TOWN OF FAIRFAX STAFF REPORT

Department of Planning and Building Services

TO:

Fairfax Planning Commission

DATE:

November 19, 2020

FROM:

Linda Neal, Principal Planner

Ben Berto, Director of Planning and Building Services

LOCATION:

169 Ridgeway Avenue; APN # 001-280-01

PROJECT:

New single-family residence

ACTION:

Hill Area Residential Development, Design Review and Tree

Removal permits; Application # 20-13

APPLICANT:

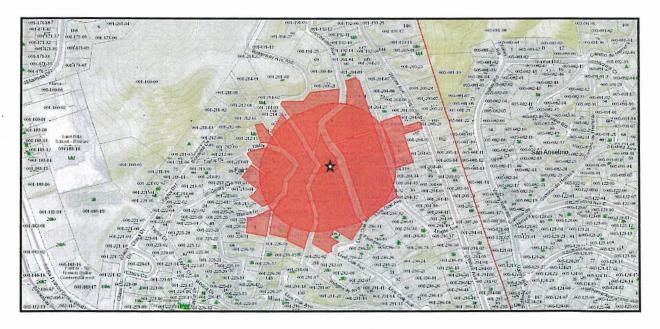
Dylan Riley

OWNER:

Jojana Nineth, Quiroa Orozco, Clavier Edvin, Cifuentes Calderon

CEQA STATUS:

Categorically Exempt, §§ 15303(a) and 15332



169 RIDGEWAY AVENUE

DESCRIPTION

The proposed project consists of the following: a) construction of the 3 story, 27 foot tall, 3 bedroom, 2 bathroom, 1,549 square-foot residential structure with a 518 sq. ft. first floor, 866 sq. ft. second floor and 62 sq. ft. 3rd (entry) floor with an attached 266 square-foot, one car garage; b) a 1,376 square foot deck is proposed off the main living level along the south and east side of the structure; and, c) a 109 square foot entry deck is proposed along the south side of the one car garage leading to the front entry door.

The total proposed project grading consists of 37 cubic yards of cut and 28 cubic yards of fill, for a net off-haul of 9 cubic yards.

The residence complies with the regulations set forth in the Residential RD 5.5.-7 Zone District as follows:

	Front Setback	Rear Setback	Combined Front/rear Setback	Side Setbacks	Combined Side Setbacks	FAR	Lot Coverage	Height
Required/ Permitted	6 ft.	12 ft.	35 ft.	5 ft. & 5 ft.	20 ft.	.40	.35	35 ft., 3 stories
Proposed	6 ft.	63 ft.	69 ft.	8 ft. 6 in., 10 ft.	18 ft. 6 in.	.34	.28	27 ft., 3 stories

BACKGROUND

The 5,864 square-foot site slopes down from Ridgeway Avenue at an average rate of 33%. The site was created by the approval of a lot line adjustment by the Town Council in 1996 that involved 4 of the surrounding properties. The lot line adjustment application was the result of a property line disagreement that was created when the surveyor assisting in trying to resolve a dispute discovered that 2 different subdivision maps had been recorded for the following 5 parcels – APN 001-203-11, 001-203-26, 001-203-30, 002-203-31, and 001-203-35 showing different boundaries (Attachment B – Assessor's Parcel Map showing the 1996 property line locations). Title reports had been written over the years using both of the differing maps at various times the result being that a portion of land was not owned by anyone and improvements and areas used by the various property owners were not in their ownership.

The lot line adjustment, and setback and encroachment permits granted by the Planning Commission to facilitate the processing of the lot line adjustment by the Town Council, were the result of over a year of negotiations and finally mediation between the 5 property owners in 1996. The result were the parcels created by the mediation and depicted in the approved lot line adjustment map (Attachment C – showing 5 new property configurations and with new parcel numbers depicted in the new parcel map – APN #'s 001-280-01 through 001-280-05).

Portions of the site appear to be improved with 2 rock walls and some terracing installed at some point in time by the adjacent property owners at 21 Chester Avenue.

There are few trees on the site. Three oaks and a plum tree are being retained with the only tree being removed an apple tree located at the center of the site and within the footprint of the proposed residential structure.

DISCUSSION

Required Discretionary Permits

The project requires the approval of a Hill Area Residential Development Permit (HRD), A Design Review Permit (DRP) and a Tree Removal Permit (TRP). The following is a discussion of the 3 required permits:

Hill Area Residential Development Permit

The site is located in the Residential RD 5.5-7 Zone. Town Code §17.048.050(c) indicates that properties with a 33% slope must be a minimum of 25,000 sq. ft. in size and 119 ft. wide to be in compliance with the minimum requirements. If a parcel does not meet the minimum size and width requirements Town Code § 17.048.050 indicates that any modifications to the site or structures, if there are any, require the approval of a Conditional Use Permit (CUP) or a HRD.

The HRD Ordinance, Town Code Chapter 17.072, sets forth the different conditions that render a project subject to an HRD permit instead of a CUP. The conditions that make the proposed development of this Ridgeway Lot subject to an HRD are as follows:

17.072.020(A)(4), 31% slope; excavation of over 50 cubic yards. The project site has a 33% slope and development will require the excavation and fill of 66 cubic yards of material.

17.072. 020(A)(B), the property falls within an area shown to be susceptible to landslides on the Division of Mines and Geology Map, "Interpretation of the Relative Stability of Upland Slopes in the Upper Ross Valley and the western Park of San Rafael Area Marin County California" Rice, Salem J. Smith, Theodore C and Strand Rudolph G.,1976.

Therefore, the project is subject to the HRD process, the purpose of which is to encourage the maximum retention of natural topographic features, minimize grading of hillside areas, provide a safe means of ingress and egress to vehicular and pedestrian traffic to and within hillside areas, minimize water runoff and soil erosion during and after construction, prevent loss of life, reduce injuries and property damage and minimize economic dislocations from geologic hazards, and to ensure that infill development on hillside lots is of a size and scale appropriate to the property and

consistent with other properties in the vicinity under the same zone classification.

Drainage and Slope Stability

The geotechnical report included test borings and probes that encountered bedrock from 1 to 3 feet below the surface. Visual inspection by the project engineer of the surrounding neighborhood structures and sites identified no evidence of distressed houses, settlements, slope stability issues or expansive soil damage. The project engineer has indicated that due to the stability of the site and the shallow depth of bedrock, the house can have either an interior spread footing tied together with grade beams to create a ridged grid foundation or a drilled pier and grade beam foundation (Attachment D – Geotechnical Reports dated 5/7/20 and 7/22/20).

The drainage on the site flows from the southwest to the northeast following the natural grade and flowing downslope to Chester Drive. The stormwater control report indicates that the new site improvements including slight grading along the northern side of the building and the installation of 4-inch storm drains that will run along the north and south sides of the structure and driveway improvements. Downspouts will be included leading from the roof to storm drain laterals on both sides of the building that will connect the roof drainage to the main storm drains that run along the northern and southern sides of the site. All the storm run-off will be taken to the rear of the house on the west side where it will be deposited into a stormwater dissipation system that will slow the water down and deposit it at the rate the water currently flows over the site onto the hillside below where it eventually will enter the concrete gutter that runs along Chester Avenue below (Attachment E – Stormwater Control Plan dated June 2020).

The Town Engineer has reviewed the following reports and the project plans and has determined that the site development, as proposed, will minimize water runoff and soil erosion during and after construction, prevent loss of life, reduce injuries and property damage and minimize economic dislocations from geologic hazards (Attachment F – Town Engineer's final project memorandum dated 9/2/20):

Architectural Plans by Alex Riley, dated 8/10/20, pages 1 through 10 Engineering plans by Vlad Iojica, Professional Engineer, pages C1.0, C3.0, C3.1, C5.0, C5.1 and C.6.

Geotechnical reports by William W. Moore, Professional Engineer and Geotechnical Engineer dated 5/7/20 and 7/22/20.

Stormwater Control Plan report by Vlad Iojica, Professional Engineer, dated June 2020.

The staff has included, upon the recommendation of the Town Engineer, the following conditions in the resolution recommending approval of the project: The Town Engineer shall review the final, stamped and signed project Civil and Structural plans and the project Geotechnical Engineer should provide a letter certifying that the intent of his recommendations, including those in the most recent July 22, 2020 letter, have been substantially incorporated into the project, prior to issuance of the building permit.

House Siting and Design

The house siting and design comply with the purpose section of the Hill Area Residential Development Chapter 17.072 of the Town Code. The house has been located at the top of the site which slopes down from Ridgeway Avenue to Chester Avenue below. Locating the residence on the upper portion of the site greatly decreases the amount of excavation required to build a house, limiting it to just the foundation installation, installation of the sewer and water lines and the storm drain system. Locating the structure from Chester Avenue would increase the required amount of excavation significantly since 3 parking spaces would have to be cut into the upsloping hillside.

Design Review

Town Code §17.020.030(A) requires that the design of new residences be reviewed and approved by the Fairfax Planning Commission for compliance with the design review criteria contained in Town Code §17.020.040.

These criteria include but are not limited to the following:

"The proposed development shall create a well composed design harmoniously related to other facilities in the immediate area and to the total setting as seen from hills and other key vantage points in the community".

"The size and design of the structure shall be considered for the purpose of determining that the structure is in proportion to its building site and that it has balance and unity among its external features so as to present a harmonious appearance".

"The extent to which natural features, including trees, shrubs, creeks and rocks and the natural grade of the site are to be retained".

The proposed structure complies with the Design Review Criteria. The structure conforms to the general character of other structures in the vicinity, will require minimal disturbance to the site for grading to accommodate the house footprint, water and sewer laterals, and drainage system improvements. The construction will require the removal of 1 apple tree that is within the footprint of the house. The Fairfax Tree Committee reviewed and approved removal of the apple tree with no recommended special conditions or requirements for a replacement tree(s) (Attachment H – Tree Committee letter of action).

The house has been designed to step down the hillside and at 27 feet in height at its maximum it is 8 feet below the permitted 35-foot maximum height allowed in the RD 5.5-7 Zone.

The parking at the front of the site has been redesigned to be located out of the required minimum and combined side yard setbacks while still providing the required 3 parking spaces, one covered in the garage, as set forth in Town Code §§ 17.052.030(A)(1)(d) and (2) (Attachment G – showing redesigned parking plan dated 11/11/20).

The exterior of the structure has been articulated with vertical Hardie-board siding painted brown (Benjamin Moore #999), rectangular bronze aluminum windows that run horizontally throughout much of the house and vertically along the stairwell and with an exterior deck out of natural cedar with natural cedar handrails. Cedar will also be used

for the fencing and house trim. See color board below.



The house has been designed to be in scale with the project site and similar in size to other structures in the neighborhood and on similar sized and sloped sites throughout the Ridgeway Park subdivision where the property is located (see table below).

169 Ridgeway A	venue – SIMILAR	PROPERTIES	DEVELOPME	NT			
APN#	ADDRESS	LOT SIZE	HOUSE	#	# BATHS	GARAGE	FAR
			SIZE	BEDROOMS			
On similar lots							
001-203-36		8500	1483	3	2	0	.17
001-214-08		5618	1504	4	2.5	0	.27
001-214-13		3600	1554	3	2.5	543	.43
001-214-21		8374	1630	3	2	0	.19
001-214-24		6250	1289	2	1	0	.21
001-214-26		5164	1865	4	2.5	0	.36
001-232-02		9095	1170	2	1	324	.13
001-232-03		8400	1256	3	1	400	.15
001-232-07		5488	1828	3	3	268	.33
001-231-10		5159	1404	3	2	0	.27
001-231-11		8763	1501	3	2	276	.23
001-231-19		7423	1694	4	2	402	.23
001-280-02		7915	1269	3	2	0	.16
001-280-03		4560	998	2	1	1	.22
001-280-04		4589	2176	4	2	0	.47
Project Site	. 1		一种介绍	321			
001-280-01		5864	1549	3	2	266	.26

Excavation

Town Code §17.20.080 requires that an Excavation Permit be obtained from the Planning Commission for excavation and fill amounts of over 100 cubic yards. The project will only require the total excavation and fill of 66 cubic yards of material, so the project does not require an excavation permit from the Commission.

Encroachment

Town Code § 12.32.010 gives the Planning Commission the authority to grant encroachment permits for carports and other structures upon portions of the public rights-of-way that are not being used for vehicular or pedestrian travel. Since the project does not propose the construction of any structures within the Ridgeway Avenue right-of-way, only paving for the driveway, the project does not require the approval of an encroachment permit.

Town Code 12.12.030 allows one 20-foot-wide driveway leading from the edge of the paved road into each residential property. The driveway proposed to reach the

proposed attached garage and second uncovered space, and which provides the 3rd required guest parking space is 20 feet wide.

OTHER DEPARTMENT/AGENCY COMMENTS/CONDITIONS

Ross Valley Fire Department (RVFD)

RVFD submitted written requirements which have been incorporated into conditions of approval in the attached resolution and are summarized as follows:

All vegetation and construction materials are to be maintained away from the residence during construction, hydrant flow and location are to be identified prior to the start of construction, a fire sprinkler system shall be installed throughout the entire building, smoke detectors shall be installed throughout the entire building and be provided with AC power and be interconnected for simultaneous alarm, carbon monoxide alarms shall be provided outside each sleeping area in the immediate vicinity of the bedrooms and address numbers at least 4 " tall visible from the street and internally illuminated or illuminated by and adjacent light controlled by a photocell and switched off only by a breaker so it will remain illuminated all night.

Marin Municipal Water District (MMWD)

MMWD submitted written requirements which have been incorporated into conditions of approval in the attached resolution and are summarized as follows:

A water service application must be submitted to the District, a copy of the building permit must be provided to the district along with the required applications and fees, the foundation must be completed within 120 days of the date of application, all indoor and outdoor requirements or District Code Title 13, Water Conservation must be complied with, any landscaping plans must be reviewed and approved by the District, backflow prevention requirements must be met and Ordinance 420, requiring installation of grey water recycling system when practicable, must be incorporated into the project building permit plans or an exemption letter from the District must be provided to the Town, all of the District's rules and regulations in effect at the time service is requested must be complied with.

Ross Valley Sanitary District (RVSD)

RVSD submitted written requirements which have been incorporated into the conditions of approval in the attached resolutions and are summarized as follows:

A sewer connection permit and a side sewer connection permit are required for all work outside the new building footprint, fees will include sewer capacity charges as well as permit fees, all sewer connection details for the sewer laterals and connection should be included on the submitted drawing set. Show the sewer main and lateral sizes and pipe material, revise the sewer clean out shown on sheet C5.0 to meet Sanitary District

standards (detail SD-30), include a sewer cleanout and backwater protection device within 2-feet of the building foundation, the Ross Valley Sanitary Standard Notes shall be shown and are found in Subsection L of Section 3 of the Design and Construction Standards and demonstrate that all materials used in the construction of the sewer improvements are from the approved materials list.

Fairfax Police, Building and Public Works Departments

Complete road closures will be limited to concrete pours and steel placement, temporary road closures will require coordination with the Fairfax Police Department and Ross Valley Fire Department, a detailed construction management plan must be submitted with the building permit application that includes construction delivery routes approved by the Department of Public Works, construction schedule (deliveries, worker hours, etc.), notification to area residents, emergency access and egress routes and proposed employee parking locations during construction. The applicant shall prepare, and file with the Public Works Director, a video of the roadway conditions on the construction delivery routes (routes must be approved by Public Works Director) and a bond will be submitted prior to issuance of the building permit in an amount that will cover the cost of grading, weatherization and repair of possible roadway damage in an amount equaling 100% of the estimated construction costs and pay for the Town Engineer's time to review and confirm the contractor's estimate.

RECOMMENDATION

Move to approve application # 20-13 by adopting Resolution No. 2020-11 setting forth the findings and conditions for the project approval.

ATTACHMENTS

Attachment A - Resolution No. 2020-11

Attachment B – 1996 Assessor's Map page for property

Attachment C – Lot line adjustment map for property

Attachment D - Project Geotechnical Engineer's 7/22/20 and 5/7/20

Attachment E - Project Civil Engineer's June 2020 Stormwater Control report

Attachment F - Town Engineer final memorandum on the project

Attachment G - revised parking plan eliminating the need for a parking variance

Attachment H - Tree Committee letter of action

RESOLUTION NO. 2020-11

A Resolution of The Fairfax Planning Commission Approving Application No. 20-13 for a Hill Area Residential Development Permit, Design Review Permit and Tree Removal Permit for a Residence at 169 Ridgeway Avenue

WHEREAS, the Town of Fairfax has received an application from Dylan and Alex Riley to build 3-story, 1,549 square-foot, 3-bedroom, 2-bathroom single-family residence and attached 266 square-foot carport on June 9, 2020: and

WHEREAS the Planning Commission held a duly noticed Public Hearing on November 19, 2020 at which time the Planning Commission determined that the project complies with the Hill Area Residential Development Overlay Ordinance; and

WHEREAS, based on the plans and other documentary evidence in the record the Planning Commission has determined that the applicant has met the burden of proof required to support the findings necessary to approve the Hill Area Residential Development, Design Review and Tree Removal Permits; and

WHEREAS, the Commission has made the following findings:

The project is consistent with the 2010-2030 Fairfax General Plan as follows:

Policy LU-1.2.3: New and renewed development shall be designed and located to minimize the visual mass. The Town will require exterior materials and colors that blend the exterior appearance of structures with the surrounding natural landscape, allowing for architectural diversity.

Policy LU-7.1.5: New and renewed residential development shall preserve and enhance the existing character of the Town's neighborhoods in diversity, architectural character, size, and mass.

Policy LU-7.2.2: to the extent feasible natural features including the existing grade, mature trees and vegetation shall be preserved for new and renewed development.

Policy LU-4.1.4: New and renewed development shall be designed to minimize run-off in a manner that does not cause undue hardship on neighboring properties.

Policy LU-7.2.2: To the extent feasible natural features including the existing grade, mature trees, and vegetation shall be preserved for new and renewed development.

Hill Area Residential Development

The proposed development is consistent with the General Plan and the Residential RD 5.5-7 Zone regulations.



