)	REMARKS
	Ground Surface		0						
	Sandy Lean CLAY (CL-FILL) brown, moist to wet, soft, some concrete and masonry debris, roots		1						
			2						
			3						
			4	SS	5	9			
			5						
	Sandy Lean CLAY (CL) dark brown, soft to stiff, roots, wet		6						
			7	SS	3	17			-200 = 59 percent
	Sandy Lean CLAY (CL) reddish brown, some rock fragments, wet, stiff, (completely weathered chert bedrock)		8						
			9						
			10	SS	50 3"	15			
	Chert (Bedrock) reddish brown, fractured, weathered, moderate to hard hardness		11						Drilling Refusal
	End of Log		12						
			13						
			15						

Notes:
1. Penetration resistance values are not standard N values, they are the raw values measured in the field.
2. Stratification lines represent the approximate boundaries between material types, the transitions may be gradual.
3. Groundwater was not encountered during drilling and the boring was backfilled with cuttings.
4. SS = 2 inch OD Standard Pentration Test sampler without liners.

BOREHOLE B-2

Peters & Ross Geotechnical Services
114 Hopeco Road, Pleasant Hill, CA 94523
925-942-3629 PetersRoss@aol.com

Project Name: Guerin Residence Wall
Project No.: 22111.001
Location: 46 Eagle St., San Francisco, CA
Client: SFT Construction
Drilling Method: Portable Hydraulic Auger w/ 3.5" SFA
Date Drilled: 2/22/2022
Elevation: 0
Water Level: Not Encountered
Remarks: Samplers driven with 140 lb. safety hammer lifted and dropped 30 inches using a rope and cathead system.

ELEVATION	DESCRIPTION	SYMBOL	DEPTH (ft)	SAMPLE TYPE	BLOWS/FT.	MOISTURE (%)	DRY DENSITY (pcf)	UNCONFINED STRENGTH (tsf)	REMARKS
	Ground Surface		0						
	Sandy Lean CLAY (CL-FILL) brown, moist to wet, soft, some concrete and masonry debris, roots		1						
			2						
			3	SS	2	9			
			4						
			5						
	Sandy Lean CLAY (CL) reddish brown, some rock fragments, wet, stiff, (completely weathered chert bedrock)		6	SS	16	17			LL=32%, PI=15% -200 = 59 percent
			7						
	Chert (Bedrock) reddish brown, fractured, weathered, moderate to hard hardness		8						
			9	SS	50 6"	15			
	End of Log		10						
			11						
			12						
			13						
			15						

Notes:
1. Penetration resistance values are not standard N values, they are the raw values measured in the field.
2. Stratification lines represent the approximate boundaries between material types, the transitions may be gradual.
3. Groundwater was not encountered during drilling and the boring was backfilled with cuttings.
4. SS = 2 inch OD Standard Pentration Test sampler without liners.

BOREHOLE HA-1

Peters & Ross Geotechnical Services
114 Hopeco Road, Pleasant Hill, CA 94523
925-942-3629 PetersRoss@aol.com

Project Name: Guerin Residence Wall
Project No.: 22111.001
Location: 46 Eagle St., San Francisco, CA
Client: SFT Construction
Drilling Method: Portable Hydraulic Auger w/ 3.5" SFA
Date Drilled: 2/22/2022
Elevation: 0
Water Level: Not Encountered
Remarks: Grab samples classified from the 3.5 inch diameter hand auger.

ELEVATION	DESCRIPTION	SYMBOL	DEPTH (ft)	SAMPLE TYPE	BLOWS/FT.	MOISTURE (%)	DRY DENSITY (pcf)	UNCONFINED STRENGTH (tsf)	REMARKS
	Ground Surface		0						
	Sandy Lean CLAY (CL-FILL) brown, moist to wet, soft, some concrete and masonry debris, roots		1						
	Sandy Lean CLAY (CL) dark brown, soft to stiff, roots, wet		2						
			3						
			4						
			5						
			6						
	Sandy Lean CLAY (CL) reddish brown, some rock fragments, wet, stiff, (completely weathered chert bedrock)		7						
	Chert (Bedrock) reddish brown, fractured, weathered, moderate to hard hardness		8						Drilling Refusal
	End of Log		9						
			10						
			11						
			12						
			13						
			15						

Notes:
1. Stratification lines represent the approximate boundaries between material types, the transitions may be gradual.
2. Groundwater was not encountered during drilling and the boring was backfilled with cuttings.