- 1. The site planning preserves identified natural features as much as possible while also complying with other agency and department regulations.
- 2. Vehicular access and parking are adequate.
- 3. The proposed development harmonizes with surrounding residential development and meets the design review criteria contained in Town Code § 17.020.040.
- 4. The approval of the Hill Area Residential Development permit for 1 single-family residence on this 5,864 square foot parcel shall not constitute a grant of special privilege and shall not contravene the doctrines of equity and equal treatment.
- 5. The development and use of property as approved under the Hill Area Residential Development Permit will not cause excessive or unreasonable detriment to adjoining properties or premises, or cause adverse physical or economic effects thereto, or create undue or excessive burdens in the use and enjoyment thereof, or any or all of which effects are substantially beyond that which might occur without approval or issuance of the use permit if the conditions of approval contained within Resolution No. 2020-11 are complied with.
- Approval of the proposed Hill Area Residential Development permit is not contrary to those objectives, goals or standards pertinent to the particular case and contained or set forth in any Master Plan, or other plan or policy, officially adopted by the City.
- 7. Approval of the Hill Area Residential Development permit will result in equal or better development of the premises than would otherwise be the case.

Design Review

8. The design of the project complies with the Design Review Criteria set forth in Town Code § 17.020.040.

Tree Removal

 The tree being removed is proposed for removal in compliance with all the considerations listed in Town Code 8.36.060(B)(1 through 7) of the Tree Ordinance, Town Code Chapter 8.36.

WHEREAS, the Commission has approved the project subject to the applicant's compliance with the following conditions:

1. The project is approved based on the following plans:

Architectural Plans by Alex Riley, dated 8/10/20, pages 1 through 10

Engineering plans by Vlad Iojica, Professional Engineer, pages C1.0, C3.0, C3.1, C5.0, C5.1 and C.6.

Geotechnical reports by William W. Moore, Professional

Engineer and Geotechnical Engineer dated 5/7/20 and 7/22/20.

Stormwater Control Plan report by Vlad Iojica, Professional Engineer, dated J June 2020.

Tree Committee recommendation of 11/9/20

Vegetative Management Plan approved by RVFD on 9/9/20

- Prior to issuance of any of the building permits for the project the applicant or his assigns shall:
 - a. Submit a construction plan to the Public Works Department which may include but is not limited to the following:
 - Construction delivery routes approved by the Department of Public Works.
 - II. Construction schedule (deliveries, worker hours, etc.)
 - III. Notification to area residents
 - IV. Emergency access routes
 - V. Construction worker staging area
 - b. The applicant shall prepare, and file with the Public Works Director, a video of the roadway conditions on the public construction delivery routes (routes to be pre-approved by Public Works Director).
 - c. Submit a cash deposit, bond, or letter of credit to the Town in an amount that will cover the cost of grading, weatherization, and repair of possible damage to public roadways. The applicant shall submit contractor's estimates for any grading, site weatherization and improvement plan for approval by the Town Engineer. Upon approval of the contract costs, the applicant shall submit a cash deposit, bond or letter of credit equaling 100% of the estimated construction costs.
- 3. The foundation and retaining elements shall be designed by a structural engineer certified as such in the state of California. Plans and calculations of the foundation and retaining elements shall be stamped and signed by the structural engineer and submitted to the satisfaction of the Town Structural Engineer.
- 4. The grading, foundation, retaining, and drainage elements shall also be stamped and signed by the project geotechnical engineer as conforming to the recommendations made by the project Geotechnical Engineer.
- 5. Prior to submittal of the building permit plans, the applicant shall secure written approval from the Ross Valley Fire Authority, Marin Municipal Water District

- and the Ross Valley Sanitary District noting the development conformance with their recommendations.
- 6. Submit 3 copies of the record of survey with the building permit plans.
- 7. All retaining walls that are visible from the street and are constructed of concrete shall be heavily textured or colorized in a manner approved by the planning staff prior to issuance of the building permit. This condition is intended to mitigate the visual impact of the proposed walls.
- 8. Prior to the removal of any trees not approved by the Planning Commission through this action, the applicant shall secure a tree cutting permit, if required, from the Fairfax Tree Committee prior to removal of any on-site trees subject to a permit under Town Code Chapter 9.36. To further minimize impacts on trees and significant vegetation, the applicant shall submit plans for any utility installation (including sewer, water and drainage) which incorporates the services of the project arborist to prune and treat trees having roots 2 inches or more in diameter that are disturbed during the construction, excavation or trenching operations. Tree root protection measures may include meandering the line, check dams, rip rap, hand trenching, soil evaluation and diversion dams. Any pruning shall take place during the winter when trees are dormant for deciduous species and during July to August for evergreen species.
- 9. During the construction process the following shall be required:
 - a. The geotechnical engineer and the project arborist shall be on-site during the grading process and both shall submit written certification to the Town Staff that the grading and tree protection measures have been completed as recommended prior to installation of foundation and/or retaining forms and drainage improvements, piers and supply lines.
 - b. Prior to the concrete form inspection by the building official, the geotechnical and structural engineers shall field check the forms of the foundations and retaining elements and provide written certification to the Town staff that the work to this point has been completed in conformance with their recommendations and the approved building plans.
 - c. The Building Official shall field check the concrete forms prior to the pour.
 - d. All construction-related vehicles including equipment delivery, cement trucks and construction materials shall always be situated off the travel lane of the adjacent public right(s)-of-way. This condition may be waived by the Building Official on a case-by-case basis with prior notification from the project sponsor.

- e. Any proposed temporary closures of a public right-of-way shall require prior approval by the Fairfax Police Department and any necessary traffic control, signage or public notification shall be the responsibility of the applicant or his/her assigns. Any violation of this provision will result in a stop work order being placed on the property and issuance of a citation.
- 10. Prior to issuance of an occupancy permit the following shall be completed:
 - a. The geotechnical engineer shall field check the completed project and submit written certification to the Town Staff that the foundation, retaining, grading and drainage elements have been installed in conformance with the approved building plans and the recommendations of the soils report.
 - b. The Planning Department and Town Engineer shall field check the completed project to verify that all and planning commission conditions and required engineering improvements have been complied including installation of landscaping and irrigation prior to issuance of the certificate of occupancy.
- 11. Excavation shall not occur between October 1st and April 1st of any year. The Town Engineer has the authority to waive this condition depending upon the weather.
- 12. The roadways shall be kept free of dust, gravel, and other construction materials by sweeping them, daily, if necessary.
- 13. Any changes, modifications, additions, or alterations made to the approved set of plans will require a modification of Application # 20-13. Modifications that do not significantly change the project, the project design or the approved discretionary permits *may* be approved by the Planning Director. Any construction based on job plans that have been altered without the benefit of an approved modification of Application 20-13 will result in the job being immediately stopped and red tagged.
- 14. Any damages to the public portions of Willow, Live Oak, Chester or Ridgeway Avenue, or other public roadway used to access the site resulting from construction activities shall be the responsibility of the property owner.
- 15. The applicant and its heirs, successors, and assigns shall, at its sole cost and expense, defend with counsel selected by the Town, indemnify, protect, release, and hold harmless the Town of Fairfax and any agency or instrumentality thereof, including its agents, officers, commissions, and employees (the "Indemnitees") from any and all claims, actions, or proceedings arising out of or in any way relating to the processing and/or approval of the project as described herein, the purpose of which is to attack, set aside, void, or annul the approval of the project, and/or any environmental

determination that accompanies it, by the Planning Commission, Town Council, Planning Director, Design Review Board or any other department or agency of the Town. This indemnification shall include, but not be limited to, suits, damages, judgments, costs, expenses, liens, levies, attorney fees or expert witness fees that may be asserted or incurred by any person or entity, including the applicant, third parties and the Indemnitees, arising out of or in connection with the approval of this project, whether or not there is concurrent, passive, or active negligence on the part of the Indemnitees. Nothing herein shall prohibit the Town from participating in the defense of any claim, action, or proceeding. The parties shall use best efforts, acting in good faith, to select mutually agreeable defense counsel. If the parties cannot reach agreement, the Town may select its own legal counsel and the applicant agrees to pay directly, or timely reimburse on a monthly basis, the Town for all such court costs, attorney fees, and time referenced herein, provided, however, that the applicant's duty in this regard shall be subject to the Town's promptly notifying the applicant of any said claim, action, or proceeding.

- 16. The applicant shall comply with all applicable local, county, state and federal laws and regulations. Local ordinances which must be complied with include, but are not limited to: the Noise Ordinance, Chapter 8.20, Polystyrene Foam, Degradable and Recyclable Food Packaging, Chapter 8.16, Garbage and Rubbish Disposal, Chapter 8.08, Urban Runoff Pollution Prevention, Chapter 8.32 and the Americans with Disabilities Act and Best Management Practices for Stormwater Pollution Prevention.
- 17. Conditions placed upon the project by outside agencies, Town department or by the Town Engineer may be eliminated or amended with that agency's, department's or the Town Engineer's written notification to the Planning Department prior to issuance of the building permit.
- 18. The building permit plans shall be reviewed and approved by the Town Engineer, at the expense of the applicant, prior to issuance of the building permit. The project shall be inspected by the Town Engineer prior to issuance of the occupancy permit for the residential structure for compliance with the engineering plans.

Ross Valley Fire Department

- 19. All vegetation and construction materials are to be maintained away from the residence during construction,
- 20. Hydrant flow and location are to be identified prior to the start of construction.
- 21. The project requires installation of a fire sprinkler system that complies with the National Fire Protection Association regulation 13-D and local standards. The system will require a permit from the Fire Department and the submittal of plans and specifications for a system submitted by an individual or firm

- licensed to design and/or design-build sprinkler systems.
- 22. The property is located within the Wildland Urban Interface Area for Fairfax and the new construction must comply with Chapter 7A of the California Building Code or equivalent.
- 23. All smoke detectors in the residence shall be provided with AC power and be interconnected for simultaneous alarm. Detectors shall be located in each sleeping room, outside of each sleeping room in a central location in the corridor and over the center of all stairways with a minimum of 1 detector on each story of the occupied portion of the residence.
- 24. Carbon monoxide alarms shall be provided in existing dwellings when a permit is required for alterations, repairs, or addition and the cost of the permit exceeds \$1,000.00. Carbon monoxide alarms shall be located outside of each sleeping area in the immediate vicinity of the bedrooms and on every level of the dwelling, including basements.
- 25. Address numbers at least 4 inches tall must be in place adjacent to the front door. If not clearly visible from the street, additional numbers must be placed in location that is visible from the street. The numbers must be internally illuminated or illuminated by and adjacent light controlled by a photocell that can be switched off only be a breaker so it will remain illuminated all night.
- 26. Alternative materials or methods may be proposed for any of the above conditions in accordance with Section 104.9 of the Fire Code.
- 27. All approved alternatives requests, and their supporting documentation, shall be included in the plan sets submitted for final approval by the Fire Department.

Marin Municipal Water District (MMWD)

- 28. A copy of the building permit must be provided to the district along with the required applications and fees.
- 29. The foundation must be completed within 120 days of the date of application.
- 30. All indoor and outdoor requirements or District Code Title 13, Water Conservation must be complied with.
- 31. Any landscaping plans must be reviewed and approved by the District.
- 32. Backflow prevention requirements must be met.
- 33. Ordinance 420., requiring installation of grey water recycling system when

- practicable, must be incorporated into the project building permit plans or an exemption letter from the District must be provided to the Town.
- 34. All the District's rules and regulations if effect at the time service is requested must be complied with.

Ross Valley Sanitary District (RVSD)

- 35. A sewer connection permit and a side sewer connection permit are required for all work outside the new building footprint.
- 36. Fees will include sewer capacity charges as well as permit fees.
- 37. All sewer connection details for the sewer laterals and connection should be included on the submitted drawing set. Show the sewer main and lateral sizes and pipe material, revise the sewer clean out shown on sheet C5.0 to meet Sanitary District standards (detail SD-30), include a sewer cleanout and backwater protection device within 2-feet of the building foundation, the Ross Valley Sanitary Standard Notes shall be shown and are found in Subsection L of Section 3 of the Design and Construction Standards and demonstrate that all materials used in the construction of the sewer improvements are from the approved materials list.
- 38. A hold will be placed on the property when the building permit is issued and will not be released for occupancy until the District permit and sewer requirements have been fulfilled.

Fairfax Public Works Department

- 39. All large trucks with more than 2 axles accessing the site for construction will be limited to the hours of 9 AM to 3 PM.
- 40. All driveway improvements shall be completed and be signed off by the Building Official and Public Works Manager before construction begins on the house.
- 41. Complete road closures will be limited to concrete pours and steel placement and will be coordinated with the Fairfax Police Department and Ross Valley Fire Department.
- 42. A detailed construction management plan must be submitted with the building permit application that includes construction delivery routes, construction schedule (deliveries, worker hours, etc.), notification to area residents, emergency access and egress routes and proposed employee parking locations during construction and be approved by the Department of Public Works.

- 43. The applicant shall prepare, and file with the Public Works Director, a video of the roadway conditions on the construction delivery routes.
- 44. A bond will be submitted prior to issuance of the building permit in an amount that will cover the cost of grading, weatherization and repair of possible roadway damage in an amount equaling 100% of the estimated construction costs and pay for the Town Engineer's/Plan Checker's time to review and confirm the contractor's estimate.

Town Engineer

45. The Town Engineer shall review the final, stamped and signed project Civil and Structural plans and the project Geotechnical Engineer should provide a letter certifying that the intent of his recommendations, including those in the most recent July 22, 2020 letter, have been substantially incorporated into the project, prior to issuance of the building permit.

Miscellaneous

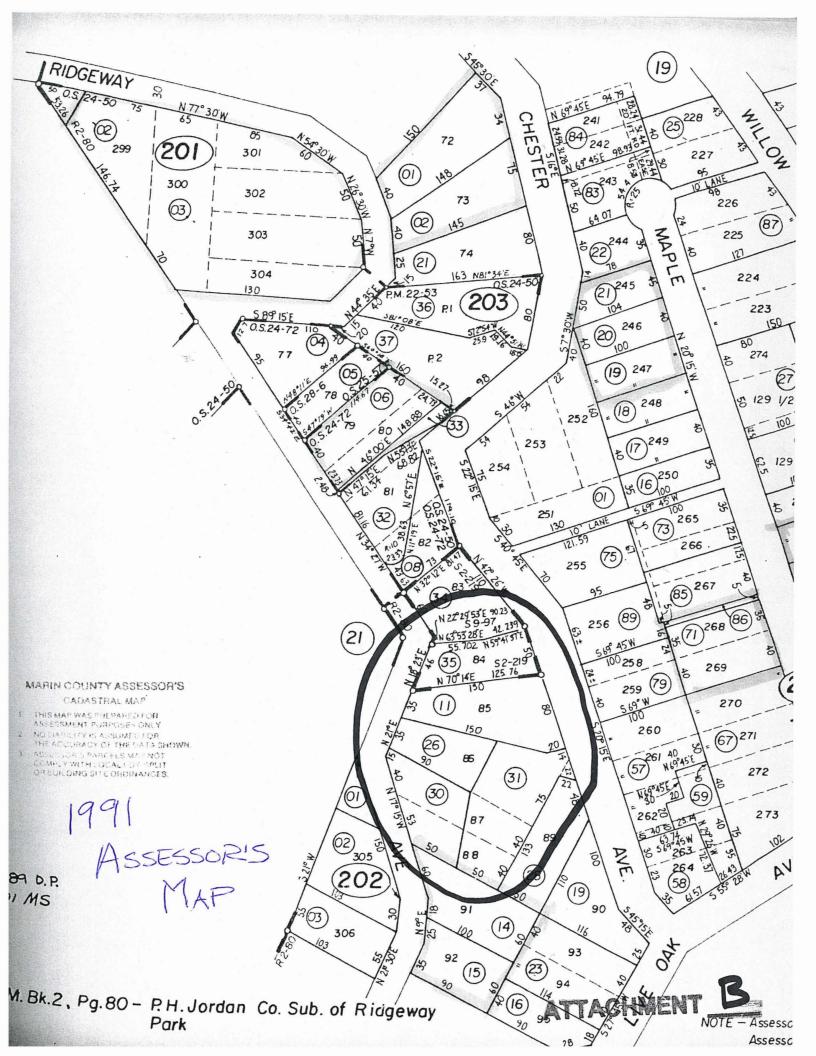
- 46. The exterior lighting fixtures must meet "dark sky" criteria, must be the minimum necessary for safety, and must be shielded from direct offsite illumination.
- 47. The surveyor shall mark the location of all the property lines in the field prior to the start of construction.
- 48. A drainage system maintenance agreement including a system location plan and required maintenance schedule hall be approved by the Town Engineer and then be recorded at the Marin County Recorder's Office setting forth the required maintenance schedule to ensure the drainage system continues to function as designed. A copy shall be provided to the Town prior to issuance of the building permit.

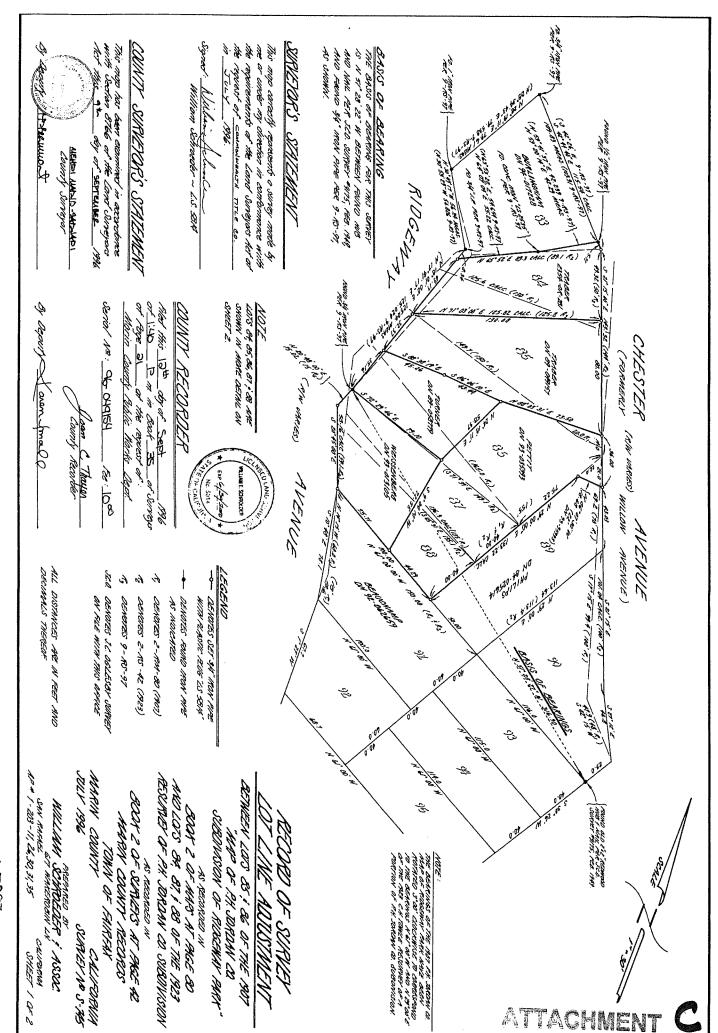
NOW, THEREFORE BE IT RESOLVED, the Planning Commission of the Town of Fairfax hereby finds and determines as follows:

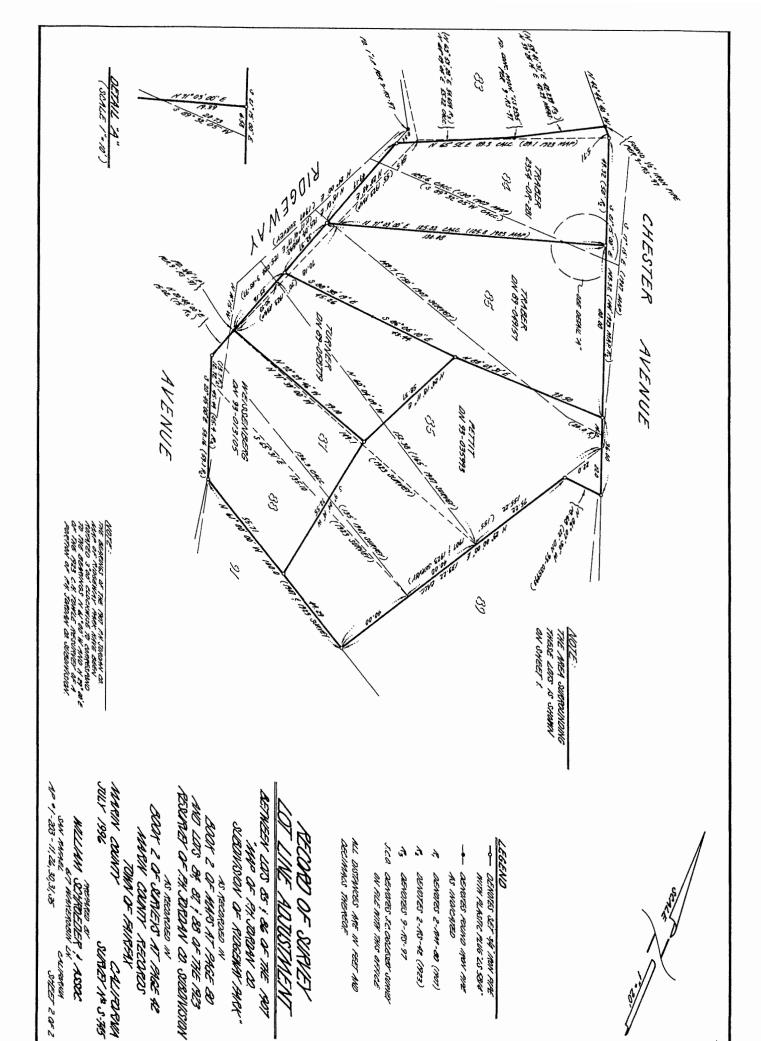
The approval of the Hill Area Residential Development, Design Review Permit and Tree Removal permit are in conformance with the 2010 – 2030 Fairfax General Plan, the Fairfax Town Code and the Fairfax Zoning Ordinance, Town Code Title 17; and

Construction of the project can occur without causing significant impacts on neighboring residences and the environment.

The foregoing resolution was adopted at a regular meeting of the Planning Commission held in said Town, on the 19 day of November 2020 by the following vote:
AYES: NOES:
Chair Green
Attest:
Ben Berto, Director of Planning and Building Services

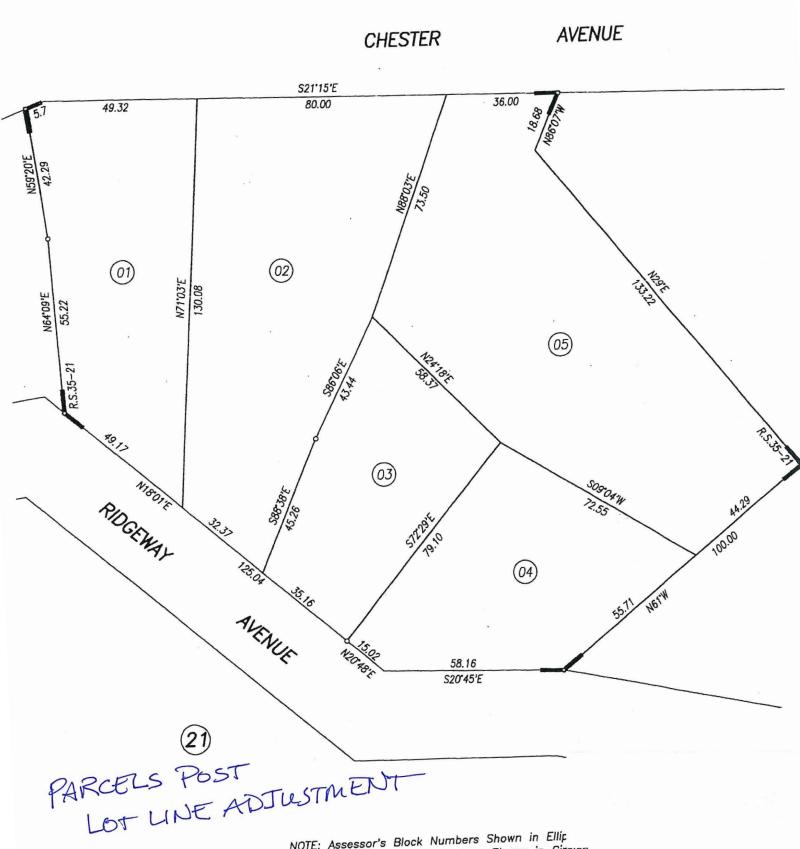






PTN. RANCHO CANADA DE HERRERA





William W. Moore, P.E., G.E.

139 Nantucket Cove, San Rafael, CA 94901

ph (707) 373-5438

wwm110@sbcglobal.net

July 22, 2020

Mr. Alex Riley, Architect and, Ms. Linda Neal, Principal Planner Town of Fairfax, Planning and Building Services Department 142 Bolinas Avenue Fairfax, CA 94930

AUG] 8 2020

Re: Proposed Riley Residence at 169 Ridgeway Avenue (APN 001-280-01) Fairfax, CA

Reference: Your File: 201.189altREV.doc Miller Pacific (M P) Letter dated July 7, 2020

The Miller Pacific letter raises a number of issues/ questions requiring a response. This letter responds to the geotechnical engineering issues in the order they are noted in the M P letter and should be considered a supplement to the Moore Geotechnical Report dated May 7, 2020.

1. M P page 3 items 4 & 5 - The existing timber wall supporting the gravel parking area will be replaced with new concrete walls supporting parking area and driveway. These elements will be supported by compacted fill retained by concrete retaining walls (H<4 ft.) designed for active soil pressure of 80 pcf (equivalent fluid density) to support vehicle wheel loads. Subject area should be excavated to top of hard clayey bedrock, graded level then back filled with 6" lifts – each compacted to 92% of maximum dry density (ASTM 1557 latest rev). Depth of excavation expected to</p>

- average 2.5 ft. All grading activities to be under technical monitoring of project geotechnical engineer.
- 2. M P page 3 item 6 New soldier-pile and timber lagging wall planned to be below the storm drain dissipater Slope ~ 20 degrees. We recognize downside slope, creep soils and saturation require design modifications. Therefore, we recommend: a) design H above bedrock surface = 2ft. higher than nominal pond depth(2.5 ft. + 2.0 ft. = 4.5 ft.), b)minimum pier depth of 6 ft (or more) below bedrock surface(subject to Geotech Engineer inspection /approval), and, c) reduction of design passive pressure to 300pcf (to account for slope & saturation). Detailed design will be by project structural engineer.
- 3. M P page 3 item 7- Recommended geotechnical design parameters without laboratory testing. All foundation elements will be established in the hard-clayey bedrock strength confirmed by pocket penetrometer in test pits and by hand driven Probes to depths up to 7 ft.) Design parameters were selected by 2 experienced Geotechnical Engineers: William Moore and his associate Paul Torikian; both have years of experience working in the Fairfax area. In addition, engineering characteristics of the Franciscan Mélange bedrock are well known: density 125-130 pcf, shear strength 3500 4000psf and essentially incompressible at the loads imposed by homes.. Drilling to obtaining samples and performing laboratory tests would add very little to the credibility of the geotechnical recommendations.
- 4. M P page 3 item 8 -expansive soil potential. Although there could be some low expansive index material present, our recommendations for constructing a robust, rigid foundation system established in the hard bedrock will minimize possible effects. In addition, we recommend designing for downslope creep of the soils above the bedrock; for 40 psf for depth of soil assume 2 ft. against foundations or piers.
- 5. M-P page4 item 9- Subgrade preparation and AB compaction in structural and traffic-loaded areas. Site grading (cutting & filling) will be quite limited. We recommend that all cut surfaces be

clean, level (can be stepped 8") and proof rolled before placement of fill. In traffic areas, AB fill maybe used – to be placed and each lift compacted to 92% per ASTM 1557. Moisture conditioning may be necessary. No foundations will be placed on fill.

- 6. M P page 4-item 10 -Shallow foundations and drilled piers. We are revising our recommendations to offer either shallow foundations or drilled piers. Because some of the spread foundations may require significant excavation, the use of drilled piers may be cost competitive and more time efficient. Recommendations for drilled piers:
 - 18" diameter drilled piers established at least 7 ft. into the hard-clayey bedrock
 - Design skin friction 1200psf (in bedrock).
 - End bearing neglect
 - Creep in soils above rock 40pcf acting on 1.5 pier diameters assume 2 ft.
 - Passive soil pressure on piers, 600 pcf in the rock only, acting on 1.5 pier diameters.
 - All piers to be tied together in a robust rigid grid with fixed connections at the pier heads.
 - Embedment check down slope side imaginary line dipping 30 degrees from top of bedrock - must not daylight for 8 ft or more.
- 7. M P page 4 item 11 Vehicle surcharge loads for retaining walls near traffic areas. See item 1 -use 80 pcf active soil pressure for design.
- 8. M P page 4 item 12. We have reviewed the lateral passive resistance figures quoted and confirm that for this circumstance we believe they are appropriate..
- 9. M P page 4 item 13 -Stability of cut slopes, trenches vs. Cal -OSHA -Soil Classification. The upper soils are Type C and should be cut back to shallow slopes 1:2. The underlying clayey bedrock is Type A (or better). We do not plan major excavations & earthwork.; Maximum depths likely to be less than 4 ft. In any case, OSHA Safety rules should always be followed.

10. M P page 4 Section 17.072.110© - In the course of our site studies we did consult published Geological Maps: e.g. Interpretation of Relative Stability of Slopes...Marin Co. by Smith 1976 and– Geology of The Upper Ross Valley....Marin County, CA by Smith, Rice & Strand, 1976, & Areal GIS Maps. In addition, we performed neighborhood reconnaissance looking for evidence of distressed houses, settlements, slope stability issues and expansive soil damage. We conclude that the specific area of this property presents very low risks of instability.

We would, of course, be pleased to discuss any aspects of our geotechnical work on this property.

Yours truly,

William W. Moore

William W. Moore, P.E., G.E.

139 Nantucket Cove, San Rafael, CA 94901

ph (707) 373-5438

wwm110@sbcglobal.net

May 7, 2020

Mr. Alex Riley

Architect

Re; Geotechnical Report

APN 001=280-01

Proposed Riley Residence

Zero Ridgeway Avenue

Fairfax CA

Dear Mr. Riley,

This report presents results of our site investigation for foundations of the proposed house and garage. It also includes geologic & seismicity information and recommendations regarding grading, parameters for retaining walls & slabs-ongrade. General site grading & drainage design will be addressed by the project civil engineers. Geotechnical drainage recommendations are included below.

Site Investigation

Our explorations consisted of a walk-through site reconnaissance followed by completion of 3 Test Pits and 4 Probes on April 8, 2020. The site is steep (1 to 1:1 to 1 to 1.5) extending between Ridgeway Ave (high side) to Chester Ave.(low side). Locations of explorations are shown on Figure 1 Site Plan. The site had several shallow terraces with wooden retaining walls and a vegetable garden (SW corner).

Soil profile consisted of a foot of loose organic topsoil overlying very stiff clayey sandstone; in some areas terraces with about 2 feet of fill had been placed. Test

Soil profile consisted of a foot of loose organic topsoil overlying very stiff clayey sandstone; in some areas terraces with about 2 feet of fill had been placed. Test pits 1 and 3 results were similar; about a foot of organic loose topsoil underlain by clayey weathered sandstone & shale bedrock – strength increasing with depth. Test Pit 2 had about 2 feet of loose fill near previous terracing features. The 3 Test Pits and the 4 Probes confirmed very stiff (grading to hard) bedrock at depths 1' to 3' below original ground surface.; Test Pit & Probe locations and are shown on Figure 1 Site Plan. Test Pit Logs, Probe & Penetrometer data are shown on Figure 2 Results of Explorations, both attached.

Geologic Setting

Bedrock consists of Franciscan Mélange - primarily sandstone. Test pits encountered weathered (Franciscan) clayey sandstones. Geologic hazards consist of seismic (earthquakes), slope stability, and erosion of loose surface soils; each is addressed below.

Seismicity

The primary geologic hazard is seismicity. A map showing known fault locations relative to Fairfax is attached, Figure 3 Fault Location Map. The San Andreas Faults located about 6 miles directly west. A site-specific seismic analysis was performed using the SEA/OSHPOD seismic map web site. The 2-page report is attached. A major seismic event will result in severe shaking at this site.

Slope Stability & Surface Soil Erosion

Although the site is steep, it appears to be stable; no evidence of slope stability issues in the adjacent areas were identified. surface erosion of the loose top soils will occur during heavy rainfall events. Improved grading and drainage features associated with the proposed development will mitigate these risks. Periodic inspection and maintenance will be required.

CONCLUSIONS AND RECOMMENDATIONS

From a geotechnical engineering perspective, the site is suitable for construction of the proposed house. We recommend that the house be supported on conventional perimeter wall foundations and interior spread footings; All foundations should be established well into the hard sandstones bedrock. Because of the steep slopes, the foundations should be deeper than usual as indicated below. All foundations should be tied together with grade beams such that a **robust ridged grid foundation** is created.

Because the foundations will be about 3 feet deep, or more. Drilled piers are a viable option. Access for a drill rig on the steep site would be difficult. Dilled piers would need to be at least 8 feet into the hard bedrock. If piers are selected, additional specific recommendations will be provided.

Actual depths of all foundations will be subject to our inspection and approval (before reinforcing steel is installed).

Foundation Design Parameters:

- Allowable design bearing pressure = 2,500psf. Minimum foundation depth 1.5 ft into the hard bedrock (measured from the down slope side of excavation).
- 2. Passive lateral soil pressure available starting 1 ft. into the hard bedrock = 500 pcf. (equivalent fluid density).
- Friction between concrete and bedrock = 0.35.
- 4. All foundation bearing surfaces to be level/flat.

Wall foundations should be stepped down to accommodate the site slopes.

All foundations should comply with current CBC.

Surface Drainage:

Surface water around the house perimeter should be diverted away from foundations by creating gentle slopes away from buildings. Roofs should have gutters connected to downspouts then into solid (non-perforated) pipes draining

3

by gravity to appropriate discharge locations. Overall site grading & drainage to be designed by the project civil engineers.

Foundation Drainage:

The purpose of foundation drains is to is to preclude water from collecting near foundations and under the house & floor slabs. During wet weather, ground water will be intercepted and channeled away to dissipation trenches or other suitable discharge locations.

Foundation drains should be placed next to foundations/footings, consist of a trench as deep as the foundation and be 8" wide. Trenches should be against the concrete, have a schedule 40 hard perforated pipe (e.g. HDPE) at the bottom and be sloped to drain by gravity. The balance of the trench above the pipe should be filled with clean crushed rock and entirely wrapped in filter fabric – including the perforated pipe. The upper 6" of backfill should be compacted impermeable material to preclude entry of surface water. Buried drain pipes should have cleanouts. Foundation drains may not be combined with surface & roof drains.

Slab-on-Grade

Any slab-on-grade will require a firm subgrade and an effective drainage system. We recommend that the exposed subgrade surface – expected to be firm weathered bedrock - be inspected by the us (It may be necessary to fill in low spots with compacted fill).

The area should be graded to drain downslope. The graded subgrade should be covered with a lightly compacted 4-inch (thickness of crushed rock - then an impermeable membrane – underlain by a 2-inch layer of road base material. For the impermeable membrane, we suggest Stego Wrap -15-mil Vapor Barrier (or similar). For Slab-on-grade living spaces, we recommend that retaining a water proofing specialist.

(In our experience, we have seen numerous cracked 4- inch slabs-on-grade; therefore, we suggest a 6-inch thick reinforced slab-on-grade, with appropriate expansion joints).

4

Retaining Walls

1. Retaining walls up to 5 feet high may be supported on spread foundations similar to house design parameters.

- 2. All retaining walls must have back drains see subsequent Drainage section.
- For design active lateral soil pressure, use 50 pcf {equivalent fluid density}.
- 4. For design Passive Lateral Loads in the bedrock (below ~2 feet) 500 pcf (pounds per cubic foot per foot of depth equivalent fluid density ignoring the upper loose surface soils.

Design soil pressures may be increased by 33% for transient loads: such as wind and seismic events.

Grading:

We do not anticipate major grading on the site. However, superficial grading in the loose upper soils will be fairly easy. These soils will slough and erode easily. Cutting in the underlying bedrock will take some effort. Temporary cuts up to 5 feet will stand vertical for short periods. As usual, follow OSHA regulations.

Cut material can be used in fills and backfills, provided they are sorted (removal of organic soils, rocks, etc.) and moisture conditioned. General fills should be placed on level firm surfaces in thin lifts (~6 inches) and compacted to 90% of maximum dry density (per ASTM D-1557 latest rev.).