APPENDIX B - LABORATORY TESTING

Laboratory tests were performed on representative samples of the materials encountered in the test borings, to achieve a quantitative and qualitative evaluation of the physical and mechanical properties of the materials that underlie the site. The tests were performed in B. Hillebrandt Soils Testing, Inc. lab located in Alamo, California. The tests included moisture content determinations and #200 washed sieve tests. The test results are presented on the boring logs in Appendix A. Test reports provided by the testing laboratory are included in this Appendix. Brief descriptions of the tests performed follow.

Moisture Content/Dry Density (ASTM 2937): Performed on undisturbed samples to determine the moisture content (the ratio of the weight of water to the weight of solids in the field sample, expressed as a percentage) and dry density (the ratio of the weight of solids in the field sample to its volume, expressed in pounds per cubic foot).

#200 Washed Sieve Test (ASTM D-1140): Performed on undisturbed or disturbed samples to determine the fine-grained (silt and clay) fraction of the materials. The fine-grained fraction is used to classify the soils according to the Unified Soils Classification System.

Atterberg Limits Test (ASTM D-4318): Performed on undisturbed or disturbed samples to determine the liquid limit (LL) and plastic limit (PL) of the samples. These limits are used to classify fine-grained soils and to evaluate the plasticity index (PI), the moisture content range over which the material exhibits plasticity. Atterberg limits correlations also provide an indication of the compressibility and expansion potential of the sample.

B. HILLEBRANDT SOILS TESTING, INC.

29 Sugarloaf Terrace, Alamo, CA 94507 - Tel: (510) 409-2816 - Fax: (925) 891-9267 - Email: soiltesting@aol.com

LAB RESULTS SUMMARY FORM

Project Number: 22111.001+ **Project Name:** 46 Eagle Street, San Francisco **Results Due By:**
Requested By: PM **Request Date:** 2/25/22 **Throw Samples Out On:**

					Atterberg			-200			Compaction				
Boring #	Sample Depth (feet)	Dry Density (pcf)	Moisture Content (%)	TxUU Shear Strength (psf)	Liquid Limit	Plastic Limit	Plasicity Index	Passing #4 Sieve (%)	Passing #40 sieve (%)	Passing #200 sieve (%)	Maximum Dry Density (pcf)	Optimum Moisture (%)	Pocket Penetrometer (tsf)	Torvane (tsf)	Remarks
B-1	4.5		8.9												
B-1	7.5		17.0					89	80	59					
B-1	10.5		14.8												
B-2	4.5		20.3												
B-2	7.5		17.4		32	17	15	93	82	67					
B-2	9.5		3.7												
B-3	2.0		7.1												
B-3	3.0		7.2												
B-3	4.0		12.8												
B-3	5.0		12.5												
B-3	6.0		14.6												

B. HILLEBRANDT SOILS TESTING, INC.

29 Sugarloaf Terrace, Alamo, CA 94507 - Tel: (510) 409-2916 - Fax: (925) 891-9267 - Email: soiltesting@aol.com

MOISTURE CONTENT WORKSHEET

Job #: 22111.001+
Job Name: 46 Eagle Street, San Francisco
Date: 2/25/22
Tested by: B. Hillebrandt

Additional Tests:		-200			PI, -200				
Boring #:	B-1	B-1	B-1	B-2	B-2	B-2	HA-1	HA-1	HA-1
Depth:	4.5	7.5	10.5	4.5	7.5	9.5	2.0	3.0	4.0
Sample Description:	Dark brown clayey SAND	Dark brown sandy CLAY	Dark yellowish brown sandy CLAY	Dark brown sandy CLAY	Dark yellowish brown sandy lean CLAY	Dark brown well graded SAND with silt	Dark brown silty SAND with gravel	Dark brown silty SAND with gravel	Dark brown sandy CLAY with gravel
Can #:	360	311	422	418	423	406	116	400	385
Wet Sample + can	182.5	232.2	209.6	193.3	180.8	245.0	328.9	270.4	232.4
Dry Sample + can	170.3	204.2	186.8	166.3	158.9	237.5	309.3	254.4	209.7
Weight can	32.7	39.5	32.6	33.0	32.7	33.0	34.6	32.8	32.8
Weight water	12.2	28	22.8	27	21.9	7.5	19.6	16	22.7
Weight Dry Sample	137.6	164.7	154.2	133.3	126.2	204.5	274.7	221.6	176.9
WATER CONTENT (%)	**8.9%**	**17.0%**	**14.8%**	**20.3%**	**17.4%**	**3.7%**	**7.1%**	**7.2%**	**12.8%**