Design Cooperation:

It is recommended that we be included in project design and construction discussions with the architect and structural engineer in order to identify and address geotechnical issues before they become problems.

5

Construction Monitoring:

We will provide periodic inspection/observation of construction activities (grading, foundation excavations, drainage, fill compaction, retaining wall and slab-on-grade construction).

Closure and Limitations:

By accepting this report, the client and design professionals acknowledge their understanding of the following:

We see no reason for soil or foundation behaviors to differ from our assessments and recommendations presented in the report, but one must recognize that factors contributing to foundation instability such as groundwater seepage are not always foreseeable.

This report represents or best judgement based on available information and complies with current professional standards of practice for comparable studies, no form of warranty or insurance coverage is provided -expressly or implied - in our reports.

Yours truly,

No. GE-615

Exp. 06-30-2/

William W. Moore

Figures: 1. Site Plan

2. Result of Explorations

3. Fault Location Maps

Attachment: SEA/OSHPOD Seismic Report

Steels Year

RESULTS OF TEST PITS, PROBES & PENETROMETER

Test Pit 1 surface - heavy grass ground cover
0 to 9' - organic loose topsoil
10' to 14" -light brown weathered clayey
bedrock very stiff (PP = 3.0tsf)
Probe at bottom: 50 blows for 7"/ 75 blows for 6"
Maximum Depth 2'3"

Test Pit 2 – surface - steep slope heavy grass ground cover 0 to 4" - loose topsoil FILL 4"to 22" – light brown silty clay loose (FILL) 22" to 26" – light brown weathered clayey bedrock very stiff (PP = 2.5tsf) Probe at bottom 16/16/12/18/43 (blows per ft.) Maximum Depth 7' 2"

Probe between Test Pit 2 and Test Pit 3 - at surface P 13/30/34 (blows per ft.)

Maximum depth 3'

Test Pit 3 – surface – heavy grass ground cover
0 to 9" organic loos topsoil
9" to 30" light brown weathered
Clayey bedrock (PP >4.5tsf)
Probe at bottom 16/18/54 (blows per ft.)
Maximum Depth 5'6"

No ground water was encountered in the explorations



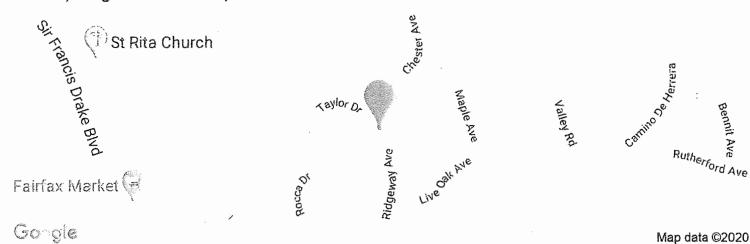
http://www.conservation.ca.gov/cgs/cgs_history/PublishingImages/FAM_750k_ReleaseStatement_SAMPLE. FIGURE 3 FAULT LOCATION MAP





172 Ridgeway Ave.

Latitude, Longitude: 37.989580, -122.586110



	A RESTRICT OF A PROPERTY OF A STATE OF A STA
Date	4/20/2020, 5:22:47 PM
Design Code Reference Document	ASCE7-16
Risk Category	11
Site Class	C - Very Dense Soil and Soft Rock

Factored deterministic acceleration value. (0.2 second)

Probabilistic risk-targeted ground motion. (1.0 second)

Site Class	3	C - Very Dense Soil and Soft Rock	411
Туре	Value	Description	
. S _S	1.5	MCE _R ground motion. (for 0.2 second period)	
; S ₁	0.6	MCE _R ground motion. (for 1.0s period)	÷
S _{MS}	1.8	Site-modified spectral acceleration value	,
S _{M1}	0.84	Site-modified spectral acceleration value	Î
S _{DS}	1.2	Numeric seismic design value at 0.2 second SA	
S _{D1}	0.56	Numeric seismic design value at 1.0 second SA	
Туре	Value	Description	1
SDC	D	Seismic design category	3
F _a	1.2	Site amplification factor at 0.2 second	
F _v	1.4	Site amplification factor at 1.0 second	:
PGA	0.588	MCE _G peak ground acceleration	4
F _{PGA}	1.2	Site amplification factor at PGA	
PGAM	0.706	Site modified peak ground acceleration	:
TL	12	Long-period transition period in seconds	i
SsRT	1.781	Probabilistic risk-targeted ground motion. (0.2 second)	:
SsUH	1.956	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration	

SsD S1RT

0.722

1.5

STUH	0.804	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration.
S1D	0.6	Factored deterministic acceleration value. (1.0 second)
PGAd	0.588	Factored deterministic acceleration value. (Peak Ground Acceleration)
c_{RS}	0.911	Mapped value of the risk coefficient at short periods
C _{R1}	0.897	Mapped value of the risk coefficient at a period of is

U.S. Seismic Design Maps

4/20/20, 5:29 PM

DISCLAIMER

100

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Stormwater Control Plan

Riley Residence

Parcel Address:

Bridgeway Avenue, Fairfax, 94930 CA (APN: 001-280-01)

Prepared For:

Dylan Riley P.O. Box 153 Inverness, CA 94937

Prepared By:

ViA Atelier, Inc. Vlad Iojica, P.E., QSD



Date: June 2020 August 2020 (Rev.1)

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I. PROJECT DATA

The Stormwater Control Plan (SCP) has been prepared in support of a new residential development to include a single-family dwelling with a single car garage site parking and site amenities.

Parcel's longitude and latitude: 37°59'23" North, and 122°35'08" West.

Project Name/Number	Riley Residence
Application Submittal Date	June, 2020
Project Location	Undeveloped Lot, Bridgeway Ave, Fairfax, CA 94930
Project Phase No.	No project phasing planed
Project Type and Description	Construction of a new single-family residence with an attached single car garage and site parking
Total Parcel Area	0.1185 Acres (5,164 sq.ft.)
Total Project Area (see Exhibit)	0.0876 Acres (3,817 sq.ft.)
Total New and Replaced Impervious Surface Area	0.0468 Acres (2,038 sq.ft.)
Total Pre-Project Impervious Surface Area	0.000 Acres (0.000 sq.ft.)
Total Post-Project Impervious Surface Area	0.0468 Acres (2,038 sq.ft.)

II. SETTING

II.A PROJECT LOCATION AND DESCRIPTION

As shown on the Vicinity Map (Fig.1) the project site is located on a hillside parcel, spanning between the alignments of Bridgeway Avenue to the west and uphill from the alignment of Woodland Road, a local street. The parcel under conditions is under current conditions developed and includes a single-family dwelling with connections to public utilities, access driveway and no garage or covered parking. Other existing improvements include paved walks and a detached shed.

The drainage tributary area to parcel is limited to the north and northeast areas due to the topography of the site. See exhibit SCP-1 under attachments of the report for the existing conditions.

- The current zoning designation is RD-5.5-7 Residential
- No construction phasing applicable to this project,
- Proposed number of residential units: 1,
- Site percent slope: 32.98%

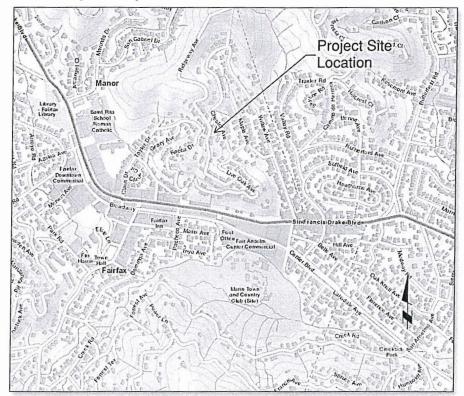


FIGURE 1 LOCATION MAP (GIS MARIN COUNTY)

II.B EXISTING SITE FEATURES AND CONDITIONS

Under the current conditions the property is un-developed with surface drainage following the natural grade to the northeast, and to the alignment of Chester Avenue. The site slopes from southwest towards northeast has a calculated average of 32.98%.

II.C. OPPORTUNITIES AND CONSTRAINTS FOR STORM WATER CONTROL

New site improvements will enhance the protection of the house pad for both surface water runoff as well as ground water, and convey the captured runoff to points of discharge located by the easterly corner of the house pad.

A bio-detention basin is proposed for construction downstream of the house pad, corresponding with the point of discharge for the runoff.

This basin will ensure that under the post development conditions, the storm water discharged to the site will not exceed the discharge rate under current conditions.

III. LOW IMPACT DEVELOPMENT DESIGN STRATEGIES

In the design process the following strategies have been taken into consideration:

- Limit disturbance to the area and incorporating natural features. Maintain existing drainage patterns.
- Minimize the compaction of permeable soils for the potions of the lot not proposed for development.
- Maintain existing vegetation to the possible extent.
- Concentrating development areas.

IV. DOCUMENTATION OF DRAINAGE DESIGN

A. DESCRIPTION OF DRAINAGE MANAGEMENT AREAS

DMA Name	Surface Type	Area	
#1	New House Roof	930 sq.ft.	
#2	Patio / Deck	550 sq.ft.	
#3	#3 Paved Surfaces incl. Driveway		
#4	Decomposed Granite	180 sq.fyt	
#5	Landscaped Areas	1,779 sq.ft.	

B. TABULATION AND SIZING CALCULATIONS

Areas Draining to Bio-Detention Basin

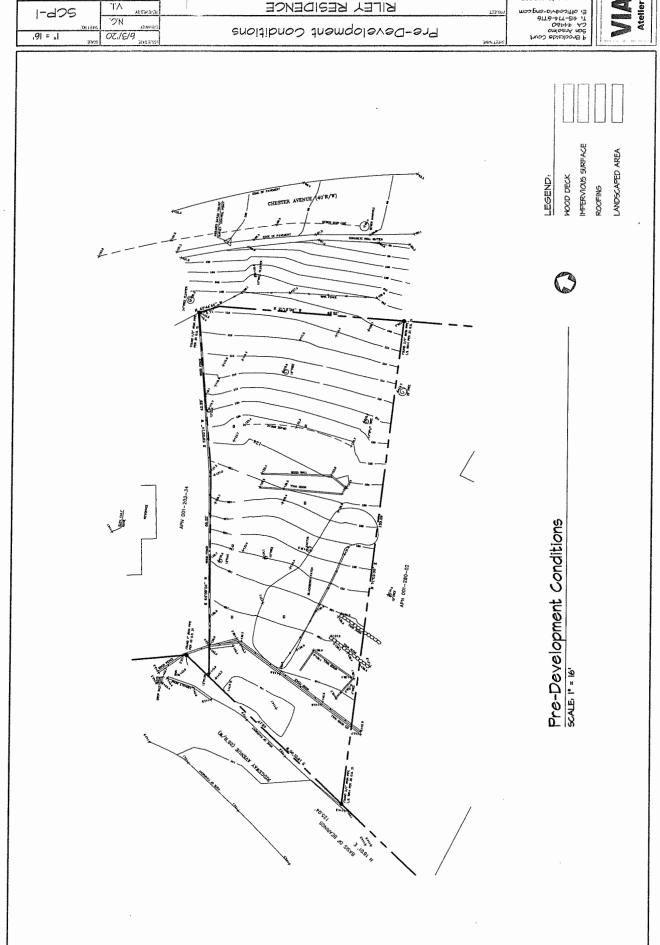
DMA Name	DMA Area (sq.ft.)	Post- project surface type	DMA Runoff factor	Product of Area x Runoff Factor		Facility Na -Detention		
#1	930	New House Roof	1.0	930				
#2	550	Deck	0.5	275	Ci=in -	Minimum Propose Facility Facility Size Size [sq.ft.] [sq.ft.]		Proposed
#3	378	Paved Surfaces	1.0	378	Sizing Factor		Size	
#4	180	DG Surface	0.8	144			[=4,]	
#4	1,779	Landscape	0.1	178				
Total:				1,905	0.04	76.2	80	

APPENDIXES

- A CURRENT CONDITIONS
- B PROPOSED CONDITIONS

	П	†	
4500 F		VIA Ateller	

1	23345 338d	2005.d	JIDGEWAY AVE, FAIRFAX, CA (APN: 001-280-01)	mospre-bry.weed
	1-425	T/V ALLEMDON	MILEY RESIDENCE	mos Bra-อเขตองเกิด
	.91 = "I = .00.1886	OZVENBU 6/3/20	Pre-Development Conditions	trooksida Cout Andelmo Andelo Andelmo Andelmo



DINDGEMAY AVE, FAIRFAX, CA (APN: 001-280-01) RILEY RESIDENCE

mos pns-blv.ham 9 Brookside Court San Anseime CA 94460 Ti 415-T14-6T16 Ei aftice@via-eng.com



TA Z-d09 N.C. Post Development Conditions .91 = ... 07./2/9

2005.0

Runoff Dissipater IMPERVIOUS SURFACE LANDSCAPED AREA WOOD DECK LEGEND: ROOFING Bio-Detention 90 ft² New Roof 930 ft² APN 001-203-34 Post Development Site Plan New Deck 550 ft² DG surf. New Pavement 378 ft²



September 2, 2020 File: 201.189bltr.doc

Town of Fairfax
Planning and Building Services Department
142 Bolinas Avenue
Fairfax, California 94930

Attn: Ms. Linda Neal, Principal Planner

Re: Second Planning-Level Geologic, Geotechnical, and Civil Engineering Review

New Single-Family Residence

169 Ridgeway Avenue (APN 001-280-01)

Fairfax, California

Introduction

In response to your request and in accordance with our agreement dated March 20, 2018, this letter summarizes our second review of submitted project plans and supporting documentation for the proposed construction of a new single-family residence and associated improvements at 169 Ridgeway Avenue (APN 001-280-01) in Fairfax, California. Our First Review comments were previously summarized in our letter dated July 7, 2020. The purpose of our services is to review the submitted documents, comment on the completeness and adequacy of the submittal in consideration of Town requirements, and to provide a recommendation to Town Planning and Building staff regarding project approval.

The scope of our services includes:

- A site reconnaissance to observe existing conditions and review proposed development features:
- Review of provided project documents for conformance to the Town of Fairfax Hill Area Residential Development Ordinance, specifically Town Code Sections 17.072.080(B), (C), (E), and (F), and Section 17.072.110 (C).
- Development of opinions regarding project compliance with applicable Town Code requirements; and
- Development of recommendations to Town staff as to whether the project may be safely constructed in consideration of any geologic, hydrologic, or geotechnical hazards.

It should be noted that the scope of our review is limited solely to geologic, geotechnical, and civil portions of the project, and does not include review of structural, architectural, mechanical, or other items beyond the scope of our qualifications. We recommend that non-geotechnical aspects of the plans be reviewed by suitably qualified professionals.

Project Description

The project generally includes constructing a new, approximately 1,500 square-foot, 3-story single-family residence with an attached 1-car garage on a currently-vacant, approximately 0.12acre parcel. Access will be via a short new driveway extending from Ridgeway Avenue at the





top of the site, and construction will be accommodated primarily via excavation into the gently-sloping

504 Redwood Blvd., Suite 220 ■ Novato, California 94947 ■ T (415) 382-3444 F (415) 382-3450

Town of Fairfax September 2, 2020

Page 2

hillside, with maximum excavations and retaining wall heights apparently on the order of 3- to 4feet. Ancillary improvements will include new underground utilities, extensive exterior decking, exterior patio/hardscape areas and associated site retaining walls, landscaping, site drainage, and other "typical" residential items.

Project Review

We performed a brief site reconnaissance on June 24, 2020 to observe existing conditions at the site. Additionally, we previously reviewed the following documents provided by the Town, as summarized in our letter dated July 7, 2020:

- County of Marin Assessor-Recorder (2017), "Grant Deed, APN 001-280-01", recorded July 6, 2017.
- First American Title Company (2020), "Preliminary Report, APN 001-280-01, Order NO. 2102-6181874", dated March 19, 2020.
- William W. Moore, PE, GE (2020), "Geotechnical Report, Proposed Riley Residence, Zero Ridgeway Avenue, Fairfax, CA", dated May 7, 2020.
- Via Atelier (2020), "Stormwater Control Plan, Riley Residence, Bridgeway Avenue, Fairfax CA, APN 001-280-01", dated June 2020.
- Via Atelier (2020), "New Riley Residence, Bridgeway Avenue, Fairfax, CA" (Preliminary Civil Plans), Sheets C1.0, C3.0, C3.0 (duplicate), C3.1, C5.0, C5.1, and C.6 (7 sheets total), Job No. 2005a, dated June 2, 2020.
- Alex Riley Associates (2020), "Riley Residence, Ridgeway Avenue, Fairfax, CA 94930", Sheets 1 through 9, dated June 4, 2020.

More recently, we reviewed the following documents submitted in response to our initial comments:

- William W. Moore, PE, GE (2020), "Proposed Riley Residence at 169 Ridgeway Avenue, Fairfax, CA" (Response to Geotechnical Comments), dated July 22, 2020.
- Alex Riley Associates (2020), "Riley Residence, Ridgeway Avenue, Fairfax, CA 94930", Sheets 1 through 10, dated August 10, 2020.



Conclusions and Recommendations

Based on our review of submitted responses, it is our opinion that the safe may be safely developed, and recommend that project processing continue at the planning stage. At the Building Submittal level, we should review the final, stamped and signed project Civil and Structural plans, and the project Geotechnical Engineer should provide a letter certifying that the intent of his recommendations, including those provided in his most recent letter dated July 22, 2020, have been substantially incorporated.

Town of Fairfax Page 3

September 2, 2020

We trust that this letter contains the information you require at this time. If you have any questions, please call. We will directly discuss our comments with the applicant's consultants if they wish to do so.

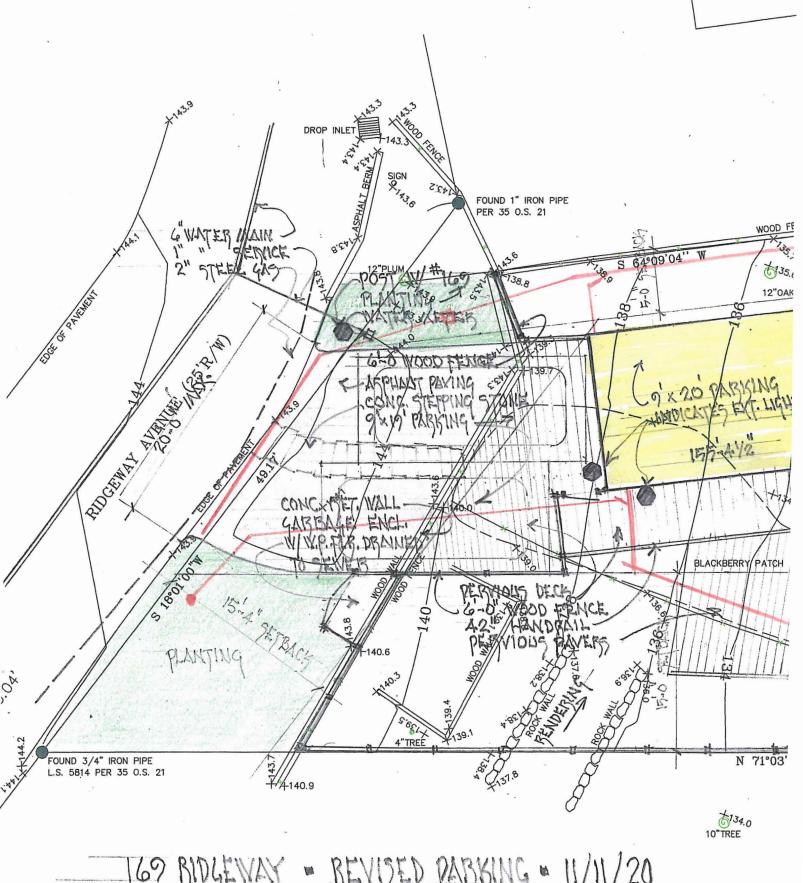
Yours very truly,
MILLER PACIFIC ENGINEERING GROUP



Mike Jewett Town of Fairfax Contract Geologist Engineering Geologist No. 2610 (Expires 1/31/21) REVIEWED BY:



Scott Stephens Town of Fairfax Contract Engineer Geotechnical Engineer No. 2398 (Expires 6/30/21)



169 BIDGEWAY - BEVISED PABKING - 11/11/20





TOWN OF FAIRFAX

142 BOLINAS ROAD, FAIRFAX, CALIFORNIA 94930 (415) 453-1584/FAX (415) 453-1618

Date: November 12, 2020

Permit #20-T-22

NOTICE OF TREE COMMITTEE ACTION

This action may be appealed to the Fairfax Town Council within 10 days of the Tree Committee decision. This permit is not in effect until the 10 day appeal period is over.

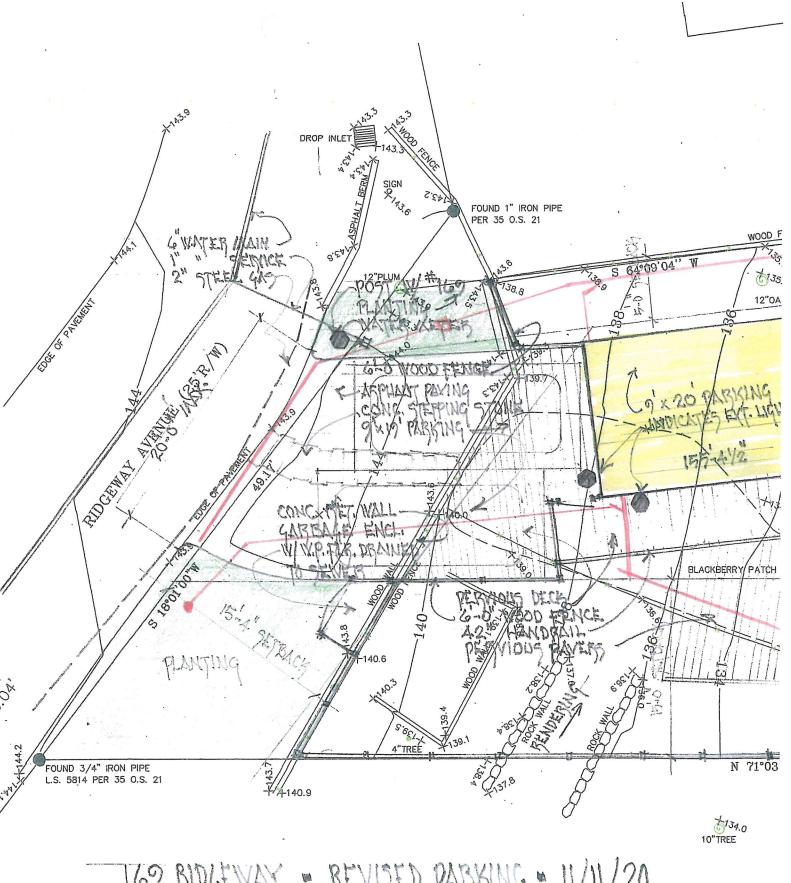
Request for a tree permit to remove: (1) Fuji Apple
Address of Tree(s) to be removed: 169 Ridgeway Avenue
Applicant's Phone: Dylan & Susan Riley (415) 307-4059
On November 9, 2020 the Fairfax Tree Committee took the following action on the above referenced tree permit application:
X APPROVED -Removal of Fuji apple. Motion to approve PC recommendation – Richardson-Mack with condition that no removal without PC approval of new dwelling, 2 nd Romaidis. Unanimous
REMINDER: PLEASE KEEP PERMIT NOTICE UP DURING THE 10 DAY WAITING PERIOD
CONTINUED
DENIED
CONDITIONS OF A DDD OVAL.

CONDITIONS OF APPROVAL:

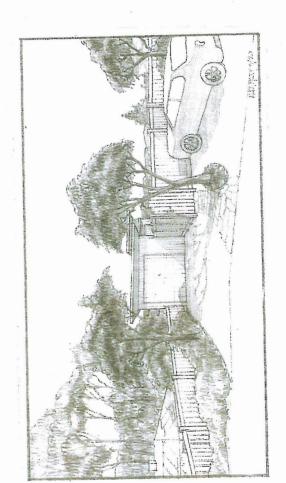
THIS APPROVED APPLICATION IS YOUR PERMIT-KEEP IT ON THE JOB SITE. FAILURE TO HAVE THE PERMIT ON THE SITE WHILE THE TREE WORK IS IN PROGRESS MAY RESULT IN THE WORK BEING HALTED UNTIL YOU SHOW PROOF OF APPROVAL. Please verify that the tree company performing the work has a current Fairfax Business license and worker's compensation coverage.

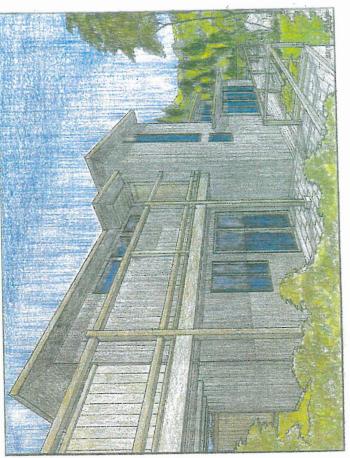
THIS TREE PERMIT EXPIRES IN SIX MONTHS. If necessary, you may apply for an extension in writing prior to the expiration date.

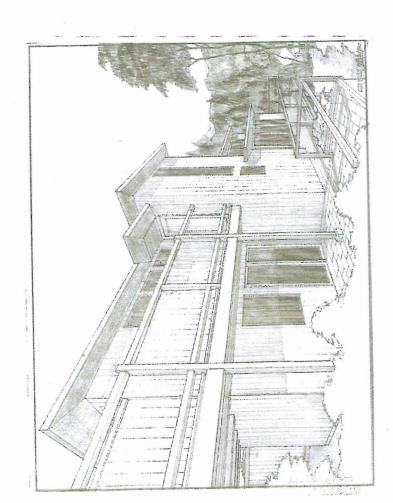


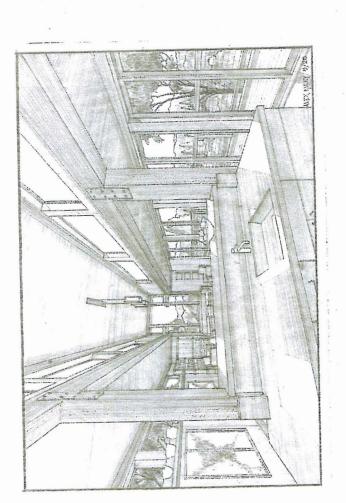


169 BIDGEWAY - BENISED BYBRING - 11/11/50









FINDER TOWERS

1 - COVERS

2 - PLOSE PLAN

2 - PLOSE PLAN

3 - PLOSE PLAN

4 - BLENATIONS

5 - PLOSE PLAN

5 - PLOSE PLAN

6 - PLANATIONS

6 - PLANATIONS

7 - LANDER PLAN

6 - PLANATIONS

8 - PLANATIONS

8 - PLANATIONS

8 - PLANATIONS

8 - PLANATIONS

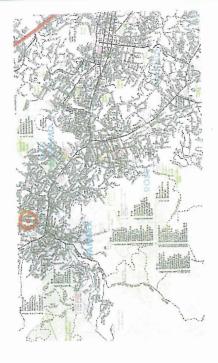
9 - PLANATIONS

PLANATIONS

1 - PL

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MAINTER PARTY NO.5
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MAINTER LIFE SE RHYN 100.5
MAINTER LIFE SE COPEAN
MAINTER LIFE SE COPEAN
MAINTER LIFE SE COPEAN
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COT MAINTER
COMMINE TO COT \$ TILL

- COPE **
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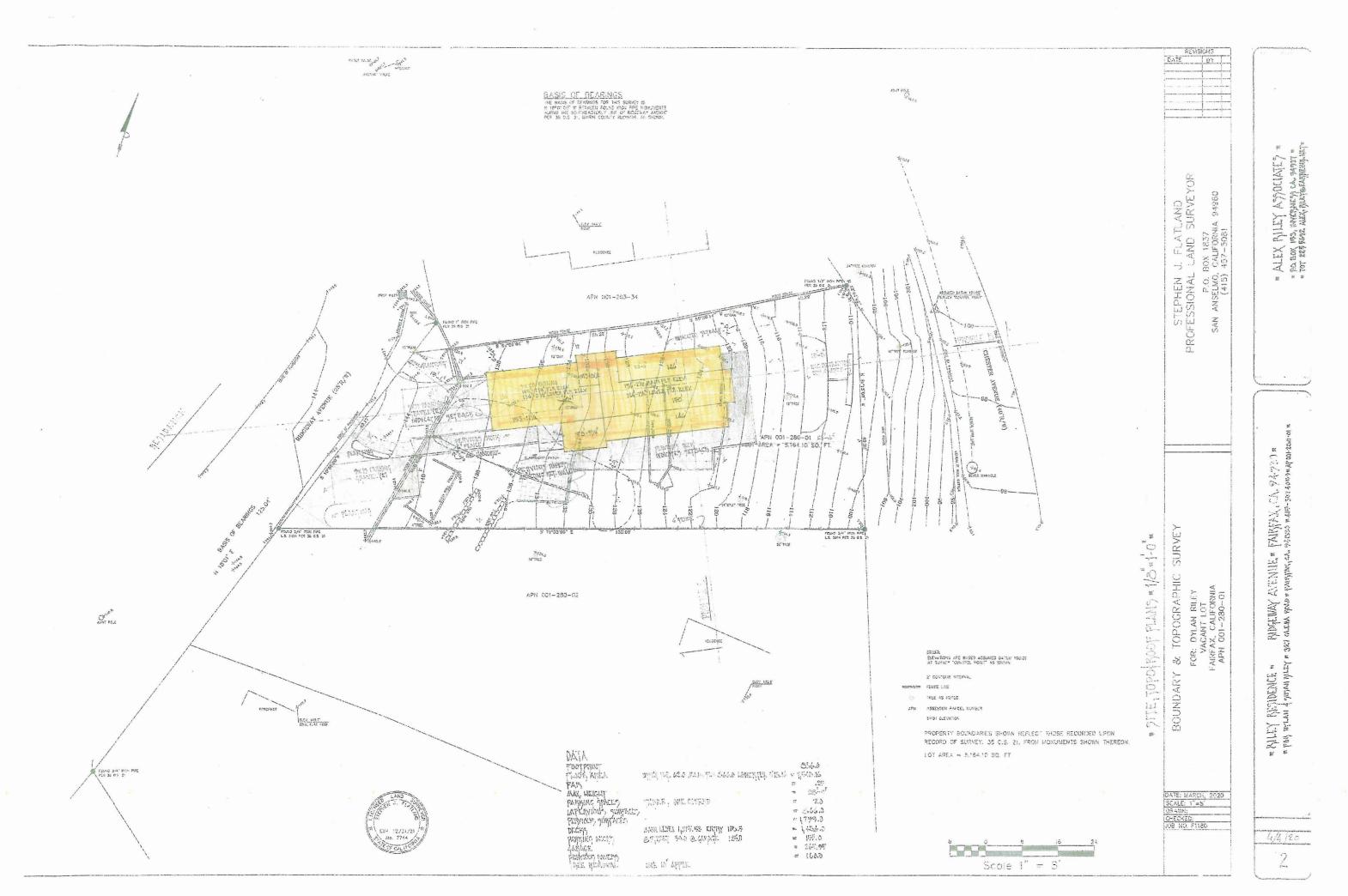