B. HILLEBRANDT SOILS TESTING, INC.

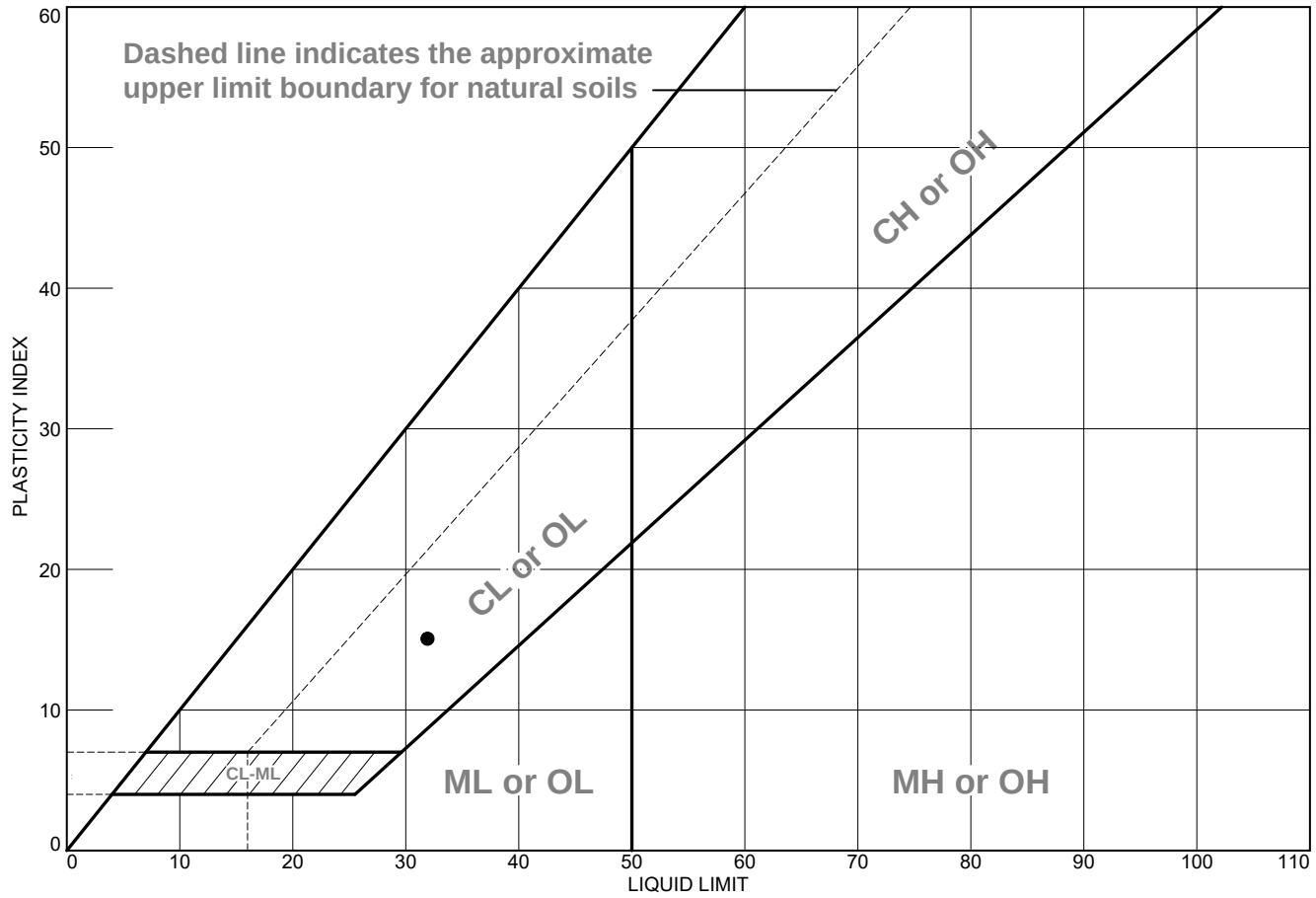
29 Sugarloaf Terrace, Alamo, CA 94507 - Tel: (510) 409-2916 - Fax: (925) 891-9267 - Email: soiltesting@aol.com

MOISTURE CONTENT WORKSHEET

Job #: 22111.001+
Job Name: 46 Eagle Street, San Francisco
Date: 2/25/22
Tested by: B. Hillebrandt