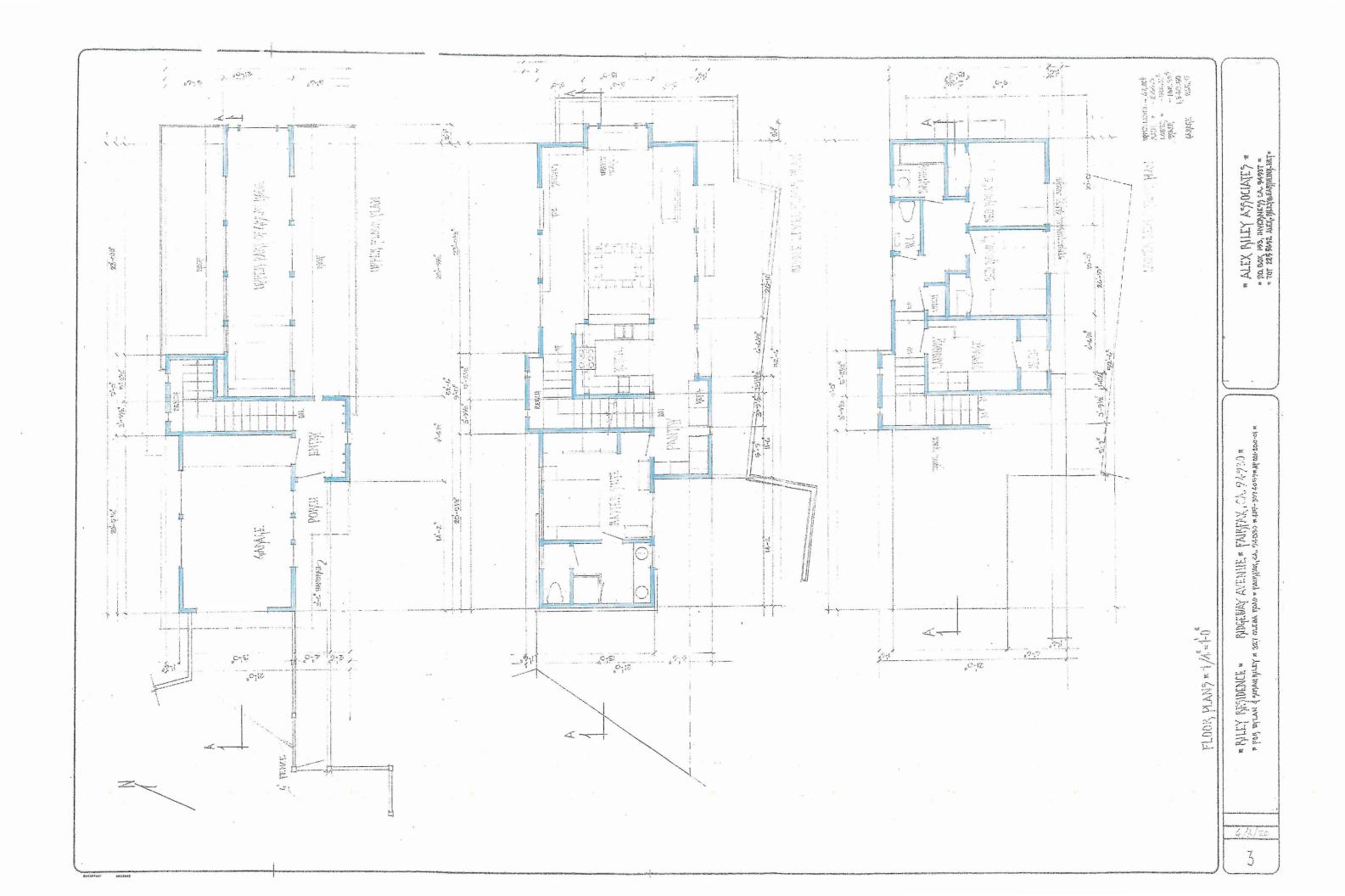
COVER

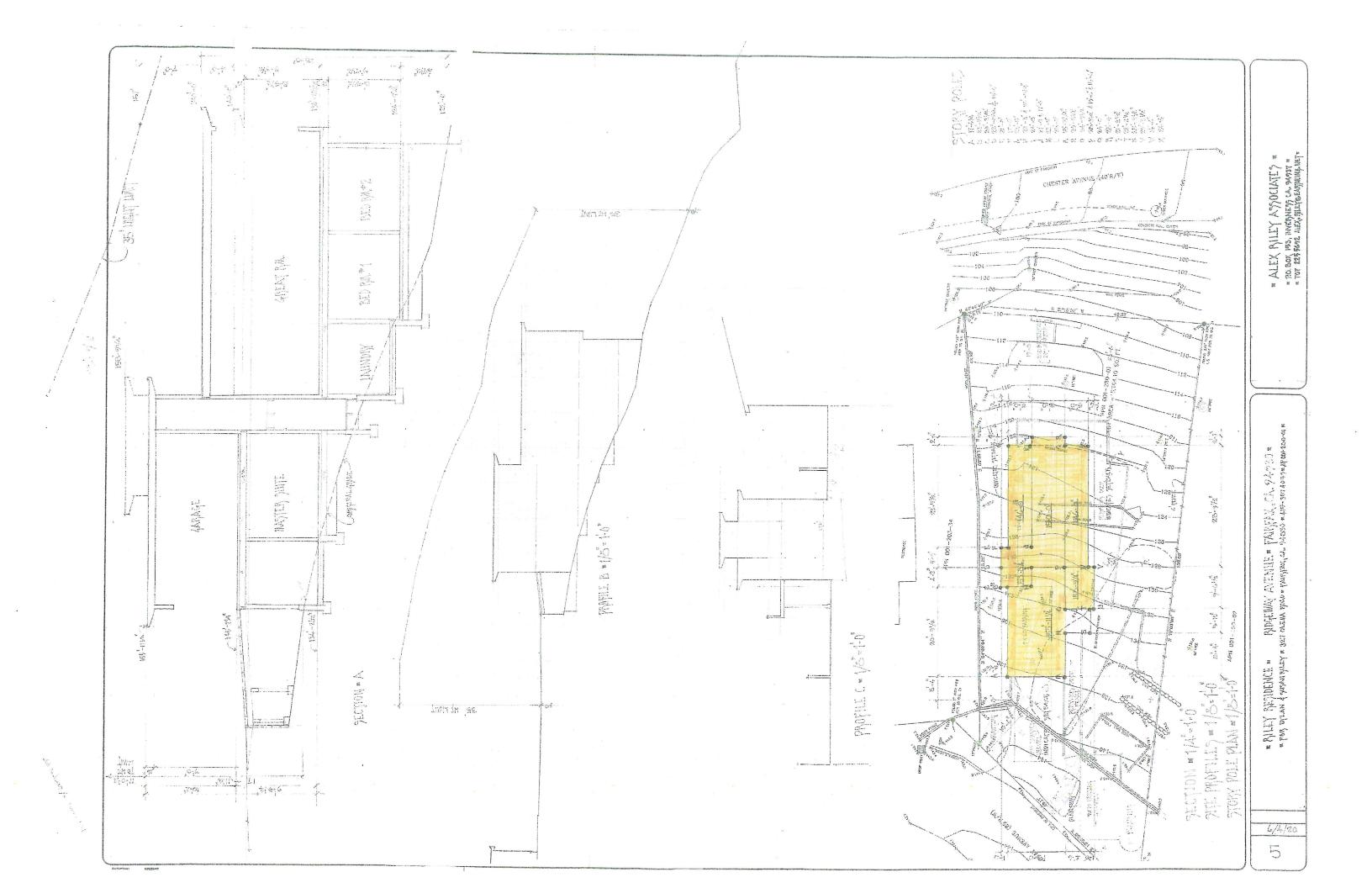
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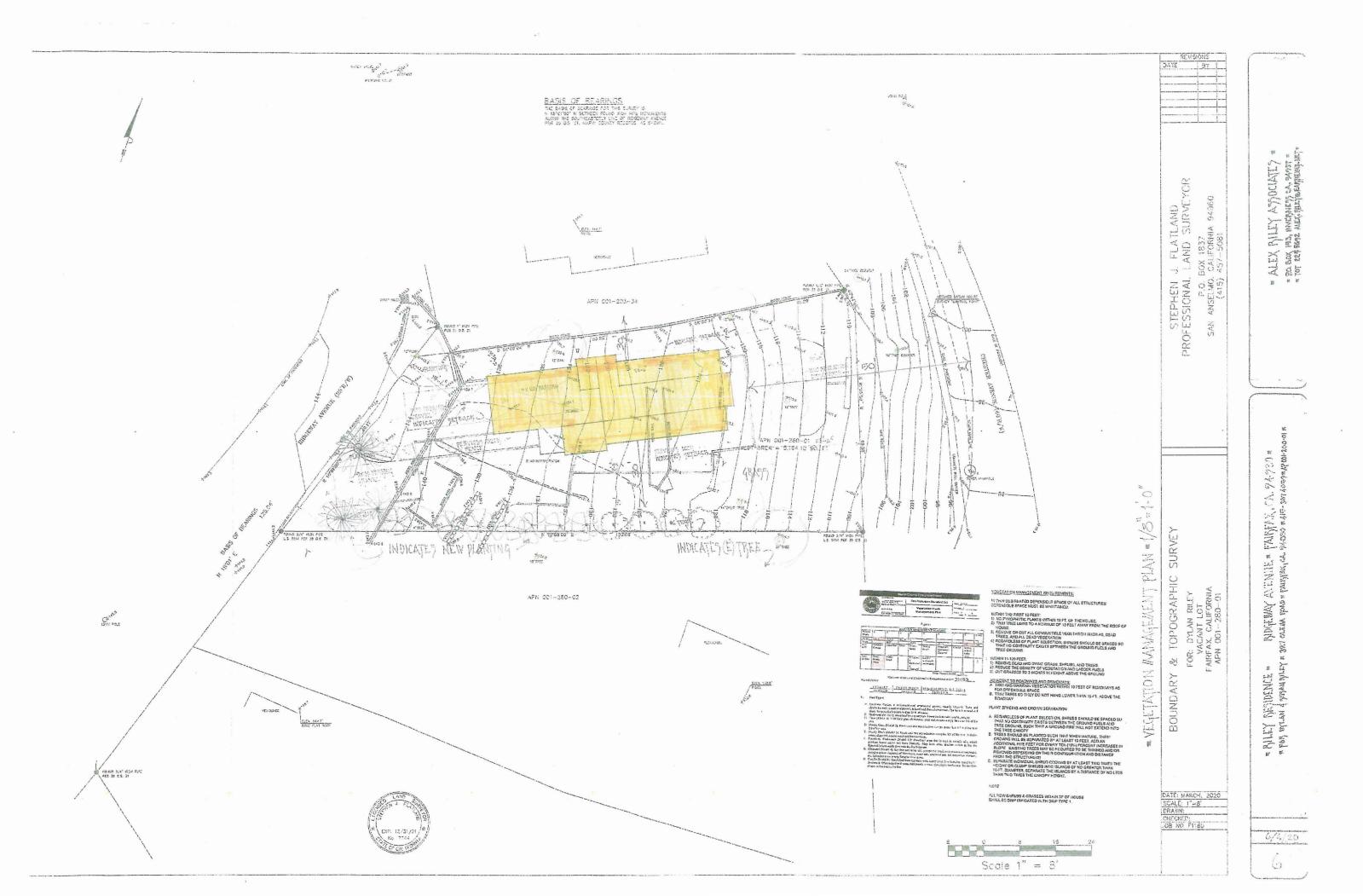
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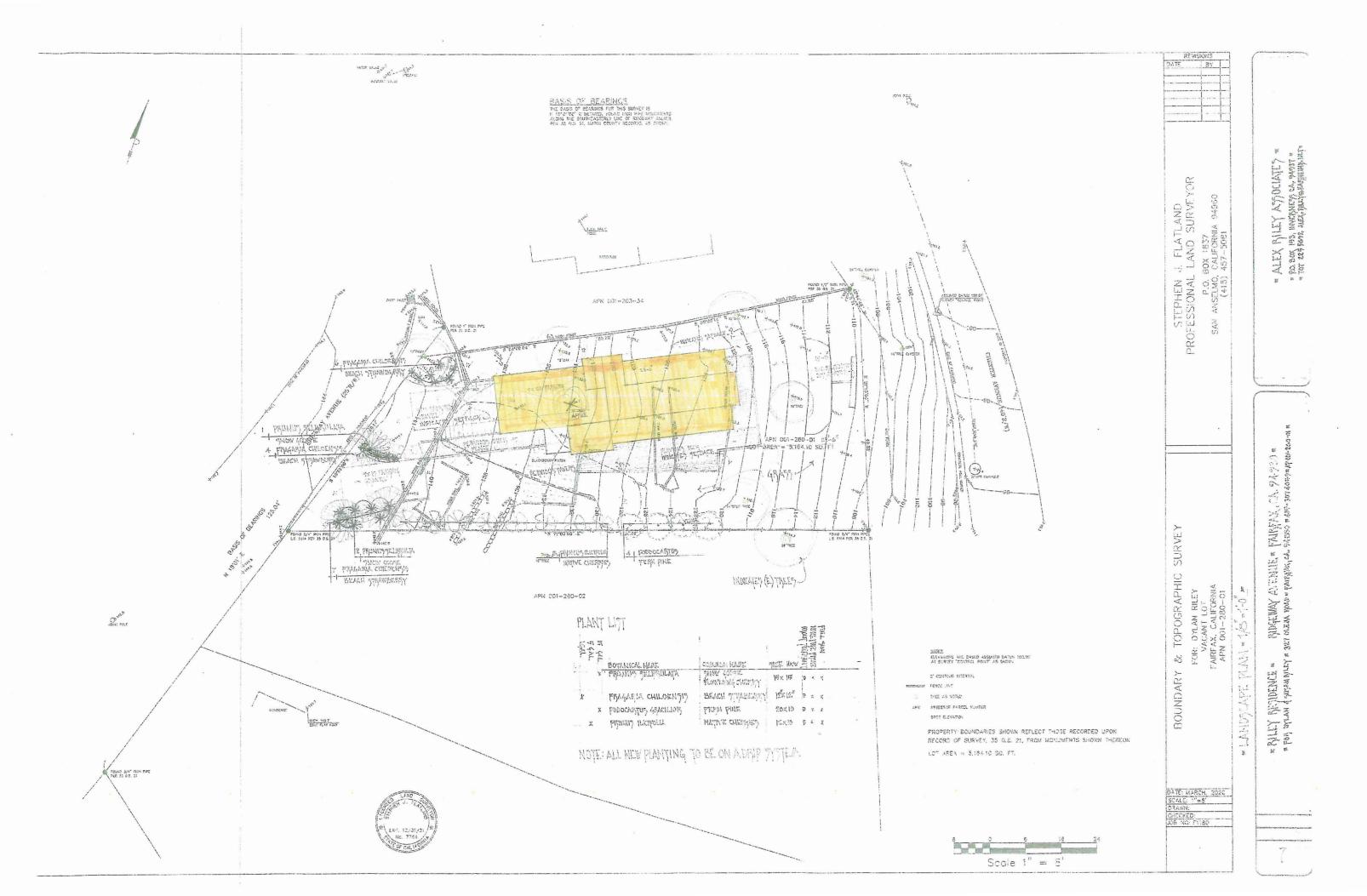
6/4/20























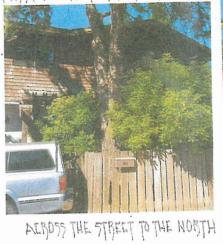


NEXT DOOR TO THE NORTH







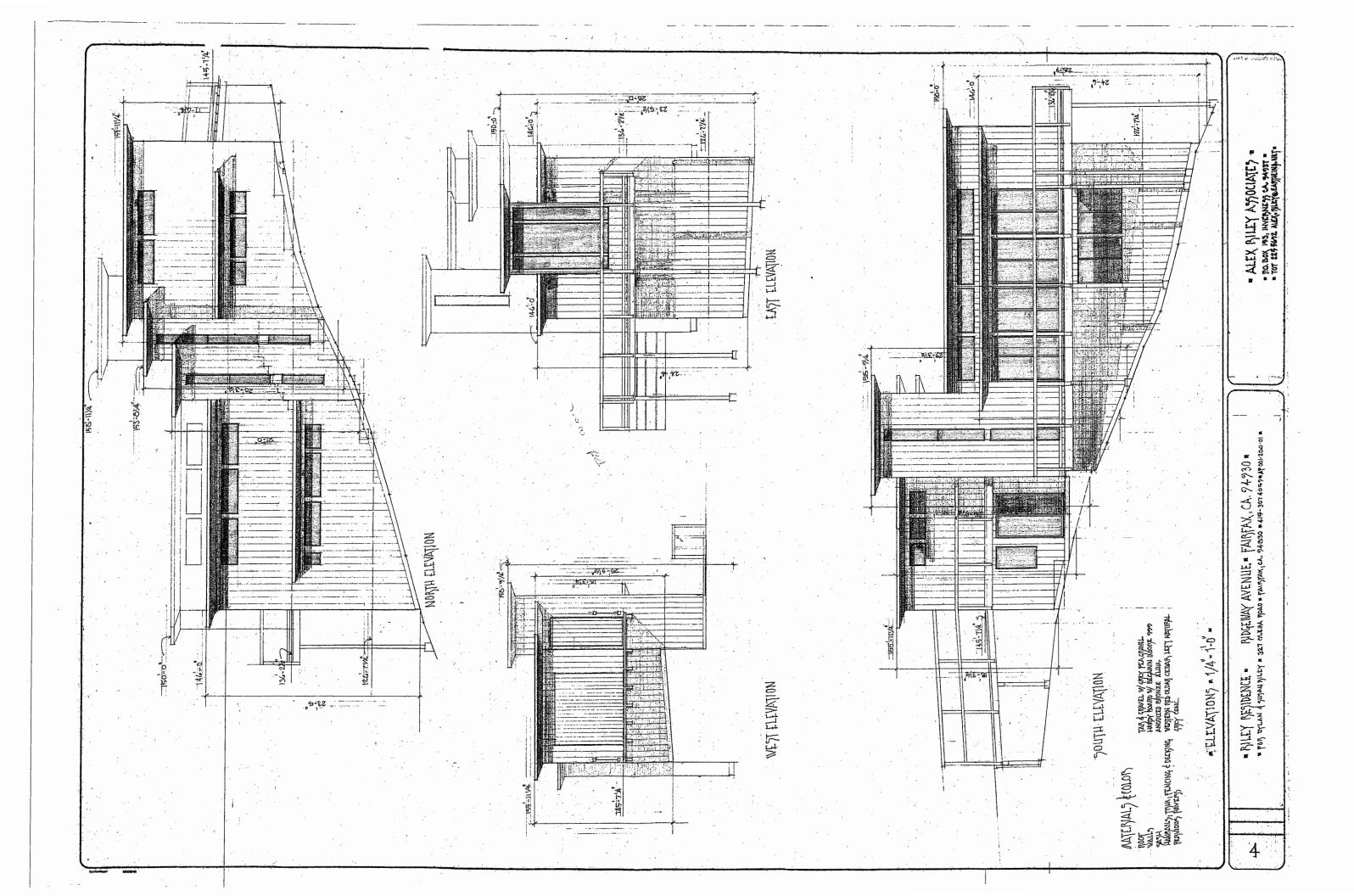


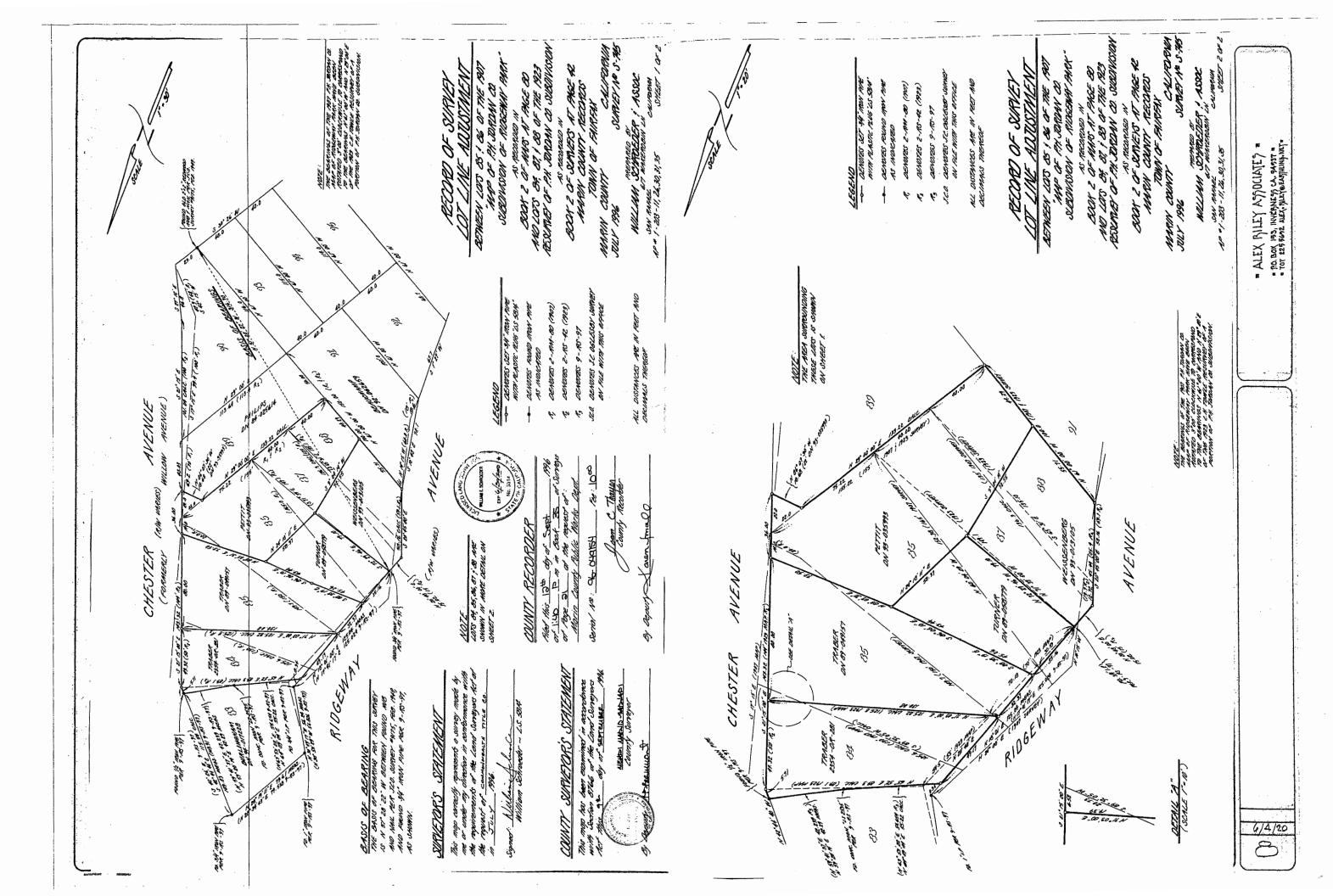


ACROSS THE STREET TO THE YOUTH

SECOND HOUSE TO THE HOISTH

■ RIDGENAY PHOTOS ■

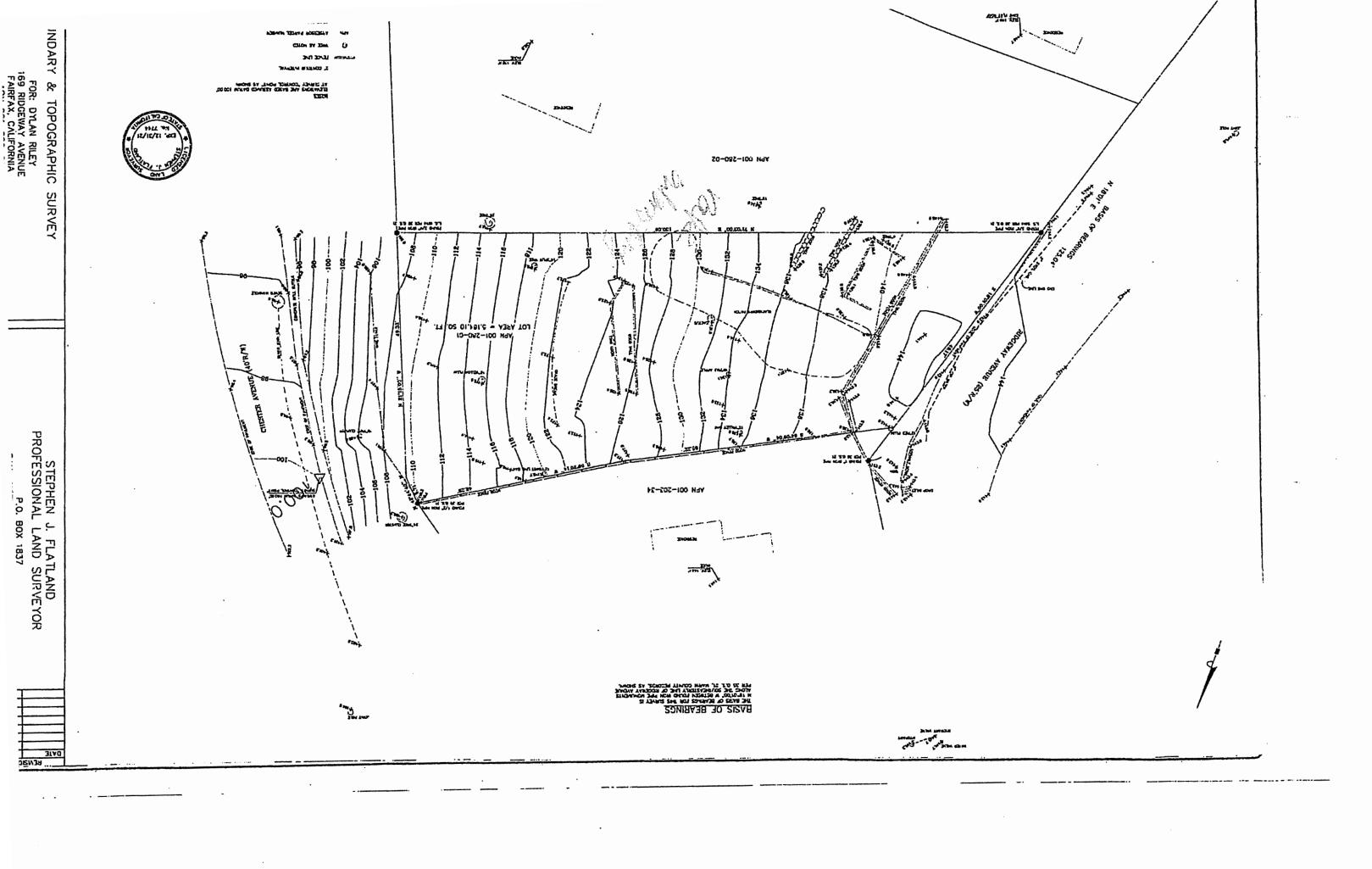




* Biogenal phoros*

3/10/20 9

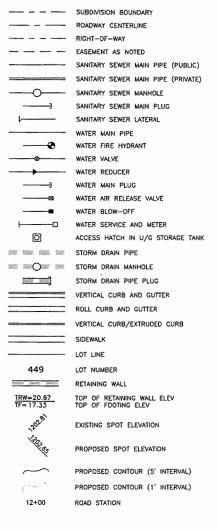
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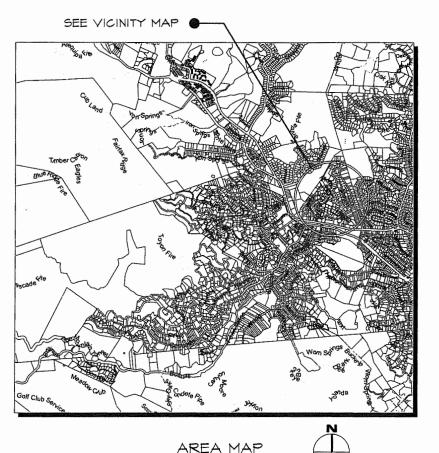


NEW RILEY RESIDENCE

BRIDGEWAY AVE., FAIRFAX, CA A.P.N. NO: 00|-280-0|

LEGEND:









LEGEND (cont.):

	GRADE BREAK
	EXISTING ROADWAY CENTERLINE
MANAGEMENT AND ADDRESS OF A	EXISTING RIGHT-OF-WAY
can be followed by the second of the	EXISTING EASEMENT AS NOTED
	EXISTING SANITARY SEWER MAIN PIPE
	EXISTING SANITARY SEWER MANHOLE
and a second of	EXISTING SANITARY SEWER MAIN PLUG
12°W	EXISTING WATER MAIN PIPE
	EXISTING WATER FIRE HYDRANT
er er er er er er	EXISTING WATER VALVE
rana manan a parantina adalah kasa ka	EXISTING WATER REDUCER
}	EXISTING WATER MAIN PLUG
	EXISTING WATER AIR RELEASE VALVE
and the second of the second o	EXISTING WATER BLOW-OFF
14 Not 1986 1881	EXISTING STORM DRAIN PIPE
* *On #	EXISTING STORM DRAIN MANHOLE
1985 - 198 <mark>1</mark>	EXISTING STORM DRAIN PIPE PLUG
A common security of the second	EXISTING VERTICAL CURB AND GUTTER
1	EXISTING ROLL CURB AND GUTTER
	EXISTING VERTICAL CURB/EXTRUDED CURB
>	EXISTING SIGN AS NOTED
None Control	EXISTING CONTOUR (1' INTERVAL)
FL=	FLOW LINE (GUTTER ELEVATION)
TC=	TOP OF CURB ELEVATION
P=	PAVEMENT ELEVATION
H₩E≕	HIGH WATER ELEVATION
FFE ≖	FINISH FLOOR ELEVATION
PAD=	FINISH PAD ELEVATION
POT=	POINT OF TANGENCY
POC=	POINT OF CURVATURE
PRC	POINT OF REVERSE CURVATURE
BTM=	BASIN BOTTOM ELEVATION
TL= ⊛	TRUE LENGTH SURVEY CONTROL POINT
>	SLOPE INDICATOR
0.75%	ROAD SLOPE INDICATOR
CMU=	CONCRETE MASONRY UNIT
EXG=	EXISTING
L/S=	LANDSCAPE
•—;¤	STREET LIGHT

DESIGN TEAM

ARCHITECT: ALEX RILEY ASSOCIATES P.O. BOX 153 INVERNESS, CA

CONTACT:

ALEX RILEY

9 BROOKSIDE CT. SAN ANSELMO, CA T: (707) 225-5692 T: (4!5) T14-6T16 E: OFFICE@VIA-ENG.COM VLAD IOJICA

CIVIL ENGINEER:

VIA ATELIER, INC.

LAND SURVEYOR:

STEVEN J. FLATLAND PROFESSIONAL LAND SURVEYOR P.O. BOX 1837 SAN ANSELMO, CA T: (415) 457-5081

GEOTECHNICAL: WILLIAM W. MOORE, PE, GE

139 NANTUCKET COVE. SAN RAFAEL, CA T. (101) 313-5438

SECTION_IAG DRAWING NUMBER

SYMBOLS:

DETAIL TAG: ----DETAIL NUMBER ----SHEET NUMBER

SCALE: 1" = 700"

REVISION NUMBER

CIVIL ENGINEERING SHEET INDEX

1 OF 7	COVER SHEET	CI.O
2 OF 7	EROSION CONTROL PLAN	C3.0
3 OF 7	EROSION CONTROL DETAILS	C3.I
4 OF 7	PROPOSED SITE IMPROVEMENTS PLAN	C4.0
5 OF 7	SECTIONS & DETAILS	C5.0
6 OF 7	SECTIONS & DETAILS	C5.1
7 OF 7	VEHICLE MANEUVERABILITY STUDY	C6.0

GENERAL NOTES:

- I. DESIGN ENGINEER SHALL CERTIFY TO THE COUNTY IN KRITING UPON THE COMPLETION OF WORK THAT ALL GRADING AND DRAIMAGE IMPROVEMENTS WEERE INSTALLED IN ACCORDANCE WITH THE APPROVED PLANS
- AND FIELD DIRECTION.

 2. ALL HORK SHALL CONFORM TO THE CURRENT UNIFORM CONSTRUCTION/DEVELOPMENT STANDARDS OF COUNTY
- OF MARIN.

 3. LOCATION OF UTILITIES SHOWN ON THESE PLANS IS APPROXIMATE, IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATIONS AND DEPTHS OF UTILITIES WITH
- THE APPROPRIATE AGENCIES PRIOR TO STARTING WORK.

 4. RAINWATER LEADERS SHALL UTILIZE MYE CONNECTIONS.

 5. CORRUGATED OR FLEXIBLE DRAIN PIPES ARE NOT
- DROP INLETS SHALL BE AS SHOWN ON PLANS OR APPROVED EQUIVALENT.
 ALL ROOF DOWNSPOUTS SHALL BE CONNECTED TO UNDERSROUND STORM DRAINS.

- - 6. NO GRADING SHALL BE COMMENCED PRIOR TO OBTAINING A GRADING PERMIT. FOR RAISED FOUNDATIONS, AT LEAST TWO INCHES 2-INCH FOR RAISED FOUNDATIONS, ALL EAST IN THE FOUNDATION DIAMETER A TOOLES SHALL BE PLACED IN THE FOUNDATION TO DRAIN THE SUBPLOOR AREA SIMILAR DRAINS SHALL BE INSTALLED IN ANY INTERIOR FOUNDATIONS SO THAT MATER IS NOT TRAPPED WIDER THE BUILDING.
- TRAFFIC CONTROL SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE LATEST MANUAL OF TRAFFIC CONTROLS "PUBLISHED BY THE CALIFORNIA DEPARTMENT OF TRANSPORTATION.
 - ALL BMPS SHALL CONFORM TO THE CALIFORNIA STORMWATER QUALITY ASSOCIATION (CASQA) LATEST STORMWATER BEST MANAGEMENT PRACTICE HANDBOOK

C1.0

VIA Atelier, Civil Engineering -9 Brookside Ct.,

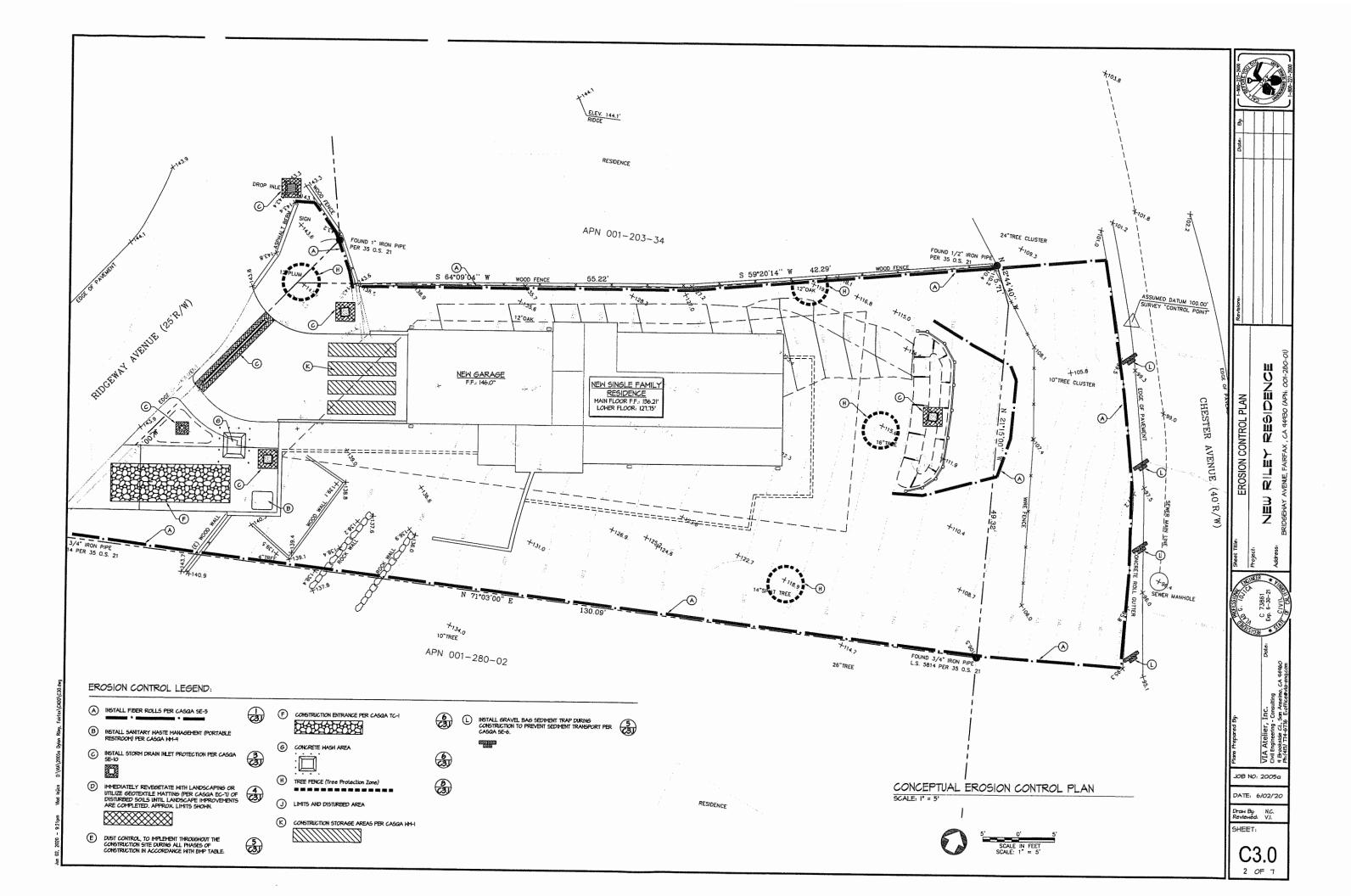
JOB NO: 20050

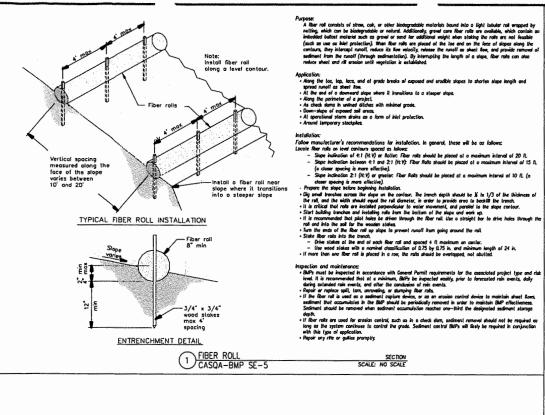
DATE: 6/02/20

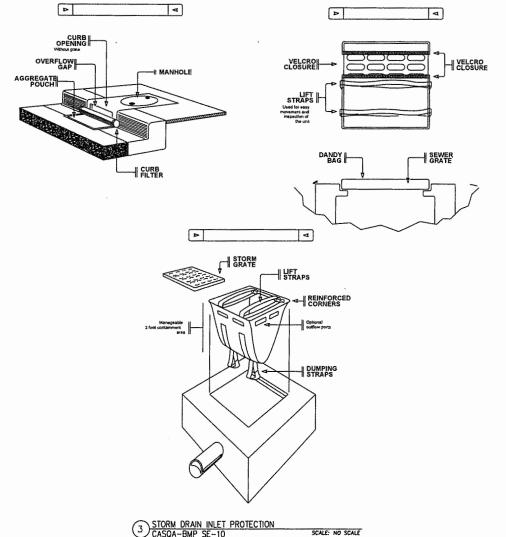
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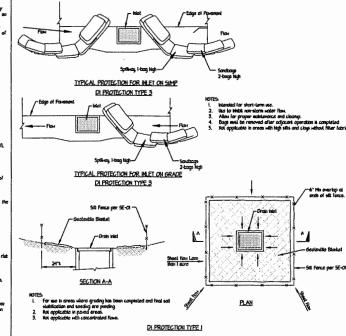
<u>__</u>

 $\overline{\mathbf{Q}}$









Purpose:
Stem drok hiel protection consists of a sedement filter or an impounding erro in, pround or systems or a stem drok, drop inlet, or cush hield. Stem
drak hield protection measures temperatly point numble before it where the stem draks, attacks graduant to settle. Some filter cumfigurations also
remove sedement by filtering, but usually the pending action results in the process sedement networks in removerage
graduals stem and inserts closely indemental storm of any state to capture and filter storm valuer.

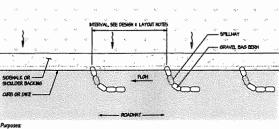
Application:
Every slamm drain lakel recording remail from analobitized or otherwise active work areas should be protected, bird protection should be used in
compaction with other arasion and sessiment controls to prevent sessiment-lockes atornwoter and non-atomisecter darkarges from entering the storm drain
splient.

Special & Mainlanance:

Biffe must be impacted a accordance with General Parmit requirements for the associated project type and risk level. It is recommended that of a minimum, Biffe be impacted wheth; prior to forecasted rain events, deby during extended rain events, and offer the conclusion of rain rewrits.

Sill Ferces. If the facility becames chapped form, or degreed, it should be replaced. Make sure this stakes are sociately driven in the ground one or in good shape (it, and both, created, or givinered, and our are recommended proposalization for ground or in good shape (it, and both, created, or givinered, and our are recommended proposalization for ground stakes, All or minimum, remove the seathers behalf the facility for the control of the facility of the facility of the control of the facility of the facility of the control of the facility of the facility of the facility of the facility of the control of the facility o

2 STORM DRAIN INLET PROTECTION CASQA-BMP SE-10 SCALE: NO SCALE



A grown bog barm is a series of grown-filled bogs placed on a level contour to intercept sheet flows. Grown bogs pand sheet flow nunoff, allowing sediment to sellbe out, and release nunoff slowly as sheet flow, preventing erasion.