Additional Tests:									
Boring #:	HA-1	HA-1							
Depth:	5.0	6.0							
Sample Description:	Reddish brown sandy CLAY	Dark brown sandy CLAY							
Can #:	357	394							
Wet Sample + can	223.8	202.0							
Dry Sample + can	202.5	180.4							
Weight can	32.5	32.7							
Weight water	21.3	21.6							
Weight Dry Sample	170	147.7							
WATER CONTENT (%)	**12.5%**	**14.6%**							

LIQUID AND PLASTIC LIMITS TEST REPORT



	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●	Dark yellowish brown sandy lean CLAY	32	17	15	81.9	66.6	CL

Project No. 22111.001 **Client:** Peters & Ross

Project: 46 Eagle Street, San Franciso

●**Source of Sample:** B-2 **Depth:** 7.5'

Remarks:

B. HILLEBRANDT SOILS TESTING, INC.
+1 510-409-2816
SoilTesting@aol.com

Figure

Tested By: BH

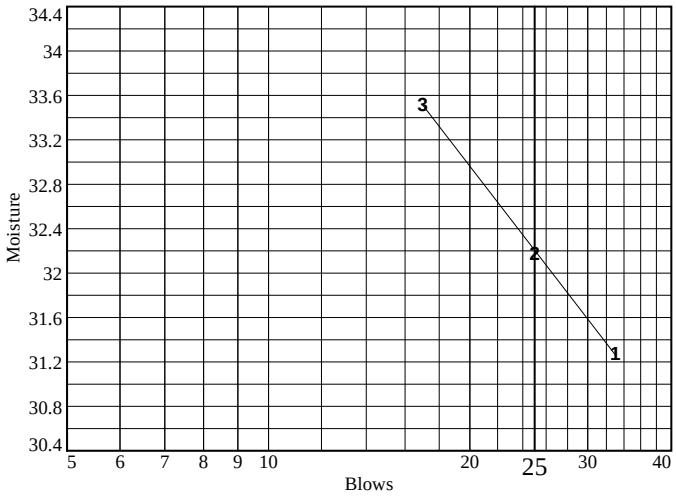
LIQUID AND PLASTIC LIMIT TEST DATA

4/1/2022

Client: Peters & Ross
Project: 46 Eagle Street, San Franciso
Project Number: 22111.001
Location: B-2
Depth: 7.5'
Material Description: Dark yellowish brown sandy lean CLAY
%<#40: 81.9 **%<#200:** 66.6 **USCS:** CL **AASHTO:** A-6(8)
Tested by: BH

Liquid Limit Data

Run No.	1	2	3	4	5	6
Wet+Tare	28.07	30.07	27.41			
Dry+Tare	24.01	25.51	23.33			
Tare	11.03	11.34	11.16			
# Blows	33	25	17			
Moisture	31.3	32.2	33.5			