- Application:

 As a direct sediment control measure:

 Below the los of stopes and enables stopes

 As sediment large at cuterfulpise outlets

 Below other send cleared area

 Along the particular of a site

 Does stope of acquared ad eness

 Around temporary stodepise and apoil areas

 Along streams and channels

 As a lever revision control measure

 Along the foct and of dynamics of exposed and enables stopes to shorten stope length and spread runoff as sheet leve.

 Along the foct and oil grade breads of exposed and enables stopes to shorten stope length and spread runoff as sheet leve.

 All the part of stopes to other transifier stopes from deducted shopes.

 All the large of stopes to other transifier stopes from deducted shopes.

 As thereas (small check dones) across mildy stoped construction roads. For check done use in channels, see \$X=4\$, Check borns.

hesign and Layout:

**Then used for stope interruption, the following stops/sheet flow length combinations apply:

- Stope inclination of 4: ((kY) or Solter: Growl bags should be placed at a maximum interval of 20 R, with the first row near the stope loc. near the stops (or. Stops inclination between 41 and 21 (14 V): Givel bags should be placed at a maximum interval of 15 fL (a closer specing is more effective), with the first two near the stops (or.

repection and Maintenance:

- Bill's must be impacted in occariance with Ceneral Farmil regularments for the associated project type and risk lens. It is recommended that of an initiative, Bill's be impacted weekly, prior to forecasted rain events, doly during extended rain events, and offer the conclusion of right events.

- Event byogs speaked to sumitify if it need to be replaced every (not to three months due to despreading of the bogs.

- Reschape or replace grant bogs are needed.

- Sediment that accumulations in the Bill's should be periodically resourced to redoring SBMP effectionness. Sediment should be a manufact that the sediment aroundation searches was fairful all the bestive highly.

be removed when the sediment occumulation reaches one-third of the borrier hight.

Remove graved bug berns when no longer needed and recycle gravel fill whenever possible and property dispose of bog motivat.

Remove sediment occumulation and others, the removes and studied the other.

GRAVEL BAG FLOW DIVERSION CASQA-BMP SE-6

Dust Control Practices

Dust contral BMPs generally stabilities exposed surfaces and minimite activities that suspend or truck dust particles. The following table presents dust contral practices that can be applied to varying site conditions that could postalistly counse dust for heavily truveled and distributed errors, relappearsion (relatively), chamical dust appression, yervel capital surfacins, temporary great construction entirecus, equipment entire-out errors, and had truck covers on the employed at and scripting applications. Permonent or lemporary expertation and mutchin can be employed for orace of occasioned or no construction traffic. Prevention measures include minimizing surfaces area to the distribute, limiting unaits entitle traffic to 15 mph or heat, and controlling the number and octivity of whickes on a site of any given time.

IO MIL PLASTIC LINING

10 MIL PLASTIC LINING

7 CONCRETE WASTE MANAGEMENT

De W

DRIPLINE

8 TREE PROTECTION DETAIL

SECTION A-A

PLAN

PLAN/SECTION SCALE: NO SCALE

FENCING WITH POSTS 6' ON CENTER AROUND DRIPLINE

ELEVATION SCALE: NO SCALE

-	Dust Control Practices							
	Permanent Vegeta des	Mulching	Wet Emperantes (W. saring)	Chronical Dark Supprension	دستون دستون	Transportery Gravel Constituentiane Entraces/Espaineres Wash Donne	Synthetic Corres	Missionies Entant of Dismerted Afres
Distriction Advantage Subject to Traffic	x	x	x		ĸ			x
Distanted Areas Bridgest he Traffie			*	×	х			×
Material Throbpiles		1	K	×			х	×
Describbes			×			×	×	
Charley Stortetes			×	×				x
III				*	x	×	x	
Trucking					ı	r.		

Chemical dust suppressonts include: mulch and Roer bosed dust politolives (e.g. paper mulch with gipsum binder), softs and brines (e.g. calcium chlaride, magnesium chlaride), non-petroleum based organics (e.g. sephall emulsion, dust oits, petroleum based organics (e.g. sephall emulsion, dust oits, petroleum resira), sylihetic palymars (e.g. polywin) actalia, wiyst, acrylic), clay additives (e.g. bentanila.

Additional preventive measures include:

Schedule construction activities to minimize exposed area (see EC-1, Schedulina). Quickly treat exposed soils using water, mulching, chemical dust suppressonts, or

Identify and stabilize key access points prior to commencement of construction.

Minimize the impact of dust by anticipating the direction of prevailing winds.

Restrict construction traffic to stabilized roadways within the project site, as practicable.

Water should be applied by means of pressure-type distributors or pipelines equipped with a apray system or hoses and nazzles that will ensure even distribution. All distribution equipment should be equipped with a positive means of shutoff.

Unless water is applied by means of pipelines, at least one mobile unit should be available at all times to apply water or dust politaine to the project. If reclaimed waste water is used, the sources and discharge must meet California Department of Health Services water reclamation criteria and the Regional Stater Quality

5 DUST CONTROL CASQA-BMP WE-1

URBAN RUNOFF POLLUTION NOTES

- Stare, handle and dispose of construction materials and waster so as to present their entry to the storm drian system, contractor must not allow concrete, washoulers, shrinks, point or other materials to enter catch bosins, the arcticle storm drain system, or ansite or offsite surface flow runoff.
- Use filtration or other measures to remove sediment from devatering effluent
- No deaning, fueling or maintaining vehicles on site shall be permitted in any manner that allows deleterious moterials from entering catch basins or to enter site nunft.
- Use of posticides and/or fertilizers shall be reduced and shall be controlled to prevent pollution runols.

EROSION & SEDIMENT CONTROL NOTES

- 2. Erasion control measures shall be installed prior to Octobe 15 and shall be maintained by the controctor in proper working order throughout the first winter. This protection shall consist of appropriate filler linear, dermain borns, strow bole dikee, etc. These derives shall be pieced in order to minimize arosin and to collect sediment generated by the construction of this project. Except for powed and landscaped areas afreedy completed, all graded areas shall be hydroseeded in order to prevent erasion of low control. The controctor is responsible for wookin & sediment control of peer long during all le work.
- All banks and all graded areas shall be hydroseeded to control erasion or the approved groundcover installed by October 15.
- The contractor shall maintain a clean site of all times which is free of debris, heterolous resites, or slockpilled molerial unless approved by the project engineer. All approved slockpiller shall be covered and protected to prevent starm solar publishs.
- Stabilize all denuded areas and maintain erosion control measures continuously between October 1 and April 15.
- Remove spots premptly, and avoid stockpiling of fill moterials when rain is forecast. If rain threotens, stockpiled sols and other moterials should be tarped, at the request of the city engineer.
- Store, handle and dispose of construction materials and wastes so as to avoid their entry to the storm system. Contractor must not allow concrute, weatwelers, sturries, point or other moterials to enter cotch basins or to enter sale runoif.
- B. Use Ritration or other measures to remove sediment from deviatering efficient. Install filter fabric bags inside all cotch basins and maintain during winter starms.
- No cleaning, fueling, or mainteining vehicles on-site, except in on orea designed to contain and treat runoff.
- lise of posticides and/or fertilizers, when applied, shall be controlled to prevent
- All areas of cut, fill and ungraded areas disturbed by the grading operation shall be hydromulched or and approved landscaping groundcover planted offer oil such has been completed. The contractor shall be responsible for furnishis labor and malerial to accomplish a dense plant cover for evacion control.
- Devoter basement and excavations with lank and filtration device prior to discharge into SD system. Provide afficient samples for testing hourly per regional water standards.
- Per the Federal and State Water Quality Acts, the owner is solely responsible for controlling construction water discharge.
- Project is subject to the requirements of the winter grading manufactum as per the Town of Fairfax Municipal Code.

DENCE **EROSION CONTROL DETAILS** Ō Ш OZ ÍЦ 3 Z

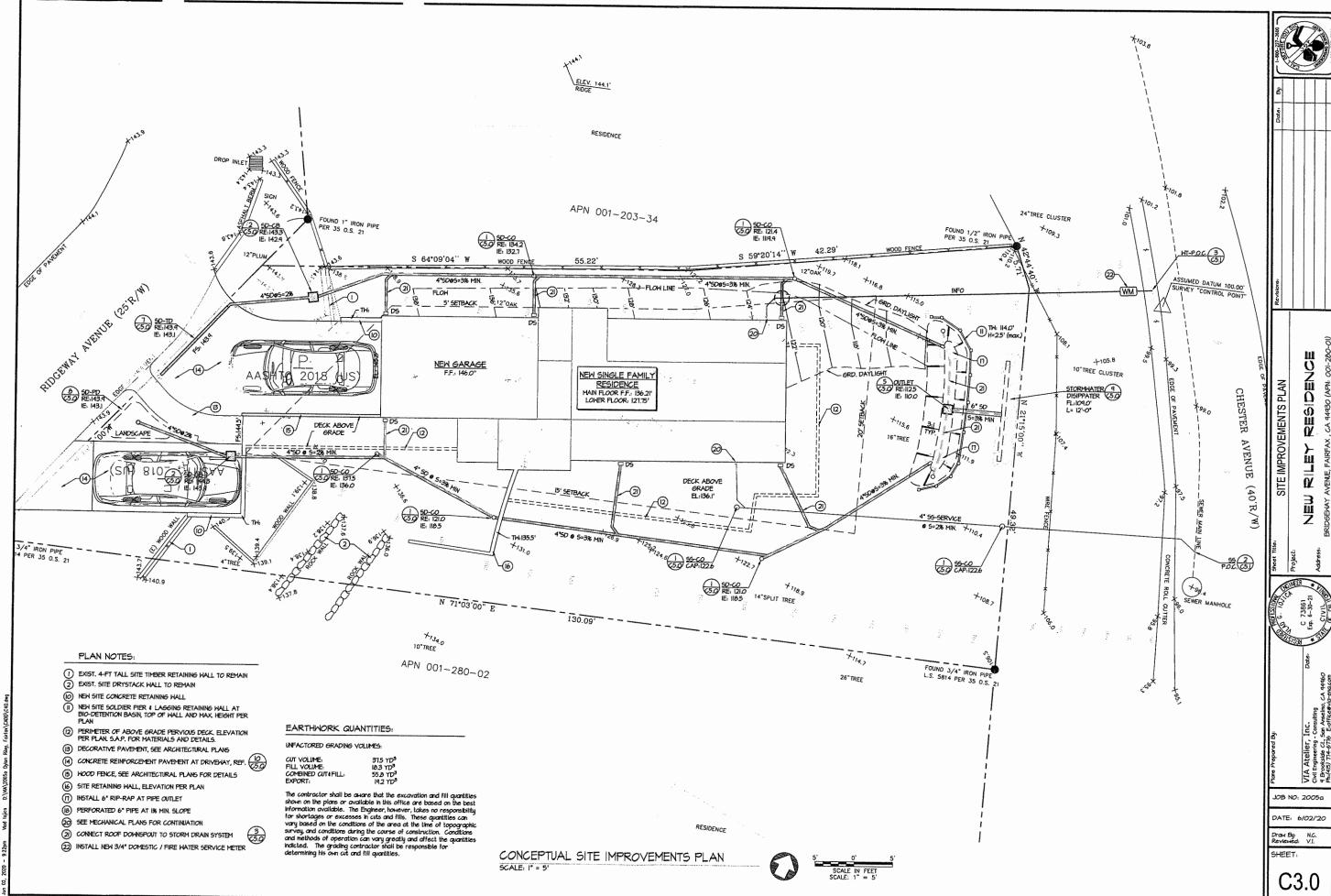
JOB NO: 20050

DATE: 6/02/20 Dran By: N.C. Reviened: V.I.

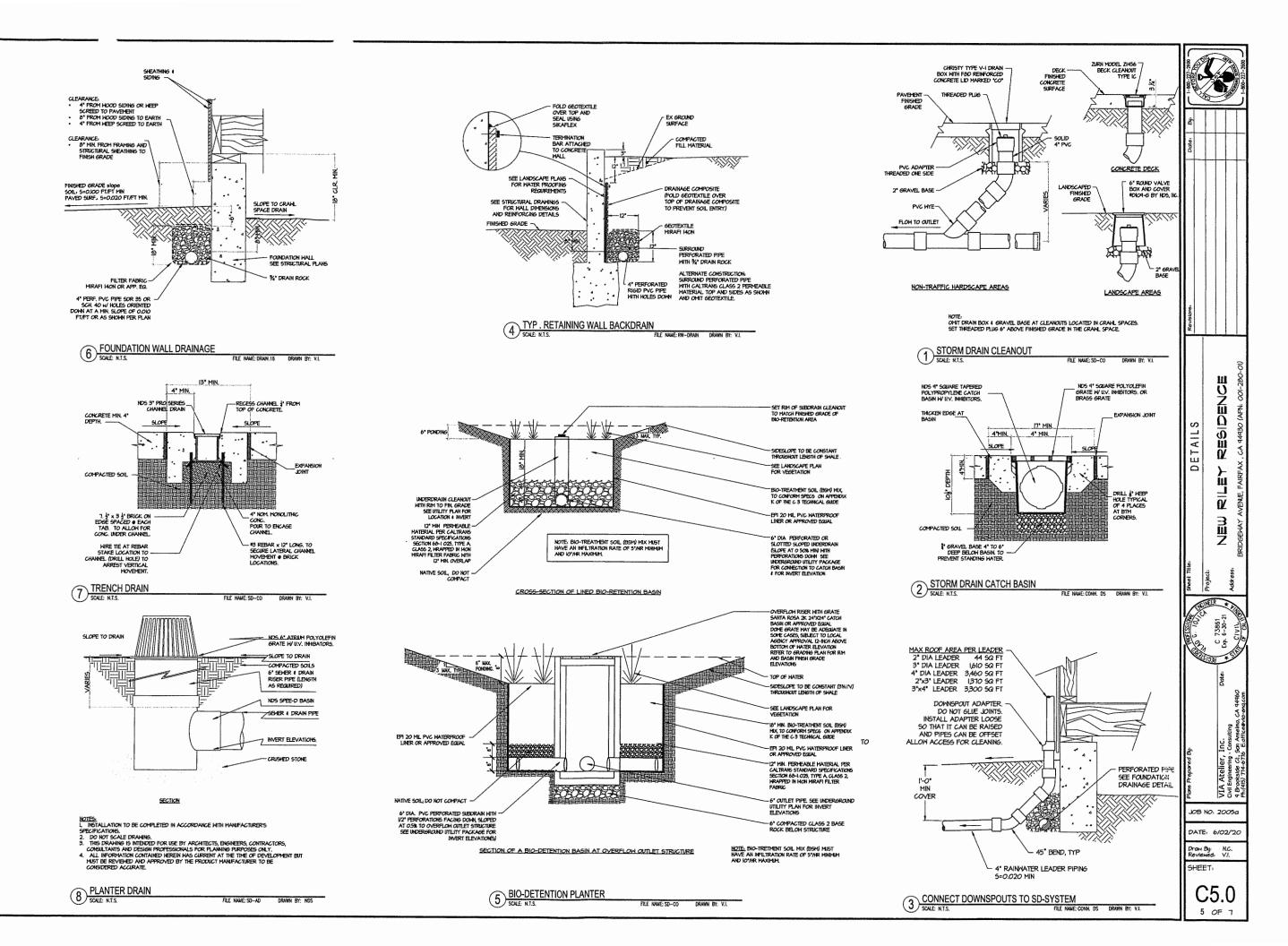
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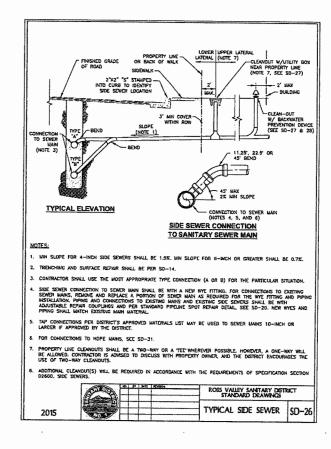
C3.1 3 OF 7

SCALE: NO SCALE

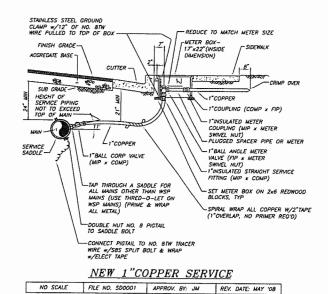


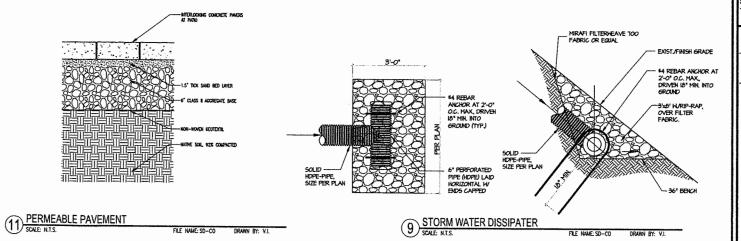
4 OF 7

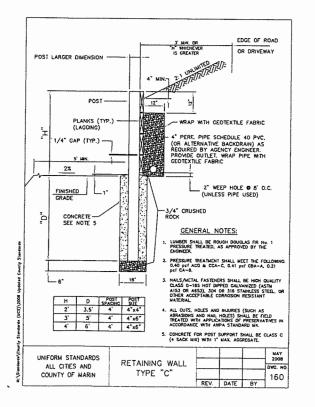




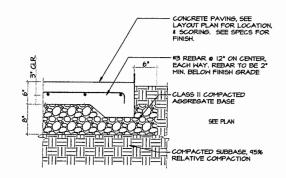


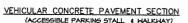


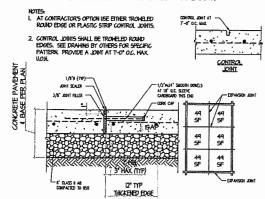












EXPANSION JOINT

CONCRETE PAVEMENT JOINTS SCALE: N.T.S.

MAX. JOINT PATTERN PLAN

STD. DETAIL SCALE: N.T.S.

DETAILS Ш } <u>N</u> 3112 JOB NO: 2005a DATE: 6/02/'20 Dran By: N.C. Reviewed: V.I. SHEET:

> C5.1 6 OF 7

DENCE

UV UV UV