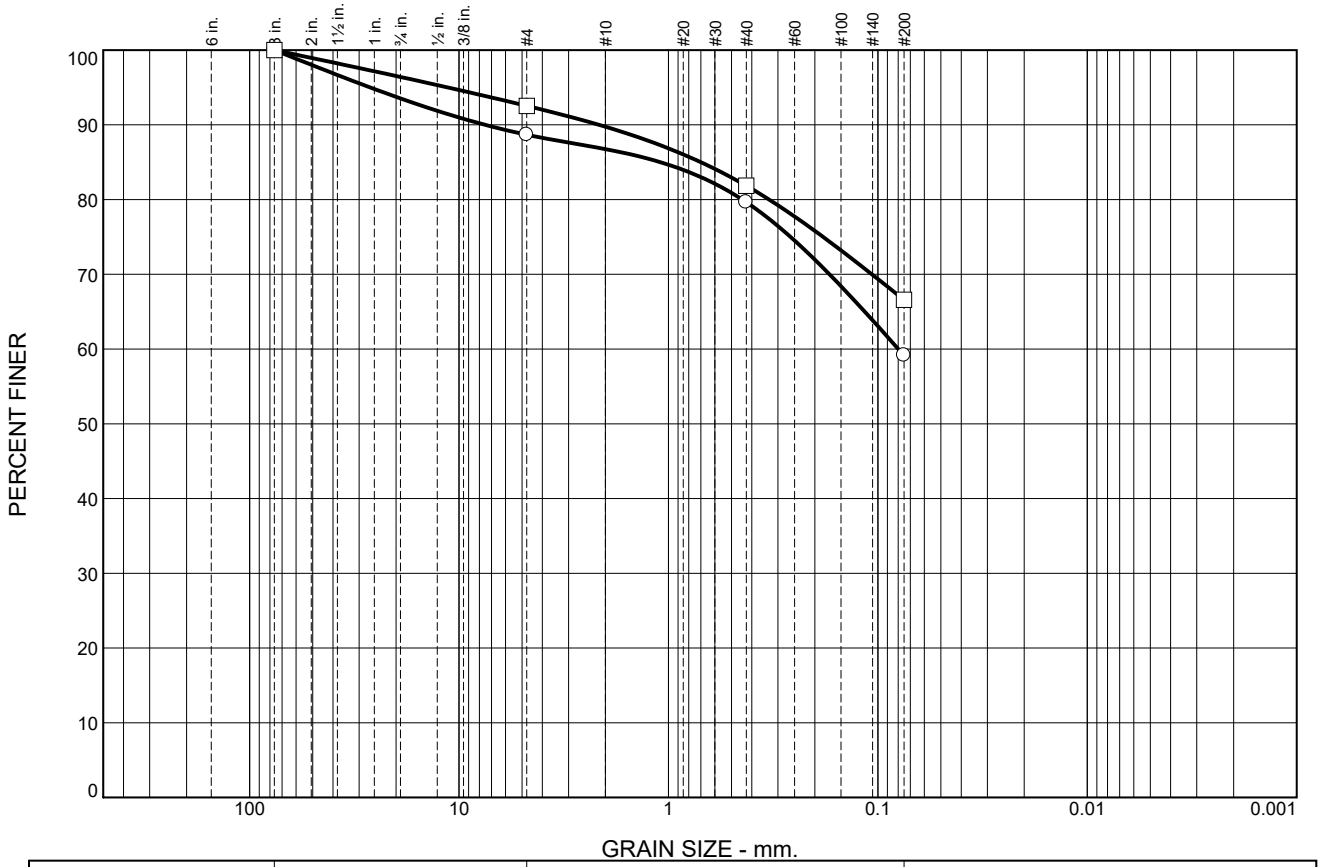


Liquid Limit= 32
Plastic Limit= 17
Plasticity Index= 15
Natural Moisture= 17.4
Liquidity Index= 0.0

Plastic Limit Data

Run No.	1	2	3	4	
Wet+Tare	19.75	18.56			
Dry+Tare	18.53	17.51			
Tare	11.23	11.30			
Moisture	16.7	16.9			

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	6.5	4.8	1.9	7.1	20.6	59.1	
□	0.0	3.6	3.9	2.8	7.8	15.3	66.6	

SOIL DATA

SYMBOL	SOURCE	SAMPLE NO.	DEPTH (ft.)	Material Description	USCS
○	B-1		7.5'	Dark brown sandy CLAY	CL
□	B-2		7.5'	Dark yellowish brown sandy lean CLAY	CL

B. HILLEBRANDT SOILS TESTING, INC.
+1 510-409-2816
SoilTesting@aol.com

Client: Peters & Ross
Project: 46 Eagle Street, San Franciso
Project No.: 22111.001 **Figure**

Tested By: BH

GRAIN SIZE DISTRIBUTION TEST DATA

4/1/2022

Client: Peters & Ross
Project: 46 Eagle Street, San Franciso
Project Number: 22111.001
Location: B-1
Depth: 7.5'
Material Description: Dark brown sandy CLAY
USCS: CL
Tested by: BH

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
204.20	39.50	0.00	3"	0.00	100.0
			#4	18.65	88.7
			#40	33.51	79.7
			#200	67.28	59.1

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	6.5	4.8	11.3	1.9	7.1	20.6	29.6			59.1

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
							0.0798	0.4437	1.0922	7.5025	26.5443

Fineness Modulus
1.31

GRAIN SIZE DISTRIBUTION TEST DATA

4/1/2022

Client: Peters & Ross
Project: 46 Eagle Street, San Franciso
Project Number: 22111.001
Location: B-2
Depth: 7.5'
Material Description: Dark yellowish brown sandy lean CLAY
USCS: CL
Tested by: BH

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer
158.90	32.70	0.00	3"	0.00	100.0
			#4	9.42	92.5
			#40	22.90	81.9
			#200	42.16	66.6

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	3.6	3.9	7.5	2.8	7.8	15.3	25.9			66.6

D_5	D_{10}	D_{15}	D_{20}	D_{30}	D_{40}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
								0.3306	0.7004	2.1459	11.2988

Fineness Modulus
1.04